



SUBJECT ITS Design Responsibility	FINAL NUMBER TR05-10 (B)	EFFECTIVE DATE 09/01/2005	VALIDATION DATE 07/24/2012	SUPERSEDES or RESCINDS
WEB LINK(S) <a href="http://www.oregon.gov/ODOT/HWY/TECHSERV/Pages/technicalguidance.aspx">http://www.oregon.gov/ODOT/HWY/TECHSERV/Pages/technicalguidance.aspx</a>				
TOPIC/PROGRAM Intelligent Transportation Systems (ITS)	APPROVED SIGNATURE  Original signed by:  Bob Pappé, PE, PLS State Traffic-Roadway Engineer			

*PURPOSE*

To document and clarify the role of the ITS Unit related to region ITS project delivery.

*GUIDANCE*

ITS design remains a centralized function within ODOT. However, ODOT Regions have project delivery responsibility. This Technical Bulletin outlines the coordination necessary to meet statewide ITS Program objectives while achieving region project delivery needs.

*DEFINITIONS*

ITS Project – Any project within the scope of the national ITS Architecture (<http://www.iteris.com/itsarch/>). These projects typically include the real-time or near real-time application of advanced information processing, communications, sensors/electronics technologies, and management strategies in an integrated fashion to improve operation of the transportation system. Some ITS project examples include variable message signs, closed circuit television (CCTV), road weather information systems (RWIS), variable speed limits, weather warning systems, and ramp meters.

*BACKGROUND/REFERENCE*

ITS design remains a centralized responsibility through the ITS Unit for the following reasons:

- ITS is a specialized design area including system engineering, electrical, communications and software elements not associated with typical STIP projects. Region design staff and region staff responsible for design oversight don't typically have this experience.
- There are a limited number of ITS design projects making it difficult to develop and maintain the necessary expertise in each of the regions.
- The majority of ITS projects are not stand alone projects but must be designed to integrate with statewide, enterprise systems and in some cases regional and/or

national systems. This requires a detailed understanding of these systems as well as national ITS standards (e.g. National Transportation Communications for ITS Protocol (NTCIP) family of standards, Society of Automotive Engineers (SAE) Standards, Institute of Electrical and Electronics Engineers (IEEE) standards, etc.).

- 23 CFR, Part 940 requires the development of a regional ITS architecture and concept of operations. This federal rule also requires procedures for maintaining the architecture and documenting project compliance with the architecture as well as use of a systems engineering process for project development. This is extra project and program documentation beyond what is typical for STIP projects and is currently being performed or guided by the statewide ITS office.
- The statewide ITS office has responsibility for managing maintenance and operation of deployed ITS equipment. Projects need to fit within statewide maintenance strategies and within limited maintenance funds. Projects also need to fit with Transportation Operations Center (TOC) operating protocols and integrate with existing software systems.

### *EXPLANATION*

Failure to achieve the coordination called for in this technical bulletin could impact the quality and cost effectiveness of the completed project either through failure of the project to integrate with existing software and TOC operating protocols or through failure to meet on-going maintenance and support requirements.

### *RESPONSIBILITIES*

Region Project Leader or Consultant Project Manager – Consult ITS Manager or ITS Standards Engineer to discuss staff assignment or consultant needs for projects with an ITS component. Include ITS Unit staff member on all ITS project teams.

ITS Manager/ITS Standards Engineer – Ensure statewide ITS Program and region project delivery needs are being met.

### *ACTION REQUIRED*

- Region project leaders shall include ITS Unit staff on the project team for all projects that include ITS elements.
- Recognizing that Regions have final responsibility for project delivery, region project leaders or consultant project managers shall work with the ITS Unit to determine the best solution for the engineering needs for the ITS component of any project including ITS.
- Should consultant support be necessary, Regions shall include the ITS Unit staff in the development or review of the consultant scope of work.
- The ITS Unit has administrative responsibility for specific contracts for ITS engineering services but will assure Project Leaders have appropriate levels of oversight and control.
- The ITS Unit will provide consultant design review services to make sure projects meet the objectives outlined in this bulletin.

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