State of Ohio
Department of Transportation (ODOT)
Office of Statewide Planning & Research
Research Section

Development of Strategic Enterprise Architecture
Design for ODOT

RFQ Solicitation No.: 2013-33

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I. Statement of the Problem

Based on our research team’s understanding of the current Ohio Department of Transportation (ODOT) business environment, some of the key business drivers/objectives of the department include:

- Continued agency downsizing, with ODOT heading toward an overall staffing level of 5,000 employees;
- Implementation of “critical success factors,” which guide not only the physical asset condition, but also key ODOT outcomes such as safety and congestion, and internal business processes such as workers compensation claims; and
- The critical success factors are leading to an overriding goal—the provision of services on a least-cost basis to the public. This means that ODOT needs to measure its own performance in terms of cost and outcomes; compare itself to other public and private sector providers; and choose the best-value methods of delivering public services.

Each of these business drivers requires ready access to timely and accurate information for management decision making. However, ODOT’s current information systems are unable to meet these demands.

The status of ODOT’s IT systems is stated succinctly in the problem statement for this research project included in the Department’s Request for Proposal. The agency has a number of systems which, understandably, were not developed in a comprehensive fashion or under one strategic vision. Some systems are old and not well-supported due to the age (and possible obsolescence) of software or people familiar with the systems (such as mainframe systems). Some systems were developed for an individual office or district and not designed to integrate with an overall architecture. And some systems simply do not work well.

ODOT has begun to address this information systems deficit. ODOT selected and has implemented Deighton dTIMS for pavement management and Kronos for time management and payroll. AgileAssets has been selected and implementation is being initiated for fleet management, facilities management and maintenance management. The Department is also interested in implementing an Enterprise Resource Planning (ERP) application to replace its legacy financial management and accounting applications in the near future.

However, the systems replacement efforts initiated to date have been done in response to the individual needs of specific business areas and not necessarily in the context of an overall enterprise-wide information systems strategy/plan. The Strategic Enterprise Architecture Design project will seek to address this gap by developing an enterprise systems vision for ODOT and a plan for implementing this vision, while at the same time being cognizant of the information technology investment decisions which have already been made by ODOT over the last several years.

II. Objectives and Goals of the Study

ODOT is undertaking this research project to develop a strategic enterprise architecture design for the department. The objective of this research project is to define a customized, executable Enterprise Architecture Strategic Plan that ODOT can then implement through a separate, follow-on project. ODOT’s enterprise architecture design will consist of:
• Business architecture which defines the functional structure of ODOT in terms of its business processes and organization and its associated business information needs;
• Application architecture which delineates the capabilities of specific applications used to support ODOT’s business functions and how these various applications work together or integrate to support ODOT’s enterprise-wide information requirements;
• Data architecture which establishes data standards for all of the Department’s systems to support integration and information sharing between these systems; and
• Technical architecture which describes the technical infrastructure and specific hardware and software technologies required to support the various business applications.

The Strategic Enterprise Architecture Design project will be carried out in two phases. Phase I consists of a best practices synthesis and a review of ODOT’s As-Is environment. Phase II includes development and validation of ODOT’s enterprise architecture; preparation of a migration plan for implementing the recommended architecture; and development of recommendations for a governance model and preparation of an organizational change management strategy to support implementation of ODOT’s proposed enterprise architecture.

III. Background and Significance of Work

An organization’s strategic objectives and business drivers, its business environment and its legislative environment are all key inputs to the development of an enterprise architecture. Consequently, the actual enterprise architecture for an organization must really be customized to that specific organization.

That being said, the methods, processes and tools for designing an enterprise architecture can be leveraged from organization to organization. There is a considerable body of knowledge, especially at the Federal level, on the process and methodology to be utilized in designing an enterprise architecture within a public-sector organization. And, within state transportation departments and other large infrastructure organizations, there are also considerable best practices and lessons learned that can be leveraged from other organizations as inputs to the development of an enterprise architecture for ODOT.

The discussion below highlights some of the inputs from previous research and enterprise architecture projects which can be leveraged as part of the preparation of the enterprise architecture for ODOT. A bibliography of relevant prior research is provided in Appendix H.

1. Enterprise Architecture in Federal Government

Design and implementation of enterprise architecture has been a focus within the Federal government sector over the last 15 years. The Clinger-Cohen Act, passed in 1996, was designed to improve information technology decision making in the Federal government. The Clinger-Cohen Act established a comprehensive approach for executive agencies to follow in managing IT acquisitions and other IT decision making. It was designed to:
Focus information resource planning to support an agency’s strategic missions;
Implement a capital planning and investment control process that links to budget formulation and execution; and
Drive business process re-engineering as a pre-cursor to investing in new IT systems.¹

The Clinger-Cohen Act directed the development and maintenance of Information Technology Architectures (ITAs) by Federal agencies to maximize the benefits of IT investments within the Federal government. In subsequent guidance on implementing the Clinger-Cohen Act, the Office of Management and Budget (OMB) required that agency ITA “be consistent with Federal, agency and bureau information architectures.”² To implement this directive, the Federal CIO Council initiated the Federal Enterprise Architecture, essentially a federal-wide ITA to “develop, maintain and facilitate the implementation of the top-level enterprise architecture for the Federal Enterprise.”³ This then led to a significant emphasis on the design and implementation of enterprise architecture at the individual agency level. In 2004, two members of our proposed research team (Robert Cooney and Dr. David Rose) participated in the development of an enterprise architecture plan for the Federal Highway Administration, Office of Federal Lands Highways, following this Federal framework.

2. Enterprise Architecture in State Government

The focus on enterprise architecture at the Federal level has helped to develop interest in the implementation of enterprise architecture programs in some states at the state level and at numerous individual state agencies across the country.

One example of enterprise architecture at the statewide level is the State of North Carolina. The Office of Enterprise Architecture for the State of North Carolina (www.scio.nc.gov/services/enterpriseArchitecture.aspx) provides leadership for the state’s information technology programs and works collaboratively with the IT organizations in various state agencies to better align IT direction and IT investment decisions with the state’s business objectives.⁴

The goal of the State of North Carolina’s enterprise architecture program is to support the expectation by its citizens and stakeholders for the State of North Carolina to conduct its business more efficiently and effectively. One of the primary goals of North Carolina’s enterprise architecture program is to build an IT environment that supports a business model which promotes among other things:

- Coordinated service delivery across agencies;
- Citizen-centric, one-stop shopping;

¹ OMB (2000) CIRCULAR NO. A-130 Revised
³ The Chief Information Officers Council (1999). Federal Enterprise Architecture Framework Version 1.1
⁴ https://www.scio.nc.gov/services/enterpriseArchitecture.aspx
• More planned and coordinated partnerships with external organizations; and
• Streamlined administrative business processes.\(^5\)

3. Enterprise Architecture in State Departments of Transportation

The Kansas Department of Transportation (KDOT) has been a leader in applying enterprise architecture within the state DOT community. In 2005, KDOT was one of only six United States public sector agencies to be recognized for “Excellence in Enterprise Architecture” by the E-Gov Institute.\(^6\) KDOT’s enterprise architecture program was focused on:

• Treating IT resources and infrastructure as a KDOT asset;
• Implementing portfolio management processes to manage future IT investment decision making and reduce/simplify the application portfolio; and
• Defining an enterprise architecture including data, applications, processes and technology architectures.\(^7\)

While the KDOT project had the definition of an enterprise architecture as its primary objective, other state departments of transportation have also made significant progress in developing an enterprise architecture as part of planning for replacement of its core legacy systems. Two examples in this category are the West Virginia Department of Transportation (WVDOT) and the Washington State Department of Transportation (WSDOT) where members of our proposed research team assisted these state DOTs to architect enterprise-wide solutions to replace aging, legacy systems and reduce the overall agency application portfolio. Both of these projects were driven from a business perspective and had as their goal to improve the capability of the management systems to support the strategic missions of their respective agencies. Both state DOTs are also anticipating significant business process re-engineering in conjunction with the implementation of the system roadmaps defined during these two project efforts.

Exhibit III-1 depicts WVDOT’s conceptual To-Be application architecture.

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\(^5\) [https://www.scio.nc.gov/services/enterpriseArchitecture.aspx](https://www.scio.nc.gov/services/enterpriseArchitecture.aspx)

\(^6\) Kansas Department of Transportation “Translines,” December 2005, page 3

The eVision Partners team expects to leverage best practices and research findings from KDOT, WSDOT and WVDOT as inputs to the preparation of ODOT’s enterprise architecture.

IV. Work Plan

eVision Partners’ proposed project approach and work plan is based on and adapted from the Open Architecture Method (TOGAF) 9.1 and the TOGAF Architecture Development Method (ADM). eVision Partners’ proposed approach is also intended to be highly collaborative, with frequent opportunities for engagement and interaction between the eVision Partners team and key ODOT stakeholders. Exhibit IV-1 illustrates how phases of ODOT’s Research Project maps to the different phases of TOGAF’s ADM.

8 West Virginia Statewide ERP Project, “West Virginia Department of Transportation Scope Visioning Document,” July 2010
1. **Project Phases**

In Phase I, the eVision Partners team will conduct research on Best Practices within the industry (State Transportation and Information Technology), a situational assessment of the existing environment at ODOT, and prepare an Interim Report. During this phase, the eVision Partners team will also commence work leading up to Phase II deliverables (To-Be state of the Enterprise Architecture), utilizing the principles of TOGAF’s ADM. In Phase II of the project, the eVision Partners team will complete the definition of the ODOT Enterprise Architecture, analyze opportunities and solutions, prepare a migration plan for transitioning from the As-Is to the To-Be states, define governance mechanisms and develop an organizational change management strategy.

**A. Phase I: Baseline Enterprise Architecture**

This phase consists of four tasks: project start-up, a best practices synthesis, the analysis of the ODOT As-Is environment and the preparation of an interim report.

- **Project Start-up:** This task includes activities required to initiate the project. This includes conducting a project start-up meeting scheduled by ODOT’s Innovation, Research and Implementation Section (IRIS). This meeting provides an opportunity to clarify technical issues or concerns with the project. Invitees to this meeting will include the eVision Partners team, technical liaisons, sponsoring Office Administrator, ODOT Project Manager, ODOT Deputy Project Manager and Federal Highway Administration (FHWA) and IRIS staff. The meeting should last for approximately one hour and be scheduled by IRIS. Following the project start-up meeting, the eVision Partners team will update the detailed work plan provided as a draft in this proposal and provide it to the ODOT Project Manager and Deputy Project Manager for review. The work plan will then be updated and finalized to reflect feedback from ODOT.
During Project Start-up, the eVision Partners team will conduct a project kick-off meeting with key stakeholders expected to be involved in the project effort. The purpose of this kick-off meeting is to explain the project goals and objectives; approach to completing the work; anticipated project timeline; and assistance which will be required from stakeholders and when this assistance will be needed.

In addition, the eVision Partners team will prepare an outline of the Interim Report and provide this outline to the ODOT Project Manager and Deputy Project Manager for review. The outline will then be updated and finalized based on ODOT feedback. The purpose of this outline is to confirm expectations as to the expected content of the Interim Report deliverable prior to initiating most of the Phase I activities.

- **Synthesize Best Practices:** Upon project initiation, the eVision Partners team will conduct a literature search of enterprise architecture best practices at other state DOTs and other large construction, maintenance or infrastructure management organizations. The team will then synthesize its findings from the literature search and prepare a one-day workshop for key ODOT stakeholders to educate the ODOT team on the identified best practices and to validate the potential applicability of the various best practices to the ODOT environment.

  In addition, the eVision Partners team is also proposing best practices briefings in various transportation functional areas. Drawing from our team’s deep experience, we propose to conduct four one-day workshop briefings on best practices in the application of technology in the areas of transportation asset management, maintenance management, project delivery/project management and financial management. Collectively, the best practices identified during this task will then be utilized as guiding principles/inputs into the development of the To-Be Architecture.

- **Analyze ODOT As-Is Environment:** The eVision Partners team will perform a situation analysis of ODOT’s existing IT architecture. This analysis will include ODOT’s current business architecture, application architecture, data architecture and technology architecture. It will also include an analysis of the current legislative environment including both the State legislative environment and the impact of the new MAP-21 legislation or other potential Federal initiatives. Findings will be documented within the Portfolio Assessment Framework. The eVision Partners team will carry out this analysis in several steps:
  - Upfront briefings of the rest of our team members by Howard Wood to draw from his knowledge of ODOT systems and help our team come up-to-speed more quickly;
  - Collection and review of available business process and system documentation;
  - Conduct of up to 40 key stakeholder interviews of ODOT business units and IT staff, appropriate Ohio Department of Administrative Services (ODAS) staff and any other external stakeholders recommended by ODOT (in previous projects our team has for example interviewed the chairs of the Transportation committees in the legislature or their key staff members and/or representatives of the contractor community or engineering consultant community, etc.). These interviews will focus on identifying the strengths, weaknesses and opportunities in the current business processes and systems. The interviews will typically be conducted 1:1 or in small groups and last 45 minutes to 1 hour; and
Documentation of our initial As-Is findings and then reviewing and validating these findings in a series of half-day work sessions with key ODOT stakeholders. We envision that these work sessions will be organized by business function as well as sessions on enterprise-wide elements such as technical architecture and systems infrastructure and external impacts including the Federal and State legislative environment. Up to 24 half-day work sessions will be conducted. Exhibit IV-2 outlines the proposed As-Is validation sessions.

**Exhibit IV-2: Proposed As-Is Validation Sessions**

<table>
<thead>
<tr>
<th>Functional Areas</th>
<th>Technical Environment</th>
<th>Business Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project prioritization, selection and programming</td>
<td>Linear referencing system/route network</td>
<td>State legislative environment</td>
</tr>
<tr>
<td>Project management/project delivery</td>
<td>Transportation asset management</td>
<td></td>
</tr>
<tr>
<td>Operating budget development</td>
<td>Maintenance management</td>
<td></td>
</tr>
<tr>
<td>Performance measurement/management</td>
<td>Fleet management</td>
<td></td>
</tr>
<tr>
<td>Financial reporting/general ledger</td>
<td>Facilities management</td>
<td></td>
</tr>
<tr>
<td>Revenue cycle</td>
<td>Transportation systems planning</td>
<td></td>
</tr>
<tr>
<td>Human resource management</td>
<td>Environmental</td>
<td></td>
</tr>
<tr>
<td>Time, leave and labor distribution</td>
<td>Construction Management</td>
<td></td>
</tr>
<tr>
<td>Procure to pay</td>
<td>Right-of-Way</td>
<td></td>
</tr>
<tr>
<td>Inventory management</td>
<td>Utility Relocation</td>
<td></td>
</tr>
<tr>
<td>Application architecture</td>
<td>Technical architecture</td>
<td></td>
</tr>
<tr>
<td>Federal legislative environment</td>
<td></td>
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</tr>
</tbody>
</table>

- **Prepare Interim Report:** The eVision Partners team will prepare a draft of the Interim Report and provide this report to ODOT for review. The eVision Partners team will then conduct a one-day review meeting with the appropriate ODOT stakeholders to review the report. eVision Partners will then update and finalize the Interim Report based on feedback received from ODOT. A formal presentation on the Interim Report will then be provided to ODOT executive management and other key stakeholders as appropriate.

**B. Phase II: Develop Enterprise Architecture Strategic Plan**

This phase consists of five tasks: Phase start-up activities; the definition of the ODOT To-Be Enterprise Architecture; development of a migration plan for transitioning to the proposed To-Be Architecture; definition of a governance model and other strategies to support implementation of the migration plan and the preparation of an Interim Report.

- **Phase Start-up:** This task includes the activities necessary to initiate Phase II. During this task, the eVision Partners team will prepare a detailed outline of the Final Report and provide this outline to the ODOT Project Manager, ODOT
Deputy Project Manager and other appropriate stakeholders for review. The purpose of this outline is to ensure there is consensus on the scope and content of the Final Report prior to initiating Phase II activities.

- **Define ODOT To-Be Architecture:** Using the guiding principles established through the Best Practices synthesis, the findings of the As-Is architecture analysis and the current and anticipated State and Federal legislative environment as key inputs, the eVision Partners team will define the preliminary ODOT To-Be Enterprise architecture. The To-Be architecture will then be reviewed and validated in a series of half-day workshops with ODOT stakeholders. As opposed to the As-Is analysis, which was accomplished through various functional workshops, these workshops will be driven from the enterprise level and will involve looking at the systems needs of the department holistically. Validation workshops will be centered on broad topic areas including business architecture, application, data architecture and technology architecture. The ODOT To-Be Architecture will: (1) align with ODOT’s critical success factors as documented in the Strategic Plan published in 2011; (2) recommend approaches for reducing ODOT staffing levels; (3) recommend whether ODOT should develop in-house applications or utilize commercial off-the-shelf software applications; (4) provide a recommended model for IT support (centralized or regional allocation of staff); and (5) be consistent with the State of Ohio enterprise architecture framework.

- **Develop Migration Plan:** The eVision Partners team will then develop a draft migration plan for transitioning to the proposed ODOT To-Be Enterprise architecture. This plan shall delineate activities to be accomplished within the immediate next two years, as well as activities to be accomplished over the following four years. As part of preparing this plan, the eVision Partners team will collaborate with ODOT stakeholders on a list of key principles or guidelines upon which the plan should be based. Some examples might be items such as:
  - ODOT is not going to abandon all systems at once, and completely redevelop its systems environment and so the migration must be staged carefully based on the relative business benefit of different systems replacement efforts;
  - ODOT has either recently completed or is currently undertaking several new system implementation projects. How will we best leverage these investments within the overall ODOT enterprise architecture? How will these systems integrate with other new systems to be implemented in the future and what can we do to minimize potential re-work or interim interfaces between systems; and
  - There are a number of systems/applications, which need to share data, and if they did, business processes would be streamlined and more efficient; however, there are some systems/applications, which do not necessarily need to share data, and so these systems can be developed on a separate evolutionary path.

  The eVision Partners team will provide a draft of the plan to ODOT and conduct a one-day review and validation session. The team will then update the migration plan to reflect ODOT input.

- **Define Governance Model and Other Implementation Strategies:** In this task, the eVision Partners team will prepare a recommended governance model and proposed organizational change management strategy for implementing the migration plan. These models/plans will be provided to ODOT in draft format and then reviewed
with key stakeholders in two half-day work sessions. The eVision Partners team will then update the draft governance model and organizational change management strategy based on feedback received from ODOT.

- **Prepare and Publish Final Report:** The eVision Partners team will prepare a draft of the Final Report and the executive summary and provide this report to ODOT for review. The Final Report will package the various work products from Phase I and Phase II into a single Enterprise Architecture Strategic Plan document. The eVision Partners team will then conduct up to a two-day review meeting with the appropriate ODOT stakeholders to review the report. eVision Partners will then update the Final Report based on feedback received from ODOT and upon ODOT’s approval publish the Final Report and Executive Summary. The Final Report and Executive Summary will be prepared and provided as follows:
  - One (1) original and five (5) copies of the draft Final Report and draft Executive Summary will be submitted no later than two months prior to the project completion date. This report will be prepared according to ODOT IRIS Research Proposal Formatting & Submission Guidelines;
  - Five (5) copies of the approved Final Report and five (5) color copies of an approved two- to four-page dated Executive Summary will be submitted by the contract completion date; and
  - Two electronic versions of the approved Final Report and approved Executive Summary will be submitted in the following formats: (1) Adobe Acrobat (.pdf) and (2) Microsoft Word (.doc).

C. **Project Management**

Project management runs concurrently with Phase I and Phase II and involves the activities required to manage the project on an on-going basis. Project management activities include:

- Preparation of bi-weekly status reports for the ODOT Project Manager and Deputy Project Manager. These status reports will highlight key project accomplishments, planned activities, issues requiring management attention and any project risks and recommended mitigation strategies;
- Conduct of bi-weekly status meetings with the ODOT Project Manager, ODOT Deputy Project Manager and other key stakeholders as appropriate;
- Conduct of monthly meetings with the ODOT Assistant Director of Transportation Policy and the ODOT Assistant Director of Business and Human Resources;
- Preparation and submission of quarterly progress reports to IRIS; these reports will be submitted electronically following the content and format guidelines established by IRIS;
- Preparation for and conduct of periodic project progress reviews with key project stakeholders. eVision Partners recommends that at least two project progress review meetings be conducted per phase;
- Preparation of a newsletter article on the Strategic Enterprise Architecture Design project for the IRIS newsletter; and
• Preparation for and conduct of a Research Results presentation. The presentation will consist of an overview of the project; detailed discussions on the findings and recommendations; and an overview of proposed implementation steps. This presentation will be scheduled by IRIS staff.

2. Methodology and Tools

eVision Partners proposes to use a proven and robust methodology, illustrated in Exhibit IV-3, to accomplish the enterprise architecture design for ODOT. The proposed methodology has been adopted by the eVision Partners team on several projects successfully, and aligns with TOGAF’s Architecture Development Method. The methodology further allows the eVision Partners team to utilize tools and enablers to perform certain aspects of the research more efficiently, thereby improving the overall quality of research and the outcomes.

Exhibit IV-3: Proposed Methodology

One tool, in particular, that eVision Partners proposes to leverage for the project is the IT Application Portfolio Assessment Framework, developed by our partner, Intueor Consulting. This analysis framework facilitates the bottom-up analysis of IT applications, as they exist currently at ODOT. The uniqueness of a tool-based approach is that it incorporates a comprehensive and rational framework for decision making. For the ODOT Enterprise Architecture Design project, eVision Partners will utilize this tool to assess the existing ODOT IT applications and their value to the enterprise architecture objectives of ODOT (such as business value, fitment to functional needs, scalability, performance, security, risk, architecture and technology standards, cost, etc.). Using this assessment, eVision Partners and ODOT will be in a better position to determine the future state of IT applications within the framework of ODOT’s To-Be Enterprise

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Architecture, i.e., whether ODOT should retire/decommission, re-engineer, re-architect or replace applications during the course of implementing the Enterprise Architecture Strategic Plan. Key benefits of utilizing the Portfolio Assessment Framework for ODOT’s Enterprise Architecture project are:

- Easy and user-friendly configuration of Enterprise Architecture objectives, against which IT Applications should be assessed;
- Leveraging a structured, multi-dimensional, objective and repeatable decision-making technique to determine the appropriate action to be taken on legacy IT applications;
- Graphical aids to visualize business value of IT Applications—individually, by functional groups or across the entire IT Portfolio (please see Exhibit IV-4 for an example); and
- Identification of transformation quick-wins, considering that the implementation of an Enterprise Architecture across ODOT will constitute a multi-year effort. For example, the Application Inventory created within the Portfolio Assessment Framework could potentially present opportunities such as License Optimization, i.e., data-based levers for ODOT to renegotiate license and AMC costs with technology vendors, thereby generating cost-savings in the short to medium term.

Exhibit IV-4: Sample Analysis from IT Portfolio Assessment

Additional information about the Intueor IT Application Portfolio Assessment Framework is provided in Appendix G. eVision Partners included pricing for a single-user license for ODOT for the Intueor IT Application Portfolio Assessment Framework in its cost proposal. This proposed tool is only available through Intueor. However, there are a number of IT portfolio analysis tools with similar types of capabilities in the marketplace. As requested by IRIS, we provided quotes for
two other products with which our team has some experience and which could be utilized on this research project. These tools are:

- ExpertChoice Comparison (www.expertchoice.com), which is a web-based capital investment portfolio analysis tool, utilized by a number of public-sector organizations and private companies to analyze and prioritize IT and other capital investments. Mr. Robert Cooney, our proposed Principal Investigator, is currently utilizing this tool to develop and implement a project evaluation and prioritization model for the Metropolitan Atlanta Rapid Transit Authority’s Capital Improvement Program; and

- Microsoft Project Server which can be configured to capture attributes about and support prioritization of projects; the eVision Partners team has not utilized Microsoft Project for this purpose but did analyze use of Microsoft Project as part of our work for MARTA. In addition, the State may already have licenses for this product which could be leveraged for this project.

The eVision Partners team is also willing to utilize any IT investment tools with similar capabilities which may already be utilized by ODAS. Our team would require training on these tools and access to ODAS staff familiar with the tool or the vendor’s help desk for any technical support questions during the course of the project.

3. Staff Loading and Timeline

eVision Partners’ proposed staff loading and timeline are included in Appendix D. eVision Partners proposed staff loading and timeline is based on: (1) our team’s experience working on similar projects for several other state departments of transportation including Colorado, Louisiana, Maryland, Washington and West Virginia; (2) our ability to leverage the experience of our proposed team members with a number of the application solutions which have been selected by ODOT (for example AgileAssets) and (3) our ability to leverage our understanding of the ODOT business and technical environment based on Howard Wood’s prior experience with ODOT to be able to quickly initiate project activities.

4. Participation Anticipated From ODOT

In order to complete the work within the proposed timeline, the eVision Partners team requests assistance with the following from ODOT:

- Work locations on-site for two staff including phones and Internet connectivity;
- Participation by ODOT staff in fact-finding interviews or review and validation sessions at the times required per the agreed to and approved project plan for the research project;
- Review of informal deliverables by ODOT staff prior to the conduct of a review and validation session, typically ODOT staff will have at least five business days to review a document;
- Review of formal deliverables within 10 business days of submission, except for the Final Report where we are requesting ODOT comments within 30 business days of submission of the Draft Final Report; and
• Assignment of an ODOT staff member as the Deputy Project Manager who will act as a single point of contact for the research team for administrative and management issues/items; we would expect this individual to be dedicated to the project approximately 25% of the time.

Exhibit IV-5 outlines eVision Partners’ anticipated commitment from ODOT and ODAS staff by role and phase.

**Exhibit IV-5: Anticipated ODOT and ODAS Staff Involvement by Phase**

<table>
<thead>
<tr>
<th>ODOT/ODAS Role</th>
<th>Commitment by Project Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Phase I</td>
</tr>
<tr>
<td>ODOT Project Manager</td>
<td>5%</td>
</tr>
<tr>
<td>ODOT Deputy Project Manager</td>
<td>25%</td>
</tr>
<tr>
<td>Business owners and other key stakeholders of core management systems/processes</td>
<td>5%</td>
</tr>
<tr>
<td>ODOT Software Production and Project Management Office staff responsible for maintaining existing systems</td>
<td>5%</td>
</tr>
<tr>
<td>ODOT Software Production and Project Management Office staff implementing new systems initiatives (AgileAssets, SiteManager™, Deighton dTIMS, etc.)</td>
<td>5%</td>
</tr>
<tr>
<td>Representatives from ODOT Database Group and Office of Infrastructure</td>
<td>5%</td>
</tr>
<tr>
<td>ODAS staff familiar with statewide systems and State architecture standards/direction</td>
<td>2%</td>
</tr>
</tbody>
</table>

**V. Research Deliverables**

Exhibit V-1 outlines the deliverables of the Strategic Enterprise Architecture Design project by phase and task.

**Exhibit V-1: Deliverables List by Phase/Task**

<table>
<thead>
<tr>
<th>Deliverable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase I: Baseline Enterprise Architecture</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Task 1: Project Start-up</strong></td>
<td></td>
</tr>
<tr>
<td>Project Start-up Meeting Minutes</td>
<td>Participation in and minutes/notes from the Project Start-up Meeting.</td>
</tr>
<tr>
<td>Project Work Plan</td>
<td>Detailed project work plan prepared in Microsoft Project which outlines the schedule and resources to perform the project. This work plan will be built from the draft work plan in this proposal and maintained and updated as required throughout the project.</td>
</tr>
<tr>
<td>Deliverable Name</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Project Kick-off Meeting</td>
<td>PowerPoint presentation used for the kick-off meeting and minutes/notes from the meeting.</td>
</tr>
<tr>
<td>Outline of Interim Report</td>
<td>Outline of the Interim Report; this outline is designed to confirm expectations as to the expected content of the Interim Report deliverable prior to initiating most of the Phase I activities.</td>
</tr>
<tr>
<td><strong>Task 2: Synthesize Best Practices</strong></td>
<td></td>
</tr>
<tr>
<td>Enterprise Architecture Best Practices Briefing</td>
<td>PowerPoint presentation which provides a synthesis of the enterprise architecture best practices literature search and meeting minutes/notes from the briefing workshop.</td>
</tr>
<tr>
<td>Best Practices Briefings – DOT Business Functions</td>
<td>PowerPoint presentations, other reference materials and meeting minutes/notes from the four DOT business process best practices briefings. These briefings will cover transportation asset management, maintenance management, DOT financial management, and capital program planning and project delivery.</td>
</tr>
<tr>
<td>Initial List of Key Business Drivers</td>
<td>Initial list of key ODOT business drivers based on best practices synthesis and input received from ODOT management and staff at the various best practices briefings.</td>
</tr>
<tr>
<td><strong>Task 3: Analyze ODOT As-Is Environment</strong></td>
<td></td>
</tr>
<tr>
<td>Stakeholder Interview List</td>
<td>List of key stakeholders from ODOT and ODAS, as well as any other external stakeholders to be interviewed by the research team. This list will be developed in collaboration with ODOT.</td>
</tr>
<tr>
<td>Stakeholder Interview Questionnaire</td>
<td>Structured questionnaire to be utilized to conduct the stakeholder interviews.</td>
</tr>
<tr>
<td>Updated List of Key Business Drivers</td>
<td>Updated list of key ODOT business drivers based on stakeholder interview findings.</td>
</tr>
<tr>
<td>As-Is Findings</td>
<td>Documentation of findings from the stakeholder interviews as validated by follow-up work sessions. This deliverable will outline the strengths, weakness and opportunities in the Department’s current systems and planned systems initiatives.</td>
</tr>
<tr>
<td><strong>Task 4: Prepare Interim Report</strong></td>
<td></td>
</tr>
<tr>
<td>Draft Interim Report</td>
<td>Initial draft of the Interim Report which documents the findings of the research team during Phase I.</td>
</tr>
<tr>
<td>Deliverable Name</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Final Interim Report</td>
<td>Publication of the final Interim Report incorporating feedback received from ODOT on the initial draft.</td>
</tr>
</tbody>
</table>

### Phase II: Develop Enterprise Architecture Strategic Plan

#### Task 5: Phase Start-up

**Outline of Final Report**
Outline of the Final Report; this outline is designed to confirm expectations as to the expected content of the Final Report deliverable prior to initiating significant Phase II activities.

#### Task 6: Define ODOT To-Be Architecture

- **Business Architecture**
  This deliverable will consist of diagrams depicting the Department’s business architecture and supporting narrative text.

- **Application Architecture**
  This deliverable will consist of diagrams depicting the Department’s proposed application systems, the relationships between these systems and supporting narrative text.

- **Data Architecture**
  This deliverable will consist of diagrams depicting the proposed data architecture and supporting narrative text.

- **Technical Architecture**
  This deliverable will consist of diagrams of the proposed technical architecture with supporting narrative descriptions.

#### Task 7: Develop Migration Plan

**Migration Plan**
This deliverable will consist of a narrative summary of the plan and a work plan in Microsoft Project format.

#### Task 8: Define Governance Model and Other Implementation Strategies

- **Governance Model**
  Proposed governance model to support implementation of ODOT Enterprise Architecture. Deliverable will consist of text and diagrams as appropriate.

- **Organizational Change Management Strategy**
  This document describes proposed organizational initiatives, training programs and communication strategies to support implementation of the proposed ODOT Enterprise Architecture.

#### Task 9: Prepare and Publish Final Report

- **Draft Final Report and Executive Summary**
  Draft of Final Report and Executive Summary incorporating the various interim work products developed during Phase I and Phase II.

- **Final Report and Executive Summary**
  Publication of Final Report and Executive Summary incorporating feedback received from ODOT on the initial draft.

#### Task 10: Project Management
<table>
<thead>
<tr>
<th>Deliverable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bi-weekly Status Report</td>
<td>Brief status reports provided to ODOT Project Manager and Deputy Project Manager every two weeks summarizing key accomplishments, plans for next period, issues requiring management attention and key risks.</td>
</tr>
<tr>
<td>Project Status Meetings</td>
<td>Research team participation in and minutes from periodic (typically bi-weekly) status meetings with the ODOT Project Manager, Deputy Project Manager and other key stakeholders as appropriate.</td>
</tr>
<tr>
<td>Quarterly Progress Reports</td>
<td>Formal quarterly progress reports in the format specified in the Research Manual and as depicted on the IRIS website. Reports will be submitted electronically.</td>
</tr>
<tr>
<td>Project Review Sessions</td>
<td>PowerPoint presentations and supporting materials for and research team participation in periodic project review sessions as scheduled by the ODOT Project Manager/Deputy Project Manager.</td>
</tr>
<tr>
<td>R &amp; D Newsletter Article</td>
<td>Up to two-page article on the project for the IRIS newsletter.</td>
</tr>
<tr>
<td>Research Results Presentation</td>
<td>PowerPoint presentation and supporting materials for and research team participation in a presentation of the research results. The presentation will consist of an overview of the project; detailed discussions on the findings and recommendations; and an overview of proposed implementation steps.</td>
</tr>
</tbody>
</table>

**VI. Benefits and Potential Application of Research Results**

The benefits from the Strategic Enterprise Application Design project consist of both direct benefits from completing the study, as well as benefits associated with the application of the research results. The direct benefits from the research study itself include:

- Greater alignment of information technology investments with ODOT’s strategic objectives and business drivers;
- A multi-year work plan and cost estimate for implementing the highest priority future ODOT information technology projects;
- A more structured process for requesting and approving future information technology investments within the context of the ODOT To-Be Enterprise Architecture;
- Reduced information technology costs through a simplification of the ODOT application portfolio as numerous legacy systems are replaced with newer, more flexible technologies; and
- A reduction in IT support as a result of a reduction in the total number of ODOT application systems which need to be managed/supported.
Based on the eVision Partners team’s experience in other states, ODOT should anticipate significant benefits from the actual implementation of the To-Be Enterprise Architecture through the execution of the multi-year work program defined during the research project. These savings are the result of a combination of faster cost recovery, cost savings from efficiencies, future cost avoidance, and redirection of staff from transaction processing activities to higher value and program-specific work. Examples of some of these potential benefits include:

- **Increased efficiency in the delivery of the transportation program:**
  - A reduction in the cost to deliver a project through improved program and project management tools including enhanced project budgeting and costing;
  - More cost-effective project programming decisions through enhanced needs identification, project scoping, project prioritization and selection tools; and
  - Reduction in construction contract change orders, claims, project delays and overruns through more effective contract management and monitoring tools.

- **Improved management of assets and consumable inventory:**
  - More effective use of the existing maintenance budget through improved lifecycle cost management as a result of implementation of an integrated transportation asset management solution with lifecycle cost modeling, needs identification, trade-off analysis, and performance-based budgeting capabilities; and
  - Reduced spend on consumable inventory by reducing inventory turns and more frequently negotiating volume discounts.

- **Automation, streamlining and consolidation of accounting and other support functions:**
  - Opportunity to redirect the time of some accounting, timekeeping, payroll and procurement staff through capturing data at the source, and through the use of employee and vendor self-service capabilities.

- **Enhanced billing and revenue collection practices:**
  - Ability to improve collection rates for accounts receivable through enhanced billing, collection and monitoring; and
  - Ability to offset receivables from and payables to local jurisdictions and other entities through the use of common identifiers and enhanced collection management capabilities.

- **Enhanced procurement practices:**
  - Ability to more effectively group purchases to achieve better pricing; and
  - Ability to take discounts on vendor payments through enhanced accounts payable management capabilities.

- **Easier and more timely access to information:**
  - Improved access to information, reducing the staff effort to perform research and improving the quality of the information available for management and policy maker decision making.
VII. Itemized Budget

Proposal budget forms for the eVision Partners team, along with appropriate back-up schedules are provided in Appendix E.

VIII. Work Time Cost Schedule

Please refer to Appendix F for a copy of the Work Time Cost Schedule for the ODOT Strategic Enterprise Architecture Design project.
Appendix A: Facilities

eVision Partners and its subcontractors will perform the work on this research project either in our offices or on-site at ODOT facilities. Our space request in ODOT facilities to support this project is outlined in Section IV – Work Plan.

In terms of the team’s office locations, eVision Partners’ office is located in Raleigh, NC. Staff from Parsons Brinkerhoff are based out of their offices in Columbus, OH; New York, NY and Seattle, Washington. Intueor staff are based out of their headquarters office in Irvine, CA.
Appendix B: Qualifications of Research Team

eVision Partners has assembled a strong team of transportation and information technology professionals with extensive experience in architecting enterprise-wide system solutions for state departments of transportation. Our proposed research team has:

- Extensive experience in developing enterprise-wide systems plans for state DOTs including the development of agency-wide system roadmaps and migration plans for the Colorado Department of Transportation (CDOT), Washington State Department of Transportation (WSDOT) and the West Virginia Department of Transportation (WVDOT). The work for WSDOT and WVDOT also involved defining the DOT enterprise architecture in the context of statewide ERP systems initiatives;

- Deep knowledge of core state DOT management systems including maintenance management, transportation asset management, program/project management, fleet/equipment, right-of-way acquisition, utility relocation, bridge management, safety management, pavement management, construction management and materials testing among other areas;

- Hands-on experience in applying national best practices in the areas of planning, programming, maintenance management, fleet and equipment management, financial management and budgeting, project delivery and project management;

- Strong enterprise architecture experience including hands-on implementation experience in technical architecture roles on large-scale statewide projects in Mississippi and Pennsylvania;

- Considerable experience in a number of state DOTS in working with divergent stakeholder groups and in collaborating with DOT staff from various business areas, headquarters and the districts to achieve project objectives; and

- Team members with knowledge of ODOT’s current systems environment which will reduce the learning curve for the research team and allow us to hit the ground running in Phase I.

- Team members with experience in a number of applications recently implemented or selected by ODOT including AgileAssets, Deighton dTIMS, AASHTO SiteManager™ and Kronos.

Exhibit B-1 summarizes the key capabilities of the proposed eVision Partners research team. Resumes for each key team member are provided on the pages which follow.
## Exhibit B-1: eVision Partners Team Experience

<table>
<thead>
<tr>
<th>Skill/Function</th>
<th>Robert Cooney</th>
<th>David Rose</th>
<th>Howard Wood</th>
<th>Kevu Shah</th>
<th>John Natteford</th>
<th>Vijay Pandey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise Architecture/IT Planning at Statewide Level</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>DOT-wide Enterprise Architecture/IT Planning</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Experience with applications solutions previously selected by ODOT (AgileAssets, Kronos, SiteManager™)</td>
<td>✔</td>
<td>✔</td>
<td></td>
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<td></td>
<td>✔</td>
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<tr>
<td>Program and Project Management</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Engineering Document Prep and Management</td>
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<td>✔</td>
<td>✔</td>
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<tr>
<td>Financial Management/Accounting/HR</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<td>✔</td>
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<tr>
<td>Preconstruction Management</td>
<td>✔</td>
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<td>✔</td>
<td>✔</td>
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<td>✔</td>
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<tr>
<td>Construction Management</td>
<td>✔</td>
<td>✔</td>
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</tr>
<tr>
<td>Materials Testing</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<td></td>
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<tr>
<td>Maintenance Management</td>
<td>✔</td>
<td>✔</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Fleet/Equipment</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Asset Management</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Management</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right-of-Way Acquisition</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Relocation</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Robert Cooney, PMP

PROPOSED ROLE
Principal Investigator

FIRM/TITLE
eVision Partners, Inc.
President and Managing Partner

EDUCATION
Master of Business Administration, Vanderbilt University, 1987
Bachelor of Arts, Finance, Ball State University, 1985

PROFILE

Robert Cooney has more than 25 years of experience working with organizations on the planning, analysis, design, and implementation of mission-critical business and technology change initiatives. Mr. Cooney has managed or directed business process improvement, organizational change, information technology planning and systems implementation projects for 22 state transportation agencies, as well as the Federal Highway Administration and several transit agencies and turnpike authorities.

RELEVANT EXPERIENCE

- Project manager for the Transportation track for the pre-implementation planning phase of the State of West Virginia’s Enterprise Resourcing Planning (ERP) project. In this role, Mr. Cooney was responsible for defining business requirements and architcting a set of application solutions for the West Virginia Department of Transportation within the context of the State’s overall ERP project. The scope included the following areas: transportation asset inventory; maintenance management; fleet/equipment; facilities management; program/project management; right-of-way acquisition; utility relocation; real estate, bridge management; pavement management and safety management.

- Project manager and Lead Analyst for the preparation of a legislatively mandated enterprise systems planning study for the Washington State Department of Transportation (WSDOT). The objective of the study was to define a systems architecture and roadmap for replacing WSDOT’s aging legacy systems in the context of an overall initiative at the statewide level to implement new statewide financial management and human resource management systems. The scope of the project included WSDOT’s financial, program/project management, maintenance and asset management and contracts/construction management systems.

- Project manager for a project development systems assessment for the Colorado Department of Transportation (CDOT) which included evaluating existing systems and preparing recommendations and an implementation roadmap for replacing CDOT’s systems supporting planning, design, construction and maintenance.

- Project manager for a feasibility study, definition of requirements and a business case for an asset data warehouse for the Maryland State Highway Administration.

- Project Manager for the definition of requirements for a maintenance management system for the Alabama Department of Transportation and the West Virginia Turnpike.

- Project manager for a feasibility study for a transportation asset management system for WSDOT.

- Project manager for feasibility studies and requirements definition efforts for safety management systems for CDOT and the Montana Department of Transportation.
• Project manager for process re-engineering of the State’s transportation-delivery processes and the, conceptual design, requirements definition and preparation of an RFP for a Statewide Environmental Management system for the Tennessee Department of Transportation.

• Project manager for an assessment of the proposed program and project management system for the Mississippi Department of Transportation.

• Project manager and lead analyst for the conceptual design of a project and program management system for ODOT.

• Program manager for the initial design and deployment of the AASHTO Trns•port SiteManager™ construction management system.

• Project manager for a feasibility study, definition of requirements and a business case for a materials testing system for the Maryland State Highway Administration.

• Project manager for an assessment of alternatives for implementing a materials testing system for CDOT.

• Project manager for a risk assessment of the financial and human resource management systems utilized by the State of Maryland and the separate systems operated by Maryland Department of Transportation.

• Project director for pre-implementation planning for a new human resource management system for the State of Oregon with ODOT as a lead agency for the project.

• Project manager for a feasibility study for a new time, leave and labor distribution system for WSDOT.

• Project manager for an organization-wide business transformation initiative for the Louisiana Department of Transportation and Development; scope included streamlining various business processes, identifying organizational changes, preparing a multi-year implementation plan and establishing and managing a project office to oversee implementation over a two-year period.

• Project director for a performance audit of the Texas Department of Transportation’s consumer services functions which included evaluating potential outsourcing initiatives in motor carrier operations, travel and tourism and outdoor advertising control.

• Project manager for the consolidation of the finance organizations of the former Massachusetts Highway Department and Massachusetts Turnpike Authority as part of the creation of the Massachusetts Department of Transportation from five independent transportation agencies.

• Senior advisor for the implementation of the State of Washington’s Enterprise Tolling Customer Service Center including developing parts of the RFP to select an operator for the center which is being implemented under a business process outsourcing model.

• Project manager for legislatively mandated operational reviews of the Kentucky Transportation Cabinet and the North Carolina Department of Transportation.
David Rose

**PROFILE**

David Rose is a national leader applying management best practices and technology in highway agencies to better address today’s policy, management, and technical challenges. He has specialized experience with program management, project delivery asset management, maintenance management, DOT fleet and equipment management and DOT financial management. Dr. Rose has a track record of success assisting some 20 state departments of transportation on major change initiatives that have addressed their business architecture and management practices.

**RELEVANT EXPERIENCE**

- Agency-wide strategic management assessments, organizational alignment and business improvement for a state department of transportation management. Currently supporting Minnesota Department of Transportation to design and implement their Enterprise Risk Management system. Dr. Rose has also conducted enterprise-wide management consulting engagements and supported change initiatives for Arizona, Kentucky, Louisiana, Minnesota, North Carolina, Montana, Oregon, Massachusetts Executive Office of Transportation, Texas and Utah departments of transportation among others.

- Project delivery and project management process and systems. Dr. Rose has conducted numerous engagements assisting DOTs to improve the project-delivery process, organization and systems. In this capacity he has assisted: Alaska, Caltrans, Oregon, Montana, New Mexico, Louisiana, North Carolina, Utah, Federal Lands Highways and others on a range of engagements that improved the effectiveness of their project-delivery process.

- Performance-based planning and programming. Provided national leadership assisting DOTs to evaluate and improve their system-level planning and programming organization, process and methods. Assisted Alaska, Arizona, Idaho, Montana, New Mexico, South Dakota, Texas and Utah, among others, to develop new methods, procedures and organizational capabilities.

- Maintenance management methods and systems. Provided organizational development, best practices implementation and management-analysis support for maintenance and preservation functions. Assisted Utah to address fleet and equipment management, Colorado to address ITS maintenance management and evaluated Arizona’s maintenance practices.

- Extensive experience with DOT financial management and accounting systems and practices. Dr. Rose has led efforts that used data from financial management, accounting systems and maintenance management systems in Alaska, Arizona, Colorado, Montana, North Carolina, Oregon, Texas, Utah, Washington and other DOTs.
**Howard Wood**

**PROFILE**
Howard Wood has 23 years of experience in transportation, with an emphasis in preliminary project development, transportation and environmental planning, multimodal analysis, travel-demand modeling, traffic engineering and highway and bridge design. Mr. Wood is very familiar with the business processes and IT architecture of ODOT. Prior to PB, Mr. Wood worked for ODOT for 16 years, giving him significant insight into the department’s As-Is business processes and systems.

**RELEVANT EXPERIENCE**
- Deputy Director of Planning for ODOT, where his responsibilities included guiding and participating in strategic management initiatives, developing department business plans, overseeing project development through NEPA and capital planning with performance measures for the department’s $2 billion annual construction program. In this position, he was responsible for the department’s performance-based planning system, which systematically addressed state-owned transportation assets, forecast system conditions, and framed capital budgets to meet the department’s goals.
- Task manager on an FHWA project that investigated performance management practices in multiple sectors of the economy and evaluated the applicability of these practices to federal-aid highway programs.
- Incorporating Reliability Performance Measures into the Transportation Planning and Programming Process (NCHRP, SHRP L05): Senior analyst for this project which developed the means—including the technical procedures—for state DOTs and metropolitan planning organizations to fully integrate mobility and reliability performance measures and strategies into the transportation planning and programming processes.
- Expediting NEPA (National Environmental Policy Act): Practitioner Strategies for Early Identification of and Response to High-Risk Issues (NCHRP 20-24(71)): Principal investigator for the development of a clear and user-friendly guide for practitioners on the use of risk management to support early identification of key issues with the potential to significantly slow or block successful project delivery.
- Project manager in charge of developing capital, operating, traffic and revenue forecasts as part of a study to evaluate the possibility of leasing the Ohio Turnpike.
- Project manager for ODOT’s Freight Study responsible for coordinating modal analyses and economic-impact evaluations.
Keyur Shah, PMP

PROPOSED ROLE
Application Architect

FIRM/TILE
Parsons Brinckerhoff
Project Manager

EDUCATION
M.E., Construction Engineering and Management, Texas A&M, 2003; B.E. Civil Engineering, Gujarat University, 2001

PROFILE
Mr. Shah has performed management systems planning and systems analysis work for six state departments of transportation. Mr. Shah’s experience with numerous state departments of transportation around the country provides him with deep domain knowledge of most agency functions, specifically construction management and materials testing, project-delivery processes, right-of-way management, transportation planning and finance, and asset management.

RELEVANT EXPERIENCE
• Project lead for development of a transportation asset management system feasibility study for the Washington State Department of Transportation (WSDOT).
• Project manager and lead analyst for a feasibility study and requirements-definition project for a Materials Management/Materials testing system for the Maryland State Highway Administration.
• Lead analyst for the development of a comprehensive roadmap for replacing core management systems for WSDOT.
• Project manager for the definition of requirements for a right-of-way acquisition/real-estate management system for the Louisiana Department of Transportation and Development.
• Project manager and lead analyst for a review of the Mississippi Department of Transportation’s current project management processes and an evaluation of a proposed new project and program management system to support these business processes.
• Project lead for an assessment of the fit of the AASHTO SiteManager™ Materials Testing module to meet the business requirements of the Colorado Department of Transportation (CDOT).
• Lead analyst for development of the functional specifications for a Project Financial statement for CDOT which integrated data from the agency’s project delivery systems and their new SAP ERP system.
• Project manager responsible for planning and managing owner acceptance testing for the WSDOT customer service center and supporting management systems.
• NCRHP 8-36, Task 114 (Transportation Asset Management for Ancillary Structures): Keyur is leading the development of guidance that supplements the AASHTO Transportation Asset Management Guide: A Focus on Implementation on how to integrate ancillary asset structures into existing asset management tools.
John Natteford

PROPOSED ROLE
Application Architect

FIRM/TILE
eVision Partners, Inc.
Senior Associate

EDUCATION
M.E., Construction Engineering and Management, Texas A&M, 2003; B.E. Civil Engineering, Gujarat University, 2001

PROFILE
Mr. Natteford has more than 20 years’ experience in designing and implementing large-scale enterprise systems for state DOTs and other government agencies. He specializes in working closely with central and diverse groups of agency users and management to drive process improvement and re-engineering toward industry best practices and build cohesive, manageable enterprise solutions.

RELEVANT EXPERIENCE

- Project manager and lead analyst for systems analysis and requirements gathering for a new State Transportation Improvement Program (STIP) application for ODOT. The project involved transforming As-Is business process flows into the future vision for these functional areas: highway funding allocation to determine funding levels, STIP draft development to identify and prioritize candidate projects, STIP adoption and approval, STIP amendment, financial planning and reporting.

- Lead analyst for an assessment of Washington State Department of Transportation’s (WSDOT’s) core management systems and the development of a conceptual To-Be systems architecture and a multi-year roadmap for implementing the proposed systems architecture. The scope of the project involved reviewing As-Is systems and business processes, defining system requirements and evaluating alternative approaches for replacing the agency’s enterprise financial, program/project management and contracts/construction management systems.

- Business analyst for an ERP implementation planning project for ODOT. Scope of effort included preparing a To-Be business model for project management of transportation projects as a model for other To-Be mapping to be completed by State staff and mapping how the transportation project management function could be met through ERP functionality.

- Lead analyst for risk assessment of the financial, human resources and procurement systems for the State of Maryland and the separate financial and procurement systems maintained by the Maryland Department of Transportation.

- Test team manager for the implementation of a toll accounting and customer relationship management system and a new customer service center to support the tolling operations of WSDOT.

- Senior manager for KPMG Consulting’s State Financial Systems Practice. Directed a team of consultants and managed projects or major tracks of projects to implement statewide financial management systems in Arizona, Hawaii, Oregon and Texas.
Vijay Pandey, PMP, SCEA

PROFILE
Vijay Pandey is a technology leader with extensive experience in the areas of Enterprise Architecture, Technical Architecture, Business Architecture, Application Architecture, SOA, JEE/Java, Security, Modeling and Performance Engineering. He is technologically highly skilled with extensive hands-on experience in the architecture, design and development of very large-scale applications that support statewide programs.

RELEVANT EXPERIENCE

- Chief technical architect for the State of Mississippi’s USD 25 million “ACCESS Mississippi” solution for modernizing the state’s Unemployment Insurance Systems and Processes. He was responsible for the overall delivery of the solution from the technology perspective. The project involved an extensive re-engineering effort targeted at both the Technology Platforms as well as the Business Processes. The target architecture followed SOA principles, which laid down the foundation for managing services as independent modules, and created a very simple and yet robust strategy to facilitate frequent legislative and regulatory changes that occur in the Unemployment Insurance business domain.

- Chief technology advisor for Commonwealth of Pennsylvania’s Integrated Offender Case Management System project aimed at comprehensively modernizing the IT portfolio of the Department of Corrections. He was responsible for defining the enterprise architecture roadmap along with the application architecture for this complex engineering effort comprising around 35+ siloed applications on varied technology platforms such as Mainframe and client server to a single unified web-based application. He was also responsible for reviewing the various artifacts created out of requirements definition, analysis and design phases. He ensured proper usage of the software design patterns to create a flexible, maintainable system.

- Technical architect for a Debt Collection Litigation System that stores up-to-date claim, debtor and payment information, generates required legal documents and produces reports on the status of the claim/debtor database based on the Java/J2EE platform. He created the technical and application architecture based on numerous open-source products.

- Technical architect of the IT Performance Reporter, a core java-based product which provides the facility for the enterprise to get the real time and historical performance-related information about the various network devices (servers, hub, switches, routers) installed on their network system. This product offering will help the enterprises in maximizing the availability and performance of mission-critical IT resources and the business services.
Jolene Martin

PROPOSED ROLE
Technical Writer/Editor

FIRM/TILE
eVision Partners, Inc.
Editor

CERTIFICATIONS
- Business Writing
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Word (Expert)
- Project Management

PROFILE
Ms. Martin has over fifteen years of experience revising technical documents including editing, formatting, and proofreading for readability. Her experience includes writing, editing, and proofreading documents for clients located globally. She has experience editing documents for management consulting firms, large public organizations, business coaches, industry leaders, and startups. Previously she managed the production department and edited documents for a management consulting firm that specialized in working with departments of transportation. She possesses more than ten plus Business and Software Certifications from Microsoft and Brainbench.com.

RELEVANT EXPERIENCE
- Technical writer/editor and project manager for the Caltrans’ Project Development Procedures Manual (PDPM); Ms. Martin edited Chapters of the manual and developed the style guide and document template.
- Technical writer/editor for a customer input report as part of the Accountability in Maintenance Operations project for the Mississippi Department of Transportation. She proofread the report for grammar, consistency, readability, style adherence, and formatting.
- Technical writer/editor for a Request for Proposal (RFP) for the State of Maryland’s new Statewide Personnel System (SPS). Ms. Martin formatted, proofread, and edited the RFP for readability, consistency, grammar, and style adherence. She incorporated Excel worksheets, images, tables, cross-references, and appendices into the Word document.
- Technical editor for final reports delivered to state departments of transportation, the Federal Highway Administration, National Cooperative Highway Research Program (NCHRP), and other state agencies for three years at a management consulting firm.
- As a freelance editor, Ms. Martin provided extensive writing, editing, and proofreading services to clients located globally. She authored text and adhered to stringent formatting standards. Ms. Martin collaborated with executives, senior management, and scholars to obtain technical information and incorporate substantial edits into existing documents.
- As a paralegal, Ms. Martin proofread patent applications and drafted and prepared Trademark Applications, Use Affidavits, Responses, Briefs, and Litigation filings. She drafted letters to clients and foreign associates to report on patent, trademark, and billing matters. She also developed and conducted intellectual property law and software training for attorneys and staff.
Appendix C: Other Commitments of the Research Team

eVision Partners, Inc. is fully committed to meeting the project schedule outlined in the RFP and has developed a staff loading which supports achieving this schedule. Exhibit C-1 outlines the availability of each proposed member of the eVision Partners, Inc. team. It also provides a comprehensive listing of our proposed team members’ commitments to other work including the approximate percentage of time each proposed research team member is committed to work for other clients.

**Exhibit C-1: Availability of Proposed Research Team**

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Proposed Role</th>
<th>Availability for ODOT Project</th>
<th>Other Commitments and Estimated % of Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Cooney</td>
<td>Principal Investigator</td>
<td>50%</td>
<td>• WVDOT/wwOASIS statewide ERP project: independent project oversight (25%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• MARTA Project Controls Improvement Initiative: Project Director and Senior Advisor (25%)</td>
</tr>
<tr>
<td>David Rose</td>
<td>Senior Advisor</td>
<td>45%</td>
<td>• Enterprise Risk Management system development and implementation (25%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Clear Roads (state DOTs). True costs of winter maintenance analysis tool development (10%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Utah DOT maintenance cost-evaluation tools (10%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Various state DOT projects: advisory roles (10%)</td>
</tr>
<tr>
<td>Howard Wood</td>
<td>Business Architect</td>
<td>50%</td>
<td>• Ohio Turnpike Advisory Services: Technical Task Leader (15%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Ohio DOT Statewide Freight Study: Project Manager (25%)</td>
</tr>
<tr>
<td>Keyur Shah</td>
<td>Application Architect</td>
<td>50%</td>
<td>• Minnesota DOT jurisdictional realignment: Project Manager (30%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• NCHRP 8-36 (114): Transportation asset management for ancillary structures: Project Manager (20%)</td>
</tr>
<tr>
<td>John Natteford</td>
<td>Application Architect</td>
<td>75%</td>
<td>• King County Mainframe Re-hosting Project: independent project oversight (25%)</td>
</tr>
<tr>
<td>Vijay Pandey</td>
<td>Technical Architect</td>
<td>50%</td>
<td>• Orange County Transportation Authority IT Portfolio Assess (10%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Private Sector Insurance Client Solution Development (15%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Government of Mexico Systems Re-engineering (25%)</td>
</tr>
<tr>
<td>Jolene Martin</td>
<td>Technical Writer/Editor</td>
<td>50%</td>
<td>• Various technical writing and proposal-development efforts (40%)</td>
</tr>
</tbody>
</table>
Appendix D: Staff Loading and Timeline

An proposed timeline for the Strategic Enterprise Architecture Design project is provided in Exhibit D-1. Exhibit D-2 provides eVision Partners’ proposed staff loading by phase/task.
### Exhibit D-1: Initial Project Schedule

<table>
<thead>
<tr>
<th>Phase/Task</th>
<th>Target Start</th>
<th>Target Stop</th>
<th>Month 1</th>
<th>Month 2</th>
<th>Month 3</th>
<th>Month 4</th>
<th>Month 5</th>
<th>Month 6</th>
<th>Month 7</th>
<th>Month 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of Strategic Enterprise Architecture Design</td>
<td>Month 1</td>
<td>Month 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase I: Baseline Enterprise Architecture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 1: Project Start-up</td>
<td>Month 1</td>
<td>Month 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 2: Synthesize Best Practices</td>
<td>Month 1</td>
<td>Month 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 3: Analyze ODOT As-Is Environment</td>
<td>Month 1</td>
<td>Month 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 4: Prepare Interim Report</td>
<td>Month 4</td>
<td>Month 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase II: Develop Enterprise Architecture Strategic Plan</td>
<td>Month 4</td>
<td>Month 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 5: Phase II Start-up</td>
<td>Month 4</td>
<td>Month 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 6: Define ODOT To-Be Architecture</td>
<td>Month 5</td>
<td>Month 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 7: Develop Migration Plan</td>
<td>Month 6</td>
<td>Month 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 8: Develop Governance Model/Supports</td>
<td>Month 6</td>
<td>Month 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 9: Prepare and Publish Final Report</td>
<td>Month 6</td>
<td>Month 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 10: Project Management</td>
<td>Month 1</td>
<td>Month 8</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Exhibit D-2: Staffing Plan

<table>
<thead>
<tr>
<th>Phase/Task</th>
<th>Target Start</th>
<th>Target Stop</th>
<th>Total Hours</th>
<th>R. Cooney</th>
<th>J. Natteford</th>
<th>J. Martin</th>
<th>D. Rose</th>
<th>H. Wood</th>
<th>K. Shah</th>
<th>V. Pandey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase I</strong></td>
<td></td>
<td></td>
<td>796</td>
<td>280</td>
<td>80</td>
<td>48</td>
<td>28</td>
<td>72</td>
<td>160</td>
<td>128</td>
</tr>
<tr>
<td>Task 1: Project Start-up</td>
<td>Month 1</td>
<td>Month 1</td>
<td>40</td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Task 2: Synthesize Best Practices</td>
<td>Month 1</td>
<td>Month 1</td>
<td>72</td>
<td>32</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>Task 3: Analyze ODOT As-Is Environment</td>
<td>Month 1</td>
<td>Month 3</td>
<td>540</td>
<td>176</td>
<td>80</td>
<td>0</td>
<td>12</td>
<td>56</td>
<td>112</td>
<td>104</td>
</tr>
<tr>
<td>Task 4: Prepare Interim Report</td>
<td>Month 4</td>
<td>Month 4</td>
<td>144</td>
<td>48</td>
<td>0</td>
<td>48</td>
<td>8</td>
<td>8</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Phase II</strong></td>
<td></td>
<td></td>
<td>936</td>
<td>400</td>
<td>80</td>
<td>72</td>
<td>48</td>
<td>32</td>
<td>152</td>
<td>152</td>
</tr>
<tr>
<td>Task 5: Phase II Start-up</td>
<td>Month 4</td>
<td>Month 5</td>
<td>20</td>
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<td>4</td>
<td>0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Task 6: Define ODOT To-Be Architecture</td>
<td>Month 5</td>
<td>Month 6</td>
<td>516</td>
<td>176</td>
<td>80</td>
<td>0</td>
<td>12</td>
<td>8</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Task 7: Develop Migration Plan</td>
<td>Month 6</td>
<td>Month 6</td>
<td>104</td>
<td>48</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>Task 8: Develop Governance Model and Other Implementation Supports</td>
<td>Month 6</td>
<td>Month 6</td>
<td>64</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Task 9: Prepare and Publish Final Report</td>
<td>Month 6</td>
<td>Month 8</td>
<td>232</td>
<td>120</td>
<td>0</td>
<td>72</td>
<td>8</td>
<td>8</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Task 10: Project Management</td>
<td>Month 1</td>
<td>Month 8</td>
<td>88</td>
<td>80</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Project Total:</strong></td>
<td></td>
<td></td>
<td>1,820</td>
<td>760</td>
<td>160</td>
<td>128</td>
<td>76</td>
<td>104</td>
<td>312</td>
<td>280</td>
</tr>
</tbody>
</table>
Appendix E: Proposed Project Budget

This appendix contains the detailed proposed itemized project budget for the Strategic Enterprise Architecture Design project. It includes:

- Budget form for eVision Partners, Inc.
- Travel expense breakout for eVision Partners, Inc.
- Letter of participation for Parsons Brinckerhoff, Inc.
- Budget form for Parsons Brinckerhoff, Inc.
- Travel expense breakout for Parsons Brinckerhoff, Inc.
- Letter of participation for Intueor Consulting, Inc.
- Budget form for Intueor Consulting, Inc.
- Travel expense form for Intueor Consulting, Inc.
## Exhibit E-1: eVision Partners, Inc. Budget Form

**Project Title:** Development of Strategic Enterprise Architecture Design for ODOT

<table>
<thead>
<tr>
<th>RFP Number:</th>
<th>2013-33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposing Agency:</td>
<td>eVision Partners, Inc.</td>
</tr>
<tr>
<td>Principal Investigator:</td>
<td>Robert Cooney</td>
</tr>
<tr>
<td>Co-Principal Investigator(s):</td>
<td></td>
</tr>
<tr>
<td>Project Duration:</td>
<td>8 months</td>
</tr>
</tbody>
</table>

### SALARIES & WAGES
Specify number of hours to be worked and hourly rate for each individual below. Salaries & Wages may be shown as a percentage of a total salary. In this case, the percentage of the salary to be paid and the total salary for each individual must be listed. The same unit, hours or percent, must be used for all personnel in all sections of the final proposal budget form. For example:

**PI: Doug Smith**

(120 hours @ $64.05/hour) $7,686.00 $0.00 $7,686.00

<table>
<thead>
<tr>
<th>PI</th>
<th>Salaries &amp; Wages</th>
<th>Fringe Benefits</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Cooney - 760 hours at $95</td>
<td>$72,200.00</td>
<td>$0.00</td>
<td>$72,200.00</td>
</tr>
<tr>
<td>Co-PI (Name)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Student(s)/Intern(s)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>(Provide total number of students to be working on project)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technicians (Name)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>John Natteford - 160 hours at $110/hour</td>
<td>$17,600.00</td>
<td>$0.00</td>
<td>$17,600.00</td>
</tr>
<tr>
<td>Jolene Martin - 128 hours at $30/hour</td>
<td>$3,840.00</td>
<td>$0.00</td>
<td>$3,840.00</td>
</tr>
<tr>
<td>Others (Specify Role &amp; Name)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>SUB-TOTAL SALARY &amp; WAGES</td>
<td>$93,640.00</td>
<td>$0.00</td>
<td>$93,640.00</td>
</tr>
</tbody>
</table>

### FRINGE BENEFITS
Provide an explanation of what is included and how the figure was derived for each personnel category (e.g.: 15% of Salary & Wages).

<table>
<thead>
<tr>
<th>PI</th>
<th>Fringe Benefits</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Co-PI</th>
<th>Fringe Benefits</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>
### Students/Interns

<table>
<thead>
<tr>
<th>Role</th>
<th>Salary</th>
<th>Fringe</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

### Technicians

<table>
<thead>
<tr>
<th>Role</th>
<th>Salary</th>
<th>Fringe</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
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</table>

### Others (Specify)

<table>
<thead>
<tr>
<th>Role</th>
<th>Salary</th>
<th>Fringe</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0.00</td>
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</table>

### SUB-TOTAL FRINGE BENEFITS

<table>
<thead>
<tr>
<th></th>
<th>Salary</th>
<th>Fringe</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>$0.00</td>
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<td>$0.00</td>
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</table>

### SUB-TOTAL SALARY & WAGES AND FRINGE BENEFITS

<table>
<thead>
<tr>
<th></th>
<th>Salary</th>
<th>Fringe</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$93,640.00</td>
<td>$0.00</td>
<td>$93,640.00</td>
</tr>
</tbody>
</table>

### SUBCONTRACTOR

List each subcontractor separately. A copy of each subcontractor’s budget must be attached. Reimbursement to contractor for subcontractor performance is subject to state accounting guidelines as is the contractor.

#### Parsons Brinckerhoff, Inc.

<table>
<thead>
<tr>
<th>Budget Item</th>
<th>Quantity</th>
<th>Rate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>$124,563.06</td>
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</table>

#### Intueor, Inc.

<table>
<thead>
<tr>
<th>Budget Item</th>
<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>$59,481.20</td>
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### SUB-TOTAL SUBCONTRACTOR

<table>
<thead>
<tr>
<th></th>
<th>Salary</th>
<th>Fringe</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
<td>$184,044.26</td>
<td>$0.00</td>
<td>$184,044.26</td>
</tr>
</tbody>
</table>

### TRAVEL

Must be in accordance with current state guidelines. Provide destination, purpose, total mileage, total # of days, total # of meals, total # of trips, names of individual(s) traveling for each trip.

#### Domestic Travel

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Rate</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>$25,920.00</td>
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</tbody>
</table>

#### Foreign Travel

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
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<tbody>
<tr>
<td></td>
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<td>$0.00</td>
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### SUB-TOTAL TRAVEL

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Rate</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>$25,920.00</td>
</tr>
</tbody>
</table>

### SUPPLIES

Provide details if over 5% of total budget.

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<thead>
<tr>
<th>Budget Item</th>
<th>Quantity</th>
<th>Rate</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
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<td>$0.00</td>
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</table>

### EQUIPMENT

List all items separately. At least 2 quotes for each piece of equipment must be attached. (See equipment policy - Section 5.3.3 for details and exceptions.) Time at which the purchase shall be made must be stated (e.g.: at project initiation, within first five months, etc.)
<table>
<thead>
<tr>
<th>Description</th>
<th>Budget</th>
<th>Interim</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intueor Portfolio Analysis Assessment Tool - Recommended Approach Included in Budget</td>
<td>$10,000.00</td>
<td>$0.00</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Alternative #1 - Expert Choice Comparison - Hosted Solution - Fee for annual license - $50,000 per year</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Alternative #2 - Microsoft Project Server - License for one server - $8,500</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>SUB-TOTAL EQUIPMENT</td>
<td>$10,000.00</td>
<td>$0.00</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>PRINTING</td>
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</tr>
<tr>
<td>Interim Reports (if applicable)</td>
<td>$600.00</td>
<td>$0.00</td>
<td>$600.00</td>
</tr>
<tr>
<td>Draft Final Report</td>
<td>$600.00</td>
<td>$0.00</td>
<td>$600.00</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>$350.00</td>
<td>$0.00</td>
<td>$350.00</td>
</tr>
<tr>
<td>Final Report</td>
<td>$600.00</td>
<td>$0.00</td>
<td>$600.00</td>
</tr>
<tr>
<td>SUB-TOTAL PRINTING</td>
<td>$2,150.00</td>
<td>$0.00</td>
<td>$2,150.00</td>
</tr>
<tr>
<td>IN-DIRECT COSTS</td>
<td>$54,592.12</td>
<td>$0.00</td>
<td>$54,592.12</td>
</tr>
<tr>
<td>FEES (Commercial Org. Only)</td>
<td>$11,858.57</td>
<td>$0.00</td>
<td>$11,858.57</td>
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<tr>
<td>SUB-TOTAL INDIRECT COSTS AND FEES</td>
<td>$66,450.69</td>
<td>$0.00</td>
<td>$66,450.69</td>
</tr>
</tbody>
</table>
OTHER EXPENSES  Any project expense which does not fall into another category. Provide detailed explanation of the expense and applicable breakdown of costs. List individually by category.

<table>
<thead>
<tr>
<th></th>
<th>Sub-Total Other Expenses</th>
<th>$0.00</th>
<th>$0.00</th>
<th>$0.00</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL PROJECT COST</strong></td>
<td></td>
<td>$382,204.95</td>
<td>$0.00</td>
<td>$382,204.95</td>
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</tbody>
</table>
Exhibit E-2: Travel expense breakout for eVision Partners, Inc.

Travel Expenses: eVision Partners, Inc.

<table>
<thead>
<tr>
<th>Name</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Cooney</td>
<td>$16,008</td>
</tr>
<tr>
<td>John Natteford</td>
<td>$9,912</td>
</tr>
</tbody>
</table>

Total Travel Expenses - eVision Partners $25,920

Expenses: Robert Cooney

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Estimating Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airfare: LAX to Columbus</td>
<td>$400</td>
<td>Roundtrip airfare: RDU/CMH</td>
</tr>
<tr>
<td>Hotel</td>
<td>$330</td>
<td>Government Rate $94/night, $110 including tax for 3 nights</td>
</tr>
<tr>
<td>Per Diem</td>
<td>$188</td>
<td>Part-day for Day 1 and Day 4 at $42, full days for Day 3 and 4 at $56</td>
</tr>
<tr>
<td>Rental Car</td>
<td>$210</td>
<td>Rental Car - 3 days at $70/day including taxes/fees</td>
</tr>
<tr>
<td>Airport Parking</td>
<td>$36</td>
<td>3 days at $12/day</td>
</tr>
<tr>
<td>Cabs or mileage to/from airport</td>
<td>$120</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$50</td>
<td></td>
</tr>
</tbody>
</table>

Total per trip $1,334

2 per month for a total of 12 trips during project $16,008
## Expenses: John Natteford

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Estimating Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airfare: PDX to Columbus</td>
<td>$700</td>
<td>Roundtrip airfare: PDX/CMH</td>
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<tr>
<td></td>
<td></td>
<td>Government Rate $94/night, $110 including tax for 3 nights</td>
</tr>
<tr>
<td>Hotel</td>
<td>$330</td>
<td>Part-day for Day 1 and Day 4 at $42, full days for Day 3 and 4 at $56</td>
</tr>
<tr>
<td>Per Diem</td>
<td>$188</td>
<td>Rental Car - 3 days at $70/day including taxes/fees</td>
</tr>
<tr>
<td>Rental Car</td>
<td>$210</td>
<td>3 days at $18/day</td>
</tr>
<tr>
<td>Airport Parking</td>
<td>$54</td>
<td></td>
</tr>
<tr>
<td>Cabs or mileage to/from airport</td>
<td>$120</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$50</td>
<td></td>
</tr>
<tr>
<td><strong>Total per trip</strong></td>
<td><strong>$1,652</strong></td>
<td></td>
</tr>
</tbody>
</table>

6 trips during project: **$9,912**
December 15, 2012

Robert Cooney
eVision Partners, Inc.
9660 Falls of Neuse Road, Suite 138 #256
Raleigh NC 27615

Dear Mr. Cooney:

Parsons Brinckerhoff, Inc is pleased to support eVision Partners, Inc. as a subcontractor for this project. If the eVision Partners team is awarded the contract, Parsons Brinckerhoff will provide the time, personnel, and expertise necessary, as outlined in the proposal, to accomplish the objectives of the project. Per the RFP, a copy of our budget form is attached to this letter.

We look forward to working with you and ODOT on this exciting project.

Sincerely,

Parsons Brinckerhoff, Inc.

[Signature]
David Rose, PhD
Exhibit E-4: Budget form for Parsons Brinckerhoff, Inc.

**Project Title:** Development of Strategic Enterprise Architecture Design for ODOT  
**RFP Number:** 2013-33

<table>
<thead>
<tr>
<th>Proposing Agency:</th>
<th>Parsons Brinckerhoff, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Investigator:</td>
<td>David Rose, PhD</td>
</tr>
<tr>
<td>Co-Principal Investigator(s):</td>
<td>Howard Wood &amp; Keyur Shah</td>
</tr>
<tr>
<td>Project Duration:</td>
<td>8 months</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ODOT Funding</th>
<th>Organizational Cost Sharing</th>
<th>Total Project Cost</th>
</tr>
</thead>
</table>
| **SALARIES & WAGES** Specifying number of hours to be work and hourly rate for each individual below. Salaries & Wages may be shown as a percentage of a total salary. In this case, the percentage of the salary to be paid and the total salary for each individual must be listed. The same unit, hours or percent, must be used for all personnel in all sections of the final proposal budget form. For example: 

**PI: Doug Smith**  
(120 hours @ $64.05/hour) $7,686.00 $0.00 $7,686.00  
| PI: Doug Smith - 76 hours at $122.12/hour | $9,281.12 | $0.00 | $9,281.12 |
| Co-PI Howard Wood - 104 hours at $77.369/hour | $8,046.38 | $0.00 | $8,046.38 |
| **Student(s)/Intern(s)** (Provide total number of students to be working on project) | $0.00 | $0.00 | $0.00 |
| **Technicians** Keyur Shah - 312 hours at $65.38 | $20,398.56 | $0.00 | $20,398.56 |
| **Others** (Specify Role & Name) | $0.00 | $0.00 | $0.00 |
| **SUB-TOTAL SALARY & WAGES** | $37,726.06 | $0.00 | $37,726.06 |

<table>
<thead>
<tr>
<th></th>
<th>ODOT Funding</th>
<th>Organizational Cost Sharing</th>
<th>Total Project Cost</th>
</tr>
</thead>
</table>
| **FRINGE BENEFITS** Provide an explanation of what is included and how the figure was derived for each personnel category (e.g.: 15% of Salary & Wages).  
| PI | $0.00 | $0.00 | $0.00 |
| Co-PI | $0.00 | $0.00 | $0.00 |
| Students/Interns | $0.00 | $0.00 | $0.00 |
### State of Ohio Department of Transportation
Office of Statewide Planning & Research, Research Section
Development of Strategic Enterprise Architecture Design for ODOT
RFQ Solicitation No.: 2013-33

<table>
<thead>
<tr>
<th></th>
<th>$0.00</th>
<th>$0.00</th>
<th>$0.00</th>
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</thead>
<tbody>
<tr>
<td>Technicians</td>
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<tr>
<td>Others (Specify)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUB-TOTAL FRINGE BENEFITS</strong></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>SUB-TOTAL SALARY &amp; WAGES AND FRINGE BENEFITS</strong></td>
<td>$37,726.06</td>
<td>$0.00</td>
<td>$37,726.06</td>
</tr>
<tr>
<td><strong>SUBCONTRACTOR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List each subcontractor separately. A copy of each subcontractor's budget must be attached. Reimbursement to contractor for subcontractor performance is subject to state accounting guidelines as is the contractor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUB-TOTAL SUBCONTRACTOR</strong></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>TRAVEL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Must be in accordance with current state guidelines. Provide destination, purpose, total mileage, total # of days, total # of meals, total # of trips, names of individual(s) traveling for each trip.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Travel</td>
<td>$15,084.00</td>
<td>$0.00</td>
<td>$15,204.00</td>
</tr>
<tr>
<td>Foreign Travel</td>
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<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>SUB-TOTAL TRAVEL</strong></td>
<td>$15,084.00</td>
<td>$0.00</td>
<td>$15,204.00</td>
</tr>
<tr>
<td><strong>SUPPLIES</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Provide details if over 5% of total budget.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUB-TOTAL SUPPLIES</strong></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>EQUIPMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List all items separately. At least 2 quotes for each piece of equipment must be attached. (See equipment policy - Section 5.3.3 for details and exceptions.) Time at which the purchase shall be made must be stated (e.g.: at project initiation, within first five months, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUB-TOTAL EQUIPMENT</strong></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>PRINTING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide a breakdown of charges including: charge per page, # of pages, total # of copies, binding charges, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interim Reports (if applicable)</td>
<td></td>
<td></td>
<td>$0.00</td>
</tr>
<tr>
<td>Draft Final Report</td>
<td></td>
<td></td>
<td>$0.00</td>
</tr>
<tr>
<td>Executive Summary</td>
<td></td>
<td></td>
<td>$0.00</td>
</tr>
<tr>
<td>Description</td>
<td>Amount</td>
<td>Rate</td>
<td>Total</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------</td>
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<tr>
<td>Final Report</td>
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<td>$0.00</td>
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<tr>
<td><strong>SUB-TOTAL PRINTING</strong></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>IN-DIRECT COSTS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicate % charged and applicable budget categories - Overhead Rate: 158.65% &amp; Cost of Money (FCC) Rate: 0.19% of Direct Labor (Wages and Salaries)</td>
<td>$59,924.00</td>
<td>$0.00</td>
<td>$59,924.00</td>
</tr>
<tr>
<td><strong>FEES (Commercial Org. Only)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicate % charged and applicable budget categories - 12% of Direct Labor and In-Direct Costs (Overhead only)</td>
<td>$11,709.00</td>
<td>$0.00</td>
<td>$11,709.00</td>
</tr>
<tr>
<td><strong>SUB-TOTAL INDIRECT COSTS AND FEES</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$71,633.00</td>
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<td>$71,633.00</td>
</tr>
<tr>
<td><strong>OTHER EXPENSES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any project expense which does not fall into another category. Provide detailed explanation of the expense and applicable breakdown of costs. List individually by category.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUB-TOTAL OTHER EXPENSES</strong></td>
<td></td>
<td></td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>TOTAL PROJECT COST</strong></td>
<td>$124,443.06</td>
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<td>$124,563.06</td>
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</table>
Exhibit E-5: Travel expense breakout for Parsons Brinckerhoff, Inc.

### Travel Expenses - Parsons Brinckerhoff

<table>
<thead>
<tr>
<th>Name</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Rose</td>
<td>$5,784</td>
</tr>
<tr>
<td>Keyur Shah</td>
<td>$8,760</td>
</tr>
<tr>
<td>Howard Wood</td>
<td>$660</td>
</tr>
</tbody>
</table>

**Total Travel Expenses - Parsons Brinckerhoff**

$15,204

### Expenses: David Rose

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Estimating Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airfare: LGA to Columbus</td>
<td>$500</td>
<td>Roundtrip airfare: LGA/CMH</td>
</tr>
<tr>
<td>Hotel</td>
<td>$330</td>
<td>Government Rate $94/night, $110 including tax for 3 nights</td>
</tr>
<tr>
<td>Per Diem</td>
<td>$188</td>
<td>Part-day for Day 1 and Day 4 at $42, full days for Day 3 and 4 at $56</td>
</tr>
<tr>
<td>Rental Car</td>
<td>$210</td>
<td>Rental Car - 3 days at $70/day including taxes/fees</td>
</tr>
<tr>
<td>Airport Parking</td>
<td>$48</td>
<td>3 days at $12/day</td>
</tr>
<tr>
<td>Cabs or mileage to/from airport</td>
<td>$120</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$50</td>
<td></td>
</tr>
</tbody>
</table>

**Total per trip**

$1,446

**4 trips during project**

$5,784
Expenses: Keyur Shah

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Estimating Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airfare: SEA to Columbus</td>
<td>$800</td>
<td>Roundtrip airfare: SEA/CMH</td>
</tr>
<tr>
<td>Hotel</td>
<td>$330</td>
<td>Government Rate $94/night, $110 including tax for 3 nights</td>
</tr>
<tr>
<td>Per Diem</td>
<td>$188</td>
<td>Part-day for Day 1 and Day 4 at $42, full days for Day 2 and 3 at $56</td>
</tr>
<tr>
<td>Rental Car</td>
<td>$210</td>
<td>Rental Car - 3 days at $70/day including taxes/fees</td>
</tr>
<tr>
<td>Airport Parking</td>
<td>$54</td>
<td>3 days at $18/day</td>
</tr>
<tr>
<td>Cabs or mileage to/from airport</td>
<td>$120</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$50</td>
<td></td>
</tr>
<tr>
<td><strong>Total per trip</strong></td>
<td></td>
<td><strong>$ 1,752</strong></td>
</tr>
<tr>
<td><strong>5 trips during project at $1,752</strong></td>
<td></td>
<td><strong>$8,760</strong></td>
</tr>
</tbody>
</table>

Expenses: Howard Wood

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Estimating Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mileage: 200 miles/month at $0.55/mile</td>
<td>$110</td>
<td>Mileage to ODOT facilities</td>
</tr>
<tr>
<td><strong>$ 110</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mileage for six months at $110/month</strong></td>
<td><strong>$660</strong></td>
<td></td>
</tr>
</tbody>
</table>
Exhibit E-6: Letter of participation for Intueor Consulting, Inc.

December 18, 2012

Robert Cooney
eVision Partners, Inc.
9660 Falls of Neuse Road, Suite 138 #256
Raleigh NC 27615

Dear Mr. Cooney:

Intueor Consulting, Inc (Intueor) is pleased to support to eVision Partners, Inc. as a subcontractor for this project. If the eVision Partners team is awarded the contract, Intueor will provide the time, personnel, and expertise necessary, as outlined in the proposal, to accomplish the objectives of the project. Per the RFP, a copy of our budget form is attached to this letter.

We look forward to working with you and ODOT on this exciting project.

Sincerely,

Sincerely,

[Signature]

Vijay Mididaddi
Managing Principle
Intueor Consulting Inc.
Exhibit E-7: Budget form for Intueor Consulting, Inc.

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>Development of Strategic Enterprise Architecture Design for ODOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFP Number:</td>
<td>2013-33</td>
</tr>
<tr>
<td>Proposing Agency:</td>
<td>Intueor, Inc.</td>
</tr>
<tr>
<td>Principal Investigator:</td>
<td>N/A</td>
</tr>
<tr>
<td>Co-Principal Investigator(s):</td>
<td>N/A</td>
</tr>
<tr>
<td>Project Duration:</td>
<td>8 months</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ODOT Funding</th>
<th>Organizational Cost Sharing</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>SALARIES &amp; WAGES</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specify number of hours to be work and hourly rate for each individual below. Salaries & Wages may be shown as a percentage of a total salary. In this case, the percentage of the salary to be paid and the total salary for each individual must be listed. The same unit, hours or percent, must be used for all personnel in all sections of the final proposal budget form. For example:

PI: Doug Smith

(120 hours @ $64.05/hour) $7,686.00 $0.00 $7,686.00

<table>
<thead>
<tr>
<th>PI (Name)</th>
<th>$0.00</th>
<th>$0.00</th>
<th>$0.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-PI (Name)</td>
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<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Student(s)/Intern(s)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>(Provide total number of students to be working on project)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technicians (Name) - Vijay Pandey - 280 hours at $65/hour</td>
<td>$18,200.00</td>
<td>$0.00</td>
<td>$18,200.00</td>
</tr>
<tr>
<td>Others (Specify Role &amp; Name)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>SUB-TOTAL SALARY &amp; WAGES</td>
<td>$18,200.00</td>
<td>$0.00</td>
<td>$18,200.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FRINGE BENEFITS</th>
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</tr>
</thead>
</table>

Provide an explanation of what is included and how the figure was derived for each personnel category (e.g.: 15% of Salary & Wages).

<table>
<thead>
<tr>
<th>PI</th>
<th>$0.00</th>
<th>$0.00</th>
<th>$0.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-PI</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Students/Interns</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Technicians</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Others (Specify)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>SUB-TOTAL FRINGE BENEFITS</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>
### SUB-TOTAL SALARY & WAGES AND FRINGE BENEFITS

<table>
<thead>
<tr>
<th></th>
<th>$0.00</th>
<th>$0.00</th>
<th>$18,200.00</th>
</tr>
</thead>
</table>

### SUBCONTRACTOR
List each subcontractor separately. A copy of each subcontractor’s budget must be attached. Reimbursement to contractor for subcontractor performance is subject to state accounting guidelines as is the contractor.

<table>
<thead>
<tr>
<th></th>
<th>$0.00</th>
<th>$0.00</th>
<th>$0.00</th>
</tr>
</thead>
</table>

### TRAVEL
Must be in accordance with current state guidelines. Provide destination, purpose, total mileage, total # of days, total # of meals, total # of trips, names of individual(s) traveling for each trip.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Travel</td>
<td>$8,230.00</td>
<td>$0.00</td>
<td>$8,230.00</td>
</tr>
<tr>
<td>Foreign Travel</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>SUB-TOTAL TRAVEL</strong></td>
<td>$8,230.00</td>
<td>$0.00</td>
<td>$8,230.00</td>
</tr>
</tbody>
</table>

### SUPPLIES
Provide details if over 5% of total budget.

<table>
<thead>
<tr>
<th></th>
<th>$0.00</th>
<th>$0.00</th>
<th>$0.00</th>
</tr>
</thead>
</table>

### EQUIPMENT
List all items separately. At least 2 quotes for each piece of equipment must be attached. (See equipment policy - Section 5.3.3 for details and exceptions.) Time at which the purchase shall be made must be stated (e.g.: at project initiation, within first five months, etc.)

<table>
<thead>
<tr>
<th></th>
<th>$0.00</th>
<th>$0.00</th>
<th>$0.00</th>
</tr>
</thead>
</table>

### PRINTING
Provide a breakdown of charges including: charge per page, # of pages, total # of copies, binding charges, etc.

<table>
<thead>
<tr>
<th></th>
<th>$0.00</th>
<th>$0.00</th>
<th>$0.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interim Reports (if applicable)</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Draft Final Report</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Final Report</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>SUB-TOTAL PRINTING</strong></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Category</td>
<td>Amount</td>
<td>Budget</td>
<td>Total</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>IN-DIRECT COSTS</strong>&lt;br&gt;Indicate % charged and applicable budget categories - 156% of Direct Labor (Wages and Salaries)</td>
<td>$28,392.00</td>
<td>$0.00</td>
<td>$28,392.00</td>
</tr>
<tr>
<td><strong>FEES</strong>&lt;br&gt;(Commercial Org. Only)&lt;br&gt;Indicate % charged and applicable budget categories - 10% of Direct Labor and Indirect Costs</td>
<td>$4,659.20</td>
<td>$0.00</td>
<td>$4,659.20</td>
</tr>
<tr>
<td><strong>SUB-TOTAL INDIRECT COSTS AND FEES</strong></td>
<td>$33,051.20</td>
<td>$0.00</td>
<td>$33,051.20</td>
</tr>
<tr>
<td><strong>OTHER EXPENSES</strong>&lt;br&gt;Any project expense which does not fall into another category. Provide detailed explanation of the expense and applicable breakdown of costs. List individually by category.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUB-TOTAL OTHER EXPENSES</strong></td>
<td></td>
<td>$0.00</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL PROJECT COST</strong></td>
<td>$0.00</td>
<td>$0.00</td>
<td>$59,481.20</td>
</tr>
</tbody>
</table>
Exhibit E-8: Travel expense form for Intueor Consulting, Inc.

Travel Expenses: Intueor

<table>
<thead>
<tr>
<th>Vijay Pandey</th>
<th>$8,230</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Travel - Intueor</strong></td>
<td>$8,230</td>
</tr>
</tbody>
</table>

Vijay Pandey

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Estimating Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airfare: LAX to Columbus</td>
<td>$700</td>
<td>Roundtrip airfare: LGA/CMH</td>
</tr>
<tr>
<td>Hotel</td>
<td>$330</td>
<td>Government Rate $94/night, $110 including tax for 3 nights</td>
</tr>
<tr>
<td>Per Diem</td>
<td>$188</td>
<td>Part-day for Day 1 and Day 4 at $42, full days for Day 3 and 4 at $56</td>
</tr>
<tr>
<td>Rental Car</td>
<td>$210</td>
<td>Rental Car - 3 days at $70/day including taxes/fees</td>
</tr>
<tr>
<td>Airport Parking</td>
<td>$48</td>
<td>3 days at $12/day</td>
</tr>
<tr>
<td>Cabs or mileage to/from airport</td>
<td>$120</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$50</td>
<td></td>
</tr>
<tr>
<td><strong>Total per trip</strong></td>
<td>$1,646</td>
<td></td>
</tr>
<tr>
<td><strong>5 trips during project</strong></td>
<td>$8,230</td>
<td></td>
</tr>
</tbody>
</table>
Appendix F: Work Time Cost Schedule

eVision Partners proposed Work Time Cost Schedule for the Strategic Enterprise Architecture Design project is provided in Exhibit F-1 on the following page.
# Exhibit F-1: Work Time Cost Schedule

<table>
<thead>
<tr>
<th>TASKS</th>
<th>MONTH</th>
<th>TOTAL TASK HOURS</th>
<th>TOTAL LABOR COSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>40</td>
<td>$7,208.62</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>72</td>
<td>$14,042.73</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>72 292 176</td>
<td>540 $99,947.51</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>144</td>
<td>44 $22,810.11</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>20</td>
<td>4 $4,014.76</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>128 364 24</td>
<td>516 $89,889.82</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>104</td>
<td>104 $19,848.07</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>64</td>
<td>64 $13,955.41</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>160 48 24</td>
<td>232 $35,252.91</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>16 8 8 8 16 8 8</td>
<td>16 8 8 $13,730.99</td>
</tr>
</tbody>
</table>

**Monthly Hours**: 200 300 184 300 380 360 40 56 1,820

**Monthly Labor Costs**: $37,029.01 $56,504.87 $32,862.30 $52,039.24 $67,064.85 $61,739.54 $6,496.63 $6,964.51 $320,700.95

**Deliverables**: Indicate the submission of all project deliverables listed in the proposal.
- Project Start-up Meeting
- Bi-weekly Status Report
- As-Is Findings
- Draft Interim Report
- Business Architecture
- R&D Newsletter Article
- Final Report and Executive Summary

---

**Labor Costs are computed at a per hour of**: various by staff member.
# Development of Strategic Enterprise Architecture Design for ODOT

**Project Title:** Development of Strategic Enterprise Architecture Design for ODOT

Labor Costs are computed at a per hour of: various by staff member

<table>
<thead>
<tr>
<th>TASKS</th>
<th>MONTHS</th>
<th>TOTAL TASK HOURS</th>
<th>TOTAL LABOR COSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Work Plan</td>
<td>Project Status Meeting</td>
<td>Bi-weekly Status Report</td>
<td>Final Interim Report</td>
</tr>
<tr>
<td>Project Kick-off Meeting</td>
<td>Project Progress Review</td>
<td>Project Status Meeting</td>
<td>Bi-weekly Status Report</td>
</tr>
<tr>
<td>Outline of Interim Report</td>
<td>Quarterly Progress Report</td>
<td>Project Status Meeting</td>
<td>Technical Architecture</td>
</tr>
<tr>
<td>Enterprise Architecture Best Practices Briefings</td>
<td>Project Progress Review</td>
<td>Bi-weekly Status Report</td>
<td>Migration Plan</td>
</tr>
<tr>
<td>Best Practices Briefings–DOT Business Functions: transportation asset management, maintenance management, DOT financial management, and capital program planning and project delivery</td>
<td>Project Status Meeting</td>
<td>Governance Model</td>
<td></td>
</tr>
</tbody>
</table>
Project Title: Development of Strategic Enterprise Architecture Design for ODOT

Labor Costs are computed at a per hour of: various by staff member

<table>
<thead>
<tr>
<th>TASKS</th>
<th>MONTH</th>
<th>TOTAL TASK HOURS</th>
<th>TOTAL LABOR COSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial List of Key Business Drivers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stakeholder Interview List</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stakeholder Interview Questionnaire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bi-weekly Status Report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Status Meeting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stakeholder Interview Questionnaire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bi-weekly Status Report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Status Meeting</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix G: Intueor IT Application Portfolio Framework

An overview of the Intueor IT Application Portfolio Framework is provided on the pages which follow.
State of Ohio Department of Transportation
Office of Statewide Planning & Research, Research Section
Development of Strategic Enterprise Architecture Design for ODOT
RFQ Solicitation No.: 2013-33

Replace pages with PDF
Appendix H: Relevant Research

This appendix includes a bibliography of prior research which is directly relevant to the ODOT Strategic Enterprise Architecture Design project. The eVision Partners research team plans to leverage these prior work products and other research identified during the enterprise architecture best practices literature search in Phase I as inputs to the design of the ODOT To-Be enterprise architecture.

1. Enterprise Architecture in Federal Government

United States Office of Management and Budget, CIRCULAR NO. A-130 Revised.


United States Department of Transportation Chief Information Officer Testimony Before The House Committee on Government Reform’s Subcommittee on Technology, Information Policy, Intergovernmental Relations and the Census; testimony is available at http://testimony.ost.dot.gov/test/pasttest/04test/Matthews1.pdf.


2. Enterprise Architecture in State Government/State Agencies


3. Enterprise Architecture in Transportation and Transit Agencies


AASHTO Standing Committee on Research, Research Advisory Committee Survey on DOT IT Systems, American Association of State Highway Transportation Officials, May 2012.


