

Deliverable for:

Statewide ITS Deployment Strategy

Task D-19

IWAYS Architecture Maintenance Process Technical Memo

Final

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1. INTRODUCTION

The Alaska Department of Transportation and Public Facilities (ADOT&PF) in cooperation with statewide stakeholders, developed the Alaska Statewide Intelligent Transportation System (ITS) or IWAYS Architecture. The Alaska IWAYS Architecture provides a framework used to coordinate and integrate ITS technologies (e.g., electronics, communications, and information processing software and systems) on a statewide level. Through coordination and integration, ITS technologies work together as a seamless, compatible, system to improve transportation operations and traveler safety in Alaska. In addition, the Alaska IWAYS Architecture ensures that agencies in Alaska can continue to receive Federal funding to support ITS deployment in the state.

IWAYS is the state adopted label for ITS that stands for intelligence, integration, internet and information (the "i") for air, sea and roadways (the "ways").

Rapid advances in technology make it possible for transportation officials to manage transportation infrastructure more effectively leading to improvements in safety, efficiency and cost-effectiveness. However, due to the dynamic nature of ITS-related technologies it is difficult to determine what the future will bring, and as a result, it is even more difficult to plan for these changes. Therefore, Alaska ITS stakeholders must remain attentive to changes that affect ITS policies and implementation, so that they can incorporate these changes into the documents that comprise the Alaska IWAYS Architecture.

The Alaska IWAYS Architecture consists of six main documents. These documents, in the order in which they were developed, are:

- User Needs
- User Services
- ITS Long-Range Vision
- Concept of Operations
- Physical ITS Architecture
- Implementation Plan

Each document listed above represents an important piece of Alaska's IWAYS Architecture. The project team developed each document listed above based on a snap shot of transportation user needs at the time these needs were identified. To remain effective, ADOT&PF must update each of these documents periodically as transportation user needs change, new technologies emerge and updates to the National ITS Architecture occur. Although the Alaska IWAYS Architecture was developed using a 10 year time frame, updating the Architecture when changes occur ensures that the Architecture remains a living, useful document. This in turn ensures that Alaska's initial investment in the IWAYS Architecture remains viable through its planned life cycle. In addition, updating the Alaska IWAYS Architecture ensures that implementation of ITS in Alaska can continue to occur with Federal funding.

This document provides a plan to maintain Alaska's IWAYS Architecture. In addition to Alaska's IWAYS Architecture, this plan may also be used to update the Municipality of Anchorage's Regional ITS Architecture, since this architecture was developed in conjunction with and using the same principals used to develop Alaska's IWAYS Architecture. Although the Municipality is not directly named throughout this plan, it fully satisfies the maintenance requirements outlined in the Final FHWA Rule and FTA Policy for Regional ITS Architecture compliance for both architectures.

1.1 PURPOSE

The purpose of the Alaska IWAYS Maintenance Plan is to enhance traveler safety and mobility in Alaska through the continual, effective maintenance of Alaska's Statewide IWAYS Architecture in accordance with National policies and local guidance. In early 2001, the United States Department of Transportation (USDOT) announced the release of FHWA's Final rule and FTA's policy for applying the National ITS Architecture at the regional level. The FHWA rule and FTA policy sets forth a number of requirements for



funding ITS projects through the National Highway Trust Fund. One such requirement is that “agencies and other stakeholders participating in the development of the regional ITS architecture shall develop and implement procedures and responsibilities for maintaining it, as needs evolve within the region.” This document helps to fulfill this requirement and ensures that Alaska’s Statewide IWAYS Architecture remains both useful and effective beyond its designed 10-year life span.

This document sets forth and describes a process to periodically update Alaska’s Statewide ITS Architecture. Without a process like the one recommended, Alaska may have to re-develop a new Statewide IWAYS Architecture when their existing ITS architecture becomes obsolete, resulting in inefficient and unnecessary use of funds and staff resources. The project team used the recommended process described in this document during the initial update to Alaska’s Statewide ITS Architecture. This document acts as a guide that users can follow to complete similar updates in the future.

1.2 BACKGROUND

The project team developed Alaska’s IWAYS Architecture based on Version 3.0 of the National ITS Architecture. The team considered proposed updates to the National ITS Architecture that were available before the Architecture was finalized. Since the time of the initial architecture development, the National ITS Architecture versions 4.0 and 5.0 have been released. In the future, it is expected that updates to the National ITS Architecture will continue to be released. As such, it is possible that needs expressed by stakeholders that could not be addressed by the National ITS Architecture, may be addressable as future updates are released.

1.3 INTENDED AUDIENCE

This document is intended for agencies and transportation professionals responsible for the implementation of ITS technologies in the State of Alaska, and those responsible for updating the Statewide ITS Architecture. It is expected that individuals will use this document as a guide to periodically update the Alaska Statewide IWAYS Architecture but more specifically to:

- Decide when to update the Statewide IWAYS Architecture,
- Define agency responsibilities for updating the Statewide IWAYS Architecture,
- Decide which ITS products must be updated, and
- Define a process for managing changes.

Individuals within the Municipality of Anchorage responsible for maintaining the Municipality’s Regional ITS Architecture also benefit from this document. ADOT&PF’s Statewide IWAYS and the MOA Regional ITS Architectures were developed concurrently, and in a similar fashion. As a result text within this plan is applicable to both agencies.

1.4 ORGANIZATION

This document is organized into five chapters including this chapter. A summary of chapters 2-5 is provided below.

Chapter 2: Maintaining the Architecture – This chapter provides readers with some reasons why the Alaska ITS Architecture should be updated, and situations in which these updates should be made.

Chapter 3: First Steps – This chapter provides and describes activities that should be undertaken before making changes to Alaska’s IWAYS Architecture.

Chapter 4: Document Modification – This chapter provides chapter-by-chapter process for making modifications to Alaska’s IWAYS Architecture.

Chapter 5: Final Steps – This chapter provides and describes the activities that should be undertaken after each update to the IWAYS Architecture.



2. MAINTAINING THE ARCHITECTURE

Maintenance is a critical step in the designed life cycle of state and regional ITS architectures, including Alaska's IWAYS Architecture. The importance of architecture maintenance is underscored in the USDOT rule 940 on regional ITS architectures, Section 940.9(F) which states that "agencies and other stakeholders participating in the development of the regional ITS architecture shall develop and implement procedures and responsibilities for maintaining it (the architecture) as needs evolve within the region". Although the USDOT rule requires regions that have developed an ITS architecture to develop a maintenance procedure, there are several other beneficial reasons why ADOT&PF and statewide stakeholders should update their architecture. In addition, there are several other situations that may develop over time, in addition to a change in user needs, that may warrant the Alaska IWAYS Architecture to be updated. These beneficial reasons and situations are described in greater detail in sections 2.1 and 2.2 respectively.

2.1 BENEFITS OF ARCHITECTURE MAINTENANCE

Updating Alaska's IWAYS Architecture ensures that it remains a living document that is both useful and effective as a decision support and planning tool for those responsible for operating the state's transportation network and the ITS-related systems that are part of it.

Updates to Alaska's IWAYS Architecture also ensures that it is kept up-to-date, and in line with other state and regional transportation plans, preserving the Alaska Statewide IWAYS Architecture's usefulness in transportation planning activities throughout its 10 year life cycle. For instance, information on project sequencing from the Alaska IWAYS Architecture may be used to determine when projects should be considered to be included in the state's transportation improvement program so that project funding is available when implementation is planned to occur. If the IWAYS Architecture is not kept up-to-date projects may not obtain the funds needed for implementation, especially, if the architecture has not been updated to include new projects that are not included in the original version of the architecture.

Updating Alaska's IWAYS Architecture may also promote the development of institutional relationships. Workshops can be formed that allow stakeholders to assemble to provide input on ITS activities and to express their needs. Resulting discussions can provide the opportunity for stakeholders to leverage areas where resources and funds can be pulled to support ITS activities in the state.

2.2 WHEN TO UPDATE THE IWAYS ARCHITECTURE

Alaska's Statewide IWAYS Architecture provides the framework to coordinate and integrate ITS technologies in the state. A set of inputs acted as the foundation from which the Architecture was developed. These inputs include; stakeholder input gathered during the course of the project, existing state and regional plans, the National ITS Architecture and ITS-related systems existing or planned for implementation in Alaska. Over time inputs like these will change, and as a result the foundation on which the architecture was originally developed will be altered. Therefore, to align Alaska's Statewide IWAYS Architecture with the altered foundation, or the modified set of inputs, the architecture must be updated. It is recommended that the architecture be modified every time a significant change in user needs or system function occurs.

Updating the architecture as changes are made, will ensure that all changes are included in the architecture and the architecture always remains up to date. Updating the architecture on a periodic basis requires that a temporary list of on-going changes be made so that they are not forgotten. Creating and maintaining such a list is unnecessary and requires as much time and effort as is needed to update the architecture after each change.

2.3 REASONS WHY THE IWAYS ARCHITECTURE MAY NEED TO BE MAINTAINED

The Alaska Statewide IWAYS Architecture may need to be revised or updated for one or more reasons. Depending on the circumstances leading to the update, one or more of the chapters that comprise the



Statewide IWAYS Architecture may need to be modified. The specific chapters to be modified, however, will depend on the reasons for the modification. Updating the Statewide IWAYS Architecture will be easier if these reasons are understood. Potential reasons for updating Alaska's Statewide IWAYS Architecture are described below.

Changes in Regional Needs – Over time, as new transportation problems surface and existing problems are resolved, regional transportation needs will change. Since regional transportation needs form the foundation from which the Statewide IWAYS Architecture is based, a change in user needs will likely require significant changes be made to the ITS Architecture.

Changes in Institutional Framework – Within the ITS Architecture's 10 year time frame it is likely that institutional frameworks will evolve to include additional stakeholders, with different perspectives and needs. As a result, stakeholders may recommend additional projects or alterations in existing projects.

Changes in Project Definition – Projects proposed for future implementation may be modified to include, eliminate, or modify elements, connections, or information flows. When changes to project definition occur, the ADOT&PF will need to analyze the Statewide IWAYS Architecture to determine if the modifications are covered by the existing architecture. If the architecture doesn't adequately include the modified project definition, ADOT&PF will need to update the architecture so that these modifications are accurately reflected.

Changes in Project Acceptance – In some cases, projects may be added or eliminated altogether. When projects are added, the ADOT&PF should analyze the IWAYS Architecture to determine if an update is warranted to reflect additional information flows, connections, and other impacts associated with these projects. When projects are deleted, all corresponding elements associated with these projects must be removed, unless similar projects covering the same functions and flows remain.

Changes in Project Priority – From time to time, project implementation may be delayed due to funding constraints and/or institutional challenges, or advanced due to increased need. In these situations, project implementation may occur in a year or timeframe other than the one originally proposed. Using the Alaska IWAYS Architecture as an example, a project originally slated for implementation in the short-term may be delayed and pushed back to the mid- or long-term. This will affect other projects if implementation of these projects is dependent on the delayed project. As a result the implementation plan and other elements of the Statewide IWAYS Architecture may need to be updated.

Changes to National ITS Architecture Framework – Since the initial development of the National ITS Architecture, there have been several modifications that affect how ITS architectures are developed. These modifications include the addition of new user services, subsystems, and architecture flows to name a few. Version 5.0 of the National ITS Architecture has been proposed and will likely be implemented in Late 2003 or Early 2004. It is expected that modifications like these will continue as will changes made to policies that dictate how ITS projects are planned and funded. Significant changes to the National ITS Architecture that affect significant aspects of Alaska's ITS program may lead the ADOT&PF to update the IWAYS Architecture.



3. FIRST STEPS

Before updating the Alaska Statewide IWAYS Architecture, ADOT&PF and statewide stakeholders should collectively answer a number of important questions that will help ease the update process and ensure that the update incorporates the input of all relevant stakeholders. First, stakeholders should decide which agency or agencies will be responsible for updating the architecture and oversee the update process. Second, the selected agencies and the individuals responsible for implementing updates to the architecture should define the products that need to be modified. Third, the available electronic resources used to create previous versions of the IWAYS Architecture should be collected to ease the architecture update process. Last, procedures to manage Architecture updates should be defined so that changes can be documented at the same time the change is made, eliminating the need to remember what changes have been made, when, and by whom. Each of these tasks are described in greater detail in sections 3.1 – 3.4 respectively.

3.1 DEFINE AGENCY RESPONSIBILITIES

To initiate the process, an agency or group of individuals need to update Statewide IWAYS Architecture. Because changes will be proposed from a number of different sources, changes might be outside the range of expertise of one individual. Therefore, a group of individuals with a wide range of technical expertise should make updates, or at a minimum oversee the process. In most cases, the champion of the Architecture development process (ADOT&PF) assumes responsibility for maintaining the architecture. However, individuals from key stakeholder agencies (for example, law enforcement, emergency response, commercial vehicles, or traffic management) also make good candidates.

- Assign responsibility for architecture maintenance.
- Assign responsibility to oversee and support the maintenance efforts.

3.2 DEFINE ARCHITECTURE PRODUCTS TO BE UPDATED

Updating the Alaska Statewide IWAYS Architecture requires clear definition of the products to be updated when changes to the Alaska Statewide IWAYS Architecture are needed. Clear definition of these products will ensure that every element of the architecture is updated. Additionally, the list of products will act as a method, or check list, individuals can use to verify if needed changes were made.

With each update to the Alaska Statewide IWAYS Architecture, the individuals responsible for updating the architecture (most likely ADOT&PF staff) should review the following elements to determine if changes are needed. Changes will be needed if the information in any of them is no longer relevant. These elements are identified within FHWA's rule and FTA's policy on ITS Architecture development and are therefore considered important aspects to future updates.

- Description of the region
- List of stakeholders, including key contact information
- Inventory of existing and planned ITS systems
- Documented needs and ITS services associated with supporting systems in the region
- Operational concepts
- System functional requirements
- Documentation of existing and planned interconnects and information flows
- Documentation of project sequencing
- List of agency agreements
- Documentation of applicable, in use, or planned ITS standards

3.3 OBTAIN AVAILABLE ELECTRONIC RESOURCES

Before beginning the Architecture update process, the update team should gather available electronic resources developed or used in previous architecture development or update efforts. The resources include all electronic files (i.e., graphics, databases, and document files) that were produced in the original



architecture development and subsequent updates. Without these files, updating the Statewide IWAYS Architecture will be more difficult as files will need to be recreated if affected by the update.

Data/Electronic files that need to be collected:

- Electronic copies of the IWAYS Architecture (6 documents)
- Electronic copies of tables/graphics not embedded in the IWAYS Architecture
- Recent version of the National ITS Architecture
- Inventory of stakeholders' systems (e.g., Turbo Architecture File)
- Recently released Regional Transportation Plans (electronic preferred)
- Stakeholder input/workshop transcripts
- All files created/used by the consultant or other agency responsible for the development or last update to the IWAYS Architecture

3.4 MANAGE CHANGES

Before updates are made to the Alaska Statewide IWAYS Architecture, the update team should establish a process for implementing, tracking, and documenting changes. Following a process to manage change will ensure that a common approach is used for each time the IWAYS Architecture is updated. The output of the change management process should document the following:

- Agencies or individuals that made changes
- The dates when changes were made
- An inventory of the changes that were made including the name of the product that changed.
- The agencies or individuals possessing the updated files

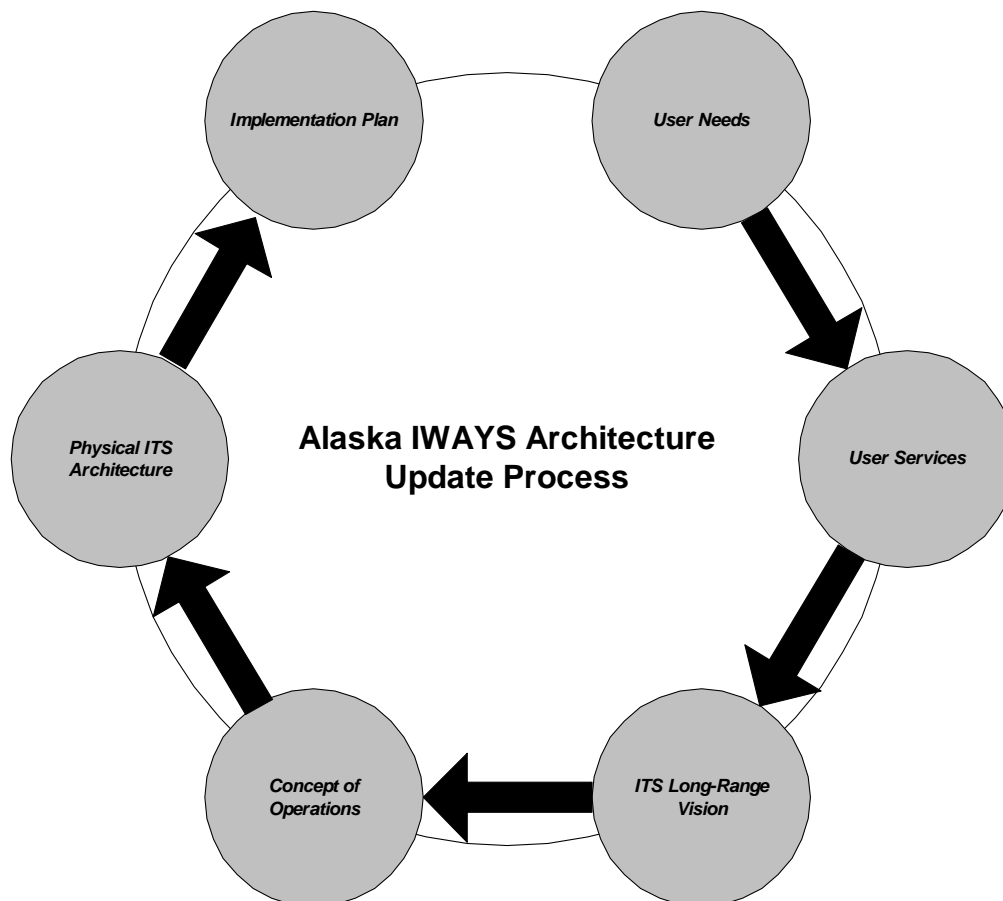
A defined change management process will reduce the time and effort needed to determine changes made in previous updates to the IWAYS Architecture. It will also reduce confusion regarding which draft of the architecture is most current, ensuring that updates are applied to the correct version of the document (version control).

4. DOCUMENT MODIFICATION

Significant changes in user needs or ITS program direction or the addition of or change to significant functions that are not reflected in the Alaska Statewide IWAYS Architecture will require that the six documents or chapters that comprise the Architecture be updated. To summarize, these chapters in the order they were developed are listed below.

- Chapter 1: User Needs
- Chapter 2: User Services
- Chapter 3: ITS Long-Range Vision
- Chapter 4: Concept of Operations
- Chapter 5: Physical ITS Architecture
- Chapter 6: Implementation Plan

The order in which each chapter was developed was based on the USDOT recommended process for developing a regional or statewide ITS architecture. In general, this process moves from high-level concepts to specific details, and as a result, each chapter in the architecture acts as the foundation for the next. For example, Chapter 1 (user needs) defines the concepts needed to develop Chapter 2 (user services), Chapters 1 and 2 define the concepts needed to develop Chapter 3, and so on. This process is illustrated in the figure below. Therefore, when a decision is made to modify the architecture, it is important that the individual or group of individuals responsible for maintaining it follow this process as it will be the most efficient, comprehensive and familiar method of updating the Alaska IWAYS Architecture.





Since the process illustrated above is intended for use in developing ITS architectures, individuals responsible for maintaining the architecture do not have to recreate each document, but rather adopt the process to review documents for the modifications that need to be made. As such, the individual or group of individuals should begin with the first chapter in the process (user needs) and determine if there are any changes that need to be reflected, implement the changes, and when finished proceed to the user services chapter, repeating these steps for each chapter.

4.1 USER NEEDS

Definition of the user needs was one of the first steps taken to develop the Alaska Statewide IWAYS Architecture. As such, user needs act as the foundation from which the remaining pieces of the architecture were developed. As stated previously, the ITS Architecture update process should begin with a review of the User Needs Chapter to determine if any new user needs should be added to this document and incorporated into the text of other chapters.

If stakeholders identified one or more new user needs that are not reflected in the IWAYS architecture, the update team should modify the text in the user needs chapter to reflect the new user need(s). Since the user needs chapter acts as the foundation for development of the other chapters, a change in user needs will require that one or more of the remaining five chapters be modified.

If a new user need is identified, modifications to the User Needs Chapter will be rather straight forward and easy to implement compared to subsequent changes to the other chapters. In general, the complexity of changes made to the IWAYS architecture will become greater as one works toward the last chapter (Implementation Plan). The only change that will need to be made to the User Needs Chapter will be to update the user need descriptions. This may involve modifying the existing text to alter the meaning of an existing user need, or the addition of a completely new user need and description. For example, when the User Needs Chapter of the Alaska IWAYS Architecture was updated to reflect security needs, several new user needs were added to the existing text, one of which pertained to improving infrastructure security in Alaska. This specific need was added to the Traveler Safety User Need Bundle which was renamed to Traveler Safety and Infrastructure Security to encompass the additional needs pertaining to security.

After the update team adds all the new user need descriptions, or modifies existing text to better describe the need, the team should carry these newly identified user needs over to Chapter 2 (User Services) where the new needs will be mapped to National ITS Architecture User Services.

4.2 USER SERVICES

National ITS Architecture User Services allow system or project definition to begin, by establishing high-level services needed to address identified user needs. Alaska's IWAYS Architecture maps identified user needs to National ITS Architecture User Services. Therefore, any change in user needs will at a minimum require that the individual or group of individuals responsible for maintaining the architecture review the newly incorporated user needs to determine which user services, if any, satisfy the new user needs. Newly identified transportation user needs may map to user services already documented in the Alaska IWAYS Architecture. If this is the case new user needs should be mapped to the existing user services. However, it is possible that user services already in the Statewide IWAYS Architecture may not satisfy any or all of the newly identified user needs. In this case, the update team should review user services in the most recent version of the National ITS Architecture and determine their applicability to the new user needs. If a new user service (from the most recent version of the National ITS Architecture) satisfies one or more of the new user needs, it should be mapped to the user need, and a description of the new user service should be added to the text. If the new user service is derived from a version of the National ITS Architecture more recent than the one previously used, it will be necessary for the update team to update all the outdated user services in Alaska's IWAYS Architecture with the new ones in the most recent version of the National ITS Architecture.

If a new user need maps to one of the National ITS Architecture user services not already included in the IWAYS Architecture, the update team should add a description of the user service to the appropriate



section of the User Services Chapter. This may involve the addition of a new user service bundle as well as the actual user service. For instance when the user services chapter was updated to reflect security needs, the Advanced Vehicle Safety System User Service Bundle, and the Vision Enhancement for Crash Safety User Service were added. Although not directly an outcome of the homeland security workshop, this user service and bundle had not be included in Alaska's IWAYS Architecture because it was not part of the National ITS Architecture at the time the Alaska's IWAYS Architecture was developed.

If a new user need maps to one of the National ITS Architecture user services included in Alaska IWAYS Architecture, the update team does not need to add a description of the user service as it already exists. However, the mapping of the new user need to the exiting user service should be reflected in the text. For instance Table 3-1 (Needs to User Service Correlation) will need to be updated.

If a new user need does not map to a National ITS Architecture user service the need should be added to Appendix A – Other Transportation Needs. In the future as National ITS Architecture is updated, it may be possible to map these user needs to newly incorporated user services.

4.3 ITS LONG-RANGE VISION

Alaska's ITS Long-Range Vision was based on Alaska's transportation needs and stakeholder defined goals. Although it is not expected that these needs and goals will change significantly in the next ten years, institutional changes, and shifts in policy may require that the update team modify Alaska's ITS Vision. Of particular importance are the sections pertaining to project goals and program areas. Changes in either of these areas should be reflected in the ITS Long-Range Vision and carried over into the remaining documents (i.e., Concept of Operations, Physical ITS Architecture, and Implementation Plan). For instance, when the IWAYS Architecture was updated to reflect security needs, a new project goal (Improve Security) and program area (Traveler Safety and Infrastructure Security) was added to the text.

4.4 CONCEPT OF OPERATIONS

The Concept of Operations defines the operational relationships and the communication elements that comprise the Alaska IWAYS Architecture. When a new ITS concept or function is planned for implementation in Alaska, the Concept of Operations will need to be updated. Items that may need to be updated include:

- Current Agency Operations
- Legacy System Analysis
- Communication Systems
- ITS System Deployment Status

If a previously unidentified stakeholder implements a new project or associated system, a description of the stakeholder should be added to the existing text. The new description should reflect the agency's ITS functions, the other organizations or agencies with which it shares data, and other relevant data that help describe the agency's role in terms of ITS operations. The modified text should describe all of the agency's ITS related systems, in National ITS Architecture terms. When making these changes, it may be necessary to update descriptions of agency operations if they have changed since the last time the architecture was updated.

If an existing stakeholder implements the new project or associated system, a description of the stakeholder does not need to be added as it already exists. However, the update team should add a description of the system being implemented to all relevant sections. Due to the fact that a review of agency systems was not undertaken as part of the first update to Alaska's IWAYS Architecture, no new systems were added when the IWAYS Architecture was updated to include homeland security needs.

When stakeholder and/or system descriptions are added or updated, stakeholders should take the opportunity to update descriptions of legacy systems, including any changes in current deployment status.



If new systems have been deployed in Alaska since the last time the IWAYS Architecture was updated, the person or group of people responsible for updating the architecture should map these systems to the National ITS Architecture and identify the applicable User Services, Sub-Systems, and Equipment Packages.

Since no new systems were identified when Alaska's IWAYS Architecture was updated to include security needs, no new systems were mapped to National ITS Architecture elements.

If a new ITS program area is added, or other change is made to Alaska's ITS Long-Range Vision, related sections within the Concept of Operations Document must also be updated to be consistent with the changes that were made in previous chapters. For instance, when the new Traveler Safety and Infrastructure Security program area was added to the ITS Long-Range Vision, this program area was added to the sections in the Concept of Operations Documents where Alaska's ITS program areas are mentioned. For example, within Table 4-2 (Required Future Operational Strategy), the new program area was added to the table and the associated required functions, existing system functionalities, and future functional needs were described. Text was also added in section three (Alaska's ITS Long-Range Vision) to add a description of the new program area. In this case, the figure showing Alaska's ITS program areas had to be modified. These are two examples where text was updated; however, the persons or group of individuals responsible for updating the Alaska's IWAYS Architecture should perform a thorough search of all text to ensure that all relevant sections are modified and consistent with previous chapters.

4.5 PHYSICAL ARCHITECTURE

Alaska's Physical ITS Architecture should be updated whenever there is a change to Alaska's IWAYS Program (e.g., new system is implemented or planned). Through the update process, connections with the new system and existing systems will be defined making it possible to identify the other systems it will communicate with and the data that will be communicated. Although, not required, it may also be beneficial to update the IWAYS Architecture when the National ITS Architecture is updated. This will ensure that terminology used in Alaska's IWAYS Architecture remains consistent with that of the National ITS Architecture.

When a new project is identified, it must be mapped to National ITS Architecture Market Packages and User Services. The project may or may not require that a new market package be added to Alaska's IWAYS Architecture. If a new Market Package is identified and included in Alaska's IWAYS Architecture, the new market package(s) should be cross referenced to applicable User Services.

The Physical ITS Architecture interconnect diagrams found in the appendix of Chapter 5 must be updated when there a new system is implemented or system scope is modified. New systems should be added, as well as the information flows that connect them to other systems.

Changes that occur as a result of updates to previous chapters must also be incorporated in this chapter. For instance, if program areas in Chapter 3 (ITS Long-Range Vision) were updated or revised these changes need to be carried through the remaining chapters. For instance, an additional program area (Traveler Safety and Infrastructure Security) was added to Alaska's existing 5 program areas. This program area was carried through to Chapter 5, and resulting changes incorporated at various locations within the Chapter (e.g., Summary of Alaska's Program Areas, Mapping Program Areas to Market Packages Table, High-level Program Area illustrations, etc.).

4.6 IMPLEMENTATION PLAN

Over time, the status of projects slated for implementation in Alaska will change. For instance, if the IWAYS Architecture has not been updated in several years, a project classified as a potential future project may have been implemented since the last time the IWAYS Architecture was updated. This will require that current text be modified to reflect this change in status. (Although, this natural change in status of projects should not, in and of themselves, necessitate an update to the IWAYS architecture.) Likewise, new projects that have yet to be implemented may be identified. A description of these projects should be added to the description of future potential projects.



Similar to project status, project phasing or conceptual integration, will also change. For instance, a project slated for implementation in the short-term may have been implemented since the last time the IWAYS Architecture was updated. This project along with others that have been implemented should be removed from the list of short-term projects and replaced with projects originally slated for implementation in the long-term. Likewise long-term projects should be replaced with newly identified projects that will be implemented 5-10 years in the future.

Since the update to Alaska's ITS Architecture, to include homeland security issues, occurred immediately after the initial release of Alaska IWAYS Architecture, there were no changes in project implementation. However, existing project descriptions were updated to reflect transportation-related security needs. For instance, the Integrated Transportation Operations and Communications Center (ITOCC) Project Description was modified to include a disaster response plan as part of the project. The disaster response plan, will describe how Alaska's transportation network will be operated if the integration the ITOCC was ever jeopardized as a result of a man-made (e.g., terrorist attack) or natural disaster (e.g., earthquake).



5. FINAL STEPS

Upon updating the Statewide IWAYS Architecture, there are a couple final steps that need to be made. These steps are summarized below.

5.1 NOTIFY STAKEHOLDERS

After the each update to the Alaska IWAYS Architecture, the update team should notify statewide stakeholders of the changes that have taken place. Stakeholder notification will allow individuals responsible for other transportation activities within the state the opportunity to adjust their plans based on the updates that were made to the Alaska IWAYS Architecture. Stakeholder notification will also help maintain stakeholder familiarity with statewide ITS activities. Before stakeholders are notified, however, decisions pertaining to who will be notified and how this notification should occur need to be made.

5.2 ARCHIVE FILES

The individual or group of individuals that update the Alaska IWAYS Architecture should archive all files that were created and or used during the IWAYS Architecture update process, according to the change management process described in section 3.4. The archive can be a simple folder located on an agency's (ADOT&PF) network. To increase the security of the files, a copy of all the files should be stored on a CD in case the integrity of the network is jeopardized or the file is accidentally deleted. The contents and location of the folder or archive should be documented and stored with the updated version of the architecture (hardcopy) so that files can be easily located next time the architecture is updated.