



**\$435
BILLION**

in total project value

Not only are these projects **STRATEGIC** to the region's **GROWTH**, but here you can see a coherent set of projects that will **TRANSFORM** North America.

—NORMAN F. ANDERSON,
PRESIDENT & CEO OF CG/LA

The Strategic Top 100 North American Infrastructure Projects The 2013/2014 List

The 5th Annual Strategic Top 100 North America Infrastructure Project list is a departure from the past, because this year we've built the list on a series of Competitiveness Visions, designed to select and rank the one hundred projects that we need to build in order to re-take our competitiveness. The total estimated value of 2013/2014 list is \$435.7 billion with a conservatively estimated potential to create 3.3 million direct jobs over the next two years, and add 1% to our national GDP each year from 2015 through 2020.

The overall goal is to double the level of infrastructure investment in North America, while making optimized choices on the projects we will build, and to make sure that we build those projects as quickly and as productively as possible. For our country to grow we need to invest in infrastructure and to do that we need to be creative, resourceful and above all bold, in identifying projects, and getting those projects approved and built quickly.

The Strategic Top 100 Projects. CG/LA defined six Competitiveness Visions through which the 100 projects were identified, and then ranked according to our proprietary scoring system (see below). The Competitiveness Visions, including the value of the projects within each vision, are:

- 📍 **Gateway Hubs (\$35 B)** - Projects identified as strategic, including ports, logistics systems and waterways improvements, to the increased ability of North America to competitively engage in international commerce. The focus is on productivity, as a driver of investment - and growth;
- 📍 **Champion Cities (\$45 B)** - Projects critical to the increased performance of cities, and their surrounding urban areas, so that they can attract the most productive and creative resources, serving both as engines for economic growth and as increasingly attractive places to live and work;
- 📍 **Connecting the Region (\$141 B)** - These are the projects that bring us together. Connecting our countries - within and outside of the Interstate Highway System - is a strategic necessity

for our countries. Here we identify the priority projects required to efficiently transport goods, services, people, and information from region to region.

📍 **Energy Independence (\$135 B)** - Incredibly, we are within sight of energy independence, a goal that seemed impossible five years ago when the shale gas revolution was unleashed. These are the projects that result from those newfound resources - from power generation, to large scale renewable projects, to liquids pipelines, to the infrastructure needed to support new developments, to the resources drawn from new gas and oil production that pays for strategic projects. Note: Mexico is still to take part in this revolution, importing one third of its natural gas, and 50% of its gasoline.

📍 **Heartland Waterways (\$52 B)** - A strategic core for US competitiveness is our waterway system, a critical economic artery for the country - and for the great cities predicated on its optimal condition. Currently the US Army Corps of Engineers, the caretaker of the system, has a \$4.5 billion annual capital budget, and a \$65 billion backlog;

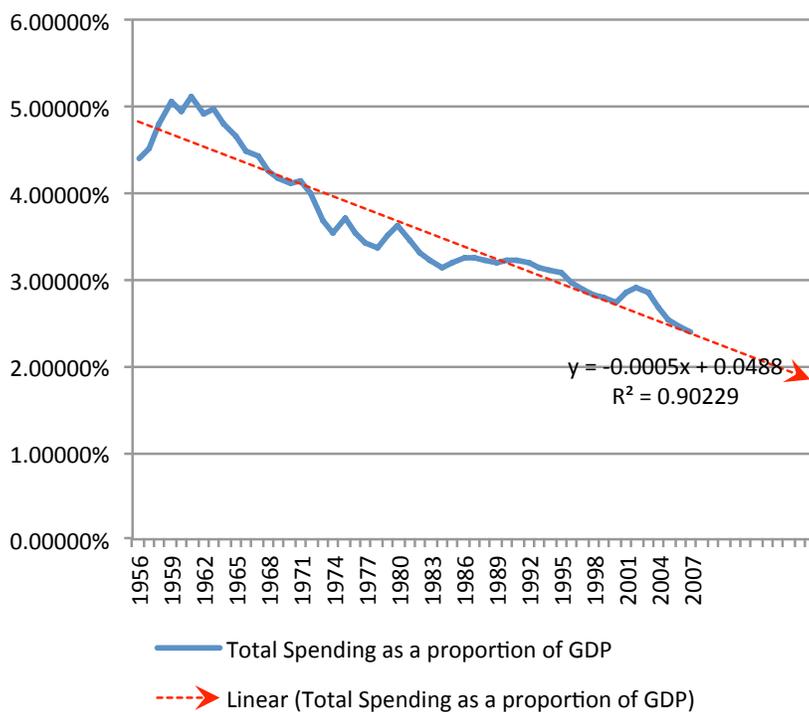
and

📍 **Partnerships for Competitiveness (\$27 B)**. The Strategic Top 100 list includes Canada and Mexico, those projects that are fundamental to our competitiveness. Our largest goods trading partners are our neighbors. Goods and services traded with Canada, by far our largest trading partner totaled over \$680 Billion annually. While in Mexico we traded over \$500 Billion annually. As near-shoring becomes an ever greater possibility an entire new generation of strategic projects have appeared, creating whole new opportunities with our neighbors.

Overall Demand - The 2018 US Infrastructure Demand Model. The US invests only 1.3% of GDP in infrastructure, lower than any other OECD country, according to CG/LA's also just released **US Infrastructure Demand 2018 Report**. The Strategic Top 100 list is designed to bring everyone together - business, policy executives, citizens - around projects that will grow our economy now, and that will serve as building blocks for the next generation.

The Strategic Top 100 list shows a path forward, as against a path that is nothing short of disastrous. Note in the graph on the following page that US investment as a percentage of GDP has declined from nearly 5% at the height of the Eisenhower years to today's current 1.3% level.

Total Spending as a proportion of GDP



Put another way, the Report shows that out of the 0.05% annual decrease in spending, 0.04% of it has been in Capital Spending. This implies that the U.S. has been investing 0.04% less in adding new infrastructure to its economy, on average, every year, for the last 57 years.

The picture in terms of infrastructure investment per capita is just as worrisome. The graph on the following page shows an abrupt decline, particularly in the period since 2003 - From 2003 to 2007, there has been a 3% decrease in per capita investment in infrastructure.

Please let us know what you think of these numbers, and whether you would like to order the **US Infrastructure Demand Report 2018**. Presentation comes in the form of a data model, an extensive slide deck and an optional briefing. See our web page (www.cg-la.com) for details. The **Global Infrastructure Demand Report 2018** is also available. The Global Report details conditions in 66 countries around the world, and is presented in slide decks by sector, and region.

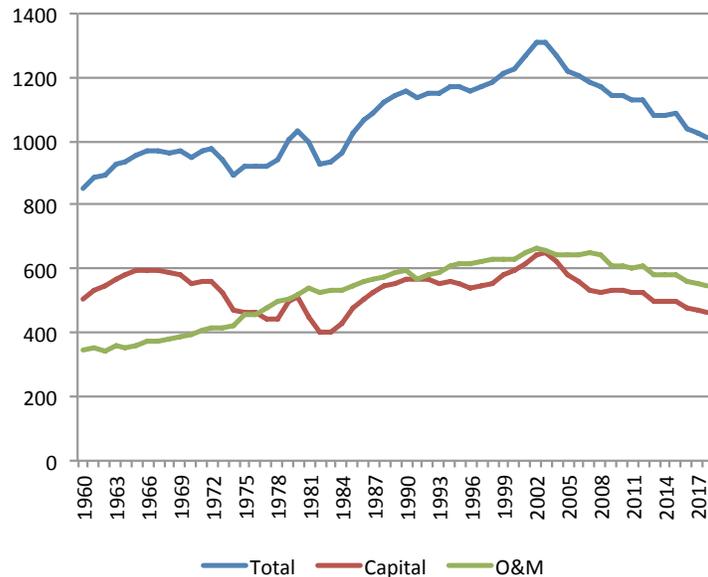
Note: O&M spending has increased to the point that it exceeds, in most sectors, capital spending - just another indication of the anemic state of our investment (along with the aging of our infrastructure).

Ranking Strategic Infrastructure

The Strategic Top 100 list is compiled as a way of showing the way forward, and at the same time highlighting the requirement that we need to do much better than we are doing now in terms of finding ways to fund our infrastructure.

The current policy discussion focuses only on a steady state spend, which will be disastrous for our country; we need to, at a minimum, double investment in our infrastructure - that is, double capital spending. This requires new thinking.

**Investment in Infrastructure/
Capita (OECD GDP, CG/LA
Projections)**



In terms of the process we use to select and rank the Strategic Top 100 projects, CG/LA follows a systematic and disciplined approach, that is both analytic and subjective. Over the course of three months, our process beginning with our data base of over 5,000 infrastructure projects, combined with interviews with industry and policy leaders from around the country. The initial result is a list of roughly 250 candidate projects. Then we begin a process of informally - and then formally - ranking each project against a list of five criteria. First, however, we make a decision whether a project offers a business opportunity in the next 3-12 months - unless we believe that the project is going forward in some material way then it is removed from the candidate list.

The five categories are:

1. Business Opportunity
2. Competitiveness Contribution
3. Productivity Contribution
4. Job Creation Potential (including over the life of the project)
5. Carbon Efficiency.

Assigning grades on a 1-5 scale (1-7 in the case of job creation, 1-3 in the case of carbon efficiency) is an exercise that is both analytic, based on the numbers, and subjective, based on our expertise. This is a structure that we imagine a national infrastructure bank would need to develop and follow in a disciplined manner - a discussion for another day, but fundamental for doubling the level of real infrastructure investment in North America.

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We have an extraordinary group of professionals involved in the Strategic Top 100 exercise as well as in building the US and global demand models. I'd like to personally thank Frank Hollowell and Andrés Quinche for their leadership in building the Strategic Top 100 North America list; and special thanks to our powerhouse analyst Zeeshan Haidar for his tremendous work in updating, and drawing out new meaning from CG/LA's data model.

Project	Sponsor	Stage	Value	Sector	Country	State
Gateway Hubs						
Southern California International Gateway	BNSF & City of Los Angeles	Design	\$500 Million	Freight	USA	California
San Francisco International Airport Expansion	San Francisco International Airport Authority	Planned	\$4.1 Billion	Airport	USA	California
LaGuardia Airport Central Terminal & Infrastructure Redevelopment	Port Authority of New York & New Jersey	RFP Expected 2013	\$3.6 Billion	Airport	USA	New York
Port of Jacksonville Expansion	JAXPORT	Design	\$45 Million	Freight	USA	Florida
Port of Savannah Expansion - Garden City Terminal	Georgia Port Authority	Under Construction	\$1.2 Billion	Freight	USA	Georgia
Charleston Harbor New Terminal	South Carolina Port Authority	RFQ	\$1.3 Billion	Freight	USA	South Carolina
CSX's Mount Clare Yard	CSX & Maryland DOT	Permitting	\$90 Million	Freight	USA	Maryland
CLT 2015 - Charlotte Douglas International Airport	City of Charlotte	Planning - Ongoing	\$1.15 Billion	Airport	USA	North Carolina
Next Generation Air Transportation System	Federal Aviation Administration	Ongoing	\$19 Billion	Airport	USA	Nation Wide
Louisiana International Gulf Transfer Terminal	LIGTT	Concept	\$1.5 Billion	Freight	USA	Louisiana
Salt Lake City Airport Upgrade	Salt Lake City International Airport Authority	Planned	\$2.0 Billion	Airport	USA	Utah
Napoleon Avenue Container Terminal Expansion	Port of New Orleans	Planned	\$580 Million	Freight	USA	Louisiana
Port of Oakland Expansion	SSA Terminals	Planned	\$430 Million	Freight	USA	Louisiana
Champion Cities						
Expo Line - Phase 2	Los Angeles County Metropolitan Transportation Authority	Under construction	\$1.5 Billion	Mass Transit	USA	California

PROJECT LIST

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Project	Sponsor	Stage	Value	Sector	Country	State
The Metro Crenshaw/ LAX Corridor Project	Los Angeles County Metropolitan Transportation Authority	Contract approved	\$1.7 Billion	Mass Transit	USA	California
The Red/Purple Line Modernization	Chicago Transit Authority	Environmental Impact Statement	\$4 Billion	Mass Transit	USA	Illinois
Regional Commuter Rail Operations and Maintenance Contract	DART	Under construction	\$500Million	Mass Transit	USA	Texas
Houston Metro Blue/Gold Line Project	METRO Houston	Planned	\$750 Million	Mass Transit	USA	Texas
BART Silicon Valley Extension Project	Santa Clara Transportation Authority	Under construction	\$2.3 Billion	Mass Transit	USA	California
East Link Expansion	Sound Transit	Final Design	\$2.8 Billion	Mass Transit	USA	Washington
East Side Access	Metropolitan Transit Authority (MTA)	Under Construction	\$8.5 billion	Mass Transit	USA	New York
Atlanta Beltline	Invest Atlanta	Under Construction	\$2.8 Billion	Surface	USA	Georgia
Green Line Extension Project	Metro Transit	Planning	\$1.25 Billion	Mass Transit	USA	Minnesota
Moynihan Rail Station Project	Moynihan Station Development Corporation (MSDC)	Planned	Phase 1 \$267 Million, Phase 2 \$1.1 Billion	Mass Transit	USA	New York
Southeast to West LTR	City of Edmonton	RFQ	\$3.2 billion	Mass Transit	Canada	Alberta
Eglinton CrossTown LRT	Metrolinx	Under Construction	\$4.9 Billion	Mass Transit	Canada	Ontario
Scarborough LRT	Metrolinx	RFPs	\$1.8 Billion	Mass Transit	Canada	Ontario
Honolulu Rail Transit Project	Hawaii DOT	Phase 1 of 4 Under Construction	\$5.2 Billion	Mass Transit	USA	Hawaii
Line 3 - Monterrey Metro	SCT	Feasibility Study	\$470 Million	Mass Transit	Mexico	Nuevo Leon
Detroit M-1 Rail Line	M-1 Rail	RFP's	\$140 Million	Mass Transit	USA	Michigan
DC Streetcar	District DOT	Under Construction	TBD	Mass Transit	USA	District of Columbia
Purple Line	Maryland Transit Administration	Planned	\$2.2 Billion	Mass Transit	USA	Maryland

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Sepulveda Pass Corridor	Los Angeles County Metropolitan Transportation Authority	Design	\$6 Billion	Mass Transit	USA	California
Tacoma Link Expansion	Sound Transit	Environmental Impact Statement	\$600 million	Mass Transit	USA	Washington
Energy Independence						
Alaska South Central LNG Project	TransCanada, ExxonMobil, BP, ConocoPhillips	Contract Approved	\$65 Billion	Oil & Gas	USA	Alaska
Flanagan South Pipeline Project	Enbridge	Permitting	\$2.8 Billion	Oil & Gas	USA	Illinois to Oklahoma
Sandpiper Pipeline	Enbridge	Planned	\$2.8 Billion	Oil & Gas	USA	North Dakota to Wisconsin
Cameron LNG Export Terminal	Sempra Energy	Permitting	\$10 Billion	Oil & Gas	USA	Louisiana
20 MW Solar Power Project	San Diego Gas & Electric	Planning		Generation	USA	California
Wyoming-Colorado Intertie	Wyoming Infrastructure Authority	Permitting	\$150 Million	Transmission	USA	Wyoming, Colorado
TransWest Express	Anschutz Corp	Permitting	\$3 Billion	Transmission	USA	Wyoming to Nevada
Illinois River Transmission Project	American Transmission Company of Illinois (ATXI)	Permitting	\$2.2 Billion	Transmission	USA	Illinois
Thumb Loop Project	ITC Holdings Corp	Under construction	\$510 Million	Transmission	USA	Michigan
Sierra Madre and Chokecherry Wind Project	Power Company of Wyoming	Permitting	\$200 Million	Generation	USA	Wyoming
300 MW Blackspring Ridge Wind Project	EDF Energies and Enbridge Inc	Planned	\$600 Million	Generation	Canada	Alberta
500 MW Rocky Creek Wind Energy Project	Rupert Peace Power Holdings	Feasibility Study	\$1.5 Billion	Generation	Canada	British Columbia
Panda Mattawoman Plant	Panda Power Funds	Permitting	\$860 Million	Generation	USA	Maryland
Coastal GasLink	TransCanada	Permitting	\$5.2 Billion	Oil & Gas	Canada	British Columbia

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Energy East Pipeline	TransCanada	Planned	\$12 Billion	Oil & Gas	Canada	Calgary to Nova Scotia
Los Ramones Phase 2	Pemex	RFQ/RFP's	\$3.3 Billion	Oil	Mexico	Nuevo Leon
Grain Belt Line Express Clean Line	Clean Line Energy	Permitting	\$1.8 Billion	Transmission	USA	Kansas
Duke Smart Grid	Duke Energy	Ongoing	\$1 Billion	Transmission	USA	Midwest
Rhode Island Off-Shore Wind Farm	Deepwater Wind, Department of Interior (DOI)	Permitting	\$4.5 Billion	Generation	USA	Rhode Island
Centennial West Clean Line	Clean Line Energy	Permitting	\$2.5 Billion	Transmission	USA	New Mexico
Southern California Reliability Project	SDG&E and Southern California Edison	Concept	\$3.8 Billion	Transmission	USA	California
Riviere Du Moulin Wind Project	EDF	Under Construction	\$800 Million	Generation	Canada	Quebec
Connecting the Region						
All Aboard Florida	Florida East Coast Industries	Planned	\$1 Billion	Passenger Rail	USA	Florida
Cotton Line	DART & The T	Planned	\$1 Billion	Mass Transit	USA	Texas
California HSR	California High Speed Rail Authority	Multi-Phase, RFQ	\$69 Billion	Passenger Rail	USA	California
Illiana Corridor	Indiana DOT & Illinois DOT	Planned	\$2.87 Billion	Surface	USA	Indiana & Illinois
CA-91 Expansion	Riverside County Transportation Commission	Design	\$1.3 Billion	Surface	USA	California
Northeast Corridor HSR	Amtrak	Planned	\$40 Billion	Passenger Rail	USA	Northeastern States
LSTAR	Union Pacific & State of Texas	Environmental Review and Funding	\$2.4 Billion	Passenger Rail	USA	Texas
US Highway 85 Four-Lane Project	North Dakota DOT	Permitting	\$300 Million	Surface	USA	North Dakota
Denver Beltway Projects	Colorado DOT	Planning & Design	\$300 Million	Surface	United States	Colorado

PROJECT LIST

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Project	Sponsor	Stage	Value	Sector	Country	State
I-70 Denver Interstate Expansion & Upgrade	Colorado DOT	Planning	\$1.8 Billion	Surface	USA	Colorado
Virginia I-64 - 264 rehabilitation	Virginia DOT	Planned	\$120 Million	Surface	USA	Virginia
Virginia I-66	Virginia DOT	Planned	\$78 Million	Surface	USA	Virginia
Cline Avenue Toll Bridge	INDOT	Design	\$250 Million	Surface	USA	Indiana
I-64 Daniel Boone Bridge	Missouri DOT	Consortium Awarded	\$111 Million	Surface	USA	Missouri
Hyperloop		Concept	\$6 Billion	Surface	USA	California
High Desert Multipurpose Corridor	Los Angeles County Metropolitan Transportation Authority	Concept	\$6 Billion	Surface	USA	California
I-710 Expansion	Los Angeles County Metropolitan Transportation Authority	Design	\$7 Billion	Surface	USA	California
Brent Spence Replacement Bridge	Ohio & Kentucky DOTs	Planning	\$2.7 Billion	Surface	USA	Ohio
Heartland Waterways						
New Orleans Canal and Pump Station	Army Corps of Engineers	Construction Began July 2013	\$614 Million	Water Management	USA	Louisiana
Morganza to Gulf Levee System	Army Corps of Engineers	Planning	\$10.3 Billion	Water Management	USA	Louisiana
Fall Creek/White River Deep Storage Tunnel	Citizen Water	Design	\$389 Million	Wastewater	USA	Indiana
NYC Storm Protection Plan	City of New York	Concept	\$19 Billion	Water Management	USA	New York, New York
DC Clean Rivers Program	DCWASA	Ongoing	\$2.6 Billion	Wastewater	USA	Washington DC
Miami-Dade Water and Sewer System Projects	Miami-Dade County	Planning	\$1.6 Billion	Wastewater	USA	Miami, Florida
Olmstead Locks & Dam Project	Army Corps of Engineers	Suspended	\$2.9 Billion	Water Transport	USA	Kentucky & Illinois
Western Area Water Supply Project	North Dakota Western Area Water Supply Authority	Phase III to start construction	\$230 Million	Public Water Supply	USA	North Dakota

Project	Sponsor	Stage	Value	Sector	Country	State
Sacramento Levee System	California Department of Water Resources	Ongoing	\$500 Million	Water Management	USA	California
Sacramento-San Joaquin Delta Water Tunnel	California Department of Water Resources	Ongoing	\$14 Billion	Water Management	USA	California
New Cumberland Locks & Dam	Army Corps of Engineers	Planned	\$200 Million	Water Management	USA	Ohio & West Virginia
Calaveras Dam Replacement Project	San Francisco Public Utilities Commission	Under Construction	\$621 Million	Water Management	USA	California
Prince George's County Pipeline of Projects	Prince George's County Department of Environmental Resources	Planning	\$1.2 Billion	Water Management	USA	Maryland
Building Competitiveness						
New Mexico City Airport	SCT	Concept	\$4.5 Billion	Airport	Mexico	D.F.
Rail between Mexico City & Querétaro	SCT	Feasibility	\$2.58 Billion	Rail	Mexico	Querétaro
Mexico City-Toluca Passenger Train Line	SCT	Feasibility	\$1.5 Billion	Passenger Rail	Mexico	Mexico
Port of Veracruz Expansion	Port Authority of Veracruz	Planning	\$3 Billion	Freight	Mexico	Veracruz
CSX Intermodal Terminal	CSX	Under Construction	\$107 million	Freight	Canada	Quebec
New International Trade Crossing	Transport Canada	Permitting	\$2.0 Billion	Surface	Canada	Ontario
Continental Rail Gateway	Windsor Port Authority	EIS	\$400 Million	Freight	Canada	Ontario
Vancouver International Airport Upgrades	Vancouver Airport Authority	Design	\$1.74 Billion	Airport	Canada	British Columbia
New Bridge for the St. Lawrence	Transport Quebec	Financial Closing	\$5 Billion	Surface	Canada	Quebec
Calgary International Airport Developments	Calgary Airport Authority	Under construction	\$2 Billion	Airport	Canada	Alberta
Maher Malford Terminal	Maher Terminal	Financial Close	\$350 Million	Freight	Canada	Nova Scotia
San Ysidro Land Port of Entry	General Service Administration	Planning Phase 2 & 3	\$732 Million	Freight	USA Mexico	California, Baja California