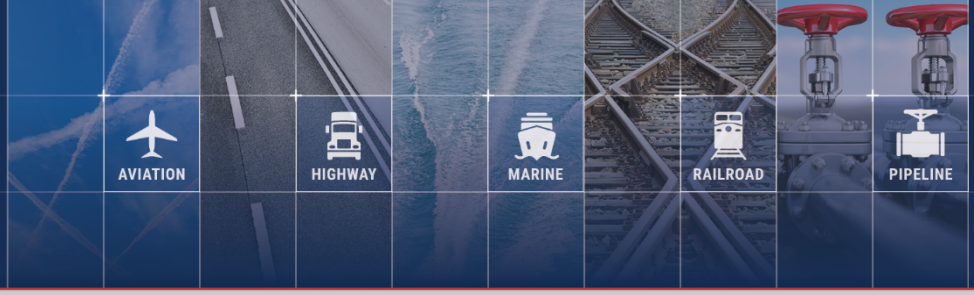

Aviation Investigation Final Report

Location:	Seattle, Washington	**Incident Number:**	DCA16IA036
Date & Time:	December 19, 2015, 08:31 Local	**Registration:**	N477AS
Aircraft:	Boeing 737	**Aircraft Damage:**	None
Defining Event:	Wrong surface or wrong airport	**Injuries:**	153 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

The flight crew inadvertently landed on a taxiway that ran parallel to the intended landing runway. About 5 miles from the runway and having been cleared to land on runway 16R, the tower controller asked if the flight would like to sidestep to runway 16C which had recently opened. The flight crew accepted and visually lined up with taxiway T, instead of the intended landing runway 16C. Although visual meteorological conditions were present, the sun was reflecting off taxiway T resulting in the flight crew visually focusing on it during landing. The flight crew and controller did not recognize the error until after landing.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: the flight crew's misidentification of the taxiway as the landing runway.

Findings

Environmental issues	Glare - Effect on personnel
Personnel issues	Identification/recognition - Flight crew

Factual Information

History of Flight

Landing-flare/touchdown	Wrong surface or wrong airport (Defining event)

On December 19, 2015, about 0831 pacific standard time, Alaska Airlines flight 27, a Boeing 737 airplane, N477AS, landed on taxiway T instead of the intended runway 16C at the Seattle-Tacoma International Airport (SEA), Seattle, Washington. There were no injuries to the 153 passengers and crew onboard and the airplane was not damaged. The flight was conducted under the provisions of 14 Code of Federal Regulations Part 121 as a regularly scheduled passenger flight from Chicago O'Hare International Airport (ORD), Chicago, Illinois, to SEA. Visual meteorological conditions prevailed at the time of the incident.

The captain reported that the descent and approach were normal. They had been cleared for the instrument landing system (ILS) approach to runway 16R. Just inside of 5 miles, the tower controller offered runway 16C that had recently opened. The captain lined up the airplane to land on what he believed was 16C. He noted that runways 16C and 16R and taxiway T were wet and reflected the morning sun, whereas 16L and the terminal were in a shadowed area and not readily visible. He further noted that the distance from 16L to 16C is less than the distance between 16C and 16R so it may appear that 16C is the left runway with taxiway T being the middle runway. The captain suggested that runway lead-in lights should remain on to prevent future similar events.

The first officer reported that both pilots were focused on landing what they thought was runway 16C, but was taxiway T. Although the first officer had retuned the captain's ILS for 16C, he was puzzled that the flightpath indicator showed on-glideslope while the localizer showed off course. Although he casually mentioned the discrepancy, since they were visually aligned with the runway, he did not give it further attention. The first officer noted that he had been focused too much on secondary tasks and neglected the big picture of ensuring the airplane was lined up on the proper runway.

Pilot Information

Certificate:	Airline transport; Commercial; Flight engineer	**Age:**	58,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	5-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	October 5, 2015
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	June 12, 2015
Flight Time:	(Estimated) 21882 hours (Total, all aircraft), 12328 hours (Total, this make and model)		

Co-pilot Information

Certificate:	Airline transport; Commercial	**Age:**	41,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	5-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	January 6, 2015
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	April 30, 2015
Flight Time:	(Estimated) 949 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	**Registration:**	N477AS
Model/Series:	737 990ER	**Aircraft Category:**	Airplane
Year of Manufacture:	2015	**Amateur Built:**	
Airworthiness Certificate:	Transport	**Serial Number:**	40716
Landing Gear Type:	Retractable - Tricycle	**Seats:**	191
Date/Type of Last Inspection:	January 16, 2015 Continuous airworthiness	**Certified Max Gross Wt.:**	188200 lbs
Time Since Last Inspection:	1986 Hrs	**Engines:**	2 Turbo fan
Airframe Total Time:	1986 Hrs as of last inspection	**Engine Manufacturer:**	CFM International
ELT:	Installed, not activated	**Engine Model/Series:**	CFM56-7B27E
Registered Owner:	Alaska Airlines	**Rated Power:**	27000 Lbs thrust
Operator:	ALASKA AIRLINES INC	**Operating Certificate(s) Held:**	Flag carrier (121)
Operator Does Business As:		**Operator Designator Code:**	ASAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Dawn
Observation Facility, Elevation:	KSEA,434 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	07:53 Local	**Direction from Accident Site:**	181°
Lowest Cloud Condition:	Few / 1600 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Broken / 2500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	140°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.89 inches Hg	**Temperature/Dew Point:**	3°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CHICAGO, IL (ORD)	**Type of Flight Plan Filed:**	IFR
Destination:	Seattle, WA (SEA)	**Type of Clearance:**	IFR
Departure Time:	06:17 Local	**Type of Airspace:**	Class B

Airport Information

Airport:	SEATTLE-TACOMA INTL SEA	**Runway Surface Type:**	Concrete
Airport Elevation:	432 ft msl	**Runway Surface Condition:**	Wet
Runway Used:	16C	**IFR Approach:**	ILS;Sidestep
Runway Length/Width:	9426 ft / 150 ft	**VFR Approach/Landing:**	Straight-in

Wreckage and Impact Information

Crew Injuries:	6 None	**Aircraft Damage:**	None
Passenger Injuries:	147 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	153 None	**Latitude, Longitude:**	47.463611,-122.313331(est)

Administrative Information

Investigator In Charge (IIC):	LeBaron, Timothy
Additional Participating Persons:	Robert Hendrickson; Federal Aviation Administration; Washington, DC
Original Publish Date:	June 8, 2020
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this incident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=92491