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## UTAH DEPARTMENT OF TRANSPORTATION – ASSET OPPORTUNITIES STUDY, PHASE I

### Prepared For:

Utah Department of Transportation  
Research Division

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**Final Report**  
**November 15, 2013**

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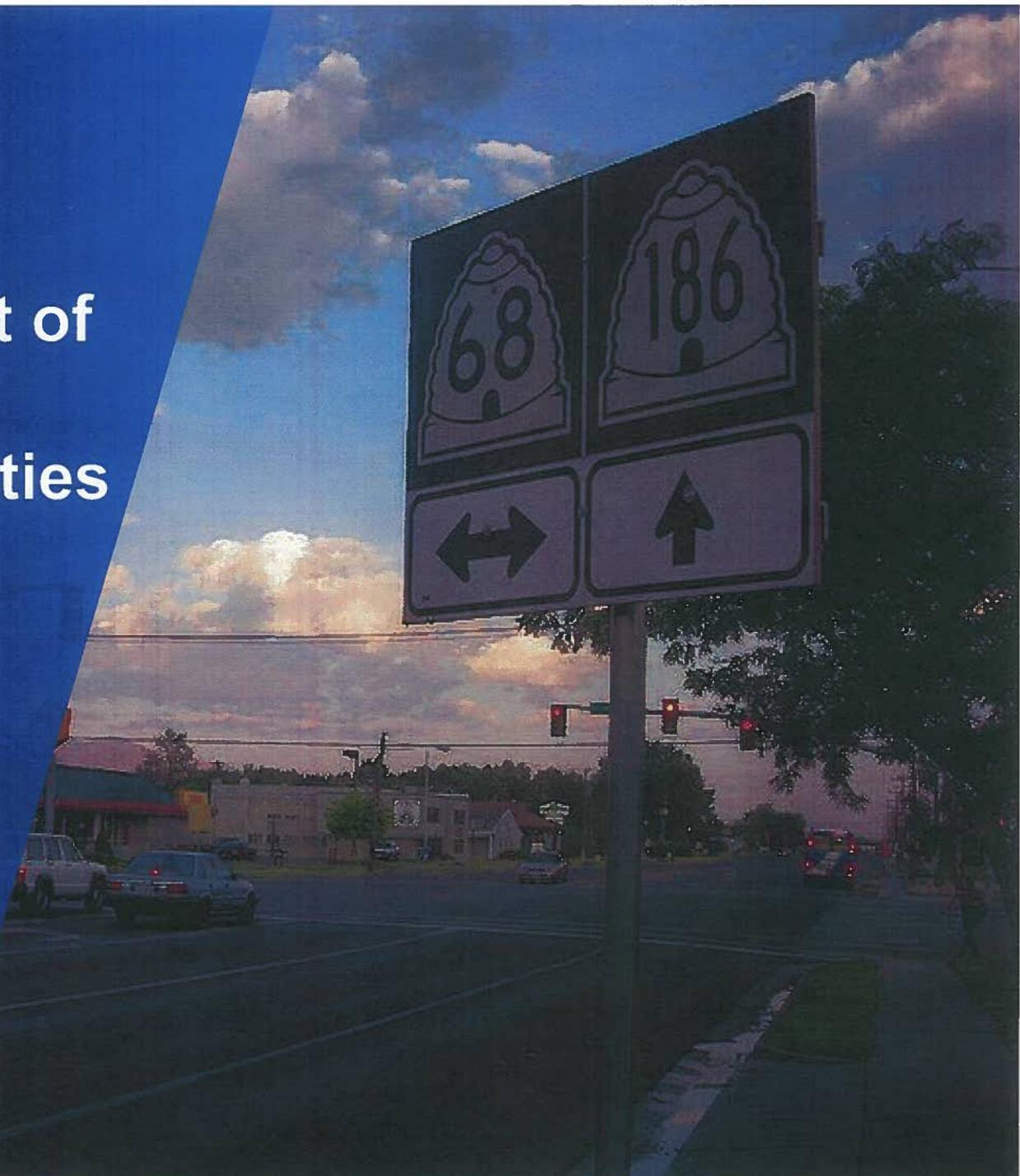


*cutting through complexity*

# Utah Department of Transportation - Asset Opportunities Study

Final Report

November 15, 2013



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# **Asset Opportunities Study – Project Summary**

# Project Summary

## Overview, Objectives and Activities Completed

### Project Overview and Objectives

In May 2013, the Utah Department of Transportation (UDOT) issued Solicitation No. MP13041, a Request for Proposal for UDOT Asset Opportunities. KPMG LLP (KPMG) was awarded the work to inventory and identify, at a high level, asset opportunities (Phase I). The Asset Opportunities Study commenced in October 2013 with the following objectives:

- UDOT seeks to identify and analyze revenue and cost efficiency opportunities with the Department's non-monetary assets.
- Review and assess the opportunities that may exist for UDOT to leverage existing assets that may be under-valued or under-utilized.
- The identification of revenue and cost opportunities is a chance for UDOT to enhance its business practices by applying domestic and international leading practices.
- The expected results of the asset opportunities would be to raise new or incremental revenue and/or offset the costs of operating and maintaining the facilities and services currently provided by the Department.

### **The following asset opportunities analysis and assessment work was completed by KPMG:**

- Determined objectives and criteria for the Asset Opportunities Study in conjunction with UDOT leadership.
- Identified asset opportunities by conducting an asset scan workshop and collecting data about UDOT's operations.
- Compared selected UDOT practices with national and international leading practices for 22 assets from three (3) major asset groups – Alternative Revenue Sources, Core DOT Operations, and Real Estate.
- Developed a preliminary list of potential revenue generating and/or cost savings asset opportunities.
- Screened asset opportunities based on financial, operational, acceptability, implementation and timing / readiness principles.
- Confirmed preliminary asset screening portfolio analysis findings with UDOT leadership.
- Summarized key findings and a go forward strategy for a future Phase II of the asset scan methodology in this potential opportunities report.

Any advice, recommendations, and information within the Final Report is for the sole use of the State, and is not intended to be, and may not be, relied upon by any third party.

# Project Summary

## Findings

### Analysis and Findings

- Based on this high-level analysis, leading practices were observed in several areas including examples such as UDOT's asset management integration, occupations/encroachments, excess lands management and telecommunications licensing.
- When comparing selected UDOT practices with national and international leading practices, opportunities for significant cost savings and revenue generation were noted.
- 22 assets were identified as opportunities and 11 of those could potentially meet UDOT's target revenue or cost savings threshold of \$500,000 (the "Priority Assets").
- Based on analysis completed within this Asset Opportunities Study, revenue and cost efficiency opportunities from the Priority Assets range from approximately \$33.1M to \$68.5M\* per year across three major asset groups:
  - *Core DOT Operations* pose the highest revenue generating or cost savings opportunities totaling approximately \$30.4M to \$62.5M, primarily from three assets: 1) Asset management (\$18M to \$36M); 2) Performance-based bundling of highway maintenance contracts (\$9M to \$18M); and 3) Fleet maintenance (\$3.4M to \$8.5M).
  - *Alternative Revenue Sources* opportunities total approximately \$1.5M to \$3.5M from 6 assets, which are presented in order of value potential: Naming Rights, 511 Systems, Commercialization of Rest Areas, Advertising, Traffic Operations Center and Freeway Service Patrol. The approximate value for each Alternative Revenue asset opportunity ranges from less than \$500K to \$1M.
  - *Real Estate* asset opportunities total approximately \$1.2M to \$2.5M from cell towers, licensing and facilities management.

\* *These figures represent approximates that are based on market comparables and UDOT data. The figures do not include any costs for additional studies, analysis, procurement or contracting.*

# Project Summary

## Findings

### Analysis and Findings (cont'd)

- UDOT's asset portfolio contains untapped revenue opportunities within real property/right-of-way, traffic operations and freeway incident response, as examples.
- Despite leading practices that UDOT employs, there are opportunities to improve efficiencies in UDOT's asset management including enhancements to data tracking, linkages, accessibility, inventory valuation/condition, and whole life costs.
- This initial Asset Opportunities Study points to key benefits that UDOT could realize from its asset opportunities, including improvements in efficiencies, risk transfer to private sector, and creation of value for money.
- A formal procurement stage is required to capture value from most of the asset opportunities.

### Recommendations and Next Steps

- In addition to the 11 Priority Assets that exceed UDOT's \$500,000 threshold, five (5) additional assets opportunities also warrant additional detailed planning prior to a formal procurement stage. Thus 16 of the 22 asset opportunities are recommended to advance to a Phase II for more detailed screening and evaluation.
- A Phase II evaluation of the assets should be geared toward pre-procurement activities and address operational challenges and benefits, market interest, public acceptance, level of revenue generation and cost savings, legal or public policy constraints and time frame for delivery.
- Screening the selected assets against UDOT's criteria for financial performance, operational efficiencies, acceptability, implementation and timing / readiness is recommended to position the asset opportunities for procurement activities that will enable UDOT to meet its objectives.
- The next stage of work should address key issues that UDOT has identified, including partnering options, benchmarks, timelines, schedule, and identification of risks and rewards.
- Undertaking a deeper dive opportunity identification and screening is a prudent next step to refine priority based on readiness and develop an informed implementation plan.

# Table 1. UDOT Asset Opportunities – Approximate Cost Savings/ Revenue Opportunities and Identification of Assets for Phase II

Type of Opportunity	#	Asset	Approximate Cost Savings/ Revenue Opportunities*	Opportunity Type**	Meet or Exceed \$500,000 Target	Advance to Phase II
Alternative Revenue Sources Opportunities	1	Commercialization of Rest Areas	\$300,000 - \$500,000 per year	CS / RG	Yes	Yes
	2	Naming Rights	\$500,000 - \$1,000,000 per year	RG	Yes	Yes
	3	Outdoor Advertising	\$300,000 - \$500,000 per year	CS / RG	Yes	Yes
	4	TOC/TMD	Less than \$500,000 per year	CS / RG		Yes
	5	Freeway Service Patrol	\$250,000 - \$500,000 per year	RG	Yes	Yes
	6	511 Systems	\$100,000 - \$1,000,000 per year	CS / RG	Yes	Yes
Core DOT Operations Opportunities	7	Express Lanes PPP/Tolling Ops	Less than \$500,000 per year in the near-term	CS		Yes
	8	Asset Management	\$18,000,000 - \$36,000,000 per year	CS	Yes	Yes
	9	Fleet Maintenance	\$3,400,000 - \$8,500,000 per year	CS	Yes	Yes
	10	O&M Bridge Bundling	Less than \$500,000 per year in the near-term	CS		
	11	Highway O&M Concessions	\$9,000,000 - \$18,000,000 per year	CS	Yes	Yes
	12	Highway Lighting	TBD (additional data needed)	CS		
	13	Signs and Lane Markings	TBD (additional data needed)	CS		
	14	Ferry Division	\$25,000 - \$70,000 per year	CS		
Real Estate Related Opportunities	15	Performance Metrics Dashboard	TBD (additional data needed)	CS		
	16	Excess Lands	TBD (additional data needed)	CS / RG	TBD	Yes
	17	Occupation / Encroachments	\$ value reflected in #18 & #19	CS / RG		Yes
	18	Licensing	\$100,000 to \$1,000,000 per year	CS / RG	Yes	Yes
	19	Cell Towers	>\$1,000,000 (in total) per year	CS / RG	Yes	Yes
	20	Renewable Energy	TBD (additional data needed)	CS	TBD	Yes
	21	Facilities Management	\$100,000 to \$500,000 per year	CS	Yes	Yes
	22	Parking	TBD (additional data needed)	CS / RG		
* Total Opportunities (Assets 1-3, 5, 6, 8, 9, 11, 18, 19, 21)			\$33,050,000 to \$68,500,000 per year		11	16

\*These figures represent approximates that are based on market comparables and UDOT data. The figures do not include any costs for additional studies, analysis, procurement or contracting.

\*\* CS = Cost Savings. RG = Revenue Generation

## Table 2. UDOT Asset Opportunities – Ranking by Dollar Values and Summary Assessment of Implementation Considerations

Ranking	Asset	Approximate Cost Savings/ Revenue Opportunities	Time Period to Reach Implementation and Realization of Cost Savings / Revenue Benefits	Level of Complexity to Reach Implementation
			Short, Medium, or Long Term Opportunity**	High, Medium, Low***
1	Asset Management	\$18,000,000 - \$36,000,000 per year	Medium	High
2	Highway O&M Concessions	\$9,000,000 - \$18,000,000 per year	Medium	High
3	Fleet Maintenance	\$3,400,000 - \$8,500,000 per year	Short	Medium
4	Cell Towers	>\$1,000,000 (in total) per year	Short	Medium
5	Naming Rights	\$500,000 - \$1,000,000 per year	Medium	Low
6	511 Systems	\$100,000 - \$1,000,000 per year	Short	Medium
7	Licensing	\$100,000 to \$1,000,000 per year	Short	Medium
8	Commercialization of Rest Areas	\$300,000 - \$500,000 per year	Short / Medium	Medium
9	Outdoor Advertising	\$300,000 - \$500,000 per year	Short	Medium
10	Freeway Service Patrol	\$250,000 - \$500,000 per year	Short	Low
11	Facilities Management	\$100,000 to \$500,000 per year	Short / Medium	Medium
	<b>Total Opportunities*</b>	<b>\$33,050,000 to \$68,500,000 per year</b>		

\*These figures represent approximates that are based on market comparables and UDOT data. The figures do not include any costs for additional studies, analysis, procurement or contracting.

\*\* "S" represents less than 1 year; "M" represents 1 to 3 years; and "L" represents more than 3 years to realize benefits.

\*\*\* Level of Complexity represents a qualitative assessment of potential obstacles to implementation for UDOT, and is based on precedents in the marketplace. The assessment measures of High, Med or Low are informed by factors including financial justification, operational and implementation challenges, constituent and agency acceptability, and timing / readiness.

# **Asset Opportunities Study – Key Findings and Next Steps**

# Asset Opportunities Study – Key Findings and Next Steps

	Commercialization of Rest Areas	Naming Rights
<b>Overview of Market Opportunities</b>	Evaluate opportunities for permitting and/or enhancing commercial activities at non-interstate rest areas (potentially welcome centers, visitor centers as well).	Bundle rights for naming, sponsorship and advertisement opportunities across the UDOT asset portfolio: roads and rest Areas - name/sponsor a road, rest area, welcome center/, or visitor center; and bridges.
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ UDOT staff are currently evaluating various options for commercialization (outsourcing, sponsorship and advertising) of rest areas and ramps and have already hired a consultant.</li> <li>▪ Further evaluation is necessary for commercializing portions of or the entire non-interstate rest areas; for example vending machines, Wi-Fi services, ATMs, or advertisements in waiting areas.</li> <li>▪ Comparable leading practices exist within Virginia DOT which has privatized 43 rest areas and generate approximately \$46,000 annually per rest area.</li> <li>▪ Arizona DOT recently completed a procurement to secure low bid O&amp;M services and high bid revenue guarantees.</li> <li>▪ Michigan DOT is planning to implement a sponsorship and advertising program at its rest areas.</li> <li>▪ The likely next step for UDOT is to engage the market and issue an RFI.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>	<ul style="list-style-type: none"> <li>▪ UDOT staff are considering a naming rights initiative for UDOT's assets.</li> <li>▪ No constraining legislation has been identified that would prevent UDOT from using naming rights as a means of generating revenue.</li> <li>▪ UDOT could consider the following list of assets for naming rights – Bridges, Freeway Service Patrol, Traffic Generation Signs, Transit Centers.</li> <li>▪ There are several examples in the market indicating naming rights interest for various transportation assets:               <ul style="list-style-type: none"> <li>- Healthline Corridor, Cleveland (\$250K/year for 25 years)</li> <li>- Barclays Center, Brooklyn (\$200K/year for 20 years)</li> <li>- Hillsborough RTA, Florida (\$100K/year for 10 years)</li> <li>- AT&amp;T Station, Philadelphia (\$1M/year for 5 years)</li> </ul> </li> <li>▪ The likely next step for UDOT is to engage the market and issue an RFI.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Could potentially generate \$300,000 to \$500,000 by commercializing UDOT's 12 non-interstate rest areas (approximately \$25K - \$50K per rest area) as per market studies.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Could potentially generate from \$500K to \$1M by selling naming rights on UDOT's assets.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Outdoor Advertising	TOC/TMD
<b>Overview of Market Opportunities</b>	Evaluate opportunities to improve financial performance of the permitting process and generating revenues from commercial signs advertising on UDOT real property.	<ul style="list-style-type: none"> <li>a) Collect in-kind services for TMC data.</li> <li>b) Generate revenues by selling data.</li> </ul>
<b>Key Findings and Next Steps</b>	<p><b>Sign Permits -</b></p> <ul style="list-style-type: none"> <li>▪ UDOT's ODA program costs are only minimally offset by program revenues from permit issuance and five-year renewal fees for outdoor signs.</li> <li>▪ Currently the program has a deficit of around \$200,000 per year because costs exceed revenues. UDOT sign permits generate approximately \$25/permit while other markets generate revenues from \$100 (Texas) to \$300 (Georgia) per permit.</li> <li>▪ Further evaluation of the pricing structure of sign permits is necessary.</li> </ul> <p><b>Outdoor Advertising -</b></p> <ul style="list-style-type: none"> <li>▪ UDOT could consider using surplus lands; UDOT owned facilities to erect billboards and advertising messaging to generate revenues.</li> <li>▪ Potential encumbrances may include availability of the excess lands as well as current legislation and policies regarding billboards.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Traffic Operations Center (TOC) is currently staffed with 13 operators out of which ten (10) are contract employees.</li> <li>▪ There is a potential to sell the traffic data to private mapping or traffic information companies which could result in additional revenues to UDOT.</li> <li>▪ However, since most of the data is already available free of cost, this particular undertaking may be challenging in the market.</li> <li>▪ UDOT could potentially incur cost savings from the following sources: <ul style="list-style-type: none"> <li>- Cost savings by potentially outsourcing to a private contractor under a performance based contract.</li> <li>- Cost savings by potentially consolidating the 511 and FSP operations into the TOC.</li> </ul> </li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Sign permit deficits of \$200K could be offset with changes in permit costs to approximately \$100, which is at or below other market prices.</li> <li>▪ Based on the market rates of billboards (\$750-\$30K per billboard) in Salt Lake City, UDOT could generate revenues ranging from \$100K - \$300K per year from a relatively large outdoor advertising program.</li> </ul>	<ul style="list-style-type: none"> <li>▪ This is a relatively low value opportunity for UDOT considering the size of the division and that it is already consolidated.</li> <li>▪ However, the existing TOC will likely be a key component of revenue opportunities in Freeway Service Patrol and 511 Systems.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Freeway Service Patrol	511 Systems
<b>Overview of Market Opportunities</b>	<ul style="list-style-type: none"> <li>a) Reevaluate provision of free roadside assistance on state highways - bring in private service provider and compensate via availability payments.</li> <li>b) Offer sponsorship space on sides of FSP vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>a) Generate revenue from traffic, travel time, accident, RWIS, IMAP, TOC data sales or collect in-kind services for data provision.</li> <li>b) Execute contracts for cost sharing between entities.</li> </ul>
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ The Incident Management Team (a program that was started in 1996) consists of a total of 13 vehicles in the state of Utah, but only one in the south.</li> <li>▪ Currently the system is decentralized where each patrol officer reports to their assigned region.</li> <li>▪ Further evaluation of consolidating the system and integrating the traffic operators should be undertaken.</li> <li>▪ As a direct comparable based on quantity of vehicles, Florida DOT engaged in partnerships with the private sector for sponsorship of highway safety patrol vehicles (14 vehicles) in order to generate \$425K per year for two years.</li> <li>▪ Market comparables for sponsored freeway patrols include NJ, MD, IN, NY, GA, FL &amp; PA which generate annual revenues ranging from \$375K to \$2M/year.</li> <li>▪ The likely next step for UDOT is to engage the market and issue an RFI.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>	<ul style="list-style-type: none"> <li>▪ UDOT currently operates its 511 telephone system (through a \$110K outsourced contract) and website (internally managed by 13 UDOT staff). Total O&amp;M costs are unknown.</li> <li>▪ Further evaluation is necessary for integrating the two systems into one or engaging a private contractor to provide these services.</li> <li>▪ UDOT could benefit from the leading practices in 511 revenue generation and cost certainty from VDOT where a "511 contractor" has been engaged under a "Transportation Operations Data Distribution Services (Video, 511, Data)" contract to deliver cost savings of approximately \$1M over five years. The contract's revenue sharing arrangements could produce cost neutral 511 service delivery (\$10M over five years).</li> <li>▪ The likely next step for UDOT is to engage the market and issue an RFI.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Could potentially generate revenues in the range of \$250K - \$500K by using advertising on the 13 vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Could potentially generate revenues and reduce costs by \$100K to \$1M per year by advertising on the website, closed circuit television and 511 signage.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Express Lanes PPP/Tolling Operations
<p><b>Overview of Market Opportunities</b></p>	<p>Evaluate opportunities for availability payment-based PPP delivery across the system. Evaluate opportunities to transfer some or all of the backoffice operations for the toll collections to reduce the cost to collect tolls.</p>
<p><b>Key Findings and Next Steps</b></p>	<p><b>Express lanes PPP-</b></p> <ul style="list-style-type: none"> <li>▪ UDOT has experienced opposition to a P3 approach on its existing express lanes. Also, there is no indication that additional \$100M+ capital cost projects will be let soon.</li> <li>▪ P3 project delivery for managed lanes projects generally enhance a public agency's cost certainties (capital and O&amp;M) through strong contractual terms.</li> <li>▪ Recent market examples of Value for Money (VfM) assessments from FDOT indicated P3 cost efficiency of approximately 12.5% in capital costs and 20% to 25% in O&amp;M costs.</li> <li>▪ Savings from a PPP approach are typically realized from projects with \$100M+ capital costs.</li> </ul> <p><b>Tolling operations-</b></p> <ul style="list-style-type: none"> <li>▪ Payment processing and account settlement are currently contracted out, but UDOT has not fully evaluated turning over complete back office operations to private operators.</li> <li>▪ The current cost to collect tolls averages about \$0.51 per transaction for UDOT. As a market example of cost benchmarks for tolling operations, a back office service provider with multiple accounts in Texas indicates costs are as low as \$0.30-\$0.35 per transaction.</li> <li>▪ An example of tolling operations contract structuring with a private operator includes VDOT's payment from operator Transurban of \$.0335 per transaction in addition to a fixed percentage of revenue for the operations of the Capital Beltway HOT lanes.</li> <li>▪ UDOT could outsource all of the back office tolling operations to a private operator to pursue cost savings without sacrificing the level of services for the express lanes. However, the level of efficiencies may be limited due to the lack of additional tolled facilities in the state.</li> <li>▪ The likely next step for UDOT is to perform an in-depth review of leading practices and also determine the market's appetite for a back office operations outsourcing opportunity using a performance-based contract.</li> <li>▪ The tolling opportunity should advance to phase II.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Express Lanes PPP/Tolling Operations (cont'd)
<b>Summary</b>	<ul style="list-style-type: none"><li>▪ Although whole of life costs through PPP could be reasonable for certain projects, given the market conditions in Utah, PPP project delivery for managed lanes does not appear feasible at this time.</li><li>▪ UDOT could generate cost savings if it contracts back office operations to a private operator. If UDOT generates cost savings ranging from \$0.20 to \$0.30 per transaction, which is lower than UDOT's current cost of about \$0.51 per transaction, and UDOT continues to have about 900,000 transactions per year, then UDOT could potentially achieve cost savings ranging from \$189K- \$279K. This range does not include the additional potential to reduce leakage and the potential for uncollected tolls, which is currently about 12% of total transactions.</li><li>▪ Because current toll rates are not able to fully cover roadway maintenance costs, the cost savings generated from transferring back office operations to a private operator could instead be used to improve the level of service.</li></ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Asset Management
<p><b>Overview of Market Opportunities</b></p>	<p>Generate comprehensive inventories of assets, assess O&amp;M and renewal/replacement requirements.</p>
<p><b>Key Findings and Next Steps</b></p>	<ul style="list-style-type: none"> <li>▪ Several current asset management practices in the Highway Division are equal to or exceed leading practices, including a Transportation Asset Management Plan with full support from upper management. The pavement and bridge divisions already allocate funds on a needs-based budgeting.</li> <li>▪ However, opportunities exist to maximize the flexibility necessary for optimizing asset management needs. These opportunities include improved database management, value based cross-asset optimization, and risk based whole life cycle costing at the network level.             <ul style="list-style-type: none"> <li>▪ Database management includes defining data needs (types and uses), hierarchy and linkage, analysis with minimal manipulation, and data reconstruction and quality assurance.</li> <li>▪ Value-based cross-asset optimization aims to facilitate investment decisions across multiple asset-related performance indicators. By using optimization techniques, the appropriate combination of investments (based on whole life costing) that enhances the entire asset base can be determined.</li> <li>▪ Emphasis on value can allow the agency to develop asset sustainability metrics that can serve as a powerful communication tool with decision makers and stakeholders.</li> </ul> </li> <li>▪ As a market example of asset integration, the UK highways agency found that by integrating their asset management systems, budgetary needs could be reduced by 16%.</li> <li>▪ The likely next steps for UDOT are to evaluate:             <ul style="list-style-type: none"> <li>▪ Improving the quality of the existing data using specialized tools and visualization techniques; enhancing the database management practices to improve consistency.</li> <li>▪ Improving the level of systems integration by linking other assets including fleet, ROW, facilities, and the performance metrics dashboard; prioritizing investments in terms of value enhancement and risk to minimize life cycle costs across all assets.</li> </ul> </li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Asset Management (cont'd)
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ Introducing advanced business intelligence (BI) or analytics techniques would allow UDOT to evaluate the most likely outcome of a number of plausible scenarios in optimizing the whole life cost of its assets from a programmatic view.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Based on the market example, it is reasonable to expect that UDOT could realize some budgetary savings from advanced asset management practices, but potentially at a lower range given the state of current systems and the existing level of integration.</li> <li>▪ If a 5% to 10% savings is achieved in O&amp;M and CAPEX, this could translate to \$18M - \$36M per year.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Fleet Maintenance
<b>Overview of Market Opportunities</b>	<ul style="list-style-type: none"> <li>a) Evaluate fleet maintenance services.</li> <li>b) Competitively procure fleet maintenance services.</li> </ul>
<b>Key Findings and Next Steps</b>	<p><b>Outsourcing –</b></p> <ul style="list-style-type: none"> <li>▪ UDOT currently spends \$20M in maintenance and \$6M in vehicle replacement annually. UDOT currently outsources \$300K of fleet maintenance, which is approximately 1% of its \$20M maintenance budget.</li> <li>▪ Market examples from Virginia DOT, State of New Jersey, City of San Diego and City of Richmond have shown that outsourcing fleet contracts can result in a 10% – 25% cost savings.</li> <li>▪ UDOT owns six repair garages. If vehicle maintenance services were outsourced, facilities could potentially be sold, repurposed or leased to vendor to offset costs.</li> </ul> <p><b>Utilization –</b></p> <ul style="list-style-type: none"> <li>▪ Based on interviews, UDOT's fleet utilization metrics are not readily identified.</li> <li>▪ As a market example, another state DOT reported that approximately 12% of the fleet is utilized at 15% or less. If UDOT's fleet utilization performance is comparable, UDOT could potentially dispose of some 400-500 vehicles in it's fleet.</li> <li>▪ UDOT has a vehicle idling policy but does not track for compliance. Vehicle idling of approximately 30% or more of their operating hours was reported by a comparable DOT.</li> <li>▪ UDOT decommissions several dump trucks (out of the 500 owned) from April through September. UDOT could potentially lease dump trucks to other state agencies, municipalities or perhaps private industry for additional revenues.</li> </ul> <ul style="list-style-type: none"> <li>▪ This opportunity should advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ If UDOT could achieve outsourcing savings from 10% to 25% the savings could range from \$2.6 - \$6.5M per year.</li> <li>▪ By applying market utilization rates, UDOT could potentially reduce its fleet size by 400-500 vehicles; assuming approximately \$2,000 to \$4,000 per vehicle disposed, revenues could range between \$800K to \$2M.</li> <li>▪ By setting a 10% idling goal and tracking for compliance, UDOT could achieve some savings (un-quantified).</li> <li>▪ By eliminating or decommissioning 10 dump trucks per year, UDOT could achieve some savings (un-quantified).</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	O&M Bridge Bundling
<b>Overview of Market Opportunities</b>	Bundle bridge maintenance, other structural O&M for contracting out - compensation via availability payments.
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ UDOT has engaged in contracting bridge maintenance and rehabilitation/reconstruction contracts through a bundled approach in 1-year contracts. Contracting mechanisms include Price + Time, CMGC, and DB depending on the risks of the project. These methods are market reasonable approaches and positive results have been reported by the department.</li> <li>▪ Contracts for bridge preservation are around \$5M and contracts for replacement are about \$15M.</li> <li>▪ UDOT is considering a multiyear approach to bridge bundling. A project for 8 to 10 bridges on I-15 is already at the planning stage for a private maintenance contract with a 20-year term.</li> <li>▪ To date, UDOT has secured adequate funding for its preservation needs such that only 1% of its bridges are reported as structurally deficient. However, in approximately 10 years replacement of about 700 bridges built in the 1950s and 1960s may be required.</li> <li>▪ As a market example, Missouri DOT estimates some \$500M in savings by bundling 800 of its bridges through monthly letting schedule (refurbishment) and a single design-build contract (replacement).</li> <li>▪ In the near-term, UDOT's planning for bridge refurbishment/replacement should include assessing gaps in revenues versus costs to replace the bridges built in the 1950s and 1960s.</li> <li>▪ This opportunity should not advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Given the current bridge conditions in Utah and the expectation that a large-scale replacement program is approximately ten years out, the opportunity to bundle bridge refurbishment/replacement should be considered over a longer-term horizon.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Highway O&M Concessions	Highway Lighting
<b>Overview of Market Opportunities</b>	<p>a) Qualified management contract for a private concessionaire to operate and maintain roads (or a network of roads).</p> <p>b) Corridor-based approach to combine small procurements into larger bundles.</p>	<p>Enter into a contract with a private entity to perform O&amp;M and capital expenditures, capturing revenues from savings.</p>
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ UDOT has taken an initial step toward highway O&amp;M concessions by approaching AMOTIA and conducting industry reviews to measure the acceptability and marketability of this contracting approach.</li> <li>▪ UDOT received RFP responses for a pilot project that bundled fence to fence assets. However, the cost of snow removal made private responses less competitive than internal public agency delivery.</li> <li>▪ As a market example, FDOT reports that a 17% cost savings is achieved through performance-based maintenance contracts.</li> <li>▪ If a bundled performance-based contract is contemplated, UDOT should determine the Level of Service and associated cost implications, and define a balanced share of risk between UDOT and the contractor.</li> <li>▪ The likely next step for UDOT is to engage the market and issue an RFI to evaluate contract structuring options and commercial interest levels.</li> <li>▪ This opportunity should advance to phase II</li> </ul>	<ul style="list-style-type: none"> <li>▪ UDOT Staff is currently loading highway and sign lighting asset data into their Maintenance Management System; the data was collected via an automated vehicle scan.</li> <li>▪ Current asset inventory and condition data is not complete or readily available for decision making on alternatives.</li> <li>▪ As market examples, highway and street lighting replacement programs have generated some 5% to 10 savings.</li> <li>▪ Evaluation of service delivery options is focused on reviewing UDOT current operations to compare against opportunities for: <ul style="list-style-type: none"> <li>▪ Energy efficient luminaires that deliver energy savings;</li> <li>▪ Combining O&amp;M outsourcing with ITS devices, traffic signals, facilities, signs and pavement markings. to gain economies of scale.</li> <li>▪ Bundled outsourcing of lighting system repair / capital improvement with long term operations and maintenance obligations.</li> </ul> </li> <li>▪ The likely next step is to collect additional data from UDOT for assessment.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ If a 2.5% to 5% savings is achieved on current maintenance budgets, this could translate to \$9M - \$18M per year. (This estimate is quantified separately from the Asset Management opportunity).</li> </ul>	<ul style="list-style-type: none"> <li>▪ With complete highway lighting inventory, accurate condition and electricity usage data, an analysis could be completed to determine the level of savings on O&amp;M, CAPEX and utilities that a market alternative delivery method could produce.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Signs and Lane Markings	Ferry Division
<b>Overview of Market Opportunities</b>	Enter into a contract to accelerate replacement of existing signs using new highly reflective materials and sheeting. Evaluate bundling signs and lane markings into one performance based contract.	<p>a) Identify opportunities to generate new or increased revenues throughout UDOT ferry system.</p> <p>b) Execute contracts/concessions where appropriate.</p>
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ By law, UDOT must procure their signs from correctional facilities. Staff believes that sign quality is an issue and that costs may be higher than if procured from a private vendor.</li> <li>▪ Sign replacement/repair, which allows the vendor to supply signs, is done on a limited basis. The data regarding UDOT's signs and lane markings including condition and inventory, is limited.</li> <li>▪ In other markets, lane marking performance-based contracts and bundling of related assets are implemented, typically with a business case that justifies some cost savings.</li> <li>▪ Given the shortfalls in existing data, cost savings opportunities from various service delivery options cannot be ascertained.</li> <li>▪ The likely next step is to collect additional data from UDOT for assessment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Currently UDOT operates one ferry across Halls Crossing and Bullfrog.</li> <li>▪ In 2013, the total loss as a result of the ferry service operation is projected to be around \$70K</li> <li>▪ Losses from operations require a subsidy payment from UDOT.</li> <li>▪ UDOT could potentially work to restructure the contract as a performance based contract to offset some of the operating costs that they are currently incurring, however the impacts are likely nominal.</li> <li>▪ UDOT could also potentially generate revenues from the following sources – 1) Develop surplus land (near the ferry service), 2) Vending machines, 3) ATMs, 4) Charge for alternate use of facilities, 4) Provide Wi-Fi / Wireless telecom, 5) Authorize advertising and 6) Sell naming rights.</li> <li>▪ Based on market example of a large state DOT ferry operator, these types of revenues are not significant. The likely next step for UDOT is to market test the opportunity to determine if the revenue potential warrants a procurement.</li> <li>▪ This opportunity should not advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ With complete sign and lane markings data, an analysis could be completed to determine the level of savings that a market alternative delivery method could produce from performance-based contract and bundling of related assets.</li> </ul>	<ul style="list-style-type: none"> <li>▪ This is a low opportunity for UDOT considering the size of the division, and that it is already engaged in a private contract.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Performance Metrics Dashboard	Excess Lands
<b>Overview of Market Opportunities</b>	Identify opportunities to improve management reporting and enhance efficiencies from a comprehensive performance dashboard.	<ul style="list-style-type: none"> <li>a) Search UDOT land parcels and identify an inventory of excess or vacant real estate.</li> <li>b) Identify vacant land development opportunities and act as sell-side real estate agent for UDOT land disposition.</li> </ul>
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ Operating costs of the performance metrics dashboard which includes about five people that update and manage UDOT's performance metrics are covered by UDOT's personnel budget.</li> <li>▪ All regions are able to access and use the Performance Metric Dashboard for each division, but a potential opportunity exists for integrating the dashboard across transportation divisions.</li> <li>▪ The cost savings from integrating the dashboard may not meet UDOT's \$500K threshold for savings.</li> <li>▪ However, this opportunity would serve as a relevant component within a comprehensive and integrated asset management system and/or real estate management system. It would also be critical to making key business decisions for allocation of funding and minimizing costs.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Based on the information provided, UDOT may already employ market leading practices because it maintains a low inventory of surplus properties and ensures that its surplus properties are used for their highest value and best use.</li> <li>▪ UDOT reports a strategic disposition program and identifies and chooses the best method to market its residual and surplus properties.</li> <li>▪ As market examples, three transportation agencies (Massachusetts Bay Transportation Authority, New York Thruway and Chicago Transit Authority) have established a range of values between \$4M to \$500M by proactively managing and disposing of its surplus real estate assets.</li> <li>▪ The likely next step is to collect more data on the disposition processes, property values, acreage and revenue generated from the sale of surplus properties.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Additional understanding of the performance metric dashboard's capabilities, processes and role in asset and real estate management systems is required to further evaluate the opportunity.</li> </ul>	<ul style="list-style-type: none"> <li>▪ While UDOT reports to proactively manage its surplus real estate assets, more formal documentation of practices used for excess lands and surplus properties is needed to narrow opportunities for additional revenue generation.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Occupations/Encroachments
<b>Overview of Market Opportunities</b>	Assess ROW encroachment by utilities, transportation service providers, agencies, and individuals and propose market value study.
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ UDOT reports its use of leading market practices to manage encroachments and right-of-way, which include centralized tenant management system that tracks real estate assets, leases, licenses and easements.</li> <li>▪ UDOT also uses a statewide system to monitor key agreements and manage the timetable for right-of-way acquisitions and transactions, environmental issues, budgets, leases, licenses and easements. However, the total revenue production from these systems was not identified.</li> <li>▪ Although differences exist between UDOT, MassDOT and MBTA, such as population density, value of real estate and the authority to advertise right-of-way, MassDOT and MBTA serve as market examples for revenue generation from a transportation agency's real property portfolio.</li> <li>▪ MBTA generated about \$15M per year in revenue from 600 route miles and 1,700 agreements for telecom, concessions, billboards, land and utilities. MassDOT generated about \$39M in revenue from 36,000 route miles for telecom, concessions, billboards and other advertising, land and utility agreements.</li> <li>▪ The likely next step is to determine total revenues from all sources and narrow opportunities for additional revenues.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Additional evaluation of UDOT's system's capabilities, processes and agreements is required to evaluate whether UDOT is maximizing revenue opportunities for occupations/encroachments, especially as related to licensing, cell towers, and utilities.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Licensing	Cell Towers
<b>Overview of Market Opportunities</b>	Charge utilities a licensing fee based on land value; applicable to utilities that cross ROW and utilities that parallel ROW (e.g. underground conduit).	Allow cell towers to be erected on UDOT ROW, other real property.
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ UDOT uses trade agreements to partner 50/50 with telecommunications companies and has about 10 master agreements with different telecommunication companies.</li> <li>▪ UDOT reports that the agreements provide about \$50M in value to UDOT.</li> <li>▪ UDOT has been recognized by the FHWA and other state agencies for using these trade agreements.</li> <li>▪ Based on expected demand in the market, UDOT may have the potential to realize additional long-term cost savings or revenues by pursuing conduit and fiber optic line trade agreements.</li> <li>▪ UDOT's revenues from utility licensing is not currently known. As market examples, MassDOT and MBTA generate utilities occupations revenues ranging from about \$100K to \$1M per year.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Concerns were expressed through UDOT and FHWA that cell towers might encumber UDOT's properties.</li> <li>▪ UDOT currently has 13 cell towers and each tower generates about \$140K per year, which amounts to about \$1.82M in total per year.</li> <li>▪ Market benchmarks from six (6) transportation agencies indicate that revenue generated from individual cell towers ranges between \$12K to \$50K per year.</li> <li>▪ Benchmarking comparisons from five (5) transportation agencies (NJDOT, VDOT, CalTrans MBTA, and MassDOT) indicate annual revenues from cell, telecommunications and fiber leases range from \$5 million to \$11 million, with an average of \$7 million annually.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Revenues from occupations, licensing and cell towers could potentially generate \$1M or more in additional revenues.</li> <li>▪ Likely next steps should be taken to identify the value of the revenue opportunities and:               <ul style="list-style-type: none"> <li>• Confirm UDOT's systematic way of evaluating occupations/encroachments by private parties.</li> <li>• Collect more formal documentation and data on the fiber optics and conduit trade agreements.</li> <li>• Explore specific concerns about encumbering properties with cell towers.</li> <li>• Conduct market study on pricing for cell towers and existing telecom coverage in Utah.</li> <li>• Collect additional data on utility licensing.</li> </ul> </li> </ul>	

# Asset Opportunities Study – Key Findings and Next Steps

	Renewable Energy	Facilities Management
<b>Overview of Market Opportunities</b>	Capture revenues from a potential private party solar development land lease and/or sharing of net metering.	a) Availability payment for facilities management. b) Evaluate the full inventory of UDOT-owned buildings (e.g. administrative, maintenance).
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ The federal tax code allows businesses to receive a 30% tax credit with no limit for net metering systems and the state of Utah allows businesses to receive a 10% tax credit up to \$50K for net metering systems as well.</li> <li>▪ UDOT is interested in receiving sponsorship or investment from the private sector for renewable energy and energy efficiency programs, but its reported low costs of power combined with the limitations on state tax incentives might not generate significant support from the private sector.</li> <li>▪ If market conditions warrant, UDOT could potentially offset some of its operational costs by pursuing a commercial arrangement for net metering or a power purchase agreement on UDOT real property.</li> <li>▪ This opportunity may not meet the \$500K threshold.</li> <li>▪ The next likely step for UDOT is to gauge market demand for renewable energy development to determine if a business case exists to seek state statute changes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ UDOT currently maintains about 80 facilities and 10 to 15 satellite facilities, and receives about \$4.5m from the state's CIP to cover the operating costs of its facilities.</li> <li>▪ Based on the current allocation from the state's CIP to manage its facilities, UDOT reports it is barely able to cover the operating costs of its facilities. Deferred maintenance liabilities are unknown at this time.</li> <li>▪ Current practices, data, and systems make it difficult to collect all facilities data and perform relevant analysis on spend levels and the appropriateness of the portfolio size.</li> <li>▪ UDOT could benefit from implementing a more comprehensive system to manage the inventory and conditions of its buildings.</li> <li>▪ As a market example, the State of Missouri executed a performance contract with a private facilities management company that guaranteed the state about \$9.5M annually in cost savings. Actual annual cost savings reached approximately \$35M.</li> <li>▪ Private marketplace participants regularly cite facility O&amp;M savings opportunities of 5% to 15% from private delivery.</li> <li>▪ The likely next step for UDOT is to engage the market and issue an RFI.</li> <li>▪ This opportunity should advance to phase II.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Further analysis of UDOT's average spend per kwh compared to market benchmarks, as well as a study of the market conditions and tax incentives for renewable energy is needed prior to reaching a decision on this asset opportunity.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Based on market comparables, UDOT could potentially generate \$100,000 to \$500,000 in cost savings from a private delivery alternative. Additional data is needed to refine cost savings estimates for UDOT.</li> </ul>

# Asset Opportunities Study – Key Findings and Next Steps

	Parking
<b>Overview of Market Opportunities</b>	<ul style="list-style-type: none"> <li>a) Identify opportunities to generate new or increased revenues throughout UDOT facilities.</li> <li>b) Execute contracts/concessions where appropriate.</li> </ul>
<b>Key Findings and Next Steps</b>	<ul style="list-style-type: none"> <li>▪ The Division of Facilities and Construction Management manages about 29 non-revenue generating parking facilities within the state. The cost to maintain each parking garage is typically included within the cost of maintaining the buildings adjacent to it.</li> <li>▪ UDOT has been able to cover the operating costs of its parking facilities without charging parking fees to the public or its employees.</li> <li>▪ The City of Harrisburg leased 9,100 of its parking spaces as part of a 40-year deal ranging from \$5.2M to \$21.6M annually. While UDOT could study the leading practices from the Harrisburg, it may not be an applicable comparable for UDOT's given market conditions for parking in Utah.</li> <li>▪ Additional research on the utilization of parking facilities needs to be collected – underutilized space could be used for renewable or solar energy systems.</li> <li>▪ The likely next step is further evaluation of the parking policies in place at UDOT.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ Market study on demand rates for parking and shared parking alternatives should be conducted prior to establishing an estimate of parking revenues.</li> </ul>

# **Asset Opportunities Study –**

## **Appendix: Additional Relevant Data**

## Appendix: Commercialization of Rest Areas

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Virginia Department of Transportation	GEICO Insurance	\$46,512/yr/rest area	<ul style="list-style-type: none"> <li>• 43 rest areas – Revenue generation and O&amp;M savings</li> <li>• 3 year contract</li> </ul>
Arizona Department of Transportation	Infrastructure Corporation of America	N/A	<ul style="list-style-type: none"> <li>• 14 rest areas</li> <li>• Low bid O&amp;M</li> <li>• High bid revenues</li> <li>• Penalty provision included in the contract.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>Market example indicates revenue generation of over \$46K per year with each rest area.</b></li> </ul>		

## Appendix: Naming Rights

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Greater Cleveland Regional Transit Authority	Cleveland Clinic and University Hospital	\$250,000/yr	<ul style="list-style-type: none"> <li>• \$6.25M over 25 years</li> <li>• Naming rights on a bus rapid transit line corridor.</li> </ul>
New York Metropolitan Transportation Agency	Barclays	\$200,000/yr	<ul style="list-style-type: none"> <li>• \$4M for 20 years</li> <li>• Naming rights for a group of subway stations in Brooklyn.</li> </ul>
Hillsborough Regional Transportation Authority, Florida	TECO	\$41,667/yr	<ul style="list-style-type: none"> <li>• \$1M for 10 years for the historic streetcar system in Tampa.</li> </ul>
Southeastern Pennsylvania Transportation Authority (SEPTA)	AT&T	\$1M/yr	<ul style="list-style-type: none"> <li>• \$5M for 5 years to name the former Pattison Station in Philadelphia.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>Naming rights sold on these asset examples resulted in a revenue generation of \$40K up to a \$1M per year.</b></li> </ul>		

## Appendix: Freeway Service Patrol

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
New Jersey Department of Transportation	Travelers Marketing /State Farm	\$600,000/yr for 3 years	<ul style="list-style-type: none"> <li>• 52 vehicles</li> <li>• 225 miles</li> <li>• 70 drivers</li> </ul>
Pennsylvania Turnpike Commission	Travelers Marketing /State Farm	\$467,000/yr for 3 years	<ul style="list-style-type: none"> <li>• 28 vehicles</li> <li>• 557 miles</li> </ul>
Florida Turnpike	Travelers Marketing /State Farm	\$425,000/yr for 2 years	<ul style="list-style-type: none"> <li>• 14 vehicles</li> <li>• 309 miles</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>\$425K - \$600K/year in revenue to the public agency.</b></li> <li>• <b>2 to 3 year initial contract term with optional 1 year contract.</b></li> </ul>		

## Appendix: 511 Systems

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Virginia Department of Transportation (VDOT)	Iteris Inc.	\$200,000/yr of cost savings	<ul style="list-style-type: none"> <li>• 5 year contract for the design, development and operation of the 511 system.</li> <li>• Potentially cost neutral solution.</li> <li>• Private partner's projection of \$10M over five years represent potentially a 100% cost recovery scenario for VDOT.</li> </ul>
West Virginia Department of Transportation	Open Roads Consulting Inc.	N/A	<ul style="list-style-type: none"> <li>• 5 year contract for the design, development, and operation of the 511 system.</li> <li>• Started in early 2013.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>Cost savings of up to \$1 million over a five year contract.</b></li> <li>• <b>A revenue sharing partnership through advertising on the 511 website increases the potential for revenues or cost offsets to the public agency.</b></li> </ul>		

## Appendix: Express Lanes PPP / Tolling Operations

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Colorado, Regional transit District, Eagle P3 Fast Tracks project	Denver Transit Partners, a consortium	Capital costs from concessionaire reflect a 12.5% cost saving from engineer's estimate.	<ul style="list-style-type: none"> <li>• Availability payments</li> <li>• Total Project Funding is \$2.2B.</li> <li>• Up-front private investment of \$486M.</li> <li>• 22.8-mile electric commuter rail transit corridor.</li> </ul>
Florida Department of Transportation, Port of Miami Tunnel	Bouygues Civil Works Florida	Value for Money Analysis (2010): P3 cost efficiency of 12.5% capital costs, and 22.5% O&M costs.	<ul style="list-style-type: none"> <li>• Availability payments</li> <li>• 35-year concession agreement.</li> <li>• The total cost of design and construction of the tunnel is set at \$663M.</li> </ul>
Florida Department of Transportation, I-595 Corridor Improvements project	I-595 Express, LLC	A 25% difference in O&M costs between traditional procurement and alternatives.	<ul style="list-style-type: none"> <li>• 35-year contract</li> <li>• \$1.84B (present value in 2009 dollars), Equity: \$207.7M.</li> <li>• Total project length of approximately 10.5 miles</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>Savings from 12% in capital cost to 25% in O&amp;M compared to Engineer's estimate have been reported.</b></li> </ul>		

## Appendix: Asset Management

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Highways Asset Management Integrated Service, Blackburn Borough council, UK	Capita Symonds	£2.9M of efficiency savings over a 6 year period which equates approximately to 20% saving of the overall highways budget.	<ul style="list-style-type: none"> <li>• 25% reduction in overall fleet costs</li> <li>• 30% reduction in reactive maintenance</li> </ul>
Highways Agency, UK	N/A	In 2012-13 the planned administration budget is 16% lower than the opening prior year budget, and by the end of the spending review period the budget reduces by over 20%.	<ul style="list-style-type: none"> <li>• The integrated asset management information system enables the agency to more effectively prioritize its program of asset renewals, and to undertake appropriate maintenance and renewal activities at the optimal time in the asset's life cycle.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• Savings in the order of 16% to over 20% have been reported.</li> </ul>		

## Appendix: Fleet Maintenance – Outsourcing Maintenance

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
United Kingdom Ministry of Defense	N/A	\$67.4M projected savings over term of contract since 2001.	<ul style="list-style-type: none"> <li>• Non-combat fleet 14,000 vehicles</li> <li>• Outsourced maintenance, management, procurement, and replacement of vehicles to a single supplier.</li> <li>• Lease operate maintain deal</li> </ul>
Virginia Department of Transportation	N/A	25% savings/yr	<ul style="list-style-type: none"> <li>• Competitively bid automotive maintenance service to provide 24 hour, on-call automobile maintenance and repair.</li> <li>• Avoids costly expansions of the vehicle fleet by contracting for leased vehicles when possible.</li> <li>• When vehicles are needed for infrequent and short-term purposes, the Commonwealth contracts with Enterprise Rent-A-Car to provide the necessary vehicles as needed.</li> </ul>
City of San Diego, CA	N/A	13% cost savings/yr	<ul style="list-style-type: none"> <li>• Competitively bid fleet maintenance.</li> <li>• City of San Diego employees won the City's competitive procurement.</li> <li>• The fleet services division responsible for parts operations, towing, and heavy tire repair was to be outsourced to the private sector since it could be completed at a cheaper cost.</li> </ul>
State of New Jersey		10% to 25% savings/yr	<ul style="list-style-type: none"> <li>• Savings estimate is based on a study of potential savings from competitively bid fleet maintenance services.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>Potential cost savings from outsourcing of fleet maintenance services in the order of 10% to 25% have been observed in the market.</b></li> </ul>		

## Appendix: Fleet Maintenance – Equipment Utilization

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Pennsylvania Department of Transportation	N/A	Utilization policy in place. Fleet size has been reduced over the past 10 years.	<ul style="list-style-type: none"> <li>Reduced passenger vehicle fleet by 300 over past 4 years.</li> </ul>
North Carolina Department of Transportation	N/A	Audit report identified 12% of 8,600 vehicles used less than 15% of available hours. 12% = 1,030 vehicles	<ul style="list-style-type: none"> <li>Evaluating utilization and sizing of fleet assets.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li><b>Savings and revenues is generated by reducing the size of the vehicle fleet and/or improving its utilization.</b></li> </ul>		

## Appendix: O&M Bridge Bundling

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Missouri DOT, Safe and Sound Bridge Improvement Program	KTU Constructors (a JV of Kiewit Western Company and two other contractors) for the DB project, and several other smaller contractors for the bid groups.	Savings of more than \$500M (or 42%) over the previous contract model. \$2.4M (or 7%) savings on a \$34.8M budget for 4 bridges. Reopening a new bridge every day and a half.	<ul style="list-style-type: none"> <li>• \$198M for 248 bridges rehabilitated through a modified DBB contracting process bid in groups according to their location, type, and size.</li> <li>• \$487M DB contract that will replace 554 bridges located in 111 of the State's 114 counties by the end of 2013.</li> </ul>
Virginia Department of Transportation	7 DB contractors	Several years reduction in letting of projects.	<ul style="list-style-type: none"> <li>• Replacing 119 bridges and culverts over next 2 years using 7 DB contracts that bundle projects geographically and by type of work.</li> <li>• The contracts range in size from \$6M to \$12M.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>From 7% to 42% savings can be expected by bundling bridge reconstruction work compared to the cost of traditional project delivery.</b></li> </ul>		

## Appendix: Highway O&M Concessions

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Alberta Transportation	Multiple contractors	Cost savings in the order of 26% compared with prior to outsourcing.	<ul style="list-style-type: none"> <li>• 25,500 miles of provincial highways</li> <li>• 30 contract maintenance areas</li> <li>• 7 to 10 yr. contract term</li> <li>• Combined unit priced and lump sum contracts to control LOS provided.</li> <li>• Outcome/performance specifications where practical</li> <li>• Included all routine roadway and bridge maintenance, but not capital works.</li> </ul>
Florida Department of Transportation	Multiple contractors	Cost savings estimated at 17%.	<ul style="list-style-type: none"> <li>• Lump sum and unit price (Hybrid) performance-based contracts for 40% of the network.</li> <li>• 5 to 14 yr. contract term (plus renewals)</li> <li>• Planning, administration &amp; management, performance and inspection of routine maintenance activities.</li> </ul>

## Appendix: Highway O&M Concessions (cont'd)

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other program facts
Finland transportation agency	Multiple contractors	Cost savings over 30%.	<ul style="list-style-type: none"> <li>• Combined lump sum and unit price contracts.</li> <li>• 5 to 7 yr contract term.</li> <li>• 85% of the network covered.</li> <li>• Full Performance specifications for specific single maintenance activities including resurfacing, bridges and line marking.</li> </ul>
Sweden Transportation Agency	Multiple contractors	Cost savings from 20% to 30%.	<ul style="list-style-type: none"> <li>• Hybrid unit price and lump sum performance-based contracts.</li> <li>• 3- 6 yr contract term.</li> <li>• Contract for routine maintenance only.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>With a combination of output-outcome (performance-based), and full performance-based maintenance contracts, savings from 17% to over 30% have been achieved.</b></li> </ul>		

## Appendix: Highway Lighting

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
City of Philadelphia	N/A	N/A	<ul style="list-style-type: none"> <li>• Utilizing an active asset management tool with remote monitoring and controls capabilities for City-owned lighting being installed along the I-95 corridor.</li> <li>• PennDOT-owned lighting along I-95 mainline will be provided with the same capabilities to evaluate this tool as a solution for lighting asset management.</li> </ul>
Pennsylvania Department of Transportation	N/A	N/A	<ul style="list-style-type: none"> <li>• Prepared strategic plan in 2012 for a large asset and cost center. Considering including traffic signals and ITS devices.</li> <li>• Seeking approval to implement an active asset management and remote monitoring system (AAMRMS) for highway lighting assets.</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>A strategic plan on how to efficiently manage highway lighting and other related assets could generate cost savings over time.</b></li> </ul>		

## Appendix: Excess Lands

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Massachusetts Bay Transportation Authority	N/A	\$230M in cash and an additional \$270M in additional long-term value.	<ul style="list-style-type: none"> <li>• Property mapping</li> <li>• GIS study</li> <li>• Title and market research</li> </ul>
New York State Thruway	N/A	\$8M for a single district	• N/A
Illinois – Chicago Transit Authority (YEAR)	N/A	\$4.3M in surplus property over the past 2 years and \$11M worth of properties ready for disposition later this year.	• CTA owns 44 miles of right-of-way
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>The amount of revenue generated for each agency varies greatly from a few million to hundreds of millions of dollars, and depends on the type of property available and market conditions. Additional data needs to be gathered from UDOT before the value of the opportunity for surplus properties can be quantified.</b></li> </ul>		

## Appendix: Occupations / Encroachments

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Massachusetts Transportation Authority	N/A	\$15,121,076/yr	<ul style="list-style-type: none"> <li>• 617 route miles</li> <li>• 1,678 agreements</li> </ul>
Massachusetts Department of Transportation	N/A	\$39,000,000/yr	<ul style="list-style-type: none"> <li>• 36,248 route miles</li> <li>• Number of agreements N/A</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>The range of revenues observed ranged from \$15M to nearly \$40M per year.</b></li> </ul>		

## Appendix: Licensing

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Massachusetts Bay Transportation Authority	N/A	\$100,000/yr	<ul style="list-style-type: none"> <li>• 617 route miles</li> <li>• 972 agreements</li> </ul>
Massachusetts Department of Transportation	N/A	\$1,000,000/yr	<ul style="list-style-type: none"> <li>• 36,248 route miles</li> <li>• Number of agreements N/A</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>▪ <b>Based on market benchmarks, revenues from licensing could potentially generate \$1M or more in additional revenues.</b></li> </ul>		

## Appendix: Cell Towers

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
Virginia Department of Transportation	N/A	\$4,800,000/yr	<ul style="list-style-type: none"> <li>• 57,000 right-of-way miles</li> <li>• 94 leased cell sites</li> </ul>
California – Caltrans	N/A	\$7,000,000/yr	<ul style="list-style-type: none"> <li>• 50,000 right-of-way miles</li> <li>• 256 leased cell sites</li> </ul>
New Jersey Department of Transportation	N/A	\$6,500,000/yr	<ul style="list-style-type: none"> <li>• Miles of right-of-way not available</li> <li>• 135 leased cell sites</li> </ul>
Massachusetts Department of Transportation	N/A	\$11,000,000/yr	<ul style="list-style-type: none"> <li>• 47 leased cell sites</li> <li>• Miles of right-of-way not available</li> </ul>
Massachusetts Bay Transportation Authority	N/A	\$7,000,000/yr	<ul style="list-style-type: none"> <li>• 640 owned miles of right-of-way</li> </ul>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• <b>Revenues from these cell towers examples generate on average about \$7M per year in revenues.</b></li> </ul>		

## Appendix: Facilities Management

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
State of Missouri	Private Facilities Management Company	Guaranteed \$9.5M in annual cost savings, but actually received \$35M in annual cost savings.	• Performance-based contract for facilities management.
Government of the Province of Ontario, Canada (Durham Consolidated Courthouse Project)	N/A	Estimate approximately \$49M/yr.	• Design-Build-Finance-Maintain (DBFM) alternative financing procurement.
Government of the Province of Ontario, Canada (Niagara Health Systems Project)	N/A	Estimate approximately \$96M/yr.	• Design-Build-Finance-Maintain (DBFM) alternative financing procurement.
<b>Summary</b>	• <b>Private marketplace facilities management participants regularly cite 5% to 15% for annual cost savings from private delivery.</b>		

## Appendix: Parking

Agency	Private Partner	Annual Revenue/Cost Savings Per Year	Other Program Facts
City of Harrisburg	N/A	\$5.2M - \$21.6M/yr	<ul style="list-style-type: none"> <li>• 9,100 parking spaces</li> <li>• 40-year deal</li> </ul>
<b>Summary</b>	<p><b>• Because there is only one market comparable for this asset, the market conditions for parking in Utah need to be further examined in order to quantify the value of the parking opportunity.</b></p>		



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