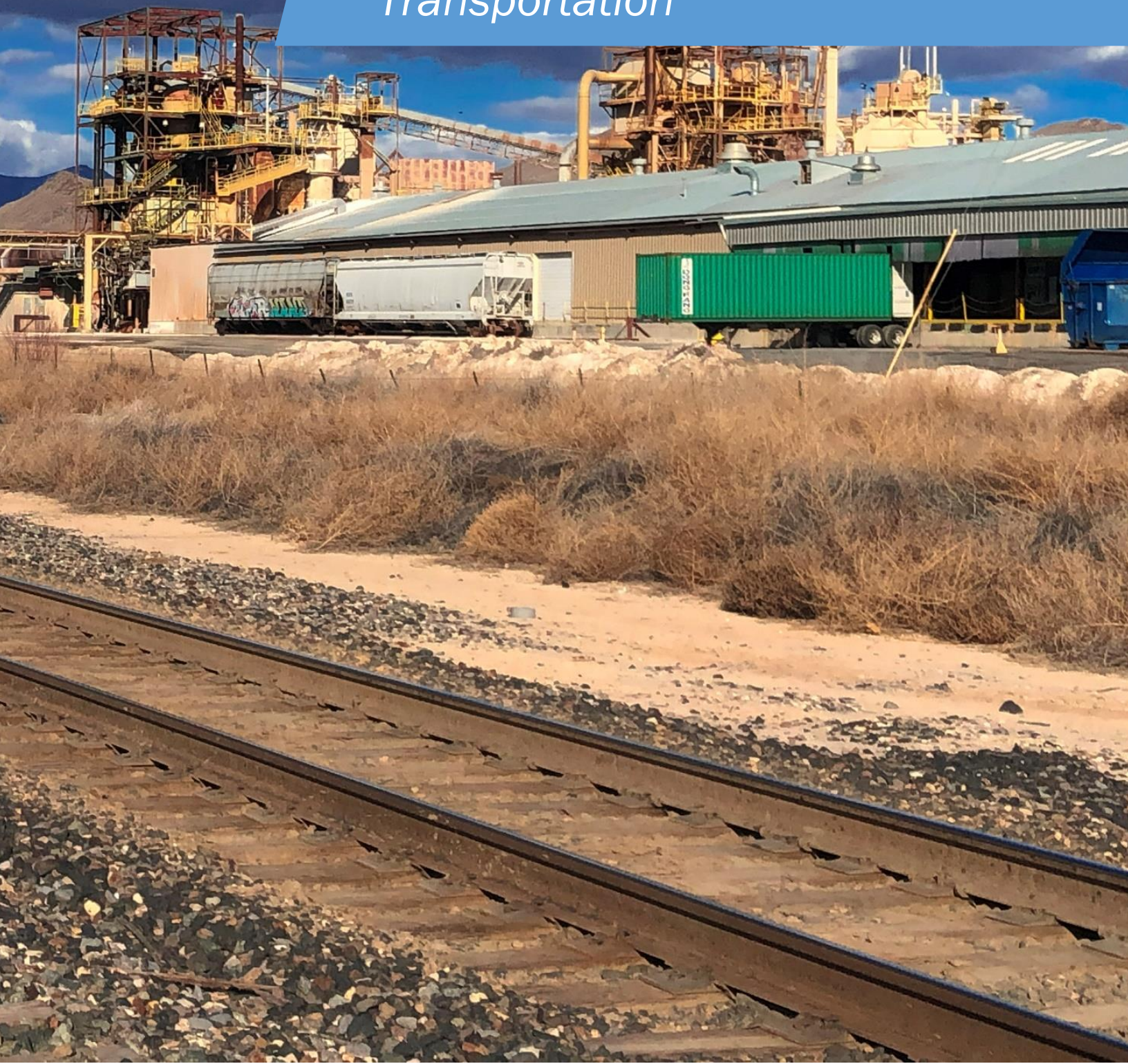


CHAPTER 1

The Role of Rail in Statewide Transportation



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Chapter 1 The Role of Rail in Statewide Transportation (Overview)

A. Introduction

Nevada is one of the nation's fastest growing states as measured by population and economic activity. This is the result of successful state and local government policies to attract residents and businesses to the employment, quality of life, and economic opportunities offered by the Silver State. Economic and population growth brings many benefits to the state's residents. An increased tax base supports urban and rural development, improving health, housing, and economic opportunity for all Nevadans. These benefits fuel a virtuous circle attracting ever more residents and businesses to the state and increasing revenues which in turn supports the development of a sustainable and inclusive economy.

As Nevada's residents and businesses have benefited economically and socially from this expansion the growth has brought new challenges for the state to address. Increasing road traffic is contributing to higher levels of traffic congestion and lower air quality. The state's air quality is challenged by weather patterns like drought and events like wildfires, which are increasing in frequency and intensity in many areas due to climate change. Nevada has the 46th lowest overall air quality in the nation¹ and Clark County/Las Vegas is regularly cited for its poor air quality.² Polling during the 2020 Nevada Caucus identified healthcare as the number one concern of the state's citizens and the environment as number two.³

Governor Sisolak's Executive Order 2019-22 issued in November 2019 addresses this issue, focusing on reducing carbon pollution to combat climate change caused by greenhouse gas emissions and improving the quality of air Nevadans breathe.

The new Nevada State Rail Plan (NVSRP) focuses on the contribution rail offers for economic development and personal mobility, and how rail mitigates these environmental and congestion challenges. On average, railroads are three to four times more fuel efficient than trucks, so moving freight by rail instead of truck lowers greenhouse gas emissions by up to 75%.⁴ Rail investments uniquely deliver a 'double benefit' by meeting development objectives while addressing congestion and environmental challenges.

The Nevada Department of Transportation has embarked on an ambitious effort to have its state rail plan and its subsequent implementation contribute to an improved economy and quality of life for Nevada's citizens.

¹ America's Health Rankings - United Health Foundation, "Air Pollution By State, 2019 Annual Report", [source link](#).
Note: This ranking is based on the average exposure of the general public to particulate matter of 2.5 microns or less measured in micrograms per cubic meter (3-year estimate), sourced from U.S. Environmental Protection Agency; U.S. Census Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2018.

² American Lung Association, "State of the Air – Most Polluted Cities" page, [source link](#), accessed August 6, 2020.

³ CBS 8 News Now Las Vegas, "8 News Now/Emerson College poll shows health care, environment are important issues with voters" article, [source link](#), published February 21, 2020.

⁴ Association of American Railroads, "Freight Rail & Preserving the Environment" report, [source link](#), published July 2020.

B. The State's Goals for the Multimodal Transportation System

The Nevada Department of Transportation (NDOT) in its 2020 *One Nevada Transportation Plan* expresses these six key goal areas, which have informed the new Nevada State Rail Plan (NVSRP):

- **Enhance safety** by building, maintaining, and operating the safest transportation system possible.
- **Preserve infrastructure** to support economic vitality, visitor experience, and travel safety.
- **Optimize mobility** to provide convenient and reliable movement of people and goods across all modes.
- **Transform economies** by supporting an innovative transportation framework.
- **Foster sustainability** by lowering long-term maintenance costs, promoting fiscal responsibility, and reducing greenhouse gas emissions from the transportation sector.
- **Connect communities** to local resources and amenities and collaborate with partners to best serve our communities.

The Nevada Freight Plan, published in January of 2017, identifies these goals which further inform the new NVSRP:

1. **Economic Competitiveness:** Improve the contribution of the freight transportation system to economic efficiency, productivity, and competitiveness.
2. **Safety:** Improve the safety of the freight transportation system
3. **Advanced Innovative Technology:** Use advanced technology, innovation, competition, and accountability in operating and maintaining the freight transportation system.
4. **Sustainable Funding:** Fully fund the operations, maintenance, renewal, and expansion of the freight transportation system.
5. **Mobility and Reliability:** Provide an efficient and reliable multimodal freight transportation system for shippers and receivers across the state.
6. **Infrastructure Preservation:** Maintain and improve essential multimodal infrastructure within the state.
7. **Environmental Sustainability & Livability:** Reduce adverse environmental and community impacts of the freight transportation system.
8. **Collaboration, Land Use and Community Values:** Establish an ongoing freight planning process to coordinate the freight transportation system and ensure consistency with local land use decisions and community values.

The process of creating the new Nevada State Rail Plan aligns with the vision of statewide collaboration expressed by NDOT's Executive Director, Kristina Swallow, in the *One Nevada Transportation Plan*:

"Delivering the transportation system, we have collectively envisioned requires a unified effort from NDOT and our partner agencies in both the urban centers and rural areas of the state. From updating our data systems to effectively prioritizing investments and measuring performance against goals, to making effective change in greenhouse gas emissions, collaboration is the catalyst for success. This plan provides the foundation and allows us to adapt in a dynamic environment of technology advances, user needs and preferences, and funding sources and levels."

NDOT has adopted these specific goals for the NVSRP:

- Enhance rail logistics to optimize the strategic location of the state and its businesses
- Mitigate negative impact of freight logistics on the environment and communities
- Improve passenger mobility through rail passenger projects that utilize existing infrastructure
- Establish smart freight-transportation land use protocols for sustainable economic development
- Improve the safety of rail transportation
- Provide a structure for ongoing rail knowledge and development support
- Establish a public/private funding mechanism for new rail infrastructure and improvements
- Develop options for efficient transportation and distribution of minerals and bio-resources and their return logistics for recycling, reuse, and remanufacturing

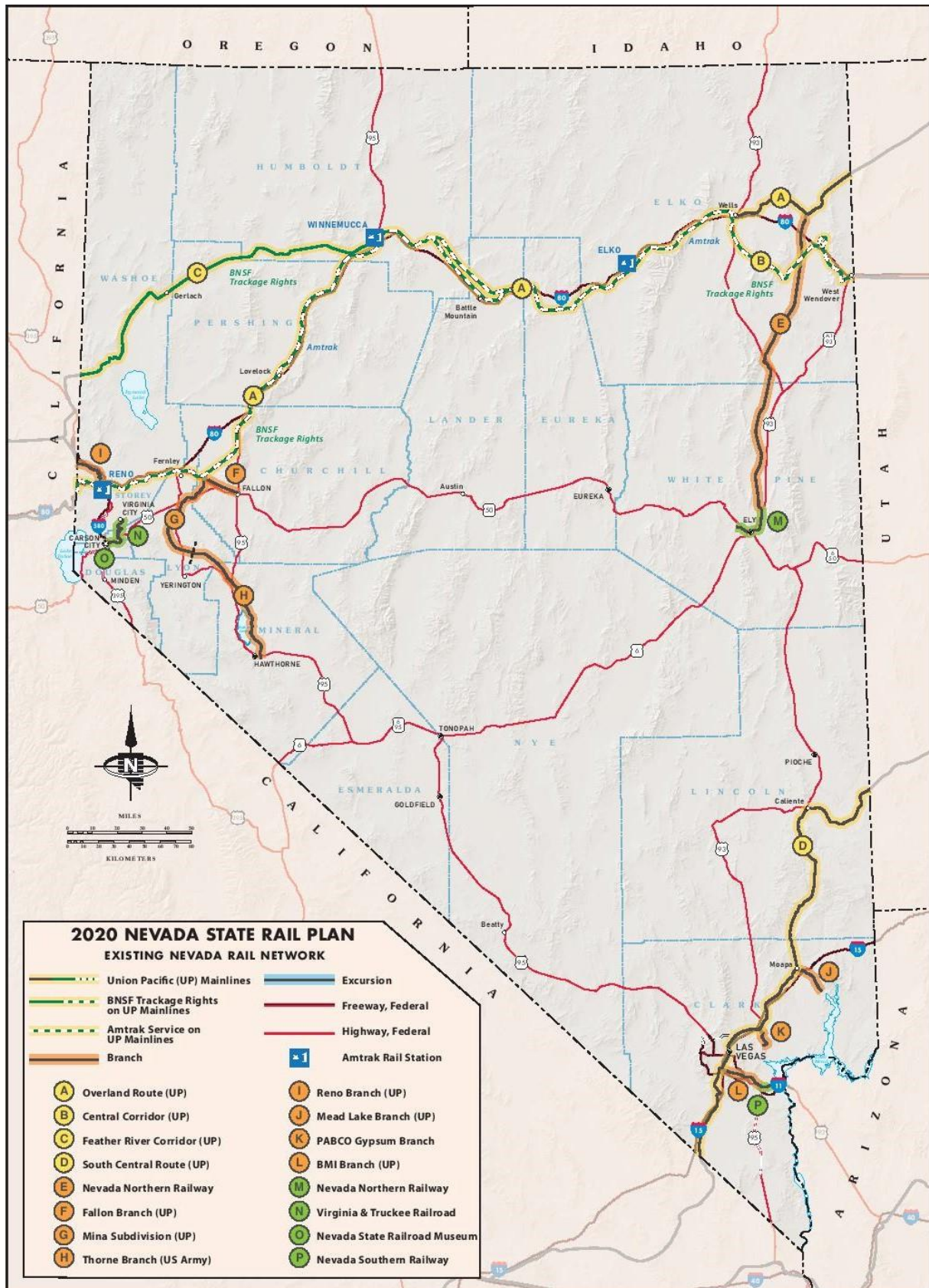
C. Nevada's Rail Transportation System Overview

Nevada's geography and historic development patterns have resulted in two primary rail corridors, which generally run east-west across the state, along with a few supplemental branch lines. The Union Pacific Railroad (UPRR) operates both the northern and the southern east-west corridors, as a result of mergers; BNSF Railway (BNSF) has trackage rights on nearly three-quarters of UPRR's Nevada trackage as a condition of the mergers. The two-route northern corridor serves Reno, as well as other northern Nevada communities, and connects with Salt Lake City and Denver to the east and with Sacramento and the San Francisco area to the west. Amtrak operates once-a-day passenger rail service in each direction across this northern Nevada corridor; I-80 generally parallels the rail lines in this corridor. The southern corridor serves Las Vegas and connects it with Salt Lake City to the northeast and with Los Angeles to the southwest. Amtrak discontinued providing service in this corridor some 23 years ago; I-15 generally parallels the single-track rail line in this corridor. The state lacks north-south through rail or interstate highway linkages; thus, Las Vegas is not connected to Reno or with nearby Phoenix to the southeast.

In addition to Nevada's freight and intercity passenger rail services, four tourist railroads operate in the state:

- Virginia & Truckee Railroad
- V&T Railway Commission
- Nevada Northern Railway
- Nevada State Railroad Museum, Boulder City

Figure 1-1: Nevada Rail Network



The NVSRP embraces many of the perspectives expressed in the 2017 Nevada Freight Plan (P 1-7):

“As in most urban centers in the United States, Las Vegas and Reno have a scattered and fragmented pattern of air, rail, trucking, customs, and other freight service functions, and have never emerged as major freight centers. There are extremely modest intermodal yards in Reno and Las Vegas, as well as a few bulk transloading facilities throughout the state. Although there is major through-railroad activity in Nevada, the trains do not stop in the state and they do not create cost and congestion relief advantages for Nevada shippers going east and west. This fragmented pattern of logistics forces trucks involved in freight movements and transfers through heavily urbanized areas results in conflicts and inefficiencies. This is a major inhibitor to a development-positive rail system that will be needed to further unite the state into the global economy and to increase its logistic function within its western U.S. context.”

There are no Class II or Class III freight railroads in Nevada. Thus, Nevada's role is one of supporting, coordinating, and enhancing the services of the Union Pacific (UPRR), BNSF, and Amtrak. For example, NDOT commits staff resources to work with state and local highway officials, UPRR personnel, and other key stakeholders to identify needed rail-highway grade crossing projects each year and improve the selected crossings, using federal dollars and a UPRR local match. NDOT's primary objective with this program is to improve the state's quality of life, safety, and environmental/economic sustainability.

A full description of Nevada's railroads follows in Chapter 2.

D. Institutional Governance Structure of the State Rail Program

D-1. Nevada Department of Transportation

The Nevada Department of Transportation (NDOT) is responsible for coordinating the overall state transportation improvement strategy. The department is primarily responsible for rail planning and project development activities, including development of this State Rail Plan. NDOT's headquarters is in Carson City, Nevada.

NDOT is Nevada's State Rail Transportation Authority (SRTA) and (SRPAA). Furthermore, Nevada follows the requirements of 49 U.S.C. §22102, which stipulates eligibility requirements for the FRA rail freight grant assistance program pertaining to state planning and administration.

NDOT is the primary rail planning agency within the state of Nevada. However, NDOT has limited funding authority for rail. It participates in the railroad abandonment process and offers comment on federal rail legislation and rulemaking.

The following are those divisions under the jurisdiction of NDOT which have existing or potential rail-related responsibilities.

Rail Planning Section

The Rail Planning Section has the primary responsibility for rail planning in Nevada DOT. The office administers various rail-related programs, including:

- Rail policy and legislation development
- Information and communications
- Passenger and freight rail planning

Railroad Safety Program

- Highway/railroad crossing agreements
- Crossing safety and inspections
- Crossing equipment and road surface maintenance

Nevada Freight Advisory Committee (FAC)

The FAC is housed within NDOT and made up of representatives from private sector companies and public agencies. Together, the Committee discusses topics that impact freight transport in Nevada and provide NDOT with guidance. Meetings are held in video conference rooms across the state with a webinar link available to those not conveniently located near a meeting site.

The Transportation Public Advisory Committee (TPAC) will review and advise on adopting the state rail plan; and the Nevada State Transportation Board has final state rail plan approval authority for Nevada. The Federal Railroad Administration (FRA) will accept the document for the federal government.

E. The State’s Authority for Grant, Loan, and Public/Private Partnership Financing

E-1. State Infrastructure Bank

The enabling legislation for Nevada State Infrastructure Bank (“Nevada SIB”) was signed into law June 2017 (NV AB-399)⁵; however, the Bank has not been capitalized, as required, to “carry out the business of the Nevada State Infrastructure Bank”. See quote below from legislation creating the Nevada SIB in 2017. Absent capitalization of the Nevada SIB by the State of Nevada, the enabling legislation passed in 2017 is not useful for aiding the development of rail infrastructure in Nevada, by any party, public or private.

If the Nevada SIB were indeed ‘capitalized’ by the State, eligible projects would include “Transportation Facilities. Nevada Revised Statutes (“NRS”) NRS 408.55066⁶ define “Transportation facility” as:

“Transportation facility” means any existing, enhanced, upgraded or new facility that is used or useful for the safe transport of people, information, or goods via one or more modes of transport, including, without limitation, any of the following:

- 1. A road, railroad, bridge, tunnel, overpass, airport, mass transit, light or commuter rail, conduit, ferry, boat, vessel, parking facility, intermodal or multimodal system or any other mode of transport, including, without limitation, those utilizing autonomous technology, and any rights of way necessary for any eligible transportation facility.*
- 2. Related or ancillary to, or used or useful to provide, operate, maintain or generate revenue for, a facility described in subsection 1, including, without limitation, administrative buildings and other*

⁵Nevada Assembly Bill 399, [source link](#), effective June 2017.

⁶Nevada Revised Statutes 408.55066, [source link](#), effective 2017.

buildings, structures, rest areas, maintenance yards, rail yards, ports of entry or storage facilities, vehicles, rolling stock, energy systems, control, communications and information systems, parking facilities and similar commercial facilities used for the support of or the transportation of persons, information or goods or other related equipment, items or property, including, without limitation, any other property that is needed to operate the facility.

3. *All improvements, including equipment necessary to the full utilization of a transportation facility, including, without limitation, site preparation, roads and streets, sidewalks, water supply, outdoor lighting, belt line railroad sidings and lead tracks, bridges, causeways, terminals for railroad, automotive and air transportation and transportation facilities incidental to the project.*

E-2. Public-Private Partnerships (“P3s”)

The Nevada Senate Bill SB 448⁷ explicitly added P3s to the Nevada statutory framework of applicable laws in July 2017 which was codified as the following:

NRS 338.1587 Public-private partnership: Authority to enter; authorized provisions.

1. *A public body may enter into a public-private partnership to plan, finance, design, construct, improve, maintain, operate, or acquire the rights-of-way for, or any combination thereof, a transportation facility.*
2. *A public-private partnership may include, without limitation:*
 - a. *A predevelopment agreement leading to another implementing agreement for a transportation facility as described in this subsection.*
 - b. *A design-build contract.*
 - c. *A design-build contract that includes the financing, maintenance or operation, or any combination thereof, of the transportation facility.*
 - d. *A contract involving a construction manager at risk.*
 - e. *A concession, including, without limitation, a toll concession, and an availability payment concession.*
 - f. *A construction agreement that includes the financing, maintenance or operation, or any combination thereof, of the transportation facility.*
 - g. *An operation and maintenance agreement for a transportation facility.*
 - h. *Any other method or agreement for completion of the transportation facility that the public body determines will serve the public interest; or*
 - i. *Any combination of paragraphs (a) to (h), inclusive.*

Since the enabling legislation was enacted in 2017, there has not yet been a P3 financing structure deployed for an infrastructure project. Nevada DOT identifies the USA Parkway Interchange project in 2007-2008 as a successful P3 funding example.

⁷Nevada Senate Bill 448, [source link](#), effective July 2017.

E-3. Private Activity Bonds

Nevada is the 7th largest state in size, but only the 32nd largest in population (2019 population of 3.08M). Population determines the allocation of a host of United States federal benefits and allocations. In the case of Private Activity Bonds (PABs), the Internal Revenue Service (IRS) most recently established each State's per capita 'PAB Volume Cap' and small state minimum levels in November 2019 (see Rev. Proc 2019-44). In 2020, The per capita PAB Volume Cap will be \$105 per capita, the same amount as in 2019, but the small state minimum for PAB Volume Cap will increase to \$321,775,000 per year from \$316,745,000. With a population of 3.08M, Nevada's PAB Volume Cap is approximately \$323M, a relatively small amount of bond authority to deploy for transportation and other eligible projects carried forward by a private entity in Nevada.

PABs are an important tool, as can be seen from the case of the Brightline West high-speed passenger rail project which will hopefully soon break ground on the rail infrastructure to carry passengers from Victorville, CA to Las Vegas, NV and back. Brightline West just received (July 2020) an allocation of \$200M in PAB issuance authority from the Nevada State Board of Finance. California, with a far greater PAB Volume Cap, was able to provide \$600M in allocation to Brightline West in April 2020.

F. Nevada's Freight and Passenger Rail Agencies, Initiatives, and Plans

F-1. Transportation Agencies

Nevada Department of Transportation

Rail planning functions at NDOT are located within the Department's Rural Programs Section. This Section is part of the Transportation/Multimodal Planning Division, which reports to the Assistant Director for Planning, one of four assistant directors under NDOT's Director and two Deputy Directors. The Section is fully integrated into NDOT's administrative structure and interacts effectively with the other operating units at NDOT. The Section is currently staffed with a division chief and separate program managers over the transit, aviation, freight, and rail programs. This multimodal division is tasked with oversight of passenger and freight rail system improvements within the state as well as updating the state freight and rail plans.

Nevada revised statutes (NRS) authorize and direct NDOT to engage in rail planning and development in the state. NRS 705.421 directs NDOT to prepare and implement a state plan for rail service in cooperation with Nevada's Public Utilities Commission (NPUC), including projects to preserve rail lines, rehabilitate rail lines to improve service, and restore or improve freight service on rail lines that are potentially subject to abandonment. NRS 705.423 gives NDOT the power to accept federal, state, local, and private money to develop and implement the state rail plan with state legislative approval to expend funds to implement the plan; to enter into agreements for railroad purposes; and to act as the agent for counties and cities for railroad purposes. NRS 705.425 provides for a state program to preserve lines where service has been discontinued; NRS 705.427 permits NDOT to acquire and operate track and other railroad property that is the subject of abandonment or discontinuation of service. NRS 705.428 authorizes NDOT to contract for construction, improvement, or rehabilitation of any trackage or rail line property, provided state

legislative approval authorizes the expenditure of any funds. NDOT has been coordinating and communicating with the PUC throughout the state rail plan process.

F-2. Regional and Local Public Entities

Nevada's transportation agencies, besides NDOT, include Metropolitan Planning Organizations (MPOs) and Regional Planning Associations (RPAs). MPOs, RPAs, as well as Economic Development Entities are identified and described in this section.

Metropolitan Planning Organizations

Metropolitan Planning Organizations (MPOs) are federally mandated and funded transportation policy-making organizations composed of local government and transportation officials. The formation of an MPO is required for any urbanized area with a population greater than 50,000.

MPOs are required to maintain and continually update a Long-Range Transportation Plan (LRTP) as well as a Transportation Improvement Program (TIP), which is a multi-year program of transportation projects to be funded with federal and other transportation funding sources. As MPO planning activities have evolved to address the movement of freight as well as passengers, they have included consideration of multimodal solutions, improved intermodal connections, and more specific rail and rail-related project solutions. MPOs must work cooperatively with area transportation stakeholders to understand and anticipate the area's travel needs and to develop the aforementioned documents.

There are three MPOs in Nevada:

- Carson Area Metropolitan Planning Organization
- Regional Transportation Commission (RTC) of Washoe County
- Regional Transportation Commission of Southern Nevada
- Tahoe Metropolitan Planning Organization

Regional Economic Development Entities

Nevada has several regional public economic development entities which recruit industries and businesses based on their location, available labor force, room for growth, and access to rail and other transportation assets. These entities often employ incentives such as tax incentives, infrastructure assistance, and other support to attract businesses to locate in the state. Although these entities do not generally work directly with freight railroad operators, they do have a vested interest in the level of rail services and rail assistance programs available to supplement their incentives for attracting and serving area businesses.

The following Nevada economic development entities were engaged in the NVSRP process:

- Economic Development Authority of Western Nevada
- Las Vegas Global Economic Alliance
- Northeastern Nevada Regional Development Authority
- Northern Nevada Development Authority
- Storey County Economic Development Office

F-3. Nevada Transportation Plans

Nevada State Freight Plan

Nevada's latest state freight plan⁸ was completed in 2017. The primary purpose of the Nevada Freight Plan is to serve as a statewide long-range freight planning document, fully integrated with other state planning initiatives. The State Freight Plan will align with the National Freight Goals to:

- Improve the contribution of the freight transportation system to economic efficiency, productivity, and competitiveness.
- Reduce congestion on the freight transportation system.
- Improve the safety, security, and resilience of the freight transportation system.
- Improve the state of good repair of the freight transportation system.
- Use advanced technology, performance management, innovation, competition, and accountability in operating and maintaining the freight transportation system.
- Reduce adverse environmental and community impacts of the freight system.

One Nevada Transportation Plan

One Nevada Transportation Plan⁹ builds on Nevada's success with a previous long-range transportation plan and provides direction for all transportation modes in the state, including rail and public transit. The document was adopted and approved in 2018. The One Nevada Transportation Plan projects the demand for transportation infrastructure and services to the year 2040 and considers the social and economic changes that are expected to occur in the state between 2018 and 2040. The One Nevada Transportation Plan underscores the idea that Nevada's economy, quality of life, and competitiveness will require a transportation system that is developed with these changes in mind.

Nevada's adopted guiding principles as the basis for decision-making and investment actions covering all transportation modes, are:

- Enhance Safety
- Preserve Infrastructure
- Optimize Mobility
- Transform Economies
- Foster Sustainability
- Connect Communities

Nevada Statewide Transportation Improvement Program

The Statewide Transportation Improvement Program 2016-2019 Draft (STIP)¹⁰ is a federally required systematic listing of projects for which federal-aid funding is proposed. This document grows out of the STP and outlines NDOT's funding objectives to maintain a globally competitive and attractive climate for businesses and people, and to ensure that the transportation system contributes to a productive and

⁸ Nevada Department of Transportation (NDOT), "Nevada State Freight Rail Plan", [source link](#), published January 2017.

⁹ NDOT, "One Nevada Transportation Plan", [source link](#), published November 2018.

¹⁰ NDOT website, "2019 Statewide Transportation Improvement Program (STIP)" projects list page, [source link](#), accessed August 13, 2020.

efficient economy. Nevada's rail network is a key asset in attaining these objectives. The STIP identifies projects funded by the Federal Highway Administration (FHWA), including highway-railroad grade crossing safety projects, and the Federal Transit Administration (FTA) programs. These projects may have a potential intersection with the Nevada railroad network. Rail projects in the state have also been added to the STIP in the past for illustrative purposes to support applications for federal grant funding.

A detailed description of Nevada's rail system, including freight data for rail and truck movements, is covered in Chapter 2.