

October 7, 2019

Surface Transportation Board
395 E Street S.W.
Washington, DC 20423

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October 8, 2019
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Re: Comments and request for denial of Texas Central Railroad and Infrastructure Inc. and Texas Central Railroad LLC's June 20, 2019 Petition to Reopen.
Finance Docket Number: 36025-0

For the record I have been a resident and property owner of Harris and Waller Counties for over thirty years. In addition, I am controlling owner of KSA Industries through one of its subsidiaries which owns over 2,832 acres in the areas of Harris County. I object to the Texas Central Entities request for STB Jurisdiction and Exemption from STB oversight and certain rules and regulations.

On June 20, 2019, the STB requested specific Supplemental Information from Texas Central for the board to evaluate their petition to reopen the STB decision to grant jurisdiction over Texas Central. STB made five (5) specific requests from Texas Central. I believe a careful examination of the information submitted by TC is necessary. Most of the TC's answers to these requests are deliberately misleading, incomplete, and in some instances incorrect. The following is a point by point discussion of some of the information submitted by TC:

1. Projections relating to annual passenger transfers in the first, fifth, and tenth full year of operation including, the number and percentage of Amtrak passengers on relevant Amtrak services who would transfer to Texas Central to the TC service and the number and percentage of Texas Central passengers who would transfer to the relevant Amtrak Services.
 - a. TC begins their answer with the statement "the Boards jurisdiction is not dependent on the volume of interstate traffic". Respectfully, the STB jurisdiction is dependent upon determining whether or not it is reasonable to project any passengers will be actually transferring from Amtrak to TC's project and existing Amtrak services. How can a viable projection of transferring passengers be computed when TC does not have an approved Terminus within the City of Houston? TC has been lobbying the City of Houston to approve their proposed terminus location for at least two years and has yet to obtain any approval for TC's proposed location. In fact, TC has not even obtained the City of Houston's permission to operate within the City limits. These facts are documented by an investigative report which members of the STB can watch on YouTube using the link:

<https://www.youtube.com/watch?v=XcYOrjUAI6Q>
 - b. No survey work has been undertaken by TC to determine if their proposed Houston terminus location is even feasible. Therefore, how can any of the projects made by either Amtrak or TC be anything more than conjecture?

- c. Amtrak's exhibit 1 to TC's answer to the STB, with attached examples, was prepared by Bruce T Williams. In bullet point #6 of Mr. Williams statement, Mr. Williams makes clear that the transfer service calculations he has prepared "will operate between Amtrak's station and Texas Centrals planned station". Unfortunately, Mr Williams fails to point out to the STB that his calculations are meaningless unless TC is actually able to operate from the "planned locations". At the very least TC's request to STB to assume jurisdiction over TC is premature and the STB should not rule in favor of TC until TC has contracted for locations that can be used in generating Amtrak connectivity estimates.
- d. Mr. Williams submission in bullet point 10 only details a method of servicing travelers if an Amtrak train runs behind schedule for the connection with TC's proposed rail line. Mr William's fails to detail a satisfactory method of servicing any passengers which due to a delay by TC rail line or due to a surface road traffic delay in Houston causes a passenger to miss their Amtrak connection. TC proposed Houston terminus is 7.4 miles from the Amtrak Houston Station. The Google map route from the stations conveniently included in Figure 2 on page 16 of TC's submission can take as long as 40 minutes in actual travel time between these two locations (Exhibit 1). It is not uncommon for road work, traffic accidents, localized street flooding, or other uncontrollable events causing the travel time, between the "proposed" locations to be far in excess of 40 minutes. KSA Industries Inc's corporate office is not far from TC's "planned terminus" and long travel delay events over the proposed route on business days happen with a frequency of more than twice a month.
- e. Google maps (Exhibit 2, 3, and 4) can be used to demonstrate a possible explanation for the City of Houston failure to approve TC proposed terminus location. The site does not have good egress or ingress to major transportation routes. The terminus location very limited direct access to the freeway system via US 290 or I 10 and has no access direct access to Loop 610. How would the massive number of intrastate riders proceed from the proposed terminus to their final Houston destination from a location that is already overly congested?
- f. The dates Mr Williams uses in Bullet point 12 also call into question the accuracy of his projections. Mr Williams' projections assume TC service will begin in 2026. A few minutes of research on the internet would have shown Mr Williams that he is making an unreasonable assumption California announced its High-speed rail project in 2008. California voters approved \$10 Billion on bonds to begin the project in 2009. California has spent at least \$5 billion on the project and has various amounts of the infrastructure in place to complete the initial segment from Merced to Bakersfield, a distance of 164 miles. Current estimates are that it will cost another \$20 Billion to complete this segment and if it is completed the segment will not begin operation until 2028. The TC project is 240 miles and no ground has been broken to even begin construction. TC claims, in its filing with STB the company has raised \$450 million in capital. The California project had \$10 billion when it was initiated. If STB assumes jurisdiction over the TC project and TC began actual property acquisition and financing with in the next 12 months the project would still be years behind the project currently under construction in California. In fact, it could easily take TC until

2026 to complete the work that has already been completed in California (which took a decade). Surely if Mr Williams had objectively reviewed the assumptions he was provided by TC for arriving at his ridership projections one of the first things he would have noted is that it is impossible for TC to be up and running by 2026.

- g. The information supplied the STB by Mr. Williams is completely based on conjecture and unrealistic assumptions. In fact, TC has never supplied realistic assumptions or computations to support their calculations of the number of intrastate passengers they would serve. The only independent study of ridership, done by the Reason Foundation (exhibit 5) indicates the amount of intrastate traffic used in Mr Williams calculations to calculate Amtrak ridership is drastically overstated. The Reason Foundation fully details their methodology and the assumptions used to develop their ridership estimates. TC refuses to disclose how they arrived at their ridership estimates. The STB should demand disclosure of TC methods and assumptions and ask what TC is trying to hide from the State of Texas and its citizens.
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- 2. The STB asked for “Details on the physical connection for any transferring passengers who may choose to walk between the Texas Central and Amtrak stations in Dallas.” I have reviewed TC’s answer submitted to this question and the answer does not provide any substantive responsive to the STB’s request. TC simply states they will “work with the City of Dallas to install a dedicated pedestrian walkway and improve sidewalk access”. TC does supply any support from the City of Dallas, the answer does not mention the Dallas city officials, or the dates TC has engaged in any discussions to support their answer. This answer simply does not comply with the STB’s request for specific information.
 - 3. The STB asks for “details on the physical connection for transfer service between the Texas Central and Amtrak stations in Dallas and Houston. The answer given by TC is not only inadequate and in the case of Houston transfers deliberately misleading.
 - a. As previously mentioned above TC really does not know where they can ultimately locate their Houston terminus. Until a definitive location has been researched and approved TC cannot honestly and truthfully address the STB’s question.
 - b. However, TC has deliberately provided misinformation to the STB with respect to the Boards information request. Figure 2 on page 16 of TC’s answers to the STB is a Google generated map detailing the distance and travel time between TC’s hoped for Houston location and the existing Houston Amtrak location. TC map shows the correct travel distance between the two locations with a travel time of 14 minutes. However, TC fails to mention that the actual travel time between the two locations during normal transfer times and as calculated using Google Maps ranges from 22 to 40 minutes. The 14 minutes shown in Figure 2 is merely the default time Google computes if there is no traffic on the route between the two locations the user has inputted.
 - c. Since the proposed project was first unveiled TC has steadfastly refused to release a business plan and has never provided any verifiable objective data to support its

ridership projections or cost estimates. TC worked with Amtrak's Mr. Williams only because the STB forced TC to provide support for their interstate ridership projections. However, TC has forced Mr Williams to use as a starting point and base his calculations on Intrastate ridership data that has never been objectively reviewed and analyzed using the same methods Amtrak did. Since the most significant portion of ridership data Amtrak used is at the very least highly questionable how can Mr. Williams possibly submit reliable ridership data to the STB? The only verifiable and objective analysis of TC ridership projections was done by the Reason Foundation and is contained in their research report issued February 2017. The Reason Foundation based their ridership estimates on Texas Department of Transportation's data and estimated 2035 ridership (exhibit 5) on TC's proposed High Speed Rail project of .07 to 2.7 million. The ridership estimates provided by TC to Mr Williams for his analysis estimate 5 million riders by 2035. If TC believes the Reason Foundation ridership estimates are incorrect TC has had 2 ½ years to contest them and supply third party verification of their ridership projections. TC has failed to do so, and this is one of the many examples of TC refusal to make their project transparent.

- d. TC has also refused to provide any objective and verifiable data with respect to the cost of their proposed rail system. TC originally publicly claimed the entire cost of their proposal would be \$10 to 12 billion. The Reason Foundation's, (Exhibit 5) issued in February of 2017, lowest case cost estimate was \$17.8 billion with a probable cost of \$20 billion. The Texas Department of Transportation estimated the cost to build the system proposed by Texas Central at \$18.3 billion. TC has had 2 ½ years to release a verifiable and objective report countering these cost calculations. TC has failed and refused to do so. All of the project cost estimates were calculated and released at least 2 ½ years ago. Since then the cost of both the labor and materials necessary to construct a proposed rail system have increased by 10% or more. TC's recently reported cost estimate has increase by 16.67% during this this 2 ½ year period.
- e. TC has consistently given deliberately misleading information to the public, state and local officials, and the STB about their proposed High-Speed Rail Project. Attached to this letter (Exhibit #6) is an article that appeared in the Houston Chronicle which represents just one of TC's attempts over the last four years to release misleading information to the public. The problems with this article are as follows:
 - i. TC has changed their current estimated cost to build the proposed system to \$14 billion. TC has refused to supply an objective and verifiable report in support of this cost estimate. It is interesting to note this estimate is \$2 billion higher than previous claims.
 - ii. TC claims an "alleged deal" made with Salini is a significant milestone. However, on closer examination it is just typical "noise" from TC. The company already announced in October 2018 that Salini had been hired to do this preliminary design work.
 - iii. Please read refer to the Exhibit 6 headline. How can TC commit to a contract for \$14 billion with Salini when TC has a commitment of only \$ 450 million in capital and has none of the approvals TC will need to actually build it project. TC is clearly trying to mislead the public about the status of their project.

- iv. On page 2 bullet point 4 of the sworn statement of Timothy B Keith, Chief Investment Officer of Texas Central Partners, he claims the company has raised a total of \$450 million dollars in capital commitments for the project. However, Mr Keith makes no reference to how much of those commitments has actually been funded. The California High Speed Rail Project has cost \$6 Billion to date with most off that cost devoted to planning engineering the system. Even if all of the \$450 million Texas Central has "Committed" has been funded the company has insufficient capital to begin significant planning and engineering by Salini.
 - v. In the article Holly Reed Managing Director for External Affairs says, "We are optimistic we could begin construction next year". This is a deliberate misrepresentation and this misrepresentation has been repeated to the public about this time for each of the last three years. Texas Central Partners currently does not have City of Houston approval to do anything with the city limits. TC does not have an approved FEIS and there is a high degree of probability the one TC has submitted to the FRA will not be approved. TC has almost none of the land required to construct their program purchased. TC has not done critical surveying work essential to the proposed project. These are just a small sample of the hurdles and obstacles TC must deal with before construction can begin. If the planning phase of the California HSR project is used as a guideline the reality is TC is two to three years or even more years away from beginning meaningful construction even if the STB grants TC jurisdiction.
- 4. Since I am not an attorney, I will not address TC's answer asking for relevant legal support.
 - 5. After reviewing the information Texas Central has presented to the STB I could not find an answer to the boards question about transfer service sufficient for me to make a comment. Once again, the lack of a coherent answer to this STB question is an example of TC's constant attempts to avoid transparency about their proposal.

Finally, on page 43 of TC's submission to the STB the company requests "a streamlined exemption process in this matter". I respectfully request the STB deny TC's request and that the Board require a full application because the board was correct to tell TC a full application might be required "in light of the questions raised in the current record". After the STB's 2016 Denial to Texas Central for Jurisdiction TC made several press releases stating that they were delighted with the STB's ruling because the company did not want Federal oversight of their project. TC said repeatedly STB oversight would only slow down their project.

TC has now come back to the STB and asked the board to assume jurisdiction over a project that in reality is still an Intrastate transportation project. TC is simply trying to disguise their project as an Interstate transportation system with the cooperation of Amtrak. I believe Amtrak has cooperated with TC because TC has given Amtrak incorrect information and assumptions as a basis for their negotiations. TC does not have an approved Terminus location in Houston and their negotiations with the City began over two years ago. Therefore, the STB's board first question for "Projections relating to annual passenger transfers in the first, fifth, and tenth year full year of operation" cannot be answered. In fact, TC project has

encountered stiff public resistance and TC has not completed the preliminary work and research required to make a reasonable estimate of when their first, fifth and tenth full year of operation might be!

On page 45 of TC's supplemental information filing TC claims "Demanding that applicants demonstrate that the market will ultimately finance a project puts the cart before the horse". However, in the case of TC's project it is appropriate to insist on evidence of the ability to finance their project. As I am sure the STB is aware California's efforts to construct a High-Speed Rail system began in 2008. The voters of California approved \$10 billion in bonds to help finance the project and the federal government initially committed another \$6 billion in financing. There was no organized resistance to the project the voters approved it! California approved where the terminus in each connecting city would be located and the route for the system. After over a decade of work on the project the State of California has only committed to completing about 160 miles of the original system design of over 500 miles. The earliest projected completion date for this segment, after a decade of planning and construction, is 2028. TC's project is approximately 240 miles and currently TC only has \$450 million of capital committed to the project. On page 46 of the TC latest submission to the STB they claim "nor is this project remotely similar to the California or Great Lakes Basin projects referenced by the board. This assertion by TC is correct their proposal has significant differences from the California rail project. Listed below are a few of these differences.

1. TC currently has \$450 million "committed" to their project and the word "committed" is not defined. How much of this commitment does TC have on hand and how much is available for immediate funding?
2. TC claims it will be publicly funded, when in fact TC knows it cannot secure funding from any public source without securing federal railroad loan guarantees to back stop the public's investment. That may be difficult since the federal government is seeking a \$3billion refund of the taxpayer dollars already spent on the California project.
3. TC is opposed by 8 of the Texas counties it will pass through, the California project was not opposed by any of the counties it will pass through.
4. The State of California plan was transparent. All assumptions as to cost and ridership on the proposed system was supported by objectively generated data. TC has steadfastly refused to release any of their financial or ridership data for review by the Texas Legislature or the citizens of the Texas. This information has been requested by the offices of a number of State Legislators and Senators. The Reason Foundation Report and the Texas Department of Transportation have released cost projections which are significantly higher than the estimated cost projected by TC. In addition, Reason Foundation ridership estimates are significantly lower than TC's.
5. TC has never presented any realistic timetable for their project. The California 160-mile segment began in 2008 will have taken over two decades to complete in 2028 , if it in fact is ever completed.

The number of reasons TC should be forced to file a complete application with the STB are legion. In fact, a full application by TC is the only way to make the project transparent to the State of Texas it's citizens.

In conclusion I urge STB to reject Texas Central Partners request for the STB to take jurisdiction of what is essentially an intrastate transportation project. At the very least Texas Central has once again made a premature and improper filing with STB. Respectfully, the STB should demand answers to all of its

questions of TC based on more than unsupported and speculative assumptions. TC's project will adversely impact a number of Texans and these Texans deserve the transparency and information needed to determine whether or not the disruption is warranted.

Respectfully submitted,

A handwritten signature in black ink that reads "Amy Adams Strunk". The script is cursive and fluid, with the first letters of each name being capitalized and prominent.

Amy Adams Strunk

CC: All Parties of Record

Exhibit 1:

FIGURE 2:
Route from Texas Central Houston HSR Terminal to
Amtrak Houston Station

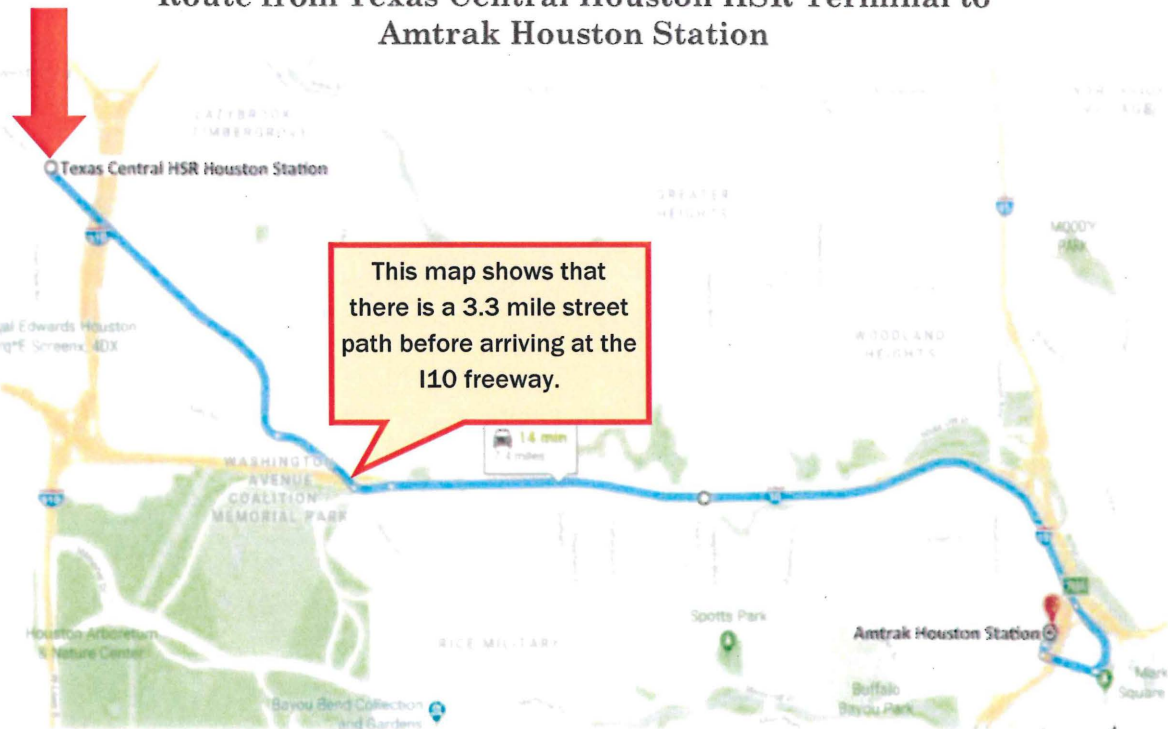
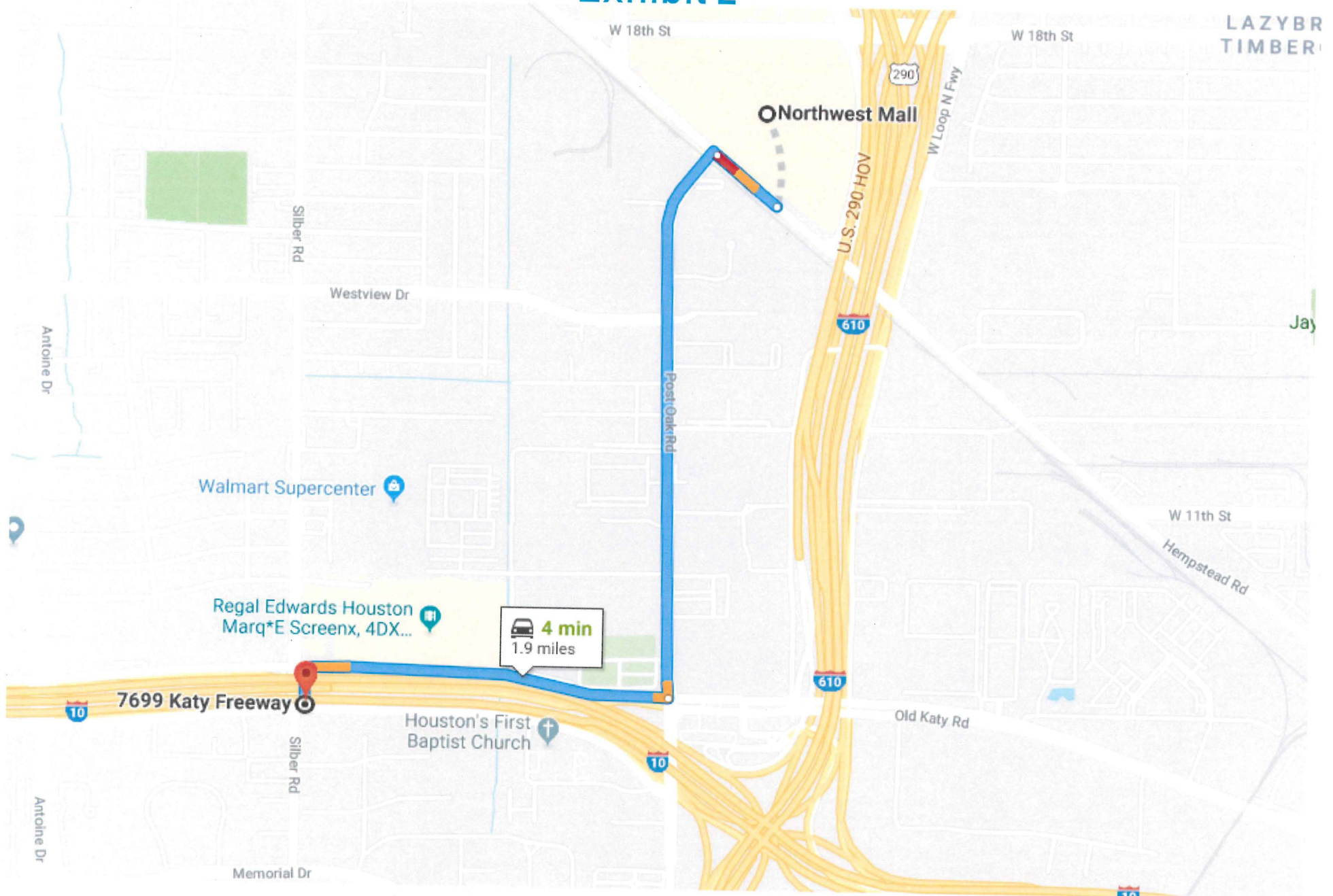


FIGURE 3:
Route from Texas Central Dallas HSR Terminal to Dallas Union Station

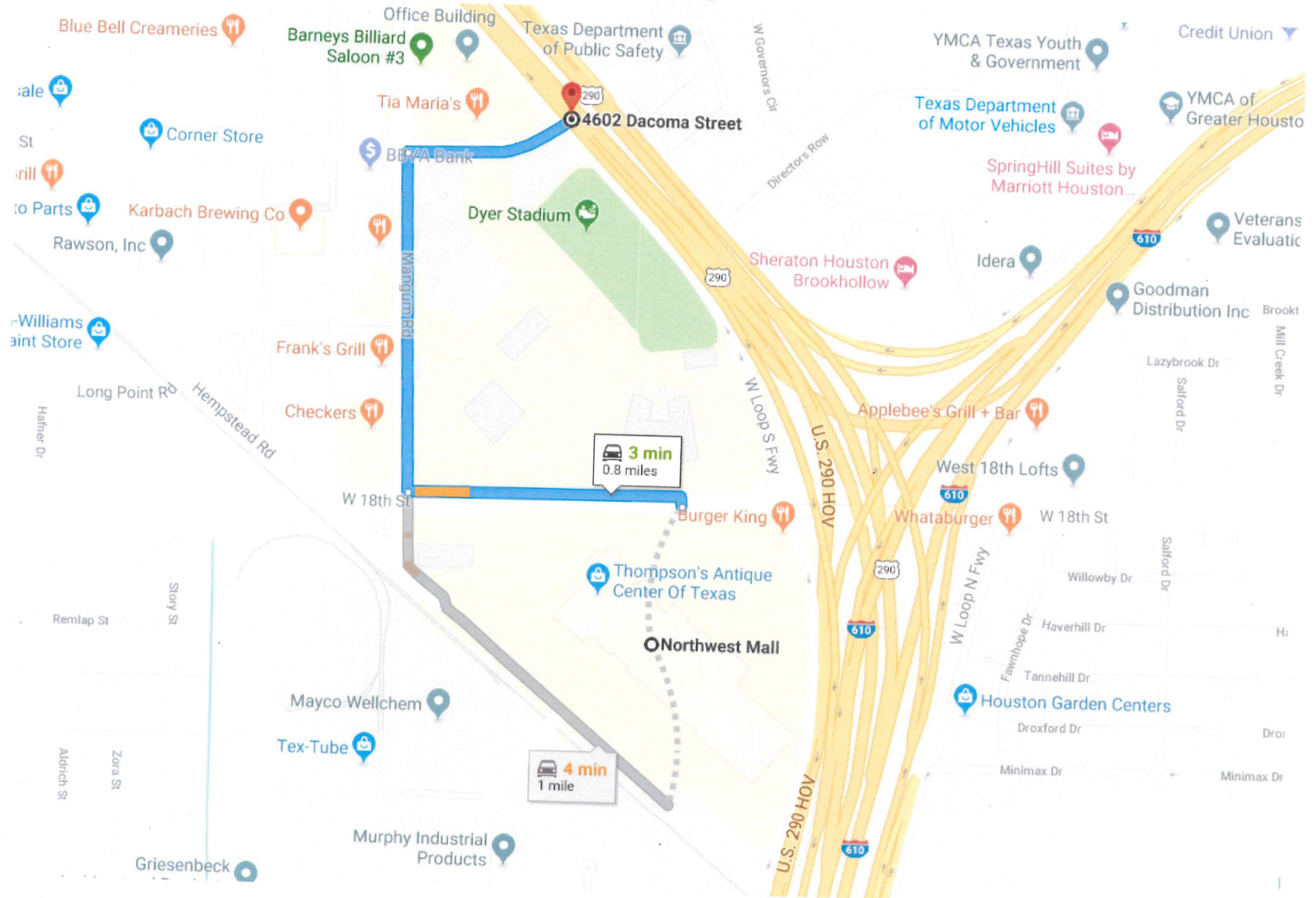


Exhibit 2



Access to I-10

Exhibit 3



Access to 290

The map displays the Northwest Houston, Texas area, centered on the CHCP Campus. A blue line traces a route starting from the Northwest mall area, passing through Hempstead Rd, and following the I-610 corridor. Key locations marked include tienda Omnilife, Northwest mall, Sesame Hut, Northwest Houston, Texas CHCP Campus, Posh Parties & Events, Northwest Embroidery Express, and Mobility Headquarters Inc. Major roads shown include U.S. 290 HOV, I-610, and various local streets like Dacoma St, Mangum Rd, and Westview Dr.

Note - There is no direct access to Loop 610 from proposed terminus location.

Exhibit 5



Reason Foundation
Policy Brief 139
February 2017

Texas High Speed Rail: Caution Ahead

by Baruch Feigenbaum



Reason Foundation



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Reason Foundation

Texas High Speed Rail: Caution Ahead

By Baruch Feigenbaum



For the past 30 years, various entities have proposed building high-speed rail lines throughout Texas. All of these lines were to rely on public funding and in the end none were built. About four years ago, a new company, Texas Central Partners, proposed to build a high-speed rail connecting Dallas and Houston. Unlike past projects, Texas Central's line is supposedly privately financed, requiring no taxpayer subsidies.¹

¹ Keith, Tim. "High-speed Rail Moving Texas Forward Without Taxpayer Grants or Bailouts." *Texas High Speed Rail News*. Texas Central. March 24, 2016. Web. Accessed June 5, 2016.

Construction of a privately funded high-speed rail line is an intriguing idea. The private sector can bring innovative financing tools that help stretch funding further. And, private sector efficiencies can typically reduce the costs of building a project by 20%. Think tanks across the political divide including the Brookings Institute, Eno Center for Transportation, Reason Foundation and Heritage Foundation support public private partnerships and private sector financing.² However, private sector involvement is not a panacea. A wildly unsuccessful project is not going to become feasible with private financing. Moreover, because Texas Central's project would be the first high-speed rail line in the United States, and the first privately constructed high-speed rail line in the world, a careful examination is vital.

Among other topics, this report examines the following:

- The feasibility of constructing Texas Central's proposed high-speed rail line between Dallas and Houston;
- The cost of building a line along the 240-mile proposed route;
- Ridership trends and projections in the Dallas to Houston corridor, which is well-served by the aviation and bus industries;
- Travel trends, central city density, car ownership levels and spatial structure of the corridor endpoints; and
- Traits specific to the Dallas to Houston corridor as compared to those of successful high-speed rail corridors in the U.S. and around the world.

Typically, we would not examine the feasibility of a private project because we believe that in most instances the private sector should be able to experiment on its own. However, this project is different. First, Texas Central is planning to apply for Railroad Rehabilitation and Investment Financing (RRIF) loans. These loans, which have very weak taxpayer protections, could be awarded to entities that do not have the resources to repay them.³ **Second, Texas Central has not released a business plan, nor has it provided any verifiable, objective data to support its ridership projections or cost estimates.** Given that this multi-billion dollar project is unlike anything that has been built in the U.S., we feel it is imperative to closely scrutinize the project to make sure it is feasible, and that it can be privately funded and financed. We do not want the first U.S. high-speed rail line to fail.

To analyze Texas Central's proposed project, we compared it to earlier Texas high-speed rail plans, higher-speed rail in the Northeast corridor, and high-speed rail around the world. We also examined corridor density, corridor air service, corridor growth, corridor transit service and central city density. Our analysis raises many questions and concerns regarding Texas Central's project.

² Each of the think tanks has indicated past support for P3s in surface transportation projects.

³ Poole, Robert. *Add Taxpayer Protections to FRA's RRIF Loan Program*. Reason Foundation, 2015. Web. <<http://reason.org/news/show/add-taxpayer-protections-to-fras-rr>>. January 6, 2016.



As we noted back in 2013 in our study titled “High-Speed Rail in Europe and Asia: Lessons for the United States,” only two high-speed train lines, anywhere in the westernized world, make money—Tokyo to Osaka and Paris to Lyon, and one breaks even—Hakata to Osaka—with the potential to make money if it remains in operation for at least 10 more years.⁴ All other high-speed rail lines throughout Europe and Japan lose money. High-speed rail lines in these countries were built to relieve crowding on conventional rail lines and to connect central cities with extremely high residential and commercial population densities, low rates of car ownership, and large subway systems with high rates of usage. These cities also lack robust toll-free roadway systems and nearby airports with low-cost air service.

In contrast, among major U.S. regions, Dallas and Houston have some of the highest rates of car ownership, smallest transit systems and percentage of transit usage, and lowest population densities.⁵ As a result, even by U.S. standards, the Dallas to Houston corridor is far from ideal for high-speed rail.

⁴ Feigenbaum, Baruch. *High Speed Rail in Europe and Asia: Lessons for the United States*. Reason Foundation. 2013. Web. <<http://reason.org/news/show/high-speed-rail-in-europe-and-asia>>. December 14, 2016.

⁵ “Commuting Characteristics by Sex,” and “Population, Housing Units, Area and Density.” U.S. Commerce Department. U.S. Census Bureau. census.gov. Jan. 1, 2017. Web. <https://www.factfinder.census.gov/faces/tables/services/jsf/pages/productview.xhtml?pid=ACS_15_5YR_S0801&prodType=table> and <https://www.factfinder.census.gov/faces/tables/services/jsf/pages/productview.xhtml?pid=DEC_10_SF1_GCTPH1.ST10&prodType=table> Jan. 17, 2017.

Table 1 displays an overview of our concerns with Texas Central's project. Some concerns, such as high car ownership, can likely be overcome. Other concerns, however, could prove to be fatal, particularly low ridership and high construction costs.

Table 1: Summary of Concerns with Texas High-Speed Rail Plan		
Concern	Details	Impact
Cost v. Ridership	Successful high-speed rail lines have been built in countries when and where land is cheaper and easier to acquire, construction costs are cheaper, and ridership is much higher.	Major
No Existing Passenger Rail Service	More than 2/3 of high-speed rail passengers have come from existing transit service. Without existing conventional rail service, a larger share of passengers must come from air and passenger vehicles.	Major
Airport Proximity to Downtown	Both Dallas and Houston have airports located within seven miles of downtown. High-speed rail has been successful in cities where airports are far or challenging to get to from downtown.	Major
Limited Transit Service	Both Dallas and Houston have limited rail transit networks. Houston has just redesigned its bus network, but the cities' transit networks are not designed to funnel passengers downtown. In cities with successful high-speed rail, five to 12 times more people were transit users than in Dallas and Houston.	Moderate
Low Population Density	Dallas ranks 143rd in population within 2 miles of downtown and Houston ranks 36th. Most high-speed rail services rely on travelers who live downtown because it is more convenient for those living outside of downtown to fly.	Moderate
Low Employment Density	Dallas ranks 16th in employment within 2 miles of downtown and Houston ranks 15th. High-speed rail lines cater to downtown employees since it is more convenient to take the rail line than fly.	Moderate
Car Ownership	Car ownership rates are 25%–50% higher in Dallas and Houston than in cities with successful high-speed rail. Car ownership affects not just the number of travelers who drive, but also the density and spatial structure of a city.	Minor

Table 2 displays the key comparisons between major world cities, including population density, transit usage, automobile ownership, gas tax and square kilometers of rail line. The table examines three categories of cities:

- 1) Tokyo and Paris, both endpoints for profitable high-speed rail lines;
- 2) New York City and Washington, D.C., considered to be the two U.S. cities most conducive to high-speed rail (presently, the Acela higher-speed rail line connects these two endpoints); and
- 3) Dallas and Houston, Texas Central's proposed endpoints for its project.

As shown in the table, Dallas and Houston lag behind in high-speed rail-friendly infrastructure.

Table 2: Key Comparisons Between World Cities						
Category	Tokyo	Paris	New York	DC*	Dallas	Houston
Population Density (Per Mile)	11,400	9,600	4,500	3,500	2,800	2,800
Transit Usage is Percent of Total Travel	60%	25%	32.5%	16.5%	1.8%	2.6%
Automobile Ownership	30%	50%	60%	70%	90%	90%
Gas Tax (Per Liter)	\$0.99	\$0.96	\$0.20	\$0.12	\$0.09	\$0.09
Square Kilometer of Rail Track per Kilometer (Lower number equals more track)	13.9	21.7	33.5	33.5	33.5	33.5

* Washington, D.C. Sources: Demographia World Areas, International Energy Agency, CIA Factbook



Texas Central claims it will privately finance the project's cost. While it is true that financing is the best way to pay for a project of this magnitude, significant capital will be required to pay back the debt. The availability of that capital primarily depends on the accuracy of Texas Central's ridership projections and estimated costs. Our analysis indicates that Texas Central is exhibiting the same "optimism bias" and "demand exaggeration" that have plagued many public infrastructure projects—and especially high-speed rail projects—for decades. Simply put, Texas Central has exaggerated its ridership projections while underestimating costs.

Texas Central has released several different sets of ridership projections. Initially, Texas Central projected annual ridership of four million passengers by 2035.⁶ More recently, Texas Central upped this projection to five million annual passengers by 2025.

Table 3 shows our ridership forecast for Texas Central's project. High-speed rail ridership comes from many different modes including conventional rail, aviation, personal automobile, buses and "induced travel."⁷

⁶ "Facts." Texas Central Rail. Texas Central Partners. Jan. 1, 2017, <<http://www.texascentral.com/about/>>. Accessed Jan. 15, 2017.

⁷ Induced travel consists of trips that would not have been taken before, but now that high-speed rail is available, residents make the trip. Induced travel has been documented in both Europe and in the Northeast corridor.

Table 3: Texas Central Project: Estimated Ridership from Different Sources

Travel Mode	2015 Usage (one-way trips)	Growth Rate	2035 Total Passengers	Diversion Rate %	2035 Ridership (one-way trips)
Conventional Rail	0	N/A	0	N/A	0
Aviation	1,242,142	1.6%	1,706,261	42%	716,630
Personal Automobile	9,709,441	0.5%	10,727,918	5%	536,396
Bus	291,470	3.0%	526,427	4%	21,057
Induced	N/A	N/A	N/A	10%	127,408
Total Ridership	11,243,053		12,960,606		1,401,491

Sources: Aviation, U.S. Department of Transportation Consumer Airfare Report; Personal Automobile, Texas Department of Transportation Average Annual Daily Traffic Volume Maps 2015; Bus, Ridership statistics of Megabus, Bolt, Greyhound.

As shown in the table, based on our analysis we estimate Texas Central's 2035 annual ridership at 1.4 million passengers. Our estimate is supported not only by public data and thorough research of U.S. and international rail systems, but also by the Texas Department of Transportation's *December 2013 Statewide Ridership Analysis Report of Texas Central's Project*, in which it projected 2035 annual ridership of 0.7 to 2.7 million annual passengers.⁸ Creating an accurate ridership projection is critical because exaggerated ridership projections lead to revenue shortfalls, financial difficulties and, ultimately, taxpayer subsidies.

Regarding costs, Texas Central has estimated capital construction costs between \$10 billion and \$12 billion.⁹ We believe this estimate is significantly understated. For our analysis, we erred on the side of caution. We gave Texas Central the benefit of the doubt by deliberately choosing the minimum costs for line construction, train and land acquisition, and station development. Our capital cost estimate is \$17.8 billion, although we believe actual construction costs may exceed \$20 billion. The Texas Department of Transportation, which projects multiple major transportation infrastructure project costs each year, *estimated up front capital costs of \$18.3 billion for Texas Central's project*.¹⁰

Table 4 below shows our projected cost estimates for each of the necessary components of the project.

Table 4: Projected Cost Estimates

Expenditure Category	Actual Expenditures
Construction	\$16.10B
Operations and Maintenance	\$8.76 B ¹¹
Trains	\$0.60B
Train Stations	\$0.84B
Land Acquisition	\$0.30B
Total	\$26.60B

⁸ "Statewide Ridership Analysis Report." Texas Department of Transportation. December 2013. <<https://ftp.dot.state.tx.us/pub/txdot-info/rail/rail-ridership-report-1213.pdf>>. Dec. 15, 2016.

⁹ "Facts." Texas Central Rail. Texas Central Partners.

¹⁰ "Statewide Ridership Analysis Report." Texas Department of Transportation.

¹¹ \$8.76B is the Operations and Maintenance costs over 40 years rounded to the hundreds position. Forty years is the standard time period to repay the loan and also represents the lifecycle of the infrastructure.

Although Texas Central has not set a ticket price, it has promised that prices will be competitive with airfare. Setting the price at 80% of the \$177 average plane ticket between Dallas Love Field and Houston Hobby¹² yields a cost of \$141 round-trip or approximately \$70 in each direction. However, the Texas Department of Transportation used a fare of \$108 in each direction in its analysis, which was based partly on input directly from Texas Central. Taking into account this higher figure and the fact that some travelers will use either the higher-priced Dallas Fort Worth International and/or Houston Intercontinental Airports, for our analysis we set the ticket price at \$89, halfway between the \$70 and \$108 figures.

After crunching the final revenue and cost numbers, and assuming Texas Central receives a 5% simple interest rate on its loan, we estimate a \$21.5 billion gap between Texas Central's costs and revenues over the first 40 years of its operations. This equates to a \$537 million annual revenue shortfall. Table 5 shows a summary of costs and revenues with a 5% simple interest loan.

In reality, Texas Central would likely receive a 1% to 2% compound interest rate, which would add between \$4 billion and \$6.3 billion to the cost. Even applying a large discount rate for inflation, Texas Central figures to pay billions of dollars in interest payments. Finally, even if Texas Central were to receive an interest-free loan, our analysis concludes that the project would still operate in a multi-billion dollar hole.

Table 5: Summary of Cost and Revenue Over 40 Years (with 5% simple interest)¹³		
	Total	Yearly
Capital Cost	\$17.8B	\$445M
Interest (Simple 5.0 %)	\$0.9B	\$22M
Capital Cost plus Interest	\$18.7B	\$467M
Operations and Maintenance Costs	\$8.8B	\$220M
Total Costs	\$27.5B	\$687M
Ticket Revenue	\$5B	\$125M
Value Capture	\$1B	\$25M
Total Revenue	\$6B	\$150M
Project Gap	-\$21.5B	-\$537M

While we strongly support privately constructed high-speed rail, particularly in the Northeast, we cannot support Texas Central's proposed Dallas to Houston project. In spite of their large and growing populations, Dallas and Houston are poster children for big cities where high-speed rail has no chance of succeeding without public funding unless land use and transit patterns change dramatically.

We truly hope that high-speed rail becomes a reality in the United States, and we would prefer that it be developed and implemented by the private sector. However, based on our experience and analysis we are concerned that Texas Central's project will fail so spectacularly that privately financed U.S. high-speed rail lines may never be given a second chance.

¹² "Domestic Airline Consumer Airfare Report." U.S. Department of Transportation, Office of Aviation Analysis. December 2016. Web.

¹³ \$8.8B totals Operations and Maintenance costs over 40 years rounded to the tenths position. Ticket Revenue and Value Capture also cover 40 years.

Perhaps there are some hidden sources of funding of which we are not aware. But as it stands, Texas elected officials, lenders, investors and taxpayers should demand full disclosure and pay close attention to the details because we do not believe that Texas Central can build the rail line without significant public subsidies. We believe that loans could default and we are particularly concerned that Texas Central may receive an RRIF loan that lacks stringent taxpayer protections. While Texas Central may not be intending to take any public funding, we believe that if construction starts, the project will inevitably have to be bailed out by the taxpayers of Texas, which is unacceptable.



About the Author

Baruch Feigenbaum is assistant director of transportation policy at Reason Foundation, a non-profit think tank advancing free minds and free markets. Feigenbaum has a diverse background researching and implementing transportation issues, including revenue and finance, public-private partnerships, highways, transit, high-speed rail, ports, intelligent transportation systems, land use and local policymaking.

Feigenbaum is involved with various transportation organizations. He is a member of the Transportation Research Board Bus Transit Systems and Intelligent Transportation Systems Committees. He is vice president of Programming for the Transportation and Research Forum Washington Chapter, a reviewer for the *Journal of the American Planning Association (JAPA)* and a contributor to *Planetizen*. He has appeared on NBC Nightly News and CNBC. His work has been featured in the *Washington Post* and *The Wall Street Journal*.

Prior to joining Reason, Feigenbaum handled transportation issues on Capitol Hill for Representative Lynn Westmoreland. He earned his master's degree in transportation from the Georgia Institute of Technology.



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Exhibit 6

Company announces \$14 billion deal to build Texas Bullet Train, but is still long way from the end of the line

Dug Begley Sep. 13, 2019 Updated: Sep. 14, 2019 11:45 a.m.



A planned high-speed rail line between Houston and Dallas reached another milestone Friday as the sponsoring company announced a \$14 billion deal to build it — as soon as it obtains the authority to do so.

Texas Central, the private company developing the Texas Bullet Train, announced it had signed a deal with Salini Impregilo, the Italian construction giant, and its American subsidiary, Lane Construction, to design, construct and install the 240-mile high-speed rail line using Japan's Shinkansen trains.

"This agreement brings us one step closer to beginning construction of the civil infrastructure segments of the project," Texas Central CEO Carlos F. Aguilar said in a statement.

The deal is valued at \$14 billion and is contingent on a number of factors and decisions, ranging from federal approvals to raising billions from private investors. Still, the announcement is the most concrete step toward construction of the train — expected to whisk travelers to and from Houston and Dallas in 90 minutes with a stop in the Brazos Valley.

"We are optimistic we could begin construction next year," said Holly Reed, managing director of external affairs for Texas Central.

Critics who have vigorously resisted the project downplayed the significance.

"I don't see it being anything new; it is the same thing they announced last year," said Kyle Workman, president of Texans Against High-Speed Rail.

Texas Central and Salini announced last October that they were proceeding with some design and early engineering of the project.

"We don't really know what it is," Workman said of Friday's announcement. "They have a tendency to laud these steps forward when in reality there is not much substance behind them."

Reed disagreed, calling the announcement a milestone that reflects readiness to break ground one day. Salini and Lane, she said, will proceed with some design and details of the project with the agreement in place, including further design of planned grade separations.

Salini is a well-known name in construction across the globe, with 35,000 workers who have built a range of infrastructure from roads to airports. The company was part of a massive joint venture that widened the Panama Canal in 2016. The project remains contentious with billions of dollars in disputed cost overruns.

Lane, which Salini acquired in 2016, built major portions of Interstate 35 and its managed lanes in the Dallas area.

Because the trains would operate at more than 200 mph, all of the route must be separated from highways and public access. Dozens of overpasses are likely as the tracks cross urban streets and rural roads in 11 Texas counties. Earthen berms at specific crossings will also be needed where tracks cross land used by wildlife and farmers.

"They are doing all of that work now so that as soon as we get the financial approvals and have approval to start construction we can move forward," Reed said.

In Houston, the company has wide support from city and business officials, along with eager travelers.

"I guess we'll wait and see if it ever gets built, but I for one want it," said Tom Ahrens, 55, as he ate lunch near Greenway Plaza.

Ahrens called American cities "way, way behind" peers in Europe and Asia when it comes to intercity travel, something he blamed on car companies.

"I've been waiting for a train to Dallas my whole life," he said.

Long road ahead

Under the best of circumstances, Ahrens will wait years more. If construction begins next year, passengers could start hopping aboard trains in 2026, at prices the company said are comparable to airline prices and would fluctuate similarly based on when a fare is purchased.

Hopes to break ground faded from 2017 to 2018 and now are optimistically set for 2020, awaiting approvals.

The Federal Railroad Administration still must develop safety standards and rules specific to the Texas Central project and approve the plans for the project, as the company spars with Texas landowners over use of eminent domain to acquire some of the land

The property acquisition has faced intense opposition from rural residents who fear the train's construction will ruin their peaceful pastures and lifestyles. Angry landowners have refused to allow surveys and opposed in court the company's

right to condemn property, arguing that since Texas Central owns no tracks or trains, it is not entitled to the eminent domain rights extended to railroads under Texas law.

A district judge in Leon County — where much of the opposition to the train is centered — ruled the company was not entitled to eminent domain rights. Texas Central challenged that ruling, which is awaiting consideration by justices in Corpus Christi.

Optimism on both sides

Meanwhile, Texas Central is seeking recognition from the federal Surface Transportation Board. The board declined to characterize the project as interstate because it would operate only within Texas. The company has asked the board to consider its request again, based on an agreement with Amtrak, because Texas Central would operate a route Amtrak does not, with an agreement to partner with the national rail agency to connect to Oklahoma-bound trains.

Workman said opponents are confident they will prevail with the surface board in Washington and the appellate court in Corpus Christi.

"At this point, we are sitting fine," he said, suggesting Texas Central's announcement was an attempt to drum up positive news.

Texas Central officials are just as optimistic.

"We are confident we will get a positive ruling on the merits," Reed said.

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