APPENDIX A: DETAILED TABLE OF THE WASHINGTON STATE AIRPORTS

The detailed table of the Washington State Airports is shown on the following pages.

Site	Airport Name	City	NPIAS Service Level	State Service Level
26433.C	American Lake SPB	Tacoma	None	Seaplane Base
26098.1A	Anacortes	Anacortes	Commercial Service - NonPrimary	Commercial Service
26123.1A	Anderson Field	Brewster	General Aviation	Community Local >10
26099.A	Arlington Municipal	Arlington	General Aviation	Regional Service
26103.11A	Auburn Municipal	Auburn	Reliever	Regional Service
26267.4A	Avey Field State	Laurier	None	Recreation or Remote
26104.A	Bandera State	Bandera	None	Recreation or Remote
26109.A	Bellingham International	Bellingham	Commercial Service - Primary	Commercial Service
26116.A	Blaine Municipal	Blaine	General Aviation	Community Local >10
26396.A	Boeing Field/King County Internationa	Seattle	Commercial Service - Primary	Commercial Service
26236.A	Bowerman Field	Hoquiam	General Aviation	Regional Service
26195.A	Bowers Field	Ellensburg	General Aviation	Regional Service
26120.*A	Bremerton National	Bremerton	General Aviation	Regional Service
26424.3*A	Camano Island Airfield	Stanwood	None	Recreation or Remote
26135.A	Cashmere Dryden	Cashmere	General Aviation	Community Local >10
26104.11*A	Cedars North Airpark	Battle Ground	None	Recreation or Remote
26144.A	Chehalis Centralia	Chehalis	General Aviation	Community Local >10
26147.A	Chelan Municipal	Chelan	General Aviation	Community Local >10
26159.A	Cle Elum Municipal	Cle Elum	General Aviation	Community Local <10
19614.*A	Columbia Gorge Regional/The Dalles	The Dalles	General Aviation	Regional Service
26165.A	Colville Municipal	Colville	General Aviation	Community Local >10
26167.A	Concrete Municipal	Concrete	None	Community Local >10
26170.A	Copalis State	Copalis	None	Recreation or Remote
26252.1A	Crest Airpark	Kent	None	Recreation or Remote
26157.*A	Cross Winds	Clayton	None	Recreation or Remote
26180.A	Darrington Municipal	Darrington	None	Community Local <10
26181.A	Davenport Municipal	Davenport	General Aviation	Community Local >10
26184.A	Deer Park Municipal	Deer Park	General Aviation	Regional Service
26290.9A	Desert Aire	Mattawa	None	Recreation or Remote
26159.1A	DeVere Field	Cle Elum	None	Recreation or Remote
26333.A	Dorothy Scott Municipal	Oroville	General Aviation	Community Local >10
26189.A	Easton State	Easton	None	Recreation or Remote
26437.A	Ed Carlson Memorial	Toledo	General Aviation	Community Local >10

Site	Airport Name	City	NPIAS Service Level	State Service Level
26196.A	Elma Municipal	Elma	None	Recreation or Remote
26204.A	Ephrata Municipal	Ephrata	General Aviation	Community Local >10
26441.1A	Evergreen Field	Vancouver	None	Recreation or Remote
26417.A	Felts Field	Spokane	Reliever	Regional Service
26384.12A	Ferry County	Republic	None	Community Local <10
26304.21A	Firstair Field	Monroe	None	Recreation or Remote
26110.11C	Floathaven SPB	Bellingham	None	Seaplane Base
26444.4A	Fly For Fun	Vancouver	None	Recreation or Remote
26213.A	Forks Municipal	Forks	None	Community Local <10
26219.4A	Friday Harbor	Friday Harbor	Commercial Service - Primary	Commercial Service
26219.1C	Friday Harbor SPB	Friday Harbor	General Aviation	Seaplane Base
26104.1A	Goheen Field	Battle Ground	None	Recreation or Remote
26222.1A	Goldendale Municipal	Goldendale	None	Community Local >10
26193.1A	Grand Coulee Dam	Electric City	General Aviation	Community Local <10
26307.A	Grant County International	Moses Lake	Commercial Service - NonPrimary	Commercial Service
26130.A	Grove Field	Camas	General Aviation	Community Local >10
26411.A	Harvey Field	Snohomish	Reliever	Regional Service
26222.*A	Hillcrest	Goldendale	None	Recreation or Remote
26328.1*A	Hoskins Field	Olympia	None	Recreation or Remote
26240.5A	Ione Municipal	Ione	General Aviation	Recreation or Remote
26363.A	Jefferson County International	Port Townsend	General Aviation	Community Local >10
26096.*A	J-Z	Almira	None	Recreation or Remote
26246.A	Kelso-Longview	Kelso	General Aviation	Regional Service
26395.5*C	Kenmore Air Harbor SPB	Seattle	None	Seaplane Base
26248.C	Kenmore Air Harbor, Inc.	Kenmore	General Aviation	Commercial Service
26269.1A	Lake Wenatchee State	Leavenworth	None	Recreation or Remote
26271.*U	Lester State	Lester	None	Recreation or Remote
26273.A	Lind Municipal	Lind	None	Community Local <10
26424.5A	Little Goose Lock & Dam State	Starbuck	None	Recreation or Remote
26274.7A	Lopez Island	Lopez	General Aviation	Community Local >10
26291.6*A	Lost River Airport	Mazama	None	Recreation or Remote
26162.1A	Lower Granite State	Colfax	None	Recreation or Remote
26243.5A	Lower Monumental State	Kahlotus	None	Recreation or Remote
26275.A	Lynden Municipal	Lynden	None	Recreation or Remote

Site	Airport Name	City	NPIAS Service Level	State Service Level
26282.A	Mansfield	Mansfield	None	Community Local <10
26163.A	Martin Field	College Place	None	Recreation or Remote
26293.A	Mead Airport	Mead	None	Recreation or Remote
26477.A	Methow Valley	Winthrop	General Aviation	Recreation or Remote
26305.A	Moses Lake Municipal	Moses Lake	None	Community Local >10
26454.A	New Warden	Warden	None	Community Local <10
26323.21A	Ocean Shores Municipal	Ocean Shores	General Aviation	Community Local <10
26323.4A	Odessa Municipal	Odessa	General Aviation	Community Local >10
26324.A	Okanogan Legion	Okanogan	None	Community Local >10
26327.A	Olympia	Olympia	General Aviation	Regional Service
26330.A	Omak	Omak	General Aviation	Regional Service
26190.*A	Orcas Island	Eastsound	Commercial Service - NonPrimary	Commercial Service
26336.2A	Othello Municipal	Othello	General Aviation	Community Local >10
26341.A	Packwood	Packwood	General Aviation	Community Local <10
26461.A	Pangborn Memorial	Wenatchee	Commercial Service - Primary	Commercial Service
26444.A	Pearson Field	Vancouver	General Aviation	Community Local >10
26374.1A	Pierce County/Thun Field	Puyallup	General Aviation	Community Local >10
26354.*A	Point Roberts Airpark	Point Roberts	None	Recreation or Remote
26240.A	Port of Ilwaco	Ilwaco	None	Community Local <10
26162.A	Port of Whitman Business Air Center	Colfax	General Aviation	Community Local >10
26365.C	Poulsbo SPB	Poulsbo	None	Seaplane Base
26369.A	Prosser	Prosser	General Aviation	Community Local >10
26388.A	Pru Field	Ritzville	General Aviation	Community Local <10
26372.A	Pullman/Moscow Regional	Pullman / Moscow, I	Commercial Service - Primary	Commercial Service
26376.5A	Quillayute	Quillayute	General Aviation	Recreation or Remote
26376.83A	Quincy Municipal	Quincy	None	Community Local <10
26388.8*A	R & K Skyranch	Rochester	None	Recreation or Remote
26230.A	Ranger Creek State	Greenwater	None	Recreation or Remote
26381.A	Renton Municipal	Renton	Reliever	Regional Service
26386.1A	Richland	Richland	General Aviation	Regional Service
26388.63C	Roche Harbor SPB	Roche Harbor	None	Seaplane Base
26098.6*A	Rogersburg State	Anatone	None	Recreation or Remote
26389.1A	Rosalia Municipal	Rosalia	General Aviation	Community Local >10
26389.4C	Rosario SPB	Rosario	None	Seaplane Base

Site	Airport Name	City	NPIAS Service Level	State Service Level
26150.A	Sand Canyon	Chewelah	None	Community Local >10
26405.A	Sanderson Field	Shelton	General Aviation	Regional Service
26395.A	Sea-Tac International	Seattle	Commercial Service - Primary	Commercial Service
26393.*C	Seattle Seaplanes SPB	Seattle	None	Seaplane Base
26401.*A	Sekiu	Sekiu	None	Community Local <10
26402.1A	Sequim Valley	Sequim	None	Recreation or Remote
26414.1*A	Shady Acres	Spanaway	None	Recreation or Remote
26125.1A	Skagit Regional	Burlington/Mount Ve	General Aviation	Regional Service
26425.8*A	Sky Harbor	Sultan	None	Recreation or Remote
26409.A	Skykomish State	Skykomish	None	Recreation or Remote
26098.23C	Skyline SPB	Anacortes	None	Seaplane Base
26210.A	Snohomish County/Paine Field	Everett	Reliever	Regional Service
26415.A	Spanaway	Spanaway	None	Recreation or Remote
26416.A	Spokane International	Spokane	Commercial Service - Primary	Commercial Service
26425.A	Stehekin State	Stehekin	None	Recreation or Remote
26304.8A	Strom Field	Morton	None	Community Local <10
26300.A	Sullivan Lake State	Metaline Falls	None	Recreation or Remote
26428.A	Sunnyside Municipal	Sunnyside	General Aviation	Community Local >10
26191.1A	Swanson Field	Eatonville	None	Recreation or Remote
26434.4A	Tacoma Narrows	Tacoma	General Aviation	Regional Service
26386.6A	Tieton State	Rimrock	None	Recreation or Remote
26438.A	Tonasket Municipal	Tonasket	None	Community Local >10
26345.A	Tri-Cities	Pasco	Commercial Service - Primary	Commercial Service
26440.A	Twisp Municipal	Twisp	None	Community Local <10
26448.A	Vashon Municipal	Vashon	General Aviation	Recreation or Remote
26249.A	Vista Field	Kennewick	None	Community Local <10
26450.A	Walla Walla Regional	Walla Walla	Commercial Service - Primary	Commercial Service
26457.A	Waterville	Waterville	None	Community Local >10
26322.11A	Wes Lupien	Oak Harbor	None	Community Local <10
26485.01A	Western Airpark	Yelm	None	Recreation or Remote
26463.A	Westport	Westport	None	Community Local <10
26266.2A	Whidbey Airpark	Langley	General Aviation	Recreation or Remote
26471.A	Wilbur Municipal	Wilbur	General Aviation	Community Local >10
26381.01C	Will Rogers Wiley Post SPB	Renton	None	Seaplane Base

Site	Airport Name	City	NPIAS Service Level	State Service Level
26412.A	Willapa Harbor	South Bend (Raymo	None	Community Local <10
26436.A	Willard Field	Tekoa	None	Community Local >10
26471.5*A	Wilson Creek	Wilson Creek	None	Community Local <10
26357.A	Wm. R. Fairchild International	Port Angeles	Commercial Service - Primary	Commercial Service
26478.1A	Woodland State	Woodland	None	Recreation or Remote
26480.A	Yakima Air Terminal	Yakima	Commercial Service - Primary	Commercial Service

APPENDIX B: WASHINGTON STATE LONG-TERM AIR TRANSPORTATION STUDY (LATS)

Washington State Long-term Air Transportation Study (LATS)

Washington State Department of Transportation (WSDOT), Aviation

Communication and Public Involvement Plan

WSDOT is committed to proving and implementing an intensive outreach effort throughout the Washington State Long-term Air Transportation Study (LATS.)

The communications plan has been drafted in accordance with FAA Advisory Circular (AC) No. 150/5070-7 *Airport System Planning and FAA's Community Involvement Manual,* FAA-EE-90-03, which provides guidance on system planning public involvement and stakeholder consultation. The FAA Advisory Circular states specifically that:

Appropriate coordination of study drafts with the aviation public, community organizations, airport sponsors and users, and other interested parties is critical to the successful adoption and implementation of the final planning report. It is important that all affected or potentially affected parties perceive that the process is open, that the opportunity for participation exists, and that the study is designed to consider input from all of them.

The following plan embraces that philosophy to assure that the resultant system plan supports the public's best interest.

Background

In 2005, the Washington State Legislature adopted Engrossed Substitute Senate Bill (ESSB) 5121, which requires the Washington State Department of Transportation (WSDOT) to assess Washington State's aviation facilities. The information will then be used by a Governor-appointed planning council to make recommendations on what is needed to meet future air transportation demand.

WSDOT will embark upon this comprehensive airport system study – also known as the Washington State Long-term Air Transportation Study

(LATS) - in conjunction with the Federal Aviation Administration (FAA). The FAA will provide a majority of the funding for LATS, with supporting grants from WSDOT and the Washington State Legislature.

Also as part of LATS, a $50,000 state-funded and appropriated grant will be used to evaluate high-speed passenger rail. This evaluation will broadly study existing materials on how rail may be used to more efficiently utilize airport capacity by connecting airports. This effort will be coordinated as part of Phase II of LATS.

The product of LATS will be a cost-effective action plan to develop Washington State airports consistent with established goals and objectives. The process will also result in establishing perspectives on aviation priorities, such as airport roles, funding, policy strategies, and system trends. It will also identify the roles and characteristics of existing and recommended new airports, describe the overall development required at each, and include timeframes and estimated project costs. This will ensure that aviation plans remain responsive to the overall statewide air transportation needs.

Approach

LATS will encompass three phases:

- Phase I includes a review of airport inventory and capacity.
- Phase II includes detailed activity forecasts for each airport, market analysis of the commercial airports, a high-speed rail review, air cargo study and future capacity assessment.
- Phase III will involve the formation of a Governor's council to review the fact finding in Phases I and II and determine long-term airport development priorities to guide investment decisions.

System Plan Components

The overall goal of any state airport system planning process is to ensure the statewide system of airports are safely, efficiently, and adequately serving immediate and long-term air transportation needs. The system plan for Washington will include 139 public-use airports. Its main components will include:

1. Inventory of the current airport system
2. Identification of air transportation needs

3. Forecast of system demand
4. Consideration of alternative airport systems
5. Definition of airport roles and policy strategies
6. Recommendation of system changes, funding strategies, airport development
7. Preparation of an implementation plan
8. Exploration of issues that impact aviation in the study area
9. Special studies that may include high-speed rail, air cargo and commercial airport analysis
10. Performed in the context of a highly visible platform that includes strong public outreach efforts

WSDOT's system planning efforts do not include:

- Master planning
- Environmental planning
- Site selection studies for new airport facilities

A system plan serves as an important contribution to the FAA's National Plan of Integrated Airport Systems (NPIAS). The FAA's NPIAS is a national plan, updated every two years, that identifies for each state specific airport improvements that will contribute to achieving FAA goals. The NPIAS supports the FAA's strategic goals for safety, system efficiency, and environmental compatibility. Aviation system planning fits between the FAA's national planning effort, as documented in the NPIAS, and contributes to more detailed master and capital improvement plans for each individual airport.

Situation Analysis

Washington's aviation system is a public-private partnership comprised of 139 public-use airports. Airports are an essential component of Washington State's overall transportation system, providing critical links to people, goods, and services. They are a lifeline to and from isolated rural communities, especially for medical and emergency services, and enhance the quality of life for residents in their work and leisure. Additionally, airports allow for easy access by out-of-state visitors, supporting Washington's tourism business.

Airports play a vital role in the state's economy by facilitating jobs and commerce. According to an economic impact report from 2001, Washington's airport system annually generates 7,600 jobs, $140 million in wages, and $490 million in total sales output. In spite of its importance to the state economy, inadequate planning, an antiquated funding base, a fluctuating economy and local land use conflict threaten the long-term health of Washington's aviation system.

WSDOT's Aviation Policy Framework

It is in the State's interest that:

- Aviation facilities and services be preserved that provide access for all regions of the state to the nation's air transportation system, provide for emergency management, and support local economies.
- Transportation by air be safe.
- There be sufficient airport capacity to respond to growth in demand to ensure access across the state, the nation and the world.

In its 2004 policy development process, WSDOT Aviation was requested by its Aviation Advisory Committee to address three questions:

- Is Washington positioned to respond to a rapidly changing aviation environment?
- Is Washington using its limited resources effectively and efficiently to meet the state's long-term interests in Aviation? What should the key priorities be?
- What strategic changes need to be made to satisfy the state's aviation policy, i.e., preservation, safety, capacity and environmental protection?

With input of key stakeholders, including intensive work by study groups on system planning, education and outreach, and safety, WSDOT Aviation identified key issues and goals needed to satisfy Washington State's interest in a healthy aviation system. The study groups were comprised of local elected and planning officials, airport representatives, pilot organizations, universities and members of the State Legislature.

The System Planning workgroup identified policy issues and system plan goals that included:

- Maximize value and impact of public investment in the aviation system statewide.
- Increase consistency and collaboration between FAA, State of Washington, and local aviation policies, rules, and regulations by class of airport recognizing that different types of airports have different regulatory and policy needs.
- Assure adequate capacity to accommodate future aviation system needs, especially through airport preservation and enhancement.
- Anticipate and strategically respond to emerging aviation system trends and issues.
- Strive to maintain serviceability and fairness in current public investments in the aviation system, taking into account different classes of airports.

The System Plan Study Group also identified the need for additional data, necessary to better define the system and its strategic priorities, including:

- Gaps in availability of aviation facilities for emergency medical, fire fighting, disaster relief, national defense and air taxi needs.
- System wide performance, role and interrelationship of airports.
- Future capacity needs
- Projected cargo needs
- Gaps in airport capacity that may inhibit economic development of rural areas, or that prevent full participation of rural communities in political processes at the state level

- Reliever airports that are necessary to meet general aviation needs near large commercial airports, which if unmet would increase congestion at the commercial airports.

- Capacity of reliever airports to continue to meet the demands of GA aircraft.

It is in response to these recommendations and the subsequent legislative direction set forth in ESSB 5121 that the Washington State LATS is being conducted.

Public Outreach / Public Involvement Objectives

Increase public awareness about the study

This project is a three-phase approach to determine "what we have, what we need, and how we get there" in terms of air transportation capacity in Washington State. It is important to be proactive about communicating this message. Outreach objectives are to:

- Increase public awareness about the project

- Prevent surprises: actively engage the public

- Minimize misperceptions about what the study is and what it is not

- Promote use of the Web as primary source of information

- Document stakeholder/public involvement

- Minimize negative media coverage

- Engage public in decision making and gather concerns, questions and ideas

Key Audiences

Audience	Priority Concerns	Outreach Recommendations
Legislature	• Delivery of technically sound system plan to be used for the basis of making long-term airport investment decisions • Local constituent concerns • Intermodal integration and efficiency	• Initial interviews to gain perspective of expectations • Ongoing coordination with legislative staff • Regular briefings • Clear messaging about study purpose and outcomes
Airports	• Data collection /airport inventory and overall fact finding data reported accurately • Opportunity to contribute to a comprehensive plan for future airport development •	• Start early and disseminate study goals, objectives and tasks early
Urban Communities	• Impacts of capacity recommendations • Impacts on airport planning and investment • Land use conflicts • Noise	• Clear messaging about study purpose and outcomes as well as what the study does not include • Multiple opportunities for involvement • Easily accessible information, presented in simple formats – leverage website and existing aviation forums / associations / meetings
Rural Communities	• Relationship to local land uses • Economic development • Funding • Emergency access • Community impacts	
General aviation pilots	• Airport maintenance • Funding of airport maintenance • Funding equity • Availability of airports • Stability of Search and Rescue functions	• Outreach to identify deficiencies in aviation airports • Clarity about how designation hierarchy works • Easily accessible information, presented in simple formats

Audience	Priority Concerns	Outreach Recommendations
Airlines	• Impact on long term facility and services planning • Taxes • Costs	• Involvement in any recommendations about aviation funding • Clear information about decision process
RTPO's/MPO's	• Consistency with regional/metropolitan transportation • Economic development • Access to emergency services • Impact on transportation facilities	• Clear messaging about study purpose and outcomes, including presenting information relevant to rural areas • Multiple opportunities for involvement • Easily accessible information, presented in simple formats • Clear information about decision process
Business communities	• Economic development • Impacts on costs of doing business • Impacts on distribution systems	• Clear messaging about study purpose and outcomes • Multiple opportunities for involvement • Easily accessible information, presented in simple formats
Association of Washington Cities/Counties	• Economic development • Similar to other concerns listed above • Impact on land use	• Clear messaging about study purpose and outcomes, including presenting information relevant to rural areas • Multiple opportunities for involvement • Easily accessible information, presented in simple formats • Clear information about decision process

Audience	Priority Concerns	Outreach Recommendations
Washington Chapter of the American Planning Association (WA-APA)	• Land use planning • Economic and social issues • Transportation system integration • Land use • Capital facility	• Clear messaging about study purpose and outcomes, including presenting information relevant to rural areas • Multiple opportunities for involvement • Easily accessible information, presented in simple formats • Clear information about decision process
Rail / Freight	• High-speed passenger rail connectivity with major urban areas • Alternate modes of transportation	• Multiple opportunities for involvement

Strategies

- Keep local media and key audiences informed.
- Lead with the Web: Create a useful, interactive Web page and update news and milestones regularly.
- Promote project benefits using listserv, press releases, Web, ads, etc.
- Implement targeted communication efforts through regional public meetings

Key Messages

The Long-term Air Transportation Study (LATS) will help decision-makers assess Washington's diverse system of airports—what we have, what we need, and how we will meet the need. LATS will create a long term strategy for meeting Washington's critical aviation needs by integrating objective, technical information with the input of those who rely on Washington's aviation system.

- Washington's aviation system is a critical link between all our communities, no matter how remote, and a major driver for Washington's economic health.

- Because of longstanding financial neglect, the system is currently in crisis and demands our attention and commitment.

- In order to effectively meet Washington's long term aviation needs, decision makers need systematic and objective information to identify future airport and capacity requirements, along with different ways to meet those needs.

- In conducting this needs assessment; we must consider the aviation needs of very diverse communities, who rely on aviation in very different ways.

Team Members and Affiliations

WSDOT AVIATION TEAM
John Sibold, Director
John Shambaugh, Project Manager
Nisha Hanchinamani, Communications

CONSULTANT TEAM
Rita Brogan, CEO, PRR
Teresa Gonzales, Senior Associate, PRR
Sonjia Murray, Project Manager, SH&E
Deborah Meehan, President, SH&E

Public Communications Tools and Tasks

Media Releases

WSDOT will issue media releases at key milestones in the progress of the LATS to announce dates of public outreach meetings and key study findings. All news releases will reinforce the key messages outlined in this communications plan.

Website

WSDOT Aviation's website will feature a special section dedicated to the airport system plan that will include media releases, links to relevant publications, links to summaries of the Technical Advisory Committee meetings, information on LATS' progress, and opportunities for public involvement. Throughout the study process WSDOT Aviation will post finalized working papers, presentation materials, and other related reports. There will also be an interactive area for periodic public comment and to sign up for notification of meetings, reports, presentations, etc.

E-Newsletter

E-Newsletters will be issued to WSDOT Aviation's extensive database of aviation stakeholders to announce opportunities for public input, and to inform the public about study findings at periodic points in LATS. It is anticipated that, at a minimum, newsletters will be issued:

- To announce the study, introduce the Technical Advisory Committee and announce the upcoming Round #1 outreach meetings.
- To inform the community about the findings of the system inventory and to introduce the methodologies that will be employed during Phase II of LATS and announce the upcoming Round #2 outreach meetings.
- To discuss findings and next steps and to offer to brief stakeholder groups on LATS.

Aviation Technical Advisory Committee (ATAC)

A technical advisory committee has been assembled to assist WSDOT Aviation in the technical review of LATS. The purpose of the committee will be to work together towards a common set of objectives to ensure a consistent and comprehensive approach to the development of the air transportation study in accordance with state law.

The technical committee is made up of a diverse group of aviation and transportation-related professionals from varying geographical areas and backgrounds. ATAC is staffed with professionals possessing technical knowledge and expertise on multi-modal transportation issues, aviation system planning, airport operations, current and future industry trends, and market and capacity needs. They will provide important guidance to the study process.

It is anticipated the ATAC will hold four meetings during 2006 and 2007:

- In Month One, review the study scope and work program
- In Month Five, review inventory findings and proposed methodologies for the commercial airport market analysis.
- In Month 12, review and comment on the commercial airport market analysis and airport activity forecasts.
- In Month 16 review and comment on the Phase II study findings.

Aviation Stakeholder Outreach

Outreach Meetings

During Phase I WSDOT Aviation will sponsor a round of four meetings to inform members of the aviation community, and interested members of the public about LATS. **Round One** meetings will set the stage by defining the scope and objectives for LATS. Phase II will include two additional regional meetings, one on the east side of the state and the other on the west side.

Coordination with Regional Transportation/Metropolitan Planning Organizations (RTPO/MPOs)

The participation of RTPO's and MPO's will be actively sought during the study process. In addition to including these organizations in the on-going program outreach, the project team will seek to brief RTPO's at their quarterly coordination meetings in February, May, August, and November.

As part of the special rail study the consultant team will be coordinating with the RTPO/MPO planning groups to review past high-speed rail and aviation-related efforts. These planning groups will contribute information throughout the high-speed rail effort and the outcome will provide guidance to how high-speed rail can potentially support Washington State's long-term transportation infrastructure needs.

On-line Surveys

WSDOT Aviation will conduct two separate electronic survey efforts eliciting feedback from those listed on its stakeholder database. The first online survey, to be issued shortly after the project starts, will identify information needs and elicit stakeholder feedback on aviation issues (such as aviation safety, capacity, and system maintenance or land use compatibility). The second online survey will elicit feedback on issues related to airport inventory and capacity.

Aviation Advisory Committee

WSDOT Aviation's standing Aviation Advisory Committee will provide valuable insight in the progress and development of LATS. Presentations on LATS will be provided to this group at its quarterly meetings.

Organizational Briefings

WSDOT Aviation will be available to present information on study issues or findings when requested by local government or aviation stakeholder groups.

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APPENDIX C: PUBLIC OUTREACH SUMMARY

During Phase II of the LATS project a number of activities were undertaken to get public and stakeholder input about their aviation needs, and to elicit reaction to the draft Phase II findings.

Electronic communications has played an important role during the Phase II outreach. The LATS website provided ongoing updates about the project and posted summaries of the meetings of the Technical Advisory Committee. In addition, the 8431 person electronic list-serve database maintained by WSDOT Aviation served as a timely tool for ongoing communications. List-serve members received project updates and a LATS newsletter that summarized key Phase II findings. In addition, list-serve members were invited to participate in an on-line questionnaire.

WSDOT Aviation also held two regional workshops in Spring 2007, one in Eastern Washington, and one in Western Washington.

Workshop Summaries

Regional workshops were held on April 30, 2007 at the Boeing Museum of Flight (Western Washington) and on May 1, 2007 at the Wenatchee Convention Center (Eastern Washington). Approximately 40 people attended the Western Washington and 30 attended the Eastern Washington workshops.

The workshops' objectives were to:

- Provide overview of LATS findings
- Obtain community feedback on findings and local issues
- Brief public on the Aviation Planning Council, and recruit potential membersWorkshop participants were given a detailed presentation of the Phase II Draft Findings, and asked to address the following questions:

- In light of Phase I and Phase II information presented, what are the key issues/implications for local communities?
- What are the implications for long-term State Aviation Planning?
- Do you have suggestions for us as we continue to complete the Phase II technical study?

- Suggestions and/or feedback for Phase III outreach?

Perhaps the largest body of questions from participants on both sides of the mountains pertained to the forecasting model. Several participants had questions about whether the forecast model takes into account variables that might affect capacity, such as changes in technology, labor market, supply of planes, or changes in economic conditions. There was also a feeling expressed by a number of participants that community and environmental impacts need to be better addressed in considering aviation capacity issues. Others wondered whether the aviation industry may be at a tipping point (due to new technology, escalating gas prices, etc) that can't be addressed in current models.

At both regional workshops concerns were raised about land use conflicts between airports and nearby development. Some suggested that there should be further discussion about what the appropriate role of the State might be in minimizing these conflicts. Another growth management question was which should come first, infrastructure investment or growth?

Participants indicated great interest in the LATS Phase II analysis of high speed rail as an alternative to air travel, wondering whether rail service could offload capacity demand at SeaTac. Some participants thought that it will be important to use rail or intercity bus to address capacity needs, while others thought that, while high speed rail investments may have other benefits, it cannot significantly alleviate future capacity shortfalls.

Several Western Washington participants expressed a concern that Washington's aviation system may be at risk because it relies too much on SeaTac and on a small number of single, large carriers. As those carriers change their fleets or their flights, the capacity of smaller airports may be affected.

Some suggested that there be further discussion about how flights might be allocated among several airports, or building a new airport in another part of the state.

Some Western Washington participants also suggested that one way to handle capacity would be to distribute maintenance, freight or other functions to airports that have more capacity.

At the Wenatchee meeting, there were a larger number of questions about general aviation airports and about the aviation needs of smaller, rural communities. It was noted that large parts of the state are underserved in general aviation airports, because there is a lack of 24/7 instrument access.

The viability of these airports is impacted by small changes in service, and communities need to make decisions about how to best invest in their airports.

It was suggested that a variety of factors, such as emerging ultra-light technology or small jets, might impact demand and capacity at smaller airports. In addition, it was suggested that the closure of some airports could shift aviation demand to other airports.

It was also suggested that making some simple adjustments in instrument approach from the standardized FAA instrument approach, could help make commercial service more viable at smaller airports.

Participants were concerned about how community needs will be factored in, when considering funding allocations, noting that small communities often depend heavily on air service to address emergencies, health and fire containment needs. They were also curious about any implications for those communities that do not happen to fall within one of the "special emphasis areas", called out in the LATS legislation.

Survey Findings

During April 1 to May 7, WSDOT Aviation invited members of the public to participate in an online survey designed to elicit perceptions about aviation needs and priorities. The purpose of the survey was to provide broad opportunity for participation in the LATS process. The data provided in this analysis should not be interpreted as a representative sample of the larger public opinion, but rather should be seen a tool for public participation.

WSDOT Aviation sent notice of the survey to its list-serve of 8431 aviation stakeholders, elected officials and interested members of the public. In addition, the survey was publicized through press releases and the LATS Phase II newsletter.

In all, some 553 people responded to the online survey (see "About the Respondents" on page 6 for a breakdown of types of respondents). The survey was designed to assess opinions regarding:

- level of concern regarding aviation capacity by region
- priorities for future capacity needs by aviation type and by region
- methods for addressing capacity issues

- future investment priorities

Survey Highlights

- Over 85% of respondents thought that the current aviation capacity of the Central Puget Sound region is of moderate or high concern (with well over half [58.9%] rating it a high concern).
- Central Puget Sound is the area of highest priority for all aviation service types.
- General Aviation service was of overall highest priority across all four regions
- 90% of respondents felt that accepting delays and reduced service was an unacceptable alternative to increasing capacity.
- 75% of those surveyed rated maintaining the condition of existing facilities as a high investment priority.

Key Findings

Aviation Capacity

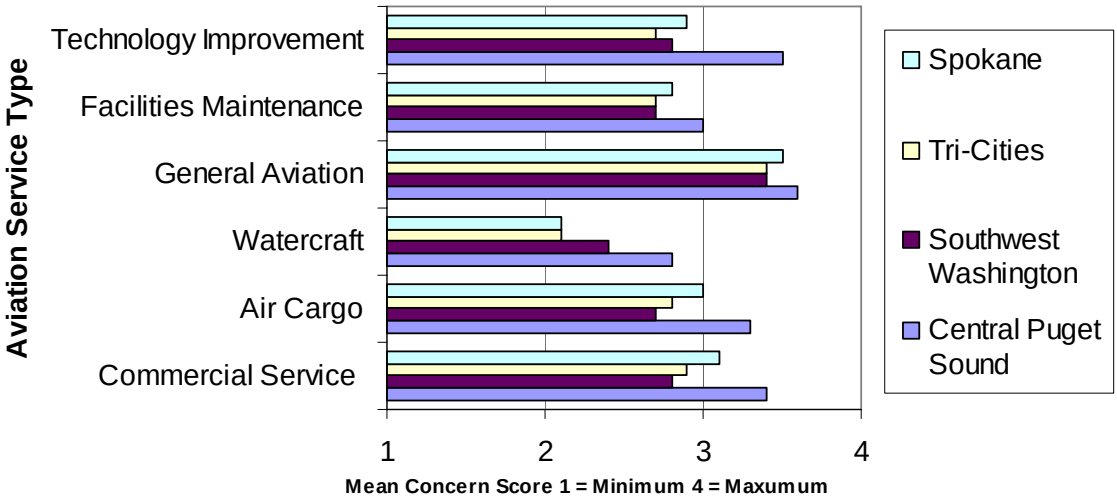
Although aviation capacity was a concern in all four major high growth regions, the highest level of concern was for the Central Puget Sound region, with 85.3% of respondents believing it to be of moderate or high concern. The next highest level of concern was for Southwest Washington in which 69.9% of respondents reported moderate or high concern. Areas of lowest concern were Spokane with 50% reporting moderate or high levels of concern and the Tri-Cities area with 42.7% reporting moderate or high concern.

When asked how important it would be to include airports outside the state, such as Portland and Vancouver B.C. in the assessment of Washington State's aviation capacity, 65.8% of respondents thought that it was either important or very important.

Priorities for Meeting Future Capacity Needs

Because one of the key issues that the LATS study is trying to address is to identify Washington's future needs for additional aviation service, participants were asked to indicate what priorities should be given to meeting future capacity needs for each of the four high growth regions in regard to six aviation service types. Overall, results (see Chart 1) indicate that general aviation was regarded as the highest priority followed by commercial service, technology improvement and air cargo. By region, Central Puget Sound was considered the highest priority followed by Spokane, Southwest Washington and the Tri-Cities.

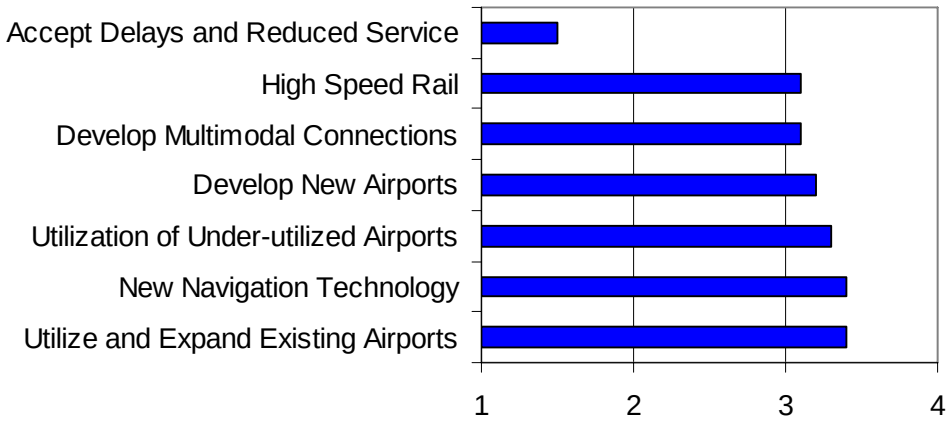
Chart 1: Aviation Service Type Priority by Region



Ways to Address Aviation Capacity

In order to better understand opinion on the various ways in which aviation capacity issues in Washington State can be addressed, respondents were asked to indicate their level of agreement or disagreement with a variety of approaches. Better utilization and expansion of existing airports and investment in new navigation technology to increase efficiency of airports were the most heavily supported approaches followed by better utilizing under-utilized airports, development of new airports, development of multi-modal connections between airports, and building high speed rail between Puget Sound and other areas of Washington. Instead of increasing capacity, accepting delays and reduced service was the least supported approach. In all, 90% of respondents disagreed or strongly disagreed with this approach.

Chart 2: Level of Agreement With Approach

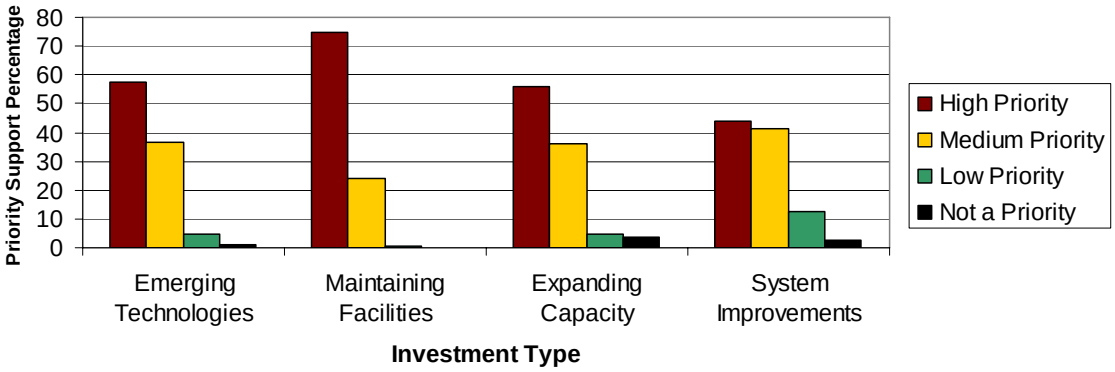


Scale: 1- 4: Strongly Disagree to Strongly Agree

Investment Priorities

Finally, when asked to prioritize investment options, 75% of those surveyed rated maintaining the condition of existing facilities as a high priority. Relativity high priority was also given to: emerging technologies to improve safety and capacity (56.9%), expanding aviation capacity to meet future demands (55.3%), and targeting system improvements to provide a higher level of customer service at airports in high growth areas (43.2%). (See Chart 3.)

Chart 3: Investment Priorities



About the Respondents

Most respondents were general aviation pilots (58.4%). The next largest groups were airplane passengers and commercial aviators each representing 9.4% of the sample. Very few public agency representatives and airport operators participated in the survey.

Table 1: Respondent Types

	Total Number	Percent of Total
Airplane Passenger	52	9.4
Airport Neighbor	46	8.3
Public Agency	6	1.1
General Aviation Pilot	323	58.4
Airport Tenant	15	2.7
Airport Operator	10	1.8
Commercial Aviator	52	9.4
Other	49	8.9
Total	553	100

Table 2: Home Zip Codes

Zip Code	#	Zip Code	#	Zip Code	#	Zip Code	#	Zip Code	#
39366	1	98103	6	98282	5	98570	1	99016	2
91678	1	98105	2	98284	1	98577	1	99019	1
97062	1	98108	2	98287	1	98580	1	99025	1
98001	1	98110	1	98288	1	98584	3	99026	1
98002	1	98112	1	98290	2	98589	2	99111	1
98003	5	98115	4	98292	2	98592	1	99159	1
98004	5	98116	1	98296	2	98593	1	99161	1
98005	3	98117	2	98304	1	98604	4	99163	2
98006	5	98118	2	98311	3	98606	1	99185	1
98008	3	98119	3	98312	1	98607	4	99201	1
98010	1	98125	1	98321	3	98611	1	99203	1
98011	3	98133	1	98329	1	98625	1	99205	2
98012	4	98136	1	98331	1	98632	2	99206	3
98019	1	98146	2	98332	1	98640	2	99208	1
98020	4	98155	4	98335	6	98642	1	99212	2
98021	1	98166	9	98338	1	98650	1	99217	1
98022	3	98168	1	98340	1	98660	1	99223	2
98023	3	98175	1	98344	1	98661	3	99301	3
98024	3	98177	1	98362	1	98662	4	99323	1
98026	11	98178	2	98363	1	98664	1	99324	1
98027	2	98199	1	98365	1	98665	1	99336	2
98028	3	98201	4	98366	3	98671	1	99337	1
98030	2	98203	2	98367	2	98672	1	99338	1
98031	2	98204	2	98368	1	98674	1	99343	1
98033	4	98206	1	98370	2	98682	1	99349	1
98034	8	98208	2	98371	1	98684	1	99350	1
98036	2	98221	6	98372	1	98685	1	99352	2
98037	3	98223	7	98373	1	98686	1	99354	2
98038	2	98226	3	98374	3	98801	3	99362	8
98039	2	98229	2	98375	4	98802	4	99403	2
98040	2	98232	4	98380	1	98807	2	99004	1
98042	8	98233	1	98382	6	98815	2	98532	3
98045	1	98239	1	98383	2	98816	2	98280	1
98050	1	98241	1	98387	1	98823	1	98941	1
98052	3	98245	5	98391	5	98826	1	98942	1
98053	2	98247	1	98407	1	98831	2	98943	1
98055	3	98248	2	98408	1	98837	2	98516	5
98056	6	98250	5	98446	1	98840	1	98520	2
98058	4	98251	1	98467	2	98841	2	98531	2
98059	5	98258	8	98498	1	98847	1	98274	1
98068	1	98261	1	98501	8	98862	2	98275	43
98070	1	98262	1	98502	3	98901	1	98277	4
98072	7	98264	1	98506	2	98907	1	98087	4
98074	3	98270	1	98507	1	98908	1	98092	3
98075	3	98271	2	98512	3	98909	1	98102	3
98077	3	98272	1	98513	2	98926	4		

APPENDIX D: LIST OF PHASE II TECHNICAL MEMORANDUMS

Technical Memorandums not included in this volume.

Air Cargo Forecasts. SH&E, Inc. March 19, 2007.

Aircraft Storage Capacity Analysis. W&H Pacific. June 12, 2007.

Airfield, Passenger Terminal, and Air Cargo Capacity Analyses. URS Corporation. May 25, 2007.

Airport Classification and Evaluation Criteria. W&H Pacific. June 26, 2007.

Airspace Analysis. URS Corporation. May 16, 2007.

Commercial Service Passenger Traffic and Operations Forecasts. SH&E, Inc. May 17, 2007.

General Aviation Activity Forecasts. SH&E, Inc. March 20, 2007.

High-Speed Passenger Transportation Facilities and Services. Cambridge Systematics, Inc. June 29, 2007.

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APPENDIX E: GLOSSARY

AC - Advisory Circular
ADF - Automatic Direction Finder
ADIZ - Air Defense Identification Zones
ADPM - Average Day of the Peak Month
AFB - Air Force Base
AGL - Above Ground Level
AIP - Airport Improvement Program
ALP - Airport Layout Plan
ALS - Approach Lighting System
ALSF-1 - Approach Light System with Sequence Flasher Lights
AOC - Airfield Operation Capacity
ARC - Airport Reference Code
ARFF - Airport Rescue and Fire Fighting
ARP - Airport Reference Point
ARTCC - Air Route Traffic Control Center
ASDA - Accelerate-Stop Distance Available
ASOS - Automated Surface Observation System
ASR - Airport Surveillance Radar
ASV - Annual Service Volume
ATC - Air Traffic Control
ATCT - Air Traffic Control Tower
AVGAS - Aviation Gasoline
AWOS - Automated Weather Observation System
BRL - Building Restriction Line
CIP - Capital Improvement Program
dBA - A-weighted Decibels
DH - Decision Height
DME - Distance Measuring Equipment
DNL - Day-Night Sound Levels
DOT - Department of Transportation
EA - Environmental Assessment
EAS - Essential Air Service
EIS - Environmental Impact Statement
EP - Enplaned Passenger
EPA - The United States Environmental Protection Agency
EPF - Essential Public Facility
ESSB - Engrossed Senate Substitute Bill
FAA - Federal Aviation Administration

FAR - Federal Aviation Regulation
FBO - Fixed Based Operator
FIS - Federal Inspection Service
FRA - Federal Railroad Administration
FSS - Flight Service Station
GA - General Aviation
GMA - Growth Management Act
GPS - Global Positioning System
HAT - Height Above Threshold
HIRL - High Intensity Runway Lights
ICAO - International Civil Aviation Organization
IFR - Instrument Flight Rules
ILS - Instrument Landing System
INM - Integrated Noise Model
LATS - Long Term Air Transportation Study
LCC - Low-Cost Carrier
LDA - Landing Distance Available
LIRL - Low Intensity Runway Lights
MALS - Medium Intensity Approach Light System
MALSF - Medium Intensity Approach Light System with sequence flashing Lights
MALSR - Medium-Intensity Approach Lighting System with Runway Alignment Indicators
MGW - Maximum Gross Weight
MIRL - Medium Intensity Runway Lights
MLS - Microwave Landing System
MOA - Military Operations Area
MPO - Metropolitan Planning Organization
MSL - Mean Sea Level
NAS - Naval Air Station
NAVAID - Air Navigation Facility/Aid
NBAA - National Business Aircraft Association
NDB - Non-Directional Beacon
NPIAS - National Plan of Integrated Airport Systems
OAG - Official Airline Guide
ODO - Overall Development Objectives
OFA - Object Free Area
OFZ - Obstacle Free Zone
PAPI - Precision Approach Path Indicator
PCI - Pavement Condition Index
PFC - Passenger Facility Charge
PIR - Precision Instrument Runway

RAIL - Runway Alignment Indicator Lights
RCW - Revised Code of Washington
REIL - Runway End Identifier Lights
RPM - Revenue Passenger Mile
RTPO - Regional Transportation Planning Organizations
RSA - Runway Safety Area
RPZ - Runway Protection Zone
RVR - Runway Visual Range
SPB - Sea Plane Base
TAF - FAA Terminal Area Forecasts
TODA - Take-Off Distance Available
TORA - Take-Off Run Available
VASI - Visual Approach Slope Indicator
VFR - Visual Flight Rules
VHF - Very High Frequency
WAAS - Wide Area Augmentation System
WTP - Washington Transportation Plan
WSCASP - Washington State Continuous Airport System Plan
WSDOT - Washington State Department of Transportation
WSTC - Washington State Transportation Commission

Airport Abbreviations

Airport Name	Airport Id	Airport Name	Airport Id
NPIAS – Primary Airports			
Bellingham International	BLI	Spokane International	GEG
Boeing Field/King County International	BFI	Tri-Cities	PSC
Friday Harborl	FHR	Walla Walla Regional	ALW
Pangborn Memorial	EAT	Wm. R. Fairchild International	CLM
Pullman/Moscow Regional	PUW	Yakima Air Terminal	YKM
Sea-Tac International	SEA		
NPIAS – Commercial Airports			
Anacortes	74S	Orcas Island	ORS
Grant County International	MWH		
NPIAS - Reliever Airports			
Auburn Municipal	S50	Renton Municipal	RNT
Felts Field	SSF	Snohomish County/Paine Field	PAE
Harvey Field	S43		
NPIAS – General Aviation Airports			
Anderson Field	S97	Ed Carlson Memorial	TDO
Arlington Municipal	AWO	Ephrata Municipal	EPH
Blaine Municipal	4W6	Friday Harbor SPB	W33
Bowerman Field	HQM	Grand Coulee Dam	3W7

Airport Name	Airport Id	Airport Name	Airport Id
Bowers Field	ELN	Grove Field	1W1
Bremerton National	PWT	Ione Municipal	S23
Cashmere Dryden	8S2	Jefferson County International	0S9
Chehalis Centralia	CLS	Kelso-Longview	KLS
Chelan Municipal	S10	Kenmore Air Harbor, Inc.	S60
Cle Elum Municipal	S93	Lopez Island	S31
Columbia Gorge Regional/The Dalles	DLS	Methow Valley	S52
Colville Municipal	63S	Ocean Shores Municipal	W04
Davenport Municipal	68S	Odessa Municipal	43D
Deer Park Municipal	DEW	Olympia	OLM
Dorothy Scott Municipal	0S7	Omak	OMK
Othello Municipal	S70	Rosalia Municipal	72S
Packwood	55S	Sanderson Field	SHN
Pearson Field	VUO	Skagit Regional	BVS
Pierce County/Thun Field	1S0	Sunnyside Municipal	1S5
Port of Whitman Business Air Center	S94	Tacoma Narrows	TIW
Prosser	S40	Vashon Municipal	2S1
Pru Field	33S	Whidbey Airpark	W10
Quillayute	UIL	Wilbur Municipal	2S8
Richland	RLD		
Non-NPIAS Airports			
American Lake SPB	W37	New Warden	2S4
Avey Field State	69S	Okanogan Legion	S35
Bandera State	4W0	Point Roberts Airpark	1RL
Camano Island Airfield	13W	Port of Ilwaco	7W1
Cedars North Airpark	W58	Poulsbo SPB	83Q
Concrete Municipal	3W5	Quincy Municipal	80T
Copalis State	S16	R & K Skyranch	8W9
Crest Airpark	S36	Ranger Creek State	21W
Cross Winds	C72	Roche Harbor SPB	W39
Darrington Municipal	1S2	Rogersburg State	D69
Desert Aire	M94	Rosario SPB	W49
DeVere Field	2W1	Sand Canyon	1S9
Easton State	ESW	Seattle Seaplanes SPB	0W0
Elma Municipal	4W8	Sekiu	11S
Evergreen Field	59S	Sequim Valley	W28
Ferry County	R49	Shady Acres	3B8
Firstair Field	W16	Sky Harbor	S86
Floathaven SPB	0W7	Skykomish State	S88
Fly For Fun	W56	Skyline SPB	21H
Forks Municipal	S18	Spanaway	S44
Goheen Field	W52	Stehekin State	6S9
Goldendale Municipal	S20	Strom Field	39P
Hillcrest	9P7	Sullivan Lake State	09S
Hoskins Field	44T	Swanson Field	2W3
J-Z	1W0	Tieton State	4S6
Kenmore Air Harbor SPB	W55	Tonasket Municipal	W01
Lake Wenatchee State	27W	Twisp Municipal	2S0
Lester State	15S	Vista Field	S98
Lind Municipal	0S0	Waterville	2S5
Little Goose Lock & Dam State	16W	Wes Lupien	76S
Lost River Airport	W12	Western Airpark	92W
Lower Granite State	00W	Westport	14S

Airport Name	Airport Id	Airport Name	Airport Id
Lower Monumental State	W09	Will Rogers Wiley Post SPB	W36
Lynden Municipal	38W	Willapa Harbor	2S9
Mansfield	8W3	Willard Field	73S
Martin Field	S95	Wilson Creek	5W1
Mead Airport	70S	Woodland State	W27
Moses Lake Municipal	W20		

Definitions

Active Aircraft - Aircraft registered with the FAA and reported to have flown during the preceding calendar year.

Activity - Used in aviation to refer to any kind of movement, e.g., cargo flights, passenger flights, or passenger enplanements. Without clarification it has no particular meaning.

Advisory Circular (AC) - A series of Federal Aviation Administration (FAA) publications providing guidance and standards for the design, operation and performance of aircraft and airport facilities.

Airport Improvement Program (AIP) - A congressionally mandated program through which the FAA provides funding assistance for the development and enhancement of airport facilities.

Air Cargo - Commercial freight, including express packages and mail, transported by passenger or all-cargo airlines.

Air Carrier - An airline providing scheduled air service for the commercial transport of passengers or cargo.

Air Freight - items principally transported by all-freight carriers and as belly freight on scheduled passenger services, including heavy-weight items as well as routine palletized shipments.

Air Mail -Air mail is carried as belly freight on some commercial carriers and is carried as freight by FedEx under contract with the US Postal Service.

Air Navigation Facility (NAVAID) - Although generally referring to electronic radio wave transmitters (VOR, NDB, ILS), it also includes any structure or mechanism designed to guide or control aircraft involved in flight operations.

Air Route Traffic Control Center (ARTCC) - FAA-manned facility established to provide air traffic control services to aircraft operating in controlled airspace, en route between terminal areas. Although designed to handle aircraft operating under IFR conditions, some advisory services are provided to participating VFR aircraft when controller work loads permit.

Air Taxi - An air carrier certificated in accordance with FAR Part 135 and authorized to provide, on demand, public transportation of persons and property by aircraft. Air taxi operators generally operate small aircraft "for hire" for specific trips.

Air Traffic Hub - The FAA groups U.S. commercial airports into four hub classes – Large Hubs, Medium Hubs, Small Hubs, and Non-Hubs – based on their level of passenger enplanements. Hub designations are determined by the following criteria:

1. Large Hub: 1.00 percent
2. Medium Hub: 0.25 percent to 0.99 percent (cont.)
3. Small Hub: 0.05 percent to 0.249 percent
4. Nonhub: Less than 0.05 percent.

Aircraft Approach Category - A grouping of aircraft based on a speed of 1.3 times the stall speed in the landing configuration at maximum gross landing weight. The aircraft approach categories are:

Category A - Speed less than 91 knots;
Category B - Speed 91 knots or more but less than 121 knots;
Category C - Speed 121 knots or more but less than 141 knots;
Category D - Speed 141 knots or more but less than 166 knots; and,
Category E - Speed 166 knots or more.

Aircraft Gate Position - An aircraft operational stand close to the terminal building and related to a specific passenger loading gate.

Aircraft Mix - The classification of aircraft into groups which are similar in size, noise, and operational characteristics.

Aircraft Operations - The airborne movement of aircraft. There are two types of operations: local and itinerant defined as follows:

1. Local Operations are performed by aircraft which:
   (a) operate in the local traffic pattern or within sight of the airport;
   (b) are known to be departing for or arriving from a local practice area.

2. Itinerant operations are all others.

Airfield - A defined area on land or water including any buildings, installations, and equipment intended to be used either wholly or in part for the arrival, departure or movement of aircraft.

Airplane Design Group - A grouping of airplanes based on wingspan. The groups are:

Group I:	Up to, but not including 49 feet
Group II:	49 feet up to, but not including 79 feet
Group III:	79 feet up to, but not including 118 feet
Group IV:	118 feet up to, but not including 171 feet
Group V:	171 feet up to, but not including 214 feet
Group VI:	214 feet up to, but not including 262 feet.

Airport Layout Plan (ALP) - An FAA required map of an airport depicting existing and proposed facilities and uses, with clearance and dimensional information showing compliance with applicable standards.

Airport Master Plan – A plan for the short-, medium-, and long-term development of an airport.

Airport Reference Code (ARC) - A coding system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport. It is a combination of the aircraft approach category and the airplane design group.

Airport Reference Point (ARP) - The location at which the designated latitude and longitude for an airport are measured.

Airport Service Area - The geographic area that generates demand for aviation services at an airport.

Airport Surveillance Radar (ASR) - Radar providing position of aircraft by azimuth and range data without elevation data. It is designed for a range of approximately 50 miles.

Airport Traffic Area - Unless otherwise specifically designated that airspace with a horizontal radius of five statute miles from the geographic center of any airport at which a control tower is operating, extending from the surface up to but not including 3,000 feet above the surface.

Airside - That portion of the airport facility where aircraft movements take place, airline operations areas, and areas that directly serve the aircraft (taxiway, runway, maintenance, and fueling areas). Also called the airport operations area.

Airspace - The area above the ground in which aircraft travel. It is divided into corridors, routes, and restricted zones for the control and safety of aircraft.

All-Cargo Carrier - An air carrier certificated in accordance with FAR Part 121 to provide scheduled air freight, express, and mail transportation over specific routes, as well as the conduct of nonscheduled operations that may include passengers.

Alternate Airport - An alternate destination airport if flight to the original destination cannot be completed.

Annual Service Volume (ASV) - A reasonable estimate of an airport's annual capacity. It accounts for differences in runway use, aircraft mix, weather conditions, etc., that would be encountered over a year's time.

Approach End of Runway - The near end of the runway as viewed from the cockpit of a landing aircraft.

Approach Surface - An imaginary surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of the runway based upon the planned approach. The inner edge of the approach surface is the same width as the primary surface and expands uniformly depending upon the planned approach.

Approved Instrument Approach - Instrument approach meeting the design requirements, equipment specifications, and accuracies, as determined by periodic FAA flight checks, and which are approved for general use and publication by the FAA.

Apron - A defined area where aircraft are maneuvered and parked and where activities associated with the handling of flights can be carried out.

AVGAS - Aviation gasoline. Fuel used in reciprocating (piston) aircraft engines. Avgas is manufactured in the following grades; 80/87, 100LL, 100/130, and 115/145.

Automated Surface Observing System (ASOS). The ASOS is the primary surface weather observation system of the U.S. The ASOS has more sophisticated capabilities than the AWOS. The observation system of the U.S. The ASOS has more sophisticated capabilities than the AWOS. The ASOS provides continuous minute-by-minute observations and performs the basic observing functions necessary to generate a Surface Aviation Observation (SAO) and other aviation weather information.

Automated Weather Observing System (AWOS) - Automated Weather Observing System (AWOS). This equipment automatically gathers weather data from various locations on an airport and transmits the

information directly to pilots by means of computer-generated voice messages over a discrete frequency.

Avigation Easement - A form of limited property right purchase that establishes legal land-use control prohibiting incompatible development of areas required for airports or aviation related purposes.

Based Aircraft - Aircraft stationed at an airport on an annual basis.

Belly Cargo - Freight which is carried in the hold below the main passenger deck.

Capacity - Level of activity that can be accommodated.

Capital Improvement Program (CIP) - A scheduled of planned projects and costs, often prepared and adopted by public agencies.

CAT I (one) - Category I Instrument Landing System which provides for approach to a height above touchdown of not less than 200 feet and with Runway Visual Range of not less than 1,800 feet.

CAT II (two) - Category II ILS approach procedure which provides for approach to a height above touchdown of not less than 100 feet and a RVR of not less than 1,200 feet.

CAT III (three) - Category III ILS approach which provides for an approach with no decision height and a RVR of not less than 700 feet.

Ceiling - The height above the ground of the base of the lowest layer of clouds or obscuring phenomena aloft that is reported as broken or overcast and not classified as scattered, thin, or partial. Ceiling figures in aviation weather reports may be determined as measured, estimated, or indefinite.

Charter - A nonscheduled flight offered by either a supplemental or certificated air carrier.

Circling Approach - An instrument approach procedure in which an aircraft executes the published instrument approach to one runway, the

maneuvers visually to land on a different runway. Circling approaches are also used at airports that have published instrument approaches with a final approach course that is not aligned within 30 degrees of any runway.

Clearway - A clearway is an area available for the continuation of the take-off operation which is above a clearly defined area connected to and extending beyond the end of the runway. The area over which the clearway lies need not be suitable for stopping aircraft in the event of an aborted take-off. Clearways are applicable only in the take-off operations of turbine-engined aircraft.

Commercial Air Carriers - An air carrier certificated in accordance with FAR Parts 121 or 127 to conduct scheduled services on specified routes. These air carriers may also provide nonscheduled or charter services as a secondary operation. Four carrier groupings have been designated for statistical and financial data aggregation and analysis:

1.	Majors:	Air carriers with annual operating revenues greater than $1 billion.
2.	Nationals:	Air carriers with annual operating revenues of between $100 million and $1 billion.
3.	Large Regionals:	Those carriers whose revenues are between $10 million and $99,999,999.
4.	Medium Regionals:	Air carriers with annual revenues less than $10 million.

Commodity -A commodity is something that is relatively easily traded, that can be physically delivered, and that can be stored for a reasonable period of time.

Commuter Air Carrier - An air carrier certificated in accordance with FAR Part 135 which operates aircraft with a maximum of 60 seats, and provides at least five scheduled round trips per week between two or more points, or carries mail.

Commuter/Air Taxi Operations - Those arrivals and departures performed by air carriers certificated in accordance with FAR Part 135.

Conical Surface - An imaginary surface extending outward and upward from the periphery of the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.

Control Areas - These consist of the airspace designated as Federal Airways, additional Control Areas, and Control Area Extensions, but do not include the Continental Control Areas.

Control Tower - A central operations facility in the terminal air traffic control system consisting of a tower cab structure using air/ground communications and/or radar, visual signaling, and other devices to provide safe and expeditious movement of air traffic.

Control Zones - Areas of controlled airspace which extend upward from the surface and terminate at the base of the continental control area. Control zones that do not underlie the continental control area have no upper limit. A control zone may include one or more airports and is normally a circular area with a radius of five statute miles and any extensions necessary to include instrument departure and arrival paths.

Controlled Airspace - Airspace designated as continental control area, control area, control zone, or transition area within which some or all aircraft may be subject to air traffic control.

Critical Aircraft - The aircraft which controls one or more design items based on wingspan, approach speed and/or maximum certificated take off weight. The same aircraft may not be critical to all design items.

dBA - Decibels measured on the A-weighted scale to factor out anomalies.

Decibel (dB) - The standard unit of noise measurement relating to a logarithm scale in which 10 units represents a doubling of acoustic energy.

Decision Height (DH) - During a precision approach, the height (or altitude) at which a decision must be made to either continue the approach or execute a missed approach.

Declared Distances - The distances the airport owner declares available and suitable for satisfying an airplane's take-off distance, accelerated-stop distance, and landing distance requirements. The distances are:

Take-off run available (TORA) - The runway length declared available and suitable for the ground run of an airplane taking off.

Take-off distance available (TODA) - The TORA plus the length of any remaining runway and/or clearway (CWY) beyond the far end of the TORA.

Accelerate-stop distance available (ASDA) - The runway plus stopway (SWY) length declared available and suitable for the acceleration and deceleration of an airplane aborting take-off.

Landing distance available (LDA) - The runway length declared available and suitable for a landing airplane.

Demand - Level of activity that needs to be accommodated.

Demand Management - The art or science of controlling demand as a strategy to avoid congestion.

Design Hour - The design hour is an hour close to the peak but not the absolute peak, which is used for airport planning and design purposes. It is usually the peak hour of the average day of the peak month.

Displaced Threshold - Actual touchdown point on specific runways designated due to obstructions which make it impossible to use the actual physical runway end.

Distance Measuring Equipment (DME) - An airborne instrument which indicates the distance the aircraft is from a fixed point, usually a VOR station.

Effective Runway Gradient - The maximum difference between runway centerline elevations divided by the runway length, expressed as a percentage.

Environmental Assessment (EA) - A report prepared under the National Environmental Policy Act (NEPA) analyzing the potential environmental impacts of a federally funded project.

Environmental Impact Statement (EIS) - A report prepared under NEPA fully analyzing the potential significant environmental impacts of a federally funded project.

EAS - The Essential Air Service program administered by the U.S. Department of Transportation is designed to ensure that small communities that were served by one or more air carriers prior to airline deregulation would retain a minimum level of scheduled airline service, even if such service requires the payment of subsidy.

EPA - The United States Environmental Protection Agency.

FAR Part 77 - Federal Aviation Regulations which establish standards for determining obstructions in navigable airspace.

Federal Aviation Administration (FAA) - A branch of the U.S. Department of Transportation responsible for the regulation of all civil aviation activities.

Fixed Base Operator (FBO) - An individual or company located at an airport providing commercial general aviation services.

Final Approach - The flight path of an aircraft which is inbound to the airport on an approved final instrument approach course, beginning at the point of interception of that course and extending to the airport or the point where circling for landing or missed approach is executed.

Fixed Wing - For the purposes of this report, any aircraft not considered rotorcraft.

Flight Plan - A description or outline of a planned flight which a pilot submits to the FAA, usually through a Flight Service Station.

Flight Service Station (FSS) - Air traffic facility operated by the FAA to provide flight service assistance such as pilot briefing, en route communications, search and rescue assistance and weather information.

General Aviation - All civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire.

Global Positioning System (GPS) - GPS uses a group of many satellites orbiting the earth to determine the position of users on or above the earth's surface. This system will provide at least non precision approach capability to any airport having published instrument approach procedures.

Horizontal Surface - A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs with a radius of 5,000 feet for all runways designated as utility or general; and 10,000 feet for all other runways from the center of each end of the primary surface and connecting the adjacent arc by tangent lines.

Instrument Flight Rules (IFR) - These rules govern the procedures for conducting instrument flight. Pilots are required to follow these rules when operating in controlled airspace with visibility of less than three miles and/or ceiling lower than 1,000 feet.

Instrument Landing System (ILS) - ILS is designed to provide an exact approach path for alignment and descent of aircraft. Generally consists of a localizer, glide slope, outer marker, middle marker, and approach lights. This type of precision instrument system is being replaced by Microwave Landing Systems (MLS).

Instrument Runway - A runway equipped with electronic and visual navigation aids for which a precision or non precision approach procedure having straight-in landing minimums has been approved.

Itinerant Operation - All aircraft operations at an airport other than local.

Landing Area - That part of the movement area intended for the landing and takeoff of aircraft.

Leakage - Refers to passengers that travel outside their market area to access airline services.

Load Factor -The ratio of revenue passenger miles to available seat miles of a particular flight.

Local Operation - Aircraft operation in the traffic pattern or within sight of the tower, or aircraft known to be departing or arriving from flight in local practice areas, or aircraft executing practice instrument approaches at the airport.

Low-Cost Carrier (LCC) - an airline that offers generally low fares in exchange for eliminating many traditional passenger services.

Medium-Intensity Approach Lighting (MALSR) -This system includes runway alignment indicator lights. An airport lighting facility which provides visual guidance to landing aircraft.

Microwave Landing System (MLS) - An instrument landing system operating in the microwave spectrum which provides lateral and vertical guidance to aircraft with compatible equipment.

Minimums - Weather condition requirements established for a particular operation or type of operation.

Movement Area - The runways, taxiways and other areas of the airport used for taxiing, takeoff and landing of aircraft, exclusive of loading ramps and parking areas.

National Plan of Integrated Airport Systems (NPIAS) - The National Plan of Integrated Airport Systems (NPIAS) identifies more than 3,300 airports that are significant to national air transportation and thus eligible to receive Federal grants under the Airport Improvement Program (AIP).

It also includes estimates of the amount of AIP money needed to fund infrastructure development projects that will bring these airports up to current design standards and add capacity to congested airports. FAA is required to provide Congress with a 5-year estimate of AIP eligible development every 2 years. The NPIAS comprises all commercial service airports, all reliever airports, and selected general aviation airports.

Navigational Aid (NAVAID) - Any visual or electronic device airborne or on the surface which provides point to point guidance information or position data to aircraft in flight.

Non-Directional Beacon (NDB) - Transmits a signal on which a pilot may "home" using equipment installed in the aircraft.

Non precision Instrument Approach - An instrument approach procedure with only horizontal guidance or area-type navigational guidance for straight-in approaches.

Object Free Area (OFA) - A two dimensional ground area surrounding runways, taxiways, and taxilanes which is clear of objects except those whose location is fixed by function.

Object Free Zone (OFZ) - The airspace defined by the runway OFZ and, as appropriate, the inner- approach OFZ and the inner-transitional OFZ, which is clear of object penetrations other than frangible NAVAIDS.

Runway OFZ - The airspace above a surface centered runway centerline.

Inner-approach OFZ - The airspace above a surface centered on the extended runway centerline. It applies to runways with an approach lighting system.
Inner-transitional OFZ - The airspace above the surfaces located on the outer edges of the runway OFZ and the inner-approach OFZ. It applies to precision instrument runways.

Obstruction - An object which penetrates an imaginary surface described in FAR Part 77.

Pavement Condition Index (PCI) - Numerical index between 0 and 100 used to indicate the condition of a roadway.

Peak Hour - Part of the day with the busiest traffic.

Peaking Factor - The factor applied to the annual operations to determine the peak hour activity.

Performance Objective - Desired facilities, services or policies provided at an airport. Used in conjunction with the state airport classification system for performance measurement.

Precision Approach Path Indicator (PAPI) - Provides visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high intensity focused light beams.

Precision Instrument Approach - An instrument approach procedure in which electronic vertical and horizontal guidance is provided, e.g. ILS and MLS.

Primary Surface - A surface longitudinally centered on the runway, extending 200 feet beyond each end of the runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline.

Residential Airpark - Also known as a "fly-in community." An airport that integrates housing into the design.

Rotorcraft (e.g. Helicopter) - A heavier-than-air aircraft supported in flight by the reactions of the air on one or more power-driven rotors on substantially vertical axis.

RPM - Revenue passenger mile. A measure of airline passenger traffic corresponding to the transport of one revenue passenger for one mile.

Runway End Identifier Lights (REIL) - These lights aid in early identification of the approach end of the runway.

Runway Protection Zone (RPZ) - The ground area under the approach surface which extends from the primary surface to a point where the approach surface is fifty feet above the ground. This was formerly known as the clear zone.

Runway Safety Area (RSA) - A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

Segmented Circle - A system of visual indicators designed to provide traffic pattern information at airports without operating control towers.

Study Team – Simat, Helliesen & Eichner, Inc. (SH&E), URS Corp., W&H Pacific (WHP), Cambridge Systematics, Inc., and Pacific Rim Research (PRR).

Threshold Siting Surface - Utilized to locate runway threshold in order to meet approach obstacle clearance requirements. The dimensions of TSS vary with the type of aircraft operations, the approach visibility minimums, and the types of navigational instrumentation.

Super Unicom - The Super Unicom is FAA certified for altimeter settings among other weather data, which is required for GPS approach implementation.

Tiedown - An apparatus used to secure an aircraft while parked on the apron.

Touch and Go Operation - Practice flight performed by a landing touch down and continuous take off without stopping or exiting the runway.

Transitional Surfaces - These surfaces extend outward and upward at right angles to the runway centerline and the extended runway centerline at a slope of 7:1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of a precision approach surface which project through and beyond the limits of the conical surface extend a distance of 5,000 feet measured horizontally

from the edge of the approach surface and at right angles to the runway centerline.

Transport Airport - An airport designed, constructed and maintained to serve airplanes in aircraft approach category C and D.

Utility Airport - An airport designed, constructed and maintained to serve airplanes in aircraft approach category A and B.

Visual Approach Slope Indicator (VASI) - A system of lights on the side of an airport runway that provides visual descent guidance information during the approach to a runway.

Visual Flight Rules (VFR) - Flight rules by which aircraft are operated by visual reference to the ground. Weather conditions for flying under these rules must include a ceiling greater than 1,000 feet, three-miles visibility and standard cloud clearance.

Wind Coverage - Wind coverage is the percent of time for which aeronautical operations are considered safe due to acceptable crosswind components.

Wind Rose - A scaled graphical presentation of wind information.

APPENDIX F: BIBLIOGRAPHY

AC 150/5060-5, Airport Capacity and Delay, Change 2, 1995.

AC 150/5070-7, The Airport System Planning Process, 2004.

AC 150/5190-5, Exclusive Rights and Minimum Standards for Commercial Aeronautical Activities.

AC 150/5325-4A, Runway Length Requirements for Airport Design.

AC 150/5300-13, Airport Design, Change11.

AC 150/5340-18D, Standards for Airport Sign Systems.

AC 150/5360-13, Terminal Planning and Design Guidelines.

Air Carrier Activity Information System (ACAIS) Database, 2007.

Air Transport Association of America, Inc.: Statement before the Aviation Subcommittee of the Senate Committee on Commerce, Science & Technology concerning the Impact of new Jet Aircraft on the National Airspace System. September 28, 2006.

Airport Facility Directory. FAA, 2006.

Airport Master Records and Reports (5010).

Air-Taxi Services Threaten to Jam Airports. Scott McCartney, The Wall Street Journal. March 28, 2006.

Amtrak Ridership Reports. 2006.

Anderson Field Airport Layout Plan. Bothell, WA: W&H Pacific, 2006.

Arlington Municipal Airport Master Plan. Everett, WA: Reid Middleton, 2002.

Auburn Municipal Airport Master Plan. Bothell, WA: W&H Pacific, 2001.

Bellingham International Airport Master Plan. Seattle, WA: URS Corporation, 2004.

Boeing Field/King County International Airport Master Plan. 2000.

Boeing World Air Cargo Forecast. 2006

Bowers Field Airport Master Plan. Seattle, WA: Bucher, Willis and Ratliff Corporation, 2004.

Bowerman Field Airport Master Plan. Everett, WA: Reid Middleton, Inc, 1997.

Bremerton National Airport Master Plan. Scottsdale, AZ: Coffman Associates, 2002.

Cashmere-Dryden Airport Layout Plan. Bothell, WA: W&H Pacific, 2005.

Chelan Municipal Airport Master Plan. East Wenatchee, WA: Forsgren Associates, P.A., 1992.

Chehalis-Centralia Airport Master Plan. Scottsdale, AZ: Coffman Associates, 2001.

Cle Elum Municipal Airport Layout Plan. Bothell, WA: W&H Pacific, 2004.

Columbia Gorge Regional Airport Layout Plan. Portland, OR: Century West Engineering Corporation, 2004.

Competitive and Economically Vital to Your Community. dayjet, 2006.

Davenport Municipal Airport Master Plan. Bellevue, WA: W&H Pacific, 1993.

Deer Park Municipal Airport Master Plan. Tulsa, OK: Barnard Dunkelberg & Company, 2001.

Desert Aire Airport Master Plan. Greenbank, WA: Airside, 2006

Dorothy Scott Municipal Airport Master Plan. Bothell, WA: W&H Pacific, 2006.

DOT Bureau of Transportation Statistics: Airline Origin and Destination Survey Database (DB1B). March 2007.

DOT FRA: High-Speed Ground Transportation for America. 1997.

DOT FRA: Report to Congress: Costs and Benefits of Magnetic Levitation. September 2005.

Ephrata Municipal Airport Master Plan. Tulsa, OK: Barnard Dunkelberg & Company, 2004.

FAA Aerospace Forecast, Fiscal Years 2006 - 2017.

FAA Aerospace Forecast, Fiscal Years 2007 - 2020.

FAA Airspace Management Handbook, Version 2.1. 2004

FAA Flight Plan. Charting the Path for the Next Generation. 2007-2011

FAA Northwest Mountain Region. Overall Development Objectives (ODO). 2007.

FAA Northwest Mountain Region. Regional Airport Plan. 2007.

FAA Order 5090.3C, Field Formation of the National Plan of Integrated Airport Systems.

FAA Order 5100.38C, Airport Improvement Program Handbook.

FAA Overall Development Objectives (ODOs) by Worksite. 2006

FAA Terminal Area Forecast, Fiscal Years 2006-2025.

FAA Terminal Instrument Procedures (TERPs), Third Edition. 1976

FAR Part 77, Objects Affecting Navigable Airspace, 1989

Felts Field Airport Master Plan. Seattle, WA: URS Corporation, 2005.

Friday Harbor Airport Master Plan. Tulsa, OK: Barnard Dunkelberg & Company, 2004.

Grand Coulee Dam Airport Master Plan. Bothell, WA: W&H Pacific, 2006.

Grant County International Airport. Seattle, WA: URS Corporation, 2005.

Grove Field Airport Master Plan. Bothell, WA: W&H Pacific, 2006.

I-5 Transportation and Trade Partnership, I-5 Rail Capacity Study. February 2003.

Ione Municipal Airport Layout Plan. Portland, OR: Century West Engineering Corporation, 2006.

Is There a DayPort in Your Future? How to Make Your Airport or FBO More National Plan of Integrated Airport Systems (2007-20011), 2006.

Jefferson County International Airport Master Plan. Seattle, WA: Bucher, Willis and Ratliff Corporation, 2001.

Methow Valley State Airport Master Plan. Bellevue, WA: W&H Pacific, 1995.

Metropolitan Transportation Commission and California High-Speed Rail Authority, Bay Area / California High-Speed Rail Ridership and Revenue Forecasting Study: Draft Final Report. Cambridge Systematics, Inc. July 2007.

National Business Aviation Association (NBAA) Airports Handbook, 2002.

NexGen Goal: Performance-Based Navigation. RNAV and RNP Evolution Through 2025. FAA Fact Sheet. May 8, 2007.

Objects Affecting Navigable Airspace, Code of Federal Regulations, Title 14, Part 77. Ocean Shores Municipal Airport Master Plan. Bothell, WA: W&H Pacific, 2006.

Odessa Municipal Airport. Bothell, WA: W&H Pacific, 2006.

Okanogan Legion Airport Master Plan. Greenbank, WA: Airside, 2001.

Omak Municipal Airport Master Plan. Bothell, WA: W&H Pacific, 2006.

Oregon Transportation Commission, 2001 Oregon Rail Plan. November 2001.

Pangborn International Airport Master Plan. Scottsdale, AZ: Coffman Associates, 2004.

Pearson Field Airport Master Plan. Seattle, WA: URS Greiner, 2001.

Pierce County – Thun Field Airport Master Plan. Seattle, WA: Bucher, Willis and Ratliff Corporation, 2000.

Port of Benton (Prosser) Master Plan. Bothell, WA: W&H Pacific, 2006.

Port of Seattle, King County, and BNSF Railway Company, Memorandum of Understanding. February 26, 2007.

Prosser Airport Master Plan. Seattle, WA: TRA Airport Consulting, 1990.

PSRC Regional Airport System Plan. 2001.

PSRC Regional Air Cargo Strategy. 2006

Pullman Moscow Regional Airport Master Plan. Coeur d'Alene, ID: J-U-B Engineers, Inc., 1999.

Renton Municipal Airport/Clayton Scott Field Airport Layout Plan Update, 2004.

Richland Airport Master Plan. Everett, WA: Reid Middleton, 1995.

Ritzville Municipal Airport – Pru Field Layout Plan. Portland, OR: Century West Engineering Corporation, 2003.

Rosalia Municipal Airport. Bothell. WA: W&H Pacific, 2006.

Sea-Tac International Airport: Airport System Facility and Capacity Assessment

Comprehensive Development Plan. 2003-2005.

Snohomish County Airport/ Paine Field Master Plan. Tulsa, OK: Barnard Dunkelberg & Company, 1995.

Spokane International Airport Air Cargo Market Study. December 2003

Spokane International Airport Master Plan. Seattle, WA: URS Corporation, 2003.

Sunnyside Municipal Airport Master Plan. Seattle, WA: TRA Airport Consulting, 1992.

Tri-Cities Airport Master Plan. Seattle, WA: URS Greiner, 2000.

Very Light Jets Poised for Aviation Stardom? Stephen Majors, Associated Press. November 6, 2006.

Vista Field Airport Master Plan. Kennewick, WA: J-U-B Engineers, Inc., 2006.

Walla Walla Regional Airport Master Plan. Tulsa, OK: Barnard Dunkelberg & Company, 2002.

Warden Municipal Airport Master Plan. Bellevue, WA: Airside, 1995.

Westport Municipal Airport Master Plan. Bothell, WA: W&H Pacific, 2006.

Wilbur Municipal Airport Layout Plan. Spokane, WA: J-U-B Engineers, Inc., 2006.

WSDOT Amtrak Cascades Ridership and Station On-Off Information. December 2006.

WSDOT Draft Long-Range Plan for Amtrak Cascades. February 2006.

WSDOT Draft Short-Range Plan for Amtrak Cascades. February 2006.

WSDOT Economic Impacts of Washington Airports. Bucher Willis and Ratliff Corp., 2001.

WSDOT I-90 Origin-Destination Survey. 2005.

WSDOT Traffic Count Database. 2005.

WSDOT Washington State Comprehensive Tolling Study. July 2006.

WSTC Statewide Rail Capacity and System Needs Study: Final Report. December, 2006.

WSTC Statewide Rail Capacity and System Needs Study: Technical Memorandum. May, 2006.

Yakima Air Terminal Master Plan. Bothell, WA: W&H Pacific, 2003.