

APPENDIX I-18: TREND ANALYSIS – PRIVATE RAILROADS AND PUBLIC AGENCY CHALLENGES

Trend Statement

A new paradigm for freight and passenger railroad infrastructure and rights-of-way sharing has emerged in urban areas over the past four decades. Public interest has grown in providing a cost-effective commute option to the private automobile, thereby improving mobility, safety, air quality, and easing congestion. The renaissance of publicly-subsidized passenger rail has been hastened by the deregulation of the freight railroads, the need to comply with clean air and sustainability requirements, and the public's willingness to provide permanent subsidies for passenger rail.

Shared use is potentially viable for private freight railroads and public passenger railroads only when both require the expansion and rehabilitation capital needed to retain and expand their services. But the challenges for both services are considerable and managing a private venture in a public setting is much more visible than managing either type of exclusive rail service individually. As a result, complex shared use agreements and operating agreements, public regulatory initiatives and public investments in private freight facilities continue to be cautiously negotiated throughout the country based on mutually recognized needs and benefits.

Background

In the United States (U.S.), freight and passenger rail services were historically owned and operated by the private sector under tight federal regulation to preserve equitable access and the public interest against railroad monopolistic pricing. However, by the 1960's the automobile and airplane had replaced most passenger rail business. Railroads also were pressured by growing competition from long distance trucking firms. By 1960, one-third of the U.S. rail industry was bankrupt or close to failure. The share of railroad intercity freight movements decreased from 75 percent in 1920 to 35 percent by 1975.

Congress responded to the reduced monopolistic threat in two ways that dramatically changed the rules for shared use of railroad infrastructure by passenger and freight trains. In May 1971, the publicly-subsidized National Railroad Passenger Corporation (AMTRAK) was created which allowed private railroads to divest their unprofitable passenger services in exchange for statutory access rights and low access rates for AMTRAK to use the private railroads. Federal deregulation of the railroads in 1976 and 1980 enabled route consolidation, freight service elimination, abandonment of more than 100,000 miles of track, railroad mergers (from 56 Class 1 railroads in 1975 to seven operating in the U.S. today) and the sale of surplus railroad infrastructure to public agencies and short line railroads. The increased efficiencies have allowed railroads to compete with trucks and airlines for freight services even though the railroads lack the public subsidies that support highway and airline systems. To sustain their local freight rail networks, railroads that sold their low volume routes to public agencies entered into complex shared use and operating agreements that allowed freight trains on the new passenger routes and allowed passenger trains to operate on their freight lines. From these early agreements emerged a guiding principle that tied public and private investment to the proportional benefit to the private or public entity.

Deregulation allowed railroads to focus on their key product - strategic long-distance rail corridors linking major global gateways to inland markets- and to become more efficient in order to be more competitive with trucking. The new passenger services within the private railroad networks increased the visibility of rail safety and other public concerns stemming from the recognition of passenger rail transit as a primary objective for air quality, sustainability, and congestion reduction strategies.

Freight System Implications

A public agency that wants to initiate passenger rail should recognize that freight railroads are not obliged to consider public interests and are concerned primarily with the interests of their shareholders and customers. The addition of publicly-subsidized passenger service to their train mix will significantly change their railroad operations, capital investment strategies, and regulatory environment. A public agency has several choices in the rail infrastructure it uses for new passenger service. There is no “best choice” for shared-facility operation of passenger and freight trains. Freight railroads own 41 percent of the shared tracks; transit owns 18 percent, and the rest are jointly owned. An agency wishing to implement passenger rail service can construct a new rail transit line that does not host freight trains, purchase abandoned railroad routes and reactivate rail passenger (and freight) service, access existing freight routes via AMTRAK’s statutory rights, or negotiate shared use agreements with each railroad owner on which the passenger trains will operate. Each of the choices involves large and long-lasting capital, operations and maintenance subsidies. Each choice also has significant policy, regulatory and business frameworks and tradeoffs.

The railroads have the choice of expanding their lines or generating capital from the public sector by sharing their mainline tracks and selling branch lines while retaining operating and expansion rights. The freight railroads bring to the negotiating table over-arching concerns for safe operations, guarding against degradation of their freight business, preserving capacity for freight growth, and limiting their liability and legal exposure. Passenger rail service consumes far more railroad resources than it generates to the railroad in revenue and the railroads expect the public agency to fully reimburse for all ongoing costs incurred, plus a profit. In addition, public agencies need to provide an incremental benefit to the railroad, usually in the form of publicly-funded capacity expansion and safety improvements.

The shared use agreements are long-term or perpetual and include detailed provisions for access (route limits, passenger and freight service restrictions and priority, integrated service schedules/slots/maintenance windows), rates (for facility use and incremental maintenance costs of passenger rail service volumes and quality), communications and dispatch arrangements, funding to be provided, and design/construction schedules for the capital projects required before passenger service is initiated or for expansion thresholds. The agreements must also consider industry specific laws (e.g. the Railroad Retirement Act, the Railroad Unemployment Insurance Act, the Railway Labor Act, and the Federal Employers Liability Act), labor agreements, liability sharing and insurance, and ever-evolving regulations affecting the viability and cost of shared services (e.g. the Americans with Disabilities Act, regulations related to rolling stock crashworthiness, and Positive Train Control). Agreements must also incorporate freight railroad design constraints (e.g. the extra lateral and vertical clearance required by freight railroads in anticipation of national defense needs, to preserve the continuity of the national railway network, and to provide higher clearance for the efficiency of double-stacked containers on freight cars).

Planning Considerations

In addition to shared use agreements, railroad projects must be assessed for their proportionate share of public and private benefits to guide the proportionate investment in a project. The justifiable investment allocations can range from a simple calculation of the proportionate number of public and private trains using the facilities to complex arrangements in which additional grade separations, street closures, and at-grade crossing infrastructure improvements are demanded by local public agencies and funded using state or federal transportation funds to expedite a nationally-significant grade separation project.

Because these agreements are long-term or perpetual, planning and negotiating capital improvement and shared use agreements requires experienced and knowledgeable negotiation teams representing all parties so that the many issues involved in the complex agreements can be timely resolved. The teams will likely need expertise in freight railroad engineering, railroad safety and operations, railroad cost estimation and accounting, legal and regulatory matters, liability and risk management, and private sector business drivers and requirements. One of the most difficult planning issues in a shared use agreement is the need for reliable, fast passenger service and competitive freight delivery schedules. With increasing demands for just-in-time service and time-sensitive high value freight service, both passenger and freight operators need to agree on how they will manage day-to-day service and dispatching, maintenance windows and recovery from incidents.

Due to the intensive competitive environment in which freight railroads exist, they expect that the public sector will understand the importance of confidentiality in negotiations. They will not typically release any future business plans and will rely on their own planners and trusted consultants to project future expansion needs.

As national railroads, they also share tracks with other facility owners and operators and are challenged to maintain national inter-operability for the efficient servicing of customers regardless of the rail service provider. Because of the need for interoperable equipment, track, signals and communications, it can take decades for federal regulations such as Positive Train Control and Quiet Zones to be fully implemented.

As a consequence, these evolutionary improvements are typically implemented on top of the current technologies and procedures and the freight railroads will either claim they are public improvements that are not needed to run a safe railroad, or mostly benefit the public. In addition, the railroads may justify implementation timeframes that do not require use of major annual percentages of their scarce capital and maintenance budgets for projects and improvements they consider supplemental to their baseline safety programs and technologies.

The same national interoperability needs and resource concerns guide public discussions surrounding air quality improvements related to locomotives. More than 24,000 locomotives operate on the seven largest U.S. Class 1 railroads. The Environmental Protection Agency (EPA) estimated in 2008 that locomotive and marine diesel engines still accounted for approximately 20 percent of mobile source emissions of low oxides of nitrogen (NOx), and about 25 percent of mobile source diesel PM in the U.S.

On May 6, 2008, the EPA finalized future Tier 3 and Tier 4 exhaust emission standards for new locomotives.¹ The transition from Tier 2 to Tier 3 required a 50 percent reduction in particulate matter (PM) and applies to newly manufactured locomotives starting January 1, 2012. Tier 4 exhaust emission standards for locomotives will take effect in 2015 and will require an additional 70 percent reduction in PM from Tier 3 standards, as well as approximately an 80 percent reduction in NOx. Tier 4 standards will not likely be met by engine design changes alone, but would instead force the transfer into the locomotive sector of exhaust catalyst technology previously developed to control NOx and PM from on-highway and non-road heavy-duty diesel engines.

In addition to EPA regulation, the state of California actively promotes effective measures of reducing emissions within that state's nonattainment zones, or areas that do not meet the National Ambient Air Quality Standards (NAAQS), where emission reduction priorities are the highest. The desire for railroads to help meet California's air quality objectives, plus the approach of future EPA regulations, has resulted in a demand from railroads for manufacturers to develop ultra-low emission locomotives and for the railroads to develop new facilities that have the lowest technically feasible emissions footprints.

Since new EPA emission standards are effective in 2015, the freight railroads are scrambling to purchase new equipment and retrofit current equipment throughout the country. Yet, as an example of the magnitude of the investment challenges, Union Pacific will only be able to purchase 200 new locomotives in 2013 and there are only two domestic freight locomotive manufacturers. General Electric has 70 percent and Caterpillar, which purchased EMD from General Motors after GM's bankruptcy, has 30 percent market share).

Resources

FRA/FTA Joint Statement of Agency Policy Concerning Shared Use of the Tracks of the General Railroad System by Conventional Railroads and Light Rail Transit: <http://www.gpo.gov/fdsys/pkg/FR-2000-07-10/pdf/00-17209.pdf>

Passenger Rail Sharing Freight Infrastructure: Creating Win-Win Agreements, Center for Transportation Research, University of Texas at Austin. March 2006: <ftp://ftp.dot.state.tx.us/pub/txdot-info/rti/psr/0-5022.pdf>

Passenger Service on Tracks Owned by the Freight Railroad. January 2004. Association of American Railroads Policy and Economics Department.

Resor, R. and P. Patel. "Allocating Track Maintenance Costs on Shared Rail Facilities." *Transportation Research Report 1785*, (2002): 25-32. www.trforum.org/journal/downloads/2005v44n1.pdf

California Public Utilities Commission: www.cpuc.ca.gov

¹ Emission regulations for locomotives and locomotive engines can be found in the US Code of Federal Regulations, 40 CFR Parts 85, 89 and 92.

Charles A. Spitulnik, Immediate Past Chair, American Public Transit Association, Legal Affairs Committee, and partner, Kaplan, Kirsch & Rockwell, LLP, Washington, DC:

http://www.kaplankirsch.com/charles_a_spitulnik.php

“Ultra-Clean Diesel Locomotive”, Southwest Research Institute, Spring 2010

<http://www.swri.org/3pubs/ttoday/Spring10/locomotive.htm>