

2. PROJECT DESCRIPTION

This chapter presents the Proposed Project location and surrounding uses, project history, project description, and the estimated construction schedule and phasing. Briefly, the Proposed Project includes a widening of the existing portal for the Metro Red and Purple Lines Maintenance Yard (Division 20 Rail Yard), development of a high-capacity turnback facility, an increase of train storage capacity, and a reconfiguration of existing internal tracks and access roads.

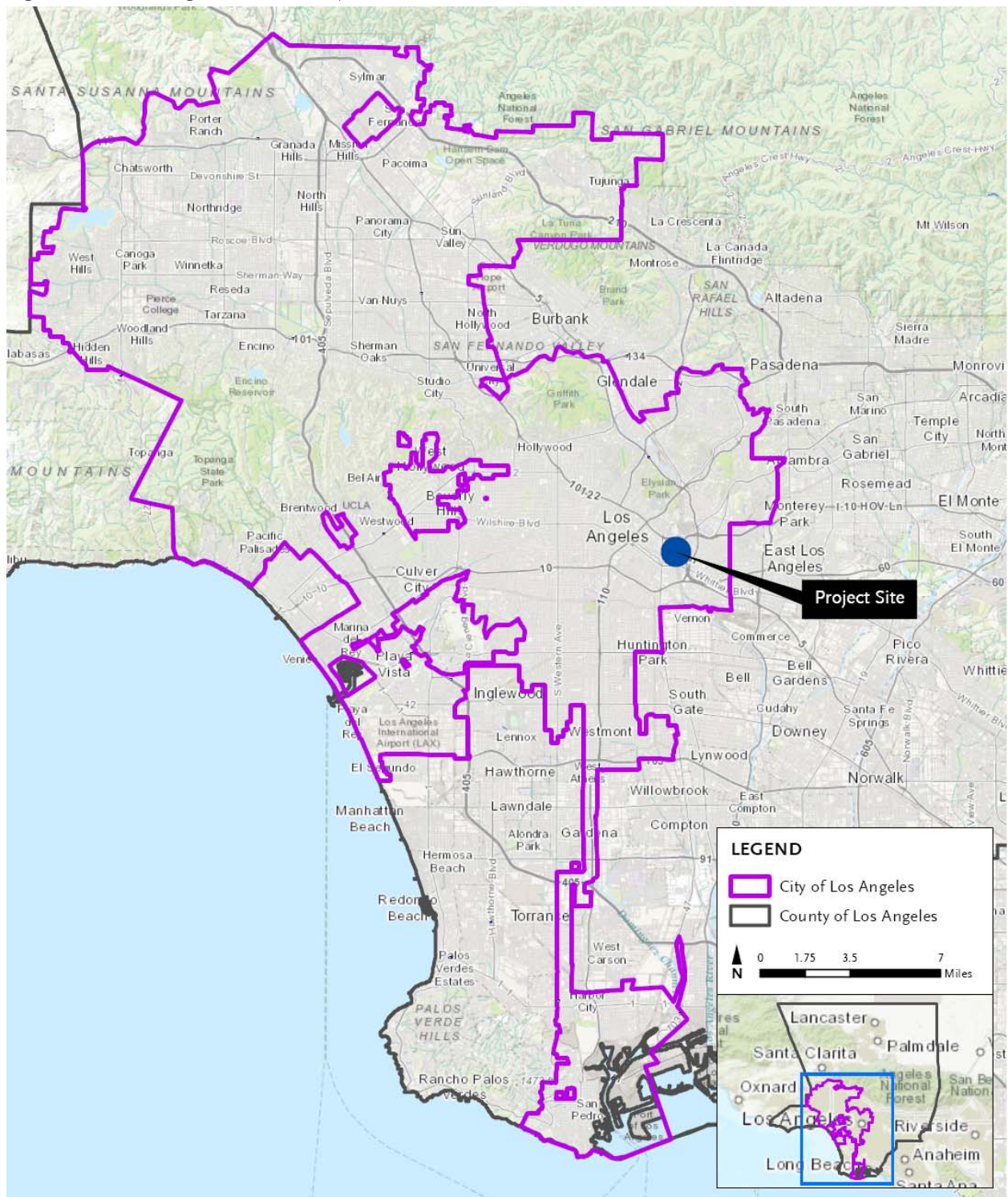
The improvements to the Division 20 Rail Yard will provide core capacity improvements to accommodate increased service levels previously approved for the Metro Red and Purple Lines and allow trains to provide faster service times at Union Station. Collectively, the Metro Red and Purple Lines carry over 140,000 passengers daily, with ridership expected to increase by 49,000 following the Purple Line Extension to the Veterans Affairs West Los Angeles Medical Center. In order to effectively serve the additional patronage during weekday peak hours, planned service improvements include operating trains every four minutes on each line – which is every two minutes in the trunk portion of the system – and expanding the fleet. Currently, eastbound trains in the trunk portion of the system use special trackwork at Union Station to reverse directions (i.e., ‘turnback’). However, the capability of turning back trains is capped at 7.5 minutes on each line, or 3.75 minutes combined due to the original design of Union Station. The Proposed Project aims to address the service and capacity limitations with three core improvements, which include:

- Widening the heavy rail tunnel south of the U.S. Highway 101 (US-101) freeway to accommodate additional special trackwork and high-speed train movements;
- Developing a new, surface-level turnback facility in the existing Division 20 Rail Yard; and
- Reconfiguring and expanding the surface-level rail storage tracks.

2.1. LOCATION AND SURROUNDING USES

The Project Site is regionally located in the northeast edge of downtown Los Angeles, in Los Angeles County, as shown in Figure 2.1. More specifically, it is within the Community Plan Area of Los Angeles known as Central City North. The Division 20 Rail Yard is an approximately 45-acre site that supports the Metro Red and Purple Lines’ train storage and maintenance facilities. It is generally bounded by the Los Angeles River to the east, Santa Fe Avenue to the southwest, Ducommun Street to the north, and the 6th Street Bridge to the south. The footprint of the Proposed Project, including expansion of the existing boundaries on the portion north of the 1st Street Bridge westward towards Santa Fe Avenue and north towards Commercial Street, are shown in Figure 2.2. The western boundary of the Project Site includes commercial/industrial properties along Santa Fe Avenue, as well as the One Santa Fe (OSF) mixed-use complex immediately south of the 1st Street Bridge. Immediately to the south and southwest of the Project Site is the Arts District, which is comprised of residential, industrial, and commercial uses, and art galleries and exhibition warehouse spaces. Land uses to the north include commercial/industrial buildings, and the Los Angeles River is located to the east beyond freight rail tracks.

Figure 2.1 Regional and Project Site Location



Source: Terry A. Hayes Associates Inc., 2017.

The Proposed Project requires the expansion of the Division 20 Rail Yard to the west. The properties that would be affected by this expansion include the vacant Citizens Warehouse/Lysle Storage Company building, the LAPD Viertel's Central Division Police Garage, and a commercial building located at 100-120 North Santa Fe Avenue. Table 2.1 shows the Assessor Parcel Numbers (APN), addresses, and parcel sizes of these properties.

Table 2.1. Affected Properties Not Owned by Metro

Current Use	Assessor Parcel Numbers /a/	Street Addresses /a/	Parcel Size (Square Feet) /a/
Citizens Warehouse/Lysle Storage Company Building	5173-023-903	<ul style="list-style-type: none"> • 1001 East 1st Street • 110 North Center Street • 112 North Center Street 	31,402.7
LAPD Viertel's Central Division Police Garage	5173-020-010	<ul style="list-style-type: none"> • 500 North Center Street • 811 East Ducommun Street 	28,773.7
Commercial Building (a.k.a. "100-120 North Santa Fe Avenue")	5173-013-016	<ul style="list-style-type: none"> • 100 North Santa Fe Avenue • 120 North Santa Fe Avenue • 746 East. Banning Street • 949 East 1st Street 	22,650.9

/a/ City of Los Angeles Department of City Planning, *Zoning Information and Map Access System (ZIMAS)*, <http://zimas.lacity.org>, accessed January 3, 2018.

Source: Terry A. Hayes Associates Inc., 2018.

The Proposed Project would also expand the Division 20 Rail Yard into areas currently occupied by the National Cold Storage facility, which is vacant and has been acquired by Metro. The Proposed Project would also require the vacation of portions of three City streets (i.e., Jackson, Banning, and Ducommun Streets east of Center Street).

The Project Site is located within PF (Public Facilities) and M-3 (Heavy Industrial) zones. Additionally, the Project Site is located within the River Improvement Overlay (RIO) District and the East Los Angeles Enterprise Zone (EZ). The area surrounding the Project Site is zoned M-3 and C-2 (Commercial).

2.2. PROJECT HISTORY

In order to accommodate increased service levels on the Metro Red and Purple Lines, Metro is planning critical facility improvements including the widening of the heavy rail tunnel portal south of the US-101 freeway and the introduction of a turnback facility in the Division 20 Rail Yard. With these improvements, new tracks and switches would allow trains to turn around more quickly at Union Station. Non-revenue Metro Red and Purple Line trains currently proceed underground south of Union Station and emerge at-grade through the portal just south of the US-101 freeway before entering a complex set of switches in the main Rail Yard.

On March 23, 2017, an Initial Study/Mitigated Negative Declaration (IS/MND) was adopted by the Metro Board of Directors for the former Red/Purple Line Core Capacity Improvements Project. Since that date, the design team has been looking at various refinements to maximize flexibility in the operations of the Division 20 Rail Yard, including the addition of storage tracks. These refinements require additional environmental analysis in the context of an EIR to address potentially significant impacts.

2.3. PROJECT DESCRIPTION

2.3.1. PROJECT OBJECTIVES

Given the ongoing Metro Purple Line Extension Project, storage constraints that inhibit fleet expansion, and the absence of a turnback facility, the goal of the Proposed Project is to accommodate the expansion and associated increased ridership of the Metro Red and Purple Lines. The two objectives of the Proposed Project are:

Objective #1: Provide core capacity improvements needed to accommodate increased service levels on Metro Red and Purple Lines.

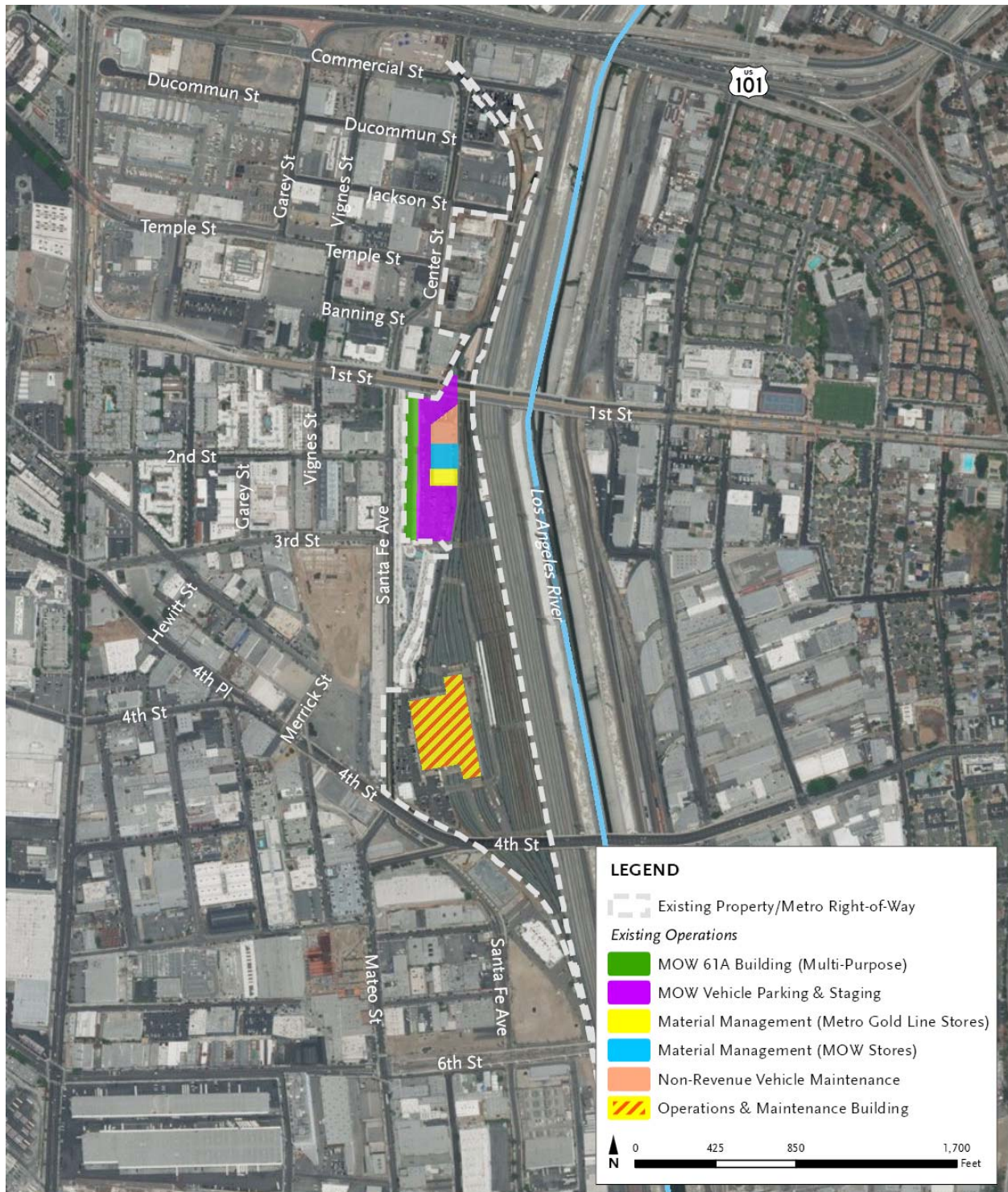
Objective #2: Provide new tracks and switches that will allow trains to provide faster service times at Union Station.

2.3.2. EXISTING OPERATIONS

The Division 20 Rail Yard currently supports a fleet of 104 heavy rail vehicles. Current activity includes 19 pull-outs and 21 pull-ins on weekdays and 10 pull-outs and 10 pull-ins on weekend days and holidays. There are up to 150 logistical movements performed within the yard and shops daily (roughly six per hour), although most days have less activity. MOW activities occur at various locations in the Rail Yard and will also occur at a new building (MOW Location 64) that is being constructed adjacent to the 6th Street Bridge. There are currently no turnback movements within the Division 20 Rail Yard. Metro Red and Purple Line trains turn back at Union Station, reversing direction from eastbound to westbound. The current minimum headway that can be achieved at Union Station is approximately 7.5 minutes on each line (3.75 minutes between Union Station and the Wilshire/Vermont Station, where the Metro Red and Purple Lines diverge).

The area adjacent to OSF that is proposed to be used for storage tracks is currently used by the MOW Department for motor vehicle traffic, including trucks moving into and out of the area on 24-hour basis seven days per week. The non-revenue vehicle repair shop is also located in this area, as well as a storage building for the Material Management Department. Approximately 25 trains move in or out of the building daily (roughly one per hour). Employee parking for vehicle maintenance and transportation staff is located along the southwestern portion of the Project Site. The Material Management Department maintains an additional storage building just south of the parking lot. The Transportation Department offices, training, and Yard Control are located at this building. Figure 2.2 shows the locations of existing operations.

Figure 2.2 Existing Operations



Source: Terry A. Hayes Associates Inc., 2018.

Existing non-revenue train movements that occur between the Division 20 Rail Yard and the mainline are summarized in Table 2.2. Presently, there are no revenue train movements at the Division 20 Rail Yard.

Table 2.2. Existing Non-Revenue Train Moves between the Division 20 Rail Yard and Mainline

Time of Day	Monday - Thursday	Friday	Saturday	Sunday
3:00 a.m. - 6:00 a.m.	10	10	9	9
6:00 a.m. - 9:00 a.m.	2	2	0	0
9:00 a.m. - 11:00 a.m.	4	4	1	1
11:00 a.m. - 2:00 p.m.	0	0	0	0
2:00 p.m. - 3:00 p.m.	12	12	0	0
3:00 p.m. - 7:00 p.m.	0	0	0	0
7:00 p.m. - 10:00 p.m.	6	6	4	4
10:00 p.m. - 12:00 a.m.	0	0	0	0
12:00 a.m. - 2:00 a.m.	6	0	0	6
2:00 a.m. - 4:00 a.m.	0	6	6	0
Total	40	40	20	20

Source: Metro, 2018.

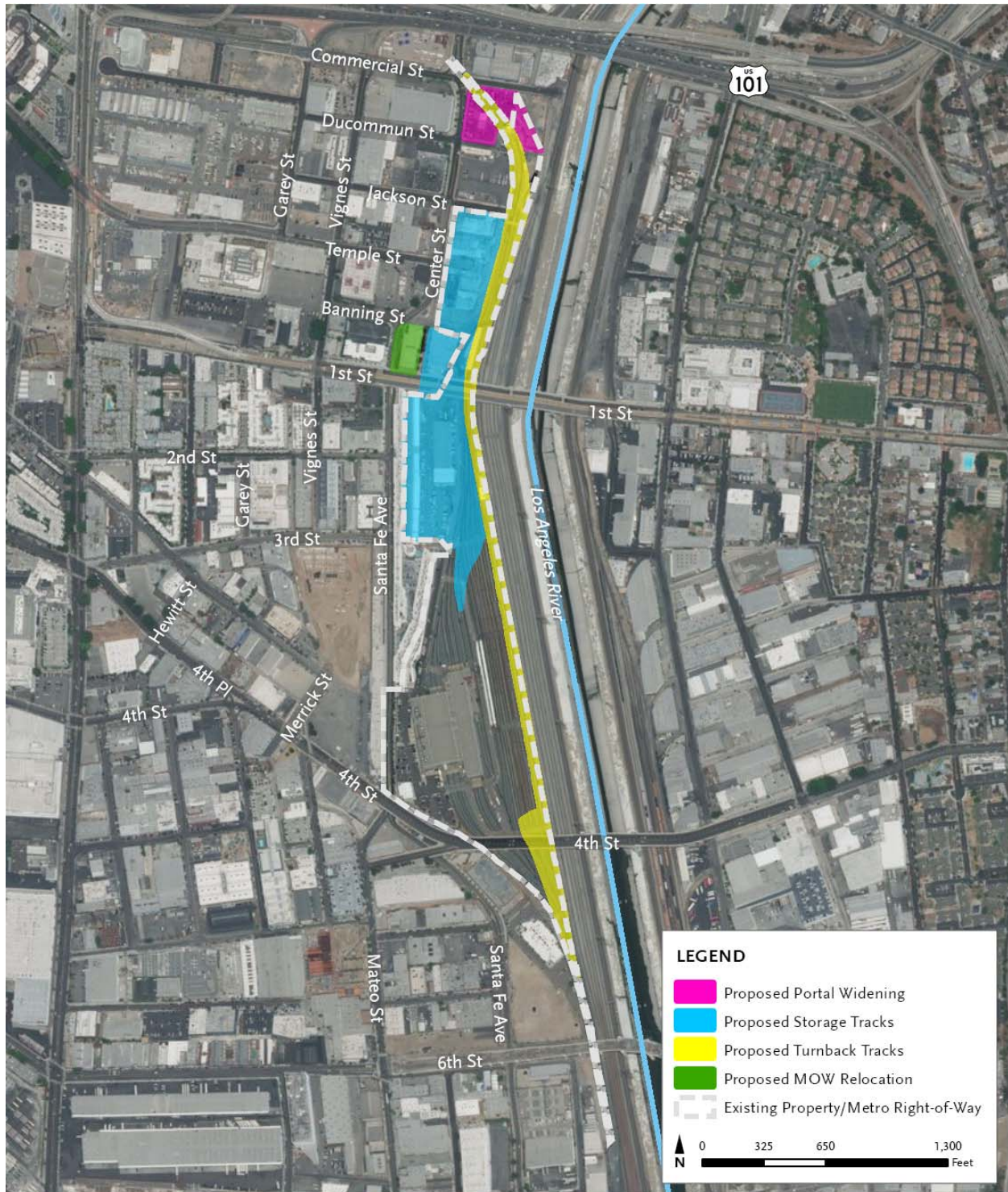
2.3.3. PROPOSED PROJECT

The Proposed Project includes the widening of the portal for the Metro Red and Purple Lines, the construction of new storage tracks, and the provision of a new turnback facility. Specifically, the Proposed Project components, shown in Figure 2.3, include:

- Widening the tunnel portal that currently connects the Metro Red and Purple Lines to the Rail Yard, including construction of a new ventilation shaft building;
- Constructing new storage tracks;
- Reconfiguring existing tracks and access roads to accommodate a turnback facility;
- Installing a new TPSS and emergency backup power generator;
- Expanding the Rail Yard west, into areas currently occupied by the Citizens Warehouse/Lysle Storage Company building, the LAPD Viertel's Central Division Police Garage, and the National Cold Storage facility;
- Repurposing an existing building at 100-120 North Santa Fe Avenue for MOW activities;
- Modifying the 1st Street Bridge piers and superstructure; and
- Vacating portions of three City streets (i.e., Jackson, Banning, and Ducommun Streets east of Center Street).

The successful implementation of these components would necessitate the demolition of the LAPD Viertel's Central Division Police Garage, the existing MOW Location 61A building, and the National Cold Storage facility, as well as the modification of the Citizens Warehouse/Lysle Storage Company building. Additionally, streetscape improvements and a physical safety perimeter would be installed for the integration of the Proposed Project into its surrounding urban environment.

Figure 2.3 Project Components



NOTE: Exact location of storage tracks and turnback tracks to be determined.

Source: Terry A. Hayes Associates Inc., 2018.

Figure 2.4 shows both the new Proposed Project's footprint and the former project's footprint as illustrated in the IS/MND site plan to demonstrate modifications to the project scope since March 23, 2017. Notable changes include the addition of storage tracks, the removal of the operator relief platforms that were originally planned, the relocation of some MOW activities to 100-120 North Santa Fe Avenue, and changes to the turnback track design.

2.3.3.1. Portal Widening

Heavy rail vehicles currently access the underground alignment to provide mainline revenue service through a portal at the north end of the Division 20 Rail Yard and south of the US-101 freeway. Heavy rail vehicles also return to the Division 20 Rail Yard in the same manner. The boundary between the mainline and the Division 20 Rail Yard is immediately adjacent to the portal. The tracks used to access the mainline are referenced as "yard leads."

There are presently two tracks linking the Division 20 Rail Yard to the mainline. The track alignment in the immediate vicinity includes both horizontal and vertical curves.

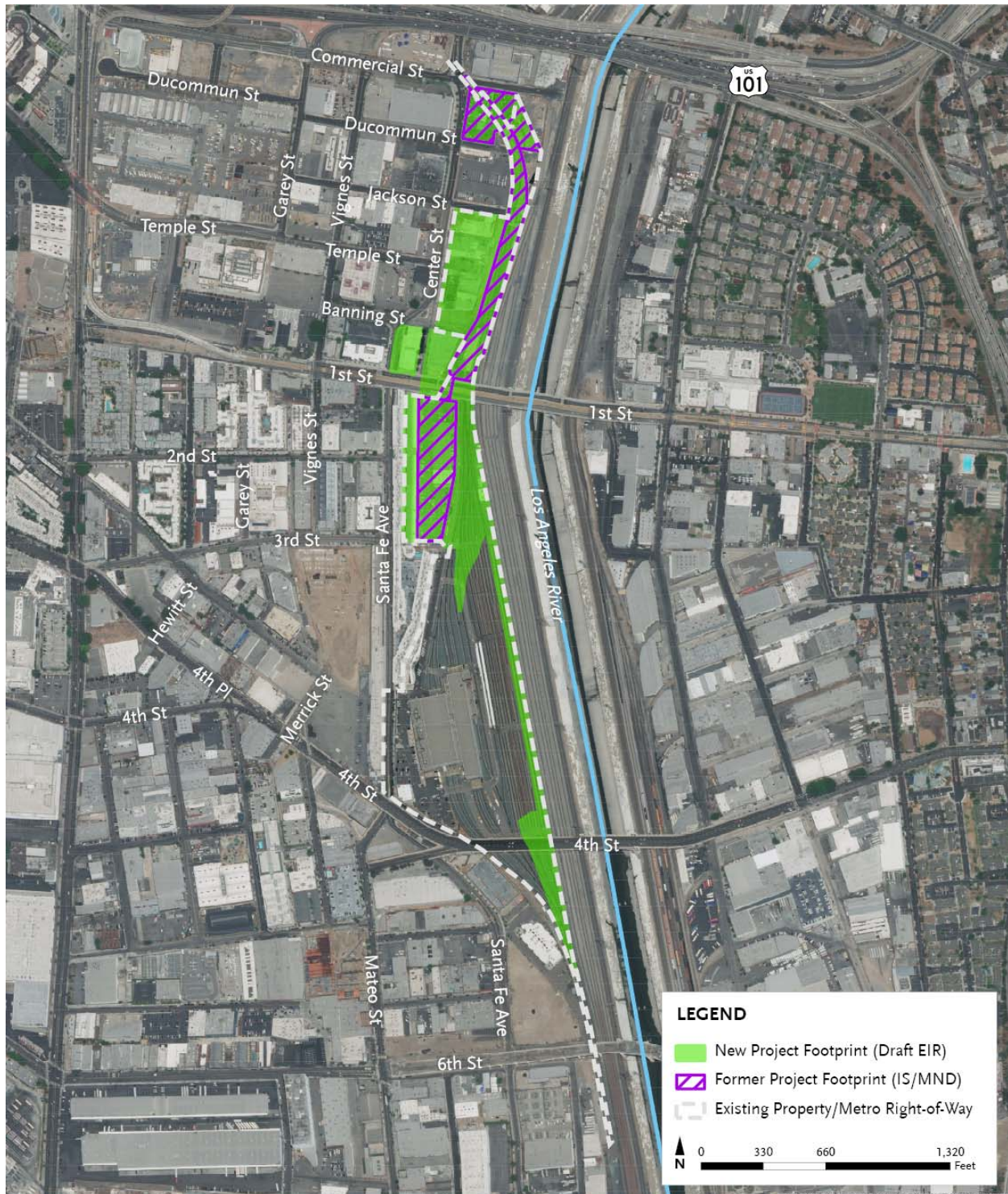
The widening of the portal would accommodate additional width to soften the radius of tracks to enable trains to move at 25 miles per hour and convert to non-revenue 'mainline status,' and provide additional space for special trackwork to relocate the yard leads from the Division 20 Rail Yard to the mainline.

The portal widening would require a new ventilation shaft building to be installed on the parcel currently occupied by LAPD Viertel's Central Division Police Garage. The ventilation shaft building would begin approximately 30 feet below grade and extend 13 feet above grade on the eastern end of Commercial Street. Its top would be capped with a cover slab and its sidewalls would be covered in a plastic waterproofing membrane. The building would house three fans that would only operate in the event of an emergency such as a fire. Metro is exploring several options regarding the aesthetic of the ventilation shaft building's exterior, although the design has not been finalized at this stage of the engineering process.

2.3.3.2. Storage Tracks

Construction of the turnback facility would remove existing storage tracks that serve 56 trains to accommodate fleet expansion and require new storage tracks in their place. The replacement storage tracks would be constructed south of the 1st Street Bridge on the west side of the Division 20 Rail Yard. These new storage tracks would displace the non-revenue vehicle repair shop and a storage building for the Material Management Department, which would both be relocated within the Division 20 Rail Yard. New storage tracks for additional rail cars would also be constructed north of the 1st Street Bridge, in an area owned by Metro, but currently outside of the existing Division 20 Rail Yard operations. Trains would be stored on these tracks daily. Most vehicle movements would occur on a regular basis late at night and in early morning hours. Some minor work involving the light cleaning or light duty repairs of interior spaces of vehicles may occur in the storage track area. Most of these activities would occur overnight when train service would not be in operation. However, these activities in the storage areas may occur occasionally in the daytime.

Figure 2.4 Modifications to Project Footprint since IS/MND



Source: Terry A. Hayes Associates Inc., 2018.

North of the 1st Street Bridge, construction of the storage tracks would require demolition of the National Cold Storage facility and a portion of the Citizens Warehouse/Lysle Storage Company building. South of the 1st Street Bridge, construction of the storage tracks would require the demolition of the existing MOW Location 61A building. It is anticipated that MOW activities and staff would be relocated to the 100-120 North Santa Fe Avenue MOW building and other adjacent Metro facilities, including the MOW Location 64 building that is currently under construction. Limited activities may also occur at other satellite maintenance facilities. The westernmost 1st Street Bridge piers and part of the superstructure would also need to be removed or modified to increase operational flexibility and access to the new storage tracks.

It is anticipated that the existing storage tracks east of OSF would still be used for early AM pull-outs because those tracks are directly aligned with the mainline. The new northern storage area would likely be used to temporarily store trains that are out of service. Forecasted non-revenue train movements are summarized in Table 2.3.

Table 2.3. Forecasted Non-Revenue Train Moves between the Division 20 Rail Yard and Mainline

Time of Day	Monday - Thursday	Friday	Saturday	Sunday
3:00 a.m. - 6:00 a.m.	40	40	12	12
6:00 a.m. - 9:00 a.m.	0	0	0	0
9:00 a.m. - 11:00 a.m.	24	24	2	2
11:00 a.m. - 2:00 p.m.	0	0	0	0
2:00 p.m. - 3:00 p.m.	24	24	0	0
3:00 p.m. - 7:00 p.m.	0	0	0	0
7:00 p.m. - 10:00 p.m.	28	28	4	4
10:00 p.m. - 12:00 a.m.	0	0	0	0
12:00 a.m. - 2:00 a.m.	12	6	4	12
2:00 a.m. - 4:00 a.m.	0	6	8	0
Total	128	128	30	30

Source: Metro, 2018.

2.3.3.3. Turnback Facility

The Proposed Project would reconfigure existing yard tracks and access roads to accommodate a turnback facility. All turnback tracks would be located along the east side of the existing Division 20 Rail Yard, which starts at the existing twin bore tunnels and continues south along the east side of the yard, traversing between the existing 1st Street Bridge bents and through the existing TPSS before connecting to the existing tail tracks just north of the 6th Street Bridge. A new TPSS and emergency power backup supply (a type of generator) would be constructed just south of the 1st Street Bridge in the area of the existing MOW Location 61A building that would be demolished. Refer to Figure 2.3 for the approximate location of the proposed turnback tracks. The proposed turnback tracks would have the capacity to support train movements every two minutes in each direction.

Table 2.4 shows that the capacity for operations would be approximately 210 round trips between Union Station and the turnback facility during weekday peak hours. This represents the maximum service levels for seven hours of peak-period service. Additional use of the turnback facility may occur at any time of day, including on weekends, pending demand-based service requirements for special events, preventative maintenance work or repair work occurring at Union Station, or service levels to support future passenger demand.

Table 2.4. Forecasted Scheduled Roundtrips to Turnback Facility

Time of Day	Monday - Thursday	Friday	Saturday	Sunday
3:00 a.m. - 6:00 a.m.	0	0	0	0
6:00 a.m. - 9:00 a.m.	90	90	0	0
9:00 a.m. - 11:00 a.m.	0	0	0	0
11:00 a.m. - 2:00 p.m.	0	0	0	0
2:00 p.m. - 3:00 p.m.	0	0	0	0
3:00 p.m. - 7:00 p.m.	120	120	0	0
7:00 p.m. - 10:00 p.m.	0	0	0	0
10:00 p.m. - 12:00 a.m.	0	0	0	0
12:00 a.m. - 2:00 a.m.	0	0	0	0
2:00 a.m. - 4:00 a.m.	0	0	0	0
Total	210	210	0	0

Source: Metro, 2018.

2.3.3.4. MOW Facility

Metro’s acquisition of the 100-120 North Santa Fe Avenue property would provide a new location for existing MOW functions that would be displaced by the new storage tracks. The existing building would be renovated and repurposed for use by Metro, and no major demolition or construction activities are planned at this location. The facility would primarily be used as office space for MOW employees. Minimal exterior space would be used for storage and staging.

2.3.3.5. Streetscape Improvements

In a coordinated effort to address previously gathered public input and create a cohesive street frontage along the east side of Center Street, the Proposed Project will soften the Project Site’s perimeter with a range of streetscape improvements including, but not limited to, landscape buffers, street trees, and street lighting along portions of the east side of Center Street. These landscaped buffers would be provided on Division 20 property and not along the public right-of-way. Such improvements would be similar in character to those to be provided along portions of the east side of Center Street by the Eastside Access at 1st & Central Project, which includes bike lanes, crosswalks, street trees, and street lighting, as well as those improvements to be provided by the Metro Emergency Security Operations Center (ESOC) Project, including landscape elements and street lighting.

2.3.3.6. Security and Site Access

The Proposed Project would include standard security measures such as restricted access, closed-circuit television security cameras monitored by Metro security staff, and a physical perimeter facing Center Street and Commercial Street. An emergency access road that would not be used on a regular basis would be constructed on the Project Site. Access would be provided from Center Street under the 1st Street Bridge and from where Jackson Street terminates at the Project Site. The existing Division 20 Rail Yard, including MOW functions that would be relocated, currently supports 513 employees. The existing surface parking lot directly west of the maintenance building between East 3rd Street and East 4th Street would not be removed by the Proposed Project. The Proposed Project would support approximately 620 total employees, taking into account the number of employees moving from the demolished MOW Location 61A building, and adequate parking would be available in the existing surface parking lot.

The physical perimeter along Center and Commercial Streets would prevent the public from freely accessing the Division 20 Rail Yard. The physical perimeter would not encroach onto public rights-of-way. Although its exact design has not been determined at this time, it would consist of a solid wall or steel fence between 8 and 12 feet tall built to standard Metro safety specifications.

2.4. CONSTRUCTION SCHEDULE AND PHASING

Construction activities would begin in early spring 2019 and finish in fall 2023. There would be seven general stages of activities plus testing and commissioning. The stages and general activities are detailed below.

- Stage 1 - General Demolition and Systems Relocation
- Stage 2 - Demolish the Existing Portal
- Stage 3 - Construct Walls Not in Conflict with Concrete Slabs
- Stage 4 - Close Alignment Left Tracks
- Stage 5 - Close Alignment Right Tracks
- Stage 6 - Construct Cutovers to New Tracks
- Stage 7 - Construct the South Storage Yard

Demolition would include removal of up to 306,875 square feet of existing buildings on and off the existing Division 20 Rail Yard, and rehabilitation of 22,651 square feet associated with the 100-120 North Santa Fe Avenue building. Construction activities would also include removal and modification of the 1st Street Bridge's piers and superstructure. Approximately 100,000 cubic yards of soil associated with the portal widening and the leveling of the Project Site in the area of expansion would be excavated and exported from the Project Site. Other activities would include installation of the new storage tracks, construction of the turnback tracks, and installation of a new TPSS and emergency backup power generator system.

Construction activity would require the relocation of utilities, including electrical ducts, a TPSS, duct banks, gas lines, fire hydrants, water lines, and sewer lines.

Construction laydown and staging areas would be located on the Project Site to eliminate on-street queuing that could interfere with existing traffic. The number of daily construction workers on the Project Site would vary throughout the construction period. Construction workers would be prohibited from parking on public streets and required by contract specifications to park on property owned by Metro.