

TRANSPORTATION ACHIEVEMENT AWARD — TSMO

Hawaii Tsunami Evacuation Strategy—Hawaii Department of Transportation and WSP USA



ITE—A Community of Transportation Professionals is proud to recognize the **Hawaii Tsunami Evacuation Strategy** as the recipient of the [2026 Transportation Achievement Award](#) in the Transportation Systems Management and Operations (TSMO) category.

ITE's Transportation Achievement Awards recognize excellence in advancing transportation to meet human needs. The Hawaii Tsunami Evacuation Strategy exemplifies this purpose by using data,

interagency coordination, public outreach, and TSMO strategies to improve evacuation readiness across the State of Hawaii following the July 29, 2025, Kamchatka tsunami warning.

The warning was issued at 2:43 p.m., coinciding with the afternoon and evening peak traffic period and contributing to widespread congestion on almost all islands. Although the event did not result in fatalities or damages, it exposed significant evacuation challenges and raised concerns about how future tsunami warnings could affect travel during even more congested conditions, such as a peak commute period when school is in session.

In response, Hawaii Department of Transportation (HDOT) Director Ed Sniffen committed to a thorough assessment of the emergency response and recommendations by December 1, 2025. To meet an aggressive eight-week schedule, HDOT worked with WSP USA, local agencies, and emergency responders to evaluate the July 29 event, identify gaps, and develop strategies to help meet evacuation time targets across the islands.

The project team conducted interviews with local agencies and emergency responders, reviewed after-action analyses, assessed existing agency capabilities, and developed a worst-case scenario that included a peak-period school day. This scenario helped guide the evaluation of strategies focused on three interdependent areas: interagency coordination, public outreach, and TSMO.

The project's innovation lies in its use of multiple data sources and analytical tools to understand travel patterns, congestion, and evacuation needs. HDOT and WSP evaluated Inrix data, Replica data, permanent traffic counters, TransCAD travel demand models, and cppRouting tools to assess event-day travel conditions, compare them with school peak-day patterns, identify unnecessary trips, and estimate clearance times under different solutions.

The strategy considered a broad set of TSMO tools designed for near-term implementation within existing agency capabilities. These included adaptive signals, contraflow lanes, controlled access, permanent dynamic message signs, portable changeable message signs, emergency shoulder use, emergency signal timing, real-time traffic monitoring, and traveler information. Conceptual evacuation maps were developed with TSMO strategies overlaid on tsunami inundation areas to support decision-making and coordination with emergency responders and local operators.

The project also recognized that operations strategies alone are not enough. Inrix data suggested that some trips during the tsunami warning left safe zones and entered evacuation areas, adding unnecessary demand to the network. As a result, the strategy emphasized improved public communications and interagency coordination, including public outreach and education, evacuation drill and planning tools, an emergency messaging playbook, digital infrastructure and interoperability planning, agency operations alignment, expanded evacuation route planning, and cross-island knowledge exchange.

A key deliverable was an internal searchable dashboard that incorporates multiple data sources and recommended TSMO strategies for each island. This tool supports faster, more informed decision-making by cataloging sample evacuation routings and strategy options in one place, helping HDOT and its partners evaluate conditions and tailor approaches to each island's unique context.

HDOT has already begun planning workshops with agency partners to focus on some of the most challenging areas. Next steps include evaluating capital investments to support emergency contraflow, considering evacuation platforms, addressing pinch points such as areas around Hilo Airport, using viable vertical evacuation structures within evacuation zones, exploring transit for evacuation where practical, and improving public communication tools with more precise guidance, including messages discouraging travel by people already in safe areas.

By combining real-time and synthetic data, island-specific evacuation analysis, near-term TSMO strategies, public communication improvements, and interagency coordination, the Hawaii Tsunami Evacuation Strategy provides a practical and scalable model for emergency transportation operations. ITE congratulates the Hawaii Department of Transportation and WSP USA on this achievement and recognizes their leadership in strengthening evacuation readiness, improving resilience, and advancing TSMO practice in service of community safety.

2026 Excellence in Transportation Award Winner



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