



Friends of the Parkway
1729 La Maderia Dr SW
Palm Bay, FL 32908
321-960-2378
www.stjohnsheritageparkway.com

September 29, 2010

Ref: Financial and Environmental Costs of NOT BUILDING THE PARKWAY (Phase I)
aka “No Build Option”

Dear Legislator:

We regularly enunciate the positive impacts of the St Johns Heritage Parkway. For a moment, objectively and without political parochialism, let's consider what the financial and environmental costs of *not building the parkway* (aka “no build option”). To ensure accurate assumptions: formulas, matrix, acknowledgments and references will be enclosed herein.

Financial Costs: There are both direct and indirect costs to potential users, as well as to the general populous if the parkway is *not* built. Let us first assess the cost of additional fuel consumption to the estimated 35,000 potential users of the Parkway (Phase I), which are currently and/or will be congesting existing local roadways. According to the Space Coast Transportation Planning Organization and Renaissance Planning Group, it is projected during the 2035 Long Range Transportation Plan window that “Vehicle Hours of Travel” will increase from 45 minutes per day to 90 minutes per day if cost feasible transportation improvements are not made. Using sound statistical formulas, the *no build option* will equate to an annual increase of \$782.10 in fuel costs for each south Brevard vehicle. Apart from the quantitative consequences that we enumerated, also consider the intangible impacts of a .75 hour of lost productivity and/or quality time with family.

Furthermore, the *no build option* will force the consideration of costly improvements to existing arterial roads (e.g. Minton Rd, Wickham Rd, Hollywood Blvd, etc). The Parkway will be constructed through predominately rural land at a cost of \$2.5 million dollars per mile, versus an estimated cost of \$20 million dollars per mile to widen existing roads (due to right-of-way costs, eminent domain litigation, retrofitting, etc).

Therefore, the Parkway will: reduce out-of-pocket expenses for fuel; save millions of dollars per mile to construct versus widening existing roadways and increase productivity for south Brevardians.

continued to page 2...

...continued from page 1

Environmental Costs: When considering impacts of the *no build option*, it is important that we identify environmental consequences. Due to increased fuel consumption, the *no build option* would increase carbon emissions axiomatically and significantly. Again, according to sound research methodology, without the Parkway, there will be an increase of 88,752.63 MtCO₂e/year (Metric tons CO₂e - Carbon Dioxide Equivalents). To put this in perspective, the Parkway would reduce a carbon footprint equivalent to the entire fleet of New York City School Buses times three (x3), annually.

Consequently, the *no build option* would not be in the best interest of our environment. There are also strong ecotourism elements planned with this project to include, but not limited to: trails, birdwatching stations, fishing, kayaking and even a “Scenic Highway” designation by the Florida Department of Transportation. Hopefully, environmental/sustainable proponents will embrace the positive benefits of the construction of the St Johns Heritage Parkway.



The St Johns Heritage Parkway will save...

- ☞ **\$780 dollars a year in gas per vehicle**
- ☞ **Millions of dollars per mile versus widening existing arterial roads**
- ☞ **88,752.63 Metric tons of Co₂e per year (Carbon Emissions)**



Very respectfully submitted,

Friends of the Parkway

Enc: Matrix with Acknowledgments/Reference



Friends of the Parkway
 1729 La Maderia Dr SW
 Palm Bay, FL 32908
 321-960-2378
www.stjohnsheritageparkway.com

St Johns Heritage Parkway Positive Financial and Environmental Mitigation

SJHP Phase I Vehicle Trips projected according to PD&E	35,000.00	vehicles per day
Fuel consumption per hour in urban stop-n-go (also considering range of .2 to .7 per half hour in idle)	1	gallons/hour
Average hour increase in drivetime without the Parkway aka "No Build Option" (per 2035 LRTP)	.75	(45 minutes)
Average cost of fuel in 3rdQ 2010	\$2.86	USD/gallon
Projected additional fuel consumption WITHOUT the Parkway aka in "No Build Option"	26,250.00	gallons/day
Days of the year are	365.00	
Additional yearly gallons of fuel consumption in "No Build Option"	9,581,250.00	gallons
Average yearly total cost in additional fuel consumption by population in "No Build Option"	\$27,373,631.25	USD/year
Average yearly cost in additional fuel consumption per vehicle in "No Build Option"	\$782.10	USD/year
Environmental Impacts under "No Build Option":		
Metric tons CO ₂ e (Carbon Dioxide Equivalents)	88,752.63	MtCO ₂ e/year
Metric tons CE (Carbon Equivalents)	24,205.26	MtCE/year

Acknowledgments/Reference:

"Project Development & Environmental (PD&E) Study"
 DRMP, Inc; 941 Lake Baldwin Lane, Orlando, FL 32814

"2035 Long Range Transportation Plan"
 Space Coast Transportation Planning Organization, 2725 Judge Fran Jamieson Way, Bldg. B, Room 105, MS #82
 Melbourne, FL 32940/Renaissance Planning Group, 121 S. Orange Ave, Suite 1200, Orlando, Florida 32801

<http://www2.dot.state.fl.us/SpecificationsEstimates/costpermile.aspx>

INVENTORY OF NEW YORK CITY GREENHOUSE GAS EMISSIONS, April 2007, Jonathan Dickinson, Editor, Page37
www.nyc.gov/html/om/pdf/ccp_report041007.pdf

<http://www.eia.doe.gov/oi/af/1605/coefficients.html>

<http://www.epa.gov/oms/climate/420f05004.htm#step1>

A gallon of gasoline is assumed to produce 8.8 kilograms (or 19.4 pounds) of CO₂. This number is calculated from values in the Code of Federal Regulations at 40 CFR 600.113-78, which EPA uses to calculate the fuel economy of vehicles, and relies on assumptions consistent with the Intergovernmental Panel on Climate Change (IPCC) guidelines.

In particular, 40 CFR 600.113-78 gives a carbon content value of 2.421 grams (g) of carbon per gallon of gasoline, which produces 8.877 g of CO₂. (The carbon content is multiplied by the ratio of the molecular weight of CO₂ to the molecular weight of carbon: 44/12).

This number is then multiplied by an oxidation factor of 0.99, which assumes that 1 percent of the carbon remains un-oxidized.[1.] This produces a value of 8.788 g or 8.8 kg (19.4 lbs) of CO₂.

.....

Metric tons of CO₂e for vehicle =

Gallons consumed x 8.8 x (100/95)/1000

.....

Converting Between Carbon Dioxide Equivalents and Carbon Equivalents --- To convert from CO₂e to CE, multiply by 12/44 For example, 11 million metric tons of CO₂ equivalent = 11 x (12/44) = 3 million metric tons of carbon equivalent (3 MMTCE). 1 metric ton of CO₂ equivalent = 0.2727 metric tons of carbon equivalent.

.....