



**WORLDWIDE
HYDROGEN SUPER HIGHWAYS**

**Kingston, Jamaica Metropolitan Region
Mass Transit and Public Utilities Infrastructure Proposal**



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JAMAICA RAILWAY

History of The Jamaica Railway

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History / wikipedia.org [Railways of Jamaica](#)

The Jamaica Railway, constructed in 1845, was the first line opened to traffic outside Europe and North America. The rail service was established in the United Kingdom in 1825, the United States in 1830 and Canada in 1836. Not only did the Jamaica Railway have the distinction of being constructed so soon after the first public railway in Britain, but also, it was the first constructed in the British colonies.

In 1843, a proposal to construct the railway line was made by William Smith and his brother David Smith to the House of Assembly in Jamaica. The plan to construct the double track line between Kingston and Spanish Town was favorably received by the Assembly and in the same year the Jamaica Railway Company was incorporated under the 7th Victoria cap. 25.

Inherent Features

The railway stations constructed between 1845 and 1896 demonstrate the application of the Jamaica/Georgian style of architecture. It should be emphasized that although most of the stations were constructed as part of a major line extension, their individual form and features show great variety.

Today, most of the stations are in a state of disrepair. Some are now used as bars, grocery shops or residences. Many stations have alterations made to their original form, nevertheless the original design features remain intact.

See Historical Timeline 1843 – 1992 [Go!](#)

A Vision For Jamaica

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In 2006, the Government of Jamaica (GOJ) mandated the Planning Institute of Jamaica (PIOJ) to lead the preparation of a comprehensive long-term National Development Plan (NDP) which will seek to place Jamaica in a position to achieve developed country status by 2030. For Jamaica, an efficient and effective transport sector is indispensable to economic progress. Other sectors such as mining, manufacturing, trade, tourism and agriculture are critical to Jamaica's growth and development and like many other sectors depend upon transportation. Without adequate infrastructure to facilitate the movement of people and goods, economic and social benefits will be limited.

As an island Jamaica's land transport sub-sector is entirely a domestic system, with no cross-boundary land transport issues. However the land transport sub-sector is linked to the air transport and maritime sub-sectors, which are both dominated by international transport modes. It will be important therefore to develop and strengthen the inter-modal transport linkages between land, sea and air transport modes particularly in the context of expanding Jamaica's role as an international transport hub.

The transport sector in Jamaica may be considered to include road (tier one), rail transportation (tier 2), air (tier 3) and maritime transportation (tier4). The Ministry of Transport and Works (MTW) has prepared a draft National Transport Policy to provide a framework for the future development of the sector, the "[Vision 2030 Jamaica Transport Sector Plan](#)"

This proposal to manufacture, construct, operate and maintain the "Interstate Traveler Mass Transit & Public Infrastructure System", *upon acceptance and subsequent deployment*, will insure Jamaica realizes the goals and objectives set forth by the "Vision 2030 Jamaica Transport Sector Plan" within years as opposed to decades.

Jamaica Railway Transportation Today

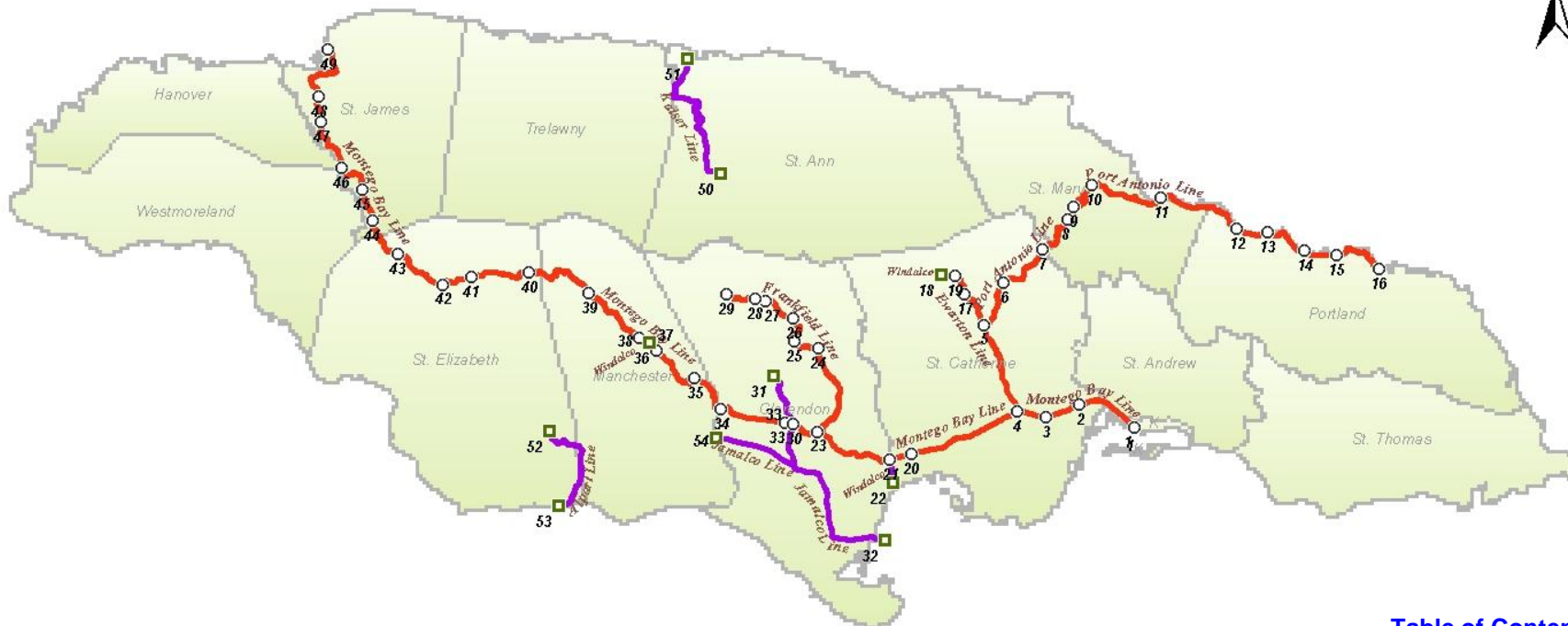
Railway transportation forms the second tier of land transportation in Jamaica, and it was one of the earliest modes of transportation to be introduced in Jamaica, dating back to the 1880s. Public railway tracks belonging to the Jamaica Railway Corporation (JRC) span three hundred thirty five kilometers (335km) across the island, traversing nine (9) of the fourteen (14) parishes of Jamaica. These are Clarendon, Kingston, Manchester, Portland, St. Ann, St. Catherine, St. Elizabeth, St. James and St. Mary, where there are over forty (40) stations.

Since the closure of the public passenger and freight transport services of the Jamaica Railway Corporation (JRC) in 1992, passenger rail transport has remained dormant and railway operations in Jamaica are currently limited to the activities of bauxite companies in the island. There are efforts underway to amend the Jamaican Railway Corporation Act, 1960 to make adequate provision for the privatization of railway operations

A number of entities have expressed an interest in revitalizing the railway but, to date, public passenger and freight services have not been restored. In 2005 the government entered into agreement with a Chinese government company to undertake studies on the feasibility of rehabilitation of the railway service in Jamaica. Significantly, the reopening of Jamaica's public railway transport operations could serve to alleviate the problem of congestion, especially within the KMTR (Kingston Metropolitan Transit Region)

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RAILWAY LINES IN JAMAICA



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KEY

JRC

Private

○ JRC Stations

■ Private Stations

— JRC Lines

— Private Lines

1:640,000



Projection: Lambert Conformal Conic
Datum: D_WGS_1984
Grid System: JAD_2001
Units: Kilometers

Date: January 25, 2005
Done by: Technical Services Unit
Organization: Ministry of Transport & Works
Information Source: Jamaica Railway Corporation, Alpart, Jamaica, Kaiser & Windalco

RAILWAY STATIONS GUIDE

NO.	STATION	LINE	NO.	STATION	LINE	NO.	STATION	LINE
1	Kingston	Montego Bay	20	Old Harbour	Montego Bay	37	Windsor Castle	Port Antonio
2	Gregory Park	Montego Bay	21	Bodles Junction	Montego Bay	37	Kirkvine Works (Alumina)	Private - Windalco
3	Grange Lane	Montego Bay	22	Port Esquivel (Alumina)	Private - Windalco	38	Kendal	Montego Bay
4	Spanish Town	Montego Bay	23	May Pen	Montego Bay	39	Gaerivale	Montego Bay
5	Bogwalk	Port Antonio	24	Suttons	Frankfield	40	Balacava	Frankfield
6	Riversdale	Port Antonio	24	Inverness	Montego Bay	41	Appleton	Montego Bay
7	Troja	Port Antonio	25	Chapelton	Frankfield	42	Magotty	Montego Bay
8	Richmond	Port Antonio	26	Morgan's Pass	Frankfield	43	Ipswich	Montego Bay
9	Highgate	Port Antonio	26	Bushy Park	Montego Bay	44	Stonehenge	Montego Bay
10	Albany	Port Antonio	27	Crooked River	Frankfield	45	Catadupa	Montego Bay
11	Annotto Bay	Port Antonio	28	Trout Hall	Frankfield	46	Cambridge	Montego Bay
12	Buff Bay	Port Antonio	29	Frankfield	Frankfield	47	Montpelier	Montego Bay
13	Orange Bay	Port Antonio	30	Jacob's Hut	Montego Bay	48	Arclovy	Montego Bay
14	Hore Bay	Port Antonio	31	Woodside (Bauxite)	Private - Jamaica	49	Montego Bay	Montego Bay
15	St Margarets Bay	Port Antonio	32	Rocky Point (Bauxite)	Private - Jamaica	50	Water Valley (Bauxite)	Private - Kaiser
16	Port Antonio	Port Antonio	33	Four Paths	Montego Bay	51	Discovery Bay	Private - Kaiser
17	Linstead	Ewarton	34	Clarendon Park	Montego Bay	52	Nain	Private - Alpart
18	Pleasant Farm	Ewarton	35	Porus	Montego Bay	53	Port Kaiser	Private - Alpart
19	Ewarton	Ewarton	36	Williamsfield	Montego Bay	54	Work in progress	Private - Jamaica

Interstate Traveler Venture Description

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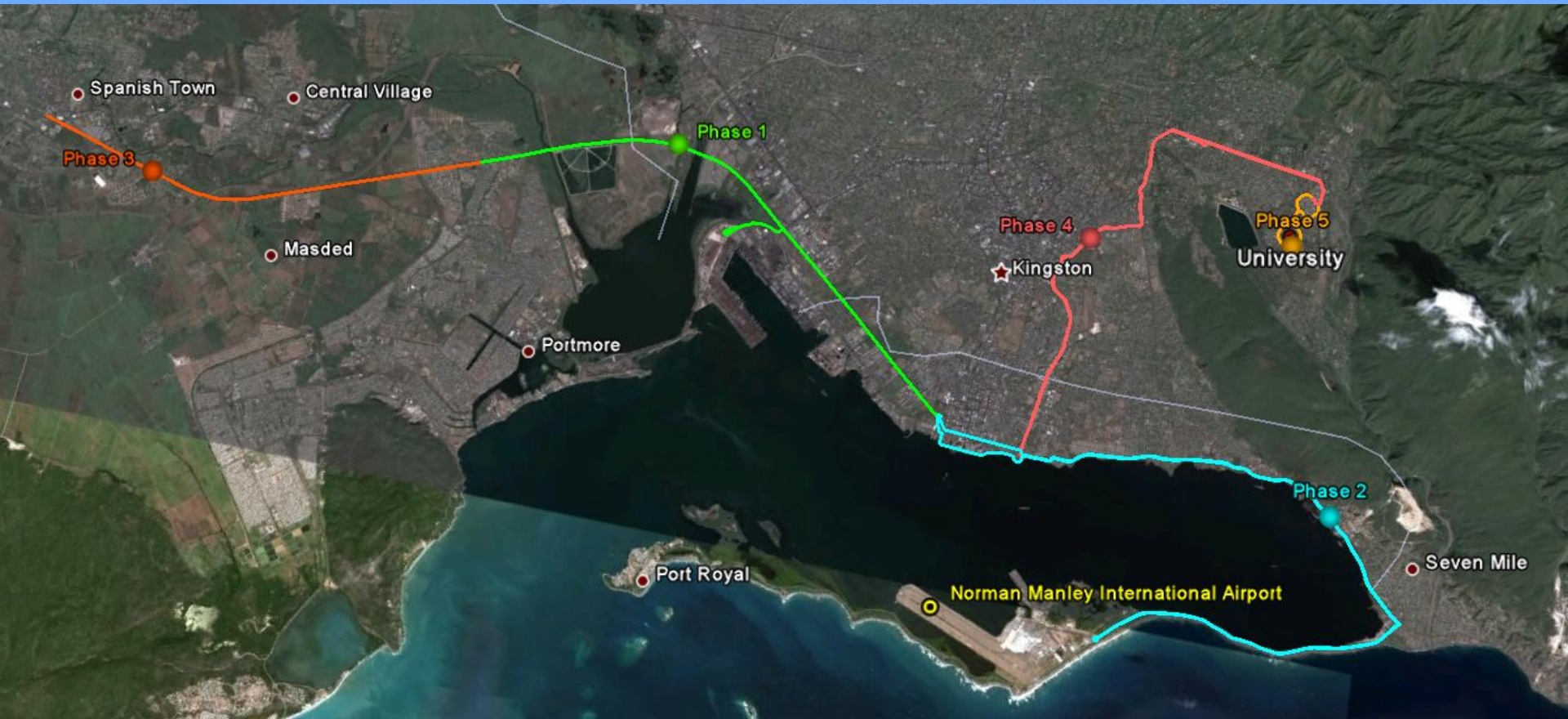
[The Interstate Traveler System](#) is a unique integration of magnetic levitation transportation, solar energy capture for electricity production, hydrogen production for fuel, and a conduit system for fiber optics and transmission of fuel, sewage and other liquids. The transportation portion is being developed for the express purpose of upgrading the entire public passenger transport system in the Kingston Metropolitan Region to provide a quieter, cleaner, safer, faster, cheaper and more efficient public transportation network. Our starting point for this endeavor is “The Old Kingston Station” in downtown. The route uses the existing rail bed and runs 10.488 km / 6.5 mi to the existing Gregory Park Station in Portmore and is referred to as “Phase 1” of a possible 5 Phase project in the Kingston Metropolitan Region. We understand the historical significance of the Old Kingston Station and will work diligently with local authorities to insure the preservation of the original station building, all while incorporating a state of the art “Grand Traveler Station Platform” that will represent the first step in the deployment of a revolutionary mass transit and public infrastructure system that will ultimately bring thousands of high quality jobs and unprecedented economic growth for the people of Jamaica.

Upon the successful completion of Phase 1; we immediately implement Phase 2; connecting Kingston Station with Norman Manley International Airport, Phase 3; From Portmore to Spanish Town and Phase 4; Connector to University West Indies Hospital, ½ scale spur around UWI Campus and finally to build a regional system along the abandoned rail corridor that links Kingston with Montego Bay. Eventually, this modular system will form a transportation and municipal infrastructure web across Jamaica. The system has been fully designed and is ready for immediate implementation.

Our business model is a public / private partnership that leverages the public owned right of ways with private investment for building the infrastructure. What is unique is that the system when installed will generate several revenue producing byproducts, including, hydrogen, water, and electricity.



Five Proposed “Stand Alone” Phases



[Phase 1 – Kingston to Portmore with Freight, Staging & Assembly Facility = 7.2 mi / 11.65 km.](#)

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[Phase 2 – Kingston to Norman Manley International Airport = 9.5 mi. / 15.3 km.](#)

[Phase 3 – Portmore to Spanish Town = 5.15 mi. / 8.3 km.](#)

[Phase 4 – South Camp Road Station to University West Indies Hospital = 6.65 mi. / 10.7 km.](#)

[Phase 5 - University West Indies Campus Loop \(½ Scale\) = 0.93 mi. / 1.495 km.](#)

Total components required to build one kilometer of rail including utility sub stations, Site work, demolition, adjustment to overhead lines and labor cost.

Cost Per Item

Total cost to construct rail and substructure Including embedded public utilities conduit

ITC Rail Installation Analysis

#Cost per Mile lock stock and barrel

1 mile = 5,280 feet 1 Kilometer = 3278 feet

Interstate Traveler Rail Costs/Kilometer

Qty	Units	Description	Cost	Amount	Notes
1	Kilometer	AMSC HTS Super Conductor Wire	\$120,000.00	\$120,000.00	
2	Kilometer	Solar Panel 72" wide x 1 Kilometer long.	\$871,948.00	\$1,743,896.00	8' x 1' section of panel at \$266.00 /foot
2	Kilometer	Concrete 3x3' x 12' concrete Piers	\$17,482.67	\$34,965.33	
2	Kilometer	Steel for Rail Tubing / Stanchion / Central Support	\$1,336,112.80	\$2,672,225.60	41.1142565557548 % of total cost / kilometer
8	Kilometer	Supplemental Conduit	\$3,278.00	\$26,224.00	\$1 / per foot
1	Kilometer	Fiber Optics	\$16,000.00	\$16,000.00	figured at \$5/ft yet may be purchase at \$.35/ft
0.25	Units/Kilometer	Full Function Utility Substation	\$1,500,000.00	\$375,000.00	One every FOUR kilometers (2.5 Miles)
1	Labor/Kilometer	100 people working simultaneously / 1 week	\$100,000.00	\$100,000.00	\$52k / Annual Salary equivalent or \$1K / week
1	Kilometer	Sitework / demolition / adjustment to overhead line	\$100,000.00	\$100,000.00	
2	Kilometer / pair of rail	Solid-state Magnets	\$655,600.00	\$1,311,200.00	\$200 / foot * 3278 for Pair of Rails

Total cost of the InterState Traveler /Kilometers

\$6,499,510.93

Additional cost for terminal stations, car ferries & required side track

Section Length (Feet)

66

Cost per foot

\$1,982.77

Cost per Section

\$130,862.64

Total cost per kilometer of rail sections and utilities conduit

Terminal Stations

Qty	Units	Description	Cost	Amount	Notes
0	Each	Grand Terminal Stations	\$8,000,000.00	\$0.00	
0	Each	Cloverleaf Stations "Traveler Station"	\$3,000,000.00	\$0.00	
0	Each	Car Ramp for Car Ferry w/ Parking Structure	\$2,000,000.00	\$0.00	
0	Kilometer	Sidetrack to Local Public Station (1Kilometer)	\$6,499,510.93	\$0.00	
0	Each	Remote Public Station, and parking (Private Land)	\$1,000,000.00	\$0.00	

Additional Cost for individual transport vehicles

\$0.00

Interstate Traveler Public Cars

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Qty	Units	Description	Cost	Amount	Notes
0	Each	Grand Public Car	\$1,000,000.00	\$0.00	
0	Each	Commuter Public Car	\$500,000.00	\$0.00	
0	Each	Car Ferry	\$300,000.00	\$0.00	

Phase 1 / Kingston to Portmore

Including Staging and Rail Assembly Facility

← Main Project Map



Phase 1 / Key Metrics: (7.2 mi / 11.65 km.)

[Overview](#)

[Cost](#)

[ROI](#)

Staging & Rail Assembly Facility – *Would serve entire rail Network build-out*

“Kingston Station” – *Historical Restoration of original station building with a new “state of art” HyRail Platform*

“Gregory Park ” – *Historical Restoration of original station building*

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Phase 1 / Overview

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Phase 1 runs along the existing rail bed from the “Old Kingston Station” in downtown Kingston to the Gregory Park Station in Portmore. Utilizing this abandoned corridor will allow for the most expedient deployment of the HYRAIL system between Kingston & Portmore.



The Kingston Railway Station

The Kingston Railway Station was built along the Jamaica/Georgian lines of architecture. It was constructed on a grand scale, symbolizing the economic importance of the city of Kingston as the centre of trade. The station is constructed of brick with prominent arcades on both levels of the east entrance end. Victorian cast iron brackets support the roof overhang on the trackside. The building has sash windows on the ground and upper floors. The Kingston Railway Station was constructed in 1845.



Spanish Town Railway Station

The Spanish Town Railway station is a Jamaica/Georgian style brick building set on a stone base. The roof overhang on the northern side of the structure is supported by timber posts and wall mounted cast iron brackets. On the southern side, the roof overhang is supported by wall mounted timber brackets. The facade of the structure contains sash windows and solid recessed panel doors. The entire structure is covered with long zinc hip roof. This Station was built in 1845.

The Interstate Traveler Company understands the historical significance of the Old Kingston Station and many other stations along the proposed routes and will work diligently with local authorities to insure the preservation of the original station buildings, as possible, all while incorporating a state of the art “Station Platforms” that will represent the first step in the deployment of a revolutionary mass transit and public infrastructure system that will ultimately bring thousands of high quality jobs and unprecedented economic growth for the people of Jamaica.

Phase 1 / Installation Cost

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Jamaica - Phase 1; ITC Rail Installation Check List / 11.65 km.

Qty	Units	Description	Cost	Amount	Notes
12	Kilometer		\$6,499,510.93	\$75,719,302.37	
-	Kilometer		\$6,499,510.93		
-	Kilometer		\$6,499,510.93		
1	Each	Grand Terminal Stations	\$8,000,000.00	\$8,000,000.00	
-	Each	Cloverleaf Stations "Traveler Station"	\$3,000,000.00	\$0.00	
5	Kilometer	Sidetrack to Local Public Station (1Kilometer)	\$6,499,510.93	\$32,497,554.67	
2	Each	Car Ramp for Car Ferry w/ Parking Structure	\$2,000,000.00	\$4,000,000.00	
4	Each	Remote Public Station, and parking (Private Land)	\$1,000,000.00	\$4,000,000.00	
-	Each	Grand Public Car (GPC)	\$1,000,000.00	\$0.00	
20	Each	Commuter Public Car (60 Passenger)	\$500,000.00	\$10,000,000.00	
10	Each	Freight Car	\$300,000.00	\$3,000,000.00	
4	Each	Car Ferry	\$300,000.00	\$1,200,000.00	
20	Total Commute Cars	Total Cost for InterState Traveler Installation		\$138,416,857.04	
4	Total Car Ferry	Cost of Steel at 1200 dollars per ton at 30 tons per section		\$32,756,011.20	31%
3	Total Stations	Balance		\$105,660,845.84	76%
11	Total Cars / Station	Freight, Staging and Assembly Facility		\$100,000,000.00	
16.7	Total Kilometers				
10.3	Total Miles				
0.145	Pairs of Stations/Mile				
3.29	Cars/mile				
34	Total Cars				
		Cost per Kilometer Complete System		\$8,313,324.75	
		Cost per Mile Complete System		\$13,386,996.37	

Total Cost Phase 1 = \$238,416,857

* Does not include ocean freight shipping cost of component parts from Detroit to Kingston – ADD (+ -) 10%

Phase 1 / Return on Investment

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Budget>> Cost for Installation for 10.34 miles	\$138,416,857.04	
Total Annual Revenue	\$83,920,080.00	
Return on Investment at 100% of Revenue	1.649389002	Years
Dept Service Fund	50%	
Total Annual Dept Service Fund (P/P Partnership)	\$41,960,040.00	
Return on Investment using Dept Service Fund	3.299	Years
Time to tool up manufacturing in Months	9.00	
Unforeseen Delays for Installation in Months	3.00	
Time to make and all parts in Months	24.27	
Total Months Until Fully Operational	36.27	
Total Years Until Operational	3.02	
Return on Investment in Months after made Operational	56.06	
Return on Investment Years Including Startup time	4.67	

Phase 2 / Kingston to Norman Manley International Airport



Phase 2 / Key Metrics:

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Public Right-of-Way Portion – 10.36 mi. / 16.685 km.

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Airport Right-of-Way Portion - 0.86 mi. / 1.385 km.

[Overview](#) [Cost](#) [ROI](#)

Phase 2; Public Right-of-Way Portion / Overview



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Phase 2; Kingston to Norman Manley International Airport / Installation Cost Public Right-of-way Portion (To entrance of airport property)

Jamaica - Phase 2; ITC Rail Installation Check List / 16.685 km.					
Qty	Units	Description	Cost	Amount	Notes
17	Kilometer		\$6,499,510.93	\$108,444,339.92	
-	Kilometer		\$6,499,510.93		
-	Kilometer		\$6,499,510.93		
1	Each	Grand Terminal Stations	\$8,000,000.00	\$8,000,000.00	
-	Each	Cloverleaf Stations "Traveler Station"	\$3,000,000.00	\$0.00	
5	Kilometer	Sidetrack to Local Public Station (1Kilometer)	\$6,499,510.93	\$32,497,554.67	
1	Each	Car Ramp for Car Ferry w/ Parking Structure	\$2,000,000.00	\$2,000,000.00	
5	Each	Remote Public Station, and parking (Private Land)	\$1,000,000.00	\$5,000,000.00	
-	Each	Grand Public Car (GPC)	\$1,000,000.00	\$0.00	
31	Each	Commuter Public Car (60 Passenger)	\$500,000.00	\$15,500,000.00	
15	Each	Freight Car	\$300,000.00	\$4,500,000.00	
6	Each	Car Ferry	\$300,000.00	\$1,800,000.00	
31	Total Commute Cars	Total Cost for InterState Traveler Installation		\$177,741,894.59	
6	Total Car Ferry	<u>Cost of Steel at 1200 dollars per ton at 30 tons per section</u>		<u>\$42,661,507.68</u>	32%
2	Total Stations	Balance		\$135,080,386.91	76%
26	Total Cars / Station	Phase 2 / Airport Right-of-Way Portion = \$23,719,081.00			
21.7	Total Kilometers				
13.5	Total Miles				
0.074	Pairs of Stations/Mile				
3.86	Cars/mile				
52	Total Cars				
		Cost per Kilometer Complete System		\$8,196,536.53	
		Cost per Mile Complete System		\$13,198,931.61	Table of Contents

Total Cost Phase 2 / Public Right-of-Way Portion = \$ 201,460,976

* Does not include ocean freight shipping cost of component parts from Detroit to Kingston – ADD (+ -) 10%

Phase 2; Public Right-of-Way Portion / Return on Investment

Budget>> Cost for Installation for 13.47 miles	\$177,741,894.59	
Total Annual Revenue	\$108,881,640.00	
Return on Investment at 100% of Revenue	1.632432195	Years
Dept Service Fund	50%	
Total Annual Dept Service Fund (P/P Partnership)	\$54,440,820.00	
Return on Investment using Dept Service Fund	3.265	Years
Time to tool up manufacturing in Months	9.00	
Unforeseen Delays for Installation in Months	3.00	
Time to make and all parts in Months	24.27	
Total Months Until Fully Operational	36.27	
Total Years Until Operational	3.02	
Return on Investment in Months after made Operational	55.86	
Return on Investment Years Including Startup time	4.65	

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Phase 2; Norman Manley International Airport Spur Phase 2; Private Right-of-Way Portion / Overview

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Phase 2; Kingston to Norman Manley International Airport / Installation Cost Airport Right-of-way Portion (Spur on airport property)

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Jamaica - Phase 2; Airport Spur / ITC Rail Installation Check List - 1.385 km.

Qty	Units	Description	Cost	Amount	Notes
1	Kilometer		\$6,499,510.93	\$8,969,325.09	
-	Kilometer		\$6,499,510.93		
-	Kilometer		\$6,499,510.93		
1	Each	Grand Terminal Stations	\$8,000,000.00	\$8,000,000.00	
-	Each	Cloverleaf Stations "Traveler Station"	\$3,000,000.00	\$0.00	
1	Kilometer	Sidetrack to Local Public Station (1Kilometer)	\$6,499,510.93	\$3,249,755.47	
1	Each	Car Ramp for Car Ferry w/ Parking Structure	\$2,000,000.00	\$2,000,000.00	
-	Each	Remote Public Station, and parking (Private Land)	\$1,000,000.00	\$0.00	
-	Each	Grand Public Car (GPC)	\$1,000,000.00	\$0.00	
3	Each	Commuter Public Car (60 Passenger)	\$500,000.00	\$1,500,000.00	
-	Each	Freight Car	\$300,000.00	\$0.00	
-	Each	Car Ferry	\$300,000.00	\$0.00	
3	Total Commute Cars	Total Cost for InterState Traveler Installation		\$23,719,080.55	
0	Total Car Ferry	Cost of Steel at 1200 dollars per ton at 30 tons per section		\$3,698,576.64	18%
2	Total Stations	Balance		\$20,020,503.91	84%
2	Total Cars / Station				
1.9	Total Kilometers				
1.2	Total Miles				
0.857	Pairs of Stations/Mile				
2.57	Cars/mile				
3	Total Cars				
		Cost per Kilometer Complete System		\$12,616,532.21	
		Cost per Mile Complete System		\$20,316,476.99	

Total Cost Phase 2 / Airport Right-of-Way Portion = \$23,719,081

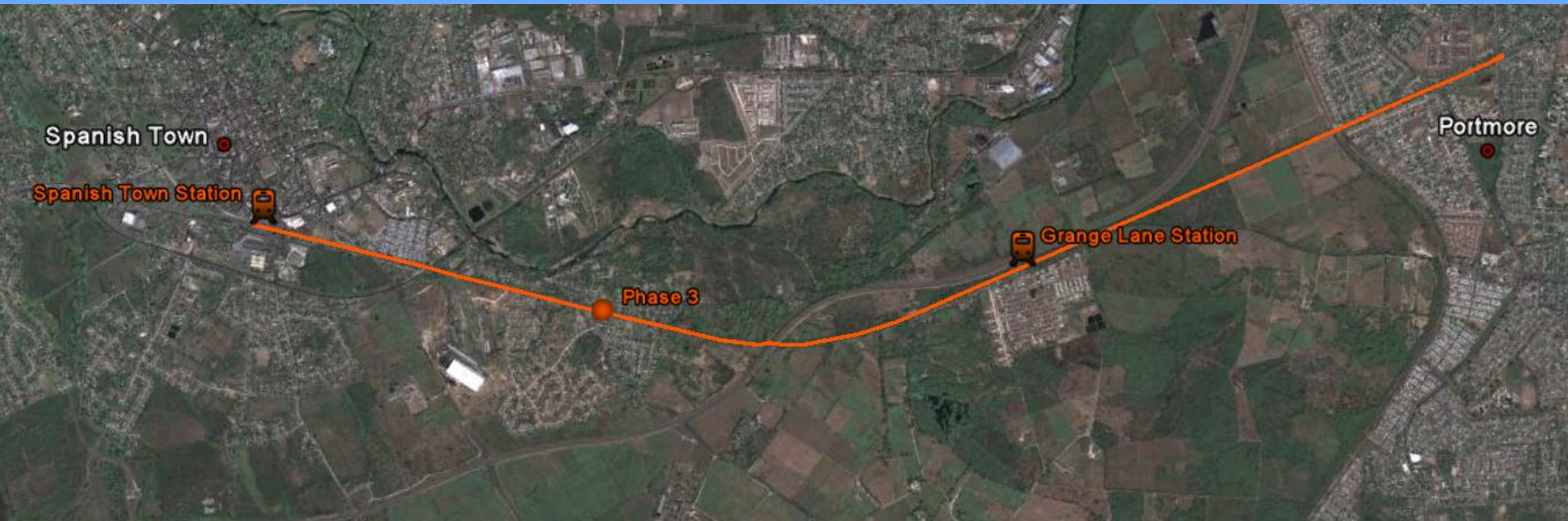
* Does not include ocean freight shipping cost of component parts from Detroit to Kingston – ADD (+ -) 10%

Phase 2; Airport Right-of-Way / Return on Investment

Budget>> Cost for Installation for 1.17 miles	\$23,719,080.55	
Total Annual Revenue	\$31,546,560.00	
Return on Investment at 100% of Revenue	0.751875341	Years
Dept Service Fund	50%	
Total Annual Dept Service Fund (P/P Partnership)	\$15,773,280.00	
Return on Investment using Dept Service Fund	1.504	Years
Time to tool up manufacturing in Months	9.00	
Unforeseen Delays for Installation in Months	3.00	
Time to make and all parts in Months	24.27	
Total Months Until Fully Operational	36.27	
Total Years Until Operational	3.02	
Return on Investment in Months after made Operational	45.29	
Return on Investment Years Including Startup time	3.77	

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Phase 3 / Portmore to Spanish Town



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Phase 3 / Key Metrics: (5.15 mi. / 8.3 km.)

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[Cost](#)

[ROI](#)

“Spanish Town Station” – *Historical Restoration of original station building*

Phase 3 / Overview

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Phase 3; Portmore to Spanish Town / Installation Cost

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Jamaica - Phase 3; Portmore to Spanish Town / Installation Check List - 8.3 km.

Qty	Units	Description	Cost	Amount	Notes
8	Kilometer		\$6,499,510.93	\$53,945,940.75	
-	Kilometer		\$6,499,510.93		
-	Kilometer		\$6,499,510.93		
-	Each	Grand Terminal Stations	\$8,000,000.00	\$0.00	
-	Each	Cloverleaf Stations "Traveler Station"	\$3,000,000.00	\$0.00	
1	Kilometer	Sidetrack to Local Public Station (1Kilometer)	\$6,499,510.93	\$3,249,755.47	
1	Each	Car Ramp for Car Ferry w/ Parking Structure	\$2,000,000.00	\$2,000,000.00	
2	Each	Remote Public Station, and parking (Private Land)	\$1,000,000.00	\$2,000,000.00	
-	Each	Grand Public Car (GPC)	\$1,000,000.00	\$0.00	
16	Each	Commuter Public Car (60 Passenger)	\$500,000.00	\$8,000,000.00	
6	Each	Freight Car	\$300,000.00	\$1,800,000.00	
4	Each	Car Ferry	\$300,000.00	\$1,200,000.00	
16	Total Commute Cars	Total Cost for InterState Traveler Installation		\$72,195,696.21	
4	Total Car Ferry	<u>Cost of Steel at 1200 dollars per ton at 30 tons per section</u>		<u>\$17,312,486.40</u>	32%
1	Total Stations	Balance		\$54,883,209.81	76%
26	Total Cars / Station				
8.8	Total Kilometers				
5.5	Total Miles				
0.091	Pairs of Stations/Mile				
4.76	Cars/mile				
26	Total Cars				
		Cost per Kilometer Complete System		\$8,204,056.39	
		Cost per Mile Complete System		\$13,211,040.88	

Total Cost Phase 3 = \$72,195,696

* Does not include ocean freight shipping cost of component parts from Detroit to Kingston – ADD (+ -) 10%

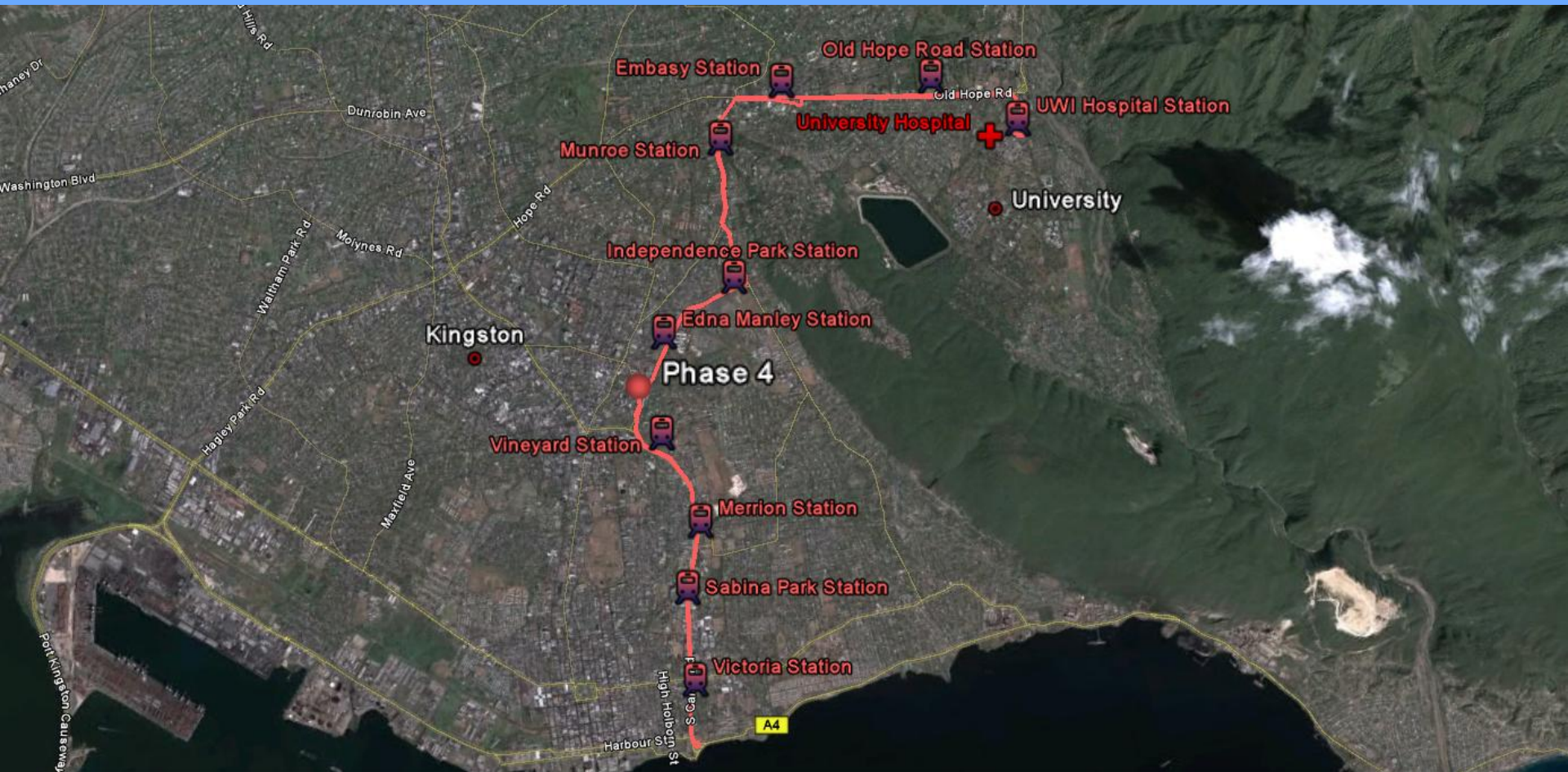
Phase 3 / Return on Investment

Budget>> Cost for Installation for 5.47 miles	\$72,195,696.21	
Total Annual Revenue	\$49,169,280.00	
Return on Investment at 100% of Revenue	1.468308997	Years
Dept Service Fund	50%	
Total Annual Dept Service Fund (P/P Partnership)	\$24,584,640.00	
Return on Investment using Dept Service Fund	2.937	Years
Time to tool up manufacturing in Months	9.00	
Unforeseen Delays for Installation in Months	3.00	
Time to make and all parts in Months	24.27	
Total Months Until Fully Operational	36.27	
Total Years Until Operational	3.02	
Return on Investment in Months after made Operational	53.89	
Return on Investment Years Including Startup time	4.49	

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Phase 4 / South Camp Road Station to UWI Hospital Station

[Table of Contents](#)



Phase 4 / Key Metrics: (6.65 mi. / 10.7 km.)

[Overview](#)

[Cost](#)

[ROI](#)

Phase 4 / Overview



Phase 4 / Installation Cost

[Table of Contents](#)

Jamaica - Phase 4; South Camp Road to UWI Hospital Installation Check List - 10.7 km.

Qty	Units	Description	Cost	Amount	Notes
11	Kilometer		\$6,499,510.93	\$69,544,766.99	
-	Kilometer		\$6,499,510.93		
-	Kilometer		\$6,499,510.93		
-	Each	Grand Terminal Stations	\$8,000,000.00	\$0.00	
-	Each	Cloverleaf Stations "Traveler Station"	\$3,000,000.00	\$0.00	
5	Kilometer	Sidetrack to Local Public Station (1Kilometer)	\$6,499,510.93	\$32,497,554.67	
1	Each	Car Ramp for Car Ferry w/ Parking Structure	\$2,000,000.00	\$2,000,000.00	
10	Each	Remote Public Station, and parking (Private Land)	\$1,000,000.00	\$10,000,000.00	
-	Each	Grand Public Car (GPC)	\$1,000,000.00	\$0.00	
30	Each	Commuter Public Car (60 Passenger)	\$500,000.00	\$15,000,000.00	
10	Each	Freight Car	\$300,000.00	\$3,000,000.00	
1	Each	Car Ferry	\$300,000.00	\$300,000.00	
30	Total Commute Cars	Total Cost for InterState Traveler Installation		\$132,342,321.65	
1	Total Car Ferry	<u>Cost of Steel at 1200 dollars per ton at 30 tons per section</u>		<u>\$30,887,049.60</u>	30%
1	Total Stations	Balance		\$101,455,272.05	77%
41	Total Cars / Station				
15.7	Total Kilometers				
9.7	Total Miles				
0.051	Pairs of Stations/Mile				
4.21	Cars/mile				
41	Total Cars				
		Cost per Kilometer Complete System		\$8,429,447.24	
		Cost per Mile Complete System		\$13,573,989.11	

Total Cost Phase 4 = \$132,342,322

* Does not include ocean freight shipping cost of component parts from Detroit to Kingston – ADD (+ -) 10%

Phase 4 / Return on Investment

Budget>> Cost for Installation for 9.75 miles	\$132,342,321.65	
Total Annual Revenue	\$85,026,720.00	
Return on Investment at 100% of Revenue	1.556479206	Years
Dept Service Fund	50%	
Total Annual Dept Service Fund (P/P Partnership)	\$42,513,360.00	
Return on Investment using Dept Service Fund	3.113	Years
<hr/>		
Time to tool up manufacturing in Months	9.00	
Unforeseen Delays for Installation in Months	3.00	
Time to make and all parts in Months	24.27	
Total Months Until Fully Operational	36.27	
Total Years Until Operational	3.02	
Return on Investment in Months after made Operational	54.94	
Return on Investment Years Including Startup time	4.58	

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Phase 5 – University West Indies Campus Loop

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Phase 5 / Key Metrics: (0.93 mi. / 1.495 km.)

[Overview](#)

[Cost](#)

[ROI](#)

Phase 5 / Overview

[Table of Contents](#)



Phase 5 / Installation Cost

[Table of Contents](#)

Jamaica - Phase 5; University West Indies 1/2 Scale Installation Check List - 1.495 km.

Qty	Units	Description	Cost	Amount	Notes
1	Kilometer		\$6,499,510.93	\$9,716,768.85	
-	Kilometer		\$6,499,510.93		
-	Kilometer		\$6,499,510.93		
-	Each	Grand Terminal Stations	\$8,000,000.00	\$0.00	
-	Each	Cloverleaf Stations "Traveler Station"	\$3,000,000.00	\$0.00	
-	Kilometer	Sidetrack to Local Public Station (1Kilometer)	\$6,499,510.93	\$0.00	
-	Each	Car Ramp for Car Ferry w/ Parking Structure	\$2,000,000.00	\$0.00	
4	Each	Remote Public Station, and parking (Private Land)	\$1,000,000.00	\$4,000,000.00	
-	Each	Grand Public Car (GPC)	\$1,000,000.00	\$0.00	
4	Each	Commuter Public Car (60 Passenger)	\$500,000.00	\$2,000,000.00	
-	Each	Freight Car	\$300,000.00	\$0.00	
-	Each	Car Ferry	\$300,000.00	\$0.00	
4	Total Commute Cars	Total Cost for InterState Traveler Installation		\$15,716,768.85	
0	Total Car Ferry	Cost of Steel at 1200 dollars per ton at 30 tons per section		\$2,941,155.36	23%
-	Total Stations	Balance		\$12,775,613.49	81%
#DIV/0!	Total Cars / Station				
1.5	Total Kilometers				
0.9	Total Miles				
0.000	Pairs of Stations/Mile				
4.31	Cars/mile				
4	Total Cars				
		Cost per Kilometer Complete System		\$10,512,888.86	
		Cost per Mile Complete System		\$16,928,967.57	

Total Cost Phase = \$ 15,716,769

Note; These figures will be reduced by up to 30% for ½ scale system

* Does not include ocean freight shipping cost of component parts from Detroit to Kingston – ADD (+ -) 10%

Phase 5 / Return on Investment

Budget>> Cost for Installation for 0.93 miles	\$15,716,768.85	
Total Annual Revenue	\$10,821,240.00	
Return on Investment at 100% of Revenue	1.452399988	Years
Dept Service Fund	50%	
Total Annual Dept Service Fund (P/P Partnership)	\$5,410,620.00	
Return on Investment using Dept Service Fund	2.905	Years
<hr/>		
Time to tool up manufacturing in Months	9.00	
Unforeseen Delays for Installation in Months	3.00	
Time to make and all parts in Months	24.27	
Total Months Until Fully Operational	36.27	
Total Years Until Operational	3.02	
Return on Investment in Months after made Operational	53.70	
Return on Investment Years Including Startup time	4.47	

These figures will be reduced by up to 30% for ½ scale system

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Management and Organization Plan

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What form of organization does the business operate under, and why? Who are the key management team members and what skills do they have to help the business? Who are the key support groups for your management team, including accountants, attorneys, consultants, board of directors, and advisory board members?

Interstate Traveler Company, LLC (ITC) is a Michigan based Limited Liability Company formed in 2003. This form of organization has allowed us to add members and key resources to the LLC through the issuance of membership units. Key members of the management team include the Founder and managing partner Justin E. Sutton; Chairman of the board, Jay C. Wilbur; President and CEO, Jim M. Jung; Chief Manufacturing Officer, Laurie Moncrieff; and Chief Operations Officer, Jack Salo. Supporting the management team is a wealth of talented outside resources including our supplier partners for design, engineering, manufacturing, and operations support; an advisory board that includes expert in transportation, energy, advanced manufacturing, computer technology, physics, and engineering. Our organization plan is to maintain a small team of direct employees for ITC and contract out the majority of the engineering, manufacturing and logistics operations to the wealth of underutilized resources available in southeast Michigan. There is a huge supply base in place to support the automotive industry and this same talent is available to ITC for every aspect of building the Kingston to Spanish Town System but as possible we will endeavor to use any Jamaican resources that are available with respect to suppliers and workforce. For example, here in the US we have forged a relationship with the International Brotherhood of Electrical Workers (IBEW) and the National Electrical Contractors Association (NECA) to provide skilled electricians to work on the system. We would seek those same types of relationships with Jamaican counterparts for those services. A likely scenario for the initial assembly operations would be to construct a (or occupy an existing) facility, owned and operated by the Interstate Traveler Company, in Kingston which will serve as the model for future assembly operations around the country.

Marketing Plan

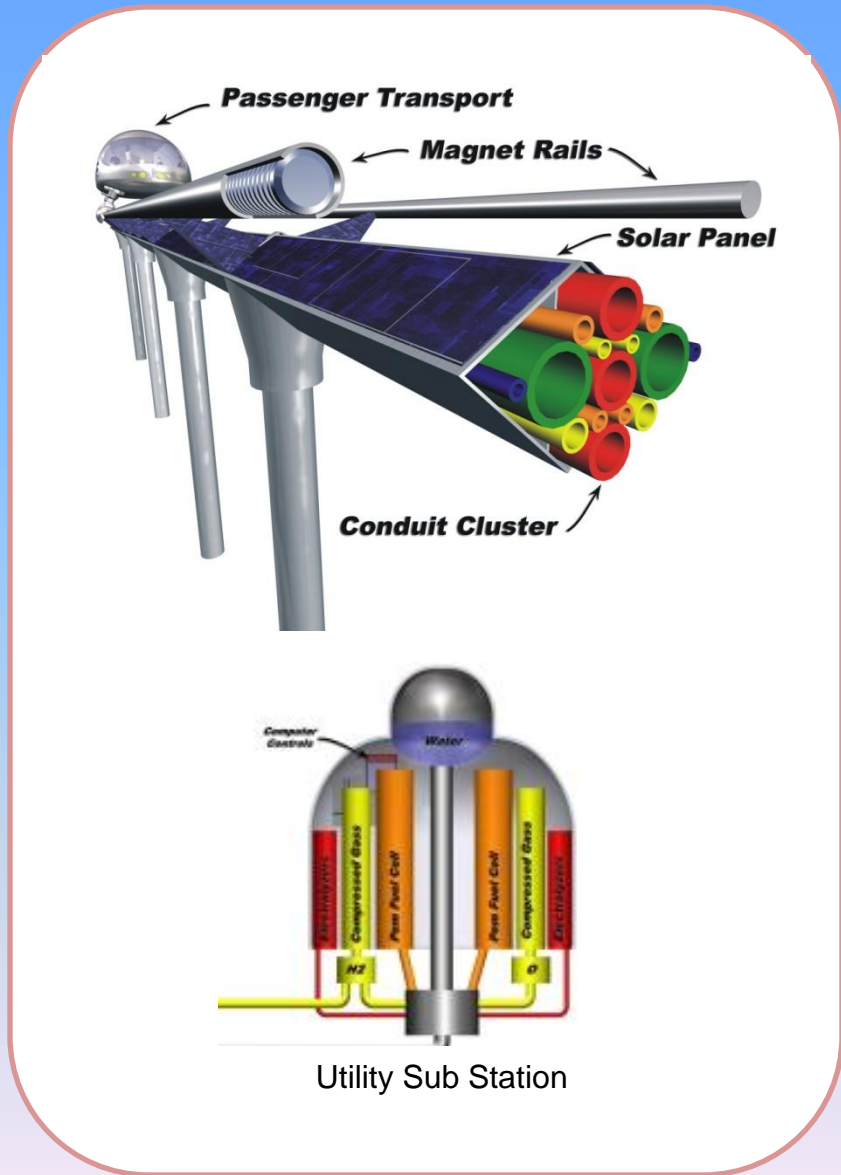
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The Magnetic Levitation (Mag-Lev) industry is untapped in the U.S. While the technology has been available for 70 years, and there have been attempts to construct sample or demonstration units, there is no existing commercial installation in the US. The main reason has been cost - the cost to construct and the cost to operate. The Interstate Traveler design overcomes these constraints with our unique integration of multiple technologies and ability to generate electricity, hydrogen for fuel, and potable water for municipalities and other consumers to purchase. Our marketing plan is a multi pronged approach targeting consumers and businesses alike. We will market the mag-lev transportation system to urban and suburban commuters that desire an alternative to auto, bus, or train transportation - an alternative that is faster (250mph vs. 70mph), less costly (\$0.02 per mile vs. \$0.18 per mile), and uses green technology (solar vs. fossil fuel) as its energy source. We will use the traditional avenues of advertising, promotions, and publicity, to get the word out about the system and its capabilities. We believe one of the best forms of advertising will be the actual construction of the rail system as automobiles and trucks traveling on the highway start to wonder about "what's going on" and begin to create a buzz about the system. We will also continue to build our internet presence. We have an existing website that we use to provide information to the public about ITC, the concept, and the progress of the company. You can view the site at www.interstatetraveler.us. Going forward we intend to upgrade the site to include interactive features for customers such as rate sheets, availability, and transportation requests, blogs, customer feedback, testimonials, and the social media interfaces like Twitter, Facebook, YouTube and LinkedIn.

For our business customers we will use a direct sales approach to target freight carriers, electricity producers, municipal governments, and commercial consumers of hydrogen and oxygen fuels. A third customer we will market to includes business advertisers that advertise in public venues like train and bus stations, outdoor billboards, public transportation vehicles, airports, and other locations with pedestrian and vehicle traffic.

Rail, conduit cluster, utility sub stations and transport vehicles

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Passenger Transport

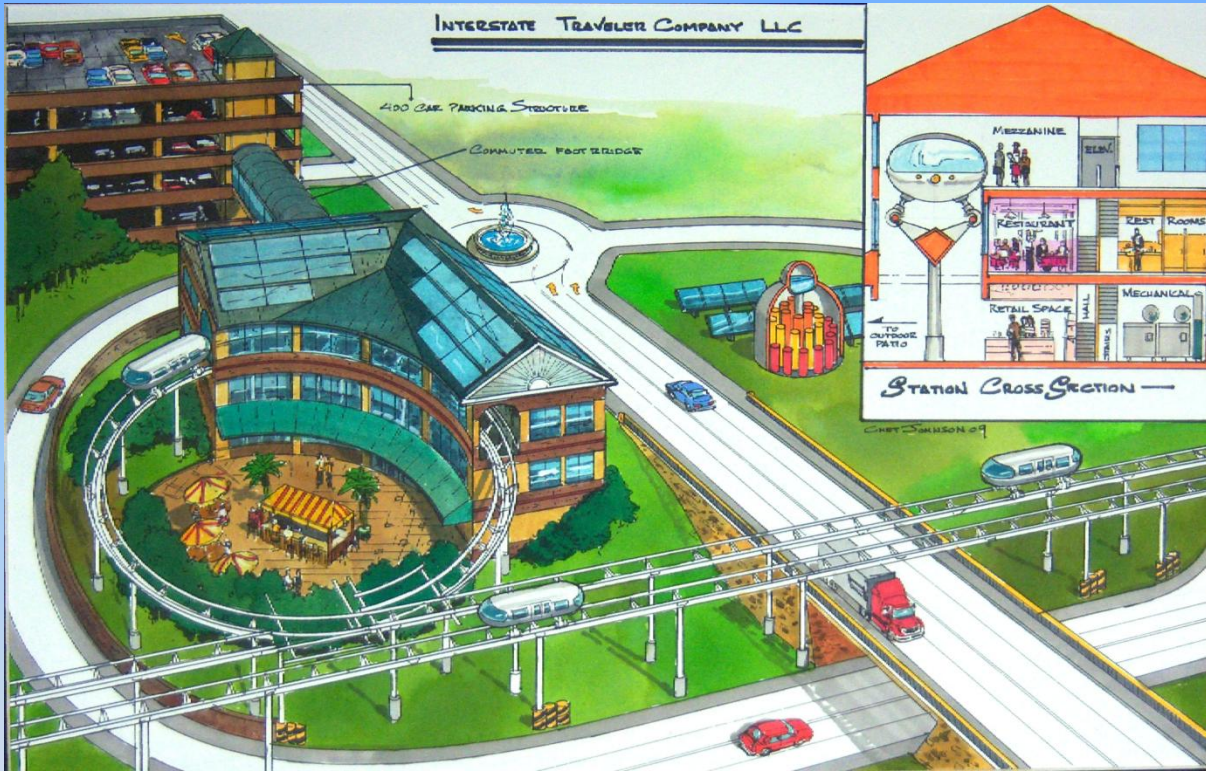


Freight Transport



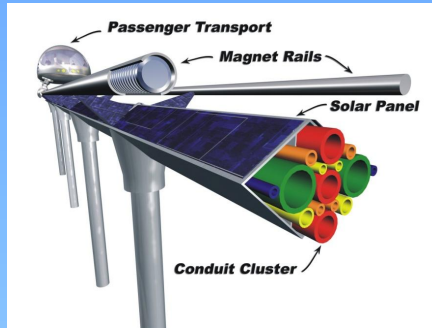
Auto Transport

Traveler Stations



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Total Cost / All 5 Phases done as stand alone projects



Total Cost / Phase 1; 7.2 mi. / 11.65 km. - \$ 238,416,857

Total Cost / Phase 2; 11.22 mi. / 18.7 km. - \$ 201,460,976

Total Cost / Phase 3; 5.15 mi. / 8.3 km. - \$ 72,195,696

Total Cost / Phase 4; 6.65 mi. / 10.7 km. - \$ 132,342,322

Total Cost / Phase 5; 0.93 mi. / 1.495 km. - \$ 15,716,769

Note; This figure will be reduced by up to 30% for 1/2 scale system

Total Project Cost All 5 Phases 31.15 mi. / 50.85 km. = \$ 660,132,620

Average cost per km/mi (does not include cost of assembly plant) \$13,255,899. Per km / \$21,346,571. Per Mile

* Does not include ocean freight shipping cost of component parts from Detroit to Kingston – ADD (+ -) 10%

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Total Cost Analysis for Entire Project

Jamaica - All 5 Phases; Installation Check List - 51 km.					
Qty	Units	Description	Cost	Amount	Notes
51	Kilometer		\$6,499,510.93	\$330,500,130.96	
-	Kilometer		\$6,499,510.93		
-	Kilometer		\$6,499,510.93		
2	Each	Grand Terminal Stations	\$8,000,000.00	\$16,000,000.00	
-	Each	Cloverleaf Stations "Traveler Station"	\$3,000,000.00	\$0.00	
16	Kilometer	Sidetrack to Local Public Station (1Kilometer)	\$6,499,510.93	\$103,992,174.93	
5	Each	Car Ramp for Car Ferry w/ Parking Structure	\$2,000,000.00	\$10,000,000.00	
22	Each	Remote Public Station, and parking (Private Land)	\$1,000,000.00	\$22,000,000.00	
-	Each	Grand Public Car (GPC)	\$1,000,000.00	\$0.00	
101	Each	Commuter Public Car (60 Passenger)	\$500,000.00	\$50,500,000.00	
41	Each	Freight Car	\$300,000.00	\$12,300,000.00	
15	Each	Car Ferry	\$300,000.00	\$4,500,000.00	
101	Total Commute Cars	Total Cost for InterState Traveler Installation		\$549,792,305.89	
15	Total Car Ferry	<u>Cost of Steel at 1200 dollars per ton at 30 tons per section</u>		<u>\$131,515,876.80</u>	31%
7	Total Stations	Balance		\$418,276,429.09	76%
22	Total Cars / Station	Freight, Staging and Assembly Facility		\$100,000,000.00	
66.9	Total Kilometers				
41.5	Total Miles				
0.084	Pairs of Stations/Mile				
3.78	Cars/mile				
157	Total Cars				
		Cost per Kilometer Complete System		\$8,224,267.85	
		Cost per Mile Complete System		\$13,243,587.52	

Total Cost As Single Project = \$649,792,305

* Does not include ocean freight shipping cost of component parts from Detroit to Kingston – ADD (+ -) 10%



WorldWide Hydrogen Super Highways



Passengers



Automobiles



Freight

- www.HydrogenSuperHighway.com -

Prepared by;

Jim Griffin – Chief Communications Officer
Interstate Traveler Company, LLC
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Jim.Griffin@Hyrail.US

1843

The Assembly of Jamaica approves a 12 mile track between Kingston and Spanish Town and a 2½ mile branch line to a sugar estate in Angels. An equity issue for the Western Jamaica Connecting Railway is floated in the amount of £150,000.

Nov. 1845

The track to Spanish Town is completed. The Governor of Jamaica along with guests and investors partake in an inaugural ride. The event is covered in the [Jan. 31, 1846 issue](#) of *The Illustrated London News*.

1845

Even before the first section of track is completed, a [£1 million equity issue](#) is floated to build a line to Montego Bay. This project was never started, and it is not known how much was raised or what the funds were used for.

1846

England passes the Sugar Duties Act which equalizes imported duties for sugar from the colonies. This Act, along with the recent abolition of slavery, makes Jamaican commodities less competitive and creates a compelling reason to lower transportation costs by expanding the Railway to various plantations.

1869

The plantation economy declines more than anticipated, affecting rail revenue and expansion capital. An eleven mile extension from Spanish Town to Old Harbour is completed.

1877

Sir Anthony Musgrave becomes Governor of Jamaica and proposes a government takeover of the privately owned railway company.

1879

The Government purchases the railway for £93,932 and undertakes a modernization program costing some £100,000.

1880 1885

The improving market for sugar and the establishment of several new banana and sugar plantations leads to the construction of railway extensions from Old Harbour to Porus and from Spanish Town to Ewarton and Bog Walk.

1885 1887

Cost analyses and surveys are undertaken to determine the feasibility of extending the railroad from Porus to Montego Bay and from Bog Walk to Port Antonio. The estimated cost to build both extensions is £1.5 million. The Government does not have the means to finance the expansion and the plans are shelved.

Nov. 1888

An American syndicate offers to buy the Railroad and build the Montego Bay and Port Antonio extensions.

Jan. 1890

The Railway is sold to the West India Improvement Co. for £100,000 cash and a

£700,000 4% second mortgage. The acquirer is authorized to issue bonds as sections of the Montego Bay and Port Antonio extensions are completed.

1894

The Montego Bay line is completed.

1896

The Port Antonio line is completed. Over the next few years, bananas become Jamaica's major export crop. The United Fruit Co. soon becomes the dominant corporate entity in Port Antonio.

1898

Cash flow does not cover all the interest payments to bondholders. The West India Improvement Co. falls into receivership.

1900

The Jamaica Government again assumes responsibility of the railroad.

1913

A 13 mile extension from May Pen to Chapelton is completed in order to service the growing citrus industry.

1925

A 9¼ mile extension from Chapelton to Frankfield is completed.

1940 1950

Bauxite deposits are discovered in the interior. The railroad plays a key role in the development of bauxite mines. By 1975, bauxite accounts for over 99% of railroad cargo.

1952 1955

Following the 1951 hurricane, a rehabilitation program is undertaken. Steam engines are replaced with diesel locomotives.

1962

Jamaica is granted independence. Nationalization of unprofitable industries results in a diversion of railway maintenance funds to keep these industries afloat.

1974

The May Pen to Frankfield line is closed due to lack of maintenance.

1975

The Bog Walk to Port Antonio line is closed due to lack of maintenance.

1988

Hurricane Gilbert destroys much of the remaining railroad infrastructure.

Oct. 1992

The Jamaica Government Railway ceases to operate with the exception of the bauxite lines which are privately funded.

Interstate Traveler Company, LLC	
Job Creation Estimates	
Does Not include Construction Jobs for Rail, Traveler Stations, Etc. or Maintenance	
Kingston Metropolitan Region	
32	Miles of Rail
24	Traveler Stations
2	Lease Hold Businesses / Stations
48	Total Businesses
10	Employees / Business
480	Total Employees in Traveler Stations
101	Transports on System
5	Concierge / Transport
505	Concierge Employees
985	Total Employees (estimated)

Infrastructure Investments and Job Creation

Three types of job creation: direct, indirect, and induced effects;

Direct job creation refers to the jobs directly involved in constructing the new infrastructure projects.

Indirect job creation refers to the jobs generated when supplies are purchased for the infrastructure projects.

Induced jobs are created when the overall level of spending in the economy rises, due to workers newly receiving incomes when they are hired to build the infrastructure projects, and to produce supplies for the project.

Infrastructure investments as job-creation tool. All forms of spending will produce jobs but infrastructure investment is a highly effective engine of job creation.

Thus, infrastructure investment spending will create about 18,000 total jobs for every \$1 billion in new investment spending, including direct, indirect, and induced jobs. By contrast, a rise in household spending levels generated by a tax cut will create, at most, about 14,000 total jobs per \$1 billion in spending, 22 percent less than infrastructure investments.

$1,000,000,000 / 650,000,000 = 65\% \times 18,000 = \mathbf{11,700 \text{ New Jobs In the Kingston Metropolitan Region}}$