
Executive Summary

S.1 INTRODUCTION

WRY Tenant LLC (an affiliate of The Related Companies, LP) and the National Railroad Passenger Corporation (Amtrak) are partnering in a joint venture (the Project Sponsor) to seek Federal financial assistance through a loan program or an available grant program administered by the U.S. Department of Transportation (USDOT). The Federal Railroad Administration (FRA) is conducting the environmental analysis in compliance with the National Environmental Policy Act of 1969 (NEPA), (42 USC 4321 et seq.) and other applicable environmental laws.

The Proposed Action put forth by the Project Sponsor includes the construction and operation of the following: (1) a structural Platform (Platform); and (2) a railroad right-of-way preservation Tunnel Encasement (Tunnel Encasement). The Platform would allow for privately funded mixed-use development and public open space above the Platform. The Proposed Action would be located on the 13-acre Western Rail Yard site, located on the western half of the Metropolitan Transportation Authority (MTA) Long Island Rail Road (LIRR) John D. Caemmerer Yard (aka “Hudson Yards”).

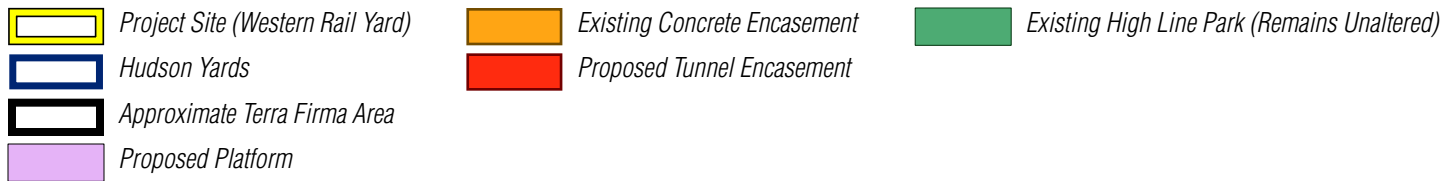
The Western Rail Yard site comprises two parcels (Block 676, Lot 1 and Lot 5) in New York County (Manhattan), New York (see **Figure S-1**). MTA LIRR is the owner of both parcels (comprising the entire 13-acre Western Rail Yard site), and has a lease agreement for both parcels with WRY Tenant LLC¹. The mixed-use development planned for the site (Overbuild) has been approved by the New York City Planning Commission (CPC), and adopted by the New York City Council into the New York City Zoning Resolution, for redevelopment of the Western Rail Yard parcel (see **Figure S-2**). The Tunnel Encasement would preserve the right-of-way for new rail infrastructure to maintain a functional, resilient, and improved trans-Hudson passenger rail crossing into New York Penn Station (Penn Station).

S.2 PURPOSE OF THE PROJECT

The purpose of the Proposed Action is to:

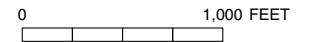
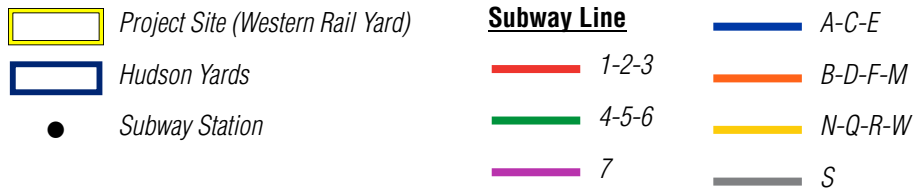
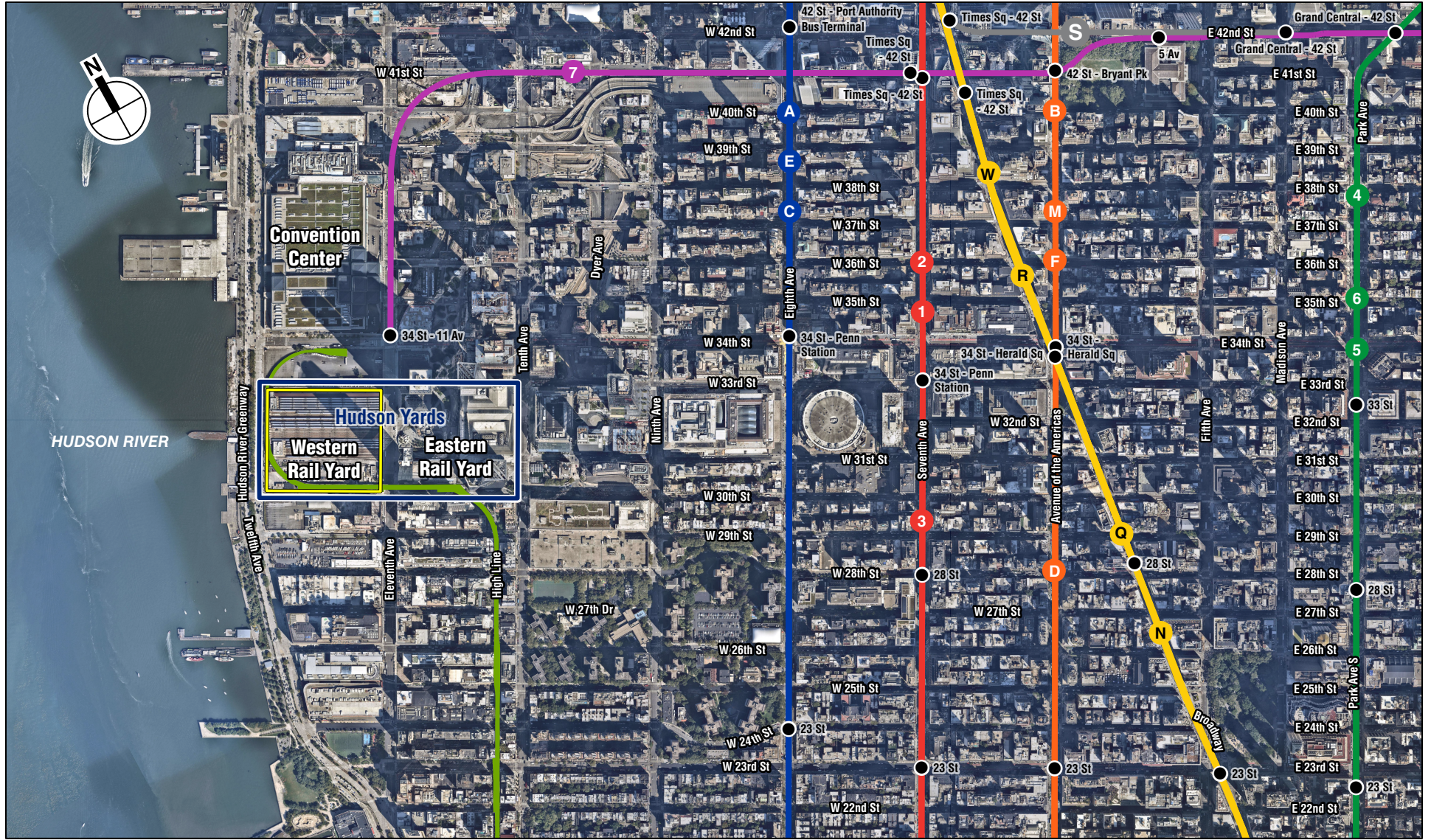
- (1) cover and protect the active railroad tracks and LIRR support facilities in the Western Rail Yard so that the Project Sponsor can provide additional new capacity for real estate development and house critical life safety and mechanical, electrical and plumbing support services for the yard, including new lighting, sprinklers and an extensive Platform ventilation system; and
- (2) preserve a right-of-way through the Western Rail Yard to support the future construction of a trans-Hudson passenger rail crossing into New York Penn Station.

¹ WRY Tenant LLC is the Overbuild Developer.



WESTERN RAIL YARD INFRASTRUCTURE PROJECT

Project Location
Figure S-1



WESTERN RAIL YARD INFRASTRUCTURE PROJECT

Project Site
Figure S-2

S.3 NEED FOR THE PROPOSED ACTION

Collectively, MTA's operating agencies (Bridges and Tunnels, Construction & Development, Long Island Rail Road, Metro-North Railroad, MTA Bus Company, and New York City Transit) serve a population of 15.3 million people across a 5,000-square-mile travel area surrounding New York City. Consequently, MTA provides over 2.6 billion trips each year, accounting for about one-third of the nation's mass transit users and two-thirds of its commuter rail passengers. However, MTA has ongoing financial needs as the agency responsible for operating and maintaining North America's largest transportation network, which comprises the nation's largest bus fleet and more subway and commuter rail cars than all other U.S. transit systems combined.

The fares and tolls MTA collects do not solely cover its operating costs. MTA's revenues typically come from a combination of fare and toll revenues, dedicated taxes, revenues generated by MTA's real estate holdings, and state and local subsidies. However, the agency has often faced operating budget deficits. For example, after the financial crisis in 2008, MTA faced a \$400 million deficit. These deficits have become more severe in the face of decreased ridership and toll revenues resulting from the coronavirus disease 2019 (COVID-19) public health emergency. At present, MTA faces a \$15.9 billion deficit through 2024. As a result of these recurrent deficits, MTA is consistently looking for additional revenue streams to sustain the operation, maintenance, expansion, and upgrading of the vast public transportation systems it operates.

Use of the air space above the Western Rail Yard has been a long-standing goal of both MTA and New York City. MTA has sought to maximize the revenue generation potential of its real estate assets, and when TBTA redeveloped Hudson Yards in 1986, the tracks and other facilities were reconfigured to accommodate the columns that would be required for a Platform needed to allow future private development to occur. In 2015, MTA completed construction on the No. 7 subway line extension. MTA NYCT extended service from Times Square (Seventh Avenue and 41st Street) to West 34th Street and Eleventh Avenue enabling riders to easily get to the far west side of Manhattan and access Hudson Yards. MTA agreed to make the investment to construct, operate, and maintain the No. 7 Subway Extension because of the anticipated high-density development proposed to take place in Hudson Yards.

MTA has used the revenue from the lease of the Western Rail Yard property to support issuing bonds, the proceeds of which were used to fund capital infrastructure upgrades, maintenance and other operational needs. However, MTA's capital and operational needs continue to grow. The Platform is needed to support the provision of developable land area that would generate revenue for the MTA and its subsidiary agencies, to protect the rail yard, and to provide modern state-of-the-art life safety systems for the entire Western Rail Yard.

The Proposed Action would benefit MTA and New York City, it is also consistent with and supports USDOT's mission to ensure America has the safest, most efficient and modern transportation system in the world, which boosts our economic productivity and global competitiveness and enhances the quality of life in communities both rural and urban.

The Tunnel Encasement is needed to maintain the ability to preserve passenger rail service in and out of New York Penn Station. New rail infrastructure is part of the effort to maintain a functional, resilient, and improved trans-Hudson passenger rail crossing into New York Penn Station, maintain existing Amtrak intercity and NJ TRANSIT commuter rail service on the Northeast Corridor, and to support future increases in the capacity of the regional rail system should they be pursued.

Multiple transportation improvement projects have been constructed or are planned on the west side of Manhattan. In 2015, MTA completed construction on the No. 7 subway line extension. MTA New York City Transit (NYCT) extended service from Times Square (Seventh Avenue and 41st Street) to West 34th Street and Eleventh Avenue enabling riders to easily get to the far west side of Manhattan and access Hudson Yards. MTA agreed to make the investment to construct, operate, and maintain the No. 7 Subway Extension because of the anticipated high-density development proposed to take place in Hudson Yards (see **Figure S-2**).

Construction is also ongoing at Moynihan Station located between Eighth Avenue and Ninth Avenue and West 31st Street and West 33rd Street. When completed, the Moynihan Station Development Project will convert the Farley Building post office facility into a new passenger rail station and mixed-use facility with 123,000 gross square feet (gsf) of retail, 228,000 gsf of public facility, and 672,000 gsf of office. The new Train Hall at Moynihan Station (an extension of New York Penn Station), which provides additional and improved connectivity to passenger platforms and enhanced passenger circulation space, opened on January 1, 2021. The associated private development is still under construction.

Amtrak's Gateway Program is anticipated to help attract riders into New York City and is focused on increasing capacity of the passenger rail system to transport more riders through a new trans-Hudson connection into New York Penn Station. The goal of the Program is, through rail infrastructure improvements, to allow double the amount of trains traveling below the Hudson River, eliminating the bottleneck that hinders the Northeast Corridor's (NEC's) level of service. The Program includes improvements to tracks, tunnels, bridges, and train stations, as well as construction of a new two-track Hudson River Tunnel to get passengers from Newark, NJ to New York's Penn Station.

S.1 PROJECT OBJECTIVES

FRA established project objectives consistent with the purpose and need for the Proposed Action. The objectives of the Western Rail Yard Infrastructure Project include the following:

- Maintain safe, continuous, and uninterrupted LIRR operations, construct critical life safety and ventilation systems, and modernize operational facilities within Western Rail Yard;
- Support the ability to meet the revenue-generation goals of the MTA, the owner of the Western Rail Yard;
- Provide support for the economic, social, and recreational life of the Hudson Yards area and the City; and
- Preserve opportunities to enable future growth of passenger rail service and to maintain a functional, resilient, and improved trans-Hudson passenger rail crossing into New York Penn Station.

S.4 PROJECT ALTERNATIVES

FRA considered all alternatives that met the purpose and need and met design criteria established by the Project Sponsor. The development of the Proposed Action involved a collaborative process between the Project Sponsor, LIRR, and MTA to ensure the safe and continual operation of LIRR facilities during construction and operation. As the result of this process, and using the information regarding the engineering constraints, FRA has identified two alternatives for analysis in this EIS and Draft Section 4(f) Evaluation, the No Action Alternative and the Preferred Alternative, described below.

S.4.1 NO ACTION ALTERNATIVE

The Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR parts 1500–1508) require consideration of a No Action Alternative, which is an alternative that represents the conditions that would exist in the planning year if a proposed action is not implemented. The No Action Alternative does not meet the Purpose and Need of the Proposed Action, because it does not protect or enhance MTA's assets, and it would not preserve the ROW for a future trans-Hudson passenger rail connection into New York Penn Station, and would not advance New York City's land use objectives for Hudson Yards. The No Action Alternative serves as a baseline for comparison against the potential impacts of the Proposed Action. Under the No Action Alternative, the Western Rail Yard Platform and Tunnel Encasement would not be built. The existing use of the rail yard and associated LIRR facilities, as well as their maintenance regimen would continue. Therefore, the No Action Alternative includes only those projects that are necessary to keep the Western Rail Yard and the associated LIRR facilities in service and provide continued maintenance.

S.4.2 PREFERRED ALTERNATIVE

Based on the purpose and need statement, information obtained through coordination with government agencies, interest groups and the public during the scoping process, and information from previous studies, there is only one reasonable, feasible and constructible alternative meets the purpose and need statement and project objectives. Any other alternative developed or proposed by others would need to satisfy the purpose and need, would need to adhere to the same design criteria, satisfy the site constraints, and go through the same rigorous stakeholder input and review process that the Project Sponsor has completed with the project stakeholders in order to be a valid feasible alternative.

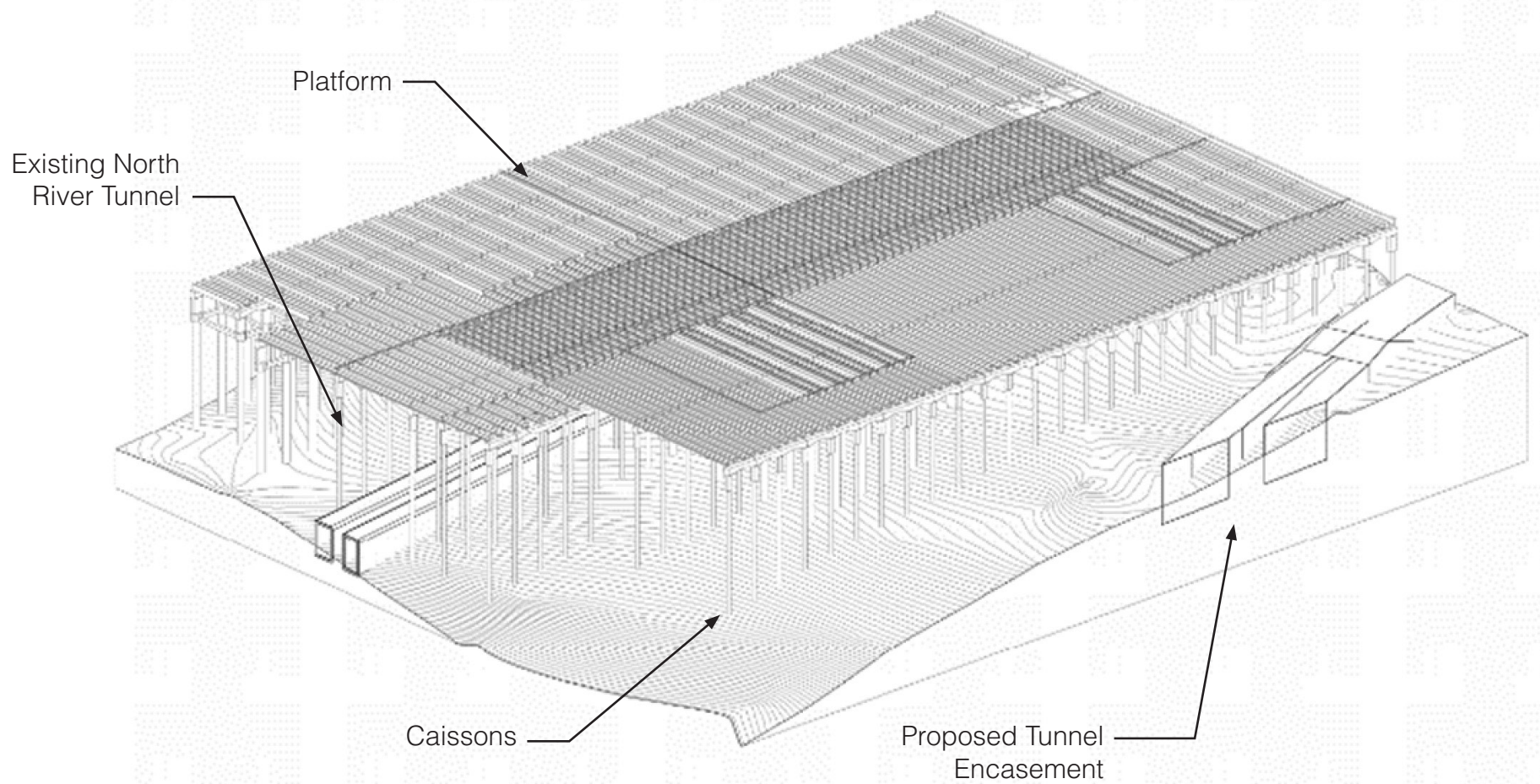
S.4.2.1 PLATFORM

The approximately 9.8-acre Platform spanning the Western Rail Yard would include deep footings and a concrete slab to cover the active rail yard below and reinforced building foundations to support the future Overbuild (see **Figure S-3**). The deep footings and a concrete slab would transfer the future building loads to the bedrock below to support the Overbuild. Approximately 400 caissons (i.e., watertight columns) would be drilled into bedrock through the water table and soil and to the rock that is up to 120 feet below the surface in certain locations.

The Platform's support columns would be threaded between the existing railroad tracks and associated infrastructure in Western Rail Yard. No existing storage tracks would be displaced and train service would be maintained during the construction of the Platform.

Platform construction would also include the modernization of LIRR support services for the yard, including new life-safety systems. The following Platform infrastructure components are necessary to support rail yard operations for LIRR:

- Ventilation system;
- Emergency electrical equipment;
- Life safety equipment (i.e., fire protection and fire alarm system);
- Crash walls (i.e., concrete barriers to redirect trains away from support columns);
- Lighting;
- Rail car cleaning services;
- Associated mechanical, electrical, and plumbing services; and
- LIRR service buildings (Replacement Block End Buildings; new Electrical Substation Building).



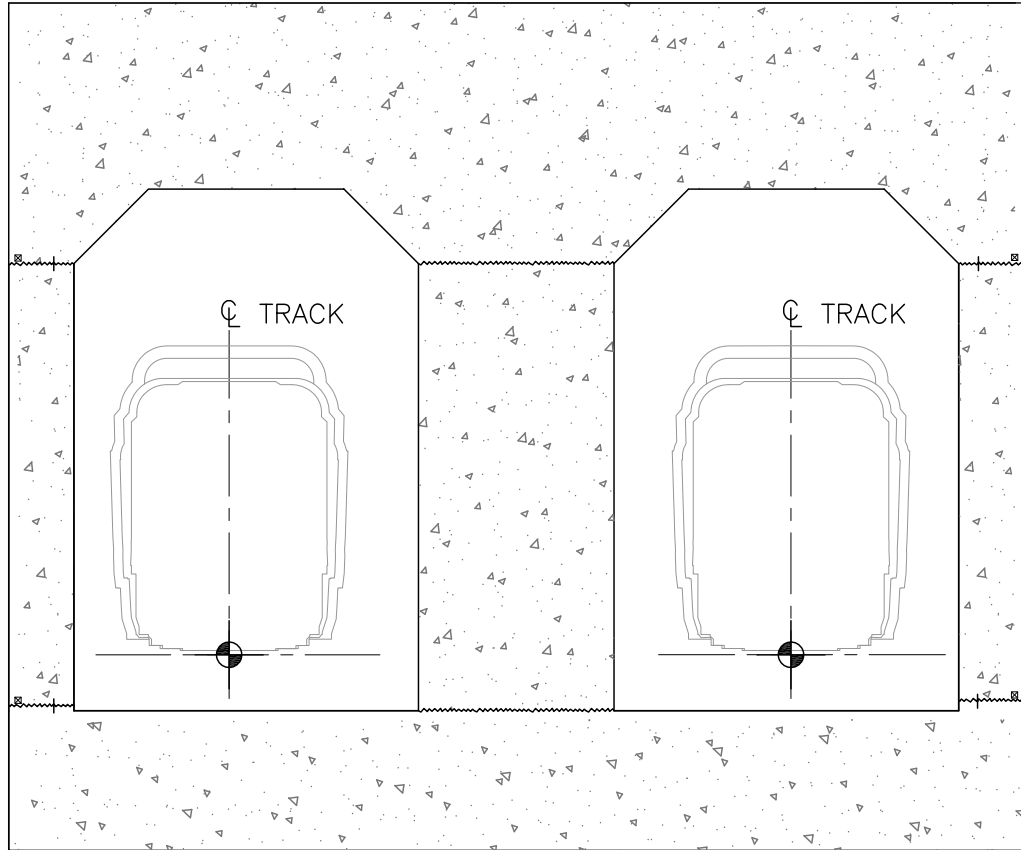
In accordance with MTA's 1989 *Master Plan, Caemmerer West Side Yard*, the placement of a Platform over the rail yard was included in the original design criteria for the yard, which MTA established to provide safety considerations and to ensure reliable train operations with a minimum of disruption of service.

Based on information from the Project Sponsor, the ventilation system would require ventilation fan plants and localized exhaust hoods for Dual Mode (DM-30) LIRR train engines that must be located within the Western Rail Yard. Ventilation of the yard is a necessary component to the Platform in order to remove the heat and emissions from train operations. As such, a heating, ventilating, and air condition (HVAC) system would need to be incorporated into the design of the Platform.

The existing LIRR support facilities in the Block End Buildings must be removed and temporarily relocated to allow for construction of the Platform. As a result, MTA-LIRR replacement facilities would then be constructed in new Block End Buildings to accommodate LIRR staff locker rooms, as well as day-to-day maintenance and inspection of train equipment. In addition to the modernization efforts, the new two-story Electrical Substation Building (approximately 20,000 square feet) would house mechanical and electrical equipment, fuel oil storage, office space and LIRR substation equipment. Besides Consolidated Edison (Con Edison) service connection and its associated electrical equipment, the Electrical Substation Building would house the Medium-Voltage Substation, Emergency Generators for the Eastern and Western Rail Yards, an Electrical Distribution Room, Western Rail Yard Fire Pump, Fire Protection Valves, Communication Rooms, as well as office and storage spaces. LIRR determined that the Replacement Block End Buildings and new Electrical Substation Building need to be in the locations proposed because these facilities must be proximate to the active rail yard to serve their intended functions, and no other suitable locations for these buildings is available at the Western Rail Yard.

S.4.2.2 TUNNEL ENCASEMENT

The Tunnel Encasement in the Western Rail Yard would start at the western edge of Eleventh Avenue, and extend across the Project Site to the northern edge of 30th Street. The tunnel box would be between 50 and 65 feet wide and between 27 and 38 feet high (see **Figure S-4**). The Tunnel Encasement would need to withstand any possible changes in load of the above ground structures to be operational for the life of the infrastructure (100-plus years). Together, the Tunnel Encasement below both rail yards (Eastern and Western Rail Yards) would preserve a total ROW of approximately 1,400 feet. It would extend underneath a portion of the High Line, and require the underpinning of the historic elevated structure during construction. No permanent operational components, such as tracks, lighting, ventilation, or electrical systems, would be constructed within the Tunnel Encasement as part of the Preferred Alternative. Minor, temporary systems, such as sump pumps, lighting, and ventilation would be installed in the Tunnel Encasement to enable its construction, which would be removed once construction is completed.



S.4.3 RELATIONSHIP OF OVERBUILD DEVELOPMENT TO PREFERRED ALTERNATIVE

The Preferred Alternative would allow for the Overbuild, a privately funded mixed-use development and public open space above the Platform. The Overbuild has been approved by CPC, and adopted by the New York City Council into the New York City Zoning Resolution, for redevelopment of the Western Rail Yard parcels, and is now as-of-right development. The Overbuild would include approximately 5.7-million gsf mixed-used development, including residential, commercial (retail and office or hotel space), a public elementary/intermediate school, publicly accessible open space, and enclosed accessory parking areas. The design of the Western Rail Yard includes a variety of uses that integrate with the surrounding neighborhoods and are consistent with the City zoning code. This construction also supports MTA's overall business plan to generate revenue to support their operations. The Preferred Alternative would be operational by 2026, and FRA has conservatively assumed the Overbuild would be completed by 2030.

S.5 SOCIAL, ECONOMIC, AND ENVIRONMENTAL EFFECTS

The Draft EIS (DEIS) and Draft Section 4(f) Evaluation identifies the impacts of the No Action Alternative and Preferred Alternative on social, economic, and environmental conditions as well as and measures to avoid, minimize, or mitigate impacts. For certain quantified analyses, such as traffic and noise, the impacts of construction activities consider a peak construction activity within the overall construction timeframe to best represent worst-case conditions during construction.

S.5.1 EFFECTS OF THE NO ACTION ALTERNATIVE

The No Action Alternative provides a baseline for which to compare potential impacts from the Proposed Action. The No Action Alternative does not meet the Purpose and Need, because it does not protect or enhance MTA's assets, and it would not preserve the right-of-way (ROW) for a future trans-Hudson passenger rail connection into New York Penn Station, and would not advance New York City's land use objectives for Hudson Yards.

S.5.2 EFFECTS OF THE PREFERRED ALTERNATIVE

Table S-1 summarizes the findings of the environmental analyses, including the benefits and adverse impacts of the Preferred Alternative and the associated avoidance, minimization, or mitigation measures that the Project Sponsor would implement to address the identified impacts. A Construction Environmental Protection Plan (CEPP) for the Preferred Alternative would incorporate the proposed project commitments identified as a result of this EIS process, as well as the established commitments being carried forward from prior environmental reviews for actions proposed for this Project (see Chapter 22, "Mitigation Measures and Project Commitments," for a full description of the CEPP and its components). A Construction Protection Plan (CPP) to avoid inadvertent damage to historic properties would be incorporated into the overarching CEPP for the Preferred Alternative.

Table S-1
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Land Use, Land Planning, and Property	<ul style="list-style-type: none"> • The Platform would allow MTA LIRR's commuter railroad storage yard and maintenance facility to be fully functional and would be consistent with the Hudson Yards Special District, as the Platform would enable development to take place above the Yard once construction of the Platform is completed. • The southern portion of the Project Site would have a utility building, which is similar to the current use of this portion of the Project Site. • The High Line (that is partially located on the Project Site) would remain an active open space upon the completion of the Preferred Alternative and would not be affected by the Preferred Alternative. • The Preferred Alternative would not hinder the construction of any of the other projects that are anticipated to be completed. • The Preferred Alternative would not require any property acquisition or displacements. • Construction of the Preferred Alternative is not anticipated to affect land uses, land planning, or existing public policies on the Project Site or within the Study Area. 	<ul style="list-style-type: none"> • Construction staging and construction activities within the Project Site and adjacent roadways. • Coordinate with LIRR on the relocation of LIRR maintenance and operations facilities on the Project Site as they would be relocated during construction. The facilities would be housed in temporary facilities under the Construction Agreement between the Project Sponsor and LIRR. • Coordinate with MTA and LIRR to provide interim facilities to enable the Yard to be functional during construction.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Transportation	<ul style="list-style-type: none"> The Platform and Tunnel Encasement would generate no new vehicular trips or parking demand once completed and operational. Construction activity could require temporary closure of curb lanes, and temporary closure, reduction in width, or relocation of sidewalks along segments of the streets and avenues bordering the Project Site. Construction activity would require temporary sidewalk closures. At no time would access to occupied buildings be closed, nor would access to the Western Rail Yard and other Caemmerer Rail Yard facilities be closed to LIRR personnel and equipment. No streets would be completely closed to vehicular traffic nor transit buses due to construction of the Preferred Alternative. However, the segment of West 33rd Street between Eleventh and Twelfth Avenues would be completely closed to non-emergency vehicles during the Preferred Alternative's construction period because of the New York City Economic Development Corporation (NYCEDC) West 33rd Street Viaduct project's construction. 	<p>The Project Sponsor would develop Maintenance and Protection of Traffic (MPT) plans for submission to New York City Department of Transportation (NYCDOT) for review and approval. Common MPT measures for a large-scale construction project in New York City would likely require:</p> <ul style="list-style-type: none"> Temporary closure of curb lanes, and temporary closure, reduction in width, or relocation of sidewalks along segments of the streets and avenues bordering the Project Site. Based on the preliminary construction logistics plan developed by the Project Sponsor, construction trucks such as dump trucks or concrete trucks are anticipated to enter the "construction area" via West 33rd Street and Eleventh Avenue throughout the duration of Platform construction, and via West 30th Street for the construction of the substation. Pedestrian circulation adjacent to the Project Site would be temporarily closed throughout Platform construction on Eleventh Avenue and West 33rd Street. However, at no time would access to occupied buildings be closed, nor would access to the Western Rail Yard and other Caemmerer Rail Yard facilities be closed to LIRR personnel and equipment. No streets would be completely closed to vehicular traffic nor transit buses due to construction of the Preferred Alternative. However, the segment of West 33rd Street between Eleventh and Twelfth Avenues would be completely closed to non-emergency vehicles during the Preferred Alternative's construction period because of the NYCEDC West 33rd Street Viaduct project's construction. The timing of the West 33rd Street reconstruction work would be coordinated with the schedule and construction of the Platform. Nearby vehicle detour routes would include West 34th Street, West 30th Street, and West 29th Street and none of the streets are likely to be disrupted by the detour, nor would other nearby projects during the construction period. In areas where temporary sidewalk closure is required, the sidewalk would be relocated to the curb lane and a barrier could be erected to separate motor vehicle traffic from pedestrian traffic. Furthermore, 34th and 29th Streets would be available as alternative pedestrian routes to 33rd and 29th Streets, respectively. In areas where access to bordering lots is not needed—along segments of the streets and avenues bordering the Project Site—the sidewalk and/or curb lane may be closed. In such instances, pedestrians would be routed to the opposite side of the street at the nearest crosswalk. Sidewalk modification may include the construction of a protective shed over segments of sidewalk bordering construction sites. The width of any relocated or modified sidewalks would be at least five feet, as specified in the 2009 Restrictive Declaration (RD).

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Air Quality, Greenhouse Gas (GHG) Emissions and Resilience	<ul style="list-style-type: none"> Air Modeling indicates no adverse air quality impacts during operation of the Preferred Alternative. Particulate Matter PM_{2.5} and carbon monoxide (CO) incremental concentrations during construction with the Preferred Alternative would be below the City's <i>de minimis</i> criteria for these pollutants. 	<p>The Project Sponsor would implement measures to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building on, the Project Sponsor would implement an emissions reduction program to minimize the air quality effects from construction under the Preferred Alternative, consisting of the following components:</p> <ul style="list-style-type: none"> Clean Fuel. Only ULSD fuel would be used for all diesel engines throughout the construction site. Diesel Equipment Reduction. Electrically powered equipment such as welders and saws would be used instead of diesel-powered versions of that equipment, to the extent feasible and practicable. Dust Control Measures. Contract specifications would require a dust control plan, including a watering program, to minimize dust emissions from construction activities. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the Project Site and water sprays would be used for all demolition, excavation, and transfer of soils to ensure that materials would be dampened as necessary to avoid the suspension of dust into the air; Idling Restriction. As required by local law, all stationary vehicles on roadways adjacent to the Project Site would be prohibited from idling for more than three minutes. The idling restriction excludes vehicles that are using their engines to operate a loading, unloading, or processing device (e.g., concrete-mixing trucks) or otherwise required for the proper operation of the engine. Engine Retrofits. Non-road diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the Preferred Alternative), including but not limited to, concrete mixing and pumping trucks would utilize the best available technology (BAT) (e.g., diesel particulate filters) for reducing diesel particulate matter emissions. Utilization of Newer Equipment. USEPA's Tier 1 through 4 standards for non-road engines regulate the emission of criteria pollutants from new engines, including PM, CO, NO_x, and hydrocarbons (HC). All diesel-powered non-road construction equipment with a power rating of 50 hp or greater would meet at least the Tier 3 emissions standard.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Noise and Vibration	<ul style="list-style-type: none"> Modeling shows no indication of adverse impacts from operation of the Preferred Alternative related to noise or vibration. Vibration from construction would not exceed the Federal Transit Administration (FTA) guidance manual thresholds for damage at any building, as confirmed by vibration monitoring at the High Line when necessary, and would not exceed the FTA guidance manual thresholds for human annoyance over an extended duration at any receptor Noise from construction would not have the potential to result in exceedances of the general construction noise assessment screening-level thresholds included in the FTA guidance manual. However, construction of the Preferred Alternative would have the potential to result in noise impacts based on CEQR thresholds at the High Line within approximately 630 feet of the nearest work area, residential buildings along Eleventh Avenue between 29th and 33rd Streets, along 30th Street between Eleventh and Twelfth Avenues, and along West 33rd Street between Tenth and Eleventh Avenues. 	<ul style="list-style-type: none"> Noise from construction equipment would comply with New York City noise emission standards. These standards mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards, and construction material be handled and transported in such a manner to not create unnecessary noise. Construction of the Preferred Alternative would include sufficient mitigation to meet the New York City Noise Control Code construction noise limit of an L_{max} of 85 dB(A) at the exteriors of any adjacent residential properties. The Project Sponsor would be required to obtain NYCDOB approval for construction outside of weekdays 7 AM to 6 PM, which is prohibited by the NYC Noise Control Code. To the extent practicable given space constraints at the work sites, construction would use acoustical noise tent and/or enclosures surrounding hoe rams, jackhammers, or pavement breakers that can provide up to 15 dB(A) of noise reduction during any demolition activities. For additional noise reduction, jackhammer noise mufflers that can provide up to an additional 10 dB(A) of noise reduction can also be used. To minimize the noise from the backup warning alarms on trucks, vehicles would be routed through the construction sites to minimize the use of alarms. In addition, vehicles would also be equipped with Occupational Safety and Health Administration (OSHA)-approved quieter backup alarms. Any blasting activities associated with excavation of rock during Tunnel Encasement would be coordinated and conducted with permission from the Fire Department of the City of New York (FDNY). The Project Sponsor would provide a blasting schedule to neighboring building owners and occupants. Construction vibration monitoring would be required during blasting activities to ensure that vibration does not exceed a level that could result in damage to any nearby buildings or structures. Consistent with the protection and monitoring procedures developed for the High Line, construction vibration monitoring would be required whenever construction would occur within 90 feet of the High Line structure to ensure that construction activities do not result in vibration levels that would be capable of causing damage.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Noise and Vibration (cont'd)		<ul style="list-style-type: none"> The Project Sponsor would develop a CPP for the construction of the Platform and Tunnel Encasement in order to protect the North River Tunnel (NRT). The CPP would be required to meet the guidelines set forth in the NYCDOB <i>TPPN #10/88, the Protection for Landmarked Buildings</i> guidance document of the LPC, and the National Park Service's <i>Preservation Tech Notes, Temporary Protection #3: Protecting a Historic Structure during Adjacent Construction</i>. The Project Sponsor would incorporate sufficient noise control measures in the final design of the ventilation system plans to ensure operation of the Preferred Alternative would be in compliance with the NYCNCC noise limits at all surrounding residential receptors
Cultural Resources	<ul style="list-style-type: none"> The Preferred Alternative could have potential inadvertent effects to the NRT and High Line during construction. 	<ul style="list-style-type: none"> To avoid the potential for damage to the NRT from vibration produced by caisson drilling, the caissons will be located outside of Amtrak's influence line exclusion zone. FRA would include a condition in the ROD to require the Project Sponsor to develop a Construction Protection Plan (CPP) (as part of the CEPP) for the construction of the Platform and Tunnel Encasement in order to protect the NRT and High Line. The CPP would be required to meet the guidelines set forth in the NYCDOB <i>TPPN #10/88, the Protection for Landmarked Buildings</i> guidance document of the NYCLPC, and the National Park Service's <i>Preservation Tech Notes, Temporary Protection #3: Protecting a Historic Structure during Adjacent Construction</i>. The CPP(s) would set forth the specific protection and monitoring measures that would be implemented during construction to avoid inadvertent damage to these historic properties and would be implemented in coordination with NYSHPO and NYCLPC.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Parks and Recreation Areas	<ul style="list-style-type: none"> Construction and operation of the Preferred Alternative would not eliminate or diminish any parks, open spaces, or recreation areas, or change the use of any resource so that it no longer serves the same user population. The Preferred Alternative would have potential construction-related effects to the High Line. 	<ul style="list-style-type: none"> FRA would require the Project Sponsor to develop a CPP (as part of the CEPP) for the construction of the Platform and Tunnel Encasement in order to protect the High Line. FRA is consulting with NYC Parks to determine the appropriate steps to protect High Line park users and the agency's ability to maintain the High Line. FRA proposes the Project Sponsor would consult with NYC Parks regarding those aspects of the Platform design that relate to the High Line. Design plans for the Platform would be submitted at the preliminary and pre-final design stages. If NYC Parks identifies substantive concerns with maintenance and operations access, the Project Sponsor would continue coordination with NYC Parks to mitigate those concerns.
Contaminated Materials	<ul style="list-style-type: none"> Potential to encounter contaminated soil or groundwater during construction. Presence of potential building materials, equipment, or utilities containing suspect polychlorinated biphenyls (PCBs), lead-based paint (LBP), and/or asbestos-containing materials (ACM). 	<ul style="list-style-type: none"> A Subsurface (Phase II) Investigation would be conducted in areas of proposed disturbance to characterize subsurface conditions. Implementation of appropriate health and safety precautionary and remedial measures including the implementation of a site-specific remedial action plan (RAP) and construction health and safety plan (CHASP) in accordance with the RD. Information in the NY Spills database indicated that additional remedial activities would be required to address known or potential residual contamination on the southwestern portion of the Project Site related to Spill #1802063 and on the northwestern portion of the Project Site under the New York State Department of Environmental Conservation (NYSDEC) State Hazardous Waste Site (SHWS) program (ID #231083). Any underground storage tanks (USTs) encountered during redevelopment would be properly closed and removed, along with any contaminated soil, in accordance with federal, state, and local regulations, including NYSDEC for registration and, if applicable, spill reporting. During any future subsurface disturbance, excavated soil would be handled and disposed of properly in accordance with all applicable regulatory requirements, with spill reporting as required. Transportation of material leaving the Project Site for off-site disposal would be in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Contaminated Materials (cont'd)		<ul style="list-style-type: none"> • Appropriate permanent ventilation systems would be installed during construction of the Preferred Alternative, as necessary, (to be operated post-construction) for areas under the Platform at the Project Site in accordance with LIRR's engineering design criteria for yard ventilation. • The appropriate vapor mitigation systems would be installed to protect buildings on the terra firma portion of the Project Site. • Any building materials, equipment, or utilities containing suspect PCBs, LBP, and/or ACM would be properly handled and disposed of, in accordance with the applicable regulations, prior to demolition or construction which may disturb them. • Dewatering activities would be conducted in accordance with New York City Department of Environmental Protection (NYCDEP) requirements, including pre-treatment as required.
Utilities and Energy	<ul style="list-style-type: none"> • During operation of the Preferred Alternative, no additional demand for existing utilities and energy is expected. <p>During construction of the Platform, the Project Sponsor would make temporary infrastructure improvements to maintain utility services on the rail yard.</p>	<ul style="list-style-type: none"> • Temporary and permanent on-site sewer improvements would be required to maintain utility services. The existing storm sewers on the Project Site would be diverted to the sanitary sewer system to accommodate the Platform support piles, and temporary drainage provision (such as pits and pumps) would be installed as temporary bypasses if needed during construction to maintain stormwater drainage in the rail yard. The existing sanitary sewer system and potable water mains would be relocated in order to avoid conflicts with the Platform support piles; however, sanitary service and water supply to the rail yard would continue to function during and after construction. In addition, the alternating currents (AC) duct banks that service the rail yard's lighting would be removed or abandoned during construction of Platform foundations, with temporary power and lighting system provided to maintain lighting on the rail yard during construction. As needed to avoid conflicts with the Platform support piles, the Project Sponsor would reroute the direct current (DC) feeders that supply energy to the rail yard's traction power system around foundations in compliance with LIRR practices and standards.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Utilities and Energy (cont'd)		<ul style="list-style-type: none"> The storm sewer currently serving the rail yard would continue to operate following construction of the Platform in order to convey stormwater collected on the terra firma portion of the Project Site; this sewer operates in accordance with a municipal separate storm sewer systems (MS4) permit, and would continue to meet the permit requirements (no additional detention and/or onsite treatment measures are required). The drainage system in the railyard and on the Platform would discharge to the NYCDEP sewers adjacent to the Project Site and would be designed to meet all NYCDEP permit requirements.
Soils and Geology	<ul style="list-style-type: none"> Excavation of soils and bedrock would not alter soils or geological typologies, characteristics or features in the Study Area. 	<ul style="list-style-type: none"> A CEPP would provide a detailed outline of environmental protection commitments and any other procedures to be implemented during the construction phase to protect sensitive resources that may be affected during construction. This includes a fugitive dust control plan; dewatering plan; noise mitigation plan; coordination with MTA and LIRR; and utility protection plan.
Water and Natural Resources	<ul style="list-style-type: none"> Would not displace quality ecological communities or habitat. No impact to groundwater. 	<ul style="list-style-type: none"> To avoid exposing construction workers and the general public to existing groundwater contaminants and to minimize potential adverse impacts to groundwater resources, the Project Sponsor would perform demolition, disposal, excavation, dewatering, and other construction activities in accordance with all applicable federal, state, and local regulations and guidelines. As such, the Project Sponsor would implement a site-specific CHASP during ground disturbance to protect workers, the public, and the environment from exposure to groundwater contaminants. To minimize potential adverse impacts to NYSDEC littoral zone tidal wetlands of the Hudson River due to discharge of sediment during construction, the Project Sponsor would implement the erosion and sediment control measures contained in the stormwater pollution prevention plan (SWPPP) prepared for the Project. To minimize potential adverse impacts to water quality and aquatic biota of the Hudson River during construction, the Project Sponsor would treat all groundwater recovered during dewatering in accordance with NYCDEP requirements prior to discharge to the municipal sewer. Additionally, to minimize the potential for discharge of sediment to the Hudson River during construction, the Project Sponsor would implement erosion and sediment control measures contained in the SWPPP prepared for the Project in accordance with SPDES requirements.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
<p>Coastal Zone Consistency</p>	<ul style="list-style-type: none"> Promotes policies of the Waterfront Revitalization Plan. 	<p>The Project Sponsor would implement erosion and sediment control measures identified in the SWPPP prepared in accordance with a SPDES permit for the Preferred Alternative.</p> <ul style="list-style-type: none"> The Project Sponsor would pump, test, and treat any groundwater recovered during dewatering of excavation sites before disposal to the New York City stormwater or combined sewer system under an NYCDEP Discharge Permit from the Bureau of Wastewater Treatment and in conformance with applicable discharge limits. The Project Sponsor would treat any groundwater recovered during dewatering activities prior to discharge to the Hudson River through existing stormwater outfalls within the Western Rail Yard in accordance with NYSDEC requirements. The Project Sponsor would implement the following remedial and protective measures to avoid, minimize, or mitigate exposure pathways to these potential contaminants during construction and operation: A Phase II Investigation would be conducted in areas of proposed disturbance (above the bedrock interface) to characterize subsurface conditions. Prior to any excavation or construction activity, the Project Sponsor would prepare a site-specific RAP and CHASP. Remedial activities in areas of known spills would continue to be conducted in coordination with NYSDEC and New York City Office of Environmental Remediation (NYCOER), as required. Any USTs encountered during redevelopment would be properly closed and removed, along with any contaminated soil, in accordance with federal, state, and local regulations, including NYSDEC for registration and, if applicable, spill reporting. During subsurface disturbance, excavated soil would be handled and disposed of properly in accordance with all applicable regulatory requirements, with spill reporting as required. Transportation of material for off-site disposal would be in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Coastal Zone Consistency (cont'd)		<ul style="list-style-type: none"> The appropriate vapor mitigation systems would be installed to protect buildings on the terra firma portion of the Project Site. If required, the design of new buildings would consider soil vapor mitigation measures to prevent any volatile contaminants that may remain present in the soil and groundwater from migrating into the new buildings. Any building materials, equipment, or utilities containing suspect PCBs, LBP, and/or ACM would be properly handled and disposed of, in accordance with the applicable regulations, prior to demolition or construction which may disturb them. Appropriate permanent ventilation systems would be installed during redevelopment (to be operated post-construction) for areas under the Platform at the Project Site in accordance with LIRR's engineering design criteria for yard ventilation.
Socioeconomics	<ul style="list-style-type: none"> No direct displacement of any residential or business populations. Would facilitate substantial economic opportunities. Construction activities associated with the Preferred Alternative would generate substantial economic benefits for the local and regional economies in terms of jobs supported, labor income, and value added. 	<ul style="list-style-type: none"> The Project Sponsor has committed to provide interim facilities to enable the railyard to be fully functional during construction. The Project Sponsor would develop MPT plans to ensure the safety of pedestrian, bicyclist, and vehicle circulation near the Project Site during construction of the Preferred Alternative as required by NYCDOT.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Public Health	<ul style="list-style-type: none"> Construction of the Preferred Alternative includes noise and air emissions, and potential to encounter contaminated materials. 	<ul style="list-style-type: none"> The Project Sponsor would install appropriate permanent ventilation systems during construction of the Preferred Alternative (to be operated post-construction) for areas under the Platform at the Project Site, in accordance with LIRR's engineering design criteria for yard ventilation. During any subsurface disturbance, the Project Sponsor would handle and dispose of excavated soil properly in accordance with all applicable regulatory requirements, with spill reporting as required. The Project Sponsor would treat any groundwater recovered during dewatering in accordance with NYCDEP requirements prior to discharge to the municipal sewer. The Project Sponsor would transport all material leaving the Site for off-site disposal in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc. The Project Sponsor would incorporate sufficient noise control measures in the final design of the ventilation system plans to ensure compliance with the NYCNCC at all surrounding residential receptors Construction of the Preferred Alternative would include sufficient mitigation to meet the NYCNCC construction noise limit of an L_{max} of 85 dB(A) at the exteriors of any adjacent residential properties. The Project Sponsor would consult with NYC Parks and Friends of the High Line to determine the necessary steps to protect users of the High Line during construction.
Environmental Justice	<ul style="list-style-type: none"> The Preferred Alternative would overall result in beneficial effects. It would support local plans for development over the Project Site and would provide benefits to the transit system by providing cover above the existing Western Rail Yard and preserving right-of-way for future passenger rail service improvements. The Preferred Alternative would not result in any operational adverse effects to environmental justice populations. Noise and vibration from construction activities would be temporarily disruptive at portions of the High Line, a linear park adjacent to the Project Site that serves as an attraction to the region, including environmental justice populations within the Study Area. 	<p>Construction activities of the Preferred Alternative, including vibration, also have the potential to result in structural impacts to the High Line (a recreational and historic resource); however, measures would be implemented by the Project Sponsor (as described above for Noise and Vibration, Cultural Resources, and Parks and Recreation Areas) to avoid adverse impacts, including development and implementation of a CEPP. With these measures in place, adverse construction impacts would be avoided, including to environmental justice populations.</p>

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Section 4(f)	<ul style="list-style-type: none"> FRA has concluded that noise levels at portions of the High Line during construction activities for the Preferred Alternative and the temporary underpinning of the High Line would be a <i>de minimis</i> Section 4(f) impact. To ensure that potential construction-related effects on the NRT and the High Line are not adverse, the Project Sponsor would be required by FRA to develop and implement a Construction Protection Plan (as part of the CEPP) for the construction of the Platform and Tunnel Encasement. 	<p>FRA would require the Project Sponsor to develop a CPP (as part of the CEPP) for the construction of the Platform and Tunnel Encasement in order to protect the High Line and the NRT.</p> <p>FRA is consulting with NYC Parks to determine the appropriate steps to protect High Line park users and the agency's ability to maintain the High Line. FRA proposes the Project Sponsor would consult with NYC Parks regarding those aspects of the Platform design that relate to the High Line. Design plans for the Platform would be submitted at the preliminary and pre-final design stages. If NYC Parks identifies substantive concerns with maintenance and operations access, the Project Sponsor would continue coordination with NYC Parks to mitigate those concerns.</p> <p>The following practices would be used to the extent feasible and practicable to reduce noise levels associated with construction of the Preferred Alternative:</p> <ul style="list-style-type: none"> Noise from construction equipment would comply with New York City noise emission standards. These requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards, and construction material be handled and transported in such a manner to not create unnecessary noise. Construction of the Preferred Alternative would include sufficient mitigation to meet the NYCNCC construction noise limit of an L_{max} of 85 dB(A) at the exteriors of any adjacent residential properties. The Project Sponsor would be required to obtain NYCDOB approval for construction outside of weekdays 7 AM to 6 PM, which is prohibited by the NYCNCC.. The Project Sponsor expects discretionary approval would be granted to reduce interference with LIRR operations. To the extent practicable given space constraints at the work sites, construction would use acoustical noise tent and/or enclosures surrounding hoe rams, jackhammers, or pavement breakers that can provide up to 15 dB(A) of noise reduction during any demolition activities. For additional noise reduction, jackhammer noise mufflers that can provide up to an additional 10 dB(A) of noise reduction can also be used.

Table S-1 (cont'd)
Summary of Effects of the Preferred Alternative

Environmental Category	Beneficial and Adverse Effects	Measures to Avoid, Minimize, or Mitigate Impacts
Section 4(f) (cont'd)		<ul style="list-style-type: none">• To minimize the noise from the backup warning alarms on trucks, vehicles would be routed through the construction sites to minimize the use of alarms. In addition, vehicles would also be equipped with OSHA-approved quieter backup alarms.• Any blasting activities associated with excavation of rock during Tunnel Encasement would be coordinated and conducted with permission from the FDNY. The Project Sponsor would provide a blasting schedule to neighboring building owners and occupants. Construction vibration monitoring would be required during blasting activities to ensure that vibration does not exceed a level that could result in damage to any nearby buildings or structures.• Consistent with the protection and monitoring procedures developed for the High Line, construction vibration monitoring would be required whenever construction would occur within 90 feet of the High Line structure to ensure that construction activities do not result in vibration levels that would be capable of causing damage.

S.5.2.1 INDIRECT, CUMULATIVE, AND OTHER IMPACTS

Indirect effects are those that are “caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable” (40 CFR § 1508.8). For the Preferred Alternative, this includes the indirect effect associated with the implementation of an as-of-right mixed-use development above the Platform and Tunnel Encasement (Overbuild). Cumulative impacts result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions (40 CFR § 1508.7).

FRA conducted an analysis of the potential indirect effects and cumulative impacts for both construction and operation of the Preferred Alternative. The 2009 SEQRA/CEQR FEIS comprehensively analyzed the Overbuild, which New York City subsequently approved. FRA summarized and described the program as set forth in the 2009 approvals and the environmental findings from the 2009 SEQRA/CEQR FEIS that support the approvals. Throughout this EIS, references to the Overbuild are included in the context of that development being a previously approved project (as analyzed in the 2009 SEQRA/CEQR FEIS) that would be an indirect consequence of the Preferred Alternative, with associated indirect effects. The analysis looked at the findings of the 2013 FRA EA/FONSI and the 2014 SEA/FONSI for the Concrete Casing in the Hudson Yards to determine indirect and cumulative effects associated with the Tunnel Encasement component of the Preferred Alternative.

Table S-2 provides a summary of the Indirect Effects of the operation and construction of the Preferred Alternative. The Preferred Alternative is not expected to result in cumulative impacts during operation of the project. Construction of the Preferred Alternative would overlap with other construction projects within the Study Area. A cumulative analysis was completed for the following technical areas: Transportation; Air Quality, Greenhouse Gas Emissions, and Resilience; Noise and Vibration; Cultural Resources; and Parks and Recreation. With project commitments and best management practices (BMPs) for construction, no cumulative construction impacts are anticipated.

Table S-2
Summary of Indirect Effects

Resource Categories	Indirect Effects
Land Use, Land Planning, and Property	The indirect effects of the operation and construction of the Preferred Alternative would be consistent with land planning, zoning, and local and regional plans and policies.
Transportation	<p><u>Operation</u></p> <ul style="list-style-type: none"> The indirect effects of the operation of the Preferred Alternative would include increasing vehicular traffic demand in the Study Area. The Preferred Alternative would not result in any indirect parking effects. The Preferred Alternative would indirectly increase pedestrian volumes given the features and function of the Overbuild. No indirect effects from the Preferred Alternative on subway station elements in the Study Area are anticipated. The indirect effects of the Preferred Alternative would add demand for bus ridership. <p><u>Construction</u></p> <ul style="list-style-type: none"> Indirect construction effects of the Preferred Alternative would be related to the construction of the Overbuild. MPT plans to be developed and submitted to NYCDOT for approval.
Air Quality, Greenhouse Gas Emissions, and Resilience	<p><u>Operation</u></p> <ul style="list-style-type: none"> Emissions from increased traffic or changed traffic patterns as an indirect effect of the Preferred Alternative would not cause or exacerbate a violation of NAAQS or cause an exceedance of NYSDEC/NYCDEP significant threshold values (STVs) for PM_{2.5} or of the NYCDEP de minimis criteria for CO, and thus would not have an adverse air quality impact. <p><u>Construction</u></p> <ul style="list-style-type: none"> The indirect construction impacts of the Preferred Alternative would not have an adverse impact on air quality. To ensure that the construction of the Overbuild would result in the lowest practicable diesel PM emissions, a state-of-the-art emissions reduction program would be implemented for construction activities.
Noise and Vibration	<p><u>Operation</u></p> <ul style="list-style-type: none"> The indirect effects on noise levels due to vehicular traffic associated with the Preferred Alternative would also not rise to the level of a significant impact. <p><u>Construction</u></p> <ul style="list-style-type: none"> The indirect construction impacts of the Preferred Alternative would not have an adverse impact on noise and vibration. Project commitments would ensure measures and construction procedures would be implemented to avoid an adverse impact related to construction noise and vibration.
Cultural Resources	<p><u>Operation</u></p> <ul style="list-style-type: none"> The Overbuild, which is an indirect consequence of the Preferred Alternative, could result in impacts to cultural resources. To ensure that the effects to the High Line that are an indirect effect of the Preferred Alternative are not adverse, FRA would require the Project Sponsor to meet all the conditions of the Letter of Resolution (LOR), which includes review of Overbuild design by NYSHPO and NYCLPC. <p><u>Construction</u></p> <ul style="list-style-type: none"> With the mitigation measures required in the RD as a result of the 2009 SEQRA/CEQR FEIS (meeting the conditions of the LOR), no significant adverse impacts to cultural resources are anticipated as an indirect effect of the Preferred Alternative.

Table S-2 (cont'd)
Summary of Indirect Effects

Resource Categories	Indirect Effects
Parks and Recreation	<p>Operation</p> <ul style="list-style-type: none"> The Preferred Alternative would have no indirect effects on parks and recreation areas. <p>Construction</p> <ul style="list-style-type: none"> The indirect construction impacts of the Preferred Alternative would not have an adverse impact on parks and recreation with the mitigation measures required as a result of the 2009 SEQRA/CEQR FEIS.
Aesthetics and Visual Quality	The operation and construction of the Preferred Alternative are not anticipated to have indirect adverse impacts on urban design and visual resources (i.e., aesthetics and visual quality).
Contaminated Materials	The operation and construction of the Preferred Alternative are not anticipated to result in an indirect adverse impact on hazardous materials with the implementation of remediation and protective measures.
Utilities and Energy	<p>Operation</p> <ul style="list-style-type: none"> The operation of the indirect effects of the Preferred Alternative would result in increased demands on New York City's water supply and sanitary sewage treatment systems but the additional demand would be negligible on utility infrastructure and services. <p>Construction</p> <ul style="list-style-type: none"> The indirect construction impacts of the Preferred Alternative is not anticipated to impact provision of utility services to the Project Site, including water supply, wastewater, and stormwater services; solid waste and sanitation services; and energy.
Soils and Geology	The operation and construction of the indirect effects of the Preferred Alternative would result in minimal disturbance to soils at the Project Site and would not alter the geological character or integrity.
Water and Natural Resources	<p>Operation</p> <ul style="list-style-type: none"> The indirect effects of the Preferred Alternative would not adversely affect flooding of areas adjacent to the Project Site. The indirect effects of the Preferred Alternative Overbuild would not result in adverse impacts on designated NYSDEC littoral zone tidal wetlands in the Hudson River. The indirect effects of the Preferred Alternative would not result in adverse impacts on groundwater, terrestrial resources, threaten and endangered species, or aquatic resources. The indirect effects of the Preferred Alternative would not result in adverse impacts on groundwater. <p>Construction</p> <ul style="list-style-type: none"> Construction of the Overbuild, which is an indirect consequence of the Preferred Alternative, is not anticipated to result in an adverse impact to natural resources with implementation of commitments related to construction practices.
Coastal Zone Consistency	<p>Operation</p> <ul style="list-style-type: none"> The indirect effects of the Preferred Alternative would be consistent with the Local Waterfront Revitalization Plan (LWRP) by supporting its policies. <p>Construction</p> <ul style="list-style-type: none"> With implementation of proposed project commitments, the indirect construction effects of the Preferred Alternative would be consistent with the LWRP.

Table S-2 (cont'd)
Summary of Indirect Effects

Resource Categories	Indirect Effects
Socioeconomics	<p>Operation</p> <ul style="list-style-type: none"> The indirect effects of the Preferred Alternative, the Overbuild, would not result in adverse impacts due to indirect residential displacement. The Preferred Alternative would not result in an adverse impact due to indirect business displacement within the Study Area, and would not adversely affect any specific industries. The new population that would indirectly result from the Overbuild would not adversely affect public schools, public libraries, police, fire, EMS, or health care facility services in the Study Area. The projected increase in demand for publicly funded child care services could adversely affect services, but would be mitigated through the RD. <p>Construction</p> <ul style="list-style-type: none"> The indirect construction effects of the Preferred Alternative would result in temporary disruptions in the surrounding area. However, such disruptions would not adversely affect socioeconomic conditions.
Public Health	The indirect effects of the operation and construction of the Preferred Alternative are not anticipated to result in any adverse effects to air quality, noise, contaminated materials, or water quality, and as a result would not result in any adverse public health impacts. Implementation of commitments for noise, air quality, and contaminated materials would mitigate, either in part or in whole, any adverse impacts.
Environmental Justice	The indirect effect of the operation and construction of the Preferred Alternative would not result in disproportionately high and adverse effects on environmental justice populations.

In accordance with NEPA and the CEQ implementing regulations, FRA also considered the irreversible or irretrievable commitment of resources that would occur if the Preferred Alternative were to be constructed, and of the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity, as summarized below (see Chapter 20 for more details).

S.5.2.1.1 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Construction of the Preferred Alternative would require the irreversible and irretrievable commitment of building materials, including construction materials such as concrete, steel, and aggregate. The Preferred Alternative would also consume energy in the form of fossil fuels and electricity during the construction and operation of the Platform, its associated infrastructure, and Tunnel Encasement. These materials are available and their use for the Preferred Alternative would not have adverse impacts on their continued availability for other purposes. In addition to materials, funding and human labor would be required to design and build the Preferred Alternative.

The various chapters of this EIS describe the measures to be implemented to avoid, minimize, and mitigate adverse impacts to resources, including the use of sustainable approaches to conserve and reuse resources whenever possible.

S.5.2.1.2 RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Short-term effects on the environment typically result from construction impacts. Long-term effects relate to the maintenance and enhancement of long-term productivity, including consistency of a project with local and regional economic, social, planning, and sustainability objectives.

S.5.2.1.2.1 SHORT-TERM USES

Construction of the Preferred Alternative would have greater short-term effects on the environment than the No Action Alternative; however, these effects would be temporary, and any construction-related environmental impacts would be avoided, minimized, and mitigated wherever practicable.

S.5.2.1.2.2 LONG-TERM PRODUCTIVITY

The No Action Alternative would likely result in negative effects to long-term productivity as it would not support the creation of additional new capacity for real estate development, nor would it preserve the right-of-way through the Western Rail Yard to support the future construction of a trans-Hudson passenger connection into New York Penn Station. In contrast, the Preferred Alternative would support the provision of developable land area that would generate revenue and modernize state-of-the-art life safety systems for the entire Western Rail Yard, in addition to preserving the right-of-way. Therefore, the Preferred Alternative would result in benefits to long-term productivity.

S.5.2.1.2.3 SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

Based on the information presented above, the localized short-term impacts that would result from construction of the Preferred Alternative would be temporary during the construction period. The long-term benefits to productivity of the Preferred Alternative are greater than the short-term effects on the environment.

S.6 SECTION 106 CONSULTATION

Section 106 of the National Historic Preservation Act (NHPA) (54 USC § 306108) requires Federal agencies to take into account the effects of their undertakings on historic properties that are listed in or meet the eligibility criteria for listing in the National Register of Historic Places (NRHP) and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. Section 106 also requires that agency officials work with the State Historic Preservation Officer (NYSHPO) to identify parties to participate in the Section 106 process (Consulting Parties). Consulting parties may include local governments, Federally recognized Indian tribes, and individuals and organizations with a demonstrated interest in the project due to the nature of their legal or economic relationship to the project or affected historic properties, or their concern with the project's effects on historic properties.

No historic properties are located within 90 feet of construction for the Preferred Alternative, with the exception of the NRT and the High Line. FRA would include conditions as part of its environmental decision regarding the project, i.e., in the ROD for the EIS in accordance with NEPA, to ensure that potential construction-related effects to the NRT and the High Line are not adverse. The condition in the ROD would require the Project Sponsor to develop a CPP for the construction of the Platform and Tunnel Encasement in order to protect the NRT and High Line. The CPP for the protection of the NRT and the High Line would be incorporated into the overarching CEPP that would be developed for the Preferred Alternative. FRA has determined, and NYSHPO concurred in a letter dated February 11, 2021, that the operation and construction of the Preferred Alternative would not result in any adverse effects to historic properties, provided the Project Sponsor follows the conditions noted above.

S.7 DRAFT SECTION 4(F) EVALUATION

A Draft Section 4(f) Evaluation documents and evaluates the Preferred Alternative in terms of its compliance with the requirements of Section 4(f) as codified at 23 USC 138 and 49 USC 303. Section 4(f) governs the use of land from publicly owned parks, recreation areas, and wildlife and waterfowl refuges and publicly or privately owned significant historic sites that may be affected by projects approved or funded by the USDOT. The requirements of Section 4(f) apply to the operating administrations of USDOT, including FRA, the Federal Transit Administration (FTA), and the Federal Highway Administration (FHWA).

FRA has concluded that noise levels at portions of the High Line during construction activities for the Preferred Alternative and the temporary underpinning of the High Line would be a *de minimis* Section 4(f) impact. Because the High Line is both a historic site and a park resource, FRA must find that the criteria for both parks and historic sites are met in order to reach a conclusion that the impacts are *de minimis*. NYSHPO is the official with jurisdiction for the High Line as a historic site; NYC Parks is the official with jurisdiction for the High Line as a park resource. As noted above, FRA has determined there is no adverse effect to the historic property under Section 106, provided the Project Sponsor follows certain conditions. In a letter dated February 11, 2021, NYSHPO concurred with the Section 106 finding, and FRA is using this concurrence for the *de minimis* finding. In addition, after taking into account measures to avoid, minimize, and mitigate harm to the High Line park, FRA proposes that the project would not adversely affect the activities, features, and attributes of the park. FRA has consulted with NYC Parks and informed them of FRA's intent to find the impacts are *de minimis*. Coordination with NYC Parks is ongoing at this time.

Therefore, after public notice and the opportunity to comment on the proposed finding through the public review period for this DEIS and Draft Section 4(f) Evaluation, FRA intends to make a *de minimis* impact determination for the High Line.

S.8 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

Agency and public involvement are an integral part of the transportation planning, environmental review, and environmental permitting processes. Accordingly, FRA is providing many opportunities for open, collaborative, and meaningful agency and public participation for the project. FRA developed the public and agency participation program for the project in compliance with legislation and policies that guide compliance with the stakeholder involvement requirements of NEPA.

FRA hosted agency coordination meetings to gather feedback from the agencies on the Preferred Alternative on July 21, 2020, and proposed methodologies on October 15, 2020. FRA notified the participating agencies of the availability of the key environmental review documents (e.g., Scoping Document, Scoping Summary Report, and DEIS and Draft Section 4(f) Evaluation) and provided comment opportunities.

FRA conducted a virtual public scoping process for the Project. As part of the virtual public scoping process, FRA developed and posted a narrated scoping presentation for the Project, in both English and Spanish. These scoping presentations were available on the Project website on July 1, 2020, and will remain on the Project website for the duration of the EIS process. FRA also held other Project meetings virtually, including Section 106 Consulting Party meetings, and encouraged submission of scoping comments for the Project and other documents electronically.

FRA has informed and solicited feedback from the public; encouraged open discussion of details and issues on the Preferred Alternative; and provided opportunities for comments and questions. Information about the Proposed Action and the opportunity to comment at specific milestones of the NEPA Process remain available at the Federal Docket (Regulations.gov, Docket No. FRA-2020-0039), and the Project website (www.westernrailyardinfrastructure.com).

S.2 PUBLIC REVIEW AND COMMENT ON DEIS

FRA is soliciting public comments on this DEIS and Draft Section 4(f) Evaluation through the end of the comment period. This DEIS and Draft Section 4(f) Evaluation is available on the Federal Docket system (Regulations.gov, Docket No. FRA-2020-0039), the project website at www.westernrailyardinfrastructure.com, and at the local repositories (Community Board 4 and 5 offices by appointment) listed on the project website. *