JACOBS CONSULTANCY

F O C U S

Baggage Screening Investment Study

March 2007

HIGHLIGHTS AND RECOMMENDATIONS

The Baggage Screening Investment Study (BSIS), led by Jacobs Consultancy, was conducted in response to directives in the Intelligence Reform and Terrorism Prevention Act of 2004. These directives required the Department of Homeland Security (DHS) and Transportation Security Administration (TSA) to (1) expedite the installation of explosives detection system (EDS) machines for checked baggage screening, and (2) complete a funding and financing study in collaboration with industry stakeholders. After review by DHS and others in the Administration, TSA released the study to Congress in February 2007.

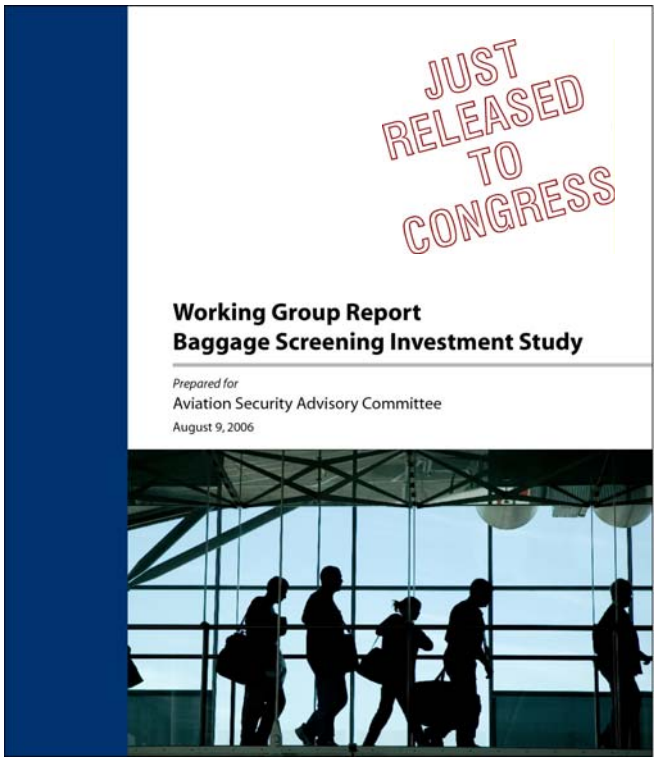
STUDY PURPOSE

The primary purpose of the study was to identify a strategy for investing the necessary capital and operating and maintenance (O&M) resources to:

- **Increase security systemwide** by deploying EDS equipment to as many airports as practicable
- **Minimize life-cycle costs** by (a) leveraging emerging technologies and (b) deploying the best possible screening solutions to each of the 277 airports categorized by TSA as threat category X, I, II and III airports (CAT X-III). By balancing upfront capital costs with long-term O&M costs through varying levels of automation, optimal solutions are identified to minimize life-cycle costs
- **Minimize operational impacts** to TSA and airport/airline operations through well-designed and well-placed EDS screening solutions
- **Provide flexibility and scalability** by implementing security infrastructure that will more readily adapt to growing airline traffic, potential new threats, and other industry changes over the next 20 years

PARTICIPANTS

The BSIS was conducted in close collaboration between TSA and aviation industry stakeholders during 8 months of 2006, through a BSIS Working Group sponsored by the Aviation Security Advisory Committee (ASAC). The Working Group consisted of a Steering Committee supported by a Technical Team and a Finance Team. Each of the subgroups included DHS, TSA, airport, and airline representatives. The Finance Team also included finance industry specialists and relied on technical advice from the Federal Aviation Administration and the Federal Highway Administration's National Resource Center. Many baggage handling system (BHS) designers periodically assisted the Technical Team with development and review of Planning and Design Guidelines.



FINDINGS

Highlights of the Working Group's observations and conclusions are:

- The capital cost of BHS and infrastructure is the largest cost hurdle to implementing optimal systems (not the equipment costs)
- Under the current cost-sharing arrangements, capital funding to complete initial optimal screening systems would total about $4.5 billion, of which TSA's share would be about $3.7 billion, and the airport/airline share would be about $0.8 billion under existing cost-sharing arrangements
- At current investment rates, optimally scaled EDS at CAT X-III airports (277 airports) will not be completed until about 2024

Jacobs Consultancy, formerly Leigh Fisher Associates, led the Baggage Screening Investment Study consulting team, in association with McBee Strategic Consulting, Northrop Grumman Corporation, Level Edge Software, Mercator Advisors, and Xenon Consulting. Working with representatives of airports, airlines, TSA, Department of Homeland Security, finance industry specialists, and baggage handling system designers, the team completed the congressionally mandated study in 8 months.

WHAT DOES THE STUDY RECOMMEND?

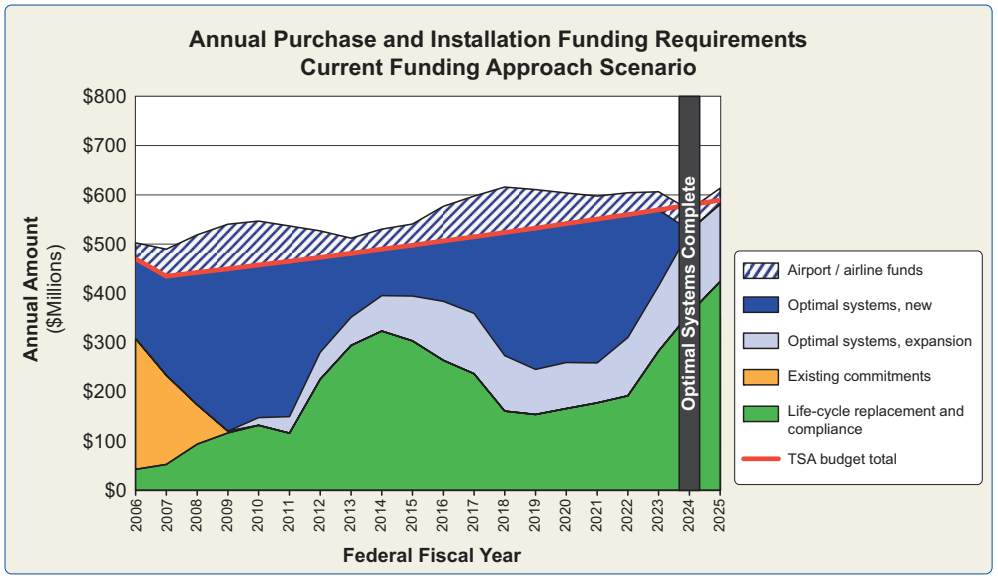
The Working Group recommended a package of initiatives to expedite deployment and provide a sustainable investment strategy:

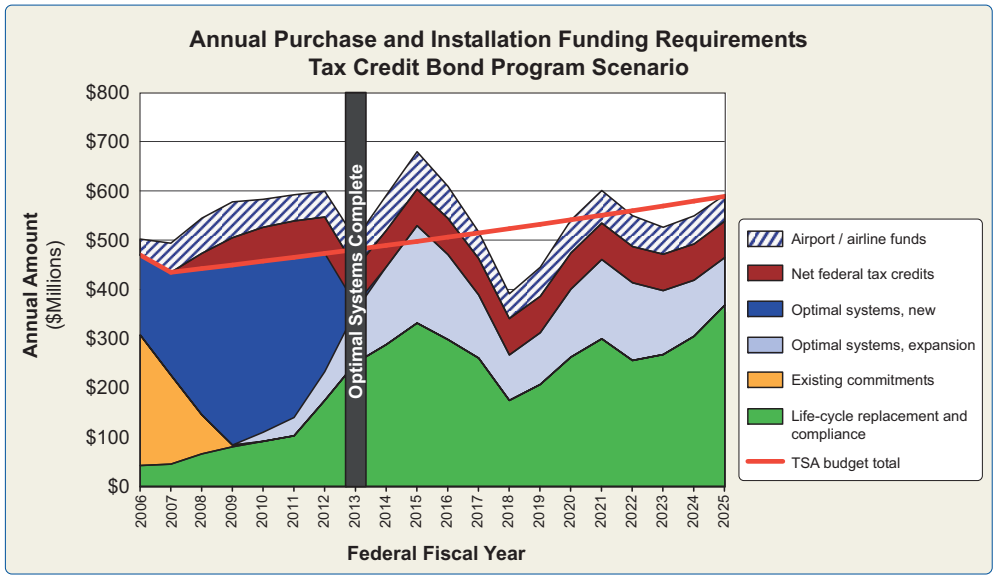
1. ***Create a voluntary $3 billion tax credit bond (TCB) program*** under which airports could issue tax credit bonds to fund infrastructure to accommodate optimal EDS baggage screening systems. With this program, the effective share of facility modification costs borne by airports and airlines would be about 25%.
2. ***Continue federal appropriations of at least $435 million per year,*** escalating annually, for purchase and installation of EDS equipment and for issuance of facility modification funding to airports and airlines that do not participate in the TCB program. The enacted budget for federal fiscal year (FFY) 2007 includes $529 million for these purposes.
3. ***Maximize TSA's flexibility in using purchase and installation funds*** by (a) appropriating purchase and installation funds as a combined line item and (b) avoiding set-asides by hub size or for specific technologies.
4. ***Enhance passenger facility charge (PFC) eligibility*** to include TCB sinking fund payments and exclusive-use outbound baggage handling systems to accommodate EDS.
5. ***Implement a formal cost management process*** that focuses on active engagement of and coordination with stakeholders that includes (a) publishing BSIS Planning and Design Guidelines, (b) implementing an enhanced design and funding approval process, (c) increasing TSA program management resources, and (d) setting up an ongoing industry stakeholder working group.

EXPECTED RESULTS

Implementation of the Working Group's recommendations would:

- **Accelerate deployment of initial optimal systems** by 11 years, from 2024 under the current funding approach, as shown on the upper figure to the right, to 2013, as shown on the lower figure to the right. As participation in the TCB program would be voluntary, the exact completion date will depend on the level of participation
- **Reduce overall present value life-cycle costs** by $1.2 billion over 20 years. The cost to the federal government would be reduced $1.47 billion due to avoided staffing costs. The cost to the aviation industry would increase by $270 million owing to increased O&M costs for BHS; however, airports and airlines would benefit from hard-to-quantify benefits, such as reduced lobby congestion, as screening equipment is removed from lobbies
- **Provide direct security benefits** by reducing the number of bags screened by primary explosives trace detection (ETD), which is very labor-intensive, less efficient, and more susceptible to human factors issues
- **Deliver indirect security benefits,** including reducing congestion and handling of bags in airport lobbies, and transferring screeners currently used for checked baggage screening to passenger checkpoint installations





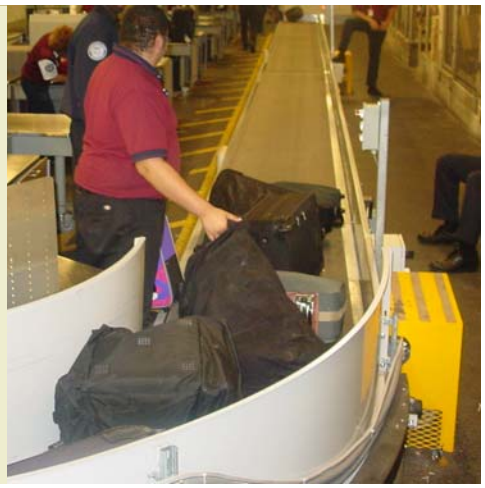
TSA FUNDING TO AIRPORTS

WILL TSA ISSUE MORE LETTERS OF INTENT TO AIRPORTS?

Through FFY 2004, TSA executed eight Letters of Intent (LOIs) to provide multi-year funding to each of nine airports over a 3- or 4-year period. The last payment is scheduled to be issued in FFY 2007. Unless concerns about making multi-year funding commitments are resolved—for example, through the safeguards of a trust fund or other form of future year funding—additional TSA LOIs seem unlikely.

ARE OTHER FORMS OF FUNDING AVAILABLE?

TSA has provided 1-year funding agreements since FFY 2004 through Other Transaction Agreements (OTAs). To date, TSA has issued more than 30 OTAs and is likely to continue issuing OTAs from its purchase and installation funding.



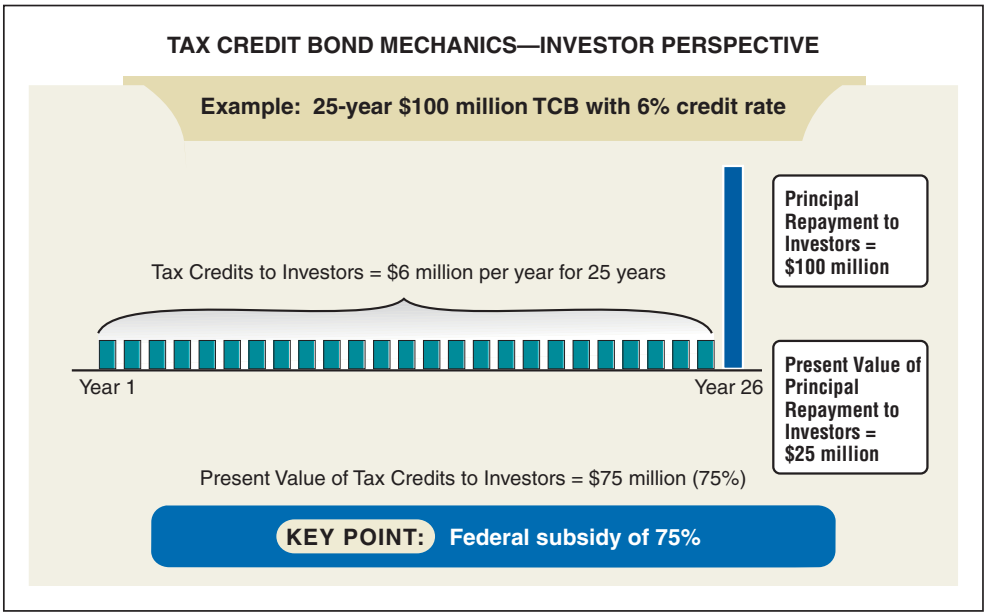
TAX CREDIT BONDS

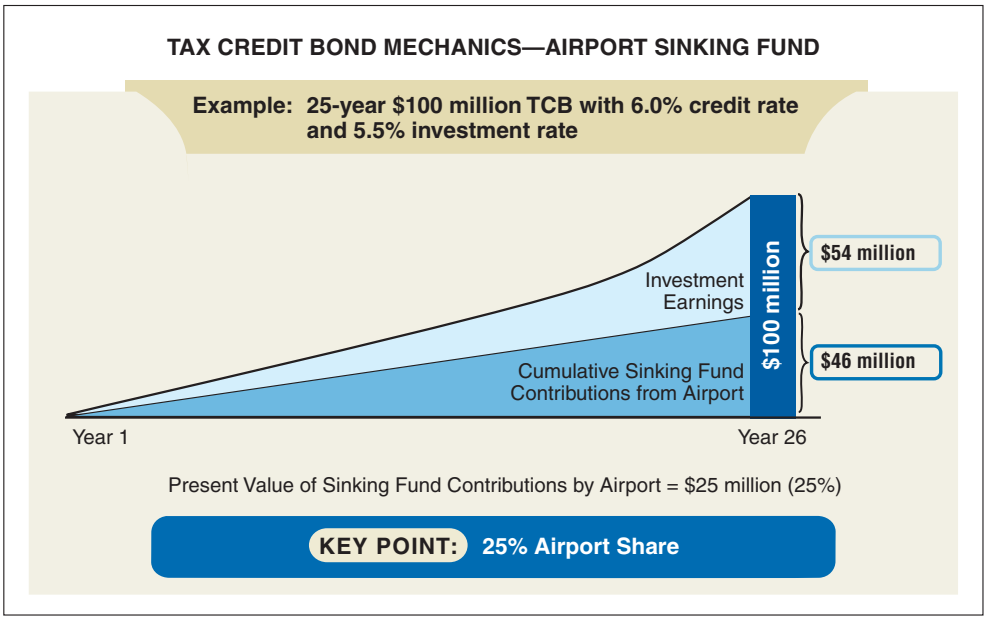
WHAT ARE TAX CREDIT BONDS ?

Tax credit bonds (TCBs) involve the issuance of taxable debt by state and local governments or other non-federal entities for designated capital purposes. In lieu of cash interest, bondholders receive annual tax credits that can be applied against their federal income tax liability, as shown on the upper figure on the right. Principal is repayable by the issuer (in this case, the airport operator) from non-federal sources. TCBs are generally structured as "bullet" term bonds, where the principal is repaid in a lump sum at bond maturity, to maximize the value of the tax credit. The issuer makes periodic deposits to a sinking fund, that would earn interest, to provide for principal retirement at maturity, as shown on the lower figure on the right.

WHAT PRECEDENTS EXIST FOR TCB PROGRAMS?

Tax credit bonds are a relatively new form of financial instrument. TCBs were introduced in 1997 in the form of Qualified Zone Academy Bonds (QZABs), a $400 million per year, 2-year program targeted to public school projects in lower income neighborhoods. Congress has renewed the QZAB program several times since then; a total of $3.2 billion of these bonds have been authorized for issuance. Last year, Congress enacted a similar 2-year, $800 million TCB program for clean renewable energy projects and a $350 million TCB program for Hurricane Katrina recovery.

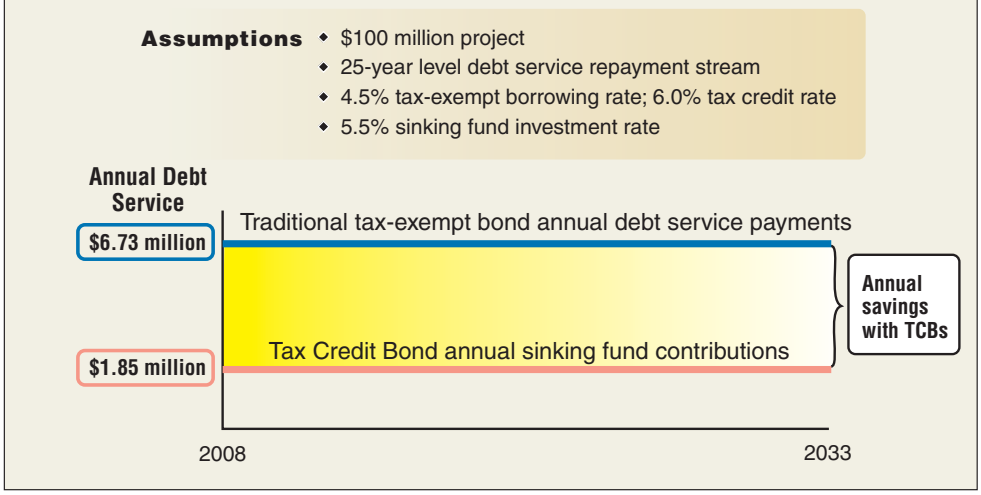




WHAT AIRPORTS WOULD BE ELIGIBLE TO PARTICIPATE IN THE TCB PROGRAM?

All CAT X-III airports would be eligible to participate on a voluntary basis. It is anticipated that airports which frequently access the debt markets to raise capital would be the most likely issuers of TCBs. Smaller airports would not be excluded, but the resource demands would be relatively high compared with their smaller borrowing needs. Also, the federal subsidy provided by the recommended TCB program (about 75%) would be less than the 90% federal contribution small- and non-hub airports were eligible to recieve previously through LOIs.

COMPARISON OF TAX CREDIT BONDS WITH CONVENTIONAL BOND FINANCING



WHAT COSTS WOULD BE ELIGIBLE FOR TCB FINANCING?

BHS and infrastructure modification design and construction costs necessary to accommodate EDS implementation in accordance with the BSIS Planning and Design Guidelines would be eligible, and would likely include (1) costs of design activities, such as planning, engineering, design, and environmental review, (2) construction, reconstruction, rehabilitation, and acquisition of real property, and (3) financing costs, including issuance expenses and required reserves.

HOW DO TCB SINKING FUND PAYMENTS COMPARE WITH TRADITIONAL DEBT SERVICE?

The TCB approach can reduce debt service to nearly one-quarter of that of traditional tax-exempt debt financing, as shown on the figure above. This is because traditional tax-exempt bonds entail repayment of all principal, and they include interest costs on outstanding principal. In contrast, issuers of TCBs do not have to repay all principal because issuers earn interest on their sinking funds, and they have no interest costs to pay.

WHAT SOURCES WOULD AIRPORTS USE TO MAKE SINKING FUND PAYMENTS?

The revenue stream may be PFC revenues, airport rents and fees paid by airlines and other tenants, other airport revenues, general or special local taxes, or other available non-federal funds.

HOW MUCH FUNDING WOULD BE AVAILABLE THROUGH THE TCB PROGRAM?

A $3 billion program is recommended and would be structured to provide $1 billion in proceeds in FFY 2008, stepping down to $800 million in FFY 2009 and $600 million in each of FFY 2010 and 2011. Any TCB proceed amounts not issued in the year initially authorized would be carried forward to future years. ■

JACOBS CONSULTANCY, formerly Leigh Fisher Associates (LFA), led the BSIS consulting team, working in association with McBee Strategic Consulting, Northrop Grumman Corporation, Level Edge Software, Mercator Advisors, and Xenon Consulting. LFA has been renamed Jacobs Consultancy, with main offices in the San Francisco area; the Washington, D.C. area; Ottawa, Canada; and London, UK. For over 60 years, we have assisted our clients in achieving their vision and goals. We have extensive practical experience in all of the disciplines necessary for the planning and management of airports, including airfield and airspace analyses, airport management and operation, commercial and concession planning, economics and forecasting, facilities planning and design, federal funding and policy development, financial analysis and planning, financial feasibility and reporting, ground transportation planning, noise and other environmental analyses, privatization, parking planning and analysis, rental car facility development and business planning, security planning and implementation, and simulation and operational analyses. Please contact us for more information about the BSIS or our Federal Practice, or visit our website as shown below.

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