IDR Enhancement Program

Final Report

May 17, 2016
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Introduction

Given the Paso del Norte region’s economic dependency on rail transportation and due to the increasing cross-border trade between Mexico and the U.S., improving the rail transportation system currently in place is essential for the economic prosperity in the region. Conducting an assessment of rail infrastructure opportunities and identifying the most pressing challenges, is essential to facilitate mobility within the cross-border region and clear the path for competitiveness.

The Paso del Norte (PdN) Interdisciplinary Research Platform, composed by members of three UTEP Colleges (College of Business Administration, College of Liberal Arts and College of Engineering) and two external members from New Mexico and Chihuahua (the University of New Mexico and the Instituto Municipal de Investigación y Planeación), has been the first attempt to assess the rail infrastructure challenges and opportunities in the region, from an academic standpoint. The results obtained from this interdisciplinary research exercise, stress the importance of the rail transportation infrastructure in the PdN region and provides key information to regional stakeholders, specifically in areas related to: Legal frameworks, Security and the Environment.

During the past year, members of our PdN interdisciplinary research platform, met once a month in order to exchange ideas, techniques, tools and concepts, to better address the rail infrastructure situation in the region (see Annex 1 & 2). The team attended meetings with governmental institutions in Chihuahua and New Mexico (i.e. New Mexico Department of Transportation) (see Annex 3), conducted field visits to the Union Pacific Facilities in Santa Teresa and El Paso (see Annex 4) and hosted El Paso/Santa Teresa/Chihuahua Border Master Plan (BMP) meeting. These outreach activities allowed the platform members to gain a better understanding of the three jurisdictions’ approach (Texas, New Mexico and Chihuahua) and management of rail infrastructure.

The findings contained in this report are divided in three main areas. First, the Legal and Regulatory Framework, provides a comparative legal analysis of the railroad laws and regulations in Texas, New Mexico and Chihuahua. Second, the Security and Border Crossing Inspections Assessment, provides an overview about the security risks, costs and immigration issues related to the railroad operations. Finally, Environmental Impact Analysis presents a series of challenges posed by rail transportation in terms of greenhouse gas emissions, air pollution and it highlights the need to conduct further environmental impact assessments.
# IDR Team Members

<table>
<thead>
<tr>
<th>Team member</th>
<th>Name</th>
<th>Department/Center/University</th>
<th>Contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI</td>
<td>Patrick Schaefer – J.D. LL.M. Executive Director</td>
<td>College of Business Administration Hunt Institute for Global Competitiveness UTEP</td>
<td>Provide guidance and direction throughout the project and conduct economic impact and legal analysis.</td>
</tr>
<tr>
<td></td>
<td>Ana P. Rodriguez – M.A. Program Manager and Research Assistant</td>
<td>College of Business Administration Hunt Institute for Global Competitiveness UTEP</td>
<td>Coordinate meetings, working groups and maintain active communication among researchers. Assist with data collection and conduct socio-economic analysis.</td>
</tr>
<tr>
<td></td>
<td>Thomas Fullerton – Ph.D Professor &amp; Director</td>
<td>College of Business Administration Border Region Modeling Project (BRMP) UTEP</td>
<td>Provide substantial data sets in the area of rail infrastructure and contribute to data analysis and modeling.</td>
</tr>
<tr>
<td></td>
<td>Josiah Heyman – Ph.D Professor &amp; Director</td>
<td>College of Liberal Arts Center of Inter-American and border Studies UTEP</td>
<td>Contribute to characterization of border inspections processes (mobility/security trade-offs); characterization of normal flows and extreme event scenarios.</td>
</tr>
<tr>
<td></td>
<td>Joao Faria – Ph.D Professor</td>
<td>College of Liberal Arts Master of Public Administration Certificate in Urban and Regional Planning UTEP</td>
<td>Contribute to the geopolitical analysis of the cross-border rail system and search for expansion alternatives.</td>
</tr>
<tr>
<td></td>
<td>William Hargrove – Ph.D Professor &amp; Director</td>
<td>Office of Research and Sponsored Projects Center for Environmental Resource Management UTEP</td>
<td>Conduct environmental assessments of the rail infrastructure currently implemented and future projects.</td>
</tr>
<tr>
<td></td>
<td>Kelvin Cheu – Ph.D Professor &amp; Director</td>
<td>College of Engineering Border intermodal gateway transportation laboratory UTEP</td>
<td>Contribute to the research on regional transportation planning, traffic operations, logistics, security and rail-truck interface.</td>
</tr>
<tr>
<td></td>
<td>Soheil Nazarian – Ph.D Professor &amp; Director</td>
<td>College of Engineering Center for Transportation and infrastructure systems (CTIS) UTEP</td>
<td>Provide input regarding alternative materials and design of innovative rail infrastructure.</td>
</tr>
<tr>
<td></td>
<td>Lucio Lanucara – J.D. LL.M Professor and International Transport Consultant</td>
<td>School of Law, School of Management UNM (Albuquerque, NM)</td>
<td>Contribute to the legal analysis of rail regulations at the federal (U.S/Mex) and state levels (NM, TX, CHI)</td>
</tr>
<tr>
<td></td>
<td>Salvador Barragan - M.A. Program Coordinator</td>
<td>Instituto Municipal de Investigación y Planeación - IMIP (Ciudad Juarez, México)</td>
<td>Provide substantial data in the area of rail infrastructure and mobility in Chihuahua and contribute to the analysis of rail infrastructure management in Ciudad Juarez.</td>
</tr>
<tr>
<td></td>
<td>Alfonso Franco, B.A. Undergraduate Research Assistant</td>
<td>College of Business Finance and Entrepreneurship UTEP</td>
<td>Provides support and coordination in the execution of the legal analysis framework.</td>
</tr>
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<td></td>
<td>Chris Jaramillo, M.A. Graduate Research Assistant</td>
<td>School of Law, UNM (Albuquerque, NM)</td>
<td>Provides support and coordination in the execution of the legal analysis framework.</td>
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<tr>
<td></td>
<td>Eduardo Torres, M.A. Graduate Research Assistant</td>
<td>College of Engineering UTEP</td>
<td>Provides support in research activities related to regional transportation planning, traffic operations, logistics, security and rail-truck interface.</td>
</tr>
</tbody>
</table>
I. Historic Overview

The first railroad to reach El Paso was Southern Pacific in May 19, 1881 from San Diego. The Texas and Pacific, the Galveston, Harrisburg & San Antonio, and the Atchison, Topeka & Santa Fe (also known as the Texas and Pacific Group Railway) company built the second line that came in 1881. The Mexican Central Railway, coming from Mexico City northward passing Ciudad Chihuahua to Paso del Norte (old Ciudad Juarez) crossed the Rio Grande in September 16, 1882. The rail crossing was a steel bridge built by Zach White Investments. However, the whole segment of the Mexican tracks, connecting the Mexico’s capital to the American border, was completed by 1884. El Paso had three major track lines connecting the city by 1882, by the Mexican Central railroad (from Mexico City to Ciudad Juarez), SP (coming from Western coast in United States towards Dallas-Forth area) and the Texas and Pacific group Railway. There was also a local railroad company that operated the local transfers between the major railroad companies.

More recently, in 2009, a project was initiated to provide to Chihuahuita, a neighborhood near BNSF’s El Paso Yard, better accessibility within the district, removing existing grade crossing, which was affecting the access time by emergency vehicles and also causing delay for residents. The construction project had 550 feet of tracks connecting the Track 130 of BNSF to the Black Bridge International Rail Crossing.

According to the El Paso Region Freight Rail Study (HNTB, 2011), the main constraint that causes obstruction of rail usage at the Mexican side of the tracks (operated by Ferromex) is the operating hour. In Ciudad Juarez, Trains are permitted to only operate between 10:00 p.m. and 7:00 a.m. due to safety and congestion concerns in the city. The permitted operating hours for trains limits the capacity of the international crossing to approximately 10 trains per day. As a result, Ferromex either diverts rail traffic to other crossings (Eagle Pass and Laredo) once capacity is reached, or shippers send their containers by truck across the border which further aggravates the traffic congestion at the commercial vehicle (truck) inspection points.
**El Paso/Ciudad Juarez Bridge Crossings**

1) Santa Fe Railroad Bridge
   - Steel bridge owned and operated by Burlington Northern Santa Fe Railway (BNSF)
   - Operate only between 10:00 p.m. and 7:00 a.m.
   - Capacity of crossing approximately 10 trains per day

2) Union Pacific (UP) Railroad Bridge
   - Steel bridge owned and operated by UP

![Location of Santa Fe Railroad Bridge and Union Pacific Railroad Bridge](image)

**Source:** (El Paso-Santa Teresa-Chihuahua Border Master Plan, 2013)

Santa Fe and UP Railroad Bridges-Northbound Trains and Container Crossings

**Source:** (El Paso-Santa Teresa-Chihuahua Border Master Plan, 2013)
**Chihuahua (Mexico), Border Crossings**

1) Freight transportation only  
2) Crosses the border at  
   - El Paso-Ciudad Juarez  
   - Nogales  
   - Eagle Pass-Piedras Negras

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**Ferromex Network in Mexico**  

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**Ferromex Border Crossings**  
**UP Intermodal Facilities in the U.S.**

Source: [https://www.up.com/customers/intermodal/intmap/index.htm](https://www.up.com/customers/intermodal/intmap/index.htm)

**UP Santa Teresa Intermodal Rail Facility (New Mexico)**

Source: [https://www.up.com/customers/intermodal/intmap/stir/index.htm](https://www.up.com/customers/intermodal/intmap/stir/index.htm)
Santa Teresa (New Mexico), International Border Crossing Pilot Project
## II. Transboundary Rail Infrastructure, Legal and Regulatory Matrix

<table>
<thead>
<tr>
<th>Issue</th>
<th>U.S. Federal Law</th>
<th>New Mexico Law</th>
<th>Texas Law</th>
<th>Mexican Federal Law</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building permits</td>
<td>In general, this is a matter ruled by State law and local jurisdictions. According to 40 U.S. Code § 3312 (<a href="https://www.gpo.gov/fdsys/gcraneluse/USCODE-2011-title40/USCODE-2011-title40-subtitleII-partA-chap33-sec3312">https://www.gpo.gov/fdsys/gcraneluse/USCODE-2011-title40/USCODE-2011-title40-subtitleII-partA-chap33-sec3312</a>), federal agencies shall build or alter buildings in accordance with nationally recognized model building codes or other nationally recognized codes (electrical, etc.).</td>
<td>As with most other business, a Railroad Corporation has the ability to erect and maintain the necessary building, stations, depots, fixtures and machinery needed to accommodate its purposes, while doing so within the proscribed building codes of the respective jurisdiction. These powers are granted under N.M.S.A 1978. § 63-2-2.</td>
<td>The Department of Transportation may enter into an agreement with a private or public entity in order to build, maintain, and operate rail facilities. Transportation Code, Title 5 – Railroads, Sec. 91.005., Sec. 91.052.</td>
<td>The construction and reconstruction of railroad lines requires approval by the Secretary of Transportation. Approval is only going to be granted to projects that follow established environmental and zoning restrictions. Ley Reglamentaria del Servicio Ferroviario, Art. 27, Art. 30.</td>
</tr>
<tr>
<td>Eminent domain</td>
<td>The Supreme Court recognized eminent domain as related to sovereignty in Kohl v. United States, 91 U.S. 371-2 (1875). Limited by 5th Eminent domain is limited by the right to Amendment demanding just compensation, as established in Bauman v. Ross, 167 U.S. 548, 574 (1897). Most federal condemnation cases are initiated by filing a Declaration of Taking pursuant to the Declaration of Taking Act, 40 U.S.C. § 3114 (<a href="https://www.gpo.gov/fdsys/gcraneluse/USCODE-2011-title40/USCODE-2011-title40-subtitleII-partA-chap33-sec3314">https://www.gpo.gov/fdsys/gcraneluse/USCODE-2011-title40/USCODE-2011-title40-subtitleII-partA-chap33-sec3314</a>). in the U.S. District Court for the district in which the property is located. After a condemnation case is filed, the parties proceed to litigate, as necessary, the issues for determination: the right to take and the amount of just compensation. They do so using the procedure set forth in Federal Rule of Civil Procedure 71.1. Just compensation means the fair market value of the property on the date it is appropriated. Kirby Forest</td>
<td>New Mexico has granted a Railroad Company the same rights enjoyed by a natural person with regards to Eminent Domain. In other words, a Railroad company can acquire land through the eminent domain process which is also commonly referred to as “taking(s)”. This ability to acquire lands via takings is pursuant to N.M.S.A 1978, § 63-2-2 (B) and N.M.S.A. § 63-2-15.</td>
<td>Additionally, railroad companies may invoke this process for acquiring the access to the use of natural streams and springs necessary for its operations. It is important to note, that this may be a right but it does not guarantee to the rights to access will actual mature into tangible water. This is largely attributed to New Mexico’s unique water rights issues. In a nutshell, the oldest water rights holders have priority over any subordinate water regardless of subrubnute’s rights or needs. Although this is a drastic simplification of the water laws in New Mexico it sheds some light on the issues that would arise surrounding water rights acquired via eminent domain.</td>
<td>The Commission may authorize a public or private entity to purchase real property necessary for rail facilities. The Department of Transportation may sell, convey, or dispose, any real property that is no longer required. A railroad company has the right to exercise the power of eminent domain for the purposes of construction and use of its railway, stations, and other accommodations necessary to accomplish company objectives. A railroad company may acquire property by condemnation if the company cannot agree with the owner for the purchase of the property. Transportation Code, Title 5 – Railroads, Sec. 91.091, Sec.112.053, Sec.112.054, Sec.112.002, 5,6,7.</td>
</tr>
</tbody>
</table>
Industries, Inc. v. United States, 467 U.S. 1 (1984). In a condemnation case each party usually presents appraisal reports to help determine the market value. Necessity in eminent domain cases have normally not been considered a judicial matter. In Kelo vs. City of New London, 545 U.S. 469, 488 (2005) the Supreme Court confirmed that “When the legislature’s purpose is legitimate and its means are not irrational, our cases make clear that empirical debates over the wisdom of takings [...] are not to be carried out in federal courts.”

### Safety regulations

Safety at the Federal level is ruled by 49 CFR parts 200 to 268; and 23 CFR Part 655.

http://www.ecfr.gov/cgi-bin/text-idx?SID=0b68a90d68290bf21a8c1f1463e80828&mc=true&tpl=/ecfrbrowse/Title49/49cfrv4_02.tpl#0

http://www.ecfr.gov/cgi-bin/text-idx?SID=a2583ef3fa3a41e5b157549f8dd705ab&mc=true&node=pt23.1.655&rgn=div5

The Federal Railroad Administration (FRA), created with the 1966 Department of Transportation Act, is the Authority in charge with Safety.

Part 200 regulates a number of specific issues, such as Work Place Safety, Track Safety Standards, etc.

Part 209 concerns the Railroad Safety Enforcement Procedures. 209.1 establishes that FRA is responsible for safety rules by delegation from the Transportation Secretary.

**FRA issues:**

- (209.201 and seq): compliance orders pursuant to the Federal railroad safety laws at 49 U.S.C. 5121(a) and/or 20111(b);

The New Mexico regulations are directly derived from the federally implemented regulations. Moreover, the Public Regulations Commission (PRC) is tasked with oversight and enforcement of the safety regulations. This is pursuant to the New Mexico Administrative Code 18.14, which mandates that the PRC comply with the federal regulations.

The New Mexico Statutes Annotated Section 63-7-1.1 grants the PRC the power and ability to determine any matters of public convenience and necessity with respect to matters subject to its regulatory authority. Which is broad scope of authority that includes a mandate that railroad companies provide the adequate and reasonable safety infrastructure and features required by both state and federal laws and rules. Lastly, the PRC has the ability to enforce these regulations through administrative sanctions and courts.

The Texas department of transportation may perform any act, adopt any rules, and issue any orders as permitted by the Federal Railroad Safety Act of 1970. The department by rule shall:

1. Adopt reasonable fees to be assessed annually against railroads operating within the state; and
2. Establish the method by which the fees are calculated and assessed.

Transportation Code, Title 5 – Railroads, Subchapter C – Department Safety Regulation, Sec. 111.101.

The Federal level implements safety regulations, the Secretary of Transportation and the Agency for Railroad Regulations oversee the implementation of these safety conditions.

Safety conditions include the transportation of hazardous materials, the limitation of property, appropriate equipment to operate railroads, infrastructure conditions, personnel certifications, and passengers’ safety.

Ley Reglamentaria del Servicio Ferroviario, Art. 32, 33, 38, 39, 40, 42, 45, 50, 51.

Ley Reglamentaria del Servicio Ferroviario,

| 32 | 33 | 38 | 39 | 40 | 42 | 45 | 50 | 51 | 111 | 101 |
### Service licensing and concession

| Licensing used to be tightly regulated by the Interstate Commerce Commission (ICC), substituted by Surface Transportation Board (STC) with 1995 ICC Termination Act (CFR 1000-1399). Regulatory restraints have been greatly limited by 1980 Staggers Act. 49 CFR, Parts 1150-1159 refers to rail licensing procedures. Part 1150.1 specifies that a “certificate of public convenience and necessity” is necessary for authorizing the construction. | The PRC has an extensive amount of power when regulating a railway's development and its operating general activity. The PRC also oversees the adequacy of the railways equipment, buildings, station buildings and shipment facilities along with other types of supporting infrastructure. But the State Transportation Department has certain responsibilities to maintain some supporting infrastructure, for example fix, determine, supervise, regulate and control all charges and rates of railway, express, telegraph, telephone, sleeping car and other. | The Texas Department of Transportation has the power to contract with a public or private person to finance, construct, maintain, or operate a rail facility under this chapter. Additionally, the department shall contract with a private entity to operate a railroad using facilities owned by the department but it may not use department employees to operate a railroad. The specific details regarding how a railroad enters into a concession are in Texas Transportation Code Ann. § 91.005. | The Secretary of Transportation highly regulates the railroad industry. A concession is required to operate within the industry, and permits in order to provide auxiliary services. Concessions are going to be granted according to an established process by the Secretary of Transportation. Candidates for concessions must meet the required criteria specified on the call: technical, financial, legal, and administrative. Concessions are only granted to Mexican nationals, but foreign investment can be considered. |

Review of rail transportation safety and security route analysis (209.501 and seq) involves the Associate Administrator for Safety, the Transportation Security Administration (“TSA”) and the Pipeline and Hazardous Materials Safety Administration (PHMSA), and the Surface Transportation Board (“STB”).

Part 212 establishes standards and procedures for State participation in investigative and surveillance activities under the Federal railroad safety laws and regulations. Subpart B of Section 212 details federal and state roles.

According to Section 212 (Program Principles) the FRA maintains direct oversight over the sector by conducting inspections and investigations in concert with participating State agencies. State agencies, based on specific agreements with the FRA, support the FRA primarily through the performance of routine compliance inspections.

As per 212.115, FRA has exclusive authority over penalties and all other enforcement actions under the Federal railroad safety laws.
### Financing of Infrastructure

<table>
<thead>
<tr>
<th>49 CFR, Part 80</th>
<th>regulates the system of Credit Assistance for Surface Transportation Projects.</th>
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<tbody>
<tr>
<td><a href="http://www.ecfr.gov/cgi-bin/text?site=const-2007&amp;app=14&amp;node=1-0.1.1.10.1.4.1.2.1.3.1.1.1.1.1.1.9.15">http://www.ecfr.gov/cgi-bin/text?site=const-2007&amp;app=14&amp;node=1-0.1.1.10.1.4.1.2.1.3.1.1.1.1.1.1.9.15</a></td>
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Amtrak is financed through Congress appropriations. Normally financing of Amtrak is done through appropriation

Under New Mexico laws, the financing of a Railroad Company or railway infrastructure is limited to private funding or some other source of funding, except for assistance from the New Mexico state government due to its anti-donation clause. Which is something we will address in more depth below.

Under N.M.S.A Section 63-1-4

The corporators of each intended corporation, before filing articles of incorporation, must have actually subscribed to the capital contract with the government for the operation of a rail facility is governed by Texas Admin. Code, Title 43, Section 7.13 (f).

### Construction and Maintenance

Construction and maintenance of crossing projects are under the budget of the operating rail line. Rail crossings in urban areas must only be authorized when security and social conditions are fulfilled.

The Federal Government will maintain the Fund, which objective is to support construction, maintenance, and operation of security services.
of federal funds year by year. Amtrak submits a yearly report to Congress as per Section 24315(b) of Title 49.

http://www.ecfr.gov/cgi-bin/text-idx?SID=0b68a90d68290bf21a8c1f1f63e80828&mc=true&tpl=/ecfrbrowse/Title49/49cfrv4_02.tpl#0

As an exception to this practice, Section 3 of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) establishes appropriation for the period 2009-2013.


With the 2009 American Recovery and Reinvestment Act (Stimulus) 8 billion USD where to be invested in passenger high speed services (later increased to 10.1 billion USD).


Other instruments include the Railroad Rehabilitation and Improvement Financing Program (RRIF), the Transportation Infrastructure Finance and Innovation Act (TIFIA), the Moving Ahead for Progress in the 21st Century Act (MAP-21), and the Fixing America’s Surface Transportation Act (FAST) of December 2015.

Price regulation

Since the adoption of the Staggers Act of 1980 tariffs have been mostly liberalized. STC can only regulate where there is no competition (49 CFR 1000-1399, in particular stock of the corporation at least one thousand dollars ($1,000) for each mile of its road and branches, and at least ten percent thereof must have been paid for the benefit of the corporation, to a treasurer appointed by the subscribers in its articles of incorporation, or their attorneys-in-fact as aforesaid. Aside from this specific requirement the funding of a railway project is the burden the individual corporation is responsible for on its own.

The anti-donation clause will have a real impact of how a railroad corporation operates in New Mexico when seeking infrastructure investment. Generally state funded railroad developments are constitutionally prohibited. Under New Mexico Constitution Article IX Section 14, the state is restricted from any comingling of public fiancés with railroad development projects, which reads as follows:

“Neither the state nor any county, school district or municipality, except as otherwise provided in this constitution, shall directly or indirectly lend or pledge its credit or make any donation to or in aid of any person, association or public or private corporation or in aid of any private enterprise for the construction of any railroad except as provided in Subsections A through G of this section.”

This is constitutional provisions is commonly referred to as the “Anti-Donation Clause”. And, on its face the anti-donation clause seemingly restricts the use of any public funds for railroad construction, as well as, financing any other corporation. There have been several amendments to this section of the New Mexico constitution, which has enabled the use of public funds for specific projects. For example, there have been exceptions created for veterans scholarships, loans for students studying “healing arts” and the establishment of a housing authority. See, N.M. Const. art. IX, § 14(B)-(E).

There is no tariff language specific for railroad within the New Mexico Statutes Annotated or the New Mexico Administrative Code of Regulations. Under these A railroad company has the right to regulate the time, manner, and compensation for the services it may provide, subject to the law.

Concessionaires and permit holders are able to set freight or passenger tariffs that allow a satisfactory delivery of service in terms of quality, efficiency, competitiveness,
| **Mergers and acquisitions** | Reviewed by STB as per 49 CFR, Part 1180. Part 1180 separates the relevant transactions in four types: Major, significant, minor, and exempt, with different information requirements. These rules are classified as Railroad Consolidation Procedures. Mergers and acquisitions of railroad companies in New Mexico something rare and exactly who has oversight of this area is not entirely clear, but at some level the Secretary of State and the PRC would be involved to some extent. Generally speaking, Under N.M.S.A. Section 63-5-4, a railroad company has the ability to sell, transfer or assign all the railroads, lands, properties, franchises and powers to a corporation of any state or territory which may be authorized by the laws of such state or territory. The sale to new owners would be subject to the restrictions and limitations imposed by law upon railroad corporations in New Mexico regardless of the new owners’ principle location. The Surface Transportation Board encourages the private industry mergers and acquisition activity that leads to an efficient market and are consistent with public interest, as per 49 CFR, Part 1180.1.

The Texas Business and Commerce Code declare unlawful any attempt to monopolize trade. Acquisitions that reduce competition in the market are declared unlawful. The state verifies and punishes monopolistic practices among the markets. The Texas Business and Commerce Code, Chapter 15, Sec. 15.05. If the Texas Transportation Commission determines that state rail facilities would be more efficiently and economically sustainable by operating jointly, merger between these business units can proceed.

Transportation Code, Title 5 – Railroads, Sec. 91.031.

| **Route changes** | STC competent only in certain cases (49 CFR 1000-1399). Special provisions on Amtrak. Generally, under N.M.S.A. Section 63-2-1 every railroad corporation as such shall have power to enter into any obligations or contracts necessary or convenient to the transaction of its ordinary affairs, or for carrying out the purposes of the corporation; and generally carrying on its business, all the rights, powers and privileges which are enjoyed by a natural person. This broad power allows for a railroad company to engage in the activity necessary to conduct its business, which presumably includes route changes. These changes are subject to PRC review since it considerations. circumstances, it would be presumable that the Federal laws and/or regulations would preempt any State-level regulations. Although there is mention of tariff’s for motorcarriers (taxis, ambulance, uber? etc.) under the New Mexico Administrative Code, which reads as follows. “All proposed tariffs shall be in the form approved by the commission and shall include for scheduled shuttle services specific presentment times at each terminal location.” N.M. Admin. Code 18.3.6.

<p>| <strong>Texas</strong> | Texas Transportation Code, Sec. 112.002. Tariffs may be reasonable and only regulated in case of a non-competitive scenario. U.S. Code, Title 49- Transportation - § 10702, The Staggers Act of 1980. The Texas Department of Transportation may determine routings for rail facilities acquired, constructed, or operated by the department. A railroad company can acquire land by condemnation in order to relocate, change, or abandon a route. Transportation Code, Title 5 – Railroads, Sec 91.104, 112.052. and safety. Concessionaires must communicate to the agency to maximum applicable tariffs for their services. Any change to the tariffs must be communicated to the Agency before its implementation. Ley Reglamentaria del Servicio Ferroviario, Art. 46. |</p>
<table>
<thead>
<tr>
<th>Intermodal relations</th>
<th>49 CFR 1090-1099 concerns intermodal traffic</th>
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<th>If the federal commission of economic competence states that there is an absence of effective competency the Agency will evaluate the case to establish proper conditions for the right-of-way. To determine criteria and set conditions, the Agency may consider international standards and opinion of the Federal Commission for Economic Competence. Ley Reglamentaria del Servicio Ferroviario, Art. 36 Bis.</th>
</tr>
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<tbody>
<tr>
<td>Public service obligations</td>
<td>In a context in which rail services are mostly provided by private companies in a substantially liberalized service, public service obligations at the federal level are only relevant for Amtrak (49 CFR 700-799). Most of the Chapter is reserved, thus more specific information is not publicly available.</td>
<td>In light of public service obligations the railroad company has the responsibility to conduct itself in good faith. Additionally, under N.M.S.A. Section 63-7-1.1 (A)(2), a railroad company is required to provide and maintain adequate equipment, depots, stock-pens, station buildings, agents and facilities for the accommodation of shippers and passengers and for receiving and delivering freight and express and to provide and maintain necessary crossings, culverts, sidings and other facilities for convenience and safety whenever in the commission's judgment the public interest demands.</td>
<td>Corporations operating street railway must convey with the following regulations: children younger than 6 years old shall be transported free of charge, children younger than 13 years of age and students shall be transported half the fare. These classifications of passengers shall receive the same rights and treatment as passengers who paid the full fare.</td>
<td>The railroad public service can be of passengers and cargo. Concessionaires that provide public railroad service must have the adequate equipment to provide the specific type of service. Ley Reglamentaria del Servicio Ferroviario, Art. 37, 38, 41.</td>
</tr>
<tr>
<td>Foreign ownership</td>
<td>There are no specific federal limitations in rail sector. However, transaction which can result in control of “critical infrastructure” by foreign entities are reviewed by the Committee on Foreign Investment in the United States (CFIUS, see website <a href="https://www.treasury.gov/resource-center/international/Pages/Co">https://www.treasury.gov/resource-center/international/Pages/Co</a></td>
<td>The foreign ownership of a railroad is rather straightforward and essentially bars any foreign ownership. Pursuant to N.M.S.A. Section 63-1-1 a railroad corporation may be formed by the voluntary association of any five or more persons, in the manner prescribed in this chapter. Such persons must be citizens of the United States. In other words, the foreign ownership of a railroad corporation that is organized in New Mexico is barred.</td>
<td>Foreign ownership of railroads, which are considered &quot;critical infrastructure are regulated by the U.S. Federal level, in case of this given situation foreign ownership of railroads must be approved by the Committee on Foreign Investment in the United States.</td>
<td>Concessions are only issued to Mexican nationals. Foreign investment can only participate up to 49% of the ownership. In order to have more than 49% of foreign ownership approval by the SCT is required. Concessionaires must inform any change in the structure of their ownership.</td>
</tr>
</tbody>
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Mergers are reviewed by the STB (as per Sections 1180 et seq.), which is also competent for other regulatory review of competitive issues (stb.dot.gov). Under revised merger rules adopted in 2001, the STB will not approve a merger application involving Class I railroads (major merger) unless the transaction is shown to be in the public interest. STB merger review involves rigorous scrutiny of the proposal and allows for public participation.

Anticompetitive agreements remain subject to ordinary antitrust law rules and competences.

http://www.ecfr.gov/cgi-bin/text-idx?SID=0b68a90d68290bf2fa8c71463e8082&mc=true&tpl=/ecfrbrowse/1a8cf1f463e8082idx?SID=0b68a90d68290bf2bin/texthttp://railwaylaboract.com/R

The Antitrust Act regulates the limitations on the competition aspect of a railroad industry. Which can be found in N.M.S.A. Sections 57-1-1 through 57-1-15. The Antitrust Act, restrict the ability of one company from monopolizing or conspiring to monopolize a trade or commerce in any trade or commerce within this state. Although, there is an exception carved to this general rule, that allows for a regulated industry to act in a manner that would displace competition, which would look like a monopoly on its face, but in reality, it would be a closely monitored business operation.

The Texas Free Enterprise and Antitrust Act of 1983 maintains and promotes economic competition in trade and commerce, occurring wholly or partly within the State of Texas. The Act considers unlawful any practice that restrains trade or commerce. Also, any action to monopolize trade or commerce is considered unlawful.

The Texas Department of Transportation has the authority to oversee any of the operations from the railroad companies.

Texas Business and Commerce Code, Sec 15.04, 15.05.

Transportation Code, Title 5 – Railroads, 111.051.

http://www.statutes.legis.state.tx.us/Docs/BC/htm/BC.15.htm

http://www.statutes.legis.state.tx.us/Docs/TN/htm/TN.111.h

http://www.statutes.legis.state.tx.us/Docs/TN/htm/TN.111.003

The Federal Commission for Competence verifies and punish if the case, monopolistic practices among the markets.

Ley Federal de Competencia Economica, Art. 2

The Federal Commission for Competence will analyze the grant of concessions. Railroad activity is considered a priority economic activity and the state is the ultimate rector for its development. The state will promote efficient competition.

Ley Reglamentaria de los Servicios Ferroviarios, Art. 9, Art. 7.

The labor laws in New Mexico have a strong base regarding unionization of workers for collective bargaining purposes. This is reflective of the federal Railway Labor Act. As with much of the railroad statutes and regulations much of the labor laws related to railroad are promulgated by the federal mandates and acts, which would

Based on the Railway Labor Act, unions negotiate contracts with railroads companies through the Board of Mediation rather than going into strike. Collective bargaining in the industry is subject to the act.

Workers have the right to strike and collective contracts for the respect of a decent job.

Collective contracts among industries establish that unions can establish decent working conditions.

Ley federal del trabajo, Art. 2, Art. 384.
### III. Security and Border Crossing Inspections

Borders are significant inspection sites for detecting and interdicting disease vectors, illegal drugs, guns and munitions, physical cash used by criminals, terrorist materials (e.g., parts for dirty bombs), and unauthorized migrants among other things. For the purposes of this document, public policy strengths and weaknesses are not explored in of these particular policies. They will be taken on face value. Railroad operations are a significant risk in terms of border control; conversely, border security measures are a significant cost (infrastructure, time) for rail.

Trains have proven to be a significant security vulnerability. For example, U.S. Customs and Border Protection proposed a fine of $500 million for Union Pacific (UP) for drugs found on its trains coming from Mexico. This was later settled for $50 million. Setting aside the particulars of this case, the dollar amounts, even in the settlement, shows a serious issue. If high value drugs (cocaine, heroin, or meth) can be smuggled in northbound trains, so can southbound guns, munitions, or physical cash, or terrorist materials in either direction.

UP argued that lengthy trains in railyards were a source of vulnerability (ease of hiding items). Rail workers (both direct rail company workers and subcontractors) are also sources of risk. Trusted shipper programs (CTPAT), a favored policy for speeding border crossing, relying on closed, pre-certified shipments are vulnerable to tampering by people with access to rail cars. This shows the ramifying implications of railroad border risk.

Unauthorized migrants ride rails inside Mexico and inside the United States; rail bridges have been used by pedestrian unauthorized crossers, but exits from them are relatively easy to interdict (e.g., Black Bridge in El Paso) so actual border rail crossings are a reduced concern for migration (transportation within borders is another matter). Disease vectors, exotic species, etc. carried by rail (e.g., in pooled water) have proven to be a serious risk inside of countries. This risk also applies to borders, although little is known about this. Inspection and cleaning potentially is expensive.
Rail security is a significant cost in the opening of new border crossings. The key case example is the time cost of a two stage relocation of the VACIS inspection machinery in order to shift the border crossing in Brownsville/Matamoros. Because this stationary unit is key to maintaining security, the two units at the border crossing were relocated in two stages, one at a time to ensure there was a unit at each active crossing. New rail crossings also involve investment in VACIS units, and related communication and housing infrastructure.

Border inspections are a source of time and personnel cost for rail transportation (of course, this applies in a different modality to truck freight). Clearly there is some sort of tradeoff between policy goods (reduction in smuggling, other risks) vs. time delay cost and inspection personnel cost involved in border rail crossing. Little is known quantitatively about this. There are not public data on rail inspection time. Border interdiction policy values are poorly quantified and highly influenced by political rhetoric and other subjective factors.

**IV. Environmental Approach**

The purpose of this section is to summarize published information regarding the environmental impacts of rail transportation of freight in the Paso del Norte region, especially as it relates to the international dimensions of the region. Few published studies exist that provide environmental impact analyses, and many of those are focused on greenhouse gases and have been conducted in Europe (Facanha et al., 2007; Forkenbrock, 2001; McKinnon, 2007; Steenhof et al., 2006; Winebrake, 2001; and Woodburn et al., 2008). Certainly very little has been published in the U.S. and no studies were found for the U.S./Mexico border region. One of the most comprehensive analyses done in North America was a study by Lawson (2007) in the U.S./Canada border region surrounding the Great Lakes. The study by Lawson (2007) considers the following parameters as impacted by truck transport, rail transport, and ship transport:

- Fuel use
- Greenhouse gas emissions
- Criteria air contaminant emissions
- Area of land occupied
- Water contamination (spills)
- Accidents
- Noise
- Congestion
- Aesthetics
- Introduction of nonindigenous species

**Intermodal Rail Facilities.** A major environmental impact of rail transport are intermodal rail facilities. These are large facilities often located near seaports where freight is transferred from port to railyard by truck and moved out by rail, or vice versa. There are only a few large ones in
the United States but they are areas of concentrated truck and train traffic, plus other freight moving equipment that also operates on diesel fuel, such as fork lifts, cranes, etc. These large facilities are mostly on the east coast and the west coast and can require 1200 trucks per day, two trains per day plus the required freight moving equipment operating within a few hundred acres.

The results of this concentrated rail and truck traffic can be poor air quality locally. These facilities are often located in the vicinity of poor neighborhoods, increasing public health risks and raising issues of environmental justice. PM2.5 and ultrafine particles are emitted by diesel engines and can cause cancer and other pulmonary and vascular illnesses. A Health Risk Assessment was conducted around the BNSF Hobart rail yard in Commerce, CA, one of the largest rail yards of its kind in the U.S. (The Trade, Health, and Environment Impact Project, 2012). The assessment showed an increased risk of 250 chances in a million of developing cancer, and 315,000 people were exposed to at least 10 in a million increase in risk of developing cancer. Other high risk areas associated with rail yards include Chicago and Kansas City.

In spite of the generally favorable environmental footprint of freight transport by rail compared to trucking, these concentrated, high volume facilities pose significant public health threats stemming from air quality emissions and other environmentally related hazards.

Summary of Environmental Effects and Recommendations. A summary of the environmental effects of freight transport by rail compared to truck is presented in the table below (adapted from Lawson, 2007). This summary can be considered an assessment of the environmental “footprint” of rail freight transport. For every parameter assessed, rail can be considered superior to truck traffic with regards to environmental impacts and thus public health impacts.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Rail</th>
<th>Truck</th>
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<tr>
<td>Fuel Use tonne-km/litre</td>
<td>181</td>
<td>75</td>
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<tr>
<td>GHG Emissions g/ton-km</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td>Nox g/tonne-km</td>
<td>0.30</td>
<td>0.83</td>
</tr>
<tr>
<td>VOCs g/tonne-km</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td>CO g/tonne-km</td>
<td>0.09</td>
<td>0.49</td>
</tr>
<tr>
<td>PM10 g/tonne-km</td>
<td>0.011</td>
<td>0.044</td>
</tr>
<tr>
<td>Land Occupied ha</td>
<td>10,000-15,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Accident Injuries/ton-km</td>
<td>3.12</td>
<td>13.22</td>
</tr>
<tr>
<td>Spills</td>
<td>M</td>
<td>M</td>
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<tr>
<td>-----------------</td>
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</tr>
<tr>
<td>Noise, Congestion, Aesthetics</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>Invasive Species</td>
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However, of particular concern are the large intermodal freight facilities where freight is moved from ship to truck to rail and vice versa. These facilities are mostly on the east coast and west coast and represent areas of concentrated high volume rail, truck, and diesel equipment traffic. They pose an environmental and public health threat to workers and residents in the local area. Similar threats, but maybe not as large, are posed by border crossings and ports of entry on the U.S./Mexico border. These threats, to the environment and to public health, need to be evaluated and mitigated if possible. This is a subject of much needed attention and further study.

The study by Lawson (2007) provides a model for the kind of detailed and comprehensive analyses that are needed for the U.S./Mexico border and for the Paso del Norte Region in particular. The strengths of the study by Lawson (2007) are that it is:

1. Comprehensive in scope, including direct effects on air pollution and greenhouse gas emissions but also includes the impacts of accidents and spills, qualitative impacts on the environment, and other direct and indirect impacts on public health and the quality of life for citizens;
2. Comparative with respect to freight transport by rail vs. freight transport by truck; and
3. Presented in a way that can inform policy and decisions regarding freight transport infrastructure.

Similar analyses and assessments are needed for the Paso del Norte Region and surrounding the Santa Teresa Port of Entry, in particular, an area of growing international trade and commerce and concomitant freight movement. UTEP’s Hunt Institute, Center for Environmental Resource Management, and Center for InterAmerican and Border Studies are well-positioned to conduct such studies.
Annex 1. IDR Team Activity Calendar

**Project Start Date:** October 6, 2014  
**Project Final Date:** February 5, 2016  
(16-months)

**General meetings schedule** (Every second Friday of every month)  
**Time:** 11.30 a.m.

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<tr>
<td>**February 1, 2016 **</td>
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**October 17, 2014 (1st coordination meeting) and February 01, 2016 (Final meeting) are not on a Friday**

**Interim reports (ORSP)(All team members should complete the three (3) interim reports)**

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Annex 2. IDR Team Working Groups
Annex 3. Field Visit to Union Facilities in Santa Teresa and El Paso

October 30 2015 the IDR Team visited the UP Santa Teresa Rail facilities in Santa Teresa and El Paso.

The team interacted with the UP staff how explained the intermodal functioning, as well as the challenges and opportunities of the relatively new Santa Teresa Intermodal Rail Facility.

The new facility replaces 3 existing fueling facilities in the El Paso, TX area.

Existing El Paso Intermodal Facility forecasted to be at capacity by 2013, so UP need to expand.

Trains from CA ports will fuel at Santa Teresa and continue on anywhere from Atlanta, GA to Chicago, IL.

Existing facilities and tracks will be reconfigured to increase efficiencies.

Block Swap Yard will provide fluidity to CA ports

Intermodal trains, go faster because they don’t make many stops.

Trains have only one commodity that is off loaded at intermodal facilities – like Santa Teresa
Annex 4. UP Santa Teresa and El Paso

Annex 5. Binational technical group meeting minutes

El Paso/Santa Teresa/Chihuahua Border Master Plan (BMP)
October 2, 2014   UTEP - Kelly hall building, room 401

On October 2, 2014 the members of the Bi-national Technical Group part of the El Paso/Santa Teresa/Chihuahua Border Master Plan (BMP) (http://texasbmps.com/), met for the first time with the members of the newly established Paso del Norte (PdN) Interdisciplinary Research Platform at UTEP (see platform project proposal attached to this e-mail).

The main purpose of this meeting was to discuss the recent developments of the Bi-national Technical Group, specifically in relation to the Cross-border rail infrastructure projects. Members of the Bi-national Technical Group presented the current activities (especially on the Mexican side) developed under the BMP. The idea was to learn more about the rail transportation planning process currently taking place, to coordinate the Cross-border rail infrastructure project activities, in order to find possibilities for cooperation and to avoid redundancies.

The meeting was hosted at the offices of the Hunt Institute for Global Competitiveness (HI) at UTEP. Patrick Schaefer, Executive Director of the HI opened the meeting, welcomed the participants, and mentioned the importance of the Cross-border rail infrastructure projects for the economic development of the PdN region.
Subsequently, Manuel Lopez, Consultant from IMIP started the presentation entitled: *A regional view for the shared border: the approach of Ciudad Juarez* (see presentation slides attached to this e-mail), which he divided in five main sections:

1. **PdN Region** (definition of the geographical area that we consider for this rail infrastructure study)
2. **Cross-border rail infrastructure project** (Analysis of the main projects underway in Ciudad Juarez)
3. **How do we define the border region?** (Past – Present – Future of cross-border projects /International Ports of Entry)
4. **Meso-regional View** (Situation of ongoing and future rail infrastructure projects at a national level in Mexico and impact for the U.S. (E.g. Expansion of the automotive industry))
5. **What should we focus on? What are we currently doing?** (Salvador Barragan from IMIP proposed a series of alternatives for improvement:
   a. **Better coordination** with Mexican federal agencies regarding the land use plan for Juarez.
   b. **Follow up** of the New Mexico – Chihuahua initiative to establish a binational community (San Jeronimo/Anapra and Santa Teresa/Sunland Park)
   c. IMIP keeps encouraging the realization of **periodic informal meetings among regional stakeholders** in order to update and exchange information for the creation of a consolidated database.
   d. Follow up initiatives/projects carried out at the **bi-national level** (US-MEX Governments) (E.G. Modernization of the International port of entry Tornillo, TX/Guadalupe, Chih)
   e. Find a **common path to work together as a region**, taking into account the common opportunities and the potential to reach a **stronger regional competitive capacity**.
   f. **Coordinate rail infrastructure activities** in the PdN region in order to **avoid redundancies** and to strengthen the **trilateral cooperation** (West Texas, Southern New Mexico and Northern Chihuahua).
   g. Communicate the **regional message** and educate other stakeholders.
   h. Importance of promoting the idea of PdN Region by designing a **strong marketing campaign that can be exported locally, nationally and internationally.**

**Comments/conclusions/questions of participants:**

- Who can deliver this regional message? We need an entity in charge of promoting the region. Perhaps the Hunt Institute could be this **centralized/neutral** entity in charge of strengthening this regional view.
- There is a multiplicity of cross-border rail initiatives, which all tend to work on the same issues. We need to **organize the ideas** and **consolidate one single regional initiative to avoid redundancies and conflicts.**
- If we manage to coordinate our efforts locally and create one single and coordinated message, we will have better opportunities to succeed as the PdN region.
- Informal meetings like this one, are an excellent opportunity to communicate and coordinate efforts and to get to know the regional actors.
- Recently, the Hunt Institute proposed the creation of a multidisciplinary research platform that received a **grant** from the Office of Research and Sponsored Projects at UTEP. This platform aims to **fill the gap in research and data** about **rail transportation infrastructure in El Paso del Norte Region (PdN)** and **provide crucial information to key regional stakeholders.** Considering the exponential increase of trade volumes that go through the region, there will be higher demand for more and better rail infrastructure in the next decades. Composed by members of three UTEP Colleges (Business Administration, Liberal Arts and Engineering) and two external members from New Mexico and Chihuahua (University of New Mexico and the IMIP), the PdN interdisciplinary research Platform constitutes an **unprecedented example of academic cooperation in the cross-border region.**
Bibliography (IBM SmartCloud Repository)


18) Tex. Transportation Code § 91


