



ECONOMIC DEVELOPMENT AND GOVERNMENT REENGINEERING

Puerto Rico Chamber of Commerce

Rubén A. Hernández Gregorat, MEM, PE
Secretary / Executive Director

April 20, 2010



Background

- The Puerto Rico Highway and Transportation Authority is a public corporation created by Act. 74 of June 23, 1965

Pursuant to the Reorganization Plan No. 6 of 1971, the Secretary of Transportation and Public Works was solely vested with the powers and responsibilities of the PRHTA's Board of Directors

Through Act 4 of August 24, 1990, the PRHTA was authorized to contract with private entities for the construction, operation and maintenance of roads, bridges, avenues, highways and other transit facilities, through public-private partnerships



Vision

- To develop and promote an integrated transportation system where roadway infrastructure, public works and outstanding customer service come together to facilitate Puerto Rico's economic development in harmony with the environment



Highway PR-22



Mission

- To stimulate economic growth in Puerto Rico by executing innovative infrastructure and transportation plans, programs and projects that effectively facilitate the movement of people and goods while protecting our precious natural resources

Toll Road PR-66



Toll Road PR-52





Goals

- Provide an integrated, efficient, reliable and safe transportation system that serves as an economic development engine to improve the quality of life of our citizens and visitors
- Build and maintain roads, transit systems, highways, trails, bridges, tunnels, structures, and related transportation infrastructure.
- Issue and sell bonds so as to achieve the Authority's mission.
- Collect tolls and other charges for the payment of such bonds and interest
- Collect fees to address the cost of maintenance, repair and operation of such facilities



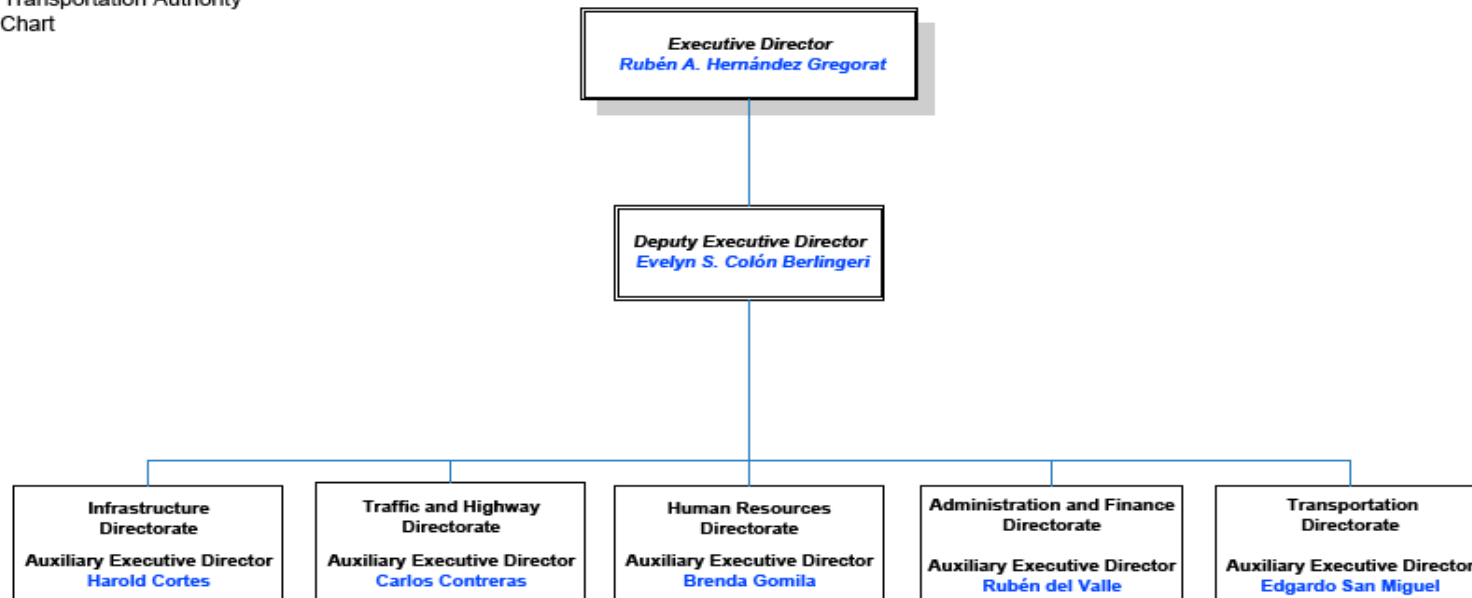
Structure

- **Divisions**
 - Infrastructure Division
 - Administration and Finance Division
 - Human Resources and Industrial Safety Division
 - Integrated Transportation Alternative Division (ATI)
 - Transit and Highways Division



Organization

Department of Transportation and Public Works
Highway and Transportation Authority
Organization Chart
2009





POTENTIAL P3 PROJECTS

Major objectives:

- Substantially improve the conditions of the road network
- Increase efficiency and accelerate investment
- Expand the road network
- Create jobs and investment

Projects:

- Highway PR-22
- Highway PR-66
- Highway PR-52
- BRTs (to formulate master plan)



THE VISION





PR-22

JOSÉ DE DIEGO

EXPRESSWAY



AGENDA

- 1. Objective and Project Background**
- 2. Brownfield and Greenfield Components**
- 3. Value Proposition / Business Case**



PR-22 Jose de Diego Highway

OBJECTIVE

- Establishing a long-term concession agreement for PR-22 (Jose de Diego Highway)

BACKGROUND



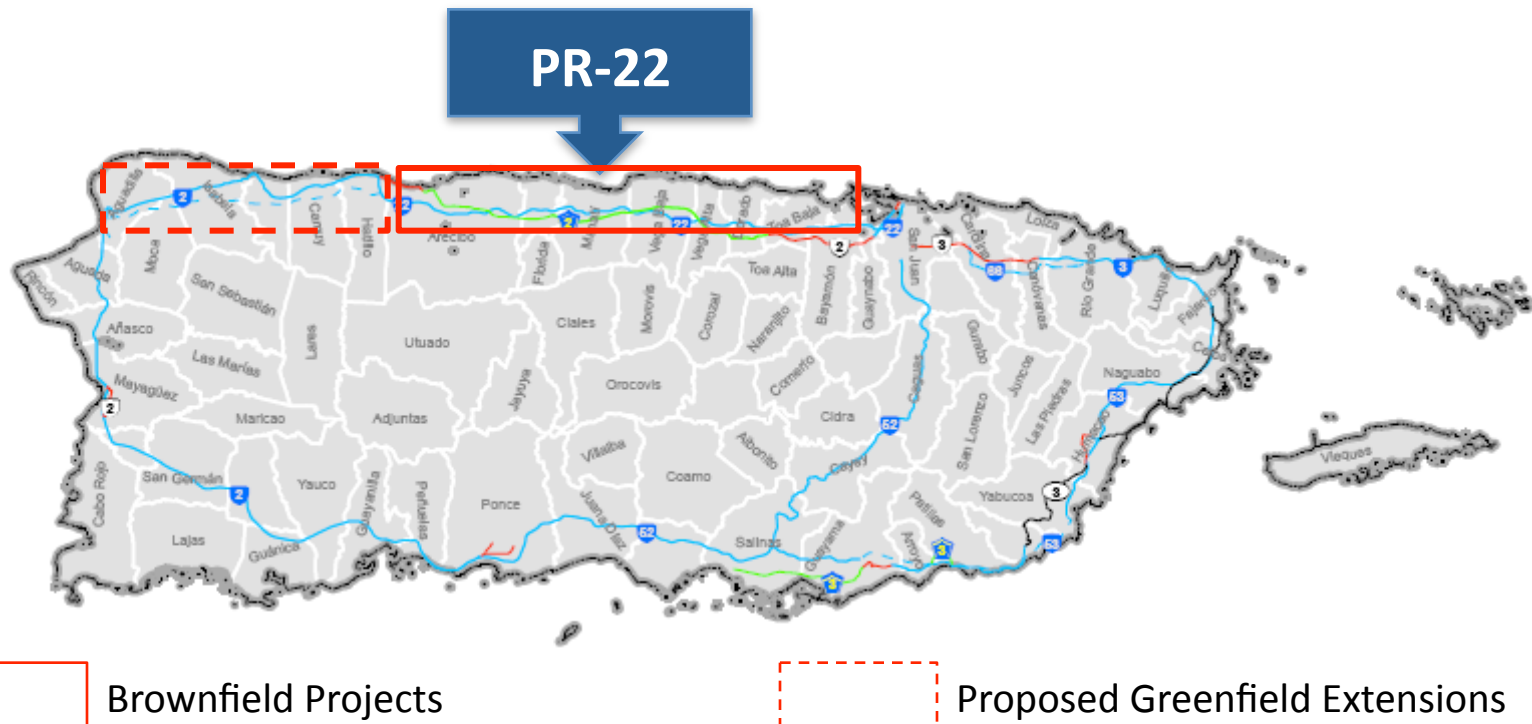
- PR-22 is Puerto Rico's most traveled highway, representing 41% of HTA toll revenues
- It spans 52 miles (83.7 kilometers) from east to west in northern Puerto Rico
- Consists of one continuous route from the City of San Juan (metro population of 2.4 million) to the city of Arecibo (population of 104,600)
- Runs through a prominent pharmaceutical and manufacturing corridor
- PR-22 has seven fare collection facilities (% of revenues):
 - Buchanan 30%
 - Toa Baja 19%
 - Vega Alta 14%
 - Manati 15%
 - Arecibo 15%
 - Arecibo Ramp 1%
 - Hatillo Ramp 7%
- Some areas of this highway see AADT in excess of 200,000



Location

ROUTE

- Connects fast-growing western region with PR's largest metropolitan area (San Juan)
- It enjoys a strong traffic profile with long peak travel periods
- Connects with largest seaport in the Caribbean (12th largest in North America) – San Juan Port – with more than 1.97 TEU per year
- High concentration of manufacturers and pharmaceuticals from Dorado to Arecibo





Demographic and Economic Base

DEMOGRAPHIC / ECONOMIC BASE

- PR-22 runs directly through 12 municipalities with favorable demographics and a robust long-term projected population growth rate
- Vehicle Density in Puerto Rico (at 0.57 vehicles per capita) is greater than the US or Europe
- Robust economic base activity in the region will continue to complement traffic
- New upcoming hotel developments in Dorado will attract significant tourists base
- Adjacent municipalities of Toa Alta and Florida are expected to grow at almost 20%

Municipality	Population 2010	Population 2025	% Total Growth
Arecibo	104,955	107,348	2.3%
Barceloneta	23,391	24,434	4.5%
Bayamón	227,457	230,171	1.2%
Cataño	28,484	26,897	-5.6%
Dorado	36,563	38,502	5.3%
Guaynabo	103,537	104,803	1.2%
Hatillo	43,682	47,800	9.4%
Manatí	49,877	53,333	6.9%
Toa Baja	98,939	102,927	4.0%
Vega Alta	40,868	43,527	6.5%
Vega Baja	66,155	69,645	5.3%
Total	823,908	849,387	3.1%

Economic Base Activity

Sector	Activity	
Retail Trade	Prime Outlets	
Manufacturing & Pharmaceuticals	Pfizer	Merck
	Procter & Gamble	Ortho McNeil
	Bristol-Myers Squibb	St. Jude Medical
	Abbott	Boston Scientific
Tourist Attractions	Synovis	
	Arecibo Observatory	
Hotels	Camuy River Cave Park	
	Dorado Beach	Ritz Carlton Resort - TBD
	Embassy Suites	Fairmont - TBD

TBD = To be Developed



AGENDA

1. Objective and Project Background

2. Brownfield and Greenfield Components

3. Value Proposition / Business Case



Brownfield Component

CONCESSION

- A concession may provide more efficient operations while expanding capacity for capital improvements
- The HTA has the long-term objective of completing a high-capacity comprehensive beltway around Puerto Rico
- Significant revenue improvement opportunities through:
 - Leakage reduction – potentially up to 20% increase
 - Further increase of market penetration amongst users of *AutoExpreso*, Puerto Rico's high-speed electronic toll collection system
 - Optimization via new technology / congestion relief measures
- Substantial recent capital improvements - \$148M from FY2001 to FY 2007



Brownfield Component

DESCRIPTION OF TOLLS

- Potential to capture more toll revenue through capturing leakage – possibly a 20% increase in revenues
- Further implementation of electronic tolling
- Current toll rates are shown in table below:

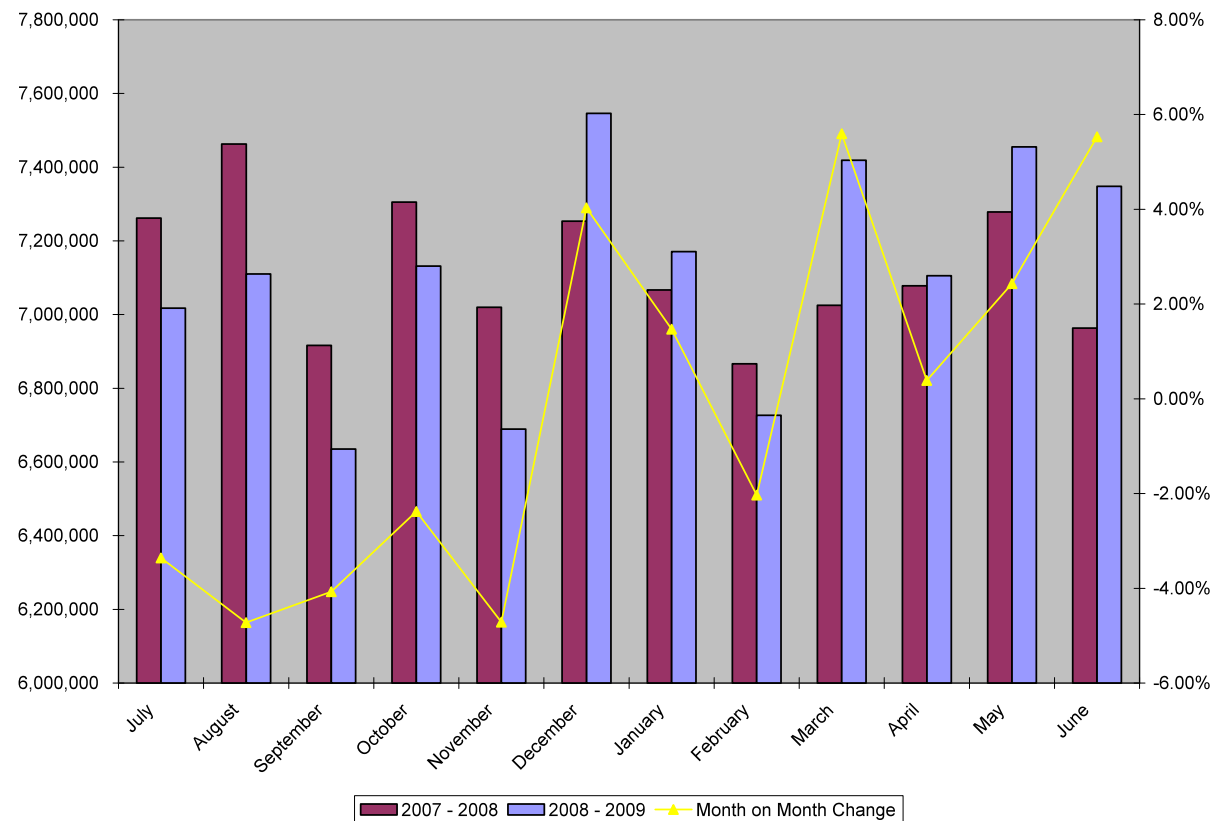
Vehicle Classification Matrix							
Toll Plaza	2 Axle	Double Tire	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle
Buchanan	\$1.00	\$2.00	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50
Toa Baja	\$1.00	\$2.00	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50
Vega Alta	\$1.00	\$2.00	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50
Manatí	\$1.50	\$3.00	\$3.50	\$4.00	\$4.50	\$5.00	\$5.50
Arecibo	\$0.75	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	\$2.75
Arecibo Ramp	\$0.50	\$1.00	\$1.25	\$1.50	\$1.75	\$2.00	\$2.25
Hatillo Ramp	\$1.00	\$2.00	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50
Total	\$6.75	\$13.50	\$16.50	\$19.50	\$22.50	\$25.50	\$28.50



Traffic Volume

- Stable daily two-way traffic
- AADT in certain areas of greater than 200,000
- Revenue CAGR to 2007 of 11.3% since 1991
- As per graph, significant improvement in last six months of FY2009

Month – on – Month Traffic Difference – 2008 - 2009





Greenfield Component

PR-22 EXTENSION

- One of the transportation priorities of the HTA is completing the extension of the PR-22 from Arecibo to the city of Aguadilla
- Approximately a 27.8 mile extension
- Expected to save drivers a significant amount in travel time vs. existent PR-2
 - In combination with existing PR-22, total time savings will be 45 minutes
- Will substantially facilitate mobility around the Island
- Will attract significant traffic from the west region heading into San Juan



AGENDA

1. Objective and Project Background
2. Brownfield and Greenfield Components
- 3. Value Proposition / Business Case**



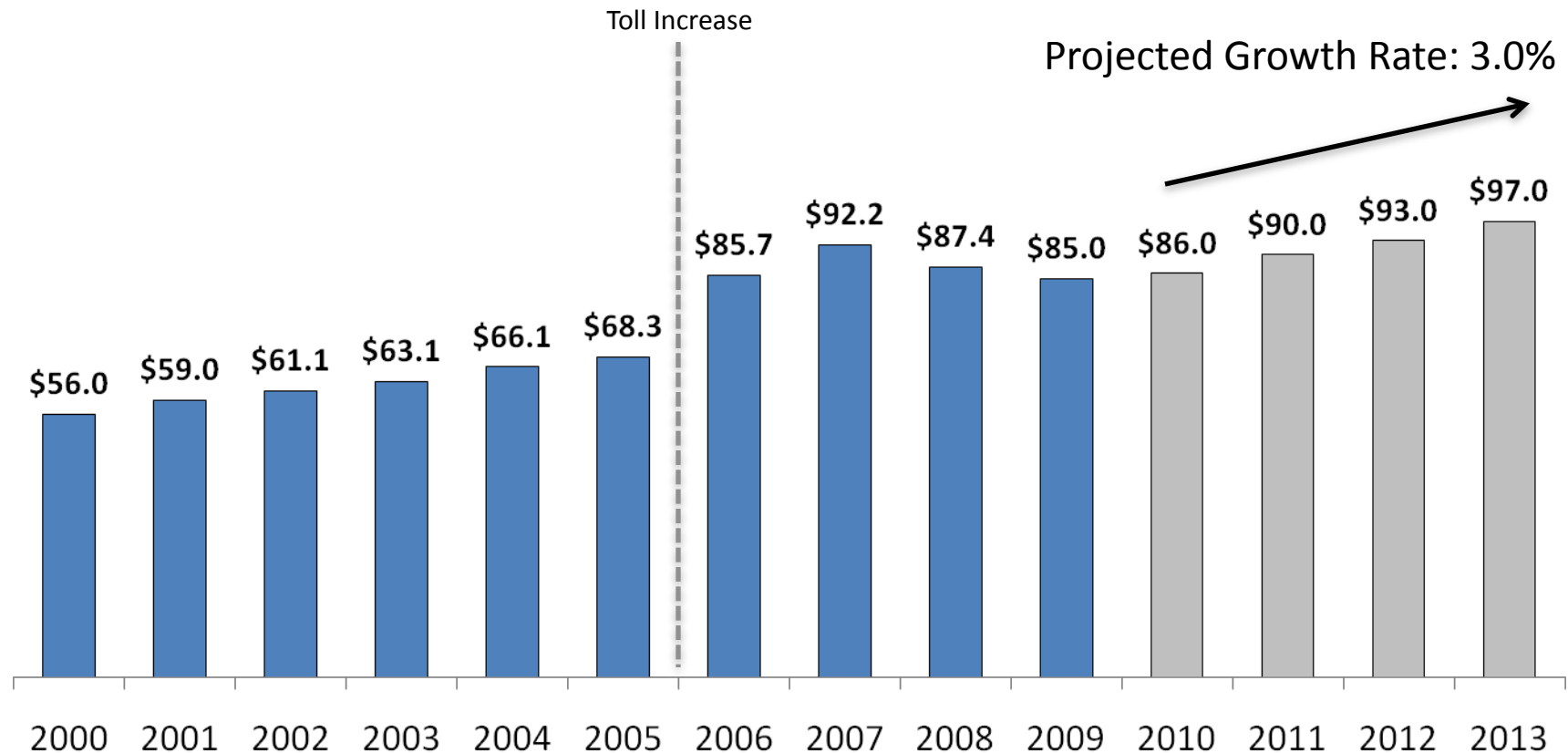
VALUE PROPOSITION / BUSINESS CASE

- ✓ PR-22 is essential component of Puerto Rico's Travel Network with strong, proven historical growth and track record
- ✓ High vehicle density in an area of high population density and commercial activity
- ✓ Ongoing modernization potential
- ✓ Substantial recent capex investment reducing near term capital burden
- ✓ Future synergies with greenfield expansion
- ✓ Stable legal framework, with Concession already authorized



PR-22 Historic/Projected Revenues

- Favorable volume of toll revenues with a sustainable growth rate in the near term
- 2008 and 2009 revenue fall associated with global recession and record oil prices



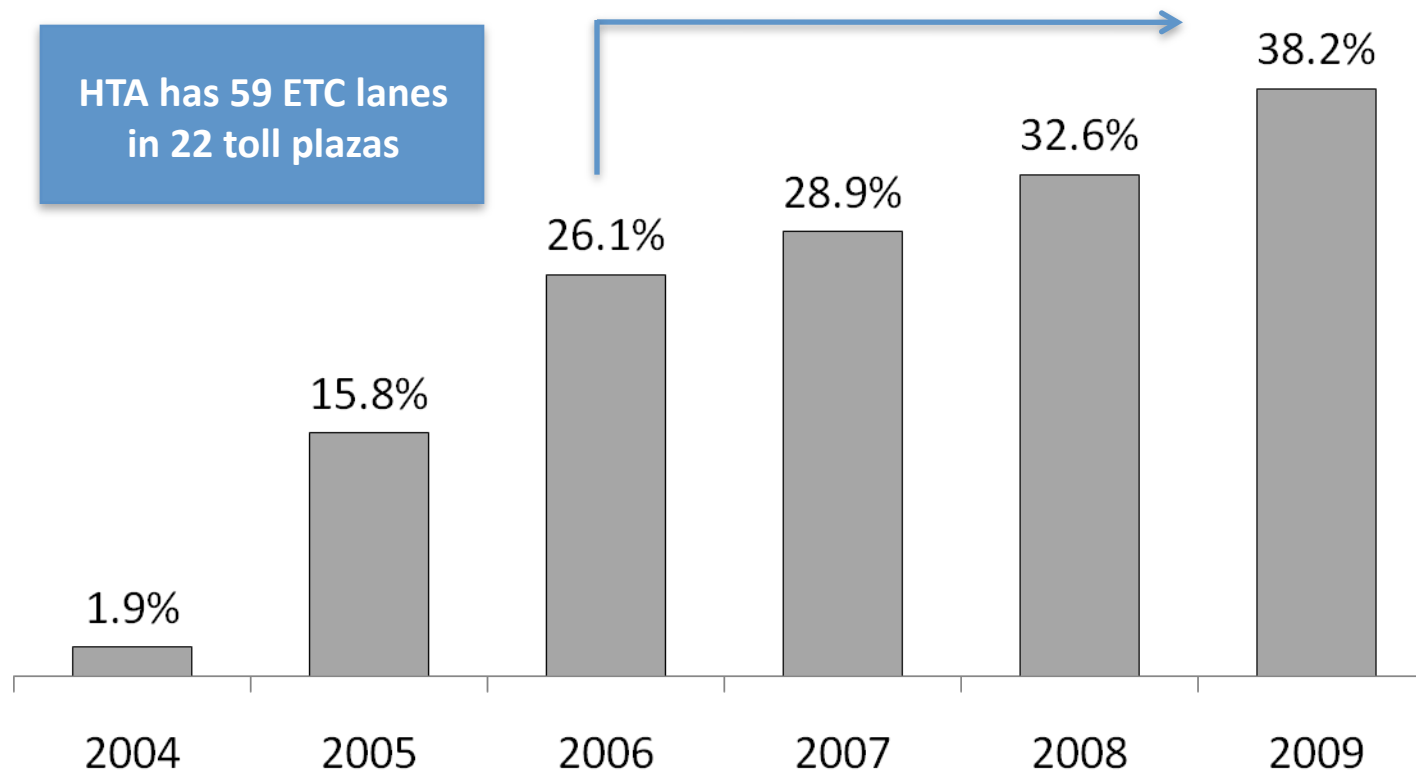


Electronic Toll Collection as % of Revenues



HTA has 59 ETC lanes
in 22 toll plazas

CAGR of 19.31% since FY2006



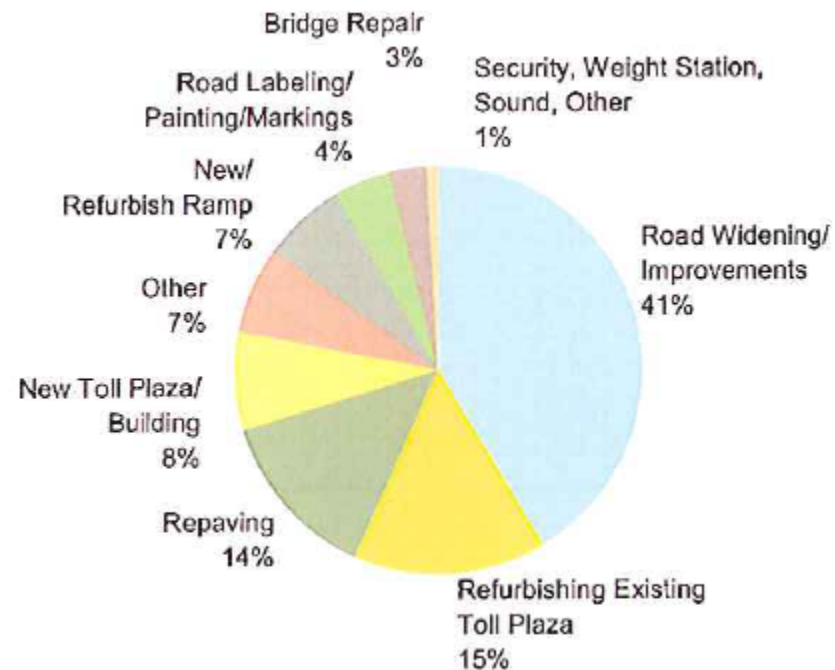


Capital Improvements – PR 22

General improvements are presently underway that amount to: \$53 million

- Re-pavement and improvements
- Bridge improvements
- Re-painting and route signaling
- Deposit of new asphalt in selected areas

**Investment Breakdown of \$148m invested
2001 - 2007**





PR-66

ROBERTO SÁNCHEZ VILELLA HIGHWAY



AGENDA

- 1. Objective and Project Background**
- 2. Brownfield and Greenfield Components**
- 3. Value Proposition / Business Case**



PR-66 Roberto Sánchez Vilella Expressway

OBJECTIVE

- Better serve economic activity in the eastern region
- Facilitate connectivity to southeastern part of the Island
- Establish a hybrid long-term concession agreement that integrates the brownfield and greenfield components

BACKGROUND

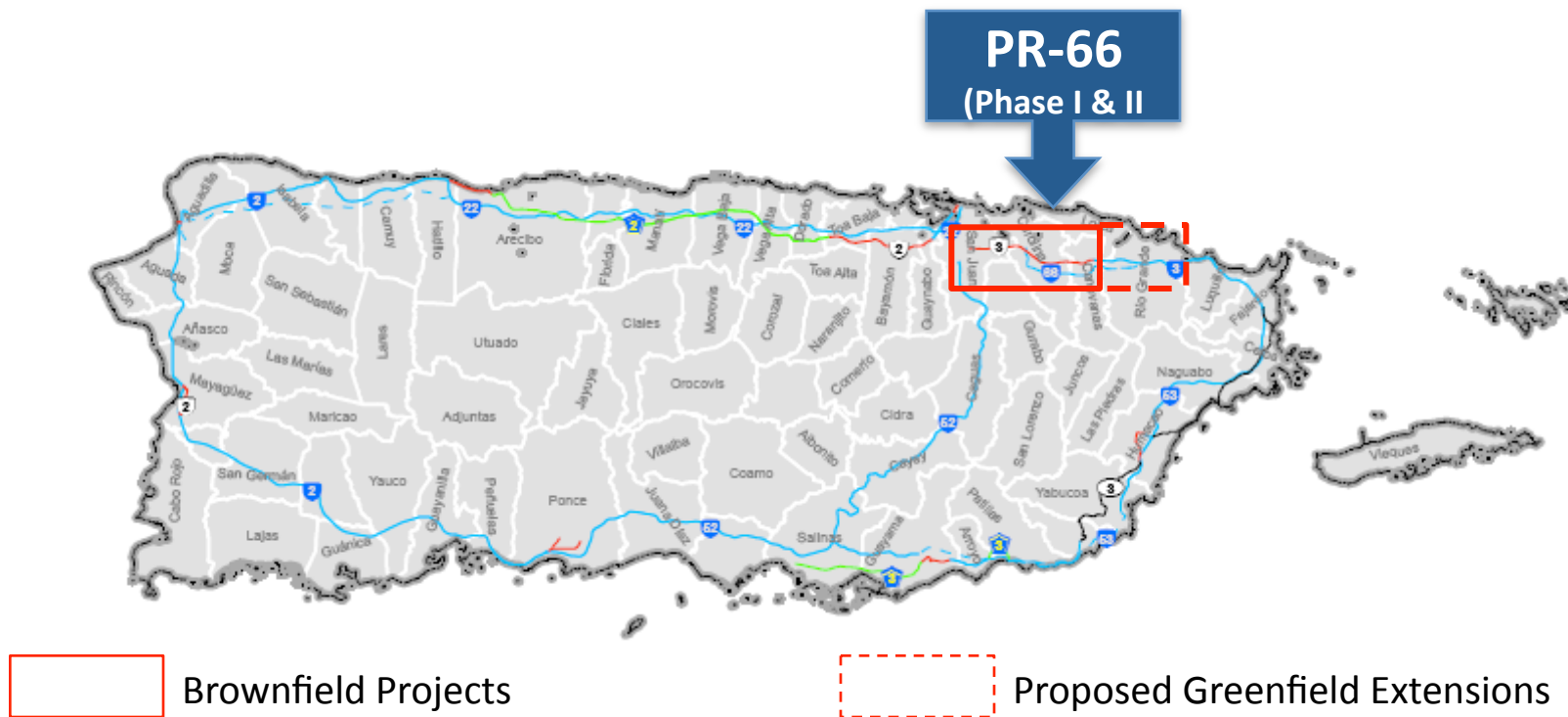


- The only expressway to the eastern region of the Island
- Has the widest bridges in Puerto Rico
- Runs parallel to PR-3, which suffers traffic lights and congestion
- Saves between 25 minutes to 1 hour of travel time relative to PR-3



LOCATION

- The only eastern corridor expressway
- Effectively connects San Juan with the eastern region





BACKGROUND

- PR-66 serves 5 municipalities without considering other farther out municipalities such as Humacao, Vieques and Culebra
- Important touristic region with world known hotels and attractions and large retail and manufacturing activity

Demographic Base

Municipality	Populati on 2010	Populati on 2025	% Total Growth
Carolina	194,091	197,686	1.9%
Canovanas	47,796	51,856	8.5%
Loiza	35,928	39,944	11.2%
Río Grande	57,173	60,927	6.6%
Fajardo	42,964	44,739	4.1%
Luquillo	20,928	21,798	4.2%
Total	398,880	416,950	4.5%

Economic Base

Sector	Acti vity
Retail Trade	Beltz Outlet
Manufacturing	Eli Lilly Wyeth
Tourist Att racti ons	El Yunque Culebra Beaches Vieques Beaches Puerto del Rey Marina Fajardo bioluminescent bay Horse track Camarero
Hotels	Westi n Rio Mar St. Regis Trump El Conquistador



AGENDA

1. Objective and Project Background
2. Brownfield and Greenfield Components
3. Value Proposition / Business Case



BROWNFIELD COMPONENT

Description Phase I: PR-66

- **Construction began in 1997**
- **Completed at a total cost of \$187 MM**
- **Opened in April 2006**
- **4 lanes of Access Controlled Highway**
- **Length: 9 miles**
- **Tolls: Carolina Plaza and Ramps**
- **Roundtrip toll: \$3.00**
- **Quasi-monopoly status due to alternative route**



Source: Puerto Rico Highway and Transportation Authority and Steer Davies Gleave Traffic Study, Apr-2007.



Brownfield Component

DESCRIPTION OF TOLLS

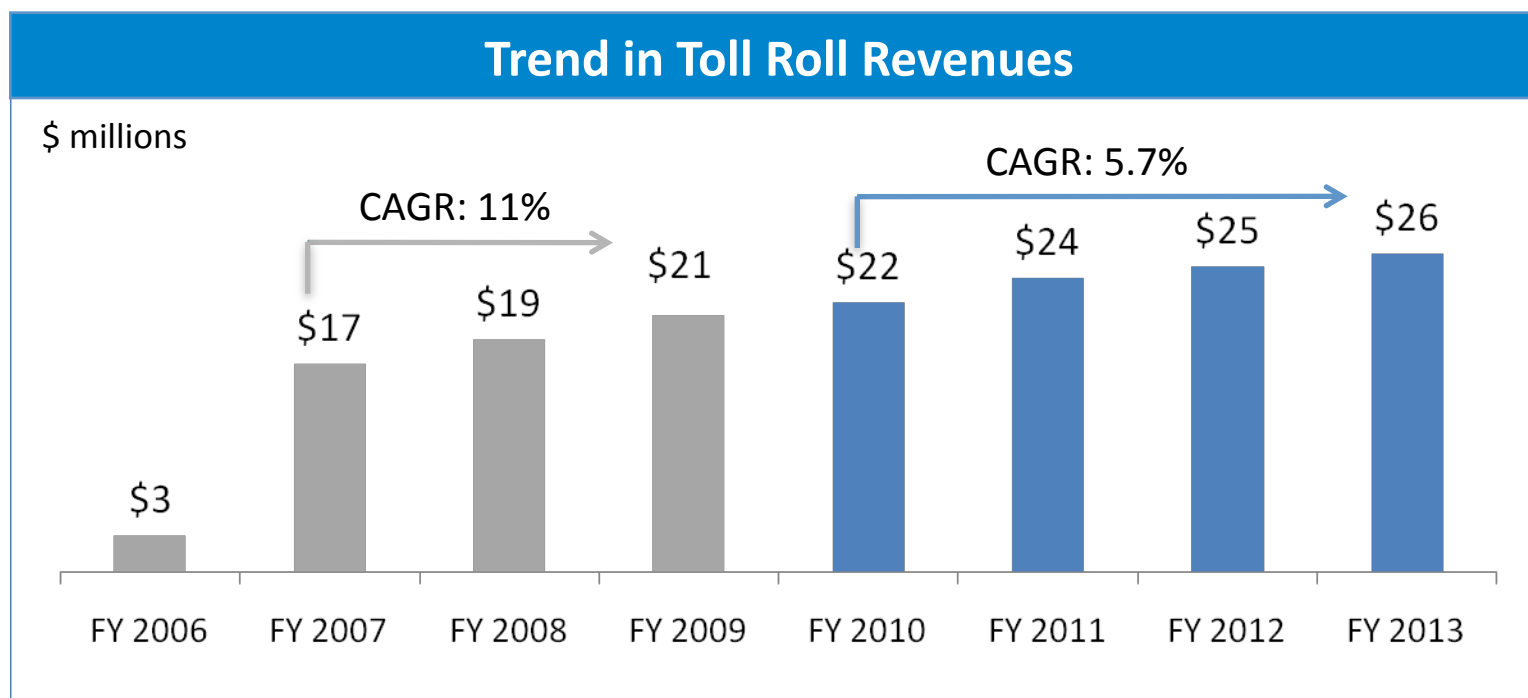
- Potential to capture more toll revenue through ending leakage
- Current toll rates are shown in table below:

Vehicle Classification Matrix							
Toll Plaza	2 Axle	Double Tire	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle
Carolina	\$1.50	\$3.00	\$3.25	\$3.50	\$3.75	\$4.00	\$4.25
Carolina Norte	\$0.75	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	\$2.75
Carolina Sur	\$0.75	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	
Pl. Rio Grande	\$1.50	\$3.00	\$3.25	\$3.50	\$3.75	\$4.00	
Rio Grande Ramp	\$0.75	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	\$4.50



BROWNFIELD COMPONENT

- A consistent revenue stream averaging \$19 million per year
- Revenue forecast based on conservative bases of 5.7%



Source: Puerto Rico Highway and Transportation Authority. Projections from April 2009.



GREENFIELD COMPONENT

Description Phase II: PR-66

- Length: 3.8 miles
- Additional Toll: Río Grande Plaza
- Toll Rate Roundtrip: \$3.0
- Est. Construction Period: 3 years
- Estimated Cost: \$223.0 million

Roadway	\$67.42
Lighting	\$4.78
PRASA Utilities	\$0.53
PREPA Utilities	\$1.73
Structures	\$85.81
Signaling and Pavement Markings	\$1.30
Traffic Signal System	\$0.48
Reforestation	\$1.64
Toll Plaza (Río Grande)	\$6.00
Acquisition	\$51.30
Construction of Wetland Mitigation Area	\$2.00
Total	\$222.99



AGENDA

1. Objective and Project Background

2. Brownfield and Greenfield Components

3. Value Proposition / Business Case



VALUE PROPOSITION / BUSINESS CASE

Summary of Revenues (\$ millions)

Phase I - Brownfield	2006	2021 NORMAL	% CAGR
Carolina Plaza	\$14.86	\$31.5	5.1%
Carolina Ramps	\$3.41	\$2.7	-1.6%
Phase I - Brownfield	\$18.27	\$34.1	4.3%
Phase II - Greenfield	2006	2021 NORMAL	% CAGR
Río Grande Plaza	\$4.79	\$11.4	5.9%
Total Project - Phase I + II	\$23.06	\$45.5	4.6%

Source: Puerto Rico Highway and Transportation Authority and Steer Davies Gleave Traffic Study, Apr-2007



BENEFITS

PR Highway Authority

- Improve credit and rating of the HTA
- Accelerate and optimize investment in highways system
- Refocus on governance and oversight
- Expand HTA's capacity for complementary investments
- Risk transfers to concessionaire

Concessionaire

- Potential hybrid brownfield / greenfield project
- Brownfield mitigates risks
- Major studies / permits completed
- Small-mid sized project
- Region with high potential for further economic base growth
- Identifiable and manageable risks



Capital Improvements

- **Presently, there are two improvements underway**
 - **Construction and improvement of Beltz Outlets intersection in Canovanas**
 - **Construction and improvement of intersection with PR-3 in Rio Grande**

These improvements total \$41.1 million



PR-52

LUIS A. FERRÉ HIGHWAY



AGENDA

1. Objective and Project Background

2. Brownfield Component

3. Value Proposition / Business Case



PR-52 Luis A Ferre Highway

OBJECTIVE

- Establishing a long-term concession agreement for PR-52 (Luis A Ferre Highway)

BACKGROUND

- PR-52 is Puerto Rico's longest toll road
- It spans 67 miles (108 kilometers) from northeast to southwest in Puerto Rico
- Consists of one continuous route from the City of San Juan (metro population of 2.4 million) to the city of Ponce, the second largest city in Puerto Rico
- Quasi monopoly route running North to South due to lack of alternative routes
- Contains 9 toll plazas and ramps, including Caguas Norte toll plaza, currently the highest tolled and highest revenue making toll plaza in the system
- PR-52 serves 15 municipalities with a population base of 1.2 million in 2010
- Represents 38% of all major highway traffic in Puerto Rico

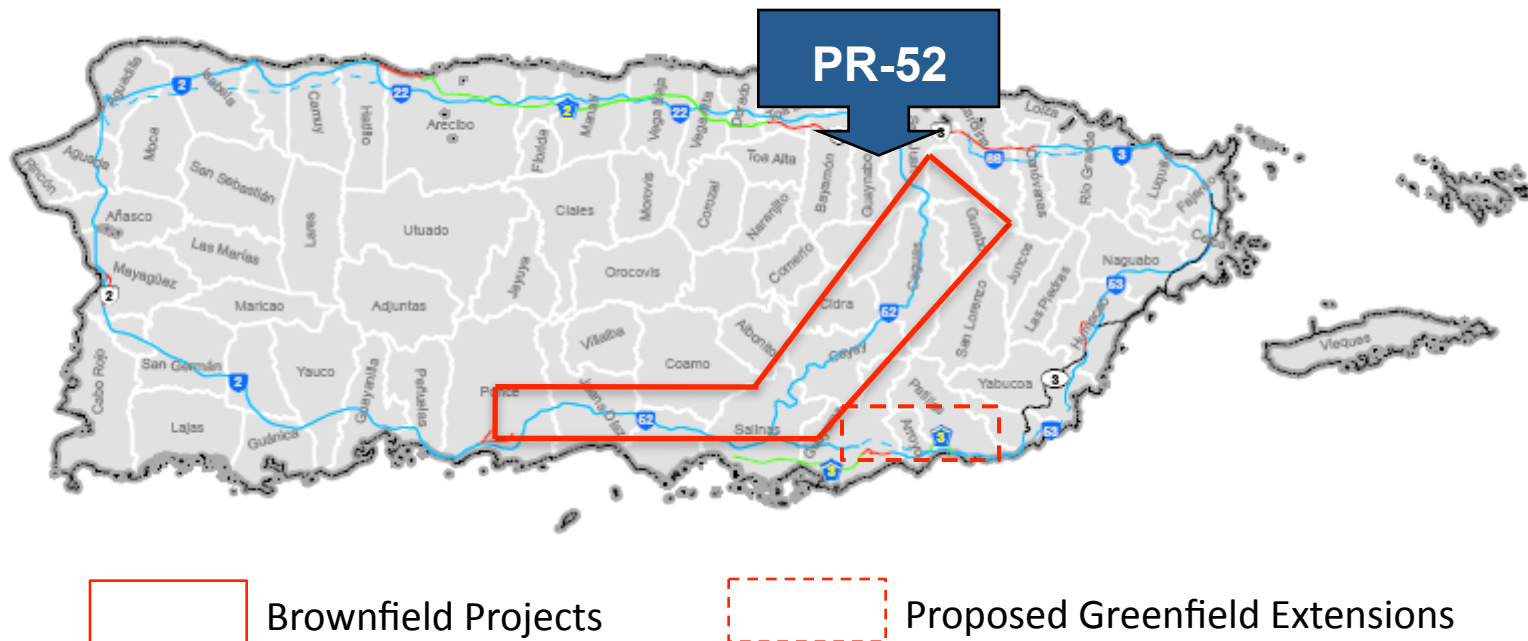




Location

ROUTE

- Connects the two largest cities in Puerto Rico
- It enjoys a strong traffic profile with long peak travel periods
- Expansion of Southern port should further increase traffic volumes





Demographic and Economic Base

DEMOGRAPHIC / ECONOMIC BASE

- PR-52 runs directly through 15 municipalities with favorable demographics and a robust long-term projected population growth rate
- Vehicle Density in Puerto Rico (at 0.57 vehicles per capita) is greater than the US or Europe
- Robust economic base activity in the region will continue to complement traffic
- New hotel and casino in Cayey will add to other tourist attractions already in the area
- Port of Americas growth will further increase traffic growth



AGENDA

1. Objective and Project Background

2. Brownfield Component

3. Value Proposition / Business Case



Brownfield Component

CONCESSION

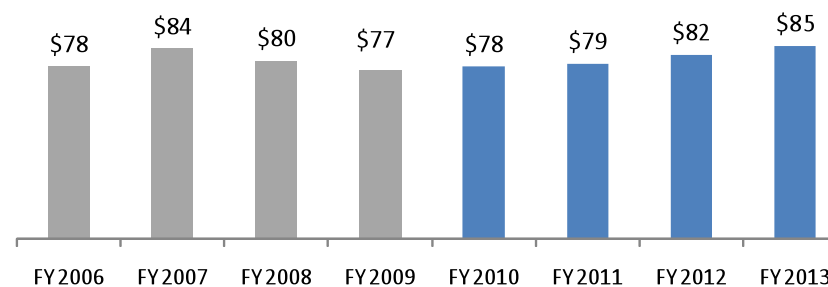
- A concession may provide more efficient operations
- Ability for more capital improvements

DESCRIPTION OF TOLLS

- Capacity to reduce leakage
- Further increase of market penetration amongst users of *AutoExpreso*, Puerto Rico's high-speed electronic toll collection system
- Optimization via new technology / congestion relief measures

CURRENT REVENUE POSITION

PR-52 Historic and Projected Revenues (in \$m)

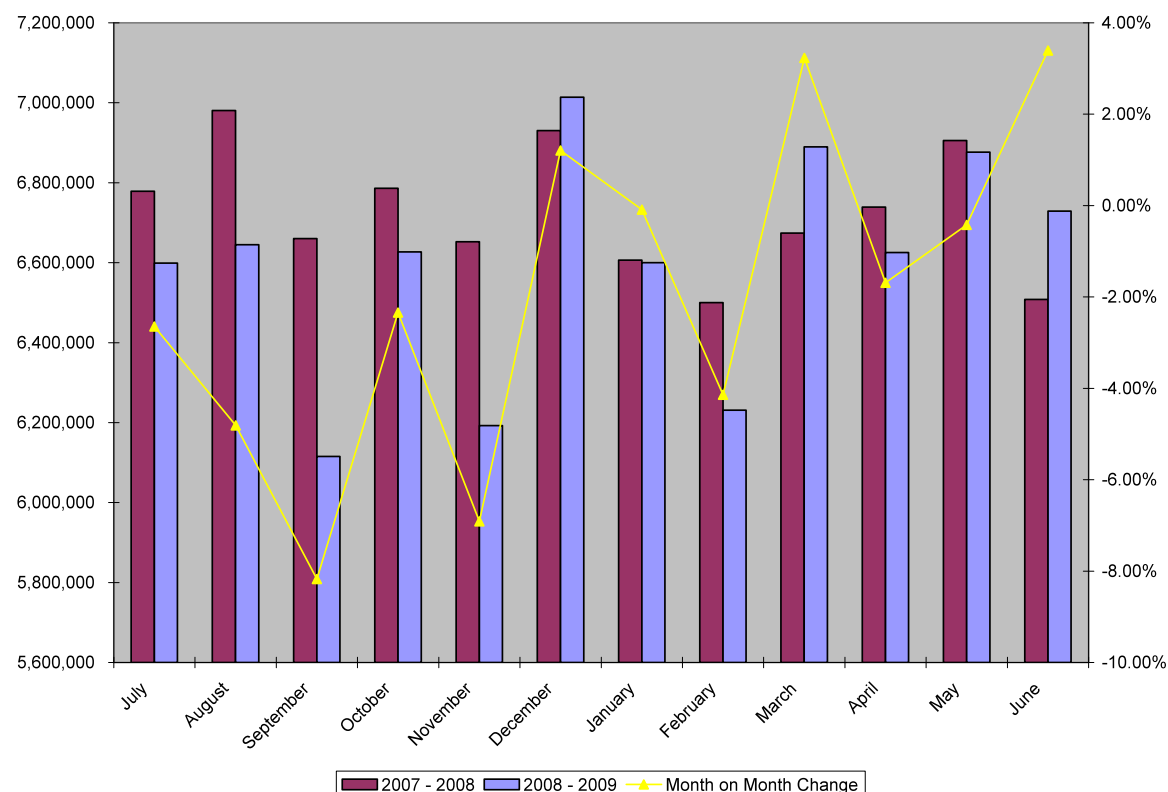




Traffic Volume

- Stable daily two-way traffic
- Second highest volume road in Puerto Rico
- Stable revenue stream
- As per graph, though traffic fell in the recession, recent resilience showing promise
- 2.9% forecast revenue CAGR in 2010 - 2013

Month – on – Month Traffic Difference – 2008 - 2009





AGENDA

1. Objective and Project Background

2. Brownfield and Greenfield Components

3. Value Proposition / Business Case



VALUE PROPOSITION / BUSINESS CASE

- ✓ PR-52 is essential component of Puerto Rico's Travel Network with strong, proven historical growth and track record
- ✓ High vehicle density on the island
- ✓ Ongoing modernization potential
- ✓ Critical artery connecting North to South with little/ no alternative
- ✓ Stable legal framework, with Concession already authorized



BUS RAPID TRANSIT



AGENDA

1. Objective and Project Background

2. Greenfield Component

3. Value Proposition / Business Case



Surface Transportation Infrastructure

- The DTPW & PRHTA envision the development of surface transportation as a mean to develop:
 - Better access and mobility infrastructure for people
 - Economic development, in order to build livable and sustainable places around the island.



BRT San Juan / Caguas



- Estimated Cost – \$365 M
- Estimated daily users – 5,000 – 50,000



BRT San Juan – Carolina



- Estimated Cost – \$400 M
- Estimated Daily Users – 10,000



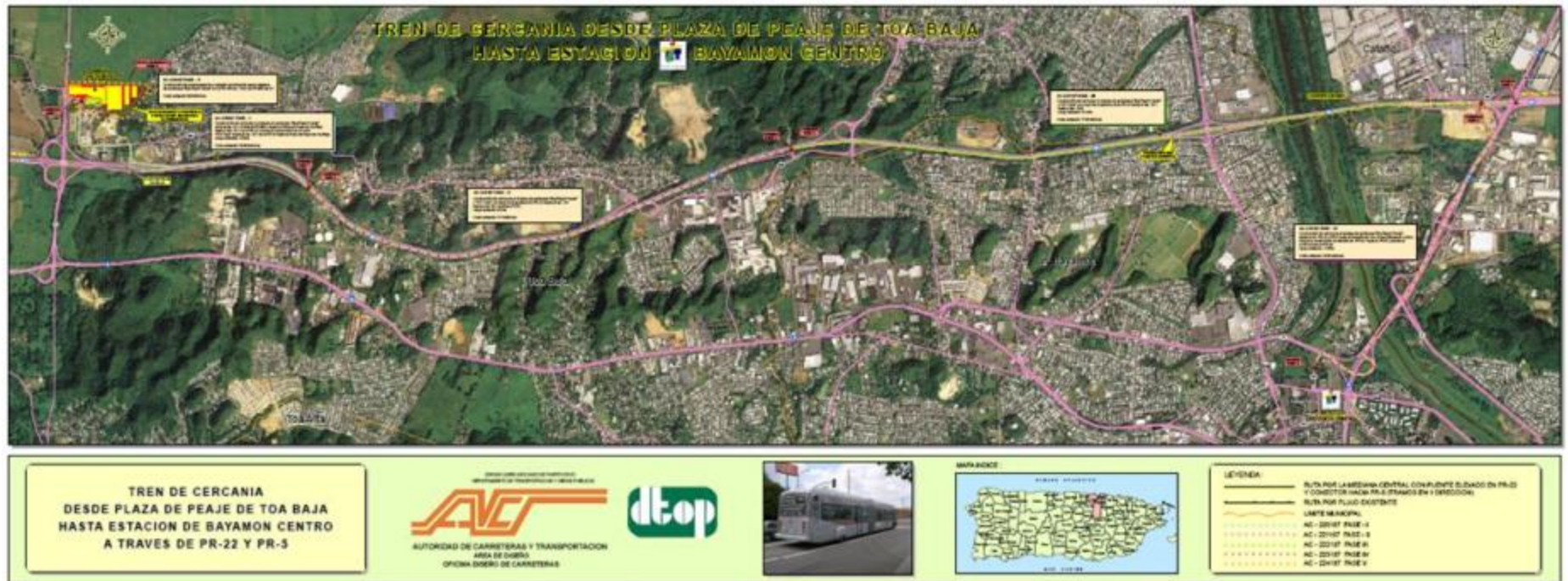
San Juan Light Rail System



- Estimated cost - \$365 M
- Estimated users – Average of 15,000



BRT- Toa Baja Bayamón



- Estimated cost - \$60 M
- Estimated users – 2,500 – 3,500



Feasibility Studies

- Government is interested in conducting a detailed a feasibility studies on the BRTs:
 - Demand Analysis
 - Analyze potential ridership
 - Estimate patronage risk
 - Estimate user fees
 - Cost-benefit analysis
 - Potential financing structure
 - Estimate time for permitting
 - Other



THANK YOU

Rubén A. Hernández Gregorat, MEM, PE
Secretary / Executive Director

April 20, 2010