Prepared For

Northeast Indiana Passenger Rail Association

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Northern Indiana/Ohio Passenger Rail Corridor Feasibility Study and Business Plan Executive Summary

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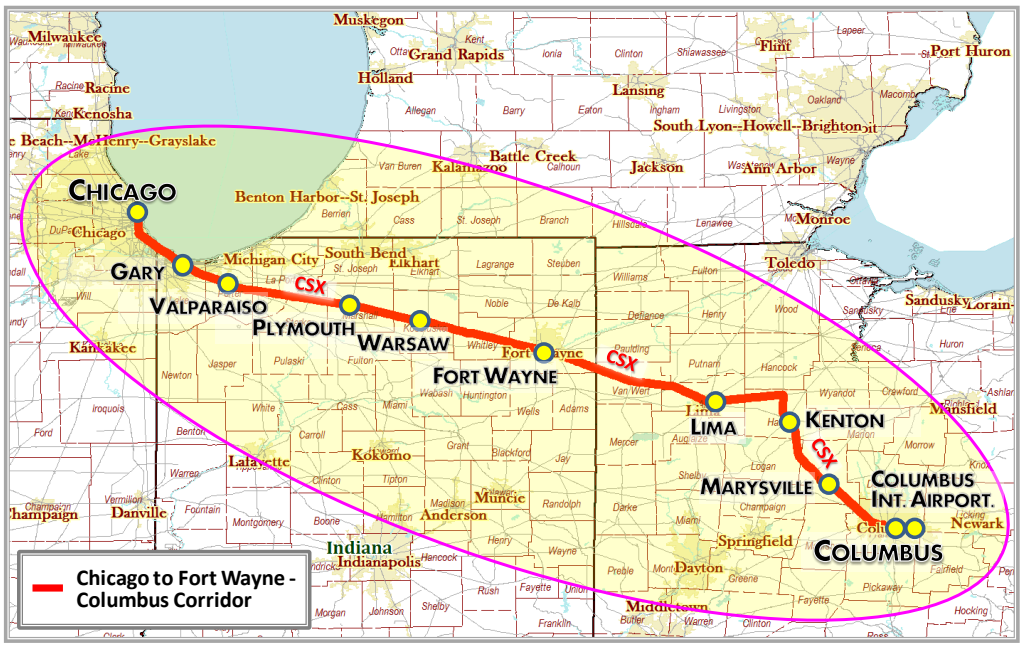
1 INTRODUCTION

The Chicago–Fort Wayne–Columbus corridor will provide the citizens of Chicago, Northern Indiana, and Central Ohio with a high quality passenger rail service that provides:

- Safe, comfortable and reliable service using state of the art (110–130 mph) equipment;
- Connectivity with the 4,000 miles of regional rail system that will link 100 Midwest and Ohio cities;
- Integration with the proposed MWRRI and Ohio Hub systems that are currently being built from Chicago to St. Louis, to Detroit, to Milwaukee and the Twin Cities, to Kansas City, and to Iowa City and Omaha;
- Access to major economic opportunities for both small and large businesses;
- A modern rail system operated on a private (franchise) basis that will provide the latest train technology, modern stations and amenities, and a high level of on-board comfort.

The development of the route will result in significant economic benefits for system users and the communities linked by the system in terms of strengthening the region's service, manufacturing, and tourism industries, while protecting the environment.

Chicago to Fort Wayne – Columbus Corridor



The analysis process used for the study reflects the latest direction from the USDOT FRA for High-Speed Rail planning. It includes comprehensive market analysis, operations planning, conceptual engineering, and detailed financial and economic analysis to assess the value of the proposed project. The key features of the analysis are:

- the assessment of the market;

- the identification of engineering needs;
- the characterization of the likely operating plan; and
- the estimation of the likely financial and economic returns from the project.

2 USER BENEFITS

The introduction of the high-speed rail system[1] will produce significant user benefits for those who ride the train as well as those who continue to use alternative modes. Benefits include:

- Reduced travel times between cities such as Fort Wayne to Chicago which will be under two hours;
- Reduced congestion on highways for auto and bus riders that improve the trips by these modes;
- Reduced travel costs due to competitive rail fares and rising gasoline prices.

Analysis projects that the corridor will generate over 2.1 Million riders in 2020 and that this will rise to over 3.3 Million by 2040. With fares set at two-thirds those of air fares the system will generate a fare box revenue of $116 Million per year in 2020 rising to $190 Million by 2040.

The corridor will generate over $6 Billion of user benefits over the thirty year life of the project and will produce a Cost Benefit return for the corridor, states and country of 1.7. This shows that each $1 invested produces $1.70 of economic return, which is a very acceptable result for such a major infrastructure project.

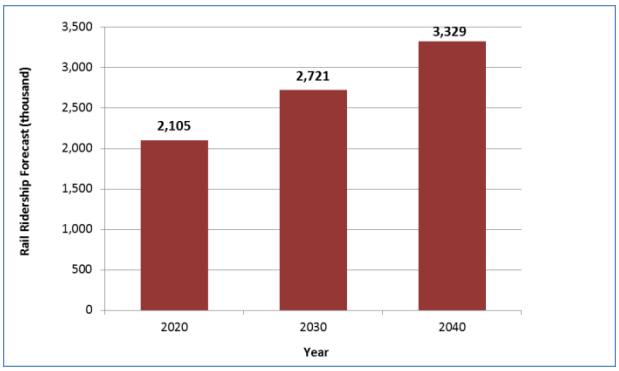
Typical High-Speed Train Amenities[1]

[1] For the purposes of this Feasibility Study and Business Plan, the term "high-speed" used throughout, refers to diesel - powered train sets reaching maximum speeds of either 110 or 130 miles per hour. This was the standard selected in 2004 by the 9 states participating in the Midwest Regional Rail Initiative plans for the Midwest rail network.

3 TRAVEL TIME BENEFITS

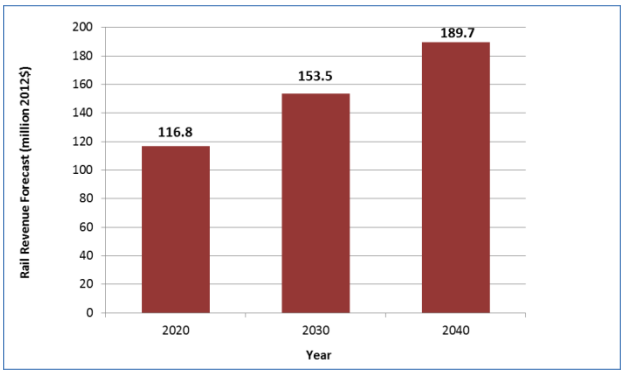
MARKET: The analysis of the market in the corridor between Chicago-Fort Wayne-Columbus showed that including connecting trips to other corridors currently being built (e.g., Chicago-Detroit) there were over 2 Million potential High-Speed Rail riders in 2020 rising to over 3 Million in 2040. This ridership generates nearly $117 Million in revenues rising to nearly $190 Million in 2040. With the implementation of the system, rail achieves about 3 percent of the market share, largely from auto diversion.

Rail Ridership Forecasts (thousand)



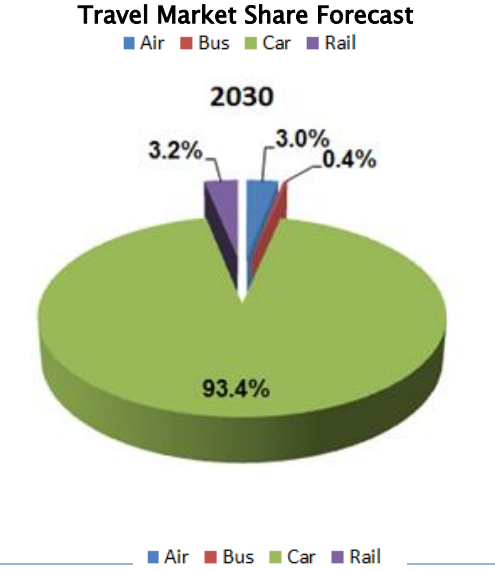
Rail Fare-Box Revenue Forecasts

($Millions 2012$)



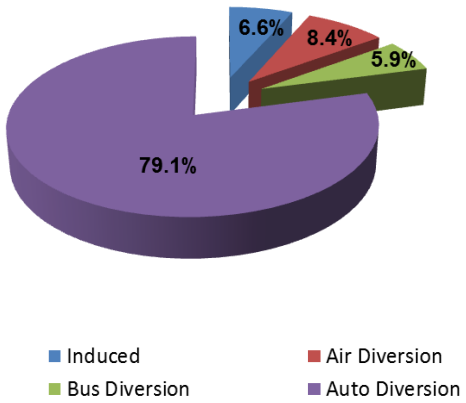
Chicago-Fort Wayne-Columbus Corridor

Travel Market Share Forecast



Rail Trip Sources Forecast

2030



OPERATING PLAN: It is proposed to operate the rail system using 130 mph Diesel trains similar to those proposed for the other MWRRI and Ohio Hub corridors. Operating at 110 mph these trains provide a four hour local train service from Chicago to Columbus and a three hour forty five minute service with a four stop express service. Fort Wayne, located nearly in the middle of the corridor, would enjoy one hour thirty-eight minute service to Chicago, and two-hour service to Columbus.

The system will use advanced Positive Train Control (PTC) to ensure the safety and effective operation of the trains, as well as quad gates to provide a fully separated and sealed corridor environment for train operation. This will greatly improve grade crossing safety and provide automatic train stop capability should any vehicles become trapped by the gates. Using nine train sets, schedules can be developed with twelve trains per day in each direction. At least six of the sets will be express trains and six will provide regular service. Due to the growth of demand this is a fifty percent increase in both regular and express trains than was proposed by the MWRRI project. The trains will seat up to 350 passengers. The train cars will have a very high level of amenity, including video and entertainment, trolley food service, and plug-ins for computer, notebooks and phones. The cars will be air-conditioned and provide a very pleasing travel environment

The operating costs for the trains will be $121 Million in 2020, rising to $141 Million in 2040. This generates a positive operating ratio from 2020 to 2040 once the system ramps up from its initial start-up. The operating profit rises from $5 Million in 2020 to $64 Million per year by 2040. This would give a (private) franchise operator a return increasing from 4 percent in 2020 to 45 percent by 2040. This cash flow would provide an overall return of 30 percent at a 7 percent discount rate and 71 percent at a 3 percent discount rate.

High-Speed Rail Increases Safety at Grade Crossings

PROPOSED TRAIN SCHEDULES[2]:

Chicago, IL to Columbus, OH: Diesel 110 Option

All times are CST; UPDATED for FT WAYNE STUDY 12/17/2012

Station - Read Down	Miles	300	302	304	306	308	310	312	314	316	318	320	322
CHICAGO, IL - UNION STATION	0.0	5:00	6:00	7:00	9:25	10:00	11:30	14:30	16:00	17:00	18:30	19:00	21:00
Gary, IN - Regional Airport	23.0	5:24	6:24	7:24	9:49	10:24	11:54	14:54	16:24	17:24	18:54	19:24	21:24
Valparaiso, IN	44.3	5:38	-	-	10:03	-	12:08	-	16:38	-	19:08	-	21:38
Plymouth, IN	84.7	6:01	-	-	10:26	-	12:31	-	17:01	-	19:31	-	22:01
Warsaw, IN	109.8	6:18	-	-	10:43	-	12:48	-	17:18	-	19:48	-	22:18
Ft. Wayne, IN	148.7	6:47	7:38	8:38	11:12	11:38	13:17	16:08	17:47	18:38	20:17	20:38	22:47
Lima, OH	208.1	7:31	8:22	9:22	11:56	12:22	14:01	16:52	18:31	19:22	21:01	21:22	23:31
Kenton, OH	243.2	7:54	-	-	12:19	-	14:24	-	18:54	-	21:24	-	23:54
Marysville, OH	275.2	8:26	-	-	12:51	-	14:56	-	19:26	-	21:56	-	0:26
Columbus, OH (Arr)	303.7	9:00	9:45	10:45	13:25	-	15:30	18:15	20:00	20:45	22:30	-	1:00

Station - Read Down	Miles	301	303	305	307	309	311	313	315	317	319	321	323
Columbus, OH (Dep)	0.0	4:55	-	6:00	9:30	10:30	11:30	14:00	-	16:30	19:45	20:30	21:30
Marysville, OH	28.5	5:29	-	-	10:04	-	12:04	-	-	-	20:19	-	22:04
Kenton, OH	60.5	6:01	-	-	10:36	-	12:36	-	-	-	20:51	-	22:36
Lima, OH	95.6	6:24	6:48	7:23	10:59	11:53	12:59	15:23	15:59	17:53	21:14	21:53	22:59
Fort Wayne, IN	155.0	7:08	7:32	8:07	11:43	12:37	13:43	16:07	16:43	18:37	21:58	22:37	23:43
Warsaw, IN	193.9	7:37	-	-	12:12	-	14:12	-	17:12	-	22:27	-	0:12
Plymouth, IN	219.0	7:54	-	-	12:29	-	14:29	-	17:29	-	22:44	-	0:29
Varparaiso, IN	259.4	8:17	-	-	12:52	-	14:52	-	17:52	-	23:07	-	0:52
Gary, IN - Regional Airport	280.7	8:31	8:46	9:21	13:06	13:51	15:06	17:21	18:06	19:51	23:21	23:51	1:06
CHICAGO, IL -UNION STATION	303.7	8:55	9:10	9:45	13:30	14:15	15:30	17:45	18:30	20:15	23:45	0:15	1:30

[2] Due to the increase in demand in the corridor there is a 50% increase in trains compared to the MWRRI project. Six (6) instead of four (4) express trains and six (6) instead of four (4) regular trains.

4 COMMUNITY BENEFITS

The development of the passenger rail corridor will significantly expand the region's economy in a manner similar to that provided by the creation of the interstate highway system. It will create new (small) business and it will grow existing businesses due to the improved economic opportunity the corridor will generate. The study projects that these benefits to the corridor communities will include:

- The equivalent of 26,800 full-time jobs for thirty years or 806,000 person years of work;
- $700 Million per year in extra household income along the corridor; and
- $2.6 Billion in increased Joint development opportunities for the corridor communities

In terms of train service it is proposed to use 130 mph Diesel trains similar to those being successfully implemented elsewhere in the Midwest (e.g., Chicago-St. Louis, Chicago-Twin Cities, Chicago-Detroit). With operating costs estimated at $121 Million in 2020, and revenues at $126 Million, the Operating Ratio is positive and increases from 1.04 in 2020, to 1.32 by 2030, and to 1.56 by 2050. This positive operating ratio demonstrates the opportunity for the corridor rail service to be franchised and to operate as a competitive intercity mode of travel. This will create a new business opportunity similar to that of the airlines or intercity bus companies.

New Jobs will be Created

5 COST BENEFIT RESULTS

Cost Benefit performance is a critical factor in the development of the corridor passenger rail system. The USDOT will only provide funding (up to 80 percent of Cost) for passenger rail development if there is a good economic case demonstrated for the corridor, the state(s), and the country as a whole.

As required by the USDOT's standards for Cost Benefit Analysis, infrastructure needs, operating costs, and the user benefits of the system were thoroughly assessed.

- The cost to develop the Chicago-Fort Wayne-Columbus corridor is a very cost-effective $4 Million per mile for the 300 mile system
- 79 percent of the cost is in track, signals and stations
- 21 percent of the cost is in equipment and facilities

While the capital investment in the 300-mile corridor is substantial at $1.285 Billion, the demand-side analysis shows an estimated return of $6.241 Billion. This demonstrates a very good Benefit Cost ratio of 1.71 when all costs (capital and operating) are compared with the total benefits.

Given the economic and financial returns there is clearly a strong case for:

- Federal funding support
- Public-Private Partnership
- Private sector involvement in station development

High-Speed Trains Generate Significant Economic Development

6 STATION DEVELOPMENT BENEFITS

High-Speed rail operations present a major opportunity for economic development in the urban environment around stations. The station traffic encourages development of nearby properties and creates the opportunity for new development at the station site. The property value increase in the corridor is estimated at $2.6 Billion with the investment potential reflecting the level of station usage.

In the intercity corridor projects currently moving ahead, station development has played a large part in attracting private sector partners. Developments in Champaign, Normal, and Milwaukee show the anchor stations that have frequently been the centerpiece for urban redevelopment. This Study estimates Joint Development potential of $2.6 Billion among the communities along the route.

New Train Stations will be Developed

Normal, IL Multimodal Transportation Center

Milwaukee, WI Downtown Station

Champaign, IL Terminal

7 CONSTRUCTION SPENDING IMPACTS

The project would have substantial economic impacts along the corridor. These include both user benefits (i.e., benefits to travelers in the corridor), as well as community benefits (i.e., benefits to communities connected to the system).

The development of the system will generate:

- 12,000 temporary jobs for the period of construction of the system
- 26,800 permanent jobs over the life of the project or 806,000 person years of work for the economy.
- $7.1 Billion of increased output for the region's businesses.

Construction and Maintenance of High-Speed Rail Systems Generates Significant Construction Work

8 CAPITAL INVESTMENT BY CORRIDOR

The cost of upgrading the 300 mile route used by the trains system would be comparable to the improvements proposed by the MWRRI for its key corridors such as Chicago-Detroit and Chicago-St. Louis. At $4 Million per mile the Chicago-Fort Wayne-Columbus Corridor is particularly cost effective due to the quality of the existing route and its existing infrastructure. The capital cost includes infrastructure, signal system and train sets.

The total cost for the 300-mile system is estimated at $1.285 Billion with 79 percent of the cost in track, signals and stations, and 21 percent in train equipment and facilities.

While the capital cost of the project is significant, the corresponding economic returns outweigh the costs. The USDOT Federal Railroad Administration (FRA), which would typically provide 80 percent of the capital cost, demands cost benefit ratios of greater than one at both 3% and 7% discount rate. The Chicago-Fort Wayne-Columbus Corridor exceeds the values required, providing a 1.31 ratio at 7% discount rate, and a 1.71 ratio at 3% discount rate.

As noted in the MWRRI project, the project costs are regarded as manageable because:

- The project will be developed in such a way that it will be eligible for 80% Federal funding.
- The remaining start-up costs of $257 Million will be shared between two states.
- Each state share (assuming at this time 50% for each) would amount to $128 Million for the 110 mph option (or $335 Million for the 130 mph option) over five years.
- State shares of the project cost could, in their turn, be significantly reduced as opportunities are put forward for public / private partnerships for the construction, operation, and financing of the system.

Both states have shown themselves to be capable partners with neighboring states, in undertaking major transportation infrastructure projects with shared benefits. Currently, Indiana is engaged with the State of Kentucky in the construction of two Ohio River bridges at Louisville (one bridge built by each state), with a total cost for the two bridges projected at $3.6 Billion; Ohio is similarly collaborating with Kentucky on the replacement of the Brent Spence Bridge in Cincinnati at a projected cost of $2.5 Billion.

Given the financial and economic returns generated by the project, it is clear that the project would not only meet the requirements of the USDOT FRA, but presents significant opportunities for a Public Private Partnership that would help minimize the capital requirements for the participating states (Indiana and Ohio) and their local communities.

9 ENVIRONMENTAL BENEFITS

The growth of income and population in the corridor will increase traffic by over 30 Million trips or over 40 percent of existing traffic by 2050. This increase will bring significant delay and congestion as neither the highway or air systems can be expanded sufficiently to support this level of growth. As a result, high-speed rail will bring very substantial environmental benefits by providing a cost effective alternative to auto and air travel.

The environmental benefits include:

- Decreased energy consumption
- Reduced accidents
- Reduced air pollution and emissions
- Reduced land for auto and air facilities
- Intensified and reuse of urban area lands around stations
- Reduced wetland and water resource impacts by reuse of existing rail routes.

The level of environmental support for high-speed rail reflects its ability to minimize energy, reduce accidents, minimize highway congestion, and limit greenfield impacts by making optimal use of existing rights-of-way. This development strategy will produce a much smaller carbon and physical footprint than either highway or airport development, in which forests, farmland, or wetlands are often impacted.

The use of a Positive Train Control System providing a sealed corridor will reduce grade crossing accidents as the trains will have an automatic stop capability that will stop trains, should there be any highway vehicles in a grade crossing.

10 RETURN TO GOVERNMENT

The building of the high-speed rail system will result in a significant increase in jobs and income throughout the corridor. The increase in income and property tax values is such that significant tax base enhancements can result from the project. These include:

- An increase in Federal Tax payments of $894 Million over the project life
- An increase in State Tax payments of $345 Million over the project life
- An increase in Property Tax of $679 Million, over the life of the project.
- The total increased Tax Revenues to government would generate a net $1.92 Billion expansion in the tax payments over the life of the project.
-

The tax base enhancements provide the Federal, State, and local government with new tax revenues comparable to the project's cost. This result is consistent with the analysis by ***Mercator Advisors*** and ***Vantage Point Associates***, two leading accounting firms, who in the report "Financing High- Speed Intercity Passenger Rail with Tax Credits" (American Passenger Transport Association {APTA}, 2008) concluded that increased tax payments for the entire 9-state system represented by the Midwest Regional Rail Initiative would fully repay Federal grants, and would offset 70 percent of state grants.

11 CONCLUSION

In an environment of rising long-term energy prices, increasing highway congestion and the deregulation of the transportation industry, High-Speed Rail has a significant role to play in raising regional mobility and transforming the economy by productivity improvements.

High-Speed Rail is an environmentally friendly, energy efficient and cost-effective alternative that not only increases individual travel options, but significantly enhances the productivity of business and industry. In addition, it elevates the role of the private sector by providing new business opportunities for operation, maintenance and servicing of the system. It creates a franchise capability for the operation of the corridor rail service that has been demonstrated effectively by railroads across the world.

Furthermore, the increase in economic activity generated by the High-Speed Rail system will increase employment, providing new incomes along with accompanying increases in the tax base to federal, state, and local governments. The incremental tax payments over the 30 year life of the project, are sufficient, in and of themselves, to offset any capital contributions required of Federal, state, or local governments. Within this new Midwest rail corridor, linking the 3rd-ranking MSA of Chicago to the 32nd ranking MSA--Columbus, through Fort Wayne (122nd-ranked MSA) with significant urban and employment centers between them (Marysville, Lima, Warsaw, and Gary), the increase in tax payments will exceed the capital contributions of all governments, given the very cost-effective nature of the proposed system.

High-Speed Rail will play a Major Role in Building the New Economy of the 21st Century for the Corridor