



University Transportation Research Center - Region 2

Final Report



A Case Study of High Speed Rail in Florida: Implications for Financing Passenger Railways

Performing Organization: The City University of New York



February 2016



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The Region 2 University Transportation Research Center (UTRC) is one of ten original University Transportation Centers established in 1987 by the U.S. Congress. These Centers were established with the recognition that transportation plays a key role in the nation's economy and the quality of life of its citizens. University faculty members provide a critical link in resolving our national and regional transportation problems while training the professionals who address our transportation systems and their customers on a daily basis.

The UTRC was established in order to support research, education and the transfer of technology in the field of transportation. The theme of the Center is "Planning and Managing Regional Transportation Systems in a Changing World." Presently, under the direction of Dr. Camille Kamga, the UTRC represents USDOT Region II, including New York, New Jersey, Puerto Rico and the U.S. Virgin Islands. Functioning as a consortium of twelve major Universities throughout the region, UTRC is located at the CUNY Institute for Transportation Systems at The City College of New York, the lead institution of the consortium. The Center, through its consortium, an Agency-Industry Council and its Director and Staff, supports research, education, and technology transfer under its theme. UTRC's three main goals are:

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Project No(s):

UTRC/RF Grant No: 49997-19-25

Project Date: February 2016

Project Title: A Case Study of High Speed Rail in Florida: Implications for Financing Passenger Railways

Project's Website:

<http://www.utrc2.org/research/projects/public-private-financing-rail-infrastructure>

Principal Investigator(s):

Dr. James Cohen

Professor Emeritus,
The City University of New York
Email: jcohen@jay.cuny.edu

Performing Organization:

The City University of New York

Sponsor(s):

University Transportation Research Center (UTRC)

To request a hard copy of our final reports, please send us an email at utrc@utrc2.org

Mailing Address:

University Transportation Research Center
The City College of New York
Marshak Hall, Suite 910
160 Convent Avenue
New York, NY 10031
Tel: 212-650-8051
Fax: 212-650-8374
Web: www.utrc2.org

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Wei Hao: *Research Fellow*

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1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
4. Title and Subtitle <u>Relationships between public-private financing, speed, and rail infrastructure development</u> <u>A CASE STUDY OF HIGH SPEED RAIL IN FLORIDA: IMPLICATIONS FOR FINANCING PASSENGER RAILWAYS</u>		5. Report Date February 29, 2016
7. Author(s) James Cohen, Ph.D., Professor Emeritus, The City University of New York		6. Performing Organization Code 8. Performing Organization Report No.
9. Performing Organization Name and Address		10. Work Unit No.
12. Sponsoring Agency Name and Address University Transportation Research Center, Region 2 The City College of N.Y. Marshak Building, Room 910 New York, N.Y. 10031		11. Contract or Grant No. 49997-19-25
15. Supplementary Notes		13. Type of Report and Period Covered
		14. Sponsoring Agency Code

16. Abstract

Between 1981 and 2011, the State of Florida and private corporations, sometimes jointly, sometimes alone, made four different attempts to implement very high speed rail lines between Miami, Orlando, and Tampa, on which trains would run at very high speed, between 150 and 220 miles per hour. Yet, at present, the only new passenger line that is likely to begin operations between these cities is not very high speed, and will not run on dedicated track. Why did all the earlier attempts at very high speed lines fail, while a moderate speed line appears likely to succeed? This report shows how neoliberal ideology and policies in the 1980's caused a private consortium to plan a line based on credit from private investors and rents and profits from real estate development. When that failed, a public-private partnership was attempted in the 1990's, which relied on direct government grants, guarantee for private activity bonds, federal financing (TIFIA), and other sources. This plan was vetoed by Governor Jeb Bush in 1999. The currently planned line will be financed, as in the 1980's and 1990's, by private activity bonds and real estate revenues. But, unlike earlier periods, trains will not run on grade separated track, so infrastructure costs are significantly lower than for very high speed. Nonetheless, sponsors of the current project are advertising their line as high speed, since its operating time will compete with existing air and highway options. This, then, shows how both actual and perceived speed-time and finance are related, and the implications of this relationship for American passenger rail in the future.

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A CASE STUDY OF HIGH SPEED RAIL IN FLORIDA:
IMPLICATIONS FOR FINANCING PASSENGER RAILWAYS

INTRODUCTION

My research concerns the history of relationships between high speed and financing for passenger rail projects. Note that this is not the same as answering the question: how can high speed rail be financed? Instead, I re-examine the very definition of high speed, and then look at relationships between speed and railway capital and operating finances. My objective is to identify relationships between speed of certain levels, and financing of certain types and amounts, which are conducive to successful implementation of improvements in American passenger railways.

The resources for my research come from American rail and financial history, from the early 19th century to the present. I have gathered data and documents primarily concerning Florida, Texas, and California, because those States have a long history of high speed trains, and also because they are the locus of new high speed projects currently under active consideration. Thus those three States provide the most relevant information for assessing how improvements to passenger railways might be successfully implemented. In this report, I focus on Florida, where I have gathered the most complete information to date.

REDEFINITIONS; REDEFINED RELATIONSHIPS

The main variables in this research, high speed and finance, are intrinsically complex. High speed, one might assume, is simply an absolute rate of movement, or threshold of speed that must be surpassed. In fact, it fits neither of those definitions. Instead, timetable data reveals that, in addition to the post 1964 period of the Japanese *Bullet Train* and its successors in Europe and elsewhere, which are commonly considered the first high speed trains, some railways operated at

high speed during three earlier periods—1830-1850; 1890-1910; and 1930-1955.¹ Therefore, high speed is historically relative, contingent of the characteristics of trains at specific moments in time, such as how fast they travel relative to earlier trains. Moreover, high speed is an idea that is partly constructed by mass media, cultural institutions, and railway advertising.² It exists in popular consciousness as well as in objective rates of movement. In short, technological changes, such as the introduction of more powerful locomotives, and socio-cultural factors, such as mass media advertising, contributed to the development of high speed trains at various points in American rail history. One can even imagine further periods of high speed in the future, if and when, for example, magnetic levitation trains are introduced in this country.

The historical relativism of high speed has important policy implications, especially when considered in relation to railway finances. Before the contemporary period, high speed had a generally, though not invariably, positive effect on rail profits. When speed and time to destination were superior to speed-time previously attained, and/or superior to the speed-time of competing modes, ridership increased significantly and, as a result, rail operators generated profits.³ This was the case, for example, for *streamliners* operating between Chicago and Milwaukee in the period from 1930-1955; trains that today would be called moderate speed, but were previously considered high speed. It was equally true of the first steam railways ever developed, which drove stagecoach transport out of business in the early 19th century.⁴ These findings imply that moderately high speed lines can be profitable, if they are advertised and perceived by passengers as high speed, and are also competitive in price with alternative modes.

The relationship between speed and finances becomes more complex, however, when we reach the contemporary period of very high speed trains. Very high speed lines are rarely profitable, in large part because these are based on very expensive, dedicated, grade separated infrastructure. Construction costs for very high speed lines are generally at least twice as high as for upgrading existing rail lines, and since construction is usually financed through loans, this creates high levels of debt service. Revenues on very high speed lines are usually insufficient to generate

¹ J. Cohen, "The historical relativism of speed on railways, 1830-present," in *Transportation, Traffic, and Mobilities (T2M)* (Philadelphia, PA.2014).

² Ibid.

³ J. Cohen, "Financing high speed rail: historical and cross-national perspectives," (New York City: The University Transportation Research Center, 2015).

⁴ Cohen, "The historical relativism of speed on railways, 1830-present."

revenues that exceed debt service and other operating costs. My research for this report shows that, in Florida, in the 1980's and 1990's, rail promoters made two successive attempts to implement very high speed lines, both of which failed, in large measure because potential investors were not convinced that operating revenues would cover both debt service and operating costs, and still generate a profit. Yet, a little over ten years later, in 2012, a private investment company, Fortress Group, and their Florida rail subsidiary, *All Aboard Florida* (AAF), proposed a plan to operate a moderately high speed line between Miami and Orlando, and construction is about to commence. AAF is promoting their line as high speed, even if their trains are operating at speeds as high as the French *TGV* or Japanese *Bullet Train*. AAF is confident that its new line will be profitable.

Since *All Aboard Florida* could possibly be profitable with a moderately high speed line on the same corridor as the earlier attempts at very high speed failed, does this argue for upgrading existing lines and not attempting very high speed? To answer this, and other fundamental questions about relationships between speed and finance, I have prepared a detailed case history of high speed rail in Florida. Eventually, by comparing Florida to Texas and California, I will develop a richer narrative and more comprehensive answers to my research questions.

I focused first on the Florida case because, in at least three ways, it prefigures broader developments in American high speed rail history. First, the most significant factors influencing high speed rail finance in the U.S. were evident in Florida between 1981 and 2011. Second, events in Florida in the 1980's influenced the way promoters approached subsequent initiatives throughout the U.S., in the 1990's and beyond. Third, since Florida is only State where, as of this date, a new, privately operated, passenger rail line is under construction, and since this proposed, new line will operate at moderate, not very high speed, on existing track, it provides comparative information that helps explain why earlier plans did not come to fruition. In short, Florida's history contains most of the elements needed to elucidate the key factors influencing high speed and financing for passenger railways.

POLITICAL CONTEXT FOR HIGH SPEED RAIL IN FLORIDA

Between 1981 and 2011 public authorities and private corporations made four different attempts to implement very high speed rail lines between Miami, Orlando, and Tampa, Florida, on which trains would run at top speeds over 200 miles per hour.⁵ Yet, at present, the only new passenger line that is likely to begin operations between these cities is not very high speed, and will not run on dedicated track. *All Aboard Florida (AAF)*, a subsidiary of the Fortress Investment Group, has proposed to operate trains at between 79 and 125 miles per hour, on upgraded freight rights of way between Miami and Orlando, with a possible future extension to Tampa. Why did all the earlier attempts at very high speed lines fail, while a moderate speed line appears likely to succeed? In the process of answering this question, I provide an analysis of relationships between high speed and passenger rail financing.

Most research attributes the failure of early high speed initiatives in Florida to the inability of sponsors to overcome local opposition, and/or inability to attract sufficient capital investment. While generally correct, these explanations are too narrow. Early high speed rail initiatives were unsuccessful primarily because a new ideology and set of policies, called neo-liberalism, came to dominate American politics in that period. Neo-liberalism changed the rules governing capital markets, thereby affecting opportunities for capital investment. It also provided key elected officials at State and federal levels with justifications for actions taken to prevent construction of high speed lines.

Neo-liberalism developed in reaction to a long period of government activism in the United States. After the end of World War 2, the U.S. began 30 years of economic growth, which was partly stimulated by public interventions on behalf of particular industries. In the rail sector, for example, the U.S. Congress passed the High Speed Ground Transportation Act, in 1965,⁶ which led to a decade of federally funded grants to railroads and rail manufacturers for research on, and development of high speed technology, and studies of the feasibility of operating high speed trains on the particular corridors, such as in the Northeast (NEC), Texas, Florida, and California.⁷

⁵ Trains that run at speeds of 150 miles per hour and faster are defined as “very high speed” by the International Union of Railways. Top speeds of 200 miles per hour are not unusual for many very high speed trains.

⁶ Public Law 89-220; 79 Statutes 893.

⁷ Congress of the United States, “U.S. passenger rail technologies. Chapter 5, passenger rail history”, ed. Office of Technology Assessment (Washington, D.C.: U.S. Government Printing Office 1983).

Trains called *Metroliners* and *Turbotrains*, with electric and gas turbine locomotive technology capable of very high speed (150 miles per hour), were developed in the late 1960's. While these trains were unable to operate in commercial service on the NEC because roadbed, catenary wires, and signals were too deteriorated, they set a precedent and nurtured the growth of individuals, agencies, and authorities that would subsequently work to implement very high speed rail in the U.S.

However, in the mid-1970's the American economy entered an extended period where recessionary conditions combined with high inflation. Termed "stagflation," these conditions increased federal budget deficits and unemployment, and in reaction to this, neo-liberalism, grew in popularity, especially during the presidency of Ronald Reagan (1981-1988). The Reagan Administration advocated free market economics, which meant a reduced role for government through cuts in spending, and elimination of public subsidies and loans for new projects, such as high speed rail lines. Neo-liberalism called on the private sector to determine economic outcomes through market choices. By the early 1980's, this was the political and economic environment in which sponsors of high speed rail projects had to operate.

With neo-liberalism as context, sponsors of high speed rail in Florida looked to raise capital from banks and other private institutional investors; to create revenue streams by developing real estate along rail lines; and to purchase existing high speed train technology from foreign manufacturers. They were optimistic about this approach partly because the Channel Tunnel project between England and France, one of the largest and most costly rail infrastructure projects in history, set a precedent for private financing. Margaret Thatcher, the neo-liberal British Prime Minister when the Channel Tunnel contracts were signed, in 1986, pushed forcefully for strictly private financing of that project and, at least initially, her arguments were supported by positive results. One investment banker who worked in Florida stated that "our American partners were truly impressed by this (Channel Tunnel) achievement, all the more so because it (initially) had met a lot of skepticism with(in) the U.S. financial community. Only one American bank, Citibank, joined the circa 200 bank lending syndicate (for the Channel Tunnel project)." ⁸ In addition to the Channel Tunnel, high speed rail was taking off in a number of other

⁸ Personal communication, 9 January, 2016.

countries, setting precedents for what might be achieved in Florida. For example, Japan successfully introduced very high speed trains into commercial service in the 1960's. France, Sweden and others followed in the 1970's and 1980's. American rail professionals and public officials, who visited those countries, returned with the belief that similar projects could be implemented in the U.S. Not surprisingly, then, rail promoters in Florida embraced neo-liberalism because they believed it provided a viable set of principles to rely on for implementing high speed rail plans, and because it's successes abroad could be duplicated in the U.S.

MAJOR ACTORS IN RAIL DEVELOPMENT PROCESS

Four groups were the main promoters of initiatives to implement very high speed rail in Florida:

1. Rail professionals and the agencies in which they worked—such as Alan Boyd, the first President of the National Passenger Railway Corporation (Amtrak), and Gilbert Carmichael, head of the Federal Railroad Administration—were strong proponents of high speed passenger rail;
2. Construction and engineering firms that specialized in major infrastructure projects, such as Fluor-Daniel and Skanska, expected high speed rail construction to be an important profit center;
3. Real estate and land development firms, such as Tishman Speyer Properties, envisaged property development near high speed rail lines as lucrative retail, commercial, and residential building opportunities;
4. The rail industry, including foreign rail manufacturers, such as GEC Alstom, ASEA, Brown, Boveri (ABB), and Siemens; their North American subsidiaries, such as the Bombardier; and operating companies, such as the French National Railway Company (SNCF) and the Japanese National Railway Company—all wanted to export their rail technology and expertise to what was potentially a very large American rail market;⁹
5. American investment banks, such as First Boston and Bear Stearns, envisioned opportunities to earn large fees advising project sponsors. Also, foreign banks, such as the National Bank of Paris (BNP), supported the efforts of their nation's train operators and manufacturers to penetrate the American market.

My research indicates that most of these American and foreign groups were neither proponents, nor opponents, of neo-liberal propositions. Instead, they were mainly focused on selling their

⁹ The French wanted to sell their *Train à Grande Vitesse (TGV)* technology; Japan wanted to export their *Bullet Train*; and Sweden had trains using tilting technology that could run at high speed through sharper than normal curved track, which could be applied in Florida.

products and expertise in a new American high speed rail marketplace. However, when the Channel Tunnel project experienced serious financial problems in the early 1990's, institutional investors and other players came to realize the risks inherent in the neoliberal approach of fully private project financing, and changed their approach. In short, positions taken by the various groups involved with high speed rail in the U.S. changed over time.

FLORIDA HIGH SPEED GROUND TRANSPORTATION ACT OF 1984

In 1981, the Miami Chamber of Commerce, which represented the powerful business community of that city, issued a report proposing a new, very high speed rail line between Miami, Orlando, and Tampa, three populous cities which were also tourist destinations for millions of visitors, and potential train passengers. The report suggested that the new line could be financed entirely from private resources, such as through property development along the route.¹⁰ Attracted to high speed rail after riding Japan's *Bullet Train*, Florida's Governor, Bob Graham, created a High Speed Rail Committee, which reported, in 1984, that a new rail line was feasible for Florida and could be privately financed.

Graham was a Democrat and, although on a national level, Democrats generally favored activist government policies, Southern Democrats had a long history of opposing interference by authorities in the affairs of individual citizens, including a particular aversion to increased taxation to fund projects such as high speed rail.¹¹ Therefore, when the State Legislature passed a High Speed Rail Act in 1984, it prohibited "pledging the full faith, credit, or taxing power of the state, toward retirement of...bonds,"¹² which ruled out public financing for the project. Instead, the Act envisioned financing primarily from two areas: tax exempt borrowing and real estate development. A High Speed Rail Transportation Commission, with independent powers, was created to oversee implementation of this strategy. The Commission could issue tax exempt bonds;¹³ require co-location of rail lines on State highway rights of way; use their powers of eminent domain to purchase private land for rights of way; and require Florida's county governments (local authorities) to cooperate on financing arrangements, such as imposition of tax assessments, which would provide revenue for rail franchisees—most of these being ways to

¹⁰ T. Billitteri, "Is there a bullet train in Florida's future," *Florida Trend* July(1982).

¹¹ N. Rae, *Southern Democrats* (New York: Oxford University Press, 1994).

¹² Chapter 84-207, Laws of Florida, 1984: section 10. Texas, similarly, explicitly prohibited the expenditure of state funds to help finance construction or operations of an approved high speed rail line. Also, in California, the Passenger Rail Financing Commission Act, established the California Passenger Rail Financing Commission, which could issue up to \$1.25 billion in construction bonds, but those bonds were "not deemed to constitute a debt or liability of the state...or a pledge of the faith and credit of the state...payable solely (from revenues of the project)." (1982 Statutes, Chapter 1553)

¹³ However, the Commission could not fund or guarantee those bonds because of the prohibition on public financing.

tap into Florida's burgeoning real estate market. In short, the 1984 Act set Florida on a path to developing high speed rail based on neoliberal assumptions about private financing.

FINANCING HIGH SPEED RAIL THROUGH REAL ESTATE DEVELOPMENT

Capturing value from property development was certainly not a new idea in American rail history. Railroads in the 19th and early 20th century often earned profits by selling land near their tracks, or by developing property to sell, rent, or lease. Florida seemed well situated to build on these precedents. Property values had been increasing in the State since the end of World War 2, based partly on rapid population growth and partly on burgeoning tourism. An early 1980's study prepared for Governor Graham reported that, while "the excess of annual passenger revenues over annual operating costs falls well short of the remaining annualized capital funding requirement (to construct a very high speed rail line),... (t)he development potentials associated with high speed rail stations... provide (the) funding opportunities necessary to assure financial viability."¹⁴ In other words, while ridership revenue would not cover both operating expenses and interest on construction debt, revenue from Florida's largest growth industry—real estate—could make up for that deficit.

The 1984 High Speed Rail Act institutionalized the real estate financing strategy by "encourag(ing)... agreements with (the) franchisee to develop financing arrangements such as benefit assessment districts, tax increment financing, station cost sharing... and development impact fees."¹⁵ In addition, it proposed that increments in projected future tax receipts that accompanied real estate projects be used to pay the debt service on bonds that were issued to finance line construction. The Florida High Speed Rail Commission, which was chaired by a real estate executive, Malcolm Kirschenbaum—founder of Wolfe, Kirshenbaum, and Peebles, P.A., property developers—could mandate that local governments implement impact fees and tax

¹⁴ Barton-Aschman Associates, "Florida HSR Study, Interim Report 5, Economic impact and development," (Tallahassee, Florida 1984).

¹⁵ Florida High Speed Rail Act, 1984: section 20, subsection 6

assessments.¹⁶ Finally, the two groups preparing to bid for the rail development franchise, Florida TGV and The Florida High Speed Rail Corporation, recruited real estate companies to serve on their boards of directors. For example, Florida TGV recruited Tishman Speyer Properties, a major Florida real estate development firm. In short, studies sponsored by the State supported a real estate financing strategy; the 1984 Act provided the High Speed Rail Commission with powers to support and regulate this approach, and Governor Graham appointed real estate executive to head the Commission; and the two groups bidding for a franchise recruited real estate firms to facilitate their planning.

Not surprisingly, then, when these two consortia issued their initial project financing plans, they placed heavy reliance on revenues from real estate. Florida TGV included \$600 million in real estate revenue in its initial plan. Florida High Speed Rail Corporation included an even higher figure, \$3.8 billion in real estate revenue, or \$125-\$130 million per year, over 30 years.¹⁷ Given that total projected spending on the new line was \$6-7 billion, real estate was projected to provide significant financial support for the rail project.

All of this planning, however, was not sufficient to assure success. The real estate financing approach also required political consensus. Both local authorities and State agencies had to review and approve real estate development projects, and the State legislature had to approve any final financial plans that included real estate revenues. Since the 1984 High Speed Rail Act designated the Department of Community Affairs (DCA) as the agency to approve matters related to real estate development along a new rail corridor, their role was crucial. Yet, DCA was wary of financial incentives in the 1984 Act that might undermine their growth management policies. During the decades after World War 2, when Florida was developing rapidly and without much public control, DCA officials lobbied for limits on unregulated growth. They made progress in this regard before the 1984 Act was passed, and did not want to see that progress undermined. Thus, while significant opportunities existed for financing very high speed rail with real estate revenues, sponsors could not tap those resources without convincing DCA and local

¹⁶ A. C. Nelson, "Impact Fees as an emerging method of infrastructure finance," *Florida Policy Review* Winter, no. 2 (1987).

¹⁷ J. Bottcher, "What happened to high speed rail in Florida?," in *High speed ground transportation systems: planning and engineering* ed. M. Bondada, Wayson, R. (New York: American Society of Civil Engineers, 1993).

authorities that their plans would not harm State and local interests.¹⁸ Even after passage of the 1984 Act, that outcome was not assured.

FINANCING HIGH SPEED RAIL WITH DEBT

Revenue from real estate development was not, by itself, sufficient to finance the entire cost of a new rail line. Rail promoters needed to generate additional capital from loans, a standard component of project finance. One type of loan was particularly important for assuring viable financing. Private activity, industrial development bonds, paid interest that, if approved by authorities, were exempt from federal, state, and local taxes, which made them attractive to private investors. The 1984 Act empowered the Florida High Speed Rail Commission to issue this kind of debt, assuming the federal government provided federal tax exemption.

State and local governments used tax exempt bonds as early as the 19th century to stimulate economic development. Most of this debt was used for public purpose projects, such as building schools, but some also financed private projects which served a public purpose, such as hospitals.¹⁹ After relatively slow growth in the early 20th century, private activity debt issuances in the U.S. grew rapidly after the end of World War 2, rising from just over \$1 billion, in 1946, to \$57.7 billion in 1985.²⁰ To slow this growth, Congress enacted The Revenue and Expenditure Control Act of 1968, which excluded many types of private activity from qualifying for tax exemption.²¹ High speed rail was one of those excluded activities. Sponsors of high speed rail in Florida wanted the federal government to change that policy because, with a tax exemption, their bonds could be issued at lower interest rates, which would lower overall project costs.²² Also, tax

¹⁸ Barton-Aschman Associates, "Florida high speed rail study: policy, financing, and management issues," (Tallahassee, Florida 1984).

¹⁹ C. Johnson, Rubin, M. , "The municipal bond market: structure and changes," in *Handbook of Public Finance*, ed. F. Thompson, Green, M. (New York: Marcel Decker, 1998). 509. Because high speed rail lines form part of a larger network of services, including highway and air transport, they serve public purposes.

²⁰ G. Auten, Chung, E., "Private activity tax exempt bonds, 1986," (1986). Johnson, "The municipal bond market: structure and changes." This growth was slowed, but not stopped, by the Revenue and Expenditure Control Act of 1968, which restricted the type of private activities that qualified for tax exemption.

²¹ Public Law 90-364; 82 Statutes 251. Signed into law June 28, 1964.

²² S. Maguire, "Private activity bonds: an introduction," (Washington, D.C.: Congressional Research Service, 2006).

exempt bonds would attract investors, who would not be obliged to pay federal taxes on interest earnings. Thus, when Florida TGV requested that State and federal authorities provide access to the tax exempt debt market, they estimated that “the difference in interest, over a 30 year period, amounts to over \$1 billion” on (our) proposed \$3.5 billion financial plan.²³

However, in the 1980’s, the national political environment was not conducive to this kind of financing. The neoliberal Reagan Administration considered the federal tax exemption for private activity bonds an inappropriate intervention of public authorities in private markets. Congress agreed. In an early 1980’s report, the Congressional Joint Committee on Taxation argued that tax exempt industrial development bonds represent “an inefficient allocation of capital,” and cost the federal government significant amounts of lost tax revenue.²⁴ As a result, Congress passed the Deficit Reduction Act of 1984,²⁵ which set limits on the amount or volume of federally tax exempt debt that states were allowed to issue for “qualified” private activities. Even when the pool of qualified activities was broadened, in 1986, it continued to exclude high speed rail.²⁶

Finally, in 1988, after much lobbying by supporters, high speed rail was named as a qualified private activity.²⁷ But, the law and subsequent Internal Revenue Service regulations included important restrictions. While 75% was outside the cap and could qualify for tax exemption, 25% of the proceeds of a high speed rail bond issuance were subject to the volume cap. And the 75% exclusion applied only to high speed rail lines that were publicly owned. If the line was not public—as was going to be the case in Florida for a period of decades before the property was turned over to the State—100% of bond proceeds were outside the volume cap, and in that case the private owner(s) could not claim any depreciation deductions or investment tax credits on the property financed with tax exempt bonds.²⁸ This attenuated the financial advantages of tax exemption, since depreciation deductions were an important benefit for private investors. In short, while the 1988 law provided financial incentives to potential investors, it also set restrictive conditions, which limited the applicability of tax exempt debt for the Florida project.

²³ R. Blanchette, "Remarks," in *High Speed Ground Transportation Association* (Tampa, Florida 1989).

²⁴ Maguire, "Private activity bonds: an introduction." Page 2, note 8.

²⁵ Public Law 98-369

²⁶ Maguire, "Private activity bonds: an introduction." Table 2, page 10.

²⁷ Internal Revenue Code, Section 142

²⁸ Maguire, "Private activity bonds: an introduction." Page 10, note b.

FIRST FLORIDA VERY HIGH SPEED PROJECT: 1981-1991

The Florida High Speed Rail Commission began public hearings in early 1988 to examine financing plans for the rail project, in preparation for selecting a franchisee. At this time, the federal government had not yet added high speed rail debt to the list of qualified, tax exempt, private activities. As the hearings commenced, Florida TGV, one of the two consortia applying for a franchise, made a startling announcement: “our (s)udies show that the State of Florida will have to consider public support to get the infrastructure underway. Real estate revenues can reduce the level of public support, but... cannot supplant it.”²⁹ In essence, Florida TGV challenged the fundamental financial assumption of the 1984 High Speed Rail Act, that a rail line could be built and operated solely with private financing. Their request for public support led to many months of negotiations, but in the end the High Speed Rail Commission rejected their plan. As a result, Florida TGV withdrew its application for a franchise.³⁰

At about this time in the process, the Commission had begun its own reassessment of using real estate value capture to finance the project. They sponsored a study that found a large backlog of already approved, but not yet constructed, development projects “which...potentially (offer) competition to projects built as ancillary facilities to high speed rail.”³¹ In addition, the study found that 500-700 special tax assessment districts already existed, some along the proposed Miami, Orlando, Tampa rail corridor.³² This suggested that an additional “high speed rail special district with ad valorem taxing authority may find resistance in this environment.”³³ In short, the Commission found that opportunities to capture revenue from property development were significantly more limited than had been anticipated in the early-to-mid-1980’s.³⁴ This caused the remaining franchise applicant, Florida High Speed Rail Corporation (FHSRC), to adjust its

²⁹ Florida High Speed Rail Transportation Commission, *A presentation of the Florida TGV*, March 25 1988.

³⁰ Bottcher, "What happenend to high speed rail in Florida?." 558.

³¹ M. Smith, "Assessment of growth management and local government and real estate benefits associated with high speed rail development," (Miami, Florida: University of Florida, 1990).. 43.

³² *Ibid.*. 57.

³³ *Ibid.*. 75.

³⁴ *Ibid.*. 53.

financial plans, first reducing real estate revenues by 50%, then even further in subsequent proposals.³⁵

The real estate financing strategy suffered an even more serious setback in 1989, when the U.S. economy entered a recession, which ended the phenomenal growth of the three previous decades in Florida's real estate market. This definitively precluded the possibility of using appreciation in property values to finance very high speed rail. Thus, in a revised financial plan submitted in 1990, FHSR Corporation turned to the public sector for support, as had Florida TGV two years earlier, and asked for a 2.5 cent increase in Florida's motor fuel tax. Their proposition to increase taxes was, however, "not warmly received, and FHSR Corporation was unable to gain the political support necessary to further the idea."³⁶ Soon thereafter FHSRC withdrew their franchise application.

In sum, the 1980's initiative to implement very high speed rail in Florida failed for three reasons: first, because project sponsors followed the flawed neoliberal assumption that the private sector would support their project without significant public backing. In fact, private investors were only willing to assume risk for a project, if the State of Florida, or federal authorities, either guaranteed their loans, and/or to directly contributed public funding. But, the 1984 High Speed Rail Act forbade the use of public guarantees, or budget appropriations to pay debt service. Second, project sponsors wanted exemption from taxes on the interest earned from bonds issued to fund rail line construction. However, federal legislation in 1984 and 1986, under the neoliberal Reagan Administration, excluded high speed rail from the list of qualified private activities. Third, real estate financing, which seemed so promising in the early 1980's, also turned out to be based on false assumptions: that large amounts of property were available for development, in return for which impact fees could be assessed and used to finance the new high speed line; and that property values would continue to appreciate for the foreseeable future. Studies showed that much of the land along the proposed Miami-Orlando-Tampa rail corridor was already owned and approved for development, and hundreds of tax assessment districts had already been established by local authorities, who did not respond positively to the idea of adding further assessments. Also, the State Department of Community Affairs (DCA), which had led the way in developing a

³⁵ Bottcher, "What happened to high speed rail in Florida?". 558-59.

³⁶ Ibid.. 559.

growth management plan for Florida in the 1970's and early 1980's, was opposed to a large amount of new development associated with high speed rail.

As a result, first Florida TGV, then Florida High Speed Rail Corporation asked the State to provide public financing in the form of increased taxes. But, new taxes were politically unpopular for both Florida's citizens and public officials. Thus, not surprisingly, when he assumed office in January of 1991, Lawton Chiles, the newly elected Governor, said of the FHSR Corporation's financing plan, "this dog won't hunt,"³⁷ meaning the proposal for implementing very high speed rail in Florida was not viable. The first attempt at very high speed rail in Florida had failed.

SECOND INITIATIVE: 1990-PRESENT

Chiles' rejection was not based on neo-liberal ideology. Quite the contrary, he supported the goal of high speed rail for Florida, and worked with the State Legislature on a new approach to financing and governing project implementation. In 1992, with Chiles' support, the legislature passed amendments that made commitments of annual budget appropriations on behalf of a new rail line, and authorized State issuance of tax exempt bonds, if and when the federal government approved such bonds. Public funding was contingent on private sponsors making significant contributions of equity capital. Finally, Florida's Department of Transportation (FDOT) was assigned responsibility for overseeing project implementation, not a semi-independent commission, as had been the case in the 1980's. In short, under Governor Chiles, Florida moved from a neo-liberal, fully private approach, to a public-private partnership (P-3) framework to implementing a new rail plan.

Florida's move away from neo-liberalism was matched by similar changes at the federal level. Most importantly, in 1998, Congress enacted the Transportation Infrastructure Financing and Improvement Act (TIFIA), which provided direct federal credit as well as credit guarantees for infrastructure projects, and allowed federal loans to be subordinate to senior private debt.³⁸ This

³⁷ "Five billion dollar plan for bullet train will not fly ", *Miami Herald* November 9 1990.. 4b.

³⁸ However, neo-liberalism was not entirely dead. The 1990 Credit Reform Act, which was still in force, required that the estimated cost of TIFIA loans and guarantees, called "subsidy costs," be appropriated by Congress. And, federal "budget scoring" rules meant that for any TIFIA credits, an equal amount of federal spending must be

allowed authorities to fund projects they believed had the greatest chance for success, a sharp break from Reagan's neo-liberal policies of market-based choice.

These shifts away from neo-liberalism were partly influenced by the failure of the Channel Tunnel's private finance scheme. In the early 1990's, massive public support was required to prevent tunnel project bankruptcy. Equity investors lost most of their money. Banks took losses on their loans. As a result, investors lost confidence in neo-liberal policies, which affected the Florida project. For example, the Banque Nationale de Paris (BNP), which, as part of the TGV Consortium in the 1980's, had supported fully private financing, by the 1990's, as part of the Florida Overland Express (FOX) consortium, came to believe that a public-private partnership (P-3) financing strategy was a more viable approach.³⁹

In 1996, the Florida Department of Transportation selected FOX as franchisee to design, build and operate a very high speed line between Miami, Orlando, and Tampa, at a cost of \$6.1 billion, using French *TGV* technology.⁴⁰ Given the changed environment at the State and federal levels, FOX was able to develop a robust financial plan that drew from diverse sources. Specifically, project capital came from tax exempt State bonds secured by the \$70 million/year State legislative appropriations, and tax exempt project bonds backed by fare revenue; from a \$439 million equity contribution from FOX; and from rolling stock leveraged leases. In addition, FOX counted on federal funding from TIFIA. During the period when the TIFIA legislation was being considered in Congress, FOX partners lobbied, and were rewarded when a Conference Committee report, in 1998, specifically named their project as a qualified recipient of TIFIA funds.⁴¹ FOX then included \$2 billion in potential TIFIA funding in their financial plan.

Private banks and other institutional investors supported this plan in various ways, including initial bond ratings advisory memos. Thus, by the late 1990's, sponsors had high hopes that the

cut/eliminated in order to prevent any increase in the federal deficit. This restricted the provision of credit for infrastructure projects.

³⁹ For more on the Channel Tunnel, see papers prepared for *Twenty Years Under the Channel and Beyond: a research and events programme to celebrate the 20th anniversary of the channel tunnel railway* (www.ahicf.com).

⁴⁰ The main FOX partners were Flour Daniel (lead partner), Odebrecht Contractors, Bombardier, and GEC Alstom.

⁴¹ U.S. Congress, "Conference Committee Report," (Washington, D.C.: U.S. Government Printing Office, 1998). HR 105-550.

FOX project would be implemented. But, some important neoliberal politicians, such as John Kasich, Chairman of the House of Representatives Budget Committee, were not so positively disposed. Kasich asked the Government Accountability Office (GAO) to examine the viability of very high speed rail financing in the U.S. In January of 1999, GAO issued a report which specifically called into question many of the FOX financial plan propositions, not least that the federal government would commit most of \$2 billion in available TIFIA funds to that single project.⁴² This provided Jeb Bush, a neo-liberal who was elected to succeed Governor Chiles, with the political “cover,” or justification, for one of his earliest official actions. In January, 1999, he refused to approve the first \$70 legislative appropriation for FOX. He opposed project implementation partly because committing the State’s full faith and credit to backing project bonds could be very expensive in the event of a default, and partly because he said State funds could be better used for other, non-high-speed transport priorities.⁴³ Soon thereafter, FOX withdrew its offer to build a very high speed line. The second attempt at high speed rail in Florida had failed.

In conclusion, although a neo-liberal Governor killed the 1990’s very high speed rail initiative, the circumstances were very different than in the 1980’s. In the 1990’s, FOX had received commitments of annual State appropriations, federal approval of tax exempt borrowing, and (potentially) TIFIA funding, which was partially matched by commitments of private equity and private rolling stock leases—a P-3 framework for financing gained considerable public and private investor support before Bush was elected Governor. This was different from the 1980’s, when project sponsors relied entirely on private funding, with revenues coming from Florida’s burgeoning real estate market, and loans from private, institutional investors. The 1980’s project was intrinsically neoliberal in its financing strategy, and failed because the private sector was unwilling to assume all of the project’s risks. The 1990’s project, on the other hand, relied on a P-3 approach, which had broad support among private investors, but which a neo-liberal Governor opposed, and vetoed. Neo-liberalism caused the failure of both projects, but in very different circumstances each time.

⁴² General Accounting Office, "Surface Infrastructure: High Speed Rail Projects in the United States," (Washington, D.C.: U.S. General Accounting Office, 1999).

⁴³ Mark Silva, "Bullet train hits a big obstacle--Jeb Bush," *Miami Herald*, January 14 1999.

CONCLUSIONS

After the failure of the 1990's initiative, promoters tried two more times, between 2000 and 2011, to implement very high speed rail in Florida. These initiatives also failed. At present, the only new passenger line that is likely to begin operations in the near future is not very high speed, and will not run on dedicated track. *All Aboard Florida (AAF)*, a subsidiary of the Fortress Investment Group, has proposed to operate trains at between 79 and 125 miles per hour, on freight rights of way between Miami and Orlando, on which it has an easement to operate passenger service and that it owns.⁴⁴ Because trains will run on existing, but upgraded track, the *AAF* passenger line will be significantly less expensive to build than grade separated, very high speed infrastructure. And it will rely on federally approved, tax exempt, private activity debt to finance infrastructure improvements. Lower project cost and federal tax exemptions are two major reasons the Fortress plan is more likely to succeed than earlier projects. At the same time, Fortress' financial plan is similar to those proposed in the 1980's and 1990's in that it relies on revenues from real estate to supplement passenger fare revenues. Fortress recently began building large, mixed use, commercial-residential, developments at on land it owns at station sites in Miami, Ft. Lauderdale, and West Palm Beach, and predicts that the tourist and business trade on their new line will provide enough traffic to make their station developments highly profitable. Thus, even if train operations, by themselves, are not profitable, Fortress expects it will earn profits from its associated real estate developments. In short, by developing a lower cost, moderate speed rail line, the Fortress project establishes strong preconditions for profitability.

If the Fortress project is financially successful, this implies that passenger rail initiatives will be more likely to succeed if they adopt a lower cost, moderate speed approach. Considerable historical evidence suggests that very high speed rail lines so expensive to construct that they cannot be profitable, except in very rare situations?⁴⁵ This evidence is also germane to the contemporary American situation in Texas and California, where promoters are planning new, very high speed rail lines. First, Texas Central Railways is currently planning a new very high speed line between Dallas/Ft. Worth and Houston, the same corridor where an earlier attempt at

⁴⁴ <http://www.floridahighspeedrail.org/fast-facts>, "Tampa-Orlando High Speed Rail Line."

⁴⁵ When costs of servicing construction debt are included in the calculation, only a very few very high speed lines in the world show evidence of profitability. These include Paris-Lyon, in France, and the Tokyo-Osaka line in Japan.

very high speed failed in the late 1980's/early 1990's. Would this new line be more likely to succeed if they were built at lower cost for moderate speed? Texas Central argues that very high speed is needed to make their line competitive with alternative modes of transport—to capture passengers from highways and airlines, as well as to induce new ridership. And they estimate that their line will be profitable, though that result is far from assured.⁴⁶ Second, the California High Speed Rail Authority (CHSRA), recently began construction on one segment of a very high speed line connecting Los Angeles and San Francisco. The projected overall cost of this line is \$68 billion, of which only about 20 percent has been raised, and all of that is public money.⁴⁷ This is a hugely expensive project, which could also be built at lower cost, if it ran at less than very high speed. But, if it ran at less than very high speed, it is not clear it could attract enough riders to compete with the existing, highly successful airline shuttle service between Los Angeles and San Francisco. In short, while moderate speed may be necessary for financial success in Florida, very high speed may be required in Texas and California.

Finally, another factor affecting the success of these projects involves ownership. The Texas Central and *All Aboard Florida* projects both claim to be privately financed, which they hope will avoid the controversies that often afflict publicly funded projects, as was the case, for example, in Florida in the 1990's. Fully private funding of passenger railways has successful historical precedents; for example, during the first three periods of high speed in the United States, many private railroads operated profitable intercity lines, on exactly the same corridors as my research documents, such as Southern Pacific's Los Angeles to San Francisco line; the Texas and New Orleans Railroad's Dallas/Ft. Worth to Houston line; and Atlantic Coast Railway's Miami to St. Petersburg line.⁴⁸ Meanwhile, fully public funding has had mixed results, depending on both the country and specific intercity corridor. For example, of all the existing very high speed projects outside the United States, only the Paris-Lyon line in France and the Tokyo-Osaka line in Japan have both been profitable, when factoring in debt service for cost of construction.⁴⁹ And P-3 approaches also have a mixed record, depending on many national,

⁴⁶ Texas Central Railway, www.texascentralrailway.com

⁴⁷ J. Cohen, Kamga, C., "Financing high speed rail in the United States and France" *Research in Transportation Business and Management* 6(2013).

⁴⁸ Cohen, "Financing high speed rail: historical and cross-national perspectives."

⁴⁹ T. Gourvish, "The high speed rail revolution: history and prospects," ed. Ministry of Transport (London, England2009).

demographic, and other variables; such as the Tours-Bordeaux very high speed line which is a partnership of Vinci Construction and French government rail agencies.⁵⁰

However, what the Florida case reported here reveals most clearly is that rigid distinctions between public and private ownership do not capture the complexities of capital finance. Thus, while *All Aboard Florida* claims that its project is fully privately financed, in fact they are relying on loans (private activity bonds) backed by a government guarantee. Will Texas Central rely on similar government support? Moreover, both projects rely on eminent domain interventions and other governmental grants of land for rights of way. In these ways, both the Florida and Texas projects are, to some extent, public-private partnerships. In short, ownership is intrinsically complex to define, though without doubt it can influence public perceptions and, thereby, affect success or failure of high speed rail projects.

In sum, my research on relationships between high speed and finance involves looking at the history of passenger rail projects in Florida, Texas, and California, primarily from the mid-20th century to the present. The present report focuses on Florida, the State where I gathered the most complete information during the last research cycle. However, I also gathered consideration information and data on Texas and California, and when complete this project, I will have developed a powerful, comparative analysis of the history and political economy of high speed rail in the three States, which will include significant policy implications for Region 2.

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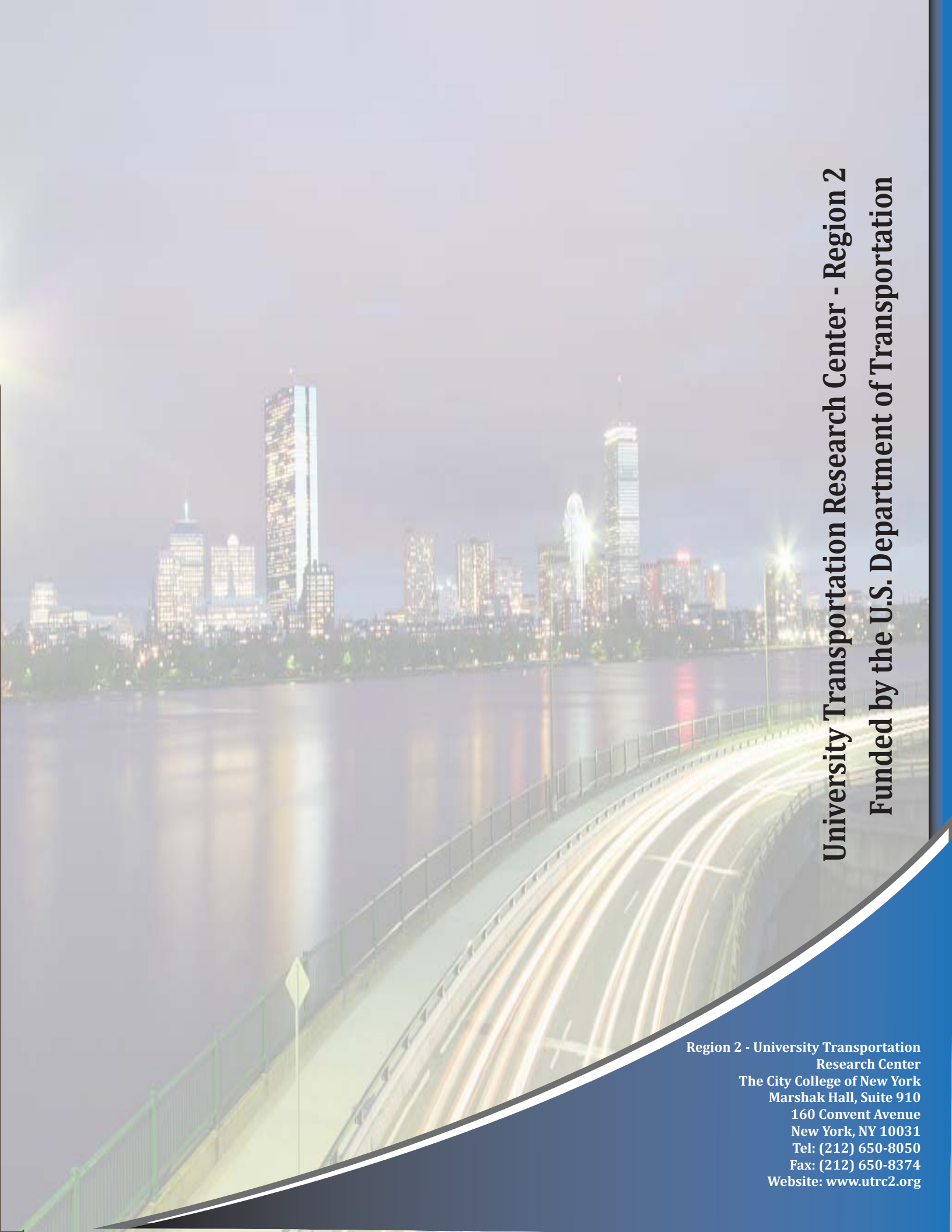
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A long-exposure photograph of a city skyline at night, reflected in a body of water. In the foreground, a bridge or highway is visible with light trails from moving vehicles. The sky is dark, and the city lights are bright and colorful.

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Funded by the U.S. Department of Transportation

**Region 2 - University Transportation
Research Center**
The City College of New York
Marshak Hall, Suite 910
160 Convent Avenue
New York, NY 10031
Tel: (212) 650-8050
Fax: (212) 650-8374
Website: www.utrc2.org