



# Project Summary

Texas Department of Transportation

## 0-5546: Protecting Rail Corridors Against Encroachment

### *Background*

The concept of transportation corridor preservation to reduce or restrict incompatible development has gained interest over the past 20 years. Most corridor preservation efforts, however, have focused exclusively on highway corridors. A number of recent developments have led public planning agencies to also consider rail corridor planning and preservation as a key part of their long-term transportation plans. The acquisition or adoption of certain abandoned rail corridors as well as the potential development of relocated rail corridors by state or municipal governments has served to increase awareness of corridor preservation and planning issues. There is a growing recognition that the current status and location of rail corridors, in the context of urban and freight growth, is essentially placing cities and rail operators on a collision course.

### *What the Researchers Did*

In order to know which strategies it could adopt to effectively preserve rail corridors, the Texas Department of Transportation (TxDOT) first needed to know what legal tools existed in Texas that could facilitate this process. Therefore the researchers performed an analysis of Texas' legal framework, including analyzing city, county, and agency powers and obligations, in order to illustrate the types of preservation and planning activities that would be possible in the absence of new legislation. Given that the need for rail preservation is an issue of growing importance in many areas of the country, the researchers then investigated policies that have been adopted in other states to set aside future corridors for new construction, prevent incompatible land uses in close proximity to existing rail corridors, and preserve corridors that have been abandoned for recreational or future transportation use.

Given that it is not always possible to create buffer zones separating rail activity from incompatible land uses, the researchers examined various mitigation techniques that could be used to lessen the impact of rail activity on surrounding communities. These techniques included sound barriers, modifications to the track or subgrade, and modifications to the locomotives or rail cars. These modifications, along with improved building codes for noise insulation, are seen as particularly important given the growth of transit-oriented development, which is often located near corridors utilized by both passenger and freight trains.

### *Research Performed by:*

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#### **Research Supervisor:**

C. Michael Walton

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#### **Project Completed:**

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## What They Found

The case studies revealed a growing national consensus that rail corridors have to be better managed with a stronger role in integrating rail corridor planning into overall transportation plans. Still, comprehensive planning was found to be deficient in many areas. In Texas, for example, TxDOT does not have the authority to adopt land use regulations; only cities are authorized to undertake this activity. This places a heavy burden on cities to undertake and implement the requisite zoning activities to ensure that incompatible development and encroachment does not occur. Some cities in Texas do not undertake zoning activity; Houston, for example, does not have the authority to zone and has not created a comprehensive plan since 1932. Many other cities in Texas, however, are actively undertaking comprehensive planning to direct land use activity and in some cases are rezoning areas or utilizing overlay zoning to achieve different land density mixes to encourage compatible development beside transportation infrastructure.

Throughout the United States, state DOTs have been developing inventories of rail assets and identifying abandoned routes. Some states, for example New Jersey, have used these inventories as a mechanism to develop plans to reinstate transit and freight service. Multiple states and cities are now actively involved in preserving rail corridors—often through rails-to-trails—and in some instances are purchasing abandoned corridors or shared rights of way within existing freight corridors. For example, North Carolina has a strong program of acquiring abandoned rail corridors to preserve system integrity. Other initiatives have included large scale projects, such as the Alameda Corridor in Los Angeles and the Reno ReTRAC project, which have grade-separated rail corridors from surrounding communities through the use of trenches and grade-separation treatments. Multiple communities are also implementing new zoning categories and using overlay districts to encourage compatible development beside transit corridors. In some instances, developers have been willing to pay for the implementation of quiet zones; for example, two developers in Fort Worth paid for the installation of measures to create quiet zones under FRA guidelines. The researchers also found that noise and vibration attenuation treatments used as a retrofit to offset community concerns are very expensive, take multiple years to bring to fruition, and do not always deliver the benefits that communities were expecting.

## What This Means

Rail corridor preservation is emerging as a priority planning area for state DOTs around the country. Texas already has many tools at its disposal to engage in preservation activities, though in many cases this requires close coordination with local jurisdictions. When it comes to preserving corridors, preventing incompatible land use, or mitigating the impact of rail operations on surrounding communities, partnering is the key. Furthermore, given that all of these activities are costly, it is critical that the department identify suitable funding sources for rail corridor preservation and protection and a transparent system for identifying the potential projects with the highest value to the state.

### *For More Information:*

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