

State of Hawaii, Department of Transportation

Traffic Signal Modernization, Oahu, Phase 1 and

Kalanianaʻole Hwy Intersection Improvements at Waa St

Community Informational Meeting and Noise Variance Consultation

Aina Haina Public Library
Tuesday, November 5, 2019 @ 6:30pm



Purpose of Meeting

- Inform community about planned traffic signal improvements at two (2) intersections along Kalanianaʻole Highway.
- Invite comments for the Community Noise Variance Application. Comments will be used by the State Department of Health, Indoor and Radiological Health Branch (DOH-IRHB) to evaluate the noise variance request.



Project Locations





Meeting Agenda

- Reason for Night Work
- Noise Regulations
- Kalaniiki St / Waieli St Intersection
- Waa St Intersection
- Question and Answers



Reason for Night Work

- Kalanianaʻole Highway is the primary highway connecting East Honolulu and Downtown Honolulu.
- Night work will minimize traffic congestion and delays.



Noise Regulations

HAR Title 11, Chapter 46 sets the rules and restrictions on sound levels for construction projects. It states:

“No permit shall allow any construction activities which emit noise:

- Monday through Friday before 7 am and after 6 pm of the same day
- Saturday before 9 am and after 6 pm
- Sundays and on Holidays”

A Community Noise Variance must be obtained for any construction activities to occur outside the normally permitted hours.



Kalaniiki St/Waieli St Intersection

Project Purpose and Need:

The project purpose is to install new traffic signal equipment that meets current State of Hawaii, Federal, and American Association of State Highway and Transportation Officials (AASHTO) standards.

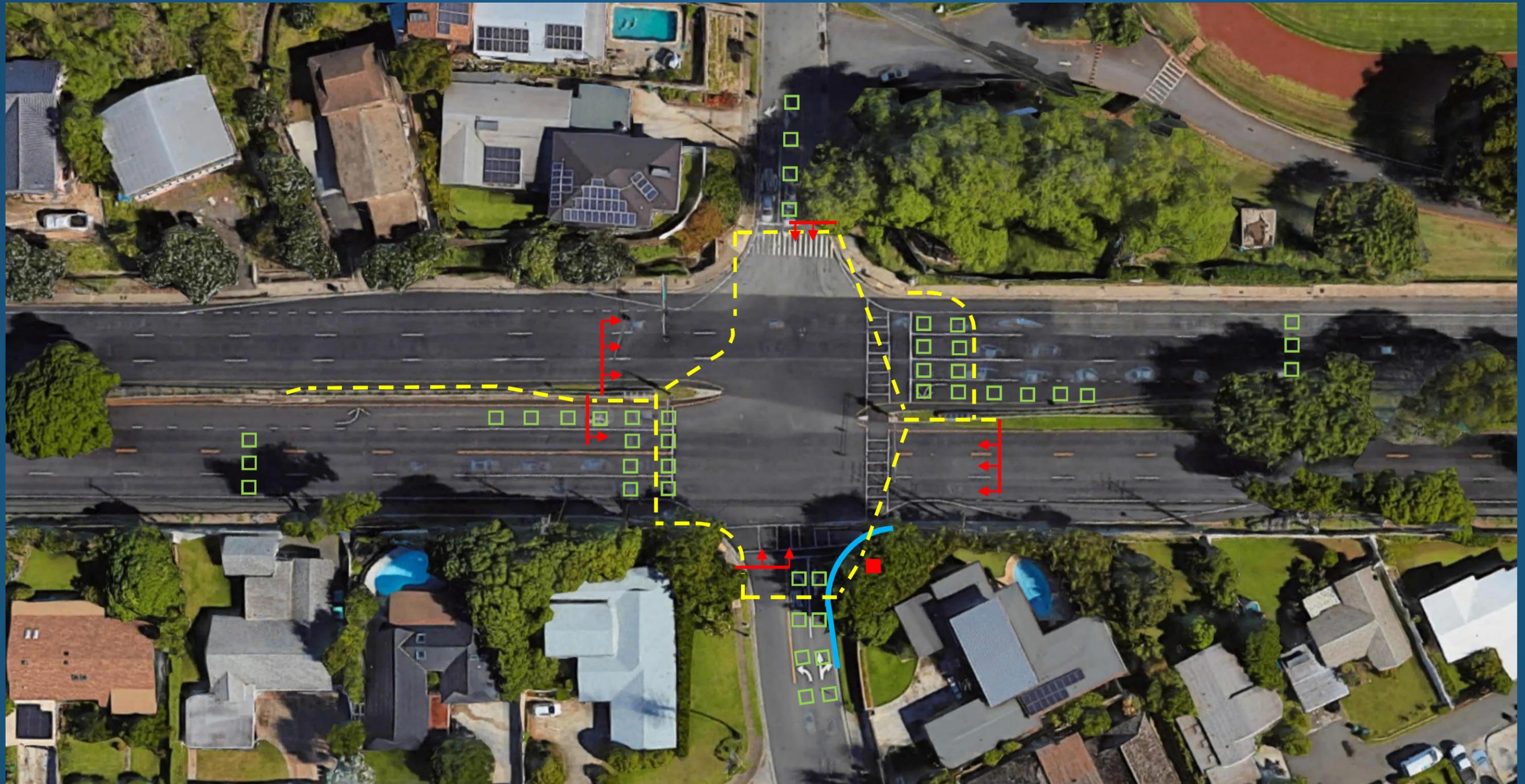


Project Description

- Modify curb, gutter, sidewalk, and curb ramps
- Upgrade of median impact attenuators
- Install of new traffic signal equipment
- Install underground duct lines
- Restore pavement and striping



Project Description





Project Description

- Remove existing signal system.
- All work will occur in State or City right-of-way.
- Expected start date: August 2020
- Expected end date: July 2021



Traffic Impacts

- One to two lanes along Kalanianaʻole Highway will need to be closed temporarily during night work.
- All lanes along Kalanianaʻole Highway, Kalaniiki Street, and Waieli Street will be open for traffic during daytime hours.



Proposed Noise Variance Hours

- Sunday 9:00 a.m. to 6:00 p.m.
- Sunday 8:00 p.m. to Monday 5:00 a.m.
- Monday 8:00 p.m. to Tuesday 5:00 a.m.
- Tuesday 8:00 p.m. to Wednesday 5:00 a.m.
- Wednesday 8:00 p.m. to Thursday 5:00 a.m.
- Thursday 8:00 p.m. to Friday 5:00 a.m.



Equipment

- Equipment such as concrete saw (90 dBA) and jackhammer (88 dBA) may be used to remove pavement, curb, sidewalk, and other concrete demolition work.
- Trenching will likely be done by backhoe (85 dBA) or trencher (85 dBA).



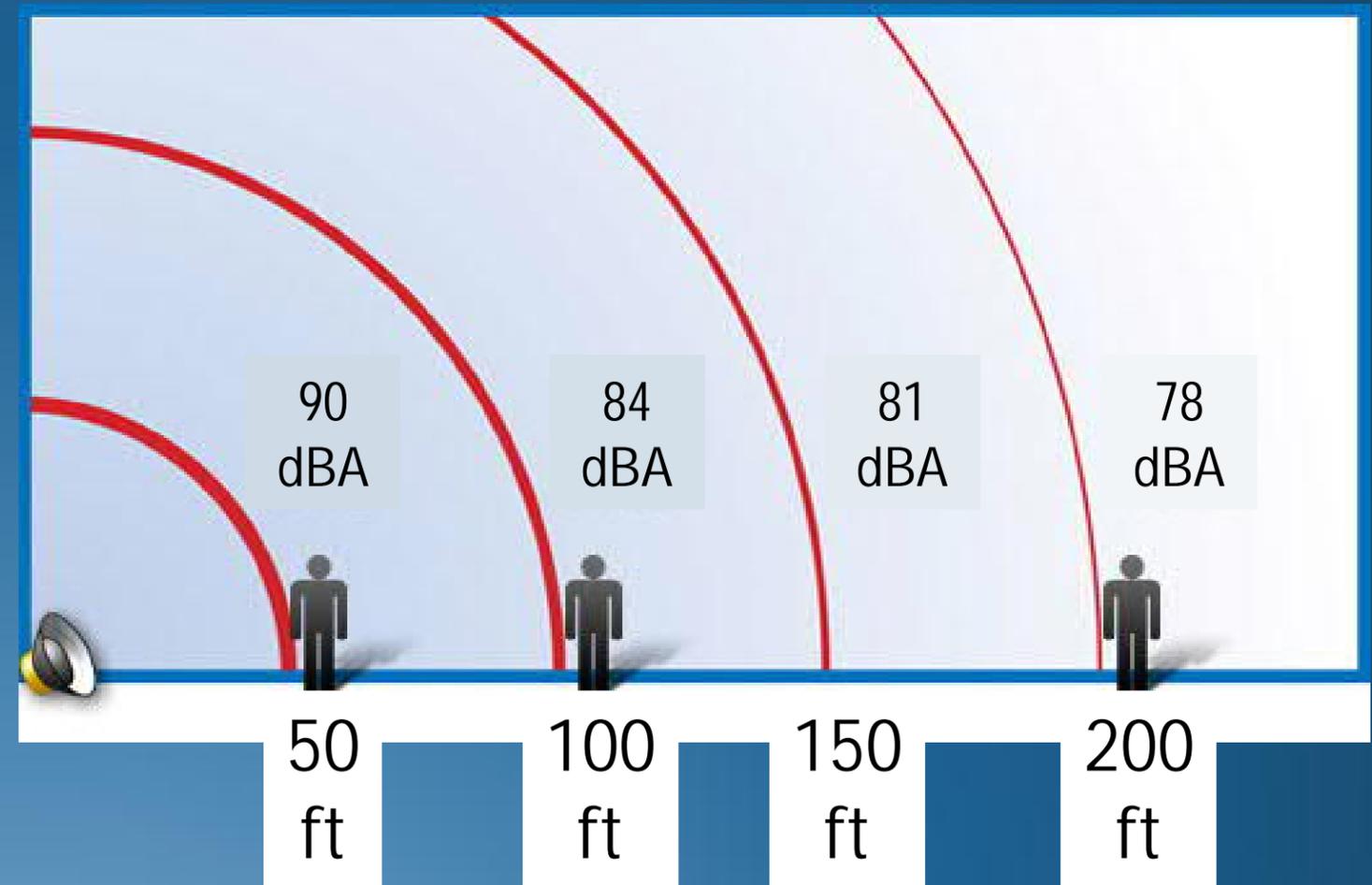
Equipment

- Foundations may be dug by an auger (85 dBA). The hole depth may vary from 6 to 11 feet deep
- Cranes (85 dBA) will be used for traffic signal pole installation.



Propagation of Sound

- For construction, noise decreases at a rate of 6 to 8 dBA each time the distance from the source doubles.
- Distances between the work area and the closest noise sensitive receptors is in the order of 20 to 25 feet.





Existing Noise Levels

- DOH night-time noise limit for residential areas is 45 dBA at the property line.
- Most construction equipment emit higher noise levels.
- Existing noise levels were RECORDED during the evening and early morning hours.



Location of Noise Measurements





Recorded Existing Noise Levels

- 7 pm to 12 midnight: 65 to 70 dBA
- 12 midnight to 5 am: 56 to 66 dBA
- Behind 6-foot high screen wall: reduce by 5 dBA
- Behind first row of houses: reduce by 5 to 20 dBA



Noise Mitigation - Plans and Procedures

- Unless authorized by DOT, noise levels produced will not exceed:
 - ❖ 95 dBA for more than 10% of the time at 50-foot distance from 8 pm to midnight
 - ❖ 75 dBA for more than 10% of the time at 50-foot distance from midnight to 5 am
- Flaggers will be employed in place of back-up alarms where safety laws allow.



Noise Mitigation - Plans and Procedures

- Use of construction equipment with exposed engine compartments will not be allowed.
- Use of power tools, pneumatic tools, hammering, grinding, or other noise producing devices or operations will not be allowed, unless pre-cleared and pre-arranged.
- Contractor will be required to comply with any restrictions imposed by DOH during the variance hours.



Kalanianaʻole Highway Traffic Signal Installation Waa Street

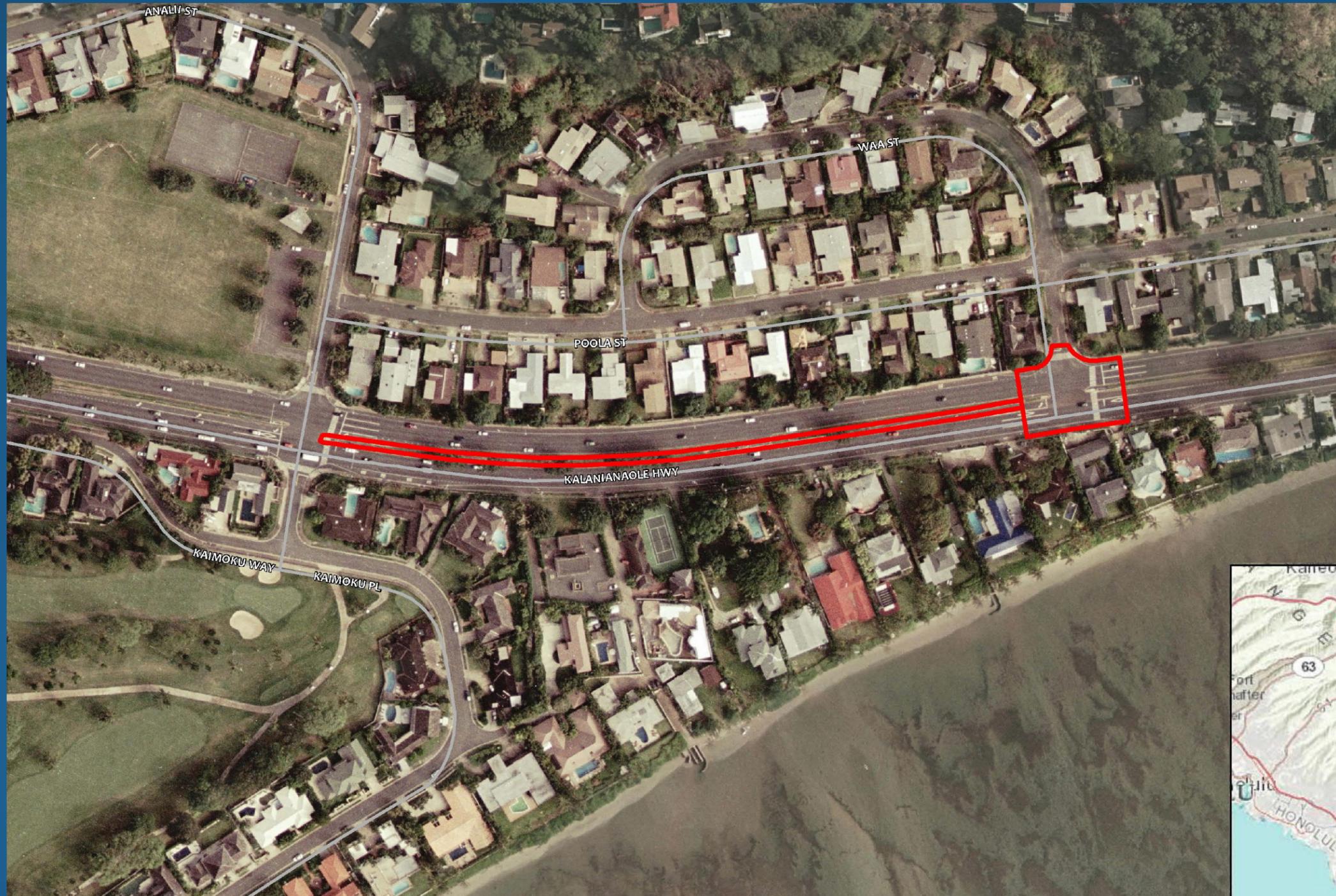
Project Purpose and Need:

Improve safety for motorists, pedestrians, and other roadway users by adding traffic signals to the currently unsignalized intersection of Kalanianaʻole Highway and Waa Street



Kalaniana'ole Highway Traffic Signal Installation Waa Street

Project Location – WAA STREET INTERSECTION





Kalaniana'ole Highway Traffic Signal Installation Waa Street

Project Description

- Installation of 6 new traffic light poles, including:
 - Installation of two traffic signal mast arms along Kalaniana'ole Highway
 - Installation of new left turn traffic signal (left arrow)
 - Installation of new pedestrian crosswalk signals
 - Installation of traffic detector loops
 - Trenching along median for installation of underground traffic signal interconnect cable
- Pavement restoration and striping.
- Median impact attenuator and guardrail reconstruction.



Kalaniana'ole Highway Traffic Signal Installation Waa Street

Project Schedule, Construction Timing & Lane Closures

- Expected start date: February 2020
- Expected end date: January 2021
- Proposed hours:
 - Sunday 8:00 p.m. to Monday 5:00 a.m.
 - Monday 8:00 p.m. to Tuesday 5:00 a.m.
 - Tuesday 8:00 p.m. to Wednesday 5:00 a.m.
 - Wednesday 8:00 p.m. to Thursday 5:00 a.m.
 - Thursday 8:00 p.m. to Friday 5:00 a.m.
- Lane Closures:
 - 1 to 2 through lane in each direction



Kalaniana'ole Highway Traffic Signal Installation Waa Street

Typical Sound Levels

Relative Sound Level	$\frac{1}{2}$ as loud	Baseline		Twice as loud	Four times as loud			
Typical Sound Environment	Indoor Office	Urban Residential		Urban Commercial				
Lmax of Common Noise Sources		Washing Machine (3 ft)	Auto (50 mph at 50 ft)	Vacuum Cleaner (3 ft)	Garbage Disposal (3 ft)	Delivery Truck (50 mph at 50 ft)	Dump Truck (50 mph at 50 ft)	Blender (3 ft)
Sound Level dBA	60	65	70	75	80	85	90	
Lmax at 50 ft of Transit Noise Source		Rail Transit with a Barrier (50 mph)		Rail Transit City Bus (50 mph) (50 mph)				

Source: EPA 1971, EPA 1974, FTA 2006



Kalaniana'ole Highway Traffic Signal Installation Waa Street

Equipment List with Noise Levels

Equipment	Decibel at 50ft.
Concrete Saw	78
Auger Drill Rig*	84
Compactor (ground)*	83
Concrete Mixer Truck*	79
Concrete Pump Truck*	81
Crane*	81
Drill Rig Truck*	79
Man Lift*	75
Vacuum Street Sweeper*	82
Vibratory Concrete Mixer*	80
Backhoe	85
Power Broom	67

Equipment	Decibel at 50ft.
Front Loader	79
Striping Machine	78
Pickup Truck	75
Labor Truck	75
Flatbed Truck	75
Hauling Truck	78
Water Truck	75
Generator	76
Paver	93
Steel Drum Roller	90
Compressor (Air)	81
Electric Mudgun	85

* Source: Federal Highway Administration Construction Noise Handbook



Noise Mitigation - Plans and Procedures

- The Contractor will provide noise monitoring and compliant response services during variance period with a call in number.
- For questions or concerns, call **Report a Highway Problem** at (808) 831-6714 or after hours at (808) 485-6200.
- Weekly construction updates are available at:
<http://hidot.hawaii.gov/highways/roadwork/oahu/>.



Title VI of the Civil Rights Act of 1964

- As an obligation to receiving Federal funds, the Department of Transportation gathers data on participants and beneficiaries.
- Public Involvement Data Card is available. Providing this information is completely voluntary and you are not required to provide this data in order to participate in the meeting.



Kalaniana'ole Highway Wa'a Street Intersection Traffic Light Installation

Comments on Noise Variance

Attention: Steven Yoshida

Department of Transportation, Highway Division

Engineering Branch

601 Kamokila Blvd., Room 602

Kapolei, Hawaii 96707

Phone: 808-692-7682

Email: steven.yoshida@hawaii.gov



Kalaniana'ole Highway Traffic Signal Installation Waa Street

More Information

HDOT

dotpao@hawaii.gov

Hidot.Hawaii.gov

Facebook & Twitter: @HDOT

808-587-2160

HDOT Oahu Lane Closures Information can be found at:

<http://hidot.Hawaii.gov/highways/roadwork/oahu/>



Questions and Answers

Mahalo!