Exhibit A

Scope of Work

Intelligent Transportation Systems Strategic Deployment Plan
Sacramento Area Council of Governments
December 27, 2004

I. INTRODUCTION

The Sacramento Area Council of Governments (SACOG) is a voluntary association of governments. Member jurisdictions include: the County of Sacramento (including the cities of Citrus Heights, Elk Grove, Folsom, Galt, Isleton, Rancho Cordova and Sacramento); the County of Yolo (including the cities of Davis, West Sacramento, Winters, and Woodland); the County of Sutter (including the cities of Live Oak and Yuba City); the County of Yuba (including the cities of Marysville and Wheatland); Placer County (including the cities of Auburn, Colfax, Lincoln, Rocklin, Roseville and Town of Loomis) and El Dorado County (including the City of Placerville).

SACOG is the federally designated Metropolitan Planning Organization (MPO) for the Sacramento, Davis and Marysville/Yuba City urbanized areas. SACOG is also the state designated Regional Transportation Planning Agency (RTPA) for the counties of Sacramento, Yolo, Sutter and Yuba.

II. BACKGROUND

This project builds upon ITS work already undertaken by SACOG and local and state transportation agencies over the past several years. This current effort will result in the replacement of the 1996 Early Deployment Plan (EDP) with a new document, the ITS Strategic Deployment Plan (SDP). The development of the SDP will also incorporate and build upon recent efforts by various local agencies and SACOG to demonstrate the importance of land use in planning for future transportation improvements. This SDP will represent a first effort to integrate ITS planning and ITS project deployment strategies within the broader transportation and land use planning efforts. The SDP will also address ways in which ITS technologies can improve mobility and air quality in the region.

Since the EDP was approved in 1996, SACOG, in cooperation with the ITS Partnership has undertaken a series of studies to deploy ITS in the region and develop a regional architecture. In June of 1999, a project report was completed that conceptualized a Sacramento Transportation Area-wide Network (STARNET) and Smart Corridor treatments on 8 multi-jurisdictional, multimodal corridors. STARNET integrates various transportation management centers in the region while the smart corridor treatments emphasize the components needed to coordinate the operations of heavily used corridors by adjoining jurisdictions.

This report was followed by the development of 18 ITS projects consistent with the EDP, which became regional candidates for discretionary funding. In 2001, the Partnership completed the development of a regional ITS Architecture (National Architecture, v3 and TurboArchitecture, v1), which laid out the framework within which the ITS system will be built and defined what pieces of the system are linked to others and what information is exchanged between them. This document met most of the requirements of the April 2001 USDOT Architecture Rule. As the architecture was being created, the Partnership determined that another study, the STARNET Needs Assessment, was necessary to provide an inventory of existing communications systems with a high level of conceptual description of the hardware and software elements necessary to implement STARNET. This report was completed in draft form in September 2001.

The next step, as envisioned by the Partnership, is to develop a Strategic Deployment Plan that incorporates the work undertaken over the past five years and provides a strategic approach to implementation of STARNET and various projects being undertaken by each member of the Partnership. In addition, the SDP will address the current USDOT Rule and Federal Transit Administration Policy for National ITS Architecture; and provide the additional required detail in the following areas: new subsystems, operational concept, system functional requirements, system interfaces, project sequencing, and agency operational agreements. The SDP will bring the Sacramento region into full compliance with Architecture requirements, provide a vision for ITS, outline a program of low, medium and high priority projects, identify a funding strategy, establish a plan for managing, integrating and operating the ITS elements in the region that are to be implemented over a designated planning period.

SACOG also envisions the SDP serving a broader purpose by linking ITS with regional land use and transportation objectives. Over the past three years, SACOG and local agencies have been examining "smart growth" land use planning as a strategy for future planning efforts. Examples include general plan updates for Rancho Cordova and the City of Sacramento, as well as, SACOG's Blueprint: Transportation/Land Use Study. A major principle of smart growth is densification in corridors served by transit. ITS will be necessary to improve operating efficiencies in those corridors, helping to advance transit service, such as Bus Rapid Transit, and minimize the traffic impacts due to densification. Smart growth also encourages environments that are pedestrian and bicycle friendly and ITS can play a role by detection and adjustment of signal operations for bicycle and pedestrian movement. Planning efforts that are more focused on transportation, such as Sacramento County's Mobility Strategies for County Corridors establish objectives for which ITS will have an immediate and direct impact. Collectively, these and other recent planning efforts will form the basis for the SDP (as well as, SACOG's next Metropolitan Transportation Plan) and are vital to crafting a plan that addresses future needs for ITS throughout the Sacramento region.

As the designated MPO for the region, SACOG is responsible for ensuring that transportation projects and plans do not impede the region's clean air goals. SACOG evaluates all projects included in the federal Metropolitan Transportation Plan and the Metropolitan Transportation Improvement Program to ensure consistency with air quality objectives. The ITS projects in the Strategic Deployment Plan will be developed in a

way that is consistent with the region's air quality objectives. To this end, air quality agencies will be solicited for input on the development of the SDP.

Development of the SACOG Strategic Deployment Plan will be a cooperative effort among the local governments in the identified counties, the Federal Highway Administration (FHWA), and Caltrans. The consultant will work through the Regional ITS Partnership (Partnership), a group of representatives from cities, counties, transit operators and Caltrans who have committed resources to ITS projects or who have a future interest in ITS deployment in the region. Not all relevant entities in the region have an active role in ITS deployment at this time and as a result, do not participate in the Partnership. Therefore, the consultant will also work through SACOG's Regional Planning Partnership (RPP), a broad based group of city, county, transit, air quality and various stakeholder groups, and involve the Blueprint Planners Committee. Major milestone reports will be presented to the Partnership and RPP and the final report and executive summary will be presented to the SACOG Work Program Committee and Board of Directors for approval.

The SACOG SDP project will be coordinated with neighboring regional strategic deployment plans completed or concurrently under development. This includes the Tahoe Gateway SDP, Tahoe Basin, Bay Area, and Central Valley projects. The consultant will address how to incorporate external interfaces into the Sacramento architecture using the current interconnects and terminators as a starting point. Specific consideration will be given to how 511 systems outside of the Sacramento architecture may interface in the future.

III. PROJECT SUMMARY AND DESCRIPTION

The contract for the Intelligent Transportation Systems Strategic Deployment Plan (SDP) will be an agreement between the SACOG and the Consultant (Kimley-Horn and Associates, Inc.). SACOG will provide contract administration services.

IV. SCOPE OF SERVICES

The Consultant will perform all technical and other analyses necessary to complete the scope of work. The Consultant will receive general direction from the SACOG Project Manager.

The Consultant will use Version 5 of the National ITS Architecture and Version 3.0 of TurboArchitecture for this project.

Unless otherwise noted, all deliverables will be submitted in electronic format via e-mail. Review comments will be accumulated by SACOG and forwarded to the Consultant after resolving any conflicting comments.

Tasks will include the following:

<u>Tasks:</u>

TASK 0: ADMINISTRATIVE TASKS

The Consultant will prepare a project schedule identifying the major tasks, deliverables, and meetings.

The Consultant will conduct a monthly status meeting with the SACOG Project Manager. These meetings will be held in conjunction with the RPP or ITS Partnership meetings or through a conference call as agreed upon by both parties. The Consultant will prepare an agenda and meeting minutes for the monthly status meetings.

The Consultant will prepare a project stakeholder database using existing committee rosters including the Blueprint Planners Committee, planning study stakeholder lists, ITS project deployment outreach lists, and input from the SACOG Project Manager and ITS Partnership chair. The database will include name, organization, address, email address and telephone number. The roster will be updated after each meeting of the stakeholders.

The Consultant will participate in each Regional Planning Partnership (RPP) and ITS Partnership meeting during the course of the project (for up to 6 months from Notice to Proceed). These meetings may also be used to gather additional information that may be required for the SDP. In particular, the Regional Planning Partnership meetings will be used as a forum to address how ITS can be used to facilitate land use plans, such as those being crafted by the City and County of Sacramento and SACOG's Blueprint Project. The Consultant will prepare a status report of the project activities and present the status at these meetings. These status reports will be structured and delivered to be part of the agenda packages for the RPP and ITS Partnership meetings.

TASK 1: DEVELOP OUTREACH PROGRAM

Task 1.1 Existing Conditions Summary Report

1. Summarize planning efforts in the region to set context for SDP. Documents include:
   - Land Use
     - SACOG's Blueprint Land Use/Transportation Study;
     - ALL city and county General Plans and current updates underway;
     - Regional Transit Multi-corridor Study.
   - Transportation with Land Use Implications
     - Placer Parkway Plan;
     - Southeast Corridor Study; and
     - SACOG Metropolitan Transportation Plan for 2025;
     - ITS Vision Document;
     - Mobility Strategies for County Corridors (Sacramento County);
     - Regional Transit multi corridor study
   - Transportation
     - Regional Transit Planning Documents;
     - Sacramento Transportation and Air Quality Collaborative
     - Sacramento Region ITS Architecture;

- SACOG Regional ITS Projects;
- STARNET Needs Assessment Report;
- Local ITS Master Plans (Roseville, Elk Grove, and Folsom);
- City of Sacramento TMC;
- Sacramento County TMC;
- Caltrans District 3 TMC;
- 50 Corridor and Sacramento 511;

q Transportation Planning in Adjacent Regions

- Tahoe Gateway SDP;
- Tahoe Basin ITS Strategic Plan;
- Bay Area ITS Plan;
- San Joaquin ITS SDP; and
- Bay Area's TravInfo/511

2. Create presentation materials for kick-off meeting and stakeholder meetings

Deliverable: Summary report of the ITS and planning status in the region
Presentation materials of existing conditions

Task 1.2 Develop Outreach Plan

The Consultant will prepare an outreach plan in consultation with the project manager to bring new stakeholders into the ITS planning and deployment process and to reach agreement on the architecture and SDP. Given the desire of SACOG and local transportation agencies to connect land use with the SDP, new stakeholders will be identified who have an interest in land use and transportation planning include transportation planners, land use planners and elected officials who are not yet actively involved in the planning and deployment process for ITS projects. The outreach plan will be finalized and presented for review and input.

The objectives of the outreach activities are as follows:

- Create awareness of the project (land use and economic development studies, air quality situation, market trends, etc.);
  - Identify champions for this project at the local level and ask them to encourage their local officials to attend appropriate meetings
  - Identify the appropriate SACOG Board subcommittee to create a strong understanding of the effort at the SACOG level;
  - Provide awareness of the project through a web site, email notification and regional report articles;
  - Invite high-level stakeholders or their designees (planning managers, executive directors, chief executive officers of area agencies) to the kick-off meeting. In addition to a written invitation and an email reminder, the Consultant will make telephone calls to key stakeholders to encourage their attendance. Provide opportunities for input to the project through the SACOG website, Regional Report and email.

- Provide education on Intelligent Transportation Systems and how they can help the SACOG region achieve its land use and transportation goals;
    - Utilize PowerPoint presentations containing graphics and photographs and present fact sheets to educate the stakeholders;
    - Highlight the achievements of local agencies
    - Provide the connection between other transportation planning efforts and underlying ITS components
- Facilitate technical review and involvement in the ITS architecture and strategic deployment plan development and explain how it is used and why;
    - Provide materials to the working group prior to public meetings to ensure accuracy
    - Prepare materials in layman language
- Build consensus on the ITS vision, updated architecture, strategic direction, project concepts, recommended projects, and implementation priorities.
    - Identify areas of agreement
    - As an optional activity, conduct follow up interviews and/or attend meetings to promote understanding and find areas of agreement where there appears to be disagreement. (at an additional cost)
    - As an optional activity, conduct additional meetings if agreement cannot be reached. (at an additional cost)

Deliverable: Outreach Plan

Task 1.3 SACOG Board of Directors Workshop

Prepare for and attend a 30-minute workshop at a SACOG Board meeting to give them a land use and transportation planning context and an understanding of ITS in the region. Consultant will help develop a presentation and materials and help answer technical questions if necessary. SACOG staff will make the presentation.

Deliverable: Presentation materials

Task 1.4 Working Kick-Off Meeting

The Consultant will conduct a Working Kick-Off Meeting with an agenda that covers the following topics:

- Overview of the project;
- Links to land use planning, how to tie together land use and transportation planning using ITS, context for the SDP;
- Proposed project schedule;
- Description of ITS and its value in transportation planning;
- Discuss how ITS can assist in meeting regional land use and transportation goals;
- Overview of process to be followed in developing the ITS regional architecture;
- Update of ITS Vision;
- Review of the preliminary inventory of ITS in the Sacramento region;
- Identification of gaps between existing and planned ITS deployments and the regional and local objectives for the use of ITS.

The meeting will be for all stakeholders including traffic engineers, land use planners, transportation planners and elected officials. The meeting will be conducted in two adjacent time periods (i.e. before and after lunch) and the more technical topics will be addressed in the second portion of the meeting allowing those who are not interested in the detailed technical discussions to be excused.

The Consultant will prepare and distribute agenda material and minutes for this meeting.

Deliverable: Working Kick-off meeting
Agenda and minutes of the meeting

Task 1.5 Stakeholder Workshops

The Consultant will coordinate two stakeholder workshops during the course of this project. These workshops will be in addition to the RPP and ITS Partnership meetings.

The first stakeholder workshop will be conducted in a one-day period and will include a discussion of the following topics:

- Regional planning efforts and priorities;
- Proposed Maintenance Plan;
- Review of draft ITS regional architecture developed by Consultant using current architecture and land use plans
    - Review of stakeholders and elements
    - Discussion of market packages
        - Prioritization
        - How they relate to regional land use and transportation objectives
        - Customization for the Region
- Stakeholder roles and responsibilities (operational concept)

The second stakeholder workshop will be conducted in a one-day period and will include a discussion of the following topics:

- Discussions of revisions to the draft architecture to reflect desired changes by stakeholders - this will be the final architecture;
- Projects and time frames for deployment
- Performance criteria, as selected according to regional objectives;
- Proposed methods for measuring performance criteria (e.g., travel demand and air quality modeling methods);
- Presentation of final maintenance plan;
- Roles and responsibilities;
- Agreements.

Deliverable: Two workshops
Agendas and minutes for each workshop

Task 1.6 Additional Outreach

For stakeholders that are not able to attend a workshop, the Consultant will conduct up to a total of two teleconferences or conduct e-mail correspondence to gather the required project information needed to supplement the information obtained in the workshops. This will be determined on a case-by-case basis by the Consultant and agreed to by the respective stakeholder.

Regardless of whether a stakeholder participates in any of the project meetings, they will still be included on the distribution list for all meeting announcements and materials for this project. Those stakeholders will also have the ability throughout the project to provide comments or input using the project website described below.

Additional outreach will include quarterly articles for the SACOG Regional Report.

Deliverable: Two teleconferences
Two quarterly articles for the SACOG Regional Report

Task 1.7 Project Website

The Consultant will prepare a project website located on SACOG's web server. The Consultant will have access to the web server and provide updated information to the website throughout the project (up to 6 months). The following information will be available on the website:

- Background and overview of project;
- Project reports;
- Stakeholder roster;
- Meeting agendas and minutes;
- ITS architecture components (inventory, market packages, functions, and interfaces);
- Glossary;
- Related links; and
- A means for stakeholders to offer comments and feedback.

After 6 months, SACOG will assume the project website responsibilities.

Deliverable: Project website for 6 months

Task 1.8 Mainstreaming ITS

The Consultant will develop a strategy for mainstreaming ITS into the Metropolitan Transportation Plan (MTP). This will include developing the proposed projects in a format compatible with the MTP for easy inclusion. This will include a review of the projects currently in the MTP, as well as consideration of land use and transportation plans that are either completed or underway, and their implications for the ITS projects in the Strategic Deployment Plan.

Deliverable: Strategy for mainstreaming ITS into the MTP to be included in the Strategic Deployment Plan but will not be submitted as a separate standalone deliverable.

Task 1.9 Wrap-up Meeting

In this meeting, the Consultant and SACOG staff will describe what has been accomplished, what the priorities are, and what future efforts are needed in order to implement ITS to achieve the goals and objectives.

Deliverable: One wrap-up meeting
Agenda and minutes

TASK 2: DEVELOP AND IMPLEMENT A PLANNING PROCESS TO PREPARE A STRATEGIC DEPLOYMENT PLAN

Task 2.1 Gap Assessment

At the working kick-off Meeting, the Consultant will present a summary of the existing and planned ITS deployments and will prepare a summary of the gaps between where the region currently stands in ITS deployment and where it wants to be. The Consultant will identify the desired objectives and what the minimum requirements are to achieve those objectives. The objectives will be derived from the ITS vision statement, the Blueprint preferred alternative, general plans, and other relevant land use and transportation planning documents or studies.

Deliverable: Results of the Gap Assessment will be used as a basis for the architecture update and will be summarized as a section of the SDP but will not be submitted as a separate deliverable. A draft of this section will be submitted for review and comment before outreach begins.

Task 2.2 Refine ITS Vision

The Consultant will utilize the original ITS Vision document prepared by the Sacramento Regional ITS Partnership and propose ITS objectives for each of the ten goals in the Vision. The Consultant will discuss each element of the Vision at the Working Kick-Off Meeting and formulate updates to the document according to discussions in the meeting. The proposed objectives will include objectives related to how the ITS program can facilitate the preferred land use scenario as adopted by the SACOG region.

Deliverable: The Consultant will submit an updated ITS Vision document that reflects the discussion in the Working Kick-Off Meeting.

Task 2.3 Develop and Prioritize Custom Market Packages

Based on the information from the Gap Assessment and from the ITS projects in the reviewed existing documents (Task 2.1), the Consultant will update the market packages from the existing Regional ITS Architecture and develop new market packages based on the 85 market packages from the National ITS Architecture, Version 5. Each market package will be associated with a need or project identified in previous tasks. For those needs that cannot be mapped to an existing market package, the Consultant will define a new market package that addresses that need.

Using the list of market packages, the Consultant will customize each market package such that they represent the systems needed by the Sacramento region. The Consultant will prepare a customized flow diagram for each market package. Customization will be based on the existing architecture information and discussions with the stakeholders during Workshop #1.

The Consultant will facilitate the establishment of priorities for the market packages with the stakeholders to set each market package as a low, medium, or high priority. The Consultant will define one measurable performance criteria for each market package.

For each market package, the following information will be summarized in a table format:

- Market package
- Priority level
- Description (Customized from National ITS Architecture)
- Existing infrastructure
- Responsible agency
- Planned projects
- Performance Criteria

Deliverable: The initial market packages will be used as a basis for the architecture update and will be presented in Workshop #1 and in a section of the SDP but will not be submitted as a separate deliverable.

The customized market packages will be posted on the project web site and will be included in the SDP.

The market package tables will be posted on the project web site; will be submitted as a stand-alone document; and will be included in the SDP.

A draft of the initial market packages and draft market package tables will be submitted for review and comment.

Task 2.4 Update Regional ITS Architecture

The Consultant will prepare an updated Regional ITS Architecture using Version 5 of the National ITS Architecture and Version 3.0 of TurboArchitectcure. The update will address the 8 major aspects of the current Federal Final Rule on ITS Architecture. The update will include the following:

- **Architecture Scope** – A timeline of 20 years will be used to be consistent with the MTP 2025 timeline.
- **Stakeholder Identification** – The stakeholder database will be used to present the stakeholders and their contact information.
- **Operational Concept** – A scenario based operational concept will be described including roles and responsibilities for each stakeholder.
- **Interface Requirements and Information Exchanges** – Customized market package diagrams with interfaces and data flows will be included. Both market package diagrams and detailed descriptions in the Turbo Architecture database will be produced.
- **Functional Requirements** – High-level functional requirements will be presented for each significant element of the architecture. The information will reside in the Turbo Architecture database and on the project website.
- **Standards Identification** – Mapping of standards to the information flows will be contained in the Turbo Architecture database and on the project website.

Deliverable: The final output of this task will be presented on the project website, will be included as an appendix to the SDP, and will be delivered on an interactive CD-ROM, but will not be submitted as a separate deliverable.

TASK 3: DEVELOP STRATEGIC DEPLOYMENT PLAN WITH EXECUTIVE SUMMARY

Task 3.1 Project Sequencing

The Consultant will identify projects to implement the market packages and will present them in a format easily included in the SACOG region MTIP. Special consideration will be given to developing project concepts in the context of recent land use and transportation planning efforts taking place in the region. Using ITS technology to support alternative modes of travel and smart growth will be considered in developing the projects. As part of the SDP development, the Consultant will develop project sequencing for the recommended projects by classifying each project into short, medium and long-term timeframes, and identifying any dependencies that the projects may have on other projects or any "foundation systems" that need to be in place first.

The Consultant will also identify up to 5 Early Winner projects that can be deployed immediately with proper funding.

Deliverable: A list of projects grouped in short, medium, and long term timeframes will be presented as a section of the SDP. A draft of this section will be submitted for review and comment.

Task 3.2 Agreements

The Consultant will develop a list of agreements that will be required for initiating the SDP. This list will be included as a section of the SDP and will include a discussion of the major components of each agreement.

Deliverable: A list of agreements that need to be executed will be included as a section of the SDP. A draft of this section will be submitted for review and comment.

Task 3.3 Prepare Strategic Deployment Plan

The Consultant will assemble the documentation from the previous tasks to prepare the SDP. This document will include:

- ITS Vision
- Performance criteria
- Projects grouped in short, medium, and long term timeframes
- Expected measurable benefits
- Anticipated program capital costs and operations and maintenance costs
- Regional ITS Architecture
    - Scope of the architecture
    - Stakeholders
    - Inventory of systems
    - Customized market packages
    - Operational Concept
    - Functional requirements
    - Standards identification

In addition to the document, the SDP outputs will include the Turbo Architecture database.

The Consultant will submit a compiled document in draft form and present the results to the project stakeholders for review. Comments will be received and revisions made and incorporated into the Final SDP.

Deliverable: Ten copies and one electronic copy of the draft SDP
Ten copies and one electronic copy of the final SDP

Task 3.4 Prepare Executive Summary

The Consultant will prepare an Executive Summary that summarizes the Strategic Deployment Plan. The Executive Summary will be developed as a 4-page brochure and written for a non-technical audience. This brochure will be used in the presentation for one SACOG Work Plan Committee and one SACOG Board of Directors meeting.

Deliverable: 50 copies of the Executive Summary brochure and one electronic copy
Presentation to SACOG Work Program Committee
Presentation to SACOG Board of Directors

TASK 4: MAINTENANCE PLAN

The Consultant will prepare a maintenance plan for the Regional Architecture. Methods for assessing the consistency of project architectures with the regional architecture will be included. A maintenance schedule will be proposed and factors requiring Architecture updates beyond regularly scheduled reviews will be identified. The maintenance plan will ensure that any future changes will be included in the architecture updates and that those not in the stakeholder meetings would have a chance in the future to make amendments.

The maintenance plan will also include a maintenance plan for the Tahoe Gateway ITS Architecture as a part of the SACOG SDP. The Consultant will utilize the on-line "ITS Architecture Maintenance Plan Builder" for development of the maintenance plan.

Deliverable: Draft and Final ITS Architecture Maintenance Plan