

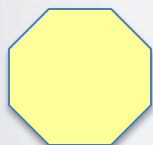


KENTUCKY **OUTLOOK** **FOR HIGHWAY,** **BRIDGE,** **AIRPORT &** **TRANSPORTATION** **CONSULTANT** **MARKET**

DECEMBER 2012

Executive Summary

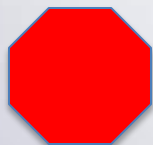
- Kentucky has a stable economy with little change in population, state revenues or expenditures.
- Transportation bottom line:



Flat market for highway and bridge construction



Modest growth in airport construction



Modest declines expected in consultant awards

Report Contents

- Kentucky General Demographics and Economic Health
- Kentucky State Highway and Bridge Market
- Kentucky Long Run Market Potential
- Kentucky Airport Market
- Kentucky Transportation Planning & Design Market Overview and Competition

KENTUCKY GENERAL DEMOGRAPHICS AND ECONOMIC HEALTH

Population and Housing Starts

- Population: 4,369,356 (ranked 26th nationally)
 - ↑ 1% (2010 to 2011)
 - ↑ 7% (2000 to 2010)
 - ↑ 2% (2010 to 2020)
- Housing starts: ↓ 27% 2008 to 2012
- Total starts per thousand population: Kentucky is forecasted to rank 35th in 2012 (1.7 per thousand).

Five Year Trend in Real Gross State Product (GSP)

- 2011 Nominal GSP: \$164.8 billion
- 2011 Real GSP: \$141.3 billion
 - ↑ 0.5% 2010 to 2011
 - ↑ .02% 2007 to 2011
- The three largest shares of 2011 Real GSP are:
 - 17% manufacturing (-3% since 2007)
 - 16% government, including federal, state, and local (+1% since 2007)
 - 9% real estate, rental, and leasing (same as 2007)
 - 9% health care and social assistance (+1% since 2007)
- The three fastest-growing sectors are:
 - Finance and insurance (+23% 2007 to 2011)
 - Health care and social assistance (+13%)
 - Information (+11%)

Kentucky State Tax Collections, Expenditures

- State tax revenue: ↑ 4.7% from 2007 to 2011 (\$10.3 billion)
- Major sources of state tax revenue:
 - Individual income taxes (33.5% of average annual state tax revenue 2007-2011)
 - General sales and gross receipts (29%).
 - Motor fuel taxes (6.7%)
- 2010 total expenditures: \$29.1 billion
 - ↑ 8% from 2009 to 2010
 - ↑ 42% from 2005 to 2010
- General expenditure was 83% of total expenditure in 2010.
- The three largest shares of 2010 general expenditure are:
 - 39% education (same % as in 2005)
 - 30% public welfare (same as 2005)
 - 8% highways (same as 2005)

Bonds and Public Private Partnerships

- Kentucky is able to issue bonds.
- Total state debt was 9% of GSP in 2010
 - Ranking: 18th highest level of debt among states
- State government bond ratings (as of 4Q 2010):
 - Standard & Poor's: AA-
 - Moody's: Aa2
- There is a state statute for PPP authorization.

Kentucky Transportation Cabinet (KYTC) Capital Investments and Revenues

- 2012 capital investments (capital outlays and construction):
\$1.84 billion
 - ↑ 65% (2011 to 2012)
 - ↑ 5% (2008 to 2012)
 - ↓ 42% (2012 to 2016)
- 2012 revenues: \$2.98 billion
 - ↑ 36% (2011 to 2012)
 - ↑ 2% (2008 to 2012)
 - ↓ 14% (2012 to 2016)
- Kentucky has a dedicated Road Fund for transportation expenditures, however Kentucky reports recent legislative diversions of transportation funds to its General Fund for other purposes, notwithstanding existing constitutional restrictions.

KENTUCKY STATE HIGHWAY AND BRIDGE MARKET

Revenues

Expenditures

Alternative Procurement

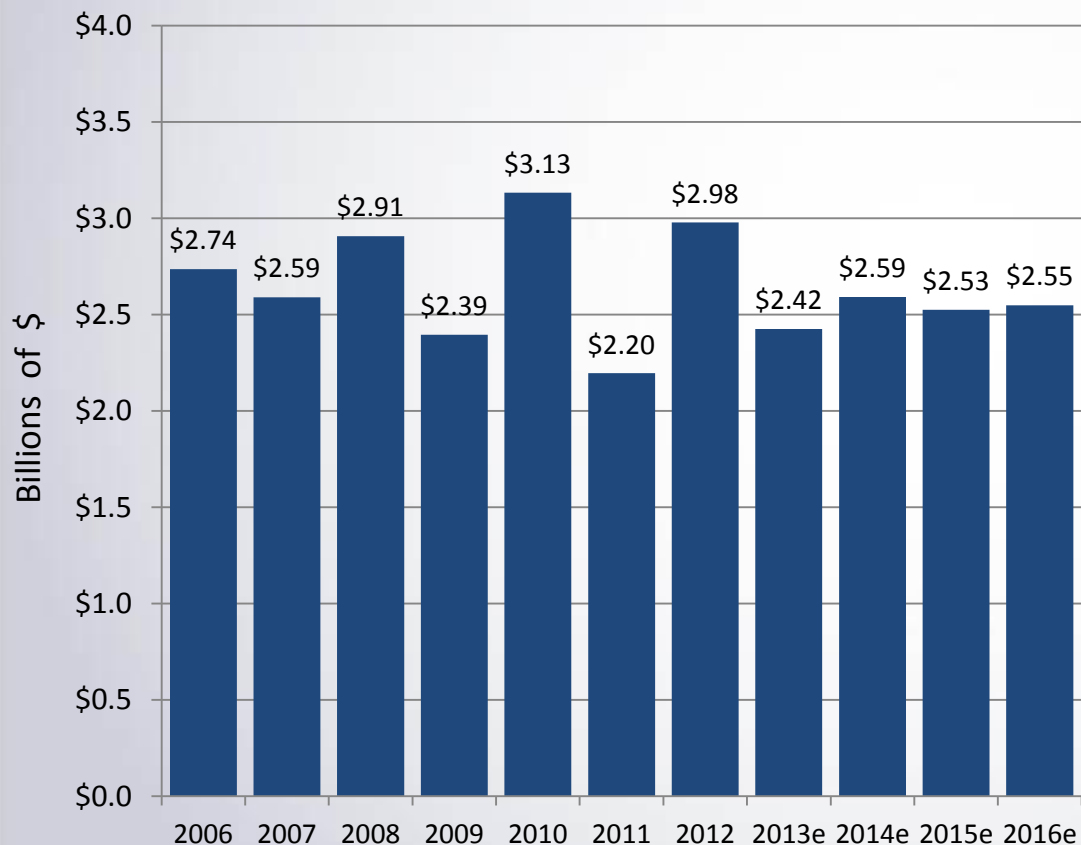
KYTC Sources of Funding and Expenditures

Source of Funds (millions of \$)	2006	2007	2008	2009	2010	2011	2012	2013 (e)	2014 (e)	2015 (e)	2016(e)
General Fund	\$7.10	\$7.70	\$6.45	\$5.18	\$4.67	\$4.86	\$5.09	\$5.68	\$5.68	\$5.83	\$5.90
Restricted Funds	\$249.42	\$371.92	\$536.31	\$330.22	\$878.06	\$234.64	\$539.51	\$326.35	\$326.54	\$349.40	\$357.44
Federal Funds (incl. GARVEEs)	\$871.79	\$697.65	\$738.63	\$725.40	\$734.30	\$718.29	\$718.31	\$630.96	\$782.57	\$643.37	\$606.67
ARRA Receipts					\$398.28						
Road Fund	\$1,144.84	\$1,162.62	\$1,229.99	\$1,229.06	\$1,117.19	\$1,181.49	\$1,259.95	\$1,449.13	\$1,476.59	\$1,526.80	\$1,578.71
Highway Bonds	\$462.55	\$350.00	\$395.76	\$110.00		\$56.00	\$456.00	\$12.50			
TOTAL SOURCES OF FUNDS	\$2,735.70	\$2,589.90	\$2,907.13	\$2,399.85	\$3,132.51	\$2,195.27	\$2,978.87	\$2,424.62	\$2,591.38	\$2,525.40	\$2,548.72
Expenditures (millions of \$)											
Personnel Cost	\$377.45	\$395.71	\$418.05	\$438.19	\$424.96	\$433.28	\$441.44	\$356.73	\$366.44	\$376.33	\$386.49
Operating Expenses	\$237.54	\$262.01	\$226.82	\$238.01	\$271.34	\$252.26	\$246.59	\$358.99	\$359.56	\$360.53	\$361.50
Grants Loans	\$203.66	\$183.35	\$252.14	\$212.01	\$265.53	\$231.61	\$240.91	\$258.19	\$274.08	\$288.33	\$303.33
Debt Service	\$182.53	\$220.13	\$238.53	\$215.20	\$132.98	\$146.47	\$188.53	\$228.80	\$264.04	\$277.77	\$292.21
Capital Outlay	\$1.38	\$5.26	\$12.96	\$4.32	\$1.03	\$0.93	\$0.93	\$2.78	\$2.89	\$3.01	\$3.13
Construction	\$1,728.60	\$1,518.24	\$1,746.91	\$1,285.99	\$2,030.30	\$1,114.59	\$1,842.58	\$1,190.12	\$1,184.25	\$1,055.13	\$1,065.68
Highway Construction	\$1,499.13	\$1,444.60	\$1,612.01	\$1,076.11	\$1,876.02	\$966.41	\$1,401.19	\$999.20	\$980.01	\$989.81	\$999.71
Louisville Bridge Construction (KY Portion)								\$73.40	\$225.90	\$86.70	\$50.00
TOTAL EXPENDITURES	\$2,731.15	\$2,584.71	\$2,895.41	\$2,393.72	\$3,126.14	\$2,179.14	\$2,960.99	\$2,395.61	\$2,451.26	\$2,361.11	\$2,412.35

Notes: 2013 and 2014 revenue sources from the Legislative budget, approved April 2012, but federal funds have been adjusted for anticipated GARVEE bonds approved and related to the Louisville Bridges project. Expenditures for 2013 and 2014 are based on the recommended budget for the same time period. Louisville Bridges construction information reflects spending from budget sources and does not include revenues/expenditures related to toll financing for the project. Road fund estimates for 2015 and 2016 from the State Budget Office. Expenditures for 2015 and 2016 are expected to be in line with historical increases. Highway construction expected to be static based on KYTC 2012 Recommended Highway Plan and the budget.

KYTC Revenues

**KYTC Revenues
2006-2016**



- KYTC revenues have averaged \$2.72 billion between 2006-2012.
- KYTC revenues will return to modest growth after a drop in 2013 due to an increase in Road Fund collections.
- The revenue bump in 2010 is due to ARRA/stimulus, while the bump in 2012 is due to \$400 million in bonds for construction work.
- Revenues from the Road Fund are constitutionally protected and returning to pre-recession levels.

The majority of Transportation Cabinet revenues come from user fees deposited in the Road Fund.

- **Road Funds** are receipts from motor vehicle usage tax, vehicle and boat registration, motor vehicle operator's licenses, motor fuels tax, tolls and interest. Road Funds are used for road construction, maintenance, operations, engineering, planning and research.

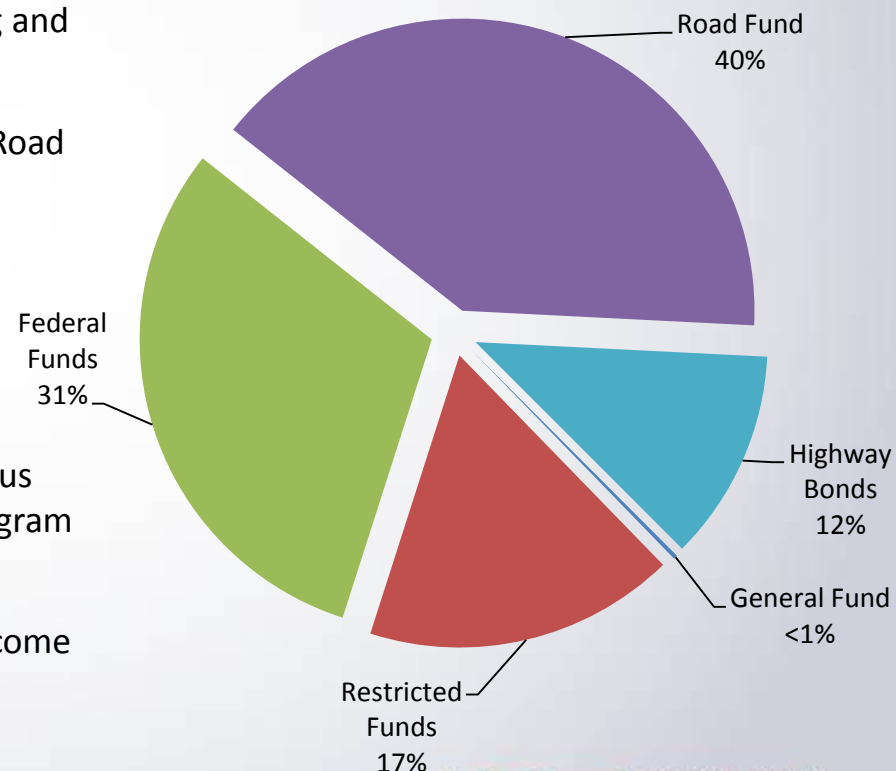
- **Highway Bonds** were used to fund Economic Development Road Projects.

- **General Funds** are collections of taxes on sales and usage, income, corporations, coal severance, property and lottery receipts.

- **Restricted Funds** are monies received from fees, sales, bond proceeds, licenses, investment income and other miscellaneous receipts. Restricted funds are used to fund the respective program for which the revenue is received.

- **Federal Funds** are derived from federal grants, contracts, income from investments, and other miscellaneous federal receipts received by state agencies.

**Average KYTC Revenue Sources
2006-2012**



KYTC Expenditures

**KYTC Expenditures
2006-2016**

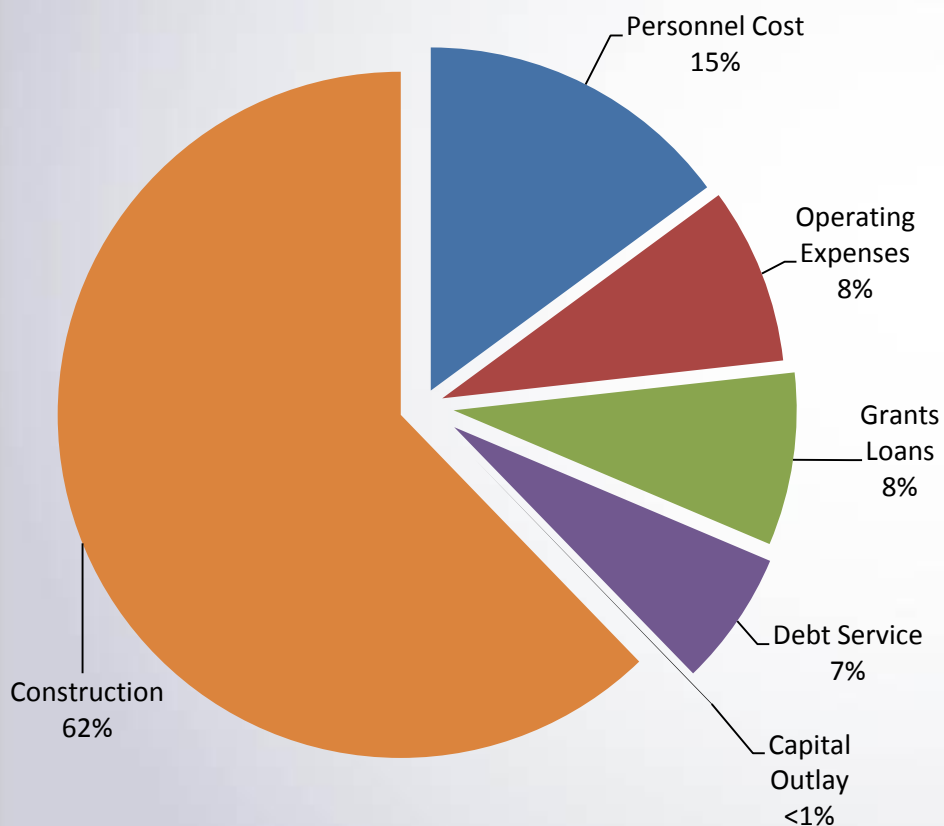


- KYTC expenditures have averaged \$2.7 billion between 2006-2012, similar to revenues.
- KYTC expenditures will return to modest growth in line with revenue collections.
- The expenditure bump in 2010 is due to ARRA/stimulus spend out, and the bump in 2012 is due to spending on mega-projects and bond revenue.
- Overall expenditures are expected to increase modestly in all spending areas with increased Road Fund revenues.

KYTC

Total Transportation Expenditures

KYTC Expenditures 2012

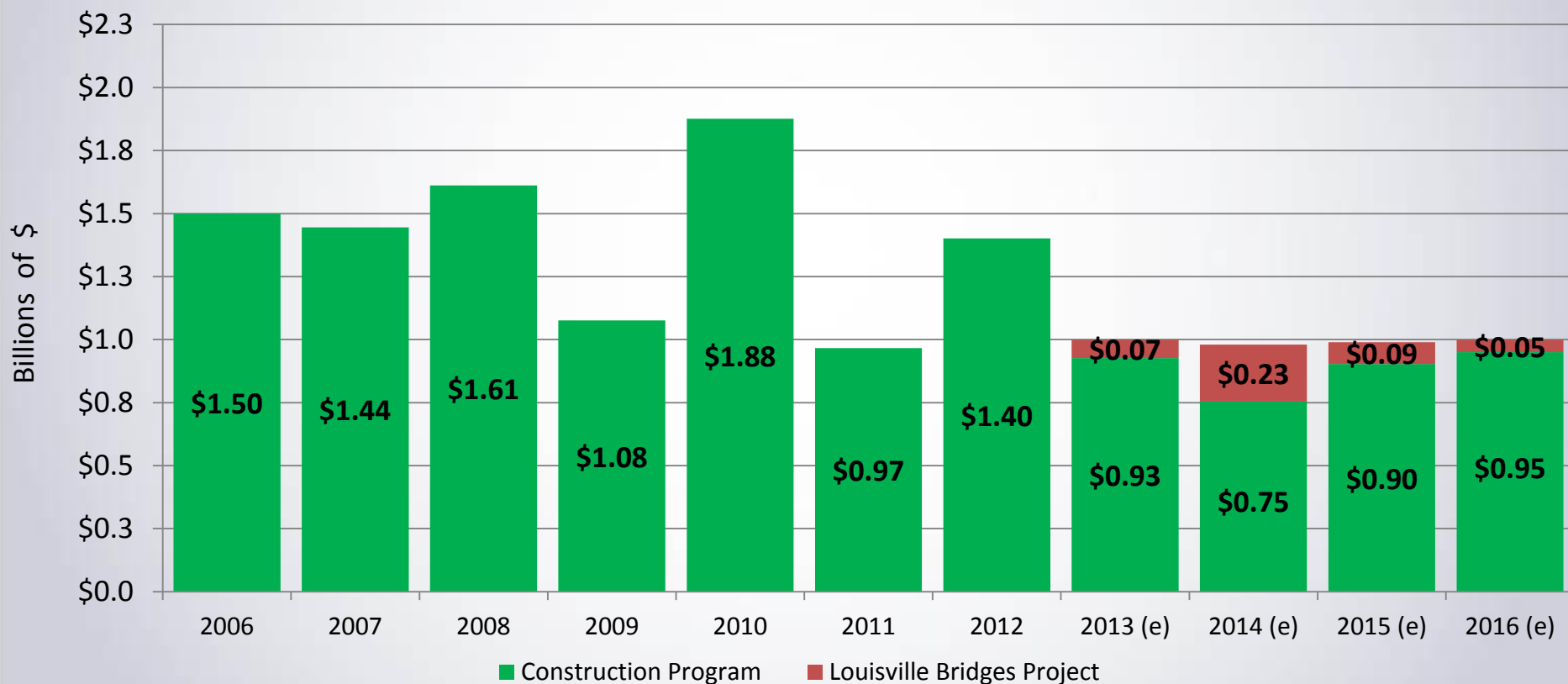


- KYTC 2012 expenditures total \$2.96 billion.
- Construction and Capital Outlay expenditures account for 62.26% of this budget.
- Increased construction expenditures are partially explained by capital spending on Kentucky's large-scale Louisville Bridges project.

Innovative Financing

- KYTC has authorized public-private partnerships (PPP), but has not initiated a PPP project as of yet.
- The KYTC has also used:
 - GARVEE bonds
 - Build America Bonds
 - Design-Build
 - Authorized in statute.
 - Weight-distance tax
 - Advance construction
 - Toll credits or “soft match”
- As a result of the 2005 and 2006 Kentucky legislative sessions, the KYTC was provided with enabling legislation and approval to pursue a specific group of interstate widening projects using \$440 million in GARVEE bonds:
 - I-65: Widen to six lanes from the Tennessee State line to Bowling Green (\$212 million).
 - I-75: Widen to six lanes from the end of the current six-lane section in northern Scott County to the current six-lane section south of KY22 in Grant County (\$199 million).
 - I-64: Widen to six lanes from the Snyder Freeway in Jefferson County toward Shelbyville in Shelby County (\$45 million).
- The KYTC has worked with the FHWA to develop a “GARVEE package” that leverages Kentucky’s federal highway program and accelerates the development and construction of key projects across the state. Kentucky’s strategic use of the GARVEE program has resulted in almost \$1.1 billion in GARVEE-supported projects completed or underway since the first authorization in 2005.
- An upcoming project utilizing innovative financing is the Ohio River Bridges Project (Louisville Bridge Project), expected to begin construction by the end of 2012.

Highway and bridge construction expenditures are expected to average \$1 billion for 2013-2016, including KYTC spending for the Louisville Bridges.



Note: Historical construction expenditures are from the construction expenditures line item of the Construction program in the KYTC Highway Office. These do not include spending on personnel, operations or debt service. Construction expenditures for 2013 and 2014 are from the proposed budget. KYTC expects to try and sustain their current \$1 billion contract program which is consistent with expenditure levels in 2013 and 2014. Louisville Bridges expenditures are only for anticipated outlays that are using federal revenues and state sources. It does not include project outlays financed by toll revenues.

Kentucky Bridge Market: Long Run Potential

- Kentucky rates 43rd for the potential bridge replacement market
 - 5.1% of bridges (712 structures) need to be replaced
 - The national average is 17.4%
 - Estimated cost would be \$598 million
- 3.2% of bridge decks are rated in poor, serious, critical or failed condition.
 - The national average is 3.9%

KENTUCKY AIRPORT MARKET

Kentucky Airports

- The primary airports in Kentucky are:
 - Cincinnati/Northern Kentucky International Airport (Covington)
 - Louisville International Airport (Louisville)
 - Blue Grass Airport (Lexington)
 - Barkley Regional Airport (Paducah)
 - Owensboro-Daviess County Regional Airport (Owensboro)
- Total 2011 Enplanements:
 - ↓ 8% from 2010
 - ↓ 45.5% from 2006

Cincinnati/Northern Kentucky Airport (CVG)

- Reclassified as medium hub (from large) in 2010,
 - 51st largest airport in 2011
- Enplanements: 3.5 million (2011)
 - Trending: ↓ 53% (2007 to 2011)
 - Forecast: ↑ 24% (2012 to 2016)
- 2011 number of based aircraft: 11
 - Forecast: ↑ to 13 in 2016
- \$359.3 million in FAA identified needs (2011 to 2015)
- Currently bidding runway work, consolidated all airlines into one terminal in 2012
- New Master Plan expected 2012

CVG Sources of Funding and Expenditures

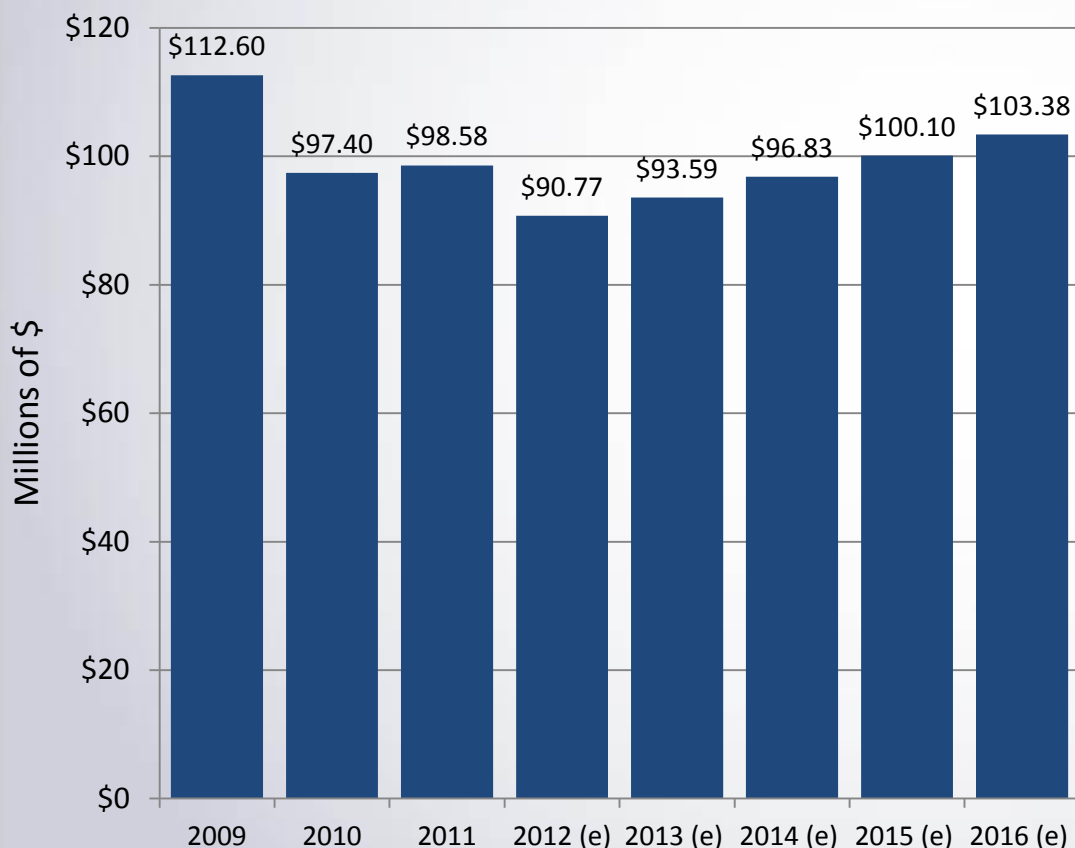
Source of Funds (millions of \$)	2007	2008	2009	2010	2011	2012 (e)	2013 (e)	2014 (e)	2015 (e)	2016(e)
Aeronautical Operations	\$44.3	\$46.2	\$46.1	\$46.5	\$46.3	\$46.9	\$47.5	\$48.0	\$48.6	\$49.2
Non-aeronautical operations	\$40.7	\$38.5	\$36.7	\$35.9	\$36.3	\$30.4	\$31.9	\$33.8	\$35.6	\$37.5
Non-operating revenues (expenses)*	\$25.3	\$77.7	\$28.9	\$15.0	\$15.8	\$13.2	\$13.9	\$14.7	\$15.5	\$16.3
Grants (all governments)	\$0.0	\$26.5	\$20.9	\$9.3	\$7.8	\$6.6	\$6.9	\$7.3	\$7.7	\$8.2
Passenger Facility Charges	\$17.3	\$24.9	\$16.1	\$10.3	\$8.9	\$7.4	\$7.8	\$8.2	\$8.7	\$9.1
Total bonds & proceeds	\$90.8	\$12.4	\$1.0	\$0.0	\$0.1	\$0.3	\$0.3	\$0.4	\$0.4	\$0.4
Bonds	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Expenditures (millions of \$)										
Operations	\$62.0	\$62.9	\$106.7	\$110.0	\$112.7	\$86.7	\$91.1	\$96.4	\$101.7	\$107.1
Debt financing	\$19.6	\$69.4	\$30.5	\$30.5	\$30.5	\$34.6	\$23.4	\$25.4	\$8.6	\$5.2
Capital Investment	\$28.5	\$19.6	\$30.7	\$7.0	\$25.5	\$23.8	\$25.0	\$26.5	\$27.9	\$29.4
Airfields	\$22.2	\$0.8	\$2.1	\$3.4	\$7.2	\$9.1	\$9.6	\$10.1	\$9.7	\$10.2
Terminals	\$4.0	\$15.9	\$26.4	\$1.8	\$11.6	\$8.4	\$8.9	\$10.8	\$12.9	\$13.6
Parking	\$0.2	\$1.6	\$0.1	\$0.1	\$0.0	\$0.1	\$0.2	\$0.4	\$0.2	\$0.2
Roadways, rail and transit	\$0.0	\$0.0	\$0.0	\$0.1	\$1.0	\$0.3	\$0.3	\$0.5	\$0.8	\$0.8
Other	\$2.1	\$1.2	\$2.1	\$1.6	\$5.7	\$3.2	\$3.3	\$4.7	\$4.4	\$4.6

Notes: Data through 2011 from FAA. 2012 to 2016 estimates based on ARTBA analysis of historical data and modeling to forecast capital investment. Future assumptions on enplanements provided by FAA. Future debt service from the CVG 2011 financial summary. Historical share of spending among capital investment categories is expected to remain relatively steady with an increase in the share of airfield work over the next 2 to 3 years based on past trends.

*FAA changed some of the reporting requirements and categories for revenues and expenditures in 2009, therefore year to year comparisons are not applicable in all categories.

CVG Airport Revenues

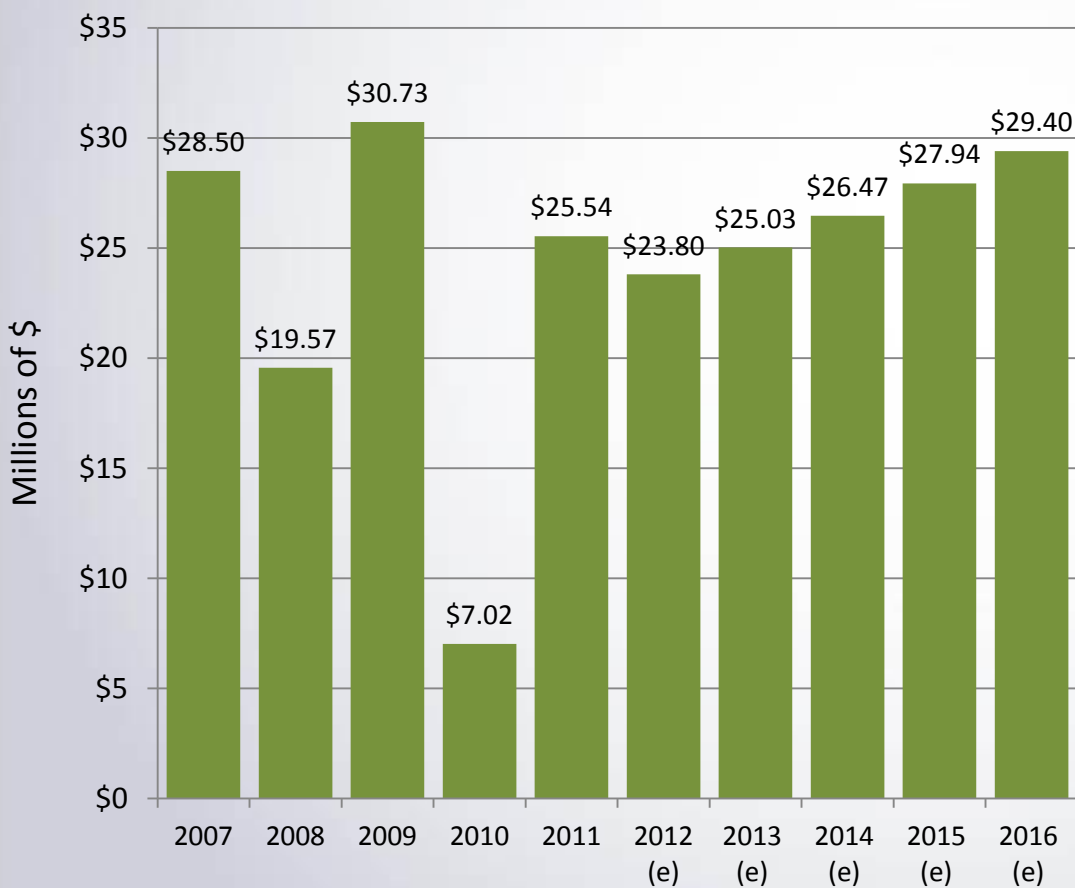
CVG Major Revenues



- Revenues are expected to drop in 2012 as the number of enplanements at CVG declines 16.4% from 3.5 to 2.9 million.
- Growth is expected to resume in future years as the number of enplanements grows.

CVG Airport Capital Investment

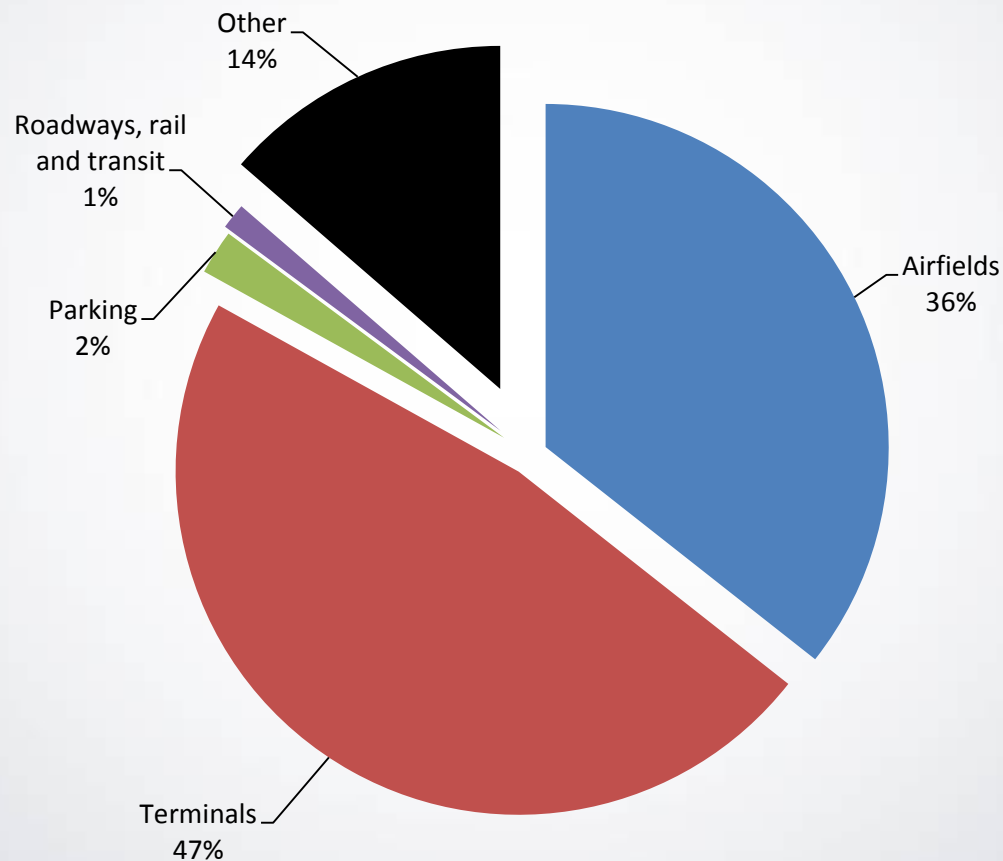
CVG Capital Investment



- Increase in enplanements and overall local economy will drive continued capital growth

CVG Type of Capital Spending

2007 to 2011 average

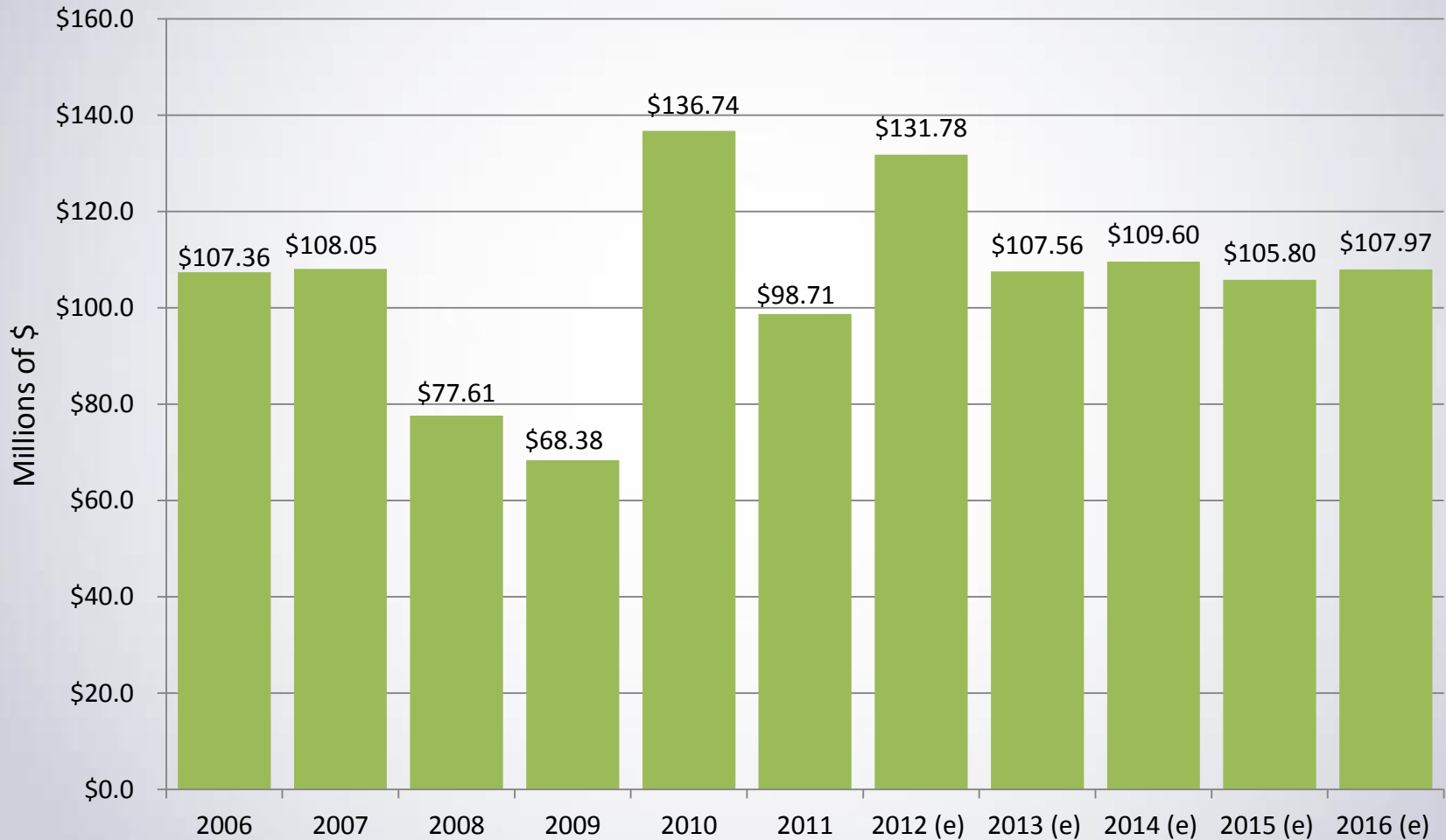


KENTUCKY PLANNING AND DESIGN CONSULTANT WORK

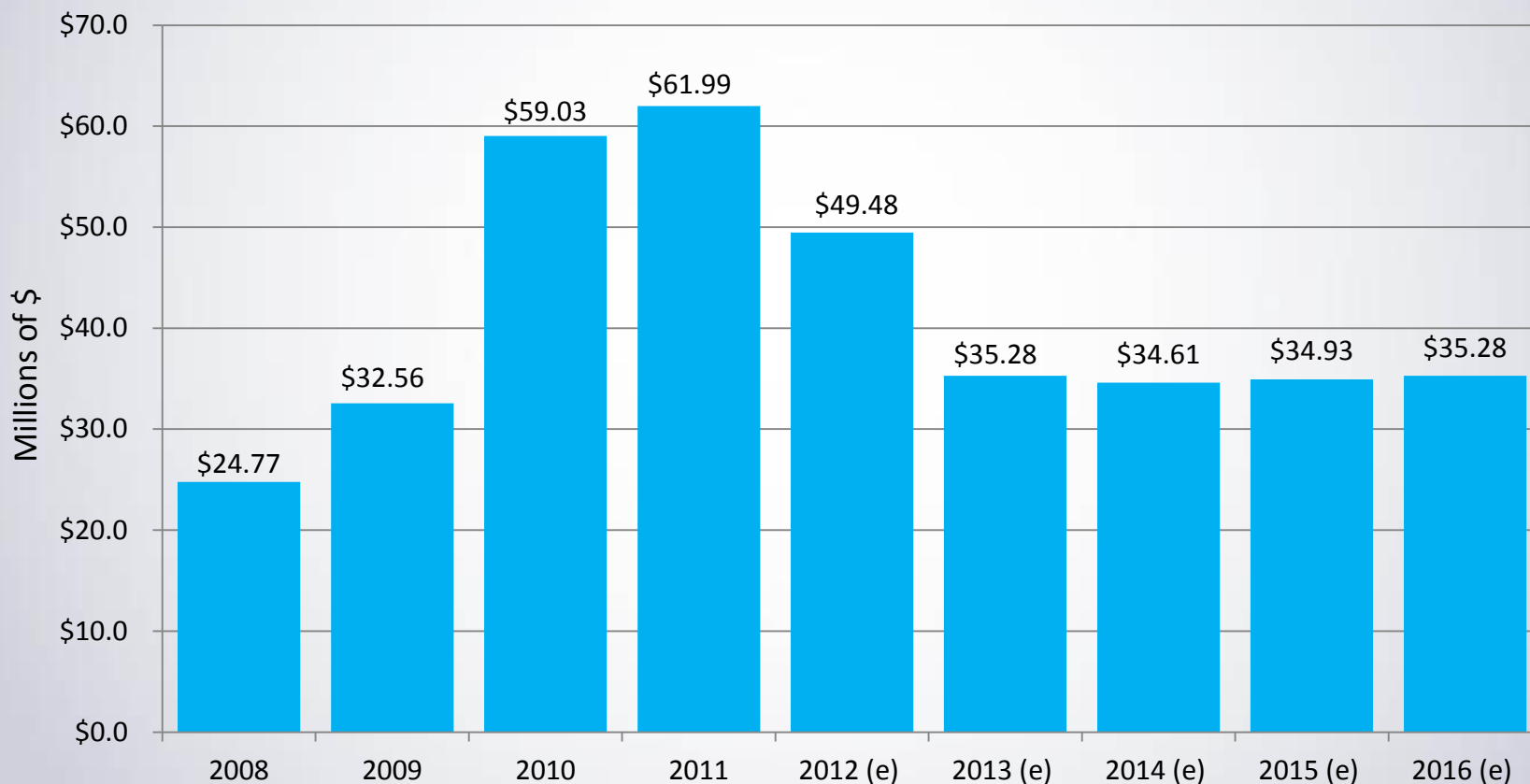
Types of Projects

Top Consultants

Kentucky Transportation Cabinet Total Consultant Contract Awards



Kentucky Consultant Contract Awards for the Highway & Bridge Design Market



Source: KYTC Special Inquiry & ARTBA estimate for 2012 to 2016.

Note: The traditional design market includes the following categories: Bridge Design, Bridge Replacement, Highway Design, Highway Rehabilitation/Reconstruction, Highway Widening, Pavement Rehabilitation, and Engineering.

Consultant awards for 2006 and 2007 are not categorized and so are not included in this graph.

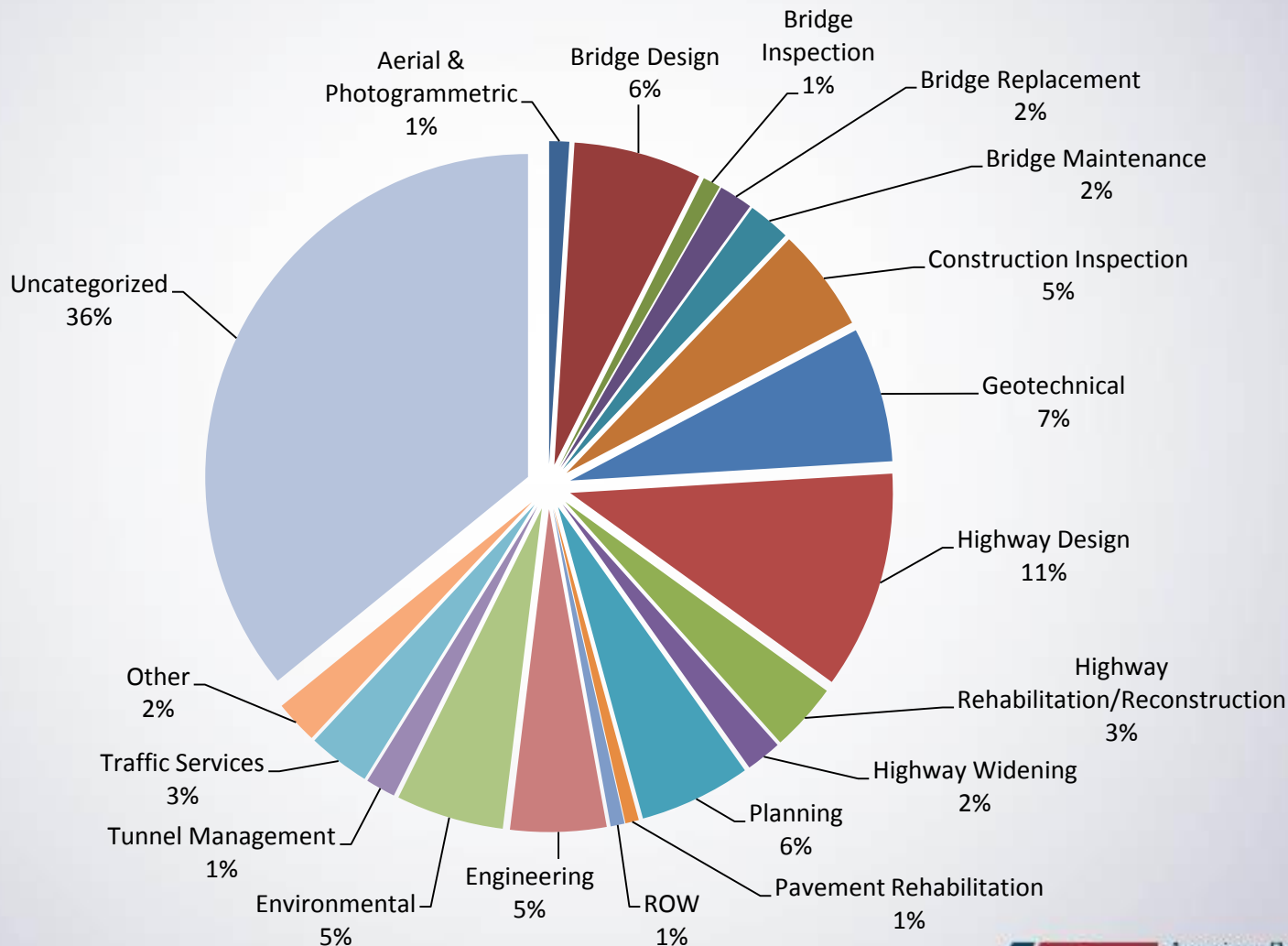
KYTC Planning and Design

- KYTC contracts all types of professional services as needed, including design work. Allocation is based on personnel assigned to a project, staff resources and expertise, as well as the current workload and capacity of in-house engineers.
- In order to respond to KYTC advertisements, firms must be prequalified in the specified areas before the project advertisement appears in a Procurement Bulletin on the KYTC website. KYTC does not use the GEC category for consultants, rather the following prequalification areas:

Aviation	Geotechnical Services	Traffic Engineering
Bikeway Planning	Highway Operations & Bridge Maintenance Services	Transportation Delivery Systems
Construction Engineering Services	Intelligent Vehicle Highway Systems	Transportation Planning Services
Environmental and UST Services	Roadway Design	
Environmental, Aquatic & Terrestrial Ecosystem Analysis	Structure Design	

- Prequalification must be renewed annually. A list of all prequalified firms is posted on the KYTC website, and is updated frequently.
 - As of June 19, 2012, 14% of prequalified firms are classified as DBE.
- Consultants are selected through a noncompetitive process. Professional service contracts for engineering and engineering-related services are negotiated based on demonstrated competence and qualification for services required at fair and reasonable prices. Professional service contracts or their modifications must be submitted to the Legislative Research Commission Government Contract Review Committee for examination and approval before they can be awarded. KYTC uses the following methods in contracting for professional services: 1) lump sum, 2) cost plus a fixed fee, 3) specific rates of compensation and 4) cost per unit of work.
- While Kentucky State Law does not currently allow for KYTC to contract with design-build or other alternative procurement methods, legislative permission has been granted by previous legislatures though the budget process to allow for some design-build projects by KYTC.
 - As a result of Kentucky legislation passed in April, the Ohio River Bridges design-build project is expected to begin construction by the end of this year.
- Archived results of consultant projects can be found on KYTC's website.

KYTC Consultant Projects by Value of Awards 2006-2011

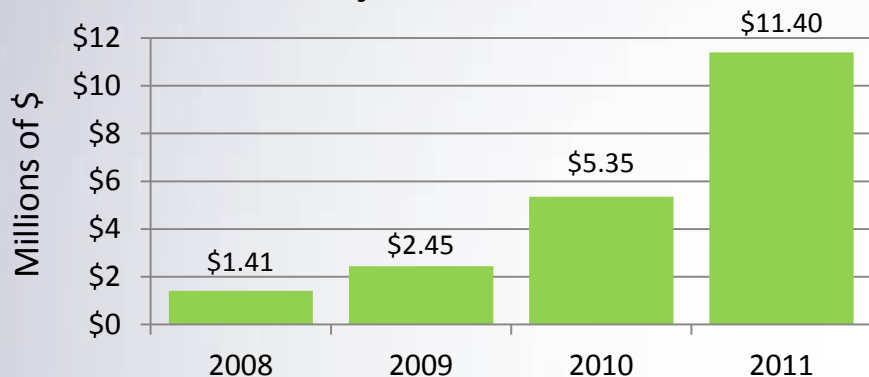


Source: KYTC Special Inquiry

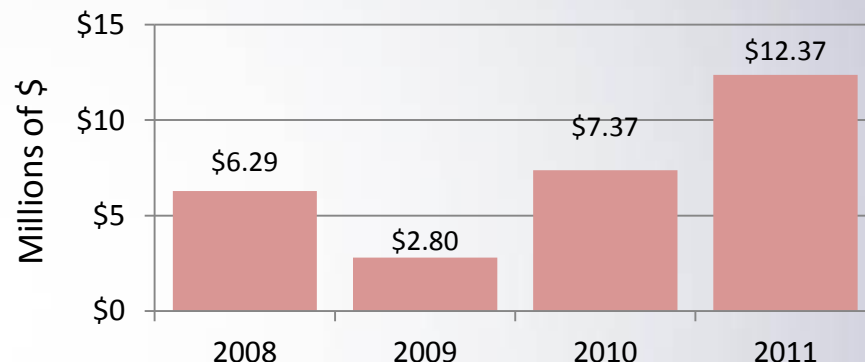
Note: "Other" includes the following project types: Aviation Planning & Engineering, Fracture Critical Inspection, Sign Support Inspection, Structure Design, Structural Steel Fabrication, Structural Steel Shop Inspection, Underwater Inspection, Airport Pavement Management, Water Line Design, Value Engineering Services, and Scoping/Surveying.

KYTC spending on consultant projects has increased for several project types in recent years.

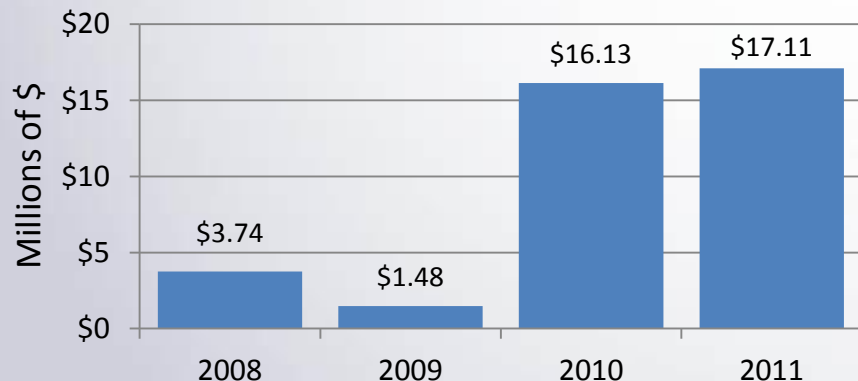
Highway Rehabilitation/Reconstruction Project Value 2008-2011



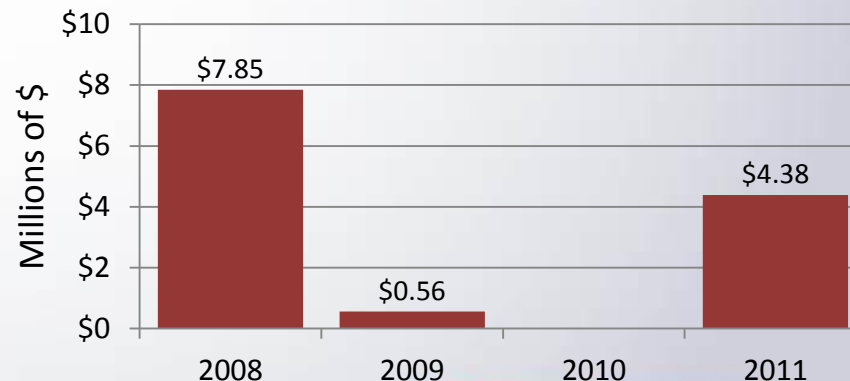
Engineering Project Value 2008-2011



Bridge Design Project Value 2008-2011

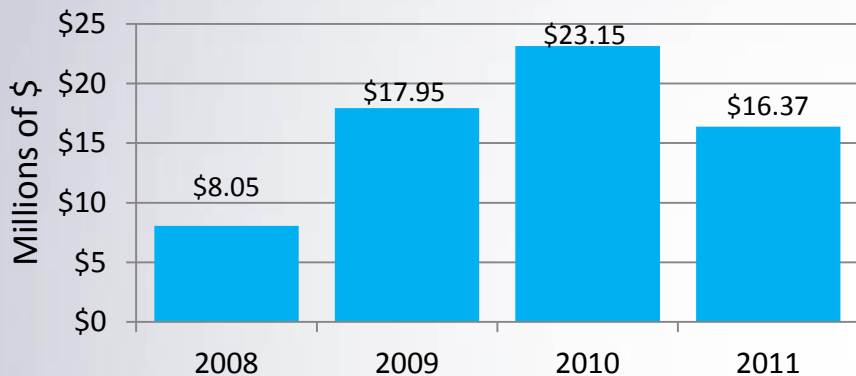


Bridge Maintenance Project Value 2008-2011

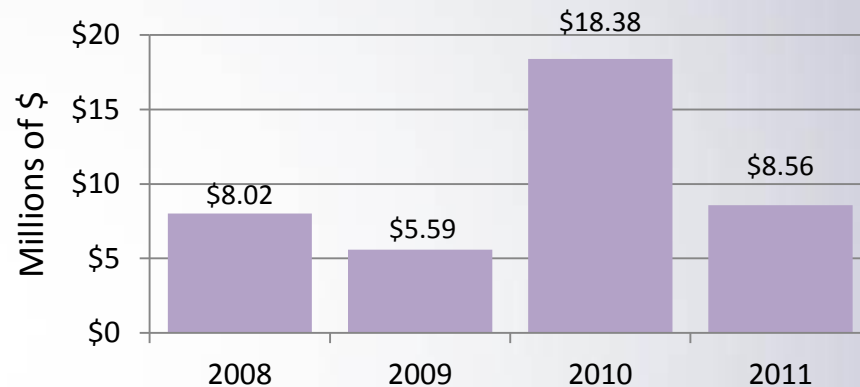


After a peak in 2010, KYTC spending on other consultant project types has decreased.

Highway Design Project Value 2008-2011



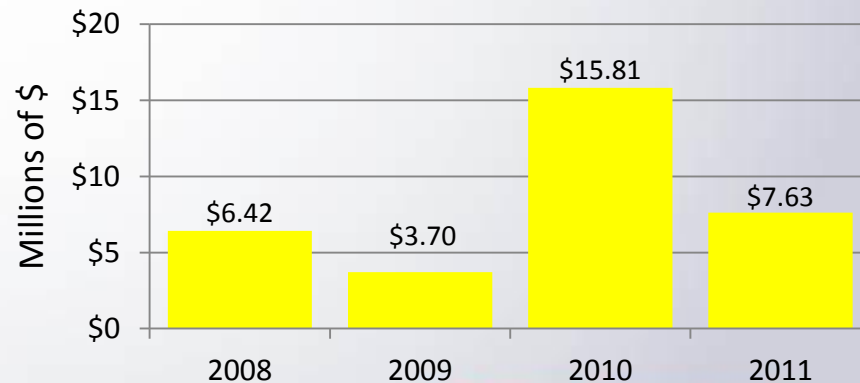
Geotechnical Project Value 2008-2011



Highway Widening Project Value 2008-2011

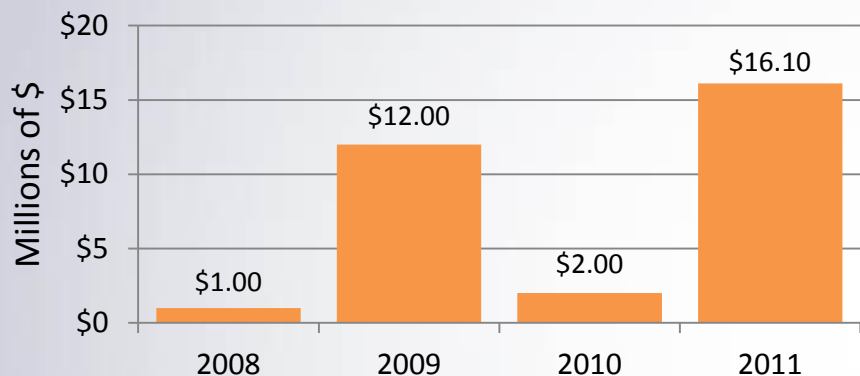


Planning Project Value 2008-2011

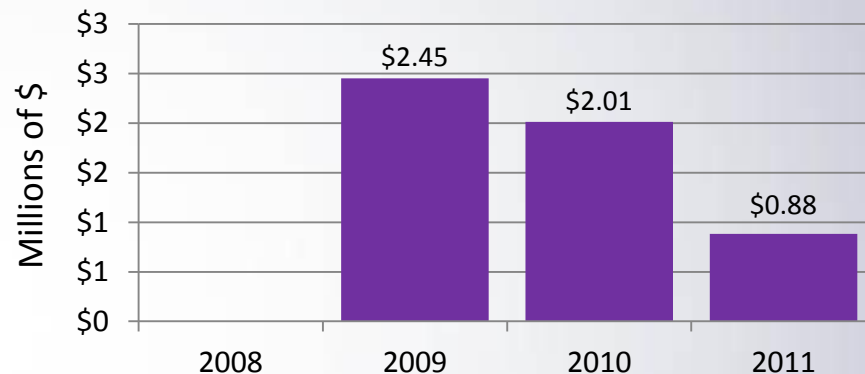


KYTC spending on other consultant project types has varied in recent years.

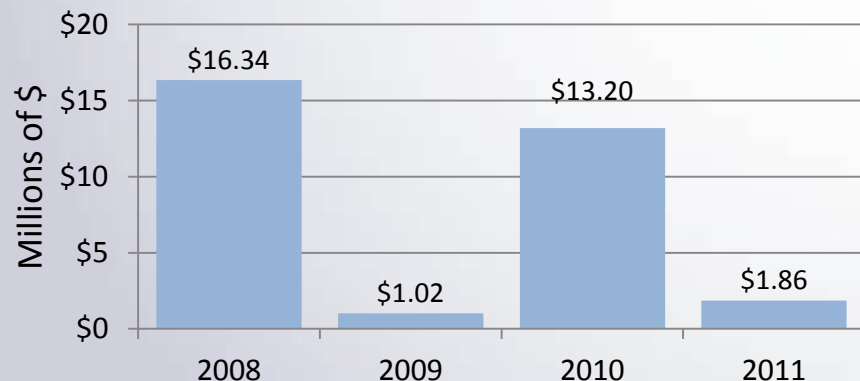
Construction Inspection Project Value 2008-2011



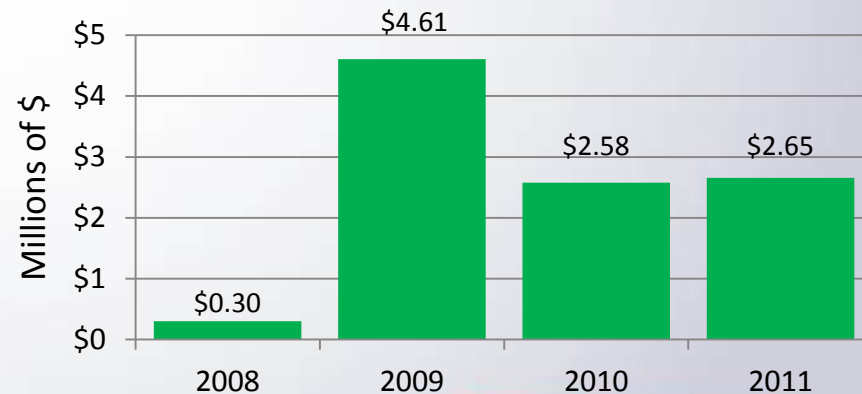
Bridge Inspection Project Value 2008-2011



Environmental Project Value 2008-2011



Bridge Replacement Project Value 2008-2011



KYTC Most Frequently Used Consultants

Top Consultants by Total Contract Value <u>CY 2006-2011</u>	Total Value of Awards (in million \$)
QK4, Inc.	\$47.45
Florence & Hutcheson, Inc.	\$32.18
HMB Professional Engineers	\$27.47
Michael Baker Jr., Inc.	\$27.05
H.W. Lochner, Inc.	\$23.23
URS Corporation	\$22.44
Palmer Engineering Company	\$21.68
ENTRAN, PLC.	\$19.67
WMB, Inc.	\$18.21
Greenman-Pedersen, Inc.	\$18.00
Community Transportation Solutions	\$16.72
Wilbur Smith & Associates	\$16.17
Northrop Grumman	\$16.00
GRW Engineers, Inc.	\$15.66
American Engineers, Inc.	\$15.16

Top Consultants by Total Number of Awards <u>CY 2006-2011</u>	Total Number of Awards
URS Corporation	26
HMB Professional Engineers	22
Florence & Hutcheson, Inc.	21
Palmer Engineering Company	20
American Engineers, Inc.	18
ENTRAN, PLC.	18
Burgess & Niple, Inc.	16
QK4, Inc.	16
Crawford J.M. & Associates	15
WMB, Inc.	14
Wilbur Smith & Associates	11
American Consulting Engineers	10
GRW Engineers, Inc.	10
PB Americas, Inc.	10
Municipal Engineering Company	9

KYTC Top Consultants by Value of Contracts 2006-2011 (in million \$)

Consultant	Highway Design	Engineering	Planning	Bridge Design	Constr. Inspection	Traffic Services	Highway Maintenance	Bridge Maintenance	Highway Widening	Environmental	Bridge Replacement	Bridge Inspection	ROW	Scoping/Surveying/Study	Other	Uncategorized	Total
QK4, Inc.	\$11.78	\$1.42	\$10.48				\$3.34	\$0.05		\$1.60			\$3.34	\$0.30		\$15.14	\$47.45
Florence & Hutcheson, Inc.	\$0.25		\$0.55		\$16.00	\$0.10	\$1.77		\$0.66		\$0.63				\$6.50	\$5.72	\$32.18
HMB Professional Engineers	\$9.02		\$2.72				\$0.39	\$0.31		\$1.60	\$0.16			\$0.03	\$0.59	\$12.66	\$27.47
Michael Baker Jr., Inc.		\$1.04		\$19.84								\$0.29				\$5.88	\$27.05
H.W. Lochner, Inc.	\$0.82		\$0.84		\$7.00		\$0.25		\$0.08		\$0.04			\$0.28	\$0.97	\$12.94	\$23.23
URS Corporation	\$2.47	\$3.33	\$0.23	\$1.22		\$3.45	\$0.09	\$0.37	\$0.12	\$1.00	\$1.99	\$0.50			\$0.06	\$7.61	\$22.44
Palmer Engineering Company	\$2.50	\$0.45	\$3.05	\$0.75			\$1.68	\$0.10	\$1.97		\$0.32	\$0.51		\$0.02	\$0.51	\$9.81	\$21.68
ENTRAN, PLC.	\$2.57		\$2.75	\$1.50		\$0.25	\$2.43		\$3.35			\$0.90	\$0.26	\$0.27	\$2.40	\$2.99	\$19.67
WMB, Inc.	\$3.37		\$0.44	\$0.75		\$0.02	\$0.81		\$1.17		\$0.05				\$2.06	\$9.54	\$18.21
Greenman-Pedersen, Inc.								\$10.00				\$2.00				\$6.00	\$18.00
Community Transportation Solutions		\$16.72															\$16.72
Wilbur Smith & Associates		\$5.03	\$1.27							\$3.10	\$2.32			\$1.74		\$2.71	\$16.17
Northrop Grumman						\$10.00										\$6.00	\$16.00
GRW Engineers, Inc.	\$3.68		\$0.82			\$0.80	\$1.59		\$0.98					\$0.08		\$7.71	\$15.66
American Engineers, Inc.	\$6.71	\$0.12	\$0.93		\$0.10		\$0.69	\$0.09	\$0.37		\$0.09		\$0.16			\$5.91	\$15.16

Source: KYTC Special Inquiry

Notes: The category Other includes: Fracture Critical Inspection, Sign Support Inspection, Pavement Rehabilitation, Water Line Design and Geotechnical.

Consultant award data from 2006-2007 is not differentiated by project type, and so is listed under the category Uncategorized.

The ARTBA Economics and Research Team
1219 28th St. NW
Washington, D.C. 20007