



FAA/NASA Workshop

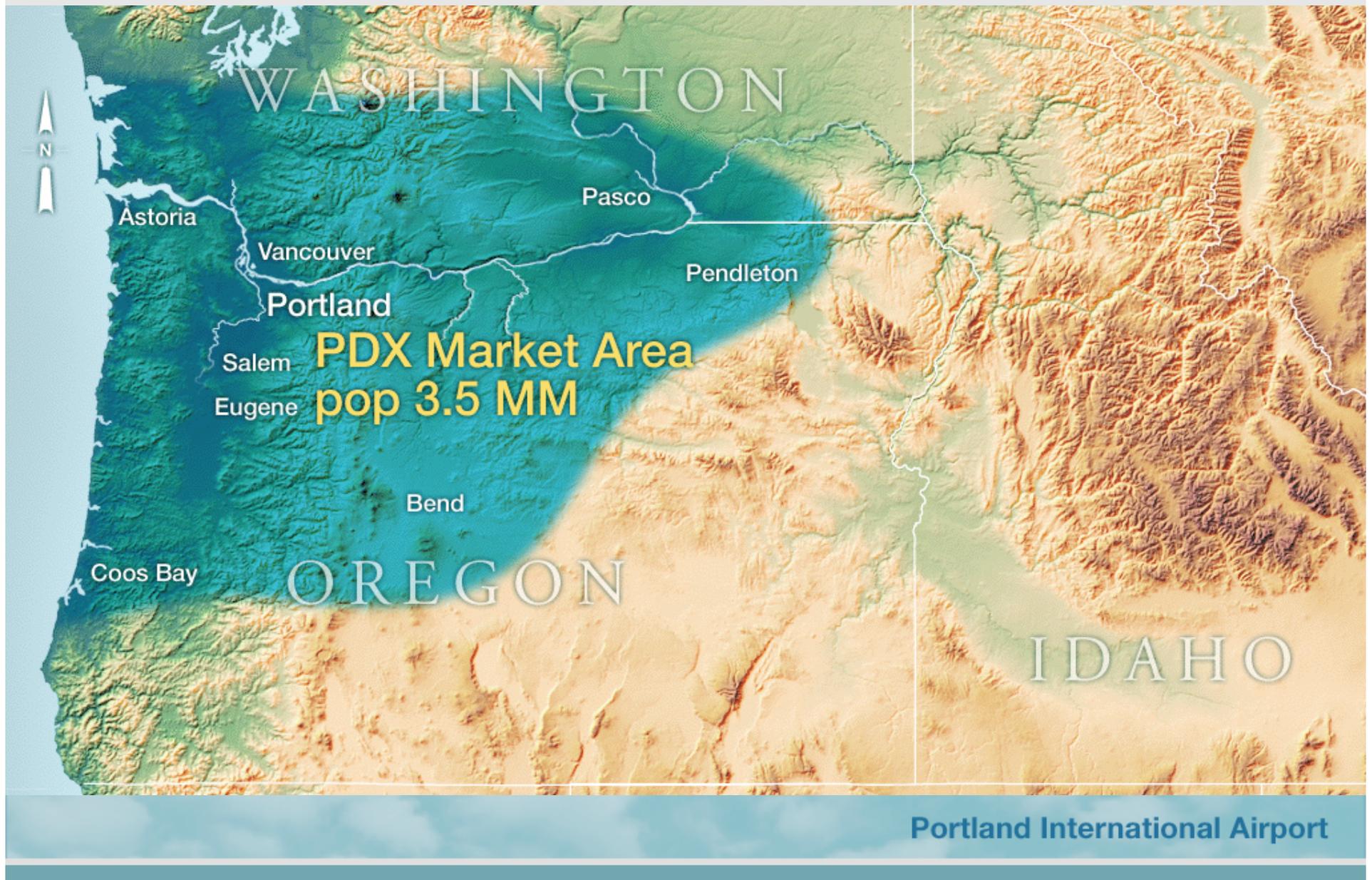
Session 2C

Landside Planning Issues, Needs & Solutions

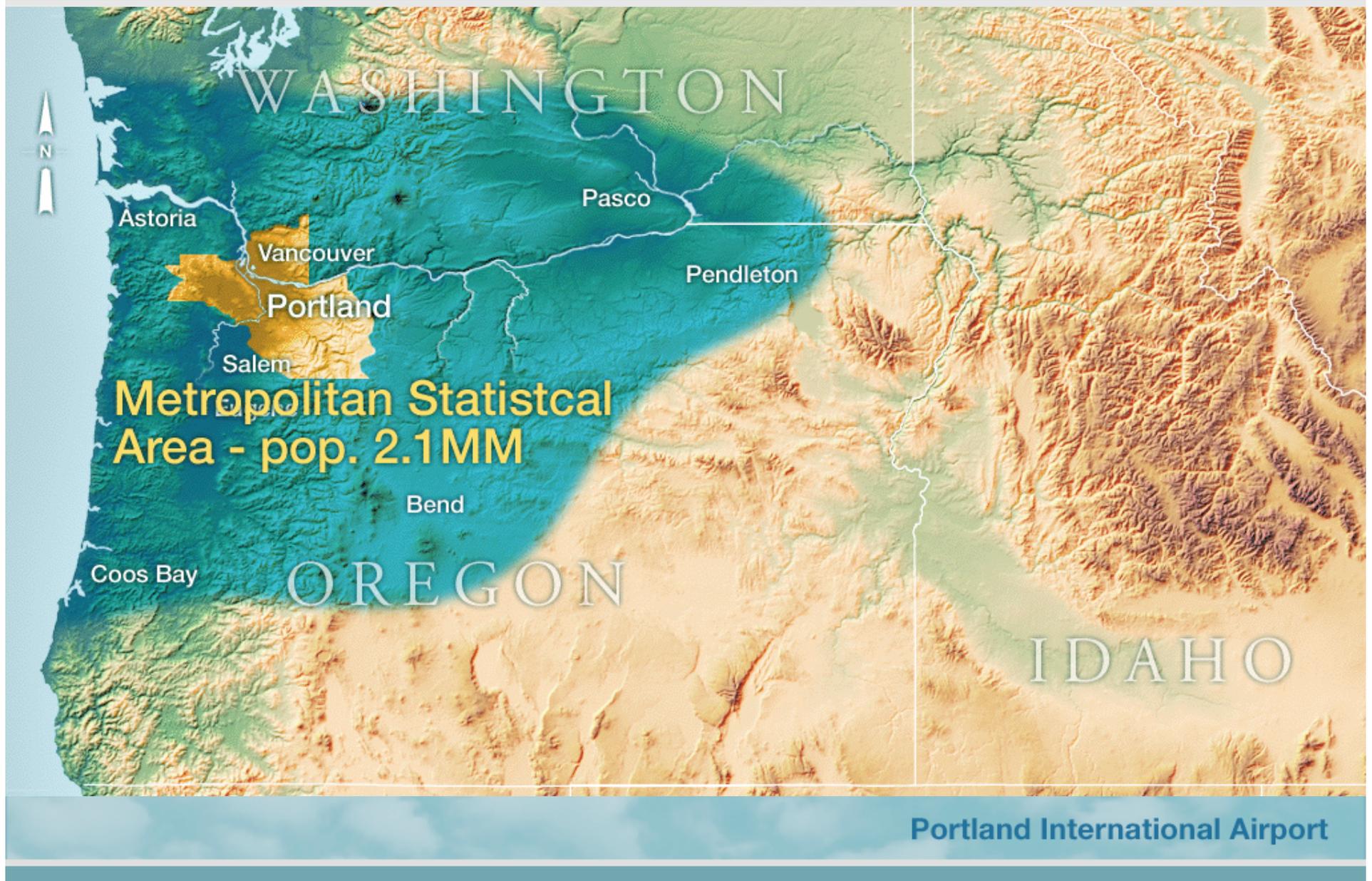
Portland International Airport

Scott King
Senior Aviation Planner

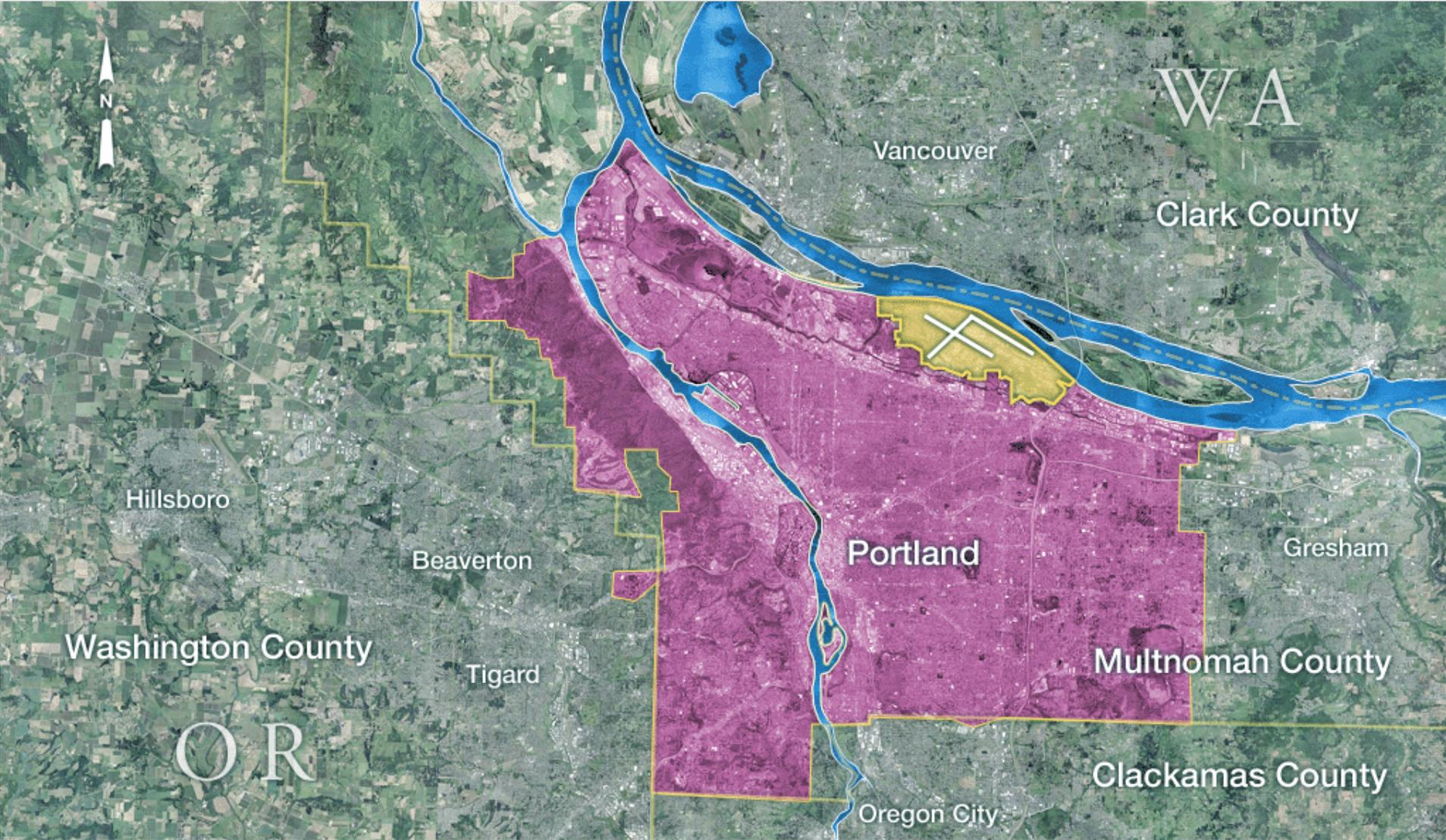
PDX Overview



PDX Overview

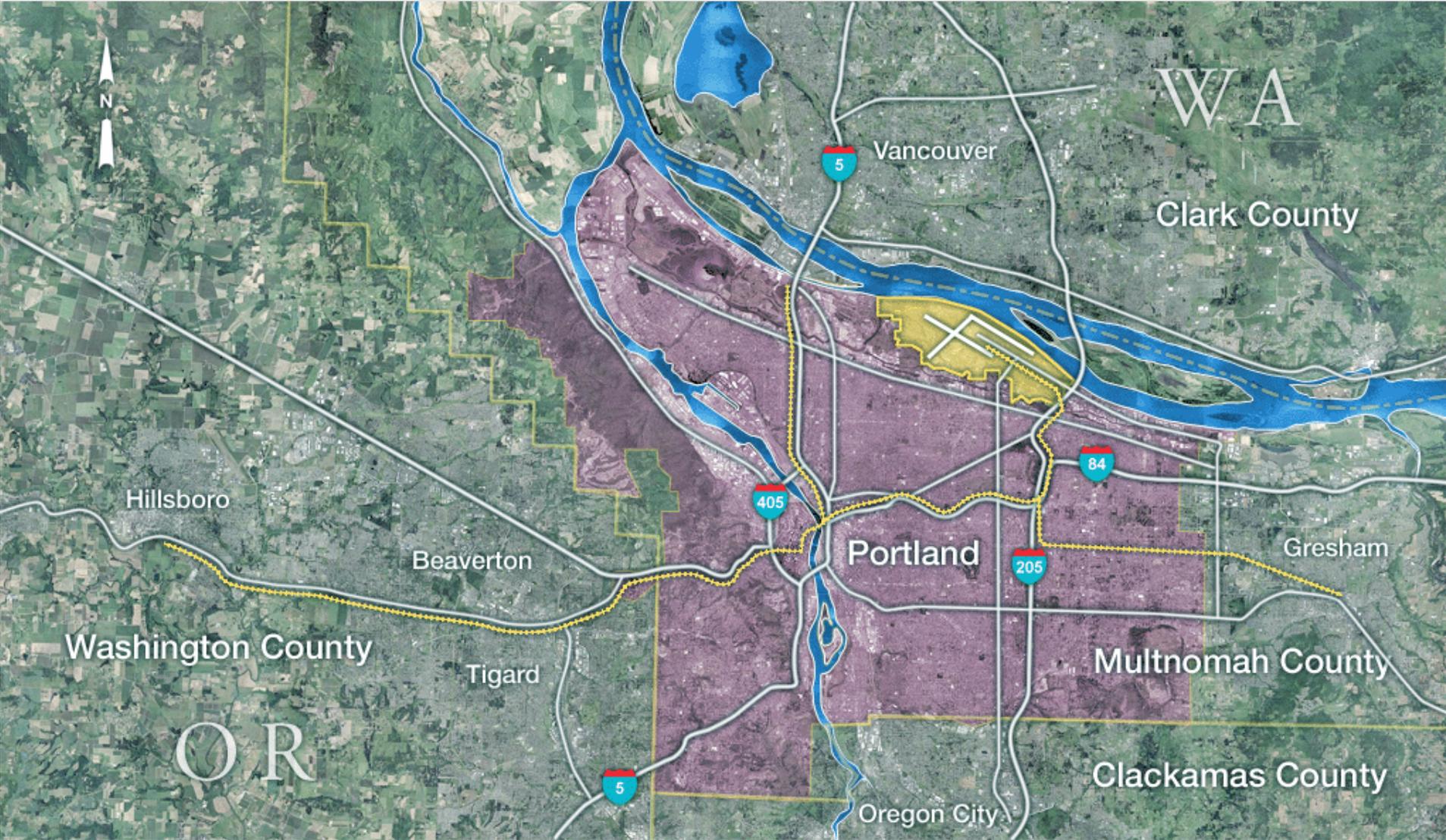


Portland Vancouver Region



Portland International Airport

Regional Transportation System



Portland International Airport

PDX Area



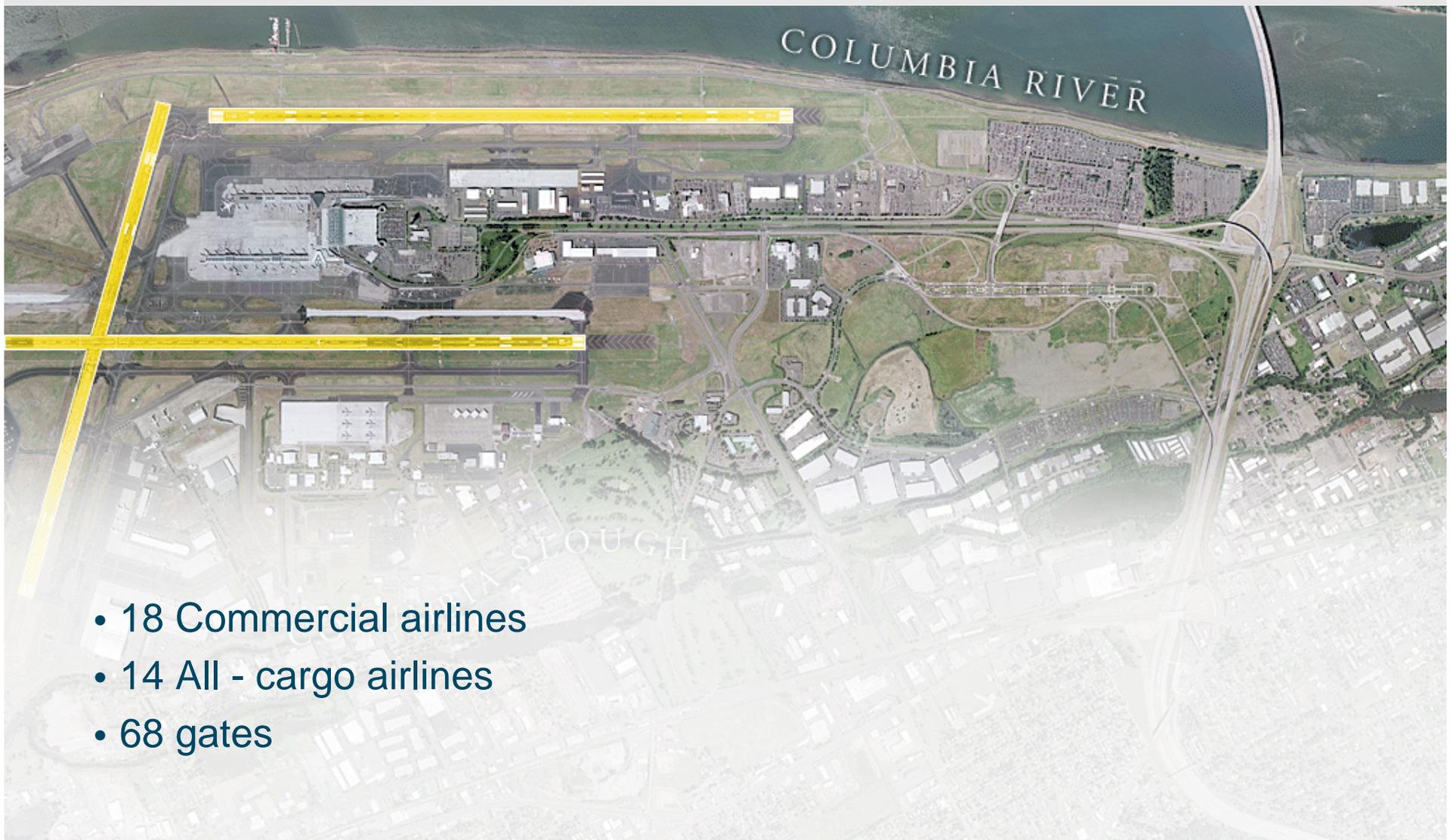
Portland International Airport

PDX Statistics



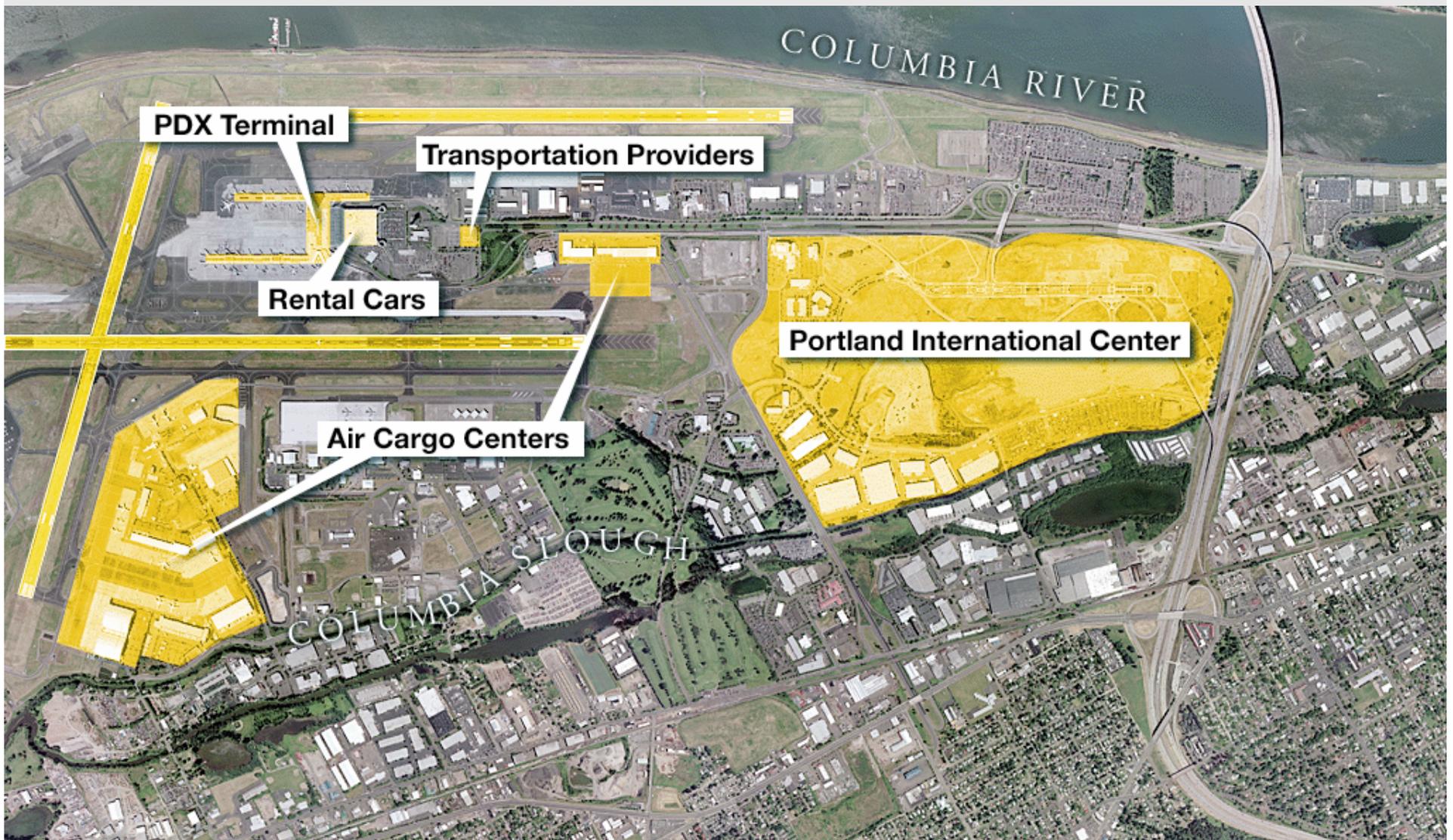
- 14.0 Million Annual Passengers (Rank - 33rd)
- 288,000 Annual Cargo Tons (Rank - 28th)
- 263,000 Annual Operations
- 3200 Acres

PDX Statistics

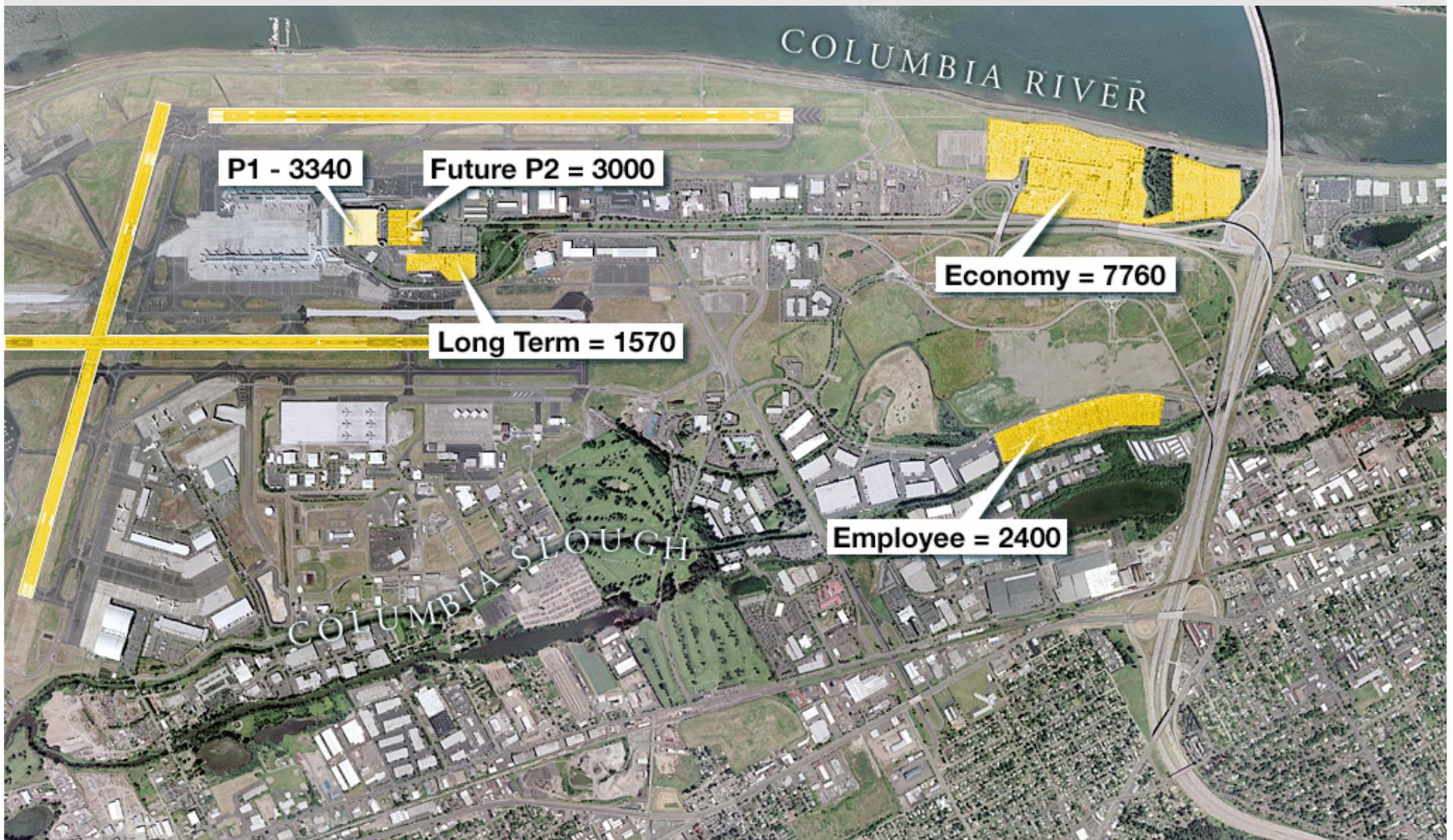


- 18 Commercial airlines
- 14 All - cargo airlines
- 68 gates

PDX Land Uses



PDX Parking



PDX Transportation



Portland International Airport

Regional Environment

- “Planning/planning/planning”
 - Elected MPO
 - Regional cooperation
 - Transportation/environmental/land use balance
- State Border
 - Oregon – No Sales Tax
 - Washington – No Income Tax
 - Only two bridges across Columbia River

PDX Landside Growth Issues

- Roadway Capacity
 - freeway interchange
 - airport access roads
 - terminal roadway
- Parking capacity
 - short term
 - long term
- External approvals for auto focused projects
- \$\$ for non-parking landside projects
- Background traffic growth on and near airport roads
- PIC Development

Portland International Center



Portland International Airport

Cascade Station Development



PDX Landside Plans & Studies

Alternative Modes

- Alternative Mode Study
 - Regional travel forecasting model development
- PDX Bicycle and Pedestrian Plan
- Transportation Demand Management (TDM) Study
 - 9 existing programs
 - 8 proposed new programs
- Intelligent Transportation Systems (ITS) Plan
 - 9 recommended projects
 - 4 complete
 - 2 partially complete
 - 3 undone

PDX Landside Plans & Studies

Airport Facility Plans & Studies

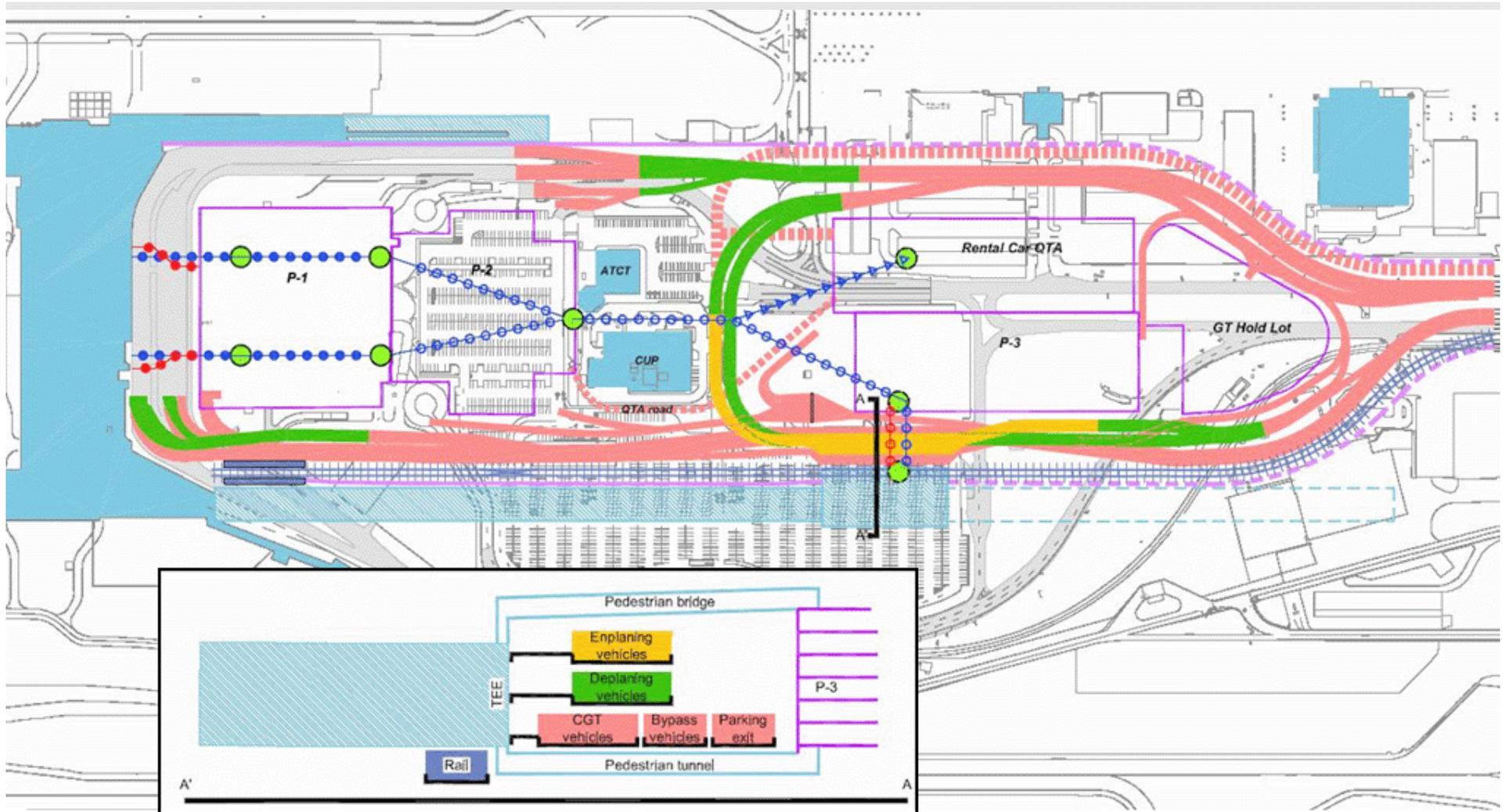
- 2000 PDX Master Plan

PDX Landside Plans & Studies

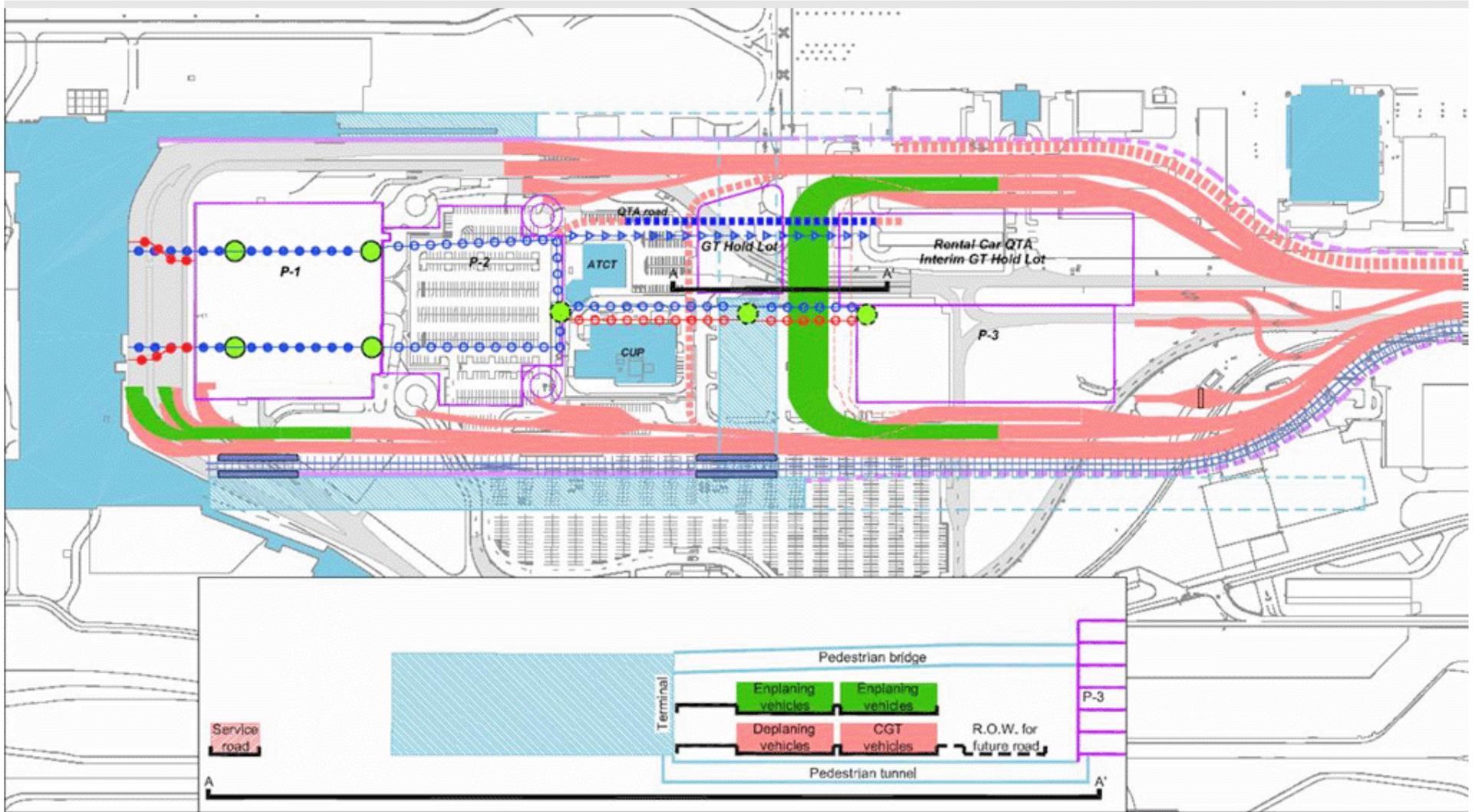
Airport Facility Plans & Studies

- 2000 PDX Master Plan
- Terminal Access Study

Terminal Access Study



Terminal Access Study



PDX Landside Plans & Studies

Airport Facility Plans & Studies

- 2000 PDX Master Plan
- Terminal Access Study
- Ultimate Capacity Study (Landside terminal access)

Ultimate Capacity Study

Summary of Demand / Capacity Analyses and Potential Solutions

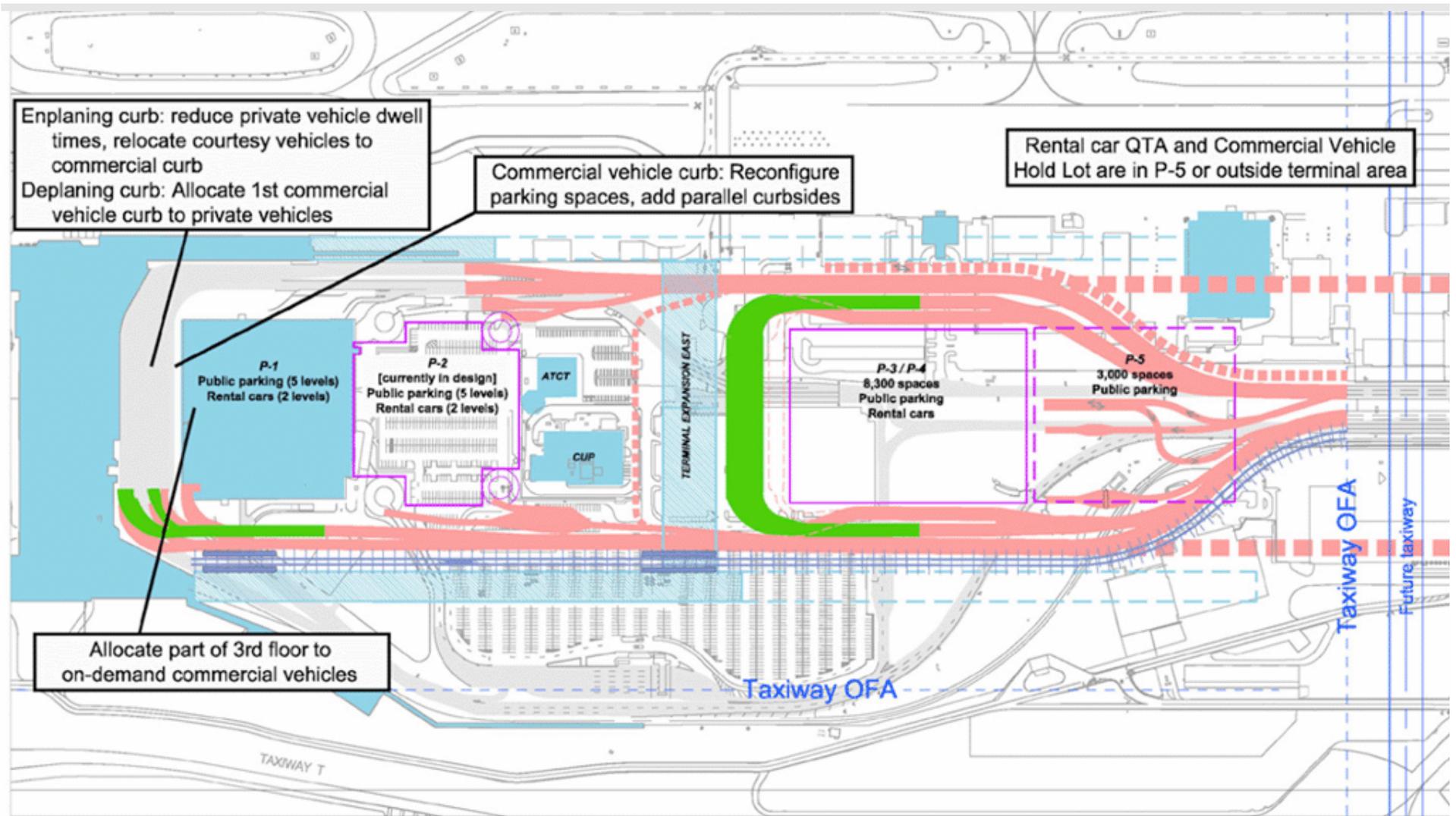
Ultimate Landside Capacity

Portland International Airport

40 MAP: Main Terminal serves 24 MAP, TEE serves 16 MAP

MAP	COMPONENT	BASELINE CAPACITY ASSUMPTION	DEMAND	DEMAND/ CAPACITY RATIO	UNMET DEMAND (a)	OPTIONS	CONSIDERATIONS
40	Terminal Area Parking	Spaces	Spaces		Spaces		
	Main Terminal (c)	6,341	9,660	1.52	(3,319)		
	TEE Central	3,000	6,440	2.15	(3,440)		
	Total requirement	9,341	16,100	1.72	(6,759)	1. Expand P-3/P-4 to approximately 9,800 public parking spaces	- All long-term parkers for Main Terminal (about 3,000 spaces) would be accommodated at P-3. Would require 45 linear feet of curbside at Main Terminal to accommodate shuttle bus.
						2. Relocate rental cars from P-1/P-2 to other location (increases P-1/P-2 public parking capacity by approximately 1,500 stalls); expand P-3/P-4 to approximately 8,300 public parking stalls)	- See "Rental Car" options for considerations associated with rental car relocation or reconfiguration.
40	Rental Car	Spaces	Spaces		Spaces		
	Ready / return area						
	Main Terminal (c)	1,481	2,080	1.40	(599)		
	TEE Central	400	1,390	3.48	(990)		
	Total	1,881	3,470	1.84	(1,589)	1. Utilize 2nd floor of P-2 and construct 1,000 additional rental car spaces in P-3 (meets approximately 95% of the Main Terminal requirement and 100% of the TEE requirement)	- Requires split rental car operation - Loss of 500 spaces of public parking in P-2
						2. Utilize 2 floors in P-2 for RAC, construct no rental car spaces in P-3/P-4 as part of opening day program	- Loss of 500 spaces of public parking in P-2 - Accommodates approximately 57% of the rental car market share - No rental car spaces TEE; shuttle bus may be required to transport patrons to P-1/P-2 and would require at least 45 linear feet of curbside at Main Terminal
						3. Utilize 3 floors in P-1 and 3 floors in P-2 for RAC, construct no rental car spaces in P-3/P-4 as part of opening day program (3,150 total RAC spaces)	- Loss of 670 spaces of public parking in P-1 and loss of 1,000 spaces of public parking in P-2 - Accommodates approximately 91% of the rental car market share - No rental car spaces at TEE; shuttle bus may be required to carry patrons to P-1/P-2 and would require at least 45 linear feet of curbside at Main Terminal

Ultimate Capacity Study



Landside Access Technology Projects

Existing

– Pay-on-foot



Portland International Airport

Landside Access Technology Projects

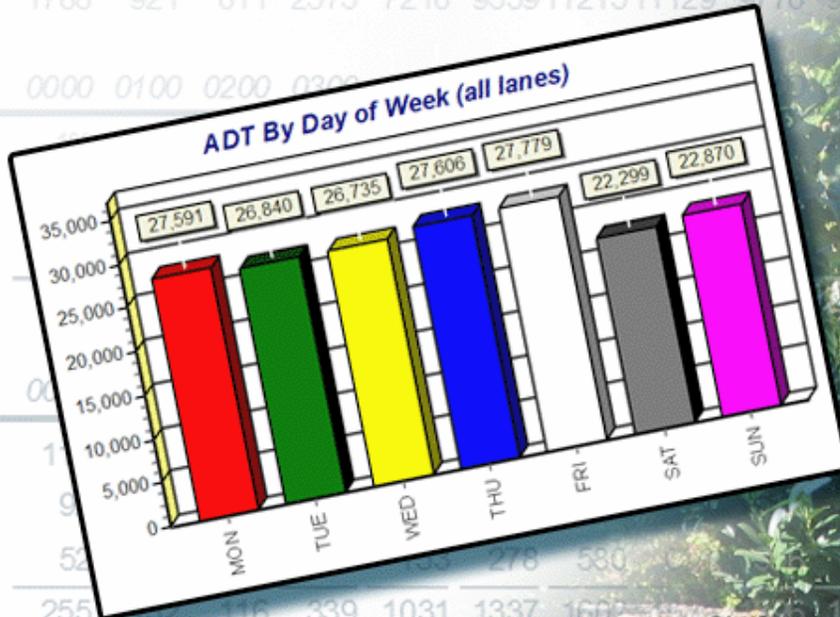
Existing

- Pay-on-foot
- Roadway Monitoring Stations

Grand Total For Data From: 12:00 AM - 8/13/2006 To: 11:59

Total Count	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600
Lane #1	788	539	518	1015	310	3819	3322	3041	3418	3671	3924	4512	4189	3518	2909	2476	245
Lane #2	647	302	230	818	3045	3792	3636	3290	3585	3844	4156	4874	4686	3697	3000	2400	1000
Lane #3	361	250	265	542	1070	1948	4057	4798	2775	2101	2160	2212	2618	2509	2123	2746	2500
TOTAL	1788	921	811	2373	7218	9359	11215	11129	9778	9616	10240	11833	11493	9722	8534	8060	719

Percents:	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600
Lane #1	44%	58%	63%	43%	43%	41%	30%	27%	36%	38%	42%	49%	45%	38%	32%	27%	13%
Lane #2	36%	33%	28%	35%	42%	41%	39%	33%	37%	39%	43%	51%	49%	38%	30%	24%	10%
Lane #3	20%	27%	32%	23%	15%	21%	36%	43%	28%	22%	21%	19%	23%	26%	24%	28%	37%
TOTAL	27%	29%	29%	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%



Landside Access Technology Projects

Existing

- Pay-on-foot
- Roadway Monitoring Stations
- Automated taxi/limo call up system



Portland International Airport

Landside Access Technology Projects

Existing

- Pay-on-foot
- Roadway Monitoring Stations
- Automated taxi/limo call up system
- CCTV

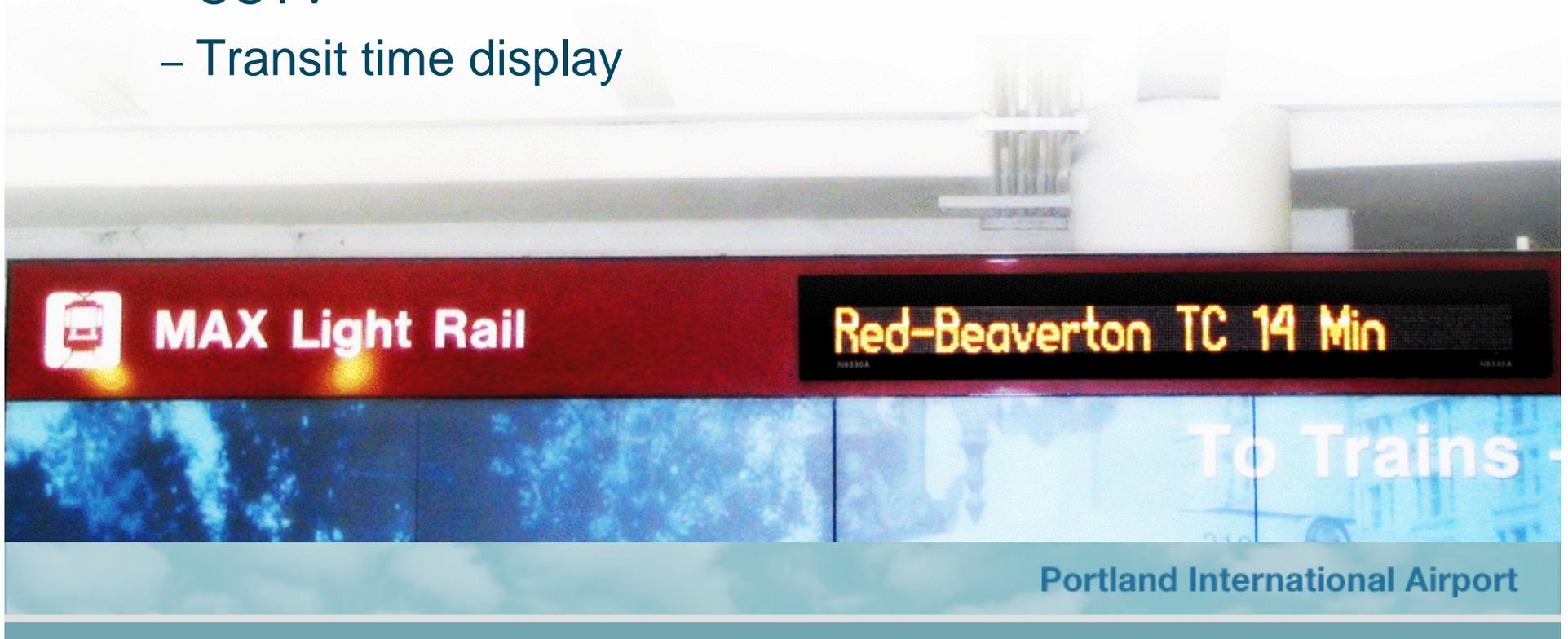


Portland International Airport

Landside Access Technology Projects

Existing

- Pay-on-foot
- Roadway Monitoring Stations
- Automated taxi/limo call up system
- CCTV
- Transit time display



Landside Access Technology Projects

Existing

- Pay-on-foot
- Roadway Monitoring Stations
- Automated taxi/limo call up system
- CCTV
- Transit time display
- Regional ITS fiber connection

Landside Access Technology Projects

Current projects

- Automated Parking Guidance System
 - Fall 2006
- Dynamic Message Signs
 - Summer 2007
- CCTV (more)
 - thru summer 2008

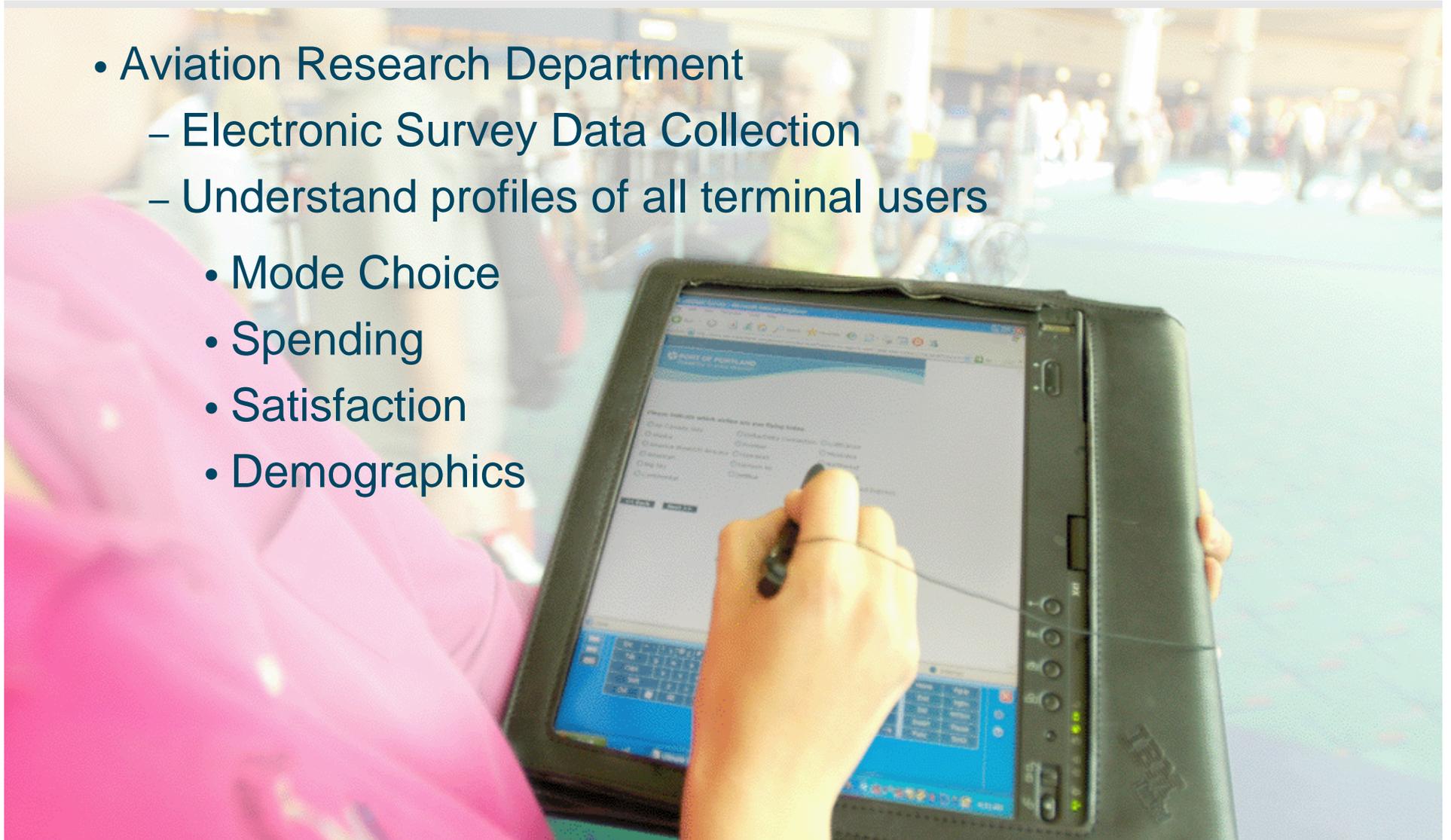
Landside Access Technology Projects

Planned Projects

- Terminal Roadway Congestion Detection/Direction
- Traveler Information Kiosks (route choice)
- Bus GPS system with arrival time info

Other Projects

- Aviation Research Department
 - Electronic Survey Data Collection
 - Understand profiles of all terminal users
 - Mode Choice
 - Spending
 - Satisfaction
 - Demographics



Other Projects

- Terminal Road Canopy



Portland International Airport

Other Projects

- Consolidated Port Headquarters Building on new Parking Garage



Portland International Airport

Ongoing Major Landside Access Issues

- Landside technology communications infrastructure
 - duct bank
 - fiber
 - communications hut
- Revenue Diversion
 - Alternate modes
 - POP strong advocates for funding at regional/state level
- NEPA – no FAA guidance on surface transportation