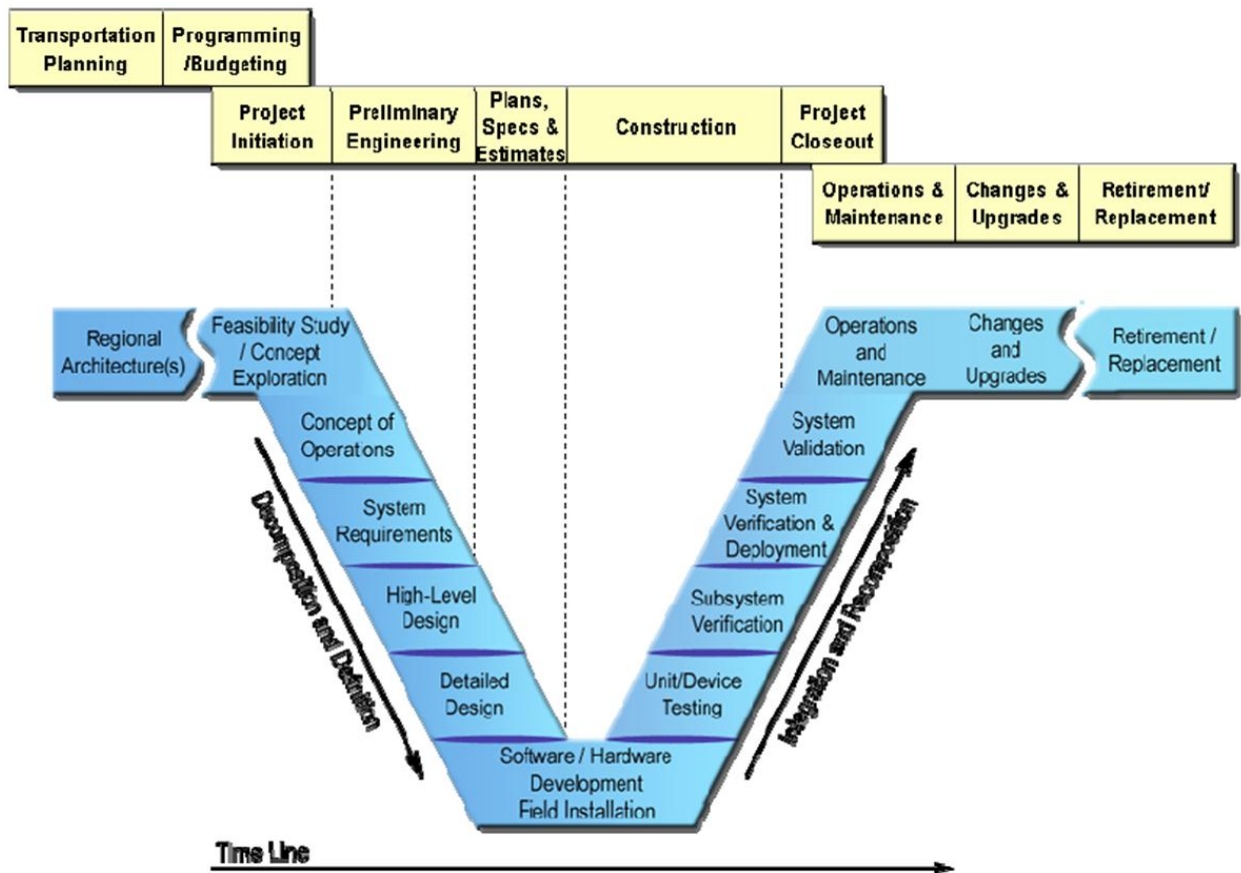


Relationship of Systems Engineering (SE) Process to Standard Transportation Project Development Process

The SE Process is another form of project development and design which has been developed by the defense industry. Technology industries have adopted this as a standard practice to reduce risk and errors in the development of projects. In the case of ITS projects the SE procedures replace the traditional planning, pre-design, final design and construction QA/QC with a series of activities that are more appropriate for technology projects. The diagram below shows the relationship of SE to the typical DOT project phases.



23 CFR 940 requires that all ITS projects funded with highway trust funds be developed based on an SE analysis. Systems engineering is a phrase used to describe the cyclical process of planning, designing, implementing, testing, operation, and maintenance of an ITS system or project throughout its useful life. The SE process begins with the development and implementation of an ITS architecture and continues

by outlining the steps and level of detail of each phase of project deployment, from high-level tasks such as establishing the Concept of Operations to very detailed component design, installation, and testing. The purpose of the SE process is to ensure that a well-planned foundation is in place and then to affirm the requirements of an ITS system.

SE Reference Documents Links

[FHWA Systems Engineering for ITS](#)

[Systems Engineering Guidebook for ITS](#)

[Building Quality Intelligent Transportation Systems Through Systems Engineering](#)

[A Guide to Configuration Management for ITS](#)

[Developing Functional Requirements for ITS Projects](#)