Transportation Management Plan (TMP)

Project Title: Interstate Route H-1 Resurfacing, Miller Pedestrian Overpass to Kapiolani Interchange

Project Number: Federal Aid Project No. H1IJK-01-17M

Date: March 20, 2019

Agency: State of Hawaii
Department of Transportation
601 Kamokila Boulevard, #609
Kapolei, Hawaii 96707

Contact: Mel Chung,
Project Manager

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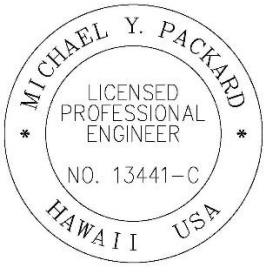
This Transportation Management Plan was developed under the direction of a licensed engineer.

TMP Level Determination

1. The project is a State of Hawaii Department of Transportation project.
2. The project is on a Freeway in an urban area.
3. The existing traffic volume during normal working hours is greater than 1,000 passenger cars/lane/hour.
4. The project anticipates lane/road closures during construction that will exceed current travel time.
5. The State of Hawaii Department of Transportation did not categorize the project location as a high crash location.
6. Public interest is anticipated to be high. Public information will be made available via the State of Hawaii Department of Transportation Public Affairs Office.
7. Impacts to environmental or historic features are not anticipated to be significant.
8. Completion Time: Approximately 12 months.
9. There will be full roadway closures during the construction.
10. There will be significant mobility impacts at night during detours.

Based on the above information and applying it to be the "Determination of a Significant Highway Project" flow chart, the project is determined to be LEVEL 3.

Prepared By: Rethwik Gona
Overseen By: Michael Packard, P.E., PTOE
Stamp:



Expiration Date: 4/30/2020
Signature: M Packard
Date: March 20, 2019

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List of Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
AC	Asphalt Concrete
CCH	City and County of Honolulu
CMS	Changeable Message Signs
DOT	Department of Transportation
DTS	Department of Transportation Services
FHWA	Federal Highway Administration
HCM	Highway Capacity Manual
HDOT	State of Hawaii Department of Transportation
HPD	Honolulu Police Department
MOT	Maintenance of Traffic
MOE	Measures of Effectiveness
MPH	Miles Per Hour
MUTCD	Manual on Uniform Traffic Control Devices
PI	Public Information
SDH	State Department of Health
TMP	Transportation Management Plan
TO	Traffic Operations
TTC	Temporary Traffic Control
v/c	Volume-to-Capacity Ratio
vph	Vehicles Per Hour

Executive Summary

The resurfacing and reconstruction of pavement on Interstate Route H-1 between the Miller Pedestrian Overpass and the Kapiolani Interchange consists of construction phases A, B, and other independent construction phases. Work will occur on weekdays during off peak hours. Construction work will begin in August 2019 with a total construction duration expected to be less than 365 calendar days, dependent on the conditions of the Noise Variance.

H-1 Lanes/On-Ramps/Off-Ramps Lane Closure Scenario:

1. **Partial Closure Scenario**
   The Contractor's work zone will be located on the shoulder side of the road. Work hours will be from 8:30 pm until 4:30 am, Sunday through Thursday, except for State holidays. Two through lanes shall be maintained during construction. The Contractor will be permitted to close lanes in either direction. During the rest of the day, all lanes will be open for use.

2. **Full Closure Scenario**
   During the construction work on H-1 in both the eastbound (Koko Head bound) and westbound (Ewa bound) directions, all travel lanes will be closed in one direction for construction work overnight. There should be no partial or full closures in the opposing direction except for emergency situations. The recommended lane closure hours are permitted from 8:30 pm to 4:30 am, Sunday through Thursday, except for State holidays. All lanes are to be open to traffic by 4:30 am. No lane closures shall take place between 4:30 am and 8:30 pm.

Cross Streets/Frontage Streets Lane Closure Scenario:

During the construction work on cross streets and frontage roads, only single lane closures are permitted unless otherwise mentioned. Lane closures are allowed between 9:00 am and 3:00 pm, Monday through Friday, except on holidays. Work that requires full road closures shall be scheduled to occur on Sundays between 8:00 am and 12:00 am.

Full closures along H-1 will require vehicle detours, increasing traffic volumes on side streets in the direction of the H-1 lane closure. Only one direction of H-1 will be closed at a time, and only between adjacent interchanges, thereby reducing the impact of the vehicle detour on side streets. During the lane closures, the primary parallel roadways such as Ala Moana Boulevard, Kapiolani Boulevard, King Street, and Beretania Street will likely experience an increase in traffic volumes. The impact on these roadways is not expected to be significant since the lane closures are scheduled to occur during weekday nights when traffic volumes are at their lowest. Three days prior to the start of construction, signs indicating construction hours and lane closures shall be posted. As a result of this advance notice, some of the existing motorists are expected to avoid these roadways during construction hours. The remaining motorists will be diverted to the parallel streets through signed detours.

During the closure of eastbound H-1 travel lanes, motorists will be directed (through CMS) to take either the Pali Highway (State Route 61) off-ramp or Punchbowl St off-ramp. From there, vehicles can progress along parallel streets such as King Street or Kapiolani Boulevard, re-connecting to H-1 through the Kapiolani Boulevard on-ramp.

During the closure of westbound H-1 travel lanes, motorists will be directed to take the Kapiolani Boulevard off-ramp. From there, vehicles can progress along Kapiolani Boulevard or Beretania Street, re-connecting to H-1 through the Punchbowl Street on-ramp or travel onto Vineyard Boulevard and take Halona Street on-ramp.

These detour routes have sufficient capacity to carry the vehicles redirected from H-1 during overnight lane closures. The on/off ramps at Punchbowl Street and Kapiolani Boulevard will be the major bottlenecks, reducing through-put traffic to a single lane. Lane closures shall be allowed only along the length of the work that will be completed that day (or night) and shall be subject to the approval of the Engineer.

TMP Roles and Responsibilities

A. TMP Manager

Mel Chung,
Project Manager
State of Hawaii
Department of Transportation
601 Kamokila Boulevard, #609
Kapolei, Hawaii 96707

B. Stakeholders/Review Committee

HWY – O, HWY – DD, and HWY – TD

Honolulu Police Department
801 South Beretania Street
Honolulu, Hawaii 96813

Department of Transportation Services
City & County of Honolulu
Frank F. Fasi Municipal Building
650 South King Street, Third Floor
Honolulu, Hawaii 96813

Kapiolani Medical Center for Women and Children
1319 Punahou Street
Honolulu, Hawaii 96826

Stakeholders may include HDOT-Highway staff from planning, design, safety, construction, operations, maintenance, public affairs, public transportation, pavement, bridge, as well as other technical specialties. This may also include the Honolulu Police Department, City and County of Honolulu Department of Transportation Services (DTS) representatives from Traffic Engineering and the Public Transit divisions, business representatives, school administration and transportation representatives, as well as emergency and towing services and the traveling public.

All the businesses, residents, and other services which are in the vicinity of the project should be informed about the construction work and lane closure schedules in advance.

C. Approval Contacts

Same as TMP Manager and Stakeholders/Review Committee.

D. TMP Implementation Task Leaders

Same as TMP Manager.

E. TMP Monitors

To be determined.

F. Emergency Contacts

Honolulu Police Department
801 South Beretania Street
Honolulu, Hawaii 96813
(808) 529-3111

Fire Station 03 Makiki
1210 Wilder Avenue
Honolulu, Hawaii 96822
(808) 523-9463

Project Description

A. Project Background

Interstate Route H-1 is a principal arterial on Oahu, carrying vehicular traffic along the southern part of the island in the east and west directions. It is a National Highway System (NHS) route, classified as an urban freeway. It is a divided highway with three to six travel lanes in each direction in addition to auxiliary lanes between most on- and off-ramps. The posted speed limit ranges from 45 to 60 mph. It was originally constructed during the late 1950's to early 1960 to provide increased accessibility to communities and development along the south shore of Oahu. It currently spans 27-miles between Farrington Highway in Kapolei and Kalanianaole Highway in Hawaii Kai.

The length of this resurfacing project is approximately three miles long and located in the urban core of the City of Honolulu. This segment of H-1 is six to eight lanes wide and has a posted speed limit that ranges from 45 to 50 mph. Figure 1 illustrates the project location.

B. Project Type

The purpose of this project is to preserve and extend the service life of this section of H-1 through pavement resurfacing and installation of new roadway elements. H-1 will be resurfaced to provide a smooth riding surface free from inconsistences and defects. During partial closures along the cross/side/frontage streets, a minimum of 10-foot wide travel lanes will be maintained.

1. H-1 Construction work during partial closures

The elements of construction work along H-1 as part of this project during the partial closures include the installation of the following elements:

- Impact Attenuator Installations
- Metal Beam Guardrails
- Signage

During the partial lane closures, two through lanes must be maintained. The Contractor will be permitted to close lanes in either direction during permitted times. Outside of construction periods, all lanes shall be open for travel. Work will primarily occur weekday nights between 8:30 pm and 4:30 am, Sunday through Thursday, except for State holidays.

2. H-1 Construction work during full closures

The elements of construction work along H-1 as part of this project during the full closures include pavement resurfacing and the installation of the following elements:

- Traffic Signal Loop Detectors /Traffic Stations
- Pavement Markings
- Street Monuments
- Signage

The contractor is permitted to close all travel lanes only in one direction of H-1, one segment at a time, during permitted times. Outside of construction periods, all lanes shall be open for travel. Work will primarily occur weekday nights between 8:30 pm and 4:30 am, Sunday through Thursday, except for State holidays.

Figure 1: Project Location Map

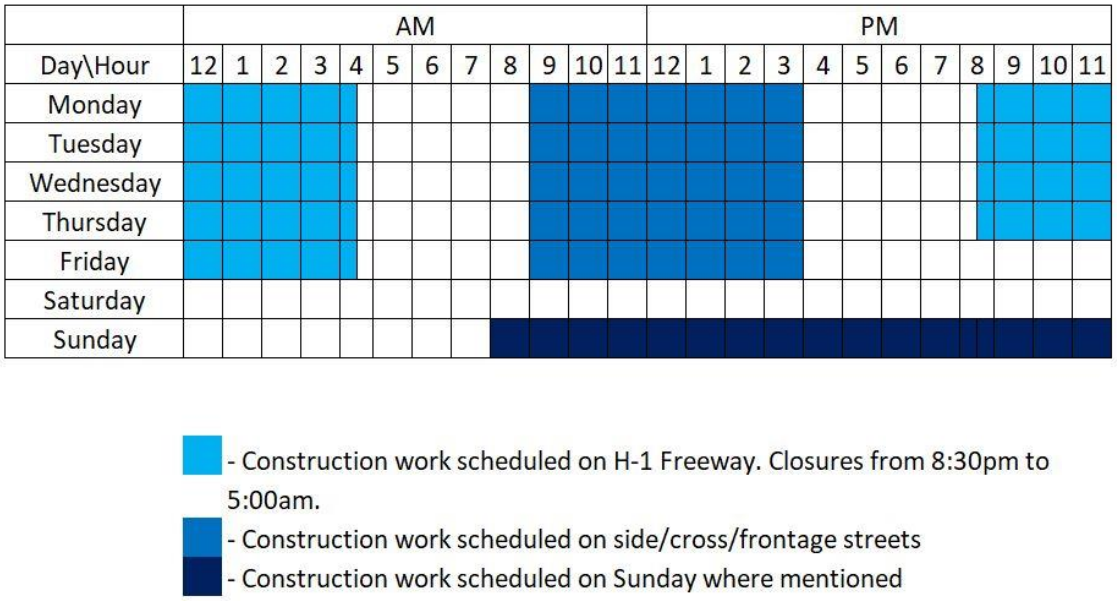
3. Cross/Frontage Street Construction

The major elements of construction work along cross/frontage streets as part of project include pavement resurfacing as well as the installation of the following elements:

- Pavement Markings
- Signage

The work on the cross streets and frontage roads shall be scheduled during weekdays between 9:00 am and 3:00 pm, Monday through Friday, except holidays. Unless otherwise indicated, only single lane closures will be allowed in each direction at a time. Where indicated, if the work requires full closure, it will be scheduled to occur Sundays between 8:00 am and 12:00 am.

Table 1: Construction Work Timing Schedule



C. Project Area/Corridor

The project area includes both directions along a three mile stretch of H-1, extending from milepost 21.80 to 24.80. Through this area, H-1 is a rolling, six to eight lane, divided highway with auxiliary lanes in places between on- and off-ramps. The posted speed limit ranges from 45 to 50 mph. Shoulders exist along H-1 through most of the project corridor. Where a shoulder is present, the width varies from two (2) to ten (10) feet wide. H-1 is divided by a two (2) foot wide concrete barrier. H-1, the frontage roads, and all on- and off-ramps are owned and maintained by HDOT. Where side streets cross and intersect with H-1, they too are owned and operated by HDOT.

D. Project Goals and Constraints

The purpose of this project is to preserve and extend the service life of this section of H-1 through resurfacing and installation of new roadway elements. The purpose of this Transportation Management Plan is to minimize motorist delays while maximizing contractor efficiency during construction work on H-1. This shall be accomplished without compromising public or worker safety, or the quality of the work being performed.

E. Proposed Construction Phasing/Staging

Construction phasing information is presented for individual segments hereinafter. Detailed construction Phasing and Staging information is included in the Temporary Traffic Control Plans.

Eastbound H-1 Full Closures

- Work includes all travel lanes of eastbound H-1 including the auxiliary lanes, ramps, and gore areas. The contractor is allowed to close all travel lanes during the times permitted. These full closures occur in multiple individual phases. The sequence of the phase closures are to be determined by the Contractor and approved by HDOT. Work shall be done on weekdays, Sunday through Thursday, between 8:30 pm and 4:30 am, except for State holidays.
    - Phase 1A: Exit at Punchbowl Street off-ramp, close H-1 up to Vineyard Boulevard on-ramp. Open H-1 access at Vineyard Boulevard on-ramp.
    - Phase 1B: Exit at Kinau Street off-ramp, close H-1 up to Vineyard Boulevard on-ramp. Open H-1 access at Vineyard Boulevard on-ramp.
    - Phase 1C: Exit at Kinau Street off-ramp, close H-1 up to Ward Avenue on-ramp. Open H-1 access at Ward Avenue on-ramp.
    - Phase 1D: Exit at Kinau Street off-ramp, close H-1 up to Piikoi Street on-ramp. Open H-1 access at Piikoi Street on-ramp.
    - Phase 1E: Exit at Kinau Street off-ramp, close H-1 up to University Avenue on-ramp. Open H-1 access at University Avenue on-ramp.
    - Phase 1F: Exit at Punahou Street off-ramp, close H-1 up to University Avenue on-ramp. Open H-1 access at University Avenue on-ramp.
    - Phase 1G: Exit at Punahou Street off-ramp, close H-1 up to Kapiolani Boulevard on-ramp. Open H-1 access at Kapiolani Boulevard on-ramp

Westbound H-1 Full Closures

- Work includes all travel lanes of westbound H-1 including the auxiliary lanes, ramps, and gore areas. The contractor is allowed to close all the travel lanes during the times permitted. These full closures occur in multiple individual phases. The sequence of the phase closures are to be determined by contractor and approved by the HDOT. Work shall be done on weekdays, Sunday through Thursday, between 8:30 pm and 4:30 am, except for State holidays.
    - Phase 2A: Exit at Kapiolani Boulevard off-ramp, close H-1 up to Old Waialae Road on-ramp. Open H-1 access at Old Waialae Road on-ramp.
    - Phase 2B: Exit at Old Waialae Road off-ramp, close H-1 up to University Avenue on-ramp. Open H-1 access at University Avenue on-ramp.
    - Phase 2C: Exit at University Avenue off-ramp, close H-1 up to Punahou Street on-ramp. Open H-1 access at Punahou Street on-ramp.
    - Phase 2D: Exit at University Avenue off-ramp, close H-1 up to Lunalilo Street on-ramp. Open H-1 access at Lunalilo Street on-ramp.
    - Phase 2E: Exit at Lunalilo Street off-ramp, close H-1 up to Punchbowl Street on-ramp. Open H-1 access at Punchbowl Street on-ramp.
    - Phase 2F: Exit at Vineyard Boulevard off-ramp, close H-1 up to Punchbowl Street on-ramp. Open H-1 access at Punchbowl Street on-ramp.

Eastbound H-1 Partial Closures

- Work includes the median and shoulder on eastbound H-1. Contractor is allowed to close up to three lanes as long as at least two travel lanes remain open to traffic at all times. As a part of construction work the Vineyard Boulevard on ramp, Ward Avenue on-ramp, Piikoi Street on-ramp, King Street off-ramp and University Avenue "U-3" off-ramp (eastbound H-1 off-ramp onto University Avenue northbound) are closed as needed during construction. Work shall be done on weekdays, Sunday through Thursday, between 8:30 pm and 4:30 am, except for State holidays.

Westbound H-1 Partial Closures

- Work includes the median and shoulder on westbound H-1. Contractor is allowed to close up to three lanes as long as at least two travel lanes remain open to traffic at all times. As a part of construction work the University Avenue "U-8" on-ramp (westbound H-1 on-ramp from University Avenue southbound), University Avenue "U-5" off-ramp (H-1 westbound off-ramp onto University Avenue northbound), University Avenue "U-6" on-ramp (westbound H-1 on-ramp from University Avenue northbound), Old Waialae Road on and off-ramp are closed as needed during construction. Work shall be done on weekdays, Sunday through Thursday, between 8:30 pm and 4:30 am, except for State holidays.

Ward Avenue: Refer to Temporary Traffic Control Plan for Phasing

- Phase A:
  - Construction work on the west half of Ward Avenue from Kinau Street to Kinalau Place/Ward Avenue on-ramp. The two left lanes on Kinau Street, approaching the intersection with Ward Avenue, will be closed and access to Kinalau Place will be closed during construction hours weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.
- Phase B:
  - Construction work on the east half of Ward Avenue from Kinau Street to Kinau Place/Ward Avenue on-ramp. The left lanes on Kinau Street, approaching the intersection with Ward Avenue, will be closed and the Ward Avenue on-ramp will be closed during construction hours weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.
- Phase C:
  - Construction work at the intersection of Ward Avenue and Lunalilo Street. This will be further divided into four stages, each including one corner of the intersection.

Lunalilo Street: Refer to Temporary Traffic Control Plan for Phasing

- Phase A:
  - Construction work along Lunalilo Street from Pensacola Street to Ernest Street. This phase will be further divided into four stages. Work shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.
- Phase B:
  - Construction work along Lunalilo Street from Piikoi Street to Pensacola Street. This phase will be further divided into four stages. Work included shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.

- Phase C:
  - Construction work along Lunalilo Street from Kewalo Street to Piikoi Street. This phase will be further divided into three stages. Work included in Stage 3 requires complete closure of Lunalilo Street and may be completed on a Sunday from 8:00 am to 12:00 am. Remaining work shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.
- Phases D and E:
  - Construction work along Lunalilo Street from Kaihee Street to Kewalo Street. Both phases require the complete closure of Lunalilo Street and may be completed on a Sunday from 8:00 am to 12:00 am.

Keeaumoku Street: Refer to Temporary Traffic Control Plan for Phasing

- Phase A:
  - Construction work along Keeaumoku Street from Kinau Street to the overpass. This phase will be further divided into three stages. All the construction work shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.
- Phase B:
  - Construction work along Keeaumoku Street from Kaihee Street to the top of the overpass. This phase will be further divided into four stages. All the construction work shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.

Bingham Street: Refer to Temporary Traffic Control Plan for Phasing

- Phase B1:
  - Construction work along Bingham Street from McCully Street to Isenberg Street. This will require a full closure of the roadway. All construction work shall be done on a Sunday between 8:00 am and 12:00 am.
- Phase B2:
  - Construction work along Keeaumoku Street from Punahou Street to McCully Street. This will require a full closure of the roadway. All the construction work shall be done weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays. To maintain traffic circulation to and from Kapiolani Medical Center (Emergency Room entrance and exit driveways may be accessed from Bingham Street) during construction hours, the pavement reconstruction work shall always maintain a 10-foot minimum clearance along the roadway, between Punahou and Alexander Streets, by working on one side of the road at a time.
- Phases B2B1 and B2B2:
  - Construction work at the Punahou Street and Bingham Street intersection. All the construction work shall be done weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.

Metcalf Street: Refer to Temporary Traffic Control Plan for Phasing

- Work will be done along Metcalf Street from Alexander Street through the intersection with Dole Street. All construction work shall be done weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.

McCully Street: Refer to Temporary Traffic Control Plan for Phasing

- Phase A:
  - Construction work along the southbound lanes over the McCully Street bridge overpass from Beretania Street to Dole Street. This will require full closures. All the construction work shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.
- Phase B:
  - The construction work along the northbound lanes over the McCully Street bridge overpass from Beretania Street up to Dole Street. This will require full closures. All construction work shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.

Wilder Avenue: Refer to Temporary Traffic Control Plan for Phasing

- Phase A:
  - Construction work along Wilder Avenue from westbound H-1 on-ramp to Dole Street. This will require closure of the Wilder Avenue off-ramp and may be completed on Sundays between 8:00 am and 12:00 am.
- Phase B:
  - Construction work along Wilder Avenue from the University Avenue to westbound H-1 on-ramp. This will require closure of the "U-8" on-ramp (westbound H-1 on-ramp from southbound University Avenue), completed on a Sunday between 8:00 am and 12:00 am.
- Phase B1 and B2:
  - Construction along University Avenue between the on and off-ramps. This will require ramp closures and will be completed on a Sunday between 8:00 am and 12:00 am.

Waiaka Road: Refer to Temporary Traffic Control Plan for Phasing

- Phase A:
  - Construction work will be performed along eastbound lanes on Waiaka Road from Kapiolani Boulevard to Waiaka Place. All construction work shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.
- Phase B:
  - Construction work will be performed along westbound lanes on Waiaka Road from Kapiolani Boulevard to Waiaka Place. All construction work shall be done on weekdays, Monday through Friday, between 9:00 am and 3:00 pm, except for State holidays.

F. General Schedule and Timeline

Construction work will begin in August 2019 and may continue until August 2020, at the latest, for a total construction duration of 12 months. The Preliminary Construction Schedule is shown in Figure 2.

G. Related Projects

None identified.

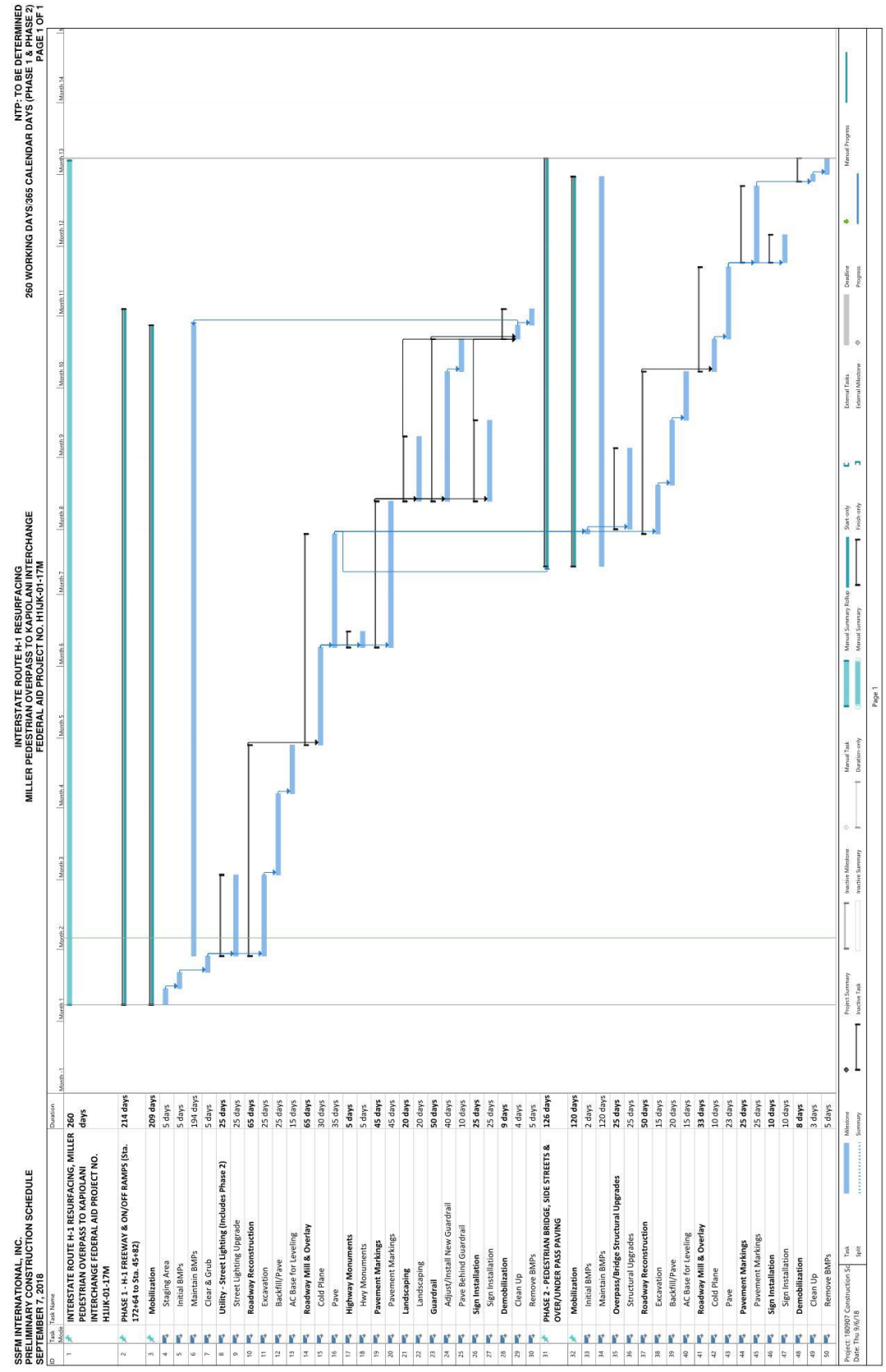


Figure 2: Preliminary Construction Schedule

Existing and Future Conditions

A. Data Collection and Modelling Approach

The Hawaii State Department of Transportation (HDOT) collects volumes annually on State and County roadways. Data is collected at locations through counter stations that use piezometers embedded in the pavement in addition to temporary tube counting machines. Locations chosen for data collection vary from year to year. Historical data obtained from HDOT counts in the vicinity of Lunalilo Street off-ramp to Punahou Street off-ramp were used in the analysis.

B. Existing Roadway Characteristics

Interstate Route H-1 is the primary east-west thoroughfare for commuters traveling between west Oahu and downtown Honolulu. The right-of-way through the project area varies from 110 feet (near the McCully Street Overpass) to 300 feet (near the Pali Highway and Puowaina Interchange). The posted speed limit varies between 45 and 50 mph.

This segment includes three to four through travel lanes in each direction of H-1, and on- and off-ramps. There are 21 on- and off-ramps within this three mile section of H-1. In the eastbound direction, five on-ramps and five off-ramps exist. In the westbound direction, five on-ramps and six off-ramps exist.

This project segment of H-1 provides access to numerous businesses, retail centers, parks, churches, downtown Honolulu, and private and public schools, including Honolulu Community College and the University of Hawaii at Manoa. Land use in the vicinity of this section of H-1 is highly urbanized and consists of governmental, commercial and residential properties, including single family houses, apartments, and condominiums.

Under current conditions, trucks comprise 3.5 to 4% of the total traffic volume. This section of H-1 is not a designated truck route. Commercial trucks are encouraged to use Nimitz Highway (State Route 92), which runs parallel to H-1, west of the project area, passing by shipping ports and industrial areas. Parallel roadways are described below and shown in Figure 3.

Parallel Roadways

- Ala Moana Boulevard serves as an extension of Nimitz Highway. For the majority of the roadway, it is a six lane, divided, principal urban arterial, with protected left turning lanes at most intersections, and a posted speed limit of 35 mph. It runs on the makai side of H-1 and has sidewalks along both sides of the road. Bike lanes exist on Ala Moana Boulevard from the western end of the project area to Bethel Street. An off-street shared use path runs makai of Ala Moana Boulevard between Kamakee Street and the eastern end of the project area.
- Kapiolani Boulevard is a six lane urban arterial that runs between H-1 and Ala Moana Boulevard. It has a posted speed limit of 35 mph. Lanes are contraflowed during peak hours of traffic. Sidewalks exist on both sides of the roadway but it has no bike facilities.
- King Street is a one-way, eastbound, urban arterial that runs parallel to H-1 and has a posted speed limit of 30 mph. It has four to six travel lanes and sidewalks on both sides. A two-way asphalt berm and delineator protected bike lane runs along the mauka portion of the road between Alapai Street and Isenberg Street.

Figure 3: Parallel Routes to H-1 Freeway

- Beretania Street is a one-way, westbound, urban arterial that runs parallel to H-1 and has a posted speed limit of 30 mph. It has four to six travel lanes and sidewalks on both sides. A combination bike lane/route runs along the mauka portion of the road between University Avenue and Alapai Street.
- Vineyard Boulevard is a six lane urban arterial that runs parallel to H-1 and eventually merges into it after running for about 1.5 miles east from the intersection of Olomea Street and Palama Street. It has a posted speed limit of 30 mph. Sidewalks exist on both sides of the roadway but it has no bike facilities.

C. Existing and Historical Traffic Data

Annual average daily traffic (AADT) volume data along H-1 was taken from 2017 HDOT Counts and on parallel routes from annual HDOT Counts. These have been included in Appendix A. The traffic volumes are presented in Table 2. The average of the 2017 two-way AADT's collected at six different locations on H-1 within the project limits is 152,600 veh/day. The directional divide is 52% eastbound and 48% westbound based on historical data.

Table 2: 24 Hour (2-way) Volumes on H-1 and Parallel Routes

Route	Speed Limit (mph)	Year	24 Hour (2-way) Volumes (vehicles)	Eastbound (vehicles)	Westbound (vehicles)
H-1 Freeway	45	2017	152,600*	79,300	73,200
Ala Moana Blvd.	35	2016	40,500	22,800	17,700
Kapiolani Blvd.	35	2016	26,200	15,000	11,200
King St.	30	2015	32,200	-	32,200
Beretania St.	30	2015	44,700	44,700	-
Vineyard Blvd.	30	2016	34,800	20,800	14,000

*Based on the average of 2017 HDOT Counts at 6 locations within project limits.

D. Existing Traffic Operations

All parallel routes are signalized at the major intersections. All left turning movements from Ala Moana Boulevard have protected only signal phasing. Along King and Beretania Streets, left turning signal controls vary. Phasing for left turn movements from Kapiolani Boulevard vary per intersection and time of day. Contraflow is used along Kapiolani Boulevard during weekday peak AM and PM traffic periods, during which time left turns are prohibited through signage and coning.

E. Incident and Crash data

Accident analysis was generated by HDOT within the project limits on H-1 utilizing data from the three most recent years of data available (2010-2012). This data reflected "major" traffic accidents which are considered those that incurred $3,000 of damage or greater, or one in which the accident resulted in injury or death. The most frequent type of human factor reported in the police report was inattention. The incidents occurred in all lanes of travel. The majority (65%) of incidents occurred during daylight

hours, however traffic volumes are also greatest during this time. The location with the greatest number of major traffic accidents within the project limits is in the eastbound H-1 lanes near the Vineyard Street overpass. The traffic accident data for the study corridor on H-1 was provided by HDOT and can be found in Appendix B.

F. Local Community and Business Concerns

The majority of the construction work is scheduled during night-time and off-peak hours to reduce the traffic impacts on the local community, businesses, and the traveling public. Businesses which are open during those times may be impacted. All the businesses, condominiums, and other services in the vicinity of the project should be informed about the construction work and lane closure schedules in advance.

G. Traffic growth rates

HDOT expects the traffic volumes on H-1 within project limits to grow at a rate of 1.2% per year. Using that growth rate, the ADT of 152,600 veh/day in 2017, is expected to reach 173,100 by 2027. Detailed volumes at specific locations are presented in Table 3.

Table 3: 2017 and 2027 Traffic Volumes Comparison on H-1

Mile Post	HDOT Counts, 2017 24 Hour Volumes (vehicles)	HDOT Forecasts, 2027 24 Hour Volumes (vehicles)
21.80 - 22.12	180,100	206,100
22.13 – 23.07	201,100	225,700
23.07 – 24.13	147,800	167,900
24.13 – 24.41	130,200	147,800
24.41 – 24.83	116,200	132,000
24.83 – 25.15	140,000	158,900
Average	152,600	173,100

H. Traffic Predictions During Construction

During periods when full closure of H-1 is implemented during construction, vehicles will be diverted along selected detours. The detours follow a set of parallel routes which were selected based on the existing traffic volumes and available capacity. Full closures will be limited to weekdays, between 8:30 pm and 4:30 am, except for State holidays. These periods were selected due to the fact that traffic volumes on H-1 are lower and the parallel routes have sufficient capacity to carry the rerouted traffic. The on- and off-ramps at Punchbowl Street and Kapiolani Boulevard are expected to be the bottlenecks due to throughput being limited to one lane.

During periods when partial closure of H-1 is implemented during construction, two throughput travel lanes will be maintained. Partial closures will be limited to weekdays, between 8:30 pm and 4:30 am, except for State holidays. These periods were selected due to the fact that traffic volumes on H-1 are low enough that the two travel lanes (estimated at 2200[1] veh/hr/ln during normal conditions and slightly

[1] Interpolated from the Exhibit 12-4: Basic Freeway and Multilane Highway Segment Capacity Under Base Conditions. SOURCE: Chapter 12, Volume 2, Highway Capacity Manual, 6th Edition, 2016.

lower capacity when adjacent to work zone) will be able to carry the existing traffic volumes. A minor delay can be expected as a results of the merge of lanes upstream to the partial closures.

During construction work on side/cross/frontage streets, only single lane closures are permitted during weekday non-peak hours from 9:00 am to 3:00 pm. When full closure is required, construction will be limited to Sundays from 8:00 am to 12:00 am. Short-term roadway closures on local streets are expected to have a larger effect on the residents of the immediately surrounding area due to noise from construction. However, these effects are temporary and can be mitigated by adhering to SDH's Noise Reference Manual. Refer to Work Zone Impact Assessment Report, part G for more analysis on traffic predictions during construction.

Work Zone Impact Assessment Report

A. Qualitative Summary of Anticipated Work Zone Impacts

During construction, H-1 roadway closures are expected to impact local and regional traffic. These impacts are not expected to be significant since they are occurring at night. The parallel roadways such as Ala Moana Boulevard, Kapiolani Boulevard, King Street, and Beretania Street will experience an increase in traffic during these times. Three days prior to the construction beginning, signs indicating road closure and construction hours will be placed along affected travel ways. As a result of this notice, some motorists are expected to avoid H-1 during construction hours.

Motorists approaching either side of the work zone will be informed of impending construction and will likely be subject to delay as a result of the queue from the loss of lane and congestion where vehicles chose to detour ahead of the closures. The key will be to advise motorists early so they can make informed decisions.

B. Construction Approach/Phasing/Staging Strategies

The construction work on H-1 will occur weekdays, between 8:30 pm and 4:30 am, Sunday through Thursday, except for State holidays. This period was chosen due to the lesser number of vehicles impacted and analysis showing that alternative routes have the additional capacity to carry the detoured vehicles. Construction work on frontage streets and ramps is scheduled to occur weekdays, between 9:00 am and 3:00 pm, Monday through Friday except for State holidays, and on Sundays between 8:00 am and 12:00 am wherever indicated, thereby falling outside of the peak commuting hours. All the construction work is scheduled in off-peak hours, which helps to minimize the impact and reduces the delays caused by construction.

C. Work Zone Impacts Management Strategies

Temporary Traffic Control (TTC) Strategies, Public Information, and Transportation Operation Strategies are identified as effective Work Zone Impacts Management Strategies and are further discussed in the respective sections.

D. Measures of Effectiveness

Volume and capacity are identified as the Measures of Effectiveness used for this TMP. 24-hour traffic volumes on H-1 and other roads were collected from historical data. The capacity of each road was

determined using the roadway type and number of lanes per guidance from NCHRP Report 599: Default Values for Highway Capacity and Level of Service Analyses. The volume-to-capacity (v/c) ratio was then calculated to analyze the ability of roadways to accommodate the added traffic volume diverted from lane and road closures during construction.

E. Traffic Analysis Strategies

The detour routes identified for use during the closure of H-1 were selected by reviewing the parallel route's volume and capacity. During lane closures, all detour routes are anticipated to be able to handle the diverted traffic from H-1. This was determined through a v/c calculation of 1.0 or less. If the v/c is equal to 1.0, then the route is determined to be operating at its maximum capacity.

F. Analysis Tool Selection, Methodology and Justification

The Highway Capacity Manual (HCM), 2016 was used to obtain the methodology and justification. The methodology was the determination of roadway capacity and determination of v/c.

Detours:

During the eastbound H-1 lane closure scenario, motorists will be directed to exit H-1 through both the Pali Highway off-ramp and the Punchbowl Street off-ramp. Vehicles detoured to these off-ramps will be directed to King Street and Kapiolani Boulevard. Both routes lead to the Kapiolani Boulevard on-ramp, which can be used to merge back onto H-1, avoiding the work zone. While calculating the v/c for traffic on the detour routes, it was assumed that half of the detoured motorists exit from the Pali Highway off-ramp and the other half exit from the Punchbowl Street off-ramp. Similarly, it was assumed that half of detoured motorists will take Kapiolani Street east and the other half will take King Street east.

During the westbound H-1 lane closure scenario, motorists will be directed to exit H-1 through the Kapiolani Boulevard off-ramp. Motorists will then be directed towards Beretania Street and Kapiolani Boulevard. Motorists are further directed on to Punchbowl Street and Vineyard Street to take the respective Punchbowl Street on-ramp and Halona Street on-ramp. While calculating the v/c, it is assumed that half the detoured motorists will use Kapiolani Boulevard and other half will use Beretania Street. Similarly, it is assumed that half of detoured motorists take Punchbowl Street on-ramp and the other half Halona Street on-ramp.

These parallel routes were selected as the preferred detour routes since they are the highest classification roadways and have sufficient capacity to accommodate the diverted traffic. The detour routes are presented in Figure 4.

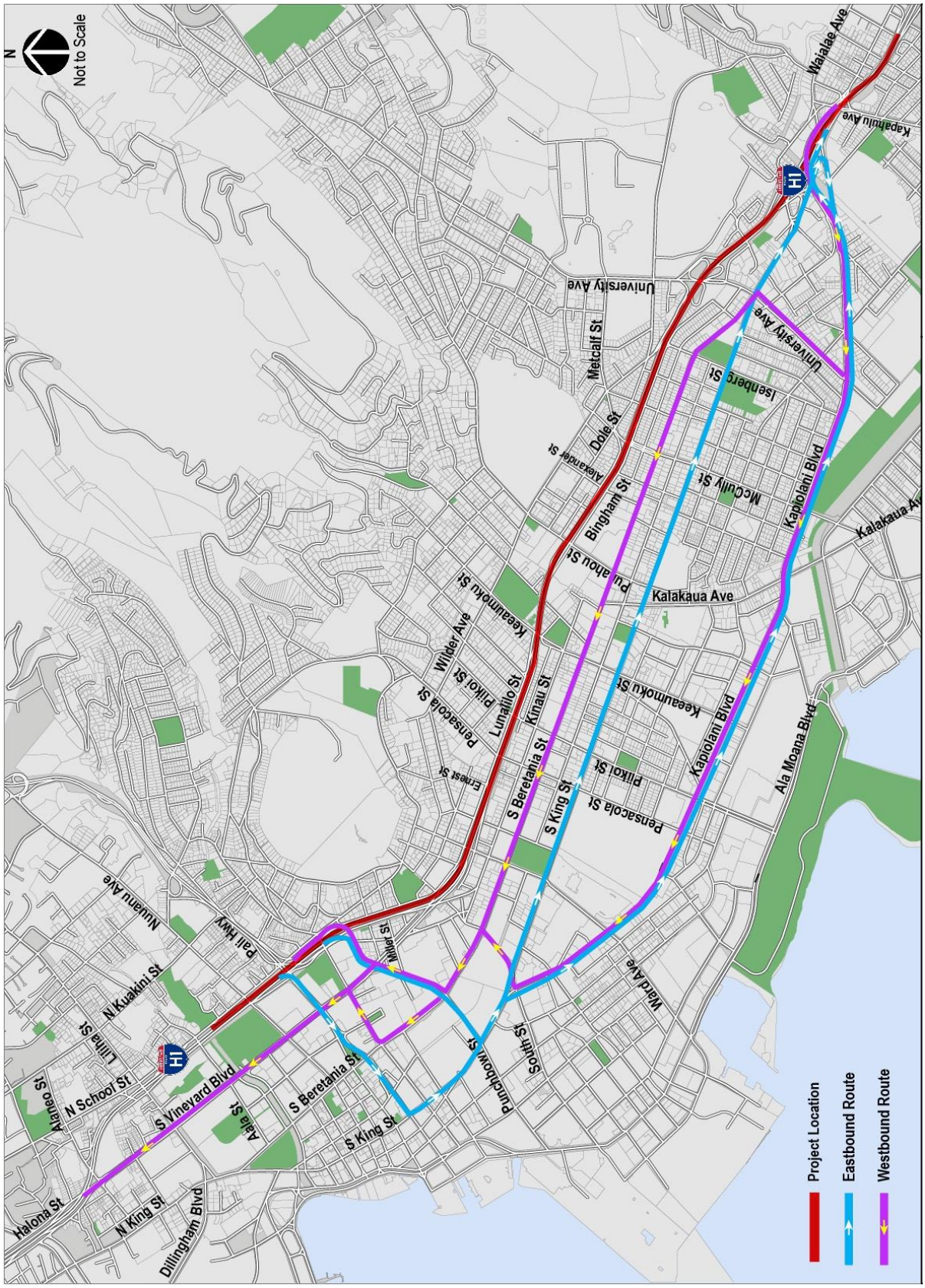


Figure 4: Proposed Detour Routes during H-1 Freeway Full Closure

Volume:
The 24-hour volumes on H-1 and designated detour routes were obtained from 2015 data from the HDOT Traffic Counts Program. 2015 volumes were forecasted to 2019 (anticipated year of construction) by applying a growth factor of 1.05 to account for a growth rate of 1.2% per year. Expected 2019 H-1 volumes were then added to the forecasted values on selected detours to calculate the volumes these detours will be accommodating during full roadway closures of H-1.

Capacity:
The capacity is estimated based on the roadway type and number of lanes present. NCHRP Report 599: Default Values for Highway Capacity and Level of Service Analyses recommends to use 1,750 veh/hr/ln as the allowable flow rate for an urban scenario. Table 4 includes street capacity.

Table 4: Capacities of Streets on H-1 Detours

Street	No. of Lanes	Capacity (veh/hr/ln)
Halona Street on-ramp	1	1,750
Pali Hwy off-ramp	3	5,250
Punchbowl Street on-ramp	1	1,750
Punchbowl Street off-ramp	1	1,750
Punchbowl Street	2	3,500
Bishop Street	4	7,000
Queen Emma Street	2	3,500
Beretania Street	4	7,000
King Street	4	7,000
Kapiolani Boulevard	3	5,250
Kapiolani Boulevard on-ramp	2	3,500
Kapiolani Boulevard off-ramp	1	1,750

Volume-to-Capacity:
The forecasted 2019 24-hour volumes were divided by the capacity to calculate the v/c ratio for each corridor. These v/c ratios were calculated by time of day, so the construction timings could be chosen when the v/c ratios on all roadways are less than or equal to 1.0.

G. Analysis Results

Traffic (volume, capacity)
For the eastbound H-1 detour route, the Punchbowl Street off-ramp and Kapiolani Boulevard on-ramp are expected to be near or over capacity during the start of construction hours. For the westbound H-1 detour route, the Kapiolani Boulevard off-ramp, and the Punchbowl Street and Halona Street on-ramps are expected to be near or over capacity during the start of construction hours. At all other times during construction, the v/c ratio on all streets is expected to be less than 1.0. The v/c ratios on all streets between 8:30 pm and 4:30 am are presented in Figures 5 and 6 and Tables 5 and 6.

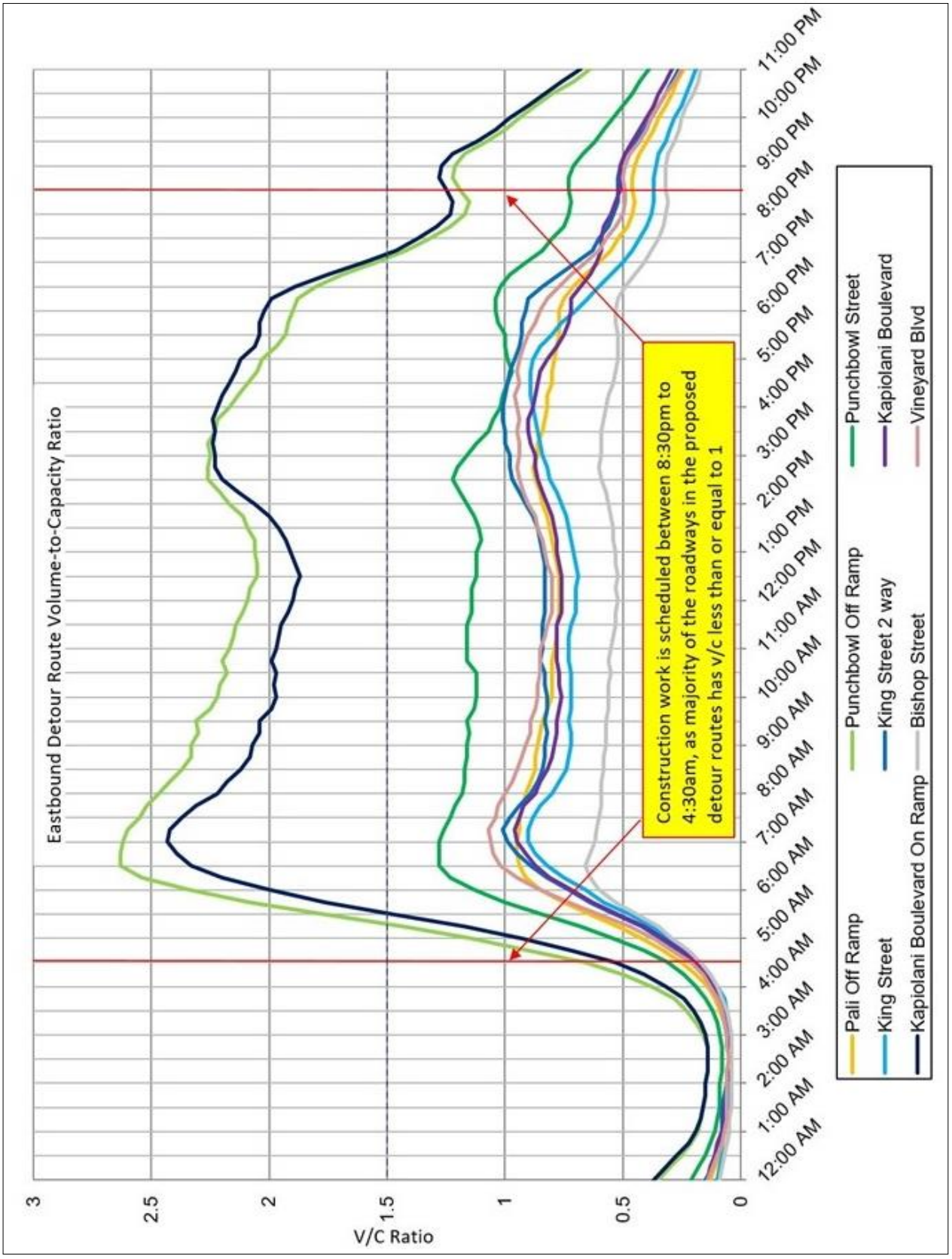


Figure 5: Eastbound Detour Route Volume-to-Capacity Ratio

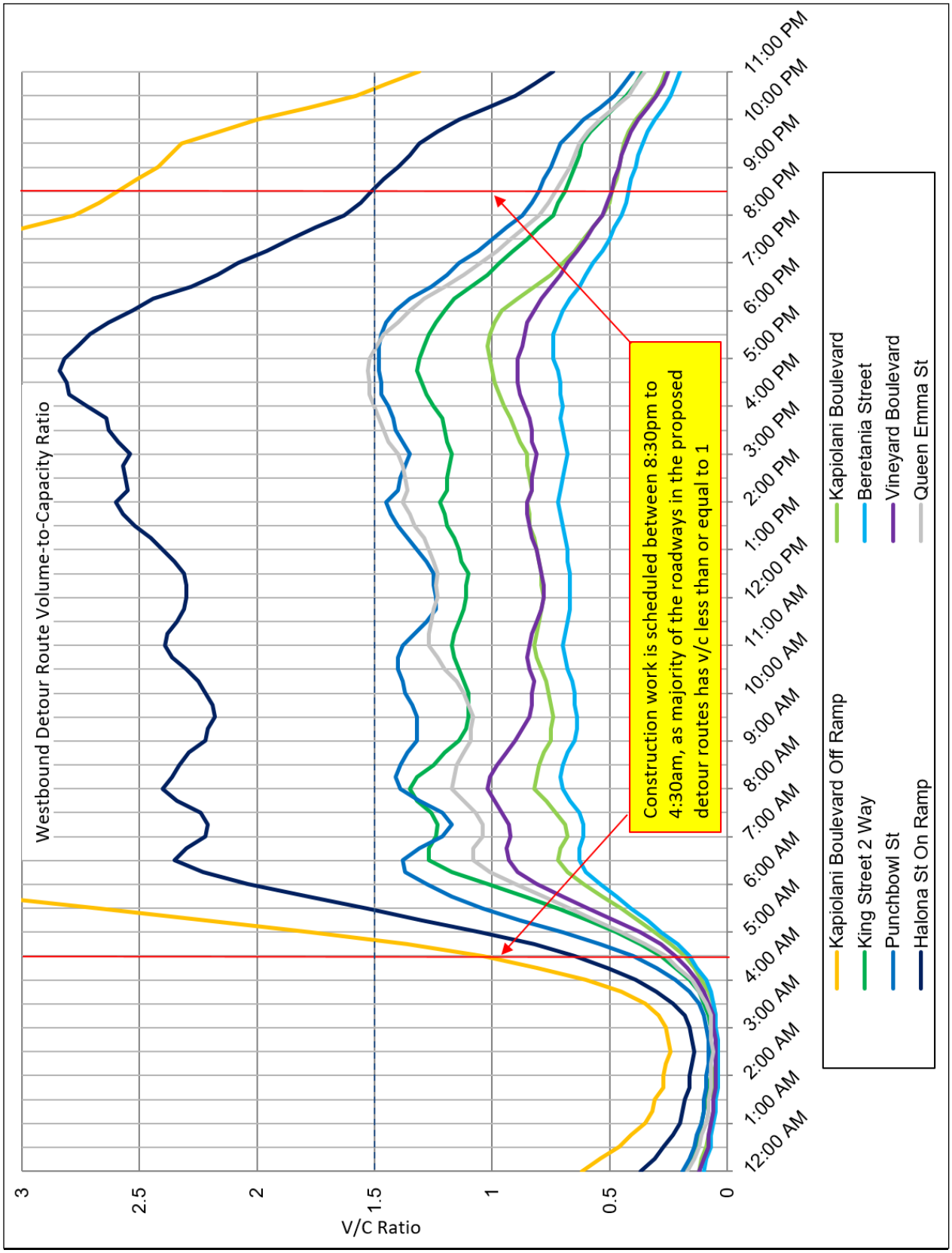


Figure 6: Westbound Detour Route Volume-to-Capacity Ratio

Table 5: Eastbound H-1 Detour v/c results

Eastbound Corridor	Volume-to-Capacity (v/c) Ratio							
	8:30pm	**10:00pm**	**11:00pm**	**12:00am**	**1:00am**	**2:00am**	**3:00am**	**4:30am**
Pali Hwy off-ramp	0.46	0.35	0.24	0.13	0.07	0.06	0.06	0.25
Bishop Street	0.32	0.25	0.17	0.09	0.05	0.04	0.04	0.17
Vineyard Boulevard	0.49	0.38	0.25	0.14	0.07	0.06	0.06	0.21
Punchbowl Street off-ramp	**1.19**	0.94	0.64	0.35	0.18	0.09	0.16	0.66
Punchbowl Street	0.73	0.54	0.39	0.21	0.11	0.15	0.09	0.31
King Street	0.52	0.38	0.26	0.15	0.08	0.06	0.06	0.19
Kapiolani Boulevard	0.51	0.40	0.29	0.14	0.08	0.06	0.06	0.19
Kapiolani Blvd on-ramp	**1.25**	0.98	0.68	0.37	0.19	0.15	0.15	0.53

Table 6: Westbound H-1 Detour v/c results

Westbound Corridor	Volume-to-Capacity (v/c) Ratio							
	8:30pm	**10:00pm**	**11:00pm**	**12:00am**	**1:00am**	**2:00am**	**3:00am**	**4:30am**
Kapiolani Blvd off-ramp	**2.59**	**2.00**	**1.31**	0.62	0.35	0.27	0.26	**1.04**
Kapiolani Boulevard	0.49	0.39	0.26	0.12	0.07	0.06	0.05	0.18
Beretania Street	0.42	0.31	0.20	0.10	0.06	0.04	0.05	0.16
Punchbowl Street	0.80	0.61	0.40	0.19	0.11	0.09	0.09	0.40
Queen Emma Street	0.73	0.54	0.35	0.17	0.09	0.07	0.07	0.26
Vineyard Boulevard	0.49	0.38	0.25	0.12	0.07	0.05	0.06	0.22
Punchbowl St on-ramp*	**1.51**	**1.14**	0.74	0.37	0.20	0.16	0.16	0.65
Halona Street on-ramp	**1.22**	0.96	0.63	0.30	0.17	0.13	0.13	0.49

* HDOT Traffic Counts were not available. Hence, v/c ratio was calculated from detoured H-1 values and capacity.

Safety

Barriers and delineators will be placed at the H-1 and ramp closure locations. An HPD vehicle with flashing blue lights will be stationed at each ramp closure for notification and safety.

Adequacy of Detour Routes

The acceptable roadway closure times were identified by insuring that detour routes have adequate capacity to accommodate the volumes diverted from H-1. However, in the eastbound direction, the Punchbowl Street off-ramp, and in the westbound direction, the Kapiolani Boulevard off-ramp and the Punchbowl Street on-ramp are expected to be over capacity during the start of construction work for a short duration. During all other times in both directions, traffic volumes are expected to be below roadway capacity. The delay caused by a detour is defined as the difference in travel time compared to normal traffic flow without the detour. In this case, the delay can be estimated by calculating the travel time on the designated detour driving 25-30 mph minus the travel time along the corresponding section of H-1 at 50 mph. Using this methodology, the travel time delays are expected to be 15 to 20 minutes across the entirety of the three mile project.

Business/Community Impacts

The majority of the construction work on H-1 is scheduled during night-time and off-peak hours thereby reducing the traffic impacts on the local community and businesses. Businesses which are open during those times may be impacted however not significantly. Emergency response vehicles will be allowed continuous access to specific businesses, such as Kapiolani Medical Center for Women and Children.

Construction work on side/cross/frontage streets is scheduled during non-peak daylight hours and includes short term roadway closures. All existing pedestrian and bicycle access will be maintained except during critical short-term construction activities. With the urban, grid-like, street network surrounding H-1, motorists have alternative choices for getting around, thereby minimizing impact to local businesses.

Seasonal Impacts

Monthly average daily traffic (ADT) volumes were collected along H-1 in 2015 from a traffic counting station at mile post 22.94. The lowest ADT was in November 2015 with 183,592 vehicles per day and the highest ADT was in March 2015 with 201,239 vehicles per day. The monthly average was 192,346 vehicles per day. There was an approximate 10% difference between the highest and lowest month. It was also observed that the volumes decreased from June to December and then increased again through March[2].

On-Street Parking

Temporary construction impacts during the work on side/cross/frontage streets include restricted on-street parking and intermittent driveway closures. Construction work on these streets will be staged/phased to minimize the impacts by completing the work as efficiently as possible. During construction hours, driveway users may need to wait for construction vehicles to clear before entering or exiting the driveway. During non-construction hours, driveway access will remain open.

All construction vehicles should be parked within staging areas in the work zones during construction. Construction vehicles are not allowed to park on public streets unless specifically permitted. The Contractor is responsible for parking/storing the construction vehicles in locations that will not interfere with traffic or neighborhood parking spaces during non-construction hours.

[2] This variation is consistent with 2017-2018 data on visitors who came to Oahu: 442,560 in November, 2017 and 510,958 in March 2018. SOURCE: Monthly Visitor Statistics by Department of Business, Economic Development and Tourism.

Selected Work Zone Impacts Management Strategies

A. Temporary Traffic Control (TTC) Strategies

Temporary traffic control strategies, devices, and contracting/construction techniques and coordination are used to facilitate traffic flow and safety through and around work zones. Standards, guidance, and other information defining the proper use of the traffic control strategies and devices are provided in Section 645 of HDOT Standard Specifications, Part 6 (Temporary Traffic Control) of the MUTCD, and Chapter 9 (Traffic Barriers, Traffic Control Devices, and Other Safety Features for Work Zones) of the American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide. The time it takes to set up and take down traffic control devices shall be factored into the total time available for construction as it relates to the permitted roadway closure times.

Control Strategies

This section includes various traffic control approaches used to accommodate road users within the work zone or the adjoining corridor in an efficient and safe manner, while providing adequate roadway access for the construction work to be performed. The following strategies will be used or considered:

- **Construction phasing/staging:** The majority of the construction work is planned to have independent phases. The intent is to finish a selected segment by the end of each workday. Segments on H-1 shall be selected in such a way to minimize the number of ramps closed during full roadway closures.

- **Full roadway closures:** Full closure of one direction of H-1 (between 8:30 pm and 4:30 am, Sunday through Thursday, except for State holidays) will greatly reduce the exposure of motorists to work zones and workers to the hazards of live traffic. Resulting traffic will be detoured along alternate roadways, providing construction workers full access to roadway facilities. However, the number of days permitted for full closures is limited.

  In a 2003 study[3], FHWA examined six projects using full closures. All six of the projects reported a reduction in project duration as compared to expected duration with partial closures. According to the study, full road closures reduced the duration of construction an average of 76 percent as compared to partial closure. In addition, two of the projects in the study realized significant cost savings through the use of full closures. (A pavement rehabilitation project on I-84 in Oregon had $100,000 in cost savings due to full closures. Similarly, an interchange project on I-670 in Ohio had an estimated cost reduction off about $8 to $10 million.) The study also found that the increased workspace and flexibility in project staging offered by full closures often led to greater efficiency. The study noted that for all sites, the impact of construction on travelers was reduced, and congestion observed on alternate routes during closures was often less than expected. An additional benefit of having full closures would be a better quality product, as the number of patches would be fewer than would be expected with partial roadway closures.

[3] Full Road Closure for Work Zone Operations: A Cross-Cutting Study, FHWA, August 2003.

- **Partial roadway closures:** Partial closures are allowed in both directions between 8:30 pm to 4:30 am, Sunday through Thursday, except for State holidays. Two travel lanes will be maintained during the partial closures on H-1. During partial closures, appropriate delineation will be used to separate motorists from the work zone. The partial closures will be used to perform construction tasks on or outside the shoulders since there is a limit on number of full closure days.

- **Night work:** Work will be performed overnight between 8:30 pm and 4:30 am in order to minimize work zone impacts on traffic and adjacent business. Construction will be done Sunday through Thursday nights, avoiding Friday and Saturday nights.

- **Temporary traffic barriers:** Temporary traffic barriers provide positive physical separation between travel lanes and the adjacent work space, or between opposing travel lanes. At each on-ramp that is scheduled for closure, a "RAMP CLOSED" sign shall be mounted on a Type III barricade, which will be placed across the closed ramp. In addition, Type II barricades with amber lamps shall be placed along the edge of the travel lane to clearly delineate the edge of the travel lane. A police vehicle with flashing blue lights will be stationed at each closed on-ramp for additional enforcement.

- **Warning Lights:** Various types of warning lights, as described in the MUTCD, are available to alert drivers and pedestrians and draw attention to critical signs, channelizing devices, and other work zone features.

Traffic Control Devices

The MUTCD provides standards, guidelines, and other information pertaining to the installation, maintenance, and operation of traffic control devices on streets and highways. Part 6 of the MUTCD, "Temporary Traffic Control," addresses safety, mobility, and constructability issues in work zones and is applicable to all types of highway work from major construction on high-volume freeways to minor maintenance on residential streets, and everything in-between. Traffic control devices and other safety devices proposed for use in the work zones include:

- Temporary signs including warning signs and regulatory signs,
- Changeable message signs,
- Channelizing devices,
- Police presence for enforcement, and
- Lighting devices.

The location of the project specific traffic control devices are presented in the Temporary Traffic Control Plans.

Project Coordination Strategies

At least one other road construction project is anticipated to occur at or around the same time as this H-1 Resurfacing project. It is identified as:

F.A.P. No. IM-H1-1(244), Interstate Route H-1, Guardrail and Shoulder Improvements, Kapiolani Interchange to Ainakoa Avenue

Coordination will be necessary if projects occur at the same time, to ensure Traffic Control plans are coordinated and impact to the motoring public is minimized.

B. Public Information (PI)

Public Awareness and Motorist Information Strategies

Effective, accurate, and timely dissemination of project information is an important part of communicating with the motoring public to set reasonable expectations for work schedule and impacts. A public information program shall be implemented throughout the project. Project staff shall provide the Public Information Officer and/or designated staff, with important weekly changes or updates concerning construction work activities in order to inform the public in a timely manner. Traditional means consist of a website, information line, newsletter, and through other media sources such as media announcements and public notices. Other means to consider include using Twitter and other social networking platforms.

With an effective public information program, public acceptance, tolerance and cooperation will be enhanced. In addition, this element is expected to reduce the traffic demand in the construction zone by encouraging motorists to take alternate routes or to travel outside of closure hours.

In general, the public information program is designed to meet the following objectives:

- Identify all target audiences who will be impacted by construction work activities
- Serve as the focal point for project related questions
- Inform the public about the project and how it could affect their travel on H-1 and adjacent roadways
- Promote alternate modes of transportation and alternate routes
- Provide information to the public using traditional and non-traditional means

A project website can be created to provide up-to-date project information such as daily updates of construction work activities. The website can also provide an opportunity for the public to register to receive information through a mailing list. HDOT also provides a website that summarizes the lane-closures due to construction projects on each island and is updated on a weekly basis. The information provided on the website describes lane-closures and the times for the lane-closures.

C. Transportation Operations (TO)

Demand Management Strategies

Demand management strategies can be used that encourage motorists to travel either in carpools or mass transit vehicles or to vary work hours to reduce the typical peak hour traffic volumes. Most of these do not apply to this project since the construction hours are proposed to occur during Sundays and off-peak hours. Public information methods should educate the public on the plan which could lead to a short-term reduction of traffic during construction.

Corridor/Network Management Strategies

Alternate routes give travelers the opportunity to avoid the work zone completely by diverting from the impacted roadways. Travel times will increase along many routes and therefore motorists can determine the benefit of using alternative routes and select routes best suited to their needs. Motorists are expected to alter their routes based on delays they encounter in advance of the work zones and comparative travel times in other corridors. It is also common to have trips shift to other times of day or avoided all together.

Drivers will be informed of traffic conditions before and during the construction work activities. This can be accomplished with a combination of temporary ground-mounted signs and changeable message signs along H-1 as well as on potential detour routes such as:

- Ala Moana Boulevard
- Kapiolani Boulevard
- King Street
- Beretania Street
- Vineyard Boulevard

Work Zone Safety Management Strategies

Work zone safety management strategies includes using devices, features, and management procedures to address traffic safety concerns in work zones. Work zone safety management strategies include:

- **Speed limit reduction/variable speed limits:** A reduced speed limit in the vicinity of the construction work may improve traffic safety in a work zone and help protect workers. All work zones on frontage and side streets shall be reduced to 15 mph.

- **Traffic Control Officers:** This involves placing police officers to direct traffic in lieu of traffic signals along proposed detoured routes and alternative routes projected to be particularly busy.

- **Warning Lights:** Flashing and steady amber warning lights, as described in the MUTCD, may be used to alert drivers and pedestrians and draw attention to critical signs, channelizing devices, and other work zone features.

- **Project on-site safety training:** This strategy provides ongoing safety to ensure that workers are familiar with safety procedures and specific risks associated with the project and to maintain a high level of safety awareness.

Traffic/Incident Management and Enforcement Strategies

Work zone traffic management strategies[4] involve monitoring traffic conditions and making adjustments to traffic operations based on changing conditions. Some of those changing conditions involve the potential impact resulting from traffic incidents. Therefore, this category also looks at management strategies that have specific applicability to traffic incidents. An incident/emergency response plan will be developed with information needed to respond to an incident. These strategies involve improved detection, verification, response, and clearance of crashes, mechanical failures, and other incidents in work zones and on detour routes. This also includes strategies to provide adequate enforcement of traffic regulations in work zones. This will require assistance from the Hawaii Freeway Service Patrol (FSP) and Honolulu Police Department (HPD).

[4] These strategies are incorporated from FHWA's Developing and Implementing Transportation Management Plans for Work Zones.

TMP Monitoring During Construction

Daily inspection and supervision of safety and/or traffic control operations is an integral part of the construction activities. The TMP Monitor is responsible for daily inspections and notification to the TMP Manager. If any traffic incidents are detected, the TMP Stakeholders/review committee shall be notified.

APPENDIX A
HDOT COUNTS

COVER SHEET

State of Hawaii
Department of Transportation
Highways Division
Planning Branch

ROUTINE TRANSMITTAL FORM

TO: HWY-DS DATE: April 3, 2017

ATTN: Mung Fa Chung

FROM: HWY-PH

SUBJECT: Interstate Route H-1 Resurfacing, Mikker Pedestrain Overpass to Kapiolani Interchange, MP 21.80 to 24.90

THIS IS TO: TRANSMIT X REQUEST X *1 Info

*1 If there will be any impacts on our permanent Traffic Monitoring Sites @ MP 22.10, MP 22.94, MP 23.55 & MP 24.60. Also request the four permanent stations be converted to EVC to collect class data.

FOR: C&R___ AA&A___ INFO/FILES___ AS REQUESTED X

SUSPENSE DATE: _____

BY: _____

TITLE: PLANNING SURVEY ENGINEER

TA17-02.xls

March 31, 2017
Date

MEMORANDUM

TO: HWY-DS

ATTN: Mung Fa Chung

FROM: HWY-PH

The following data are submitted for your information:

NAME OF PROJECT Interstate Route H-1 Resurfacing, Miller Pedestrian Overpass to Kapiolani IC

Route H-1 - MP 21.80 - 24.90 (Page 1 of 2)

PROJECT NO.: H11JK-01-17M

SECTION:	Interstate Route H-1		
	MP 21.80-22.12	MP 22.12-23.07	MP 23.07-24.13
	Miller Pedestrian OP	Off-Ramp to Vineyard Blvd	On-Ramp from Punahou St
	Off-Ramp to Vineyard Blvd	On-Ramp from Punahou St	On Ramp from University Ave
2017	180,100	201,100	147,800
2027	206,100	225,700	167,900
2027	15,460	16,930	12,590
Design K	7.5	7.5	7.5
Design D	60/40	60/40	60/40
Design T	3.5	3.5	3.5
T24	4.0	4.0	4.0
CLASSIFICATION	PERCENT	PERCENT	PERCENT
BUS	18.00	18.00	18.00
2D	61.02	61.02	61.02
3X	8.70	8.70	8.70
4X	1.22	1.22	1.22
2S1, 3S1, 2S2	6.16	6.16	6.16
3S2, 3-2, 2-3	2.95	2.95	2.95
6/6+X S-TLR	0.51	0.51	0.51
5X M-TLR	0.28	0.28	0.28
6X M-TLR	0.14	0.14	0.14
7X M-TLR	1.02	1.02	1.02

REF. NO. TA 17-02

100.00 100.00 100.00

TA17-02.xls

March 31, 2017
Date

MEMORANDUM

TO: HWY-DS

ATTN: Mung Fa Chung

FROM: HWY-PH TJ

The following data are submitted for your information:

NAME OF PROJEC Interstate Route H-1 Resurfacing, Miller Pedestrian Overpass to Kapiolani IC

Route H-1 - MP 21.80 - 24.90 (Page 2 of 2)

PROJECT NO.: H11JK-01-17M

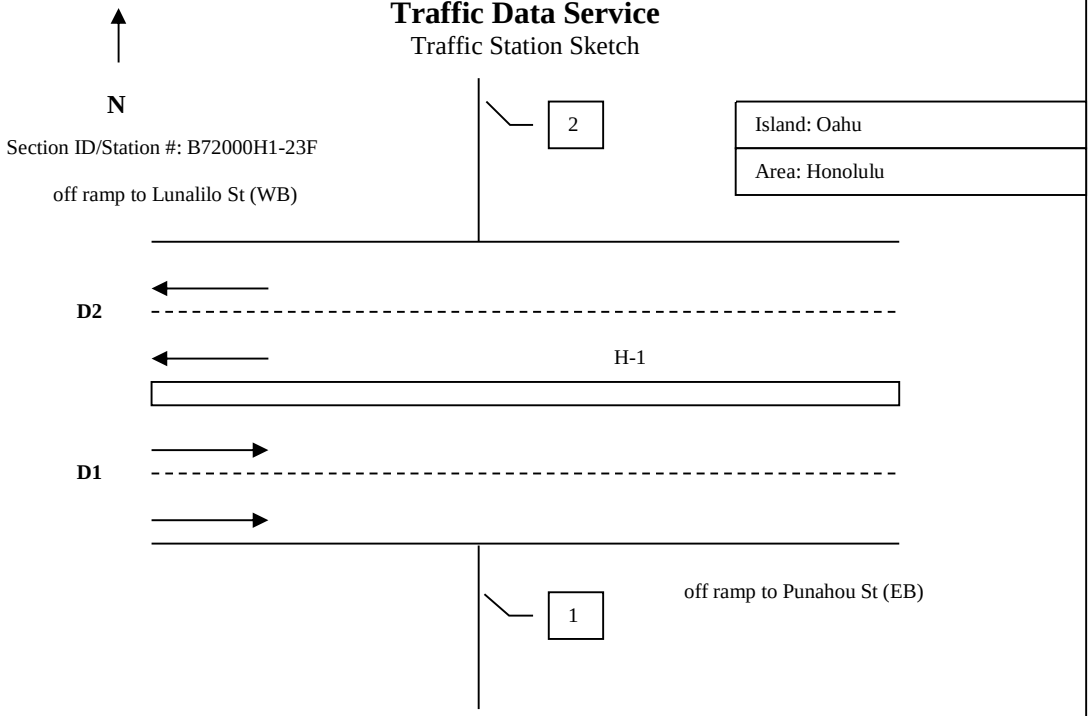
SECTION:	Interstate Route H-1		
	MP 24.13-24.41	MP 24.41-24.83	MP 24.83-25.15
	On-Ramp from University Ave	On-Ramp from Old Waialae	Kapahulu Ave
	On-Ramp from Old Waialae Rd	Kapahulu Ave	Off-Ramp to 6th ave
2017	130,200	116,200	140,000
2027	147,800	132,000	158,900
2027	11,090	9,900	11,920
Design K	7.5	7.5	7.5
Design D	60/40	60/40	60/40
Design T	3.5	3.5	3.5
T24	4.0	4.0	4.0
CLASSIFICATION	PERCENT	PERCENT	PERCENT
BUS	18.00	18.00	18.00
2D	61.02	61.02	61.02
3X	8.70	8.70	8.70
4X	1.22	1.22	1.22
2S1, 3S1, 2S2	6.16	6.16	6.16
3S2, 3-2, 2-3	2.95	2.95	2.95
6/6+X S-TLR	0.51	0.51	0.51
5X M-TLR	0.28	0.28	0.28
6X M-TLR	0.14	0.14	0.14
7X M-TLR	1.02	1.02	1.02

REF. NO. TA 17-02

100.00 100.00 100.00

Traffic Data Service

Traffic Station Sketch



Meter #	File Name	GPS
1. wave	D1206013_B72000H1-23F	21.30215, -157.8368
2.	D1206014_B72000H1-23F	21.30215, -157.8368

Station Description: H-1: off ramp to Lunalilo St (WB) to off ramp to Punahou St (EB)					
Survey Beginning Date/Time: 12/6/2016 @ 0000			Survey Ending Date/Time: 12/7/2016 @ 2400		
Survey Method:		Data Type:	Class		
Survey Crew:	LM		Wavetronix		
Sketch Updated:		By:	SR		
Remarks:	26				
FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
H-1		11		0001	
D1= Direction to End D2= Direction to Begin	D1: off ramp to Punahou St (EB) / Ainakoa Avenue D2: off ramp to Lunalilo St (WB) / Palailai IC				

Run Date: 2017/08/08

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72000H1-23F **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 201200
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VEHICLE TYPE **Counter Type:** Sensor **Route No:** H-1
Location: H-1 Fwy - offramp to Lunalilo St (WB) to offramp to Punahou St (EB)

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/06/2016															
12:00-12:15	340	286	626	06:00-06:15	1243	1231	2474	12:00-12:15	1497	1507	3004	06:00-06:15	1418	1809	3227
12:15-12:30	269	231	500	06:15-06:30	1562	1254	2816	12:15-12:30	1514	1563	3077	06:15-06:30	1344	1839	3183
12:30-12:45	253	203	456	06:30-06:45	1784	1433	3217	12:30-12:45	1355	1544	2899	06:30-06:45	1449	1751	3200
12:45-01:00	189	206	395	06:45-07:00	1850	1711	3561	12:45-01:00	1497	1591	3088	06:45-07:00	1485	1520	3005
01:00-01:15	180	169	349	07:00-07:15	1843	1739	3582	01:00-01:15	1511	1677	3188	07:00-07:15	1483	1440	2923
01:15-01:30	155	157	312	07:15-07:30	1907	1484	3391	01:15-01:30	1299	1661	2960	07:15-07:30	1296	1502	2798
01:30-01:45	155	160	315	07:30-07:45	1804	1214	3018	01:30-01:45	1444	1678	3122	07:30-07:45	1267	1584	2851
01:45-02:00	102	104	206	07:45-08:00	1893	1206	3099	01:45-02:00	1505	1713	3218	07:45-08:00	1079	1539	2618
02:00-02:15	140	107	247	08:00-08:15	1813	1681	3494	02:00-02:15	1518	1765	3283	08:00-08:15	962	1387	2349
02:15-02:30	95	125	220	08:15-08:30	1722	1706	3428	02:15-02:30	1482	1793	3275	08:15-08:30	953	1125	2078
02:30-02:45	117	104	221	08:30-08:45	1744	1541	3285	02:30-02:45	1567	1744	3311	08:30-08:45	888	1207	2095
02:45-03:00	86	111	197	08:45-09:00	1703	1753	3456	02:45-03:00	1697	1734	3431	08:45-09:00	884	1141	2025
03:00-03:15	106	110	216	09:00-09:15	1679	1763	3442	03:00-03:15	1675	1432	3107	09:00-09:15	1020	1115	2135
03:15-03:30	115	77	192	09:15-09:30	1546	1685	3231	03:15-03:30	1631	1620	3251	09:15-09:30	1283	1020	2303
03:30-03:45	125	122	247	09:30-09:45	1569	1568	3137	03:30-03:45	1650	1697	3347	09:30-09:45	1186	1131	2317
03:45-04:00	128	104	232	09:45-10:00	1575	1521	3096	03:45-04:00	1647	1570	3217	09:45-10:00	976	1024	2000
04:00-04:15	170	140	310	10:00-10:15	1591	1647	3238	04:00-04:15	1637	1546	3183	10:00-10:15	930	1111	2041
04:15-04:30	195	192	387	10:15-10:30	1537	1558	3095	04:15-04:30	1632	1728	3360	10:15-10:30	878	999	1877
04:30-04:45	250	264	514	10:30-10:45	1356	1544	2900	04:30-04:45	1596	1710	3306	10:30-10:45	840	935	1775
04:45-05:00	375	375	750	10:45-11:00	1581	1592	3173	04:45-05:00	1460	1802	3262	10:45-11:00	753	751	1504
05:00-05:15	444	486	930	11:00-11:15	1501	1662	3163	05:00-05:15	1544	1819	3363	11:00-11:15	623	711	1334
05:15-05:30	609	581	1190	11:15-11:30	1499	1608	3107	05:15-05:30	1522	1821	3343	11:15-11:30	603	705	1308
05:30-05:45	843	830	1673	11:30-11:45	1486	1588	3074	05:30-05:45	1433	1844	3277	11:30-11:45	595	680	1275
05:45-06:00	1057	1035	2092	11:45-12:00	1491	1593	3084	05:45-06:00	1466	1821	3287	11:45-12:00	532	540	1072

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:30 AM to 07:30 AM		
AM - PEAK HR VOLUME	7384	6367	13751
AM - K FACTOR (%)			6.26
AM - D (%)	53.70	46.30	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM	08:00 AM to 09:00 AM	
AM - PEAK HR VOLUME	7447	6681	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	6232	7059	13291
PM - K FACTOR (%)			6.05
PM - D (%)	46.89	53.11	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:00 PM to 04:00 PM	05:30 PM to 06:30 PM	
PM - PEAK HR VOLUME	6603	7313	

AM PERIOD (00:00-12:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:30 AM to 07:30 AM		
AM - PEAK HR VOLUME	7384	6367	13751
AM - K FACTOR (%)			6.26
AM - D (%)	53.70	46.30	100.00

PM PERIOD (12:00-24:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	02:00 PM to 03:00 PM		
PM - PEAK HR VOLUME	6264	7036	13300
PM - K FACTOR (%)			6.05
PM - D (%)	47.10	52.90	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	6264	7036	13300
DIRECTIONAL PEAK			
PEAK HR TIME	09:00 AM to 10:00 AM	02:00 PM to 03:00 PM	
PEAK HR VOLUME	6369	7036	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	39,279	37,282	76,561
AM 12-HR PERIOD (00:00-12:00)	45,777	43,561	89,338
PM 6-HR PERIOD (12:00-18:00)	36,779	40,380	77,159
PM 12-HR PERIOD (12:00-24:00)	61,506	68,946	130,452
24 HOUR PERIOD	107,283	112,507	219,790
D (%)	48.81	51.19	100.00

Run Date: 2017/08/08

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72000H1-23F **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 201200
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VEHICLE TYPE **Counter Type:** Sensor **Route No:** H-1
Location: H-1 Fwy - offramp to Lunalilo St (WB) to offramp to Punahou St (EB)

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/07/2016															
12:00-12:15	369	325	694	06:00-06:15	1290	1097	2387	12:00-12:15	1549	1583	3132	06:00-06:15	1493	1733	3226
12:15-12:30	291	315	606	06:15-06:30	1609	1182	2791	12:15-12:30	1503	1477	2980	06:15-06:30	1569	1663	3232
12:30-12:45	308	250	558	06:30-06:45	1867	1392	3259	12:30-12:45	1544	1479	3023	06:30-06:45	1625	1672	3297
12:45-01:00	229	189	418	06:45-07:00	1878	1599	3477	12:45-01:00	1475	1462	2937	06:45-07:00	1474	1677	3151
01:00-01:15	196	165	361	07:00-07:15	1919	1646	3565	01:00-01:15	1483	1515	2998	07:00-07:15	1295	1629	2924
01:15-01:30	119	126	245	07:15-07:30	1939	1352	3291	01:15-01:30	1564	1403	2967	07:15-07:30	1137	1176	2313
01:30-01:45	141	144	285	07:30-07:45	2003	1104	3107	01:30-01:45	1575	1611	3186	07:30-07:45	1099	1262	2361
01:45-02:00	118	108	226	07:45-08:00	1947	1350	3297	01:45-02:00	1563	1608	3171	07:45-08:00	1029	1184	2213
02:00-02:15	131	118	249	08:00-08:15	1836	1600	3436	02:00-02:15	1530	1623	3153	08:00-08:15	977	1004	1981
02:15-02:30	120	114	234	08:15-08:30	1834	1665	3499	02:15-02:30	1577	1593	3170	08:15-08:30	932	984	1916
02:30-02:45	132	92	224	08:30-08:45	1803	1695	3498	02:30-02:45	1656	1725	3381	08:30-08:45	949	1003	1952
02:45-03:00	109	97	206	08:45-09:00	1697	1630	3327	02:45-03:00	1738	1718	3456	08:45-09:00	854	949	1803
03:00-03:15	82	90	172	09:00-09:15	1707	1527	3234	03:00-03:15	1734	1520	3254	09:00-09:15	826	937	1763
03:15-03:30	115	94	209	09:15-09:30	1632	1488	3120	03:15-03:30	1799	1734	3533	09:15-09:30	834	853	1687
03:30-03:45	124	112	236	09:30-09:45	1705	1384	3089	03:30-03:45	1659	1712	3371	09:30-09:45	829	892	1721
03:45-04:00	163	139	302	09:45-10:00	1744	1386	3130	03:45-04:00	1679	1726	3405	09:45-10:00	736	794	1530
04:00-04:15	164	130	294	10:00-10:15	1519	1454	2973	04:00-04:15	1722	1724	3446	10:00-10:15	653	780	1433
04:15-04:30	234	189	423	10:15-10:30	1672	1401	3073	04:15-04:30	1659	1741	3400	10:15-10:30	639	758	1397
04:30-04:45	272	271	543	10:30-10:45	1619	1512	3131	04:30-04:45	1642	1763	3405	10:30-10:45	719	592	1311
04:45-05:00	411	345	756	10:45-11:00	1615	1437	3052	04:45-05:00	1673	1792	3465	10:45-11:00	608	538	1146
05:00-05:15	501	446	947	11:00-11:15	1627	1651	3278	05:00-05:15	1682	1759	3441	11:00-11:15	490	473	963
05:15-05:30	644	518	1162	11:15-11:30	1599	1709	3308	05:15-05:30	1547	1761	3308	11:15-11:30	476	414	890
05:30-05:45	895	754	1649	11:30-11:45	1650	1680	3330	05:30-05:45	1621	1828	3449	11:30-11:45	472	413	885
05:45-06:00	1128	934	2062	11:45-12:00	1603	1561	3164	05:45-06:00	1511	1740	3251	11:45-12:00	378	315	693

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	08:00 AM to 09:00 AM		
AM - PEAK HR VOLUME	7170	6590	13760
AM - K FACTOR (%)			6.43
AM - D (%)	52.11	47.89	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM	08:00 AM to 09:00 AM	
AM - PEAK HR VOLUME	7808	6590	

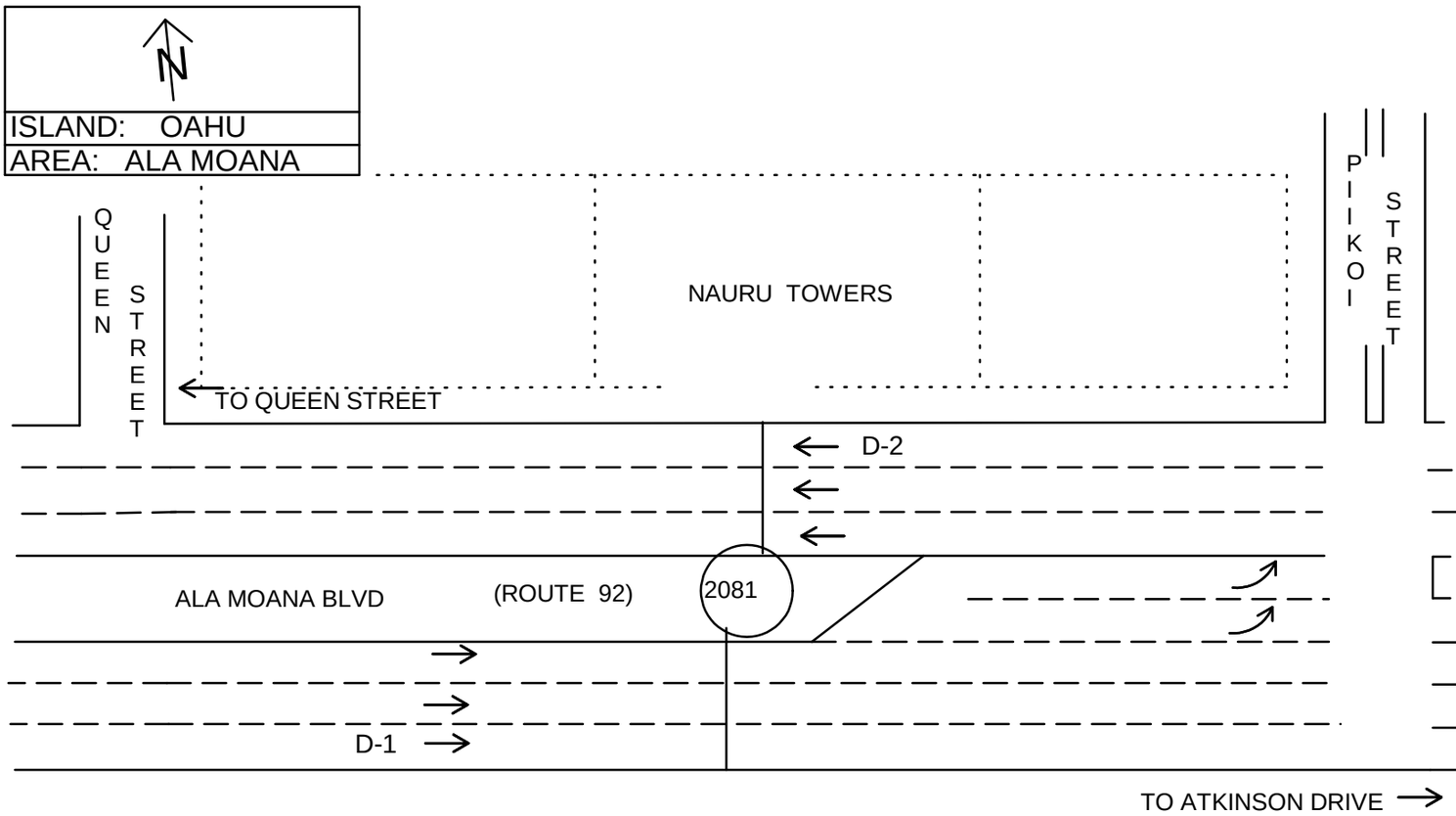
PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:15 PM to 04:15 PM		
PM - PEAK HR VOLUME	6859	6896	13755
PM - K FACTOR (%)			6.43
PM - D (%)	49.87	50.13	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:00 PM to 04:00 PM	04:45 PM to 05:45 PM	
PM - PEAK HR VOLUME	6871	7140	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	08:00 AM to 09:00 AM		
AM - PEAK HR VOLUME	7170	6590	13760
AM - K FACTOR (%)			6.43
AM - D (%)	52.11	47.89	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:15 PM to 04:15 PM		
PM - PEAK HR VOLUME	6859	6896	13755
PM - K FACTOR (%)			6.43
PM - D (%)	49.87	50.13	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	6501	6659	13160
DIRECTIONAL PEAK			
PEAK HR TIME	09:00 AM to 10:00 AM	02:00 PM to 03:00 PM	
PEAK HR VOLUME	6788	6659	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	41,314	35,502	76,816
AM 12-HR PERIOD (00:00-12:00)	48,310	41,567	89,877
PM 6-HR PERIOD (12:00-18:00)	38,685	39,597	78,282
PM 12-HR PERIOD (12:00-24:00)	60,778	63,292	124,07(
24 HOUR PERIOD	109,088	104,859	213,947
D (%)	50.99	49.01	100.00



Station No:	B72 0092 00791

Station Location:			
Ala Moana Boulevard between Queen Street and Piikoi Street			
Station Mileage:	8.02	GPS Coord (Latitude):	21.29138 N
		GPS Coord (Longitude):	157.84904 W
Begin Survey (Date/Time):	11-28-16 0000	End Survey (Date/Time):	12-1-16 0000
Survey Method: LOOP **HOSE** OTHER		Survey Type: **VOL** CLASS SPEED OTHER	
Survey Crew:	field crew	Module No.:	

HPMS DATA							
Segment Description:							
ALA MOANA BOULEVARD - BEGINNING OF CURBED MEDIAN TO PIIKOI STREET (ADT CHANGE)							
Segment Begin LRS	7.91	Segment End LRS	8.10	Length	0.19		

Facility Name	Juris	Func Class	Area Type	Route No.	Route Mile	D-1 = Direction to End of Route D-2 = Direction to Beginning of Route	
ALA MOANA BOULEVARD	S	14	4	92	8.02	D-1	TO KALAKAUA AVENUE
						D-2	TO PEARL HARBOR GATE

Sketch By:	GN	Date:	3/9/2005	SLD:	2003

Run Date: 2017/08/07

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72009200791 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 40500

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 92

Location: Ala Moana Blvd btwn Queen St _Piikoi St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/29/2016															
12:00-12:15	35	38	73	06:00-06:15	199	146	345	12:00-12:15	340	274	614	06:00-06:15	527	312	839
12:15-12:30	26	28	54	06:15-06:30	252	171	423	12:15-12:30	284	282	566	06:15-06:30	541	339	880
12:30-12:45	24	33	57	06:30-06:45	244	252	496	12:30-12:45	292	322	614	06:30-06:45	492	322	814
12:45-01:00	16	26	42	06:45-07:00	298	325	623	12:45-01:00	299	274	573	06:45-07:00	355	270	625
01:00-01:15	16	14	30	07:00-07:15	350	340	690	01:00-01:15	324	312	636	07:00-07:15	272	300	572
01:15-01:30	12	18	30	07:15-07:30	378	408	786	01:15-01:30	302	355	657	07:15-07:30	236	216	452
01:30-01:45	12	15	27	07:30-07:45	406	406	812	01:30-01:45	317	359	676	07:30-07:45	174	224	398
01:45-02:00	18	16	34	07:45-08:00	364	435	799	01:45-02:00	326	314	640	07:45-08:00	206	177	383
02:00-02:15	12	18	30	08:00-08:15	322	424	746	02:00-02:15	350	284	634	08:00-08:15	206	193	399
02:15-02:30	10	20	30	08:15-08:30	372	418	790	02:15-02:30	350	331	681	08:15-08:30	158	200	358
02:30-02:45	9	12	21	08:30-08:45	329	339	668	02:30-02:45	364	344	708	08:30-08:45	185	184	369
02:45-03:00	11	10	21	08:45-09:00	326	298	624	02:45-03:00	388	372	760	08:45-09:00	154	160	314
03:00-03:15	9	5	14	09:00-09:15	318	311	629	03:00-03:15	498	349	847	09:00-09:15	158	171	329
03:15-03:30	10	6	16	09:15-09:30	290	279	569	03:15-03:30	480	372	852	09:15-09:30	159	188	347
03:30-03:45	24	13	37	09:30-09:45	309	271	580	03:30-03:45	517	400	917	09:30-09:45	134	124	258
03:45-04:00	22	24	46	09:45-10:00	244	277	521	03:45-04:00	526	386	912	09:45-10:00	119	139	258
04:00-04:15	32	28	60	10:00-10:15	280	312	592	04:00-04:15	474	330	804	10:00-10:15	136	142	278
04:15-04:30	39	20	59	10:15-10:30	284	310	594	04:15-04:30	531	444	975	10:15-10:30	90	107	197
04:30-04:45	71	36	107	10:30-10:45	270	336	606	04:30-04:45	515	389	904	10:30-10:45	72	91	163
04:45-05:00	79	46	125	10:45-11:00	265	530	795	04:45-05:00	524	362	886	10:45-11:00	62	84	146
05:00-05:15	86	54	140	11:00-11:15	286	464	750	05:00-05:15	532	364	896	11:00-11:15	74	83	157
05:15-05:30	148	90	238	11:15-11:30	304	475	779	05:15-05:30	508	351	859	11:15-11:30	56	51	107
05:30-05:45	166	118	284	11:30-11:45	304	488	792	05:30-05:45	544	334	878	11:30-11:45	50	51	101
05:45-06:00	183	132	315	11:45-12:00	266	374	640	05:45-06:00	528	353	881	11:45-12:00	34	42	76

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1464	1683	3147
AM - K FACTOR (%)			7.04
AM - D (%)	46.52	53.48	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM	07:30 AM to 08:30 AM	
AM - PEAK HR VOLUME	1498	1683	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	2102	1559	3661
PM - K FACTOR (%)			8.18
PM - D (%)	57.42	42.58	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:30 PM to 06:30 PM	03:30 PM to 04:30 PM	
PM - PEAK HR VOLUME	2140	1560	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1464	1683	3147
AM - K FACTOR (%)			7.04
AM - D (%)	46.52	53.48	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	2102	1559	3661
PM - K FACTOR (%)			8.18
PM - D (%)	57.42	42.58	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	10:45 AM to 11:45 AM		
PEAK HR VOLUME	1159	1957	3116
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	10:45 AM to 11:45 AM	
PEAK HR VOLUME	1452	1957	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	7,260	8,389	15,649
AM 12-HR PERIOD (00:00-12:00)	8,330	9,209	17,539
PM 6-HR PERIOD (12:00-18:00)	10,113	8,257	18,370
PM 12-HR PERIOD (12:00-24:00)	14,763	12,427	27,190
24 HOUR PERIOD	23,093	21,636	44,729
D (%)	51.63	48.37	100.00

Run Date: 2017/08/07

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72009200791 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 40500

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 92

Location: Ala Moana Blvd btwn Queen St _Piikoi St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/30/2016															
12:00-12:15	46	44	90	06:00-06:15	245	165	410	12:00-12:15	314	314	628	06:00-06:15	500	298	798
12:15-12:30	32	40	72	06:15-06:30	232	191	423	12:15-12:30	288	292	580	06:15-06:30	472	305	777
12:30-12:45	40	24	64	06:30-06:45	270	252	522	12:30-12:45	328	356	684	06:30-06:45	393	322	715
12:45-01:00	21	26	47	06:45-07:00	310	325	635	12:45-01:00	291	307	598	06:45-07:00	260	270	530
01:00-01:15	25	22	47	07:00-07:15	328	380	708	01:00-01:15	306	328	634	07:00-07:15	290	268	558
01:15-01:30	16	20	36	07:15-07:30	381	411	792	01:15-01:30	264	320	584	07:15-07:30	224	234	458
01:30-01:45	9	18	27	07:30-07:45	398	432	830	01:30-01:45	314	332	646	07:30-07:45	190	238	428
01:45-02:00	13	14	27	07:45-08:00	360	408	768	01:45-02:00	318	343	661	07:45-08:00	197	198	395
02:00-02:15	10	14	24	08:00-08:15	378	404	782	02:00-02:15	336	336	672	08:00-08:15	184	216	400
02:15-02:30	10	15	25	08:15-08:30	329	404	733	02:15-02:30	314	372	686	08:15-08:30	162	210	372
02:30-02:45	10	14	24	08:30-08:45	317	398	715	02:30-02:45	376	328	704	08:30-08:45	177	196	373
02:45-03:00	8	21	29	08:45-09:00	319	286	605	02:45-03:00	404	328	732	08:45-09:00	154	161	315
03:00-03:15	9	15	24	09:00-09:15	259	291	550	03:00-03:15	492	372	864	09:00-09:15	154	196	350
03:15-03:30	14	8	22	09:15-09:30	200	293	493	03:15-03:30	454	402	856	09:15-09:30	164	188	352
03:30-03:45	14	10	24	09:30-09:45	298	274	572	03:30-03:45	454	365	819	09:30-09:45	138	134	272
03:45-04:00	19	20	39	09:45-10:00	266	326	592	03:45-04:00	537	370	907	09:45-10:00	116	130	246
04:00-04:15	28	20	48	10:00-10:15	285	284	569	04:00-04:15	468	306	774	10:00-10:15	131	130	261
04:15-04:30	34	24	58	10:15-10:30	232	282	514	04:15-04:30	494	416	910	10:15-10:30	108	123	231
04:30-04:45	64	43	107	10:30-10:45	255	269	524	04:30-04:45	491	386	877	10:30-10:45	91	116	207
04:45-05:00	82	52	134	10:45-11:00	269	278	547	04:45-05:00	504	348	852	10:45-11:00	70	80	150
05:00-05:15	76	71	147	11:00-11:15	275	253	528	05:00-05:15	578	319	897	11:00-11:15	73	108	181
05:15-05:30	120	74	194	11:15-11:30	308	332	640	05:15-05:30	476	350	826	11:15-11:30	60	66	126
05:30-05:45	164	106	270	11:30-11:45	300	268	568	05:30-05:45	570	360	930	11:30-11:45	40	53	93
05:45-06:00	178	130	308	11:45-12:00	353	284	637	05:45-06:00	546	344	890	11:45-12:00	38	46	84

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1517	1655	3172
AM - K FACTOR (%)			7.30
AM - D (%)	47.82	52.18	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	1517	1655	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM		
PM - PEAK HR VOLUME	2170	1373	3543
PM - K FACTOR (%)			8.16
PM - D (%)	61.25	38.75	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	2170	1509	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1517	1655	3172
AM - K FACTOR (%)			7.30
AM - D (%)	47.82	52.18	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM		
PM - PEAK HR VOLUME	2170	1373	3543
PM - K FACTOR (%)			8.16
PM - D (%)	61.25	38.75	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	1430	1364	2794
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	01:30 PM to 02:30 PM	
PEAK HR VOLUME	1430	1383	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	7,167	7,490	14,657
AM 12-HR PERIOD (00:00-12:00)	8,209	8,335	16,544
PM 6-HR PERIOD (12:00-18:00)	9,917	8,294	18,211
PM 12-HR PERIOD (12:00-24:00)	14,303	12,580	26,883
24 HOUR PERIOD	22,512	20,915	43,427
D (%)	51.84	48.16	100.00

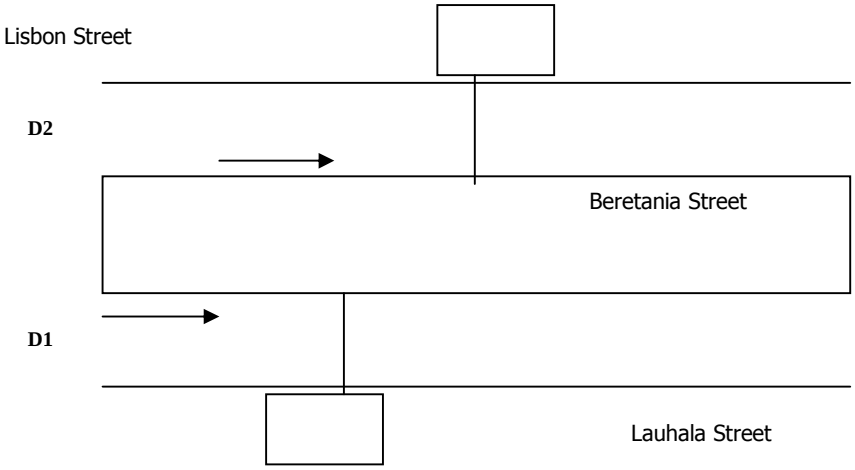
Traffic Data Service

Traffic Station Sketch

N

Island: Oahu
Area: Honolulu

Section ID/Station: B72750200227



Meter #	File Name	GPS
1. BG84	D120207_B72750200227	21.30574, -157.854

Station Description: Beretania Street: Lisbon Street to Lauhala Street					
Survey Beginning Date/Time: 12/2/2015 @ 0000			Survey Ending Date/Time: 12/3/2015 @ 2400		
Survey Method:	Road Tube		Data Type:	Vol	
Survey Crew:	LM			V5	
Sketch Updated:			By:	SR	
Remarks:	1381				
FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	MILE
Beretania Street		14		7502	
D1= Direction to End D2= Direction to Begin			D1: Lauhala Street / North King Street D2: Lisbon Street / University Avenue		

Run Date: 2016/05/26

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2015 Program Count - Summary

Site ID: B72750200227 **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 44700

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7502

Location: Beretania St - Lisbon St to Lauhala St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/02/2015															
12:00-12:15	80	0	80	06:00-06:15	385	0	385	12:00-12:15	796	0	796	06:00-06:15	749	0	749
12:15-12:30	83	0	83	06:15-06:30	563	0	563	12:15-12:30	710	0	710	06:15-06:30	654	0	654
12:30-12:45	72	0	72	06:30-06:45	673	0	673	12:30-12:45	769	0	769	06:30-06:45	587	0	587
12:45-01:00	61	0	61	06:45-07:00	769	0	769	12:45-01:00	774	0	774	06:45-07:00	540	0	540
01:00-01:15	66	0	66	07:00-07:15	1053	0	1053	01:00-01:15	819	0	819	07:00-07:15	536	0	536
01:15-01:30	39	0	39	07:15-07:30	1045	0	1045	01:15-01:30	783	0	783	07:15-07:30	474	0	474
01:30-01:45	46	0	46	07:30-07:45	1035	0	1035	01:30-01:45	755	0	755	07:30-07:45	480	0	480
01:45-02:00	37	0	37	07:45-08:00	1068	0	1068	01:45-02:00	851	0	851	07:45-08:00	470	0	470
02:00-02:15	39	0	39	08:00-08:15	1002	0	1002	02:00-02:15	829	0	829	08:00-08:15	434	0	434
02:15-02:30	35	0	35	08:15-08:30	879	0	879	02:15-02:30	835	0	835	08:15-08:30	408	0	408
02:30-02:45	30	0	30	08:30-08:45	786	0	786	02:30-02:45	831	0	831	08:30-08:45	364	0	364
02:45-03:00	41	0	41	08:45-09:00	704	0	704	02:45-03:00	897	0	897	08:45-09:00	385	0	385
03:00-03:15	36	0	36	09:00-09:15	707	0	707	03:00-03:15	1030	0	1030	09:00-09:15	414	0	414
03:15-03:30	34	0	34	09:15-09:30	685	0	685	03:15-03:30	936	0	936	09:15-09:30	313	0	313
03:30-03:45	60	0	60	09:30-09:45	673	0	673	03:30-03:45	961	0	961	09:30-09:45	243	0	243
03:45-04:00	44	0	44	09:45-10:00	654	0	654	03:45-04:00	963	0	963	09:45-10:00	274	0	274
04:00-04:15	35	0	35	10:00-10:15	747	0	747	04:00-04:15	987	0	987	10:00-10:15	265	0	265
04:15-04:30	73	0	73	10:15-10:30	613	0	613	04:15-04:30	857	0	857	10:15-10:30	197	0	197
04:30-04:45	87	0	87	10:30-10:45	585	0	585	04:30-04:45	916	0	916	10:30-10:45	197	0	197
04:45-05:00	119	0	119	10:45-11:00	633	0	633	04:45-05:00	893	0	893	10:45-11:00	182	0	182
05:00-05:15	173	0	173	11:00-11:15	658	0	658	05:00-05:15	891	0	891	11:00-11:15	155	0	155
05:15-05:30	248	0	248	11:15-11:30	618	0	618	05:15-05:30	856	0	856	11:15-11:30	138	0	138
05:30-05:45	215	0	215	11:30-11:45	726	0	726	05:30-05:45	838	0	838	11:30-11:45	84	0	84
05:45-06:00	299	0	299	11:45-12:00	748	0	748	05:45-06:00	821	0	821	11:45-12:00	112	0	112

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:00 AM to 08:00 AM	
AM - PEAK HR VOLUME	4201	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:00 AM to 08:00 AM	
AM - PEAK HR VOLUME	4201	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	3890	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	3890	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	07:00 AM to 08:00 AM
AM - PEAK HR VOLUME	4201
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	03:00 PM to 04:00 PM
PM - PEAK HR VOLUME	3890
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	3392
DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	3392

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	18,009		
AM 12-HR PERIOD (00:00-12:00)	20,061		
PM 6-HR PERIOD (12:00-18:00)	20,598		
PM 12-HR PERIOD (12:00-24:00)	29,253		
24 HOUR PERIOD	49,314		
D (%)			

Run Date: 2016/05/26

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2015 Program Count - Summary

Site ID: B72750200227 **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 44700

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7502

Location: Beretania St - Lisbon St to Lauhala St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/03/2015															
12:00-12:15	93	0	93	06:00-06:15	374	0	374	12:00-12:15	863	0	863	06:00-06:15	685	0	685
12:15-12:30	71	0	71	06:15-06:30	627	0	627	12:15-12:30	855	0	855	06:15-06:30	688	0	688
12:30-12:45	75	0	75	06:30-06:45	641	0	641	12:30-12:45	773	0	773	06:30-06:45	649	0	649
12:45-01:00	79	0	79	06:45-07:00	780	0	780	12:45-01:00	845	0	845	06:45-07:00	574	0	574
01:00-01:15	72	0	72	07:00-07:15	996	0	996	01:00-01:15	815	0	815	07:00-07:15	523	0	523
01:15-01:30	54	0	54	07:15-07:30	1088	0	1088	01:15-01:30	845	0	845	07:15-07:30	545	0	545
01:30-01:45	57	0	57	07:30-07:45	994	0	994	01:30-01:45	944	0	944	07:30-07:45	449	0	449
01:45-02:00	33	0	33	07:45-08:00	1052	0	1052	01:45-02:00	950	0	950	07:45-08:00	490	0	490
02:00-02:15	56	0	56	08:00-08:15	1012	0	1012	02:00-02:15	861	0	861	08:00-08:15	387	0	387
02:15-02:30	50	0	50	08:15-08:30	775	0	775	02:15-02:30	934	0	934	08:15-08:30	443	0	443
02:30-02:45	26	0	26	08:30-08:45	750	0	750	02:30-02:45	875	0	875	08:30-08:45	428	0	428
02:45-03:00	35	0	35	08:45-09:00	708	0	708	02:45-03:00	999	0	999	08:45-09:00	411	0	411
03:00-03:15	39	0	39	09:00-09:15	679	0	679	03:00-03:15	968	0	968	09:00-09:15	407	0	407
03:15-03:30	52	0	52	09:15-09:30	623	0	623	03:15-03:30	955	0	955	09:15-09:30	321	0	321
03:30-03:45	63	0	63	09:30-09:45	633	0	633	03:30-03:45	912	0	912	09:30-09:45	266	0	266
03:45-04:00	42	0	42	09:45-10:00	701	0	701	03:45-04:00	961	0	961	09:45-10:00	263	0	263
04:00-04:15	44	0	44	10:00-10:15	635	0	635	04:00-04:15	1039	0	1039	10:00-10:15	285	0	285
04:15-04:30	69	0	69	10:15-10:30	645	0	645	04:15-04:30	879	0	879	10:15-10:30	247	0	247
04:30-04:45	84	0	84	10:30-10:45	747	0	747	04:30-04:45	806	0	806	10:30-10:45	176	0	176
04:45-05:00	104	0	104	10:45-11:00	739	0	739	04:45-05:00	911	0	911	10:45-11:00	207	0	207
05:00-05:15	182	0	182	11:00-11:15	731	0	731	05:00-05:15	794	0	794	11:00-11:15	180	0	180
05:15-05:30	238	0	238	11:15-11:30	714	0	714	05:15-05:30	901	0	901	11:15-11:30	155	0	155
05:30-05:45	272	0	272	11:30-11:45	739	0	739	05:30-05:45	799	0	799	11:30-11:45	108	0	108
05:45-06:00	300	0	300	11:45-12:00	719	0	719	05:45-06:00	738	0	738	11:45-12:00	97	0	97

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	4146	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	4146	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:15 PM to 04:15 PM	
PM - PEAK HR VOLUME	3867	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:15 PM to 04:15 PM	
PM - PEAK HR VOLUME	3867	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	07:15 AM to 08:15 AM
AM - PEAK HR VOLUME	4146
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	03:15 PM to 04:15 PM
PM - PEAK HR VOLUME	3867
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	01:30 PM to 02:30 PM
PEAK HR VOLUME	3689
DIRECTIONAL PEAK	
PEAK HR TIME	01:30 PM to 02:30 PM
PEAK HR VOLUME	3689

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	18,102		
AM 12-HR PERIOD (00:00-12:00)	20,292		
PM 6-HR PERIOD (12:00-18:00)	21,222		
PM 12-HR PERIOD (12:00-24:00)	30,206		
24 HOUR PERIOD	50,498		
D (%)			

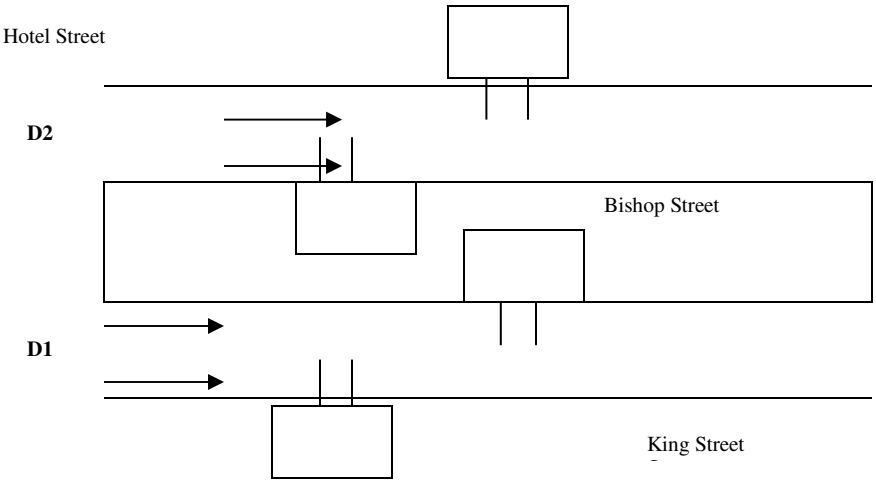
Traffic Data Service

Traffic Station Sketch

N

Island: Oahu
Area: Honolulu

Section ID/Station: B72750500035



	Meter #	File Name	GPS
1.	BG76	D0210021_B72750500035	21.30902, -157.8607
2.	W534		

Station Description: Bishop Street: Hotel Street to King Street					
Survey Beginning Date/Time: 2/10/16 @ 0000			Survey Ending Date/Time: 2/11/16 @ 2400		
Survey Method:	Road Tube		Data Type:	Vol	
Survey Crew:	LM				
Sketch Updated:			By:	SR	
Remarks:	1381				
FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
Bishop Street		14		7505	
D1= Direction to End D2= Direction to Begin			D1: King Street / Nimitz Highway D2: Hotel Street / Vineyard Boulevard		

Run Date: 2017/07/05

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2016 Program Count - Summary

Site ID: B72750500035 **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 8200

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7505

Location: Bishop St - Hotel St to King St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/10/2016															
12:00-12:15	14	0	14	06:00-06:15	133	0	133	12:00-12:15	99	0	99	06:00-06:15	146	0	146
12:15-12:30	15	0	15	06:15-06:30	192	0	192	12:15-12:30	119	0	119	06:15-06:30	173	0	173
12:30-12:45	13	0	13	06:30-06:45	225	0	225	12:30-12:45	158	0	158	06:30-06:45	136	0	136
12:45-01:00	19	0	19	06:45-07:00	171	0	171	12:45-01:00	150	0	150	06:45-07:00	117	0	117
01:00-01:15	10	0	10	07:00-07:15	167	0	167	01:00-01:15	150	0	150	07:00-07:15	125	0	125
01:15-01:30	9	0	9	07:15-07:30	102	0	102	01:15-01:30	148	0	148	07:15-07:30	115	0	115
01:30-01:45	16	0	16	07:30-07:45	42	0	42	01:30-01:45	157	0	157	07:30-07:45	76	0	76
01:45-02:00	9	0	9	07:45-08:00	60	0	60	01:45-02:00	133	0	133	07:45-08:00	76	0	76
02:00-02:15	7	0	7	08:00-08:15	116	0	116	02:00-02:15	153	0	153	08:00-08:15	88	0	88
02:15-02:30	7	0	7	08:15-08:30	123	0	123	02:15-02:30	154	0	154	08:15-08:30	85	0	85
02:30-02:45	12	0	12	08:30-08:45	112	0	112	02:30-02:45	145	0	145	08:30-08:45	65	0	65
02:45-03:00	5	0	5	08:45-09:00	156	0	156	02:45-03:00	142	0	142	08:45-09:00	58	0	58
03:00-03:15	13	0	13	09:00-09:15	135	0	135	03:00-03:15	145	0	145	09:00-09:15	54	0	54
03:15-03:30	11	0	11	09:15-09:30	165	0	165	03:15-03:30	164	0	164	09:15-09:30	58	0	58
03:30-03:45	12	0	12	09:30-09:45	114	0	114	03:30-03:45	169	0	169	09:30-09:45	43	0	43
03:45-04:00	18	0	18	09:45-10:00	128	0	128	03:45-04:00	153	0	153	09:45-10:00	46	0	46
04:00-04:15	17	0	17	10:00-10:15	152	0	152	04:00-04:15	134	0	134	10:00-10:15	43	0	43
04:15-04:30	42	0	42	10:15-10:30	156	0	156	04:15-04:30	164	0	164	10:15-10:30	33	0	33
04:30-04:45	45	0	45	10:30-10:45	133	0	133	04:30-04:45	135	0	135	10:30-10:45	32	0	32
04:45-05:00	59	0	59	10:45-11:00	160	0	160	04:45-05:00	121	0	121	10:45-11:00	28	0	28
05:00-05:15	77	0	77	11:00-11:15	159	0	159	05:00-05:15	101	0	101	11:00-11:15	14	0	14
05:15-05:30	68	0	68	11:15-11:30	154	0	154	05:15-05:30	138	0	138	11:15-11:30	11	0	11
05:30-05:45	119	0	119	11:30-11:45	122	0	122	05:30-05:45	71	0	71	11:30-11:45	14	0	14
05:45-06:00	140	0	140	11:45-12:00	150	0	150	05:45-06:00	130	0	130	11:45-12:00	12	0	12

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:15 AM to 07:15 AM	
AM - PEAK HR VOLUME	755	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:15 AM to 07:15 AM	
AM - PEAK HR VOLUME	755	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	631	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	631	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	06:15 AM to 07:15 AM
AM - PEAK HR VOLUME	755
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	03:00 PM to 04:00 PM
PM - PEAK HR VOLUME	631
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	10:15 AM to 11:15 AM
PEAK HR VOLUME	608
DIRECTIONAL PEAK	
PEAK HR TIME	10:15 AM to 11:15 AM
PEAK HR VOLUME	608

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	3,327		
AM 12-HR PERIOD (00:00-12:00)	4,084		
PM 6-HR PERIOD (12:00-18:00)	3,333		
PM 12-HR PERIOD (12:00-24:00)	4,981		
24 HOUR PERIOD	9,065		
D (%)			

Run Date: 2017/07/05

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2016 Program Count - Summary

Site ID: B72750500035 **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 8200

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7505

Location: Bishop St - Hotel St to King St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/11/2016															
12:00-12:15	8	0	8	06:00-06:15	123	0	123	12:00-12:15	122	0	122	06:00-06:15	117	0	117
12:15-12:30	18	0	18	06:15-06:30	186	0	186	12:15-12:30	142	0	142	06:15-06:30	180	0	180
12:30-12:45	14	0	14	06:30-06:45	231	0	231	12:30-12:45	129	0	129	06:30-06:45	151	0	151
12:45-01:00	8	0	8	06:45-07:00	235	0	235	12:45-01:00	156	0	156	06:45-07:00	145	0	145
01:00-01:15	9	0	9	07:00-07:15	103	0	103	01:00-01:15	147	0	147	07:00-07:15	138	0	138
01:15-01:30	16	0	16	07:15-07:30	117	0	117	01:15-01:30	150	0	150	07:15-07:30	82	0	82
01:30-01:45	13	0	13	07:30-07:45	133	0	133	01:30-01:45	168	0	168	07:30-07:45	47	0	47
01:45-02:00	11	0	11	07:45-08:00	52	0	52	01:45-02:00	134	0	134	07:45-08:00	77	0	77
02:00-02:15	11	0	11	08:00-08:15	54	0	54	02:00-02:15	161	0	161	08:00-08:15	64	0	64
02:15-02:30	2	0	2	08:15-08:30	68	0	68	02:15-02:30	141	0	141	08:15-08:30	83	0	83
02:30-02:45	12	0	12	08:30-08:45	69	0	69	02:30-02:45	140	0	140	08:30-08:45	78	0	78
02:45-03:00	9	0	9	08:45-09:00	135	0	135	02:45-03:00	132	0	132	08:45-09:00	72	0	72
03:00-03:15	6	0	6	09:00-09:15	148	0	148	03:00-03:15	148	0	148	09:00-09:15	62	0	62
03:15-03:30	13	0	13	09:15-09:30	171	0	171	03:15-03:30	143	0	143	09:15-09:30	56	0	56
03:30-03:45	8	0	8	09:30-09:45	144	0	144	03:30-03:45	171	0	171	09:30-09:45	65	0	65
03:45-04:00	13	0	13	09:45-10:00	147	0	147	03:45-04:00	147	0	147	09:45-10:00	55	0	55
04:00-04:15	22	0	22	10:00-10:15	159	0	159	04:00-04:15	142	0	142	10:00-10:15	50	0	50
04:15-04:30	33	0	33	10:15-10:30	185	0	185	04:15-04:30	151	0	151	10:15-10:30	54	0	54
04:30-04:45	49	0	49	10:30-10:45	155	0	155	04:30-04:45	156	0	156	10:30-10:45	38	0	38
04:45-05:00	52	0	52	10:45-11:00	163	0	163	04:45-05:00	136	0	136	10:45-11:00	24	0	24
05:00-05:15	64	0	64	11:00-11:15	121	0	121	05:00-05:15	90	0	90	11:00-11:15	27	0	27
05:15-05:30	66	0	66	11:15-11:30	169	0	169	05:15-05:30	71	0	71	11:15-11:30	20	0	20
05:30-05:45	114	0	114	11:30-11:45	153	0	153	05:30-05:45	148	0	148	11:30-11:45	28	0	28
05:45-06:00	144	0	144	11:45-12:00	136	0	136	05:45-06:00	131	0	131	11:45-12:00	17	0	17

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:00 AM to 07:00 AM	
AM - PEAK HR VOLUME	775	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:00 AM to 07:00 AM	
AM - PEAK HR VOLUME	775	

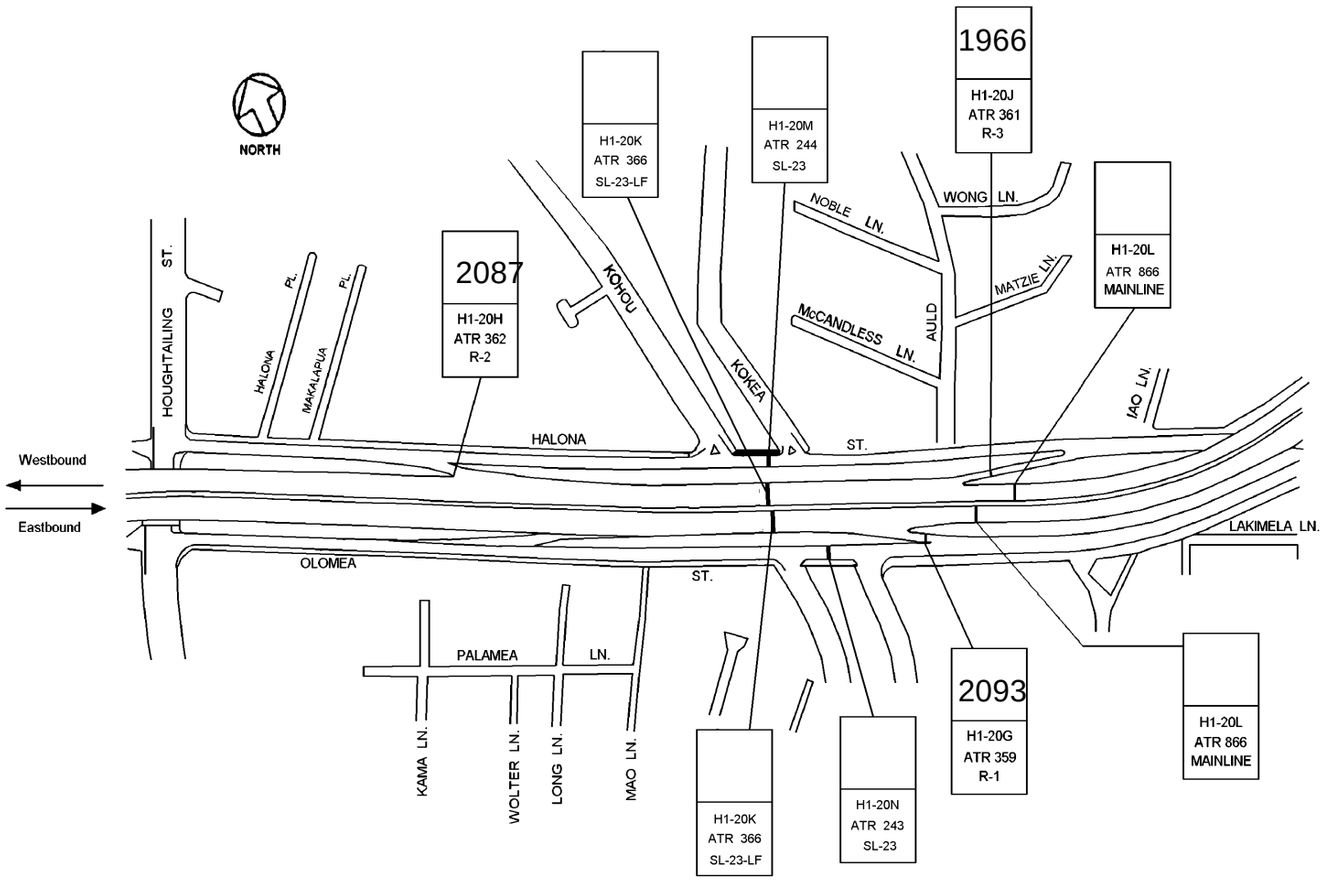
PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:30 PM to 04:30 PM	
PM - PEAK HR VOLUME	611	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:30 PM to 04:30 PM	
PM - PEAK HR VOLUME	611	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	06:00 AM to 07:00 AM
AM - PEAK HR VOLUME	775
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	12:45 PM to 01:45 PM
PM - PEAK HR VOLUME	621
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	10:00 AM to 11:00 AM
PEAK HR VOLUME	662
DIRECTIONAL PEAK	
PEAK HR TIME	10:00 AM to 11:00 AM
PEAK HR VOLUME	662

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	3,357		
AM 12-HR PERIOD (00:00-12:00)	4,072		
PM 6-HR PERIOD (12:00-18:00)	3,356		
PM 12-HR PERIOD (12:00-24:00)	5,086		
24 HOUR PERIOD	9,158		
D (%)			



HOUGHTAILING ST.
TO PALAMA ST.

Station Description:	HOUGHTAILING STREET - PALAMA STREET INTERCHANGE				
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					

ATR #	FREEWAY STA #	AUX STA #	DESCRIPTION	RTE #	RTE MILE
866	H1-20L		H-1 FREEWAY AT PALAMA STREET	H-1	20.40
			(loop station)		
362	H1-20H	R-2	OFF RAMP, H-1 WB TO HALONA STREET	H-1	20.08
359	H1-20G	R-1	OFF RAMP, H-1 EB TO OLOMEA STREET	H-1	20.26
			(loop station)		
361	H1-20J	R-3	ON RAMP, HALONA STREET TO H-1 WB	H-1	20.30
			(loop station)		
366	H1-20K	SL-23-LF	H-1 FREEWAY AT KAPALAMA DRAINAGE CANAL	H-1	20.24
			BRIDGE		
244	H1-20M	SL-23	HALONA STREET AT KAPALAMA DRAINAGE CANAL	FRONTAGE	
			(ONE WAY WB)		
243	H1-20N	SL-23	OLOMEA STREET AT KAPALAMA DRAINAGE CANAL	FRONTAGE	
			(ONE WAY EB)		

Run Date: 2017/08/03

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72000H1-20J **Town:** Oahu **DIR 1:** -MP **DIR 2:** None **Final AADT:** 13400
Functional Class: OTHER **Count Type:** CLASS **Counter Type:** Tube **Route No:** H-1_WB_20BB
Location: ON RAMP, H-1 WB from Halona St (loop station), Houghtailing/Palama IC R-3

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 10/18/2016															
12:00-12:15	33	0	33	06:00-06:15	138	0	138	12:00-12:15	198	0	198	06:00-06:15	230	0	230
12:15-12:30	32	0	32	06:15-06:30	143	0	143	12:15-12:30	206	0	206	06:15-06:30	227	0	227
12:30-12:45	23	0	23	06:30-06:45	199	0	199	12:30-12:45	221	0	221	06:30-06:45	207	0	207
12:45-01:00	16	0	16	06:45-07:00	219	0	219	12:45-01:00	205	0	205	06:45-07:00	186	0	186
01:00-01:15	12	0	12	07:00-07:15	201	0	201	01:00-01:15	177	0	177	07:00-07:15	184	0	184
01:15-01:30	16	0	16	07:15-07:30	255	0	255	01:15-01:30	204	0	204	07:15-07:30	171	0	171
01:30-01:45	12	0	12	07:30-07:45	209	0	209	01:30-01:45	219	0	219	07:30-07:45	150	0	150
01:45-02:00	8	0	8	07:45-08:00	273	0	273	01:45-02:00	221	0	221	07:45-08:00	137	0	137
02:00-02:15	16	0	16	08:00-08:15	198	0	198	02:00-02:15	233	0	233	08:00-08:15	136	0	136
02:15-02:30	11	0	11	08:15-08:30	179	0	179	02:15-02:30	250	0	250	08:15-08:30	141	0	141
02:30-02:45	11	0	11	08:30-08:45	173	0	173	02:30-02:45	244	0	244	08:30-08:45	128	0	128
02:45-03:00	9	0	9	08:45-09:00	148	0	148	02:45-03:00	245	0	245	08:45-09:00	106	0	106
03:00-03:15	8	0	8	09:00-09:15	146	0	146	03:00-03:15	226	0	226	09:00-09:15	110	0	110
03:15-03:30	9	0	9	09:15-09:30	185	0	185	03:15-03:30	266	0	266	09:15-09:30	129	0	129
03:30-03:45	10	0	10	09:30-09:45	150	0	150	03:30-03:45	281	0	281	09:30-09:45	79	0	79
03:45-04:00	18	0	18	09:45-10:00	156	0	156	03:45-04:00	277	0	277	09:45-10:00	96	0	96
04:00-04:15	26	0	26	10:00-10:15	165	0	165	04:00-04:15	287	0	287	10:00-10:15	62	0	62
04:15-04:30	38	0	38	10:15-10:30	194	0	194	04:15-04:30	281	0	281	10:15-10:30	90	0	90
04:30-04:45	51	0	51	10:30-10:45	167	0	167	04:30-04:45	292	0	292	10:30-10:45	80	0	80
04:45-05:00	54	0	54	10:45-11:00	156	0	156	04:45-05:00	270	0	270	10:45-11:00	67	0	67
05:00-05:15	74	0	74	11:00-11:15	165	0	165	05:00-05:15	295	0	295	11:00-11:15	55	0	55
05:15-05:30	92	0	92	11:15-11:30	195	0	195	05:15-05:30	311	0	311	11:15-11:30	40	0	40
05:30-05:45	94	0	94	11:30-11:45	212	0	212	05:30-05:45	286	0	286	11:30-11:45	47	0	47
05:45-06:00	117	0	117	11:45-12:00	197	0	197	05:45-06:00	259	0	259	11:45-12:00	48	0	48

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:00 AM to 08:00 AM	
AM - PEAK HR VOLUME	938	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:00 AM to 08:00 AM	
AM - PEAK HR VOLUME	938	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	1168	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	1168	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	07:00 AM to 08:00 AM
AM - PEAK HR VOLUME	938
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	04:30 PM to 05:30 PM
PM - PEAK HR VOLUME	1168
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	972
DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	972

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	4,423		
AM 12-HR PERIOD (00:00-12:00)	5,213		
PM 6-HR PERIOD (12:00-18:00)	5,954		
PM 12-HR PERIOD (12:00-24:00)	8,860		
24 HOUR PERIOD	14,073		
D (%)			

Run Date: 2017/08/03

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72000H1-20J **Town:** Oahu **DIR 1:** -MP **DIR 2:** None **Final AADT:** 13400
Functional Class: OTHER **Count Type:** CLASS **Counter Type:** Tube **Route No:** H-1_WB_20BB
Location: ON RAMP, H-1 WB from Halona St (loop station), Houghtailing/Palama IC R-3

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 10/19/2016															
12:00-12:15	43	0	43	06:00-06:15	162	0	162	12:00-12:15	206	0	206	06:00-06:15	216	0	216
12:15-12:30	29	0	29	06:15-06:30	159	0	159	12:15-12:30	190	0	190	06:15-06:30	227	0	227
12:30-12:45	33	0	33	06:30-06:45	186	0	186	12:30-12:45	204	0	204	06:30-06:45	203	0	203
12:45-01:00	26	0	26	06:45-07:00	201	0	201	12:45-01:00	193	0	193	06:45-07:00	185	0	185
01:00-01:15	15	0	15	07:00-07:15	209	0	209	01:00-01:15	199	0	199	07:00-07:15	182	0	182
01:15-01:30	18	0	18	07:15-07:30	269	0	269	01:15-01:30	193	0	193	07:15-07:30	182	0	182
01:30-01:45	13	0	13	07:30-07:45	246	0	246	01:30-01:45	207	0	207	07:30-07:45	160	0	160
01:45-02:00	17	0	17	07:45-08:00	268	0	268	01:45-02:00	214	0	214	07:45-08:00	172	0	172
02:00-02:15	20	0	20	08:00-08:15	224	0	224	02:00-02:15	217	0	217	08:00-08:15	174	0	174
02:15-02:30	11	0	11	08:15-08:30	189	0	189	02:15-02:30	222	0	222	08:15-08:30	152	0	152
02:30-02:45	11	0	11	08:30-08:45	163	0	163	02:30-02:45	250	0	250	08:30-08:45	127	0	127
02:45-03:00	9	0	9	08:45-09:00	170	0	170	02:45-03:00	255	0	255	08:45-09:00	127	0	127
03:00-03:15	15	0	15	09:00-09:15	141	0	141	03:00-03:15	248	0	248	09:00-09:15	113	0	113
03:15-03:30	14	0	14	09:15-09:30	170	0	170	03:15-03:30	262	0	262	09:15-09:30	123	0	123
03:30-03:45	19	0	19	09:30-09:45	183	0	183	03:30-03:45	268	0	268	09:30-09:45	88	0	88
03:45-04:00	21	0	21	09:45-10:00	169	0	169	03:45-04:00	206	0	206	09:45-10:00	90	0	90
04:00-04:15	23	0	23	10:00-10:15	175	0	175	04:00-04:15	205	0	205	10:00-10:15	80	0	80
04:15-04:30	39	0	39	10:15-10:30	169	0	169	04:15-04:30	313	0	313	10:15-10:30	78	0	78
04:30-04:45	62	0	62	10:30-10:45	172	0	172	04:30-04:45	280	0	280	10:30-10:45	68	0	68
04:45-05:00	48	0	48	10:45-11:00	181	0	181	04:45-05:00	318	0	318	10:45-11:00	66	0	66
05:00-05:15	76	0	76	11:00-11:15	176	0	176	05:00-05:15	315	0	315	11:00-11:15	42	0	42
05:15-05:30	82	0	82	11:15-11:30	176	0	176	05:15-05:30	270	0	270	11:15-11:30	37	0	37
05:30-05:45	72	0	72	11:30-11:45	208	0	208	05:30-05:45	288	0	288	11:30-11:45	52	0	52
05:45-06:00	117	0	117	11:45-12:00	197	0	197	05:45-06:00	251	0	251	11:45-12:00	49	0	49

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	1007	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	1007	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	1226	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	1226	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	07:15 AM to 08:15 AM
AM - PEAK HR VOLUME	1007
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	1226	
PM - K FACTOR (%)		-
PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	944
DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	944

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	4,563		
AM 12-HR PERIOD (00:00-12:00)	5,396		
PM 6-HR PERIOD (12:00-18:00)	5,774		
PM 12-HR PERIOD (12:00-24:00)	8,767		
24 HOUR PERIOD	14,163		
D (%)			

Run Date: 2017/08/03

Hawaii Department of Transportation
Highways Division
Highways Planning Survey Section

Vehicle Classification Data Summary
2016

Site ID: B72000H1-20J **Route No:** H-1_WB_20BB **Date From:** 2016/10/18 0:00
Town: Oahu **Direction:** -MP **Date To:** 2016/10/19 23:45
Location: ON RAMP, H-1 WB from Halona St (loop station), Houghtailing/Palama IC R-3

Functional Classification: 99 OTHER

REPORT TOTALS - 48 HOURS RECORDED

	VOLUME	%	NUMBER OF AXLES
Cycles	6	0.02%	11
PC	19666	69.65%	39331
2A-4T	6860	24.30%	13720
LIGHT VEHICLE TOTALS	26532	93.96%	53063
	HEAVY VEHICLES		
Bus	731	2.59%	1828
SINGLE UNIT TRUCK			
2A-6T	772	2.73%	1544
3A-SU	47	0.17%	141
4A-SU	6	0.02%	24
SINGLE-TRAILER TRUCKS			
4A-ST	131	0.46%	524
5A-ST	10	0.04%	50
6A-ST	1	0.00%	6
MULTI-TRAILER TRUCKS			
5A-MT	7	0.02%	35
6A-MT	0	0.00%	0
7A-MT	0	0.00%	0
HEAVY VEHICLE TOTALS	1705	6.04%	4152
CLASSIFIED VEHICLES TOTALS	28237 (A)	100.00%	57215 (B)
UNCLASSIFIED VEHICLES TOTALS	-1	-0.00%	

AXLE CORRECTION FACTOR (A/C) = 0.987

ROADTUBE EQUIVALENT(B/2) = 28607 (C)

PEAK HOUR VOLUME : 1151 **2016/10/18 17:00**	**PEAK HOUR TRUCK VOLUME**	**% TOTAL PEAK HOUR VOLUME**	**24 HOUR TRUCK VOLUME**	**AADT**	**% OF AADT**	**HPMS K-FACTOR (PEAK/AADT) (ITEM 66)**
SINGLE UNIT TRUCKS (TYPE 4-7)	**75**	**(65A-1) 6.52%**	**778**	**13400**	**(65A-2) 5.81%**	**8.59%**
COMBINATION (TYPE 8-13)	**8**	**(65B-1) 0.70%**	**74**		**(65B-2) 0.55%**	**8.59%**

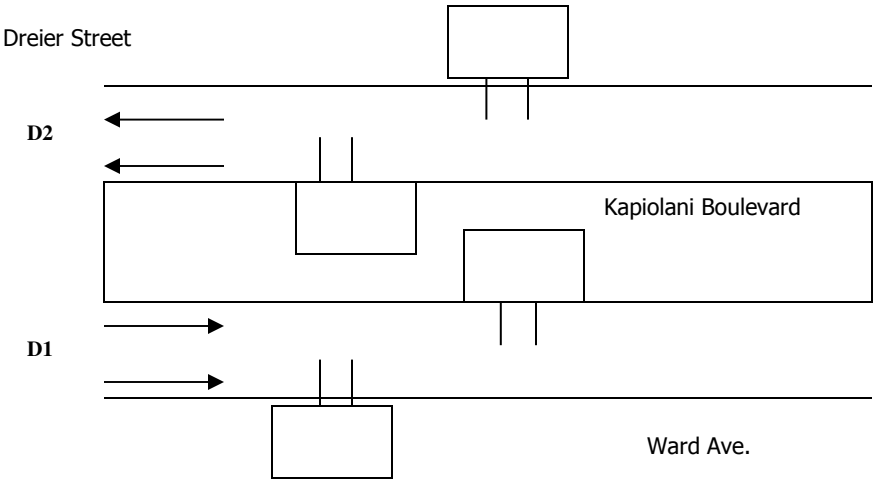
Traffic Data Service

Traffic Station Sketch

N

Island: Oahu
Area: Honolulu

Section ID/Station: B72750300019



Meter #	File Name	GPS
1. bt27	D0331003_B72750300019	21.30052, -157.85394
2. y217	D0331004_B72750300019	21.30052, -157.85394

Station Description:
Kapiolani Blvd: Dreier St to Ward Ave.

Survey Beginning Date/Time:		Survey Ending Date/Time:
3/31/16 @ 0000		4/1/16 @ 2400

Survey Method:	Road Tube	Data Type:	Volume
Survey Crew:	LM		C4
Sketch Updated:		By:	SR

Remarks:	1381

FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
Kapiolani Boulevard		14		7503	

D1= Direction to End
D2= Direction to Begin

D1: Ward Ave. / Waialae Avenue
D2: Dreier Street / South Street

Run Date: 2017/07/17

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72750300019 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 26200
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7503
Location: Kapiolani Blvd: Dreier St to Ward Ave

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 03/31/2016															
12:00-12:15	33	40	73	06:00-06:15	63	70	133	12:00-12:15	205	230	435	06:00-06:15	189	385	574
12:15-12:30	48	33	81	06:15-06:30	83	58	141	12:15-12:30	221	228	449	06:15-06:30	204	235	439
12:30-12:45	31	28	59	06:30-06:45	91	86	177	12:30-12:45	193	209	402	06:30-06:45	192	202	394
12:45-01:00	47	23	70	06:45-07:00	139	116	255	12:45-01:00	222	201	423	06:45-07:00	168	184	352
01:00-01:15	64	21	85	07:00-07:15	193	127	320	01:00-01:15	233	225	458	07:00-07:15	170	167	337
01:15-01:30	30	21	51	07:15-07:30	224	176	400	01:15-01:30	258	192	450	07:15-07:30	134	142	276
01:30-01:45	29	16	45	07:30-07:45	275	183	458	01:30-01:45	228	208	436	07:30-07:45	139	141	280
01:45-02:00	28	11	39	07:45-08:00	271	192	463	01:45-02:00	202	216	418	07:45-08:00	152	137	289
02:00-02:15	34	12	46	08:00-08:15	270	187	457	02:00-02:15	218	211	429	08:00-08:15	154	132	286
02:15-02:30	19	25	44	08:15-08:30	193	193	386	02:15-02:30	228	208	436	08:15-08:30	145	143	288
02:30-02:45	15	9	24	08:30-08:45	226	213	439	02:30-02:45	227	190	417	08:30-08:45	141	87	228
02:45-03:00	12	15	27	08:45-09:00	166	212	378	02:45-03:00	237	233	470	08:45-09:00	154	94	248
03:00-03:15	5	10	15	09:00-09:15	208	167	375	03:00-03:15	196	243	439	09:00-09:15	231	95	326
03:15-03:30	14	9	23	09:15-09:30	188	158	346	03:15-03:30	240	219	459	09:15-09:30	121	74	195
03:30-03:45	8	8	16	09:30-09:45	167	197	364	03:30-03:45	270	256	526	09:30-09:45	120	85	205
03:45-04:00	13	8	21	09:45-10:00	165	184	349	03:45-04:00	269	273	542	09:45-10:00	189	83	272
04:00-04:15	8	16	24	10:00-10:15	172	187	359	04:00-04:15	378	328	706	10:00-10:15	116	71	187
04:15-04:30	3	8	11	10:15-10:30	181	186	367	04:15-04:30	271	292	563	10:15-10:30	124	63	187
04:30-04:45	9	20	29	10:30-10:45	162	174	336	04:30-04:45	287	385	672	10:30-10:45	107	50	157
04:45-05:00	20	24	44	10:45-11:00	170	222	392	04:45-05:00	266	330	596	10:45-11:00	83	47	130
05:00-05:15	20	29	49	11:00-11:15	189	197	386	05:00-05:15	271	353	624	11:00-11:15	121	45	166
05:15-05:30	23	42	65	11:15-11:30	235	201	436	05:15-05:30	312	315	627	11:15-11:30	118	41	159
05:30-05:45	29	34	63	11:30-11:45	203	216	419	05:30-05:45	292	351	643	11:30-11:45	61	40	101
05:45-06:00	51	48	99	11:45-12:00	217	224	441	05:45-06:00	190	365	555	11:45-12:00	38	23	61

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2		PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK				TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM			PM - PEAK HR TIME	04:00 PM to 05:00 PM		
AM - PEAK HR VOLUME	1040	738	1778	PM - PEAK HR VOLUME	1202	1335	2537
AM - K FACTOR (%)			6.35	PM - K FACTOR (%)			9.06
AM - D (%)	58.49	41.51	100.00	PM - D (%)	47.38	52.62	100.00
DIRECTIONAL PEAK				DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	08:00 AM to 09:00 AM		PM - PEAK HR TIME	03:45 PM to 04:45 PM	05:15 PM to 06:15 PM	
AM - PEAK HR VOLUME	1040	805		PM - PEAK HR VOLUME	1205	1416	

AM PERIOD (00:00-12:00)				PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK				TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM			PM - PEAK HR TIME	04:00 PM to 05:00 PM		
AM - PEAK HR VOLUME	1040	738	1778	PM - PEAK HR VOLUME	1202	1335	2537
AM - K FACTOR (%)			6.35	PM - K FACTOR (%)			9.06
AM - D (%)	58.49	41.51	100.00	PM - D (%)	47.38	52.62	100.00

NON-COMMUTER PERIOD (09:00-15:00)				6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK				AM 6-HR PERIOD (06:00-12:00)	4,451	4,126	8,577
PEAK HR TIME	12:45 PM to 01:45 PM			AM 12-HR PERIOD (00:00-12:00)	5,044	4,636	9,680
PEAK HR VOLUME	941	826	1767	PM 6-HR PERIOD (12:00-18:00)	5,914	6,261	12,175
DIRECTIONAL PEAK				PM 12-HR PERIOD (12:00-24:00)	9,285	9,027	18,312
PEAK HR TIME	12:45 PM to 01:45 PM	11:30 AM to 12:30 PM		24 HOUR PERIOD	14,329	13,663	27,992
PEAK HR VOLUME	941	898		D (%)	51.19	48.81	100.00

Run Date: 2017/07/17

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72750300019 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 26200
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7503
Location: Kapiolani Blvd: Dreier St to Ward Ave

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 04/01/2016															
12:00-12:15	24	21	45	06:00-06:15	57	58	115	12:00-12:15	226	259	485	06:00-06:15	164	513	677
12:15-12:30	33	29	62	06:15-06:30	85	76	161	12:15-12:30	228	213	441	06:15-06:30	159	379	538
12:30-12:45	36	34	70	06:30-06:45	109	114	223	12:30-12:45	203	233	436	06:30-06:45	157	493	650
12:45-01:00	30	21	51	06:45-07:00	145	124	269	12:45-01:00	239	244	483	06:45-07:00	151	423	574
01:00-01:15	35	19	54	07:00-07:15	188	135	323	01:00-01:15	234	219	453	07:00-07:15	151	264	415
01:15-01:30	22	25	47	07:15-07:30	208	168	376	01:15-01:30	241	238	479	07:15-07:30	115	202	317
01:30-01:45	23	14	37	07:30-07:45	288	177	465	01:30-01:45	236	226	462	07:30-07:45	137	186	323
01:45-02:00	14	13	27	07:45-08:00	282	200	482	01:45-02:00	259	210	469	07:45-08:00	293	132	425
02:00-02:15	20	22	42	08:00-08:15	257	209	466	02:00-02:15	225	253	478	08:00-08:15	392	127	519
02:15-02:30	18	25	43	08:15-08:30	236	217	453	02:15-02:30	230	213	443	08:15-08:30	405	129	534
02:30-02:45	13	12	25	08:30-08:45	202	185	387	02:30-02:45	258	220	478	08:30-08:45	325	117	442
02:45-03:00	17	11	28	08:45-09:00	181	204	385	02:45-03:00	256	233	489	08:45-09:00	137	104	241
03:00-03:15	15	19	34	09:00-09:15	194	182	376	03:00-03:15	233	231	464	09:00-09:15	131	95	226
03:15-03:30	9	13	22	09:15-09:30	161	206	367	03:15-03:30	255	262	517	09:15-09:30	169	118	287
03:30-03:45	8	13	21	09:30-09:45	163	185	348	03:30-03:45	284	301	585	09:30-09:45	176	109	285
03:45-04:00	17	9	26	09:45-10:00	189	174	363	03:45-04:00	332	268	600	09:45-10:00	203	96	299
04:00-04:15	9	11	20	10:00-10:15	205	199	404	04:00-04:15	280	337	617	10:00-10:15	158	118	276
04:15-04:30	14	7	21	10:15-10:30	194	209	403	04:15-04:30	324	322	646	10:15-10:30	117	106	223
04:30-04:45	17	13	30	10:30-10:45	185	219	404	04:30-04:45	301	328	629	10:30-10:45	161	107	268
04:45-05:00	23	25	48	10:45-11:00	175	188	363	04:45-05:00	288	377	665	10:45-11:00	142	95	237
05:00-05:15	22	33	55	11:00-11:15	211	199	410	05:00-05:15	339	382	721	11:00-11:15	138	88	226
05:15-05:30	31	26	57	11:15-11:30	213	204	417	05:15-05:30	271	370	641	11:15-11:30	130	78	208
05:30-05:45	29	37	66	11:30-11:45	201	247	448	05:30-05:45	275	433	708	11:30-11:45	98	65	163
05:45-06:00	41	47	88	11:45-12:00	195	226	421	05:45-06:00	178	429	607	11:45-12:00	149	79	228

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1063	803	1866
AM - K FACTOR (%)			5.94
AM - D (%)	56.97	43.03	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM	08:00 AM to 09:00 AM	
AM - PEAK HR VOLUME	1063	815	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM		
PM - PEAK HR VOLUME	1173	1562	2735
PM - K FACTOR (%)			8.70
PM - D (%)	42.89	57.11	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM	05:45 PM to 06:45 PM	
PM - PEAK HR VOLUME	1252	1814	

AM PERIOD (00:00-12:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1063	803	1866
AM - K FACTOR (%)			5.94
AM - D (%)	56.97	43.03	100.00

PM PERIOD (12:00-24:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM		
PM - PEAK HR VOLUME	1173	1562	2735
PM - K FACTOR (%)			8.70
PM - D (%)	42.89	57.11	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	01:15 PM to 02:15 PM		
PEAK HR VOLUME	961	927	1888
DIRECTIONAL PEAK			
PEAK HR TIME	01:45 PM to 02:45 PM	12:00 PM to 01:00 PM	
PEAK HR VOLUME	972	949	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	4,524	4,305	8,829
AM 12-HR PERIOD (00:00-12:00)	5,044	4,804	9,848
PM 6-HR PERIOD (12:00-18:00)	6,195	6,801	12,996
PM 12-HR PERIOD (12:00-24:00)	10,553	11,024	21,577
24 HOUR PERIOD	15,597	15,828	31,425
D (%)	49.63	50.37	100.00

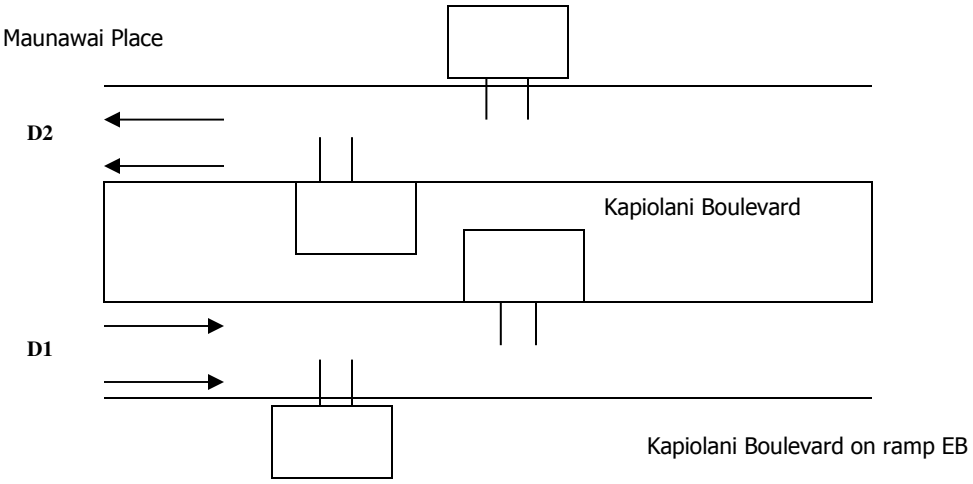
Traffic Data Service

Traffic Station Sketch

N

Island: Oahu
Area: Saint Louis Heights

Section ID/Station: B72750300269



	Meter #	File Name	GPS
1.	t114	D0225003_B72750300269	21.28794, -157.8186
2.	bt01	D0225004_B72750300269	

Station Description: Kapiolani Boulevard: Maunawai Place to Kapiolani Boulevard on ramp EB (Makai Entrance)					
Survey Beginning Date/Time: 2/25/16 @ 0000			Survey Ending Date/Time: 2/26/16 @ 2400		
Survey Method:	Road Tube		Data Type:	Vol	
Survey Crew:	LM				
Sketch Updated:			By:	SR	
Remarks:	1381				
FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
Kapiolani Boulevard		14		7503	
D1= Direction to End D2= Direction to Begin	D1: Kapiolani Boulevard on ramp EB (Makai Entrance) / Waialae Avenue D2: Maunawai Place / South Street				

Run Date: 2017/07/10

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72750300269 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 22500
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7503
Location: Kapiolani Blvd - Maunawai Pl to Kapiolani Blvd on ramp EB (makai ent)

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/25/2016															
12:00-12:15	45	19	64	06:00-06:15	49	62	111	12:00-12:15	196	107	303	06:00-06:15	323	125	448
12:15-12:30	55	27	82	06:15-06:30	92	82	174	12:15-12:30	233	113	346	06:15-06:30	371	114	485
12:30-12:45	33	14	47	06:30-06:45	98	104	202	12:30-12:45	228	100	328	06:30-06:45	329	109	438
12:45-01:00	27	13	40	06:45-07:00	135	153	288	12:45-01:00	237	91	328	06:45-07:00	298	106	404
01:00-01:15	42	14	56	07:00-07:15	193	171	364	01:00-01:15	197	107	304	07:00-07:15	240	113	353
01:15-01:30	37	12	49	07:15-07:30	247	223	470	01:15-01:30	199	103	302	07:15-07:30	244	98	342
01:30-01:45	26	20	46	07:30-07:45	260	219	479	01:30-01:45	229	102	331	07:30-07:45	198	95	293
01:45-02:00	23	12	35	07:45-08:00	218	205	423	01:45-02:00	220	96	316	07:45-08:00	203	98	301
02:00-02:15	29	6	35	08:00-08:15	151	215	366	02:00-02:15	234	102	336	08:00-08:15	189	102	291
02:15-02:30	21	2	23	08:15-08:30	181	173	354	02:15-02:30	282	132	414	08:15-08:30	160	90	250
02:30-02:45	11	7	18	08:30-08:45	196	139	335	02:30-02:45	275	141	416	08:30-08:45	201	66	267
02:45-03:00	14	8	22	08:45-09:00	175	123	298	02:45-03:00	283	126	409	08:45-09:00	169	90	259
03:00-03:15	13	6	19	09:00-09:15	197	108	305	03:00-03:15	304	145	449	09:00-09:15	174	99	273
03:15-03:30	11	7	18	09:15-09:30	204	103	307	03:15-03:30	352	149	501	09:15-09:30	177	100	277
03:30-03:45	8	12	20	09:30-09:45	151	98	249	03:30-03:45	366	143	509	09:30-09:45	184	128	312
03:45-04:00	9	10	19	09:45-10:00	194	111	305	03:45-04:00	373	109	482	09:45-10:00	152	104	256
04:00-04:15	17	7	24	10:00-10:15	175	113	288	04:00-04:15	358	139	497	10:00-10:15	125	74	199
04:15-04:30	20	12	32	10:15-10:30	202	103	305	04:15-04:30	415	127	542	10:15-10:30	122	60	182
04:30-04:45	13	12	25	10:30-10:45	183	101	284	04:30-04:45	361	110	471	10:30-10:45	102	37	139
04:45-05:00	17	14	31	10:45-11:00	214	99	313	04:45-05:00	417	115	532	10:45-11:00	83	42	125
05:00-05:15	29	11	40	11:00-11:15	196	108	304	05:00-05:15	435	111	546	11:00-11:15	79	34	113
05:15-05:30	36	19	55	11:15-11:30	219	102	321	05:15-05:30	381	111	492	11:15-11:30	99	43	142
05:30-05:45	45	36	81	11:30-11:45	236	97	333	05:30-05:45	408	96	504	11:30-11:45	77	32	109
05:45-06:00	52	31	83	11:45-12:00	220	99	319	05:45-06:00	390	129	519	11:45-12:00	59	28	87

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	876	862	1738
AM - K FACTOR (%)			6.96
AM - D (%)	50.40	49.60	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	918	862	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	1628	463	2091
PM - K FACTOR (%)			8.37
PM - D (%)	77.86	22.14	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	1641	546	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	876	862	1738
AM - K FACTOR (%)			6.96
AM - D (%)	50.40	49.60	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	1628	463	2091
PM - K FACTOR (%)			8.37
PM - D (%)	77.86	22.14	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	1074	501	1575
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	02:00 PM to 03:00 PM	
PEAK HR VOLUME	1074	501	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	4,386	3,111	7,497
AM 12-HR PERIOD (00:00-12:00)	5,019	3,442	8,461
PM 6-HR PERIOD (12:00-18:00)	7,373	2,804	10,177
PM 12-HR PERIOD (12:00-24:00)	11,731	4,791	16,522
24 HOUR PERIOD	16,750	8,233	24,983
D (%)	67.05	32.95	100.00

Run Date: 2017/07/10

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72750300269 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 22500
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7503
Location: Kapiolani Blvd - Maunawai Pl to Kapiolani Blvd on ramp EB (makai ent)

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/26/2016															
12:00-12:15	54	19	73	06:00-06:15	66	46	112	12:00-12:15	248	112	360	06:00-06:15	299	148	447
12:15-12:30	56	22	78	06:15-06:30	74	66	140	12:15-12:30	247	108	355	06:15-06:30	349	142	491
12:30-12:45	41	22	63	06:30-06:45	104	99	203	12:30-12:45	231	111	342	06:30-06:45	289	132	421
12:45-01:00	40	19	59	06:45-07:00	133	134	267	12:45-01:00	212	99	311	06:45-07:00	265	110	375
01:00-01:15	33	17	50	07:00-07:15	165	169	334	01:00-01:15	253	107	360	07:00-07:15	224	124	348
01:15-01:30	31	17	48	07:15-07:30	225	223	448	01:15-01:30	254	129	383	07:15-07:30	283	119	402
01:30-01:45	22	16	38	07:30-07:45	241	210	451	01:30-01:45	230	135	365	07:30-07:45	208	116	324
01:45-02:00	22	12	34	07:45-08:00	203	186	389	01:45-02:00	265	137	402	07:45-08:00	216	88	304
02:00-02:15	30	7	37	08:00-08:15	150	181	331	02:00-02:15	288	118	406	08:00-08:15	187	108	295
02:15-02:30	19	7	26	08:15-08:30	149	155	304	02:15-02:30	309	121	430	08:15-08:30	194	104	298
02:30-02:45	26	8	34	08:30-08:45	154	130	284	02:30-02:45	288	191	479	08:30-08:45	208	90	298
02:45-03:00	19	6	25	08:45-09:00	182	107	289	02:45-03:00	261	157	418	08:45-09:00	193	95	288
03:00-03:15	14	2	16	09:00-09:15	178	120	298	03:00-03:15	296	129	425	09:00-09:15	228	95	323
03:15-03:30	14	14	28	09:15-09:30	186	116	302	03:15-03:30	357	144	501	09:15-09:30	222	105	327
03:30-03:45	10	5	15	09:30-09:45	156	106	262	03:30-03:45	356	118	474	09:30-09:45	236	98	334
03:45-04:00	11	15	26	09:45-10:00	174	129	303	03:45-04:00	355	117	472	09:45-10:00	211	75	286
04:00-04:15	15	10	25	10:00-10:15	186	120	306	04:00-04:15	312	122	434	10:00-10:15	188	73	261
04:15-04:30	14	8	22	10:15-10:30	228	108	336	04:15-04:30	388	124	512	10:15-10:30	167	63	230
04:30-04:45	18	12	30	10:30-10:45	235	135	370	04:30-04:45	343	126	469	10:30-10:45	148	58	206
04:45-05:00	22	21	43	10:45-11:00	222	118	340	04:45-05:00	368	141	509	10:45-11:00	130	63	193
05:00-05:15	25	17	42	11:00-11:15	210	124	334	05:00-05:15	395	139	534	11:00-11:15	130	66	196
05:15-05:30	44	24	68	11:15-11:30	197	115	312	05:15-05:30	355	137	492	11:15-11:30	108	41	149
05:30-05:45	43	36	79	11:30-11:45	274	104	378	05:30-05:45	359	129	488	11:30-11:45	125	47	172
05:45-06:00	60	42	102	11:45-12:00	234	106	340	05:45-06:00	337	150	487	11:45-12:00	81	41	122

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM		
AM - PEAK HR VOLUME	834	788	1622
AM - K FACTOR (%)			6.24
AM - D (%)	51.42	48.58	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	834	800	

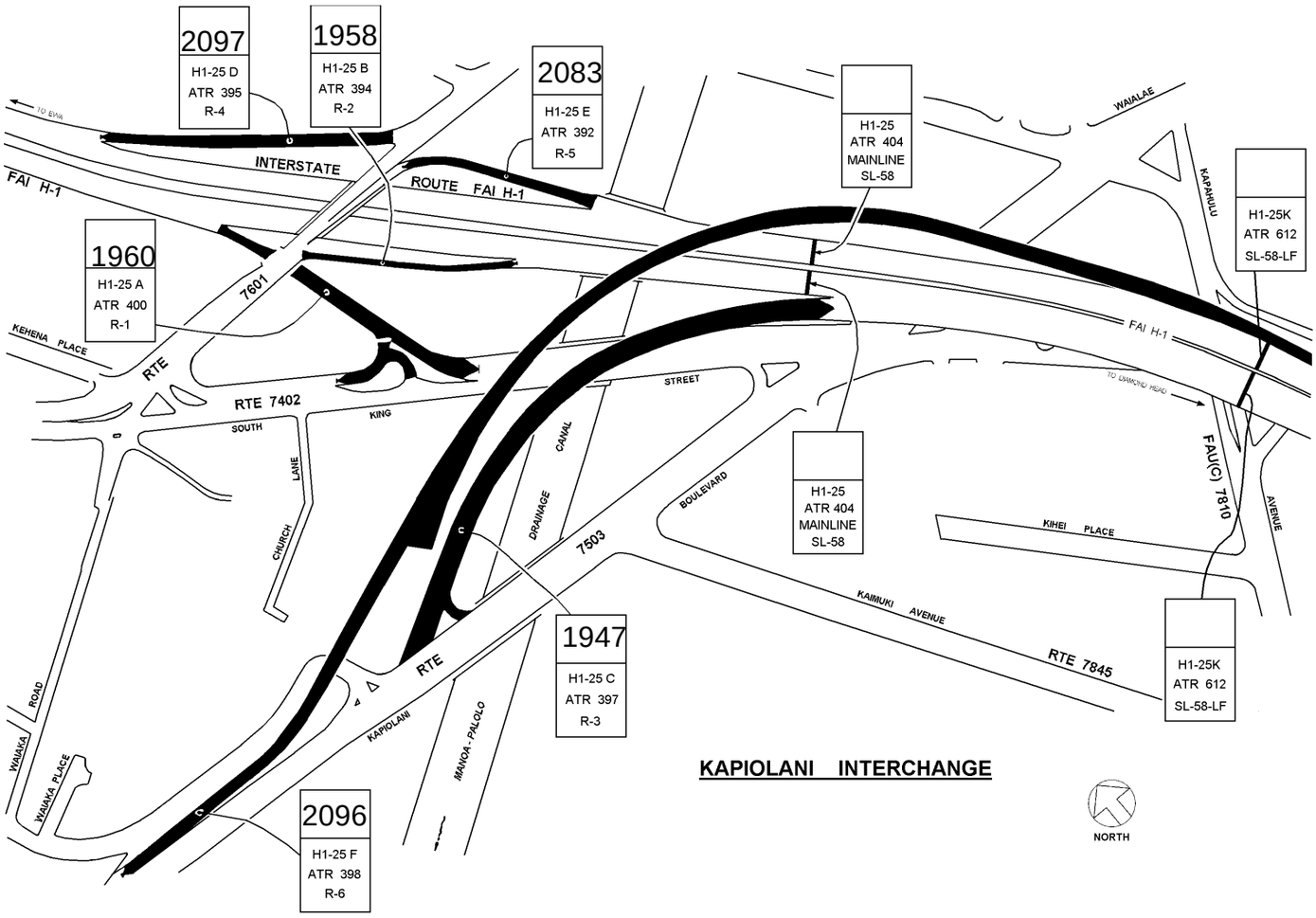
PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	1494	530	2024
PM - K FACTOR (%)			7.79
PM - D (%)	73.81	26.19	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM	05:45 PM to 06:45 PM	
PM - PEAK HR VOLUME	1494	572	

AM PERIOD (00:00-12:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM		
AM - PEAK HR VOLUME	834	788	1622
AM - K FACTOR (%)			6.24
AM - D (%)	51.42	48.58	100.00

PM PERIOD (12:00-24:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	1494	530	2024
PM - K FACTOR (%)			7.79
PM - D (%)	73.81	26.19	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	1146	587	1733
DIRECTIONAL PEAK			
PEAK HR TIME	01:45 PM to 02:45 PM	02:00 PM to 03:00 PM	
PEAK HR VOLUME	1150	587	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	4,326	3,107	7,433
AM 12-HR PERIOD (00:00-12:00)	5,009	3,485	8,494
PM 6-HR PERIOD (12:00-18:00)	7,307	3,101	10,408
PM 12-HR PERIOD (12:00-24:00)	12,196	5,302	17,498
24 HOUR PERIOD	17,205	8,787	25,992
D (%)	66.19	33.81	100.00



Station Description: KAPIOLANI INTERCHANGE					
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					
ATR #	FREEWAY STA #	AUX STA #	DESCRIPTION	RTE #	RTE MILE
404	H1-25	SL-58	H1- FREEWAY AT MANOA-PALOLO DRAINAGE CANA	H-1	24.59
			(loop station)		
395	H1-25D	R-4	ON RAMP, OLD WAIALAE ROAD WB TO H-1 WB	H-1	24.41
400	H1-25A	R-1	OFF RAMP, H-1 EB TO KING STREET	H-1	24.47
394	H1-25B	R-2	ON RAMP, OLD WAIALAE ROAD EB TO H-1 EB	H-1	24.56
392	H1-25E	R-5	OFF RAMP, H-1 WB TO OLD WAIALAE ROAD WB	H-1	24.58
397	H1-25C	R-3	ON RAMP, KAPIOLNI BLVD EB TO H-1 EB	H-1	24.81
			(research station)		
398	H1-25F	R-6	OFF RAMP, H-1 WB TO KAPIOLANI BLVD WB	H-1	24.93
			(research station)		
612	H1-25K	SL-58-LF	H-1 FREEWAY AT KAPAHULU AVE	H-1	25.00

Run Date: 2017/08/07

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2016 Program Count - Summary

Site ID: B72000H1-25F **Town:** Oahu **DIR 1:** -MP **DIR 2:** None **Final AADT:** 8100

Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-1_WB_25B

Location: OFF RAMP, H-1 WB Kapiolani Blvd WB (research station), Kapiolani IC R-6

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/16/2016															
12:00-12:15	12	0	12	06:00-06:15	86	0	86	12:00-12:15	119	0	119	06:00-06:15	126	0	126
12:15-12:30	6	0	6	06:15-06:30	131	0	131	12:15-12:30	113	0	113	06:15-06:30	113	0	113
12:30-12:45	5	0	5	06:30-06:45	215	0	215	12:30-12:45	100	0	100	06:30-06:45	108	0	108
12:45-01:00	16	0	16	06:45-07:00	252	0	252	12:45-01:00	118	0	118	06:45-07:00	102	0	102
01:00-01:15	5	0	5	07:00-07:15	247	0	247	01:00-01:15	100	0	100	07:00-07:15	80	0	80
01:15-01:30	5	0	5	07:15-07:30	205	0	205	01:15-01:30	100	0	100	07:15-07:30	90	0	90
01:30-01:45	5	0	5	07:30-07:45	241	0	241	01:30-01:45	116	0	116	07:30-07:45	88	0	88
01:45-02:00	4	0	4	07:45-08:00	296	0	296	01:45-02:00	116	0	116	07:45-08:00	77	0	77
02:00-02:15	7	0	7	08:00-08:15	275	0	275	02:00-02:15	107	0	107	08:00-08:15	63	0	63
02:15-02:30	8	0	8	08:15-08:30	280	0	280	02:15-02:30	109	0	109	08:15-08:30	68	0	68
02:30-02:45	7	0	7	08:30-08:45	252	0	252	02:30-02:45	125	0	125	08:30-08:45	78	0	78
02:45-03:00	0	0	0	08:45-09:00	257	0	257	02:45-03:00	131	0	131	08:45-09:00	63	0	63
03:00-03:15	7	0	7	09:00-09:15	206	0	206	03:00-03:15	100	0	100	09:00-09:15	38	0	38
03:15-03:30	0	0	0	09:15-09:30	123	0	123	03:15-03:30	115	0	115	09:15-09:30	54	0	54
03:30-03:45	6	0	6	09:30-09:45	145	0	145	03:30-03:45	97	0	97	09:30-09:45	41	0	41
03:45-04:00	4	0	4	09:45-10:00	148	0	148	03:45-04:00	100	0	100	09:45-10:00	48	0	48
04:00-04:15	6	0	6	10:00-10:15	130	0	130	04:00-04:15	101	0	101	10:00-10:15	40	0	40
04:15-04:30	9	0	9	10:15-10:30	113	0	113	04:15-04:30	108	0	108	10:15-10:30	44	0	44
04:30-04:45	23	0	23	10:30-10:45	133	0	133	04:30-04:45	95	0	95	10:30-10:45	16	0	16
04:45-05:00	22	0	22	10:45-11:00	128	0	128	04:45-05:00	113	0	113	10:45-11:00	32	0	32
05:00-05:15	25	0	25	11:00-11:15	133	0	133	05:00-05:15	111	0	111	11:00-11:15	26	0	26
05:15-05:30	31	0	31	11:15-11:30	108	0	108	05:15-05:30	113	0	113	11:15-11:30	18	0	18
05:30-05:45	48	0	48	11:30-11:45	113	0	113	05:30-05:45	118	0	118	11:30-11:45	21	0	21
05:45-06:00	76	0	76	11:45-12:00	112	0	112	05:45-06:00	104	0	104	11:45-12:00	12	0	12

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:45 AM to 08:45 AM		PM - PEAK HR TIME	05:15 PM to 06:15 PM	
AM - PEAK HR VOLUME	1103		PM - PEAK HR VOLUME	461	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:45 AM to 08:45 AM		PM - PEAK HR TIME	05:15 PM to 06:15 PM	
AM - PEAK HR VOLUME	1103		PM - PEAK HR VOLUME	461	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:45 AM to 08:45 AM	PM - PEAK HR TIME	02:00 PM to 03:00 PM	
AM - PEAK HR VOLUME	1103	PM - PEAK HR VOLUME	472	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	4,329		
PEAK HR TIME	09:00 AM to 10:00 AM	AM 12-HR PERIOD (00:00-12:00)	4,666		
PEAK HR VOLUME	622	PM 6-HR PERIOD (12:00-18:00)	2,629		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	4,075		
PEAK HR TIME	09:00 AM to 10:00 AM	24 HOUR PERIOD	8,741		
PEAK HR VOLUME	622	D (%)			

Run Date: 2017/08/07

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2016 Program Count - Summary

Site ID: B72000H1-25F **Town:** Oahu **DIR 1:** -MP **DIR 2:** None **Final AADT:** 8100

Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-1_WB_25B

Location: OFF RAMP, H-1 WB Kapiolani Blvd WB (research station), Kapiolani IC R-6

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/17/2016															
12:00-12:15	16	0	16	06:00-06:15	84	0	84	12:00-12:15	92	0	92	06:00-06:15	106	0	106
12:15-12:30	9	0	9	06:15-06:30	116	0	116	12:15-12:30	111	0	111	06:15-06:30	114	0	114
12:30-12:45	10	0	10	06:30-06:45	219	0	219	12:30-12:45	104	0	104	06:30-06:45	88	0	88
12:45-01:00	9	0	9	06:45-07:00	224	0	224	12:45-01:00	126	0	126	06:45-07:00	85	0	85
01:00-01:15	10	0	10	07:00-07:15	243	0	243	01:00-01:15	98	0	98	07:00-07:15	81	0	81
01:15-01:30	9	0	9	07:15-07:30	237	0	237	01:15-01:30	113	0	113	07:15-07:30	92	0	92
01:30-01:45	6	0	6	07:30-07:45	217	0	217	01:30-01:45	96	0	96	07:30-07:45	76	0	76
01:45-02:00	5	0	5	07:45-08:00	278	0	278	01:45-02:00	105	0	105	07:45-08:00	73	0	73
02:00-02:15	6	0	6	08:00-08:15	263	0	263	02:00-02:15	116	0	116	08:00-08:15	72	0	72
02:15-02:30	5	0	5	08:15-08:30	252	0	252	02:15-02:30	118	0	118	08:15-08:30	74	0	74
02:30-02:45	7	0	7	08:30-08:45	250	0	250	02:30-02:45	111	0	111	08:30-08:45	76	0	76
02:45-03:00	3	0	3	08:45-09:00	248	0	248	02:45-03:00	130	0	130	08:45-09:00	55	0	55
03:00-03:15	5	0	5	09:00-09:15	207	0	207	03:00-03:15	124	0	124	09:00-09:15	66	0	66
03:15-03:30	4	0	4	09:15-09:30	140	0	140	03:15-03:30	86	0	86	09:15-09:30	55	0	55
03:30-03:45	4	0	4	09:30-09:45	126	0	126	03:30-03:45	103	0	103	09:30-09:45	44	0	44
03:45-04:00	10	0	10	09:45-10:00	137	0	137	03:45-04:00	108	0	108	09:45-10:00	42	0	42
04:00-04:15	10	0	10	10:00-10:15	126	0	126	04:00-04:15	98	0	98	10:00-10:15	28	0	28
04:15-04:30	7	0	7	10:15-10:30	127	0	127	04:15-04:30	138	0	138	10:15-10:30	26	0	26
04:30-04:45	14	0	14	10:30-10:45	102	0	102	04:30-04:45	128	0	128	10:30-10:45	34	0	34
04:45-05:00	27	0	27	10:45-11:00	141	0	141	04:45-05:00	95	0	95	10:45-11:00	27	0	27
05:00-05:15	21	0	21	11:00-11:15	148	0	148	05:00-05:15	132	0	132	11:00-11:15	26	0	26
05:15-05:30	32	0	32	11:15-11:30	110	0	110	05:15-05:30	116	0	116	11:15-11:30	18	0	18
05:30-05:45	46	0	46	11:30-11:45	97	0	97	05:30-05:45	99	0	99	11:30-11:45	16	0	16
05:45-06:00	75	0	75	11:45-12:00	120	0	120	05:45-06:00	109	0	109	11:45-12:00	15	0	15

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:45 AM to 08:45 AM	
AM - PEAK HR VOLUME	1043	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:45 AM to 08:45 AM	
AM - PEAK HR VOLUME	1043	

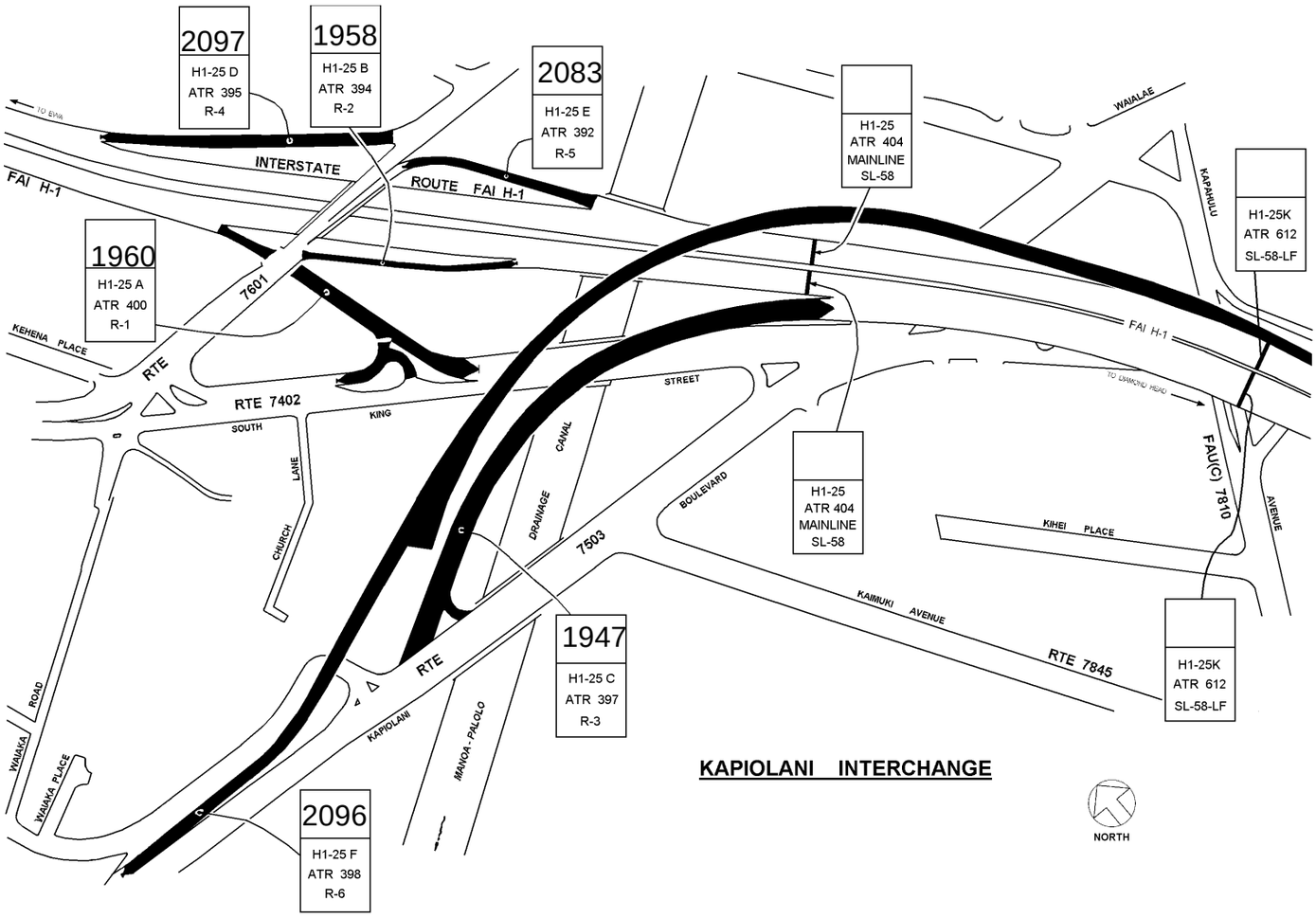
PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	493	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	493	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	07:45 AM to 08:45 AM
AM - PEAK HR VOLUME	1043
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	04:15 PM to 05:15 PM
PM - PEAK HR VOLUME	493
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	09:00 AM to 10:00 AM
PEAK HR VOLUME	610
DIRECTIONAL PEAK	
PEAK HR TIME	09:00 AM to 10:00 AM
PEAK HR VOLUME	610

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	4,212		
AM 12-HR PERIOD (00:00-12:00)	4,562		
PM 6-HR PERIOD (12:00-18:00)	2,656		
PM 12-HR PERIOD (12:00-24:00)	4,045		
24 HOUR PERIOD	8,607		
D (%)			



Station Description: KAPIOLANI INTERCHANGE					
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					
ATR #	FREEWAY STA #	AUX STA #	DESCRIPTION	RTE #	RTE MILE
404	H1-25	SL-58	H1- FREEWAY AT MANOA-PALOLO DRAINAGE CANA	H-1	24.59
			(loop station)		
395	H1-25D	R-4	ON RAMP, OLD WAIALAE ROAD WB TO H-1 WB	H-1	24.41
400	H1-25A	R-1	OFF RAMP, H-1 EB TO KING STREET	H-1	24.47
394	H1-25B	R-2	ON RAMP, OLD WAIALAE ROAD EB TO H-1 EB	H-1	24.56
392	H1-25E	R-5	OFF RAMP, H-1 WB TO OLD WAIALAE ROAD WB	H-1	24.58
397	H1-25C	R-3	ON RAMP, KAPIOLNI BLVD EB TO H-1 EB	H-1	24.81
			(research station)		
398	H1-25F	R-6	OFF RAMP, H-1 WB TO KAPIOLANI BLVD WB	H-1	24.93
			(research station)		
612	H1-25K	SL-58-LF	H-1 FREEWAY AT KAPAHULU AVE	H-1	25.00

Run Date: 2017/08/07

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2016 Program Count - Summary

Site ID: B72000H1-25C **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 8900

Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-1_EB_25BB

Location: ON RAMP, H-1 EB from Kapiolani Blvd EB (research station), Kapiolani IC R-3

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/16/2016															
12:00-12:15	32	0	32	06:00-06:15	35	0	35	12:00-12:15	88	0	88	06:00-06:15	214	0	214
12:15-12:30	37	0	37	06:15-06:30	45	0	45	12:15-12:30	97	0	97	06:15-06:30	221	0	221
12:30-12:45	24	0	24	06:30-06:45	46	0	46	12:30-12:45	106	0	106	06:30-06:45	237	0	237
12:45-01:00	15	0	15	06:45-07:00	76	0	76	12:45-01:00	94	0	94	06:45-07:00	206	0	206
01:00-01:15	16	0	16	07:00-07:15	101	0	101	01:00-01:15	102	0	102	07:00-07:15	172	0	172
01:15-01:30	16	0	16	07:15-07:30	109	0	109	01:15-01:30	117	0	117	07:15-07:30	133	0	133
01:30-01:45	8	0	8	07:30-07:45	172	0	172	01:30-01:45	121	0	121	07:30-07:45	115	0	115
01:45-02:00	7	0	7	07:45-08:00	175	0	175	01:45-02:00	114	0	114	07:45-08:00	109	0	109
02:00-02:15	9	0	9	08:00-08:15	110	0	110	02:00-02:15	140	0	140	08:00-08:15	105	0	105
02:15-02:30	7	0	7	08:15-08:30	89	0	89	02:15-02:30	136	0	136	08:15-08:30	98	0	98
02:30-02:45	10	0	10	08:30-08:45	92	0	92	02:30-02:45	141	0	141	08:30-08:45	99	0	99
02:45-03:00	7	0	7	08:45-09:00	90	0	90	02:45-03:00	134	0	134	08:45-09:00	105	0	105
03:00-03:15	5	0	5	09:00-09:15	89	0	89	03:00-03:15	149	0	149	09:00-09:15	101	0	101
03:15-03:30	6	0	6	09:15-09:30	89	0	89	03:15-03:30	176	0	176	09:15-09:30	102	0	102
03:30-03:45	5	0	5	09:30-09:45	111	0	111	03:30-03:45	191	0	191	09:30-09:45	102	0	102
03:45-04:00	4	0	4	09:45-10:00	103	0	103	03:45-04:00	217	0	217	09:45-10:00	113	0	113
04:00-04:15	8	0	8	10:00-10:15	106	0	106	04:00-04:15	227	0	227	10:00-10:15	82	0	82
04:15-04:30	5	0	5	10:15-10:30	77	0	77	04:15-04:30	243	0	243	10:15-10:30	71	0	71
04:30-04:45	9	0	9	10:30-10:45	111	0	111	04:30-04:45	243	0	243	10:30-10:45	64	0	64
04:45-05:00	11	0	11	10:45-11:00	106	0	106	04:45-05:00	246	0	246	10:45-11:00	57	0	57
05:00-05:15	5	0	5	11:00-11:15	92	0	92	05:00-05:15	238	0	238	11:00-11:15	53	0	53
05:15-05:30	14	0	14	11:15-11:30	100	0	100	05:15-05:30	231	0	231	11:15-11:30	44	0	44
05:30-05:45	18	0	18	11:30-11:45	91	0	91	05:30-05:45	241	0	241	11:30-11:45	60	0	60
05:45-06:00	29	0	29	11:45-12:00	121	0	121	05:45-06:00	249	0	249	11:45-12:00	45	0	45

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	566	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	566	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	970	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	970	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	07:15 AM to 08:15 AM
AM - PEAK HR VOLUME	566
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	04:15 PM to 05:15 PM
PM - PEAK HR VOLUME	970
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	551
DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	551

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	2,336		
AM 12-HR PERIOD (00:00-12:00)	2,643		
PM 6-HR PERIOD (12:00-18:00)	4,041		
PM 12-HR PERIOD (12:00-24:00)	6,749		
24 HOUR PERIOD	9,392		
D (%)			

Run Date: 2017/08/07

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2016 Program Count - Summary

Site ID: B72000H1-25C **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 8900

Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-1_EB_25BB

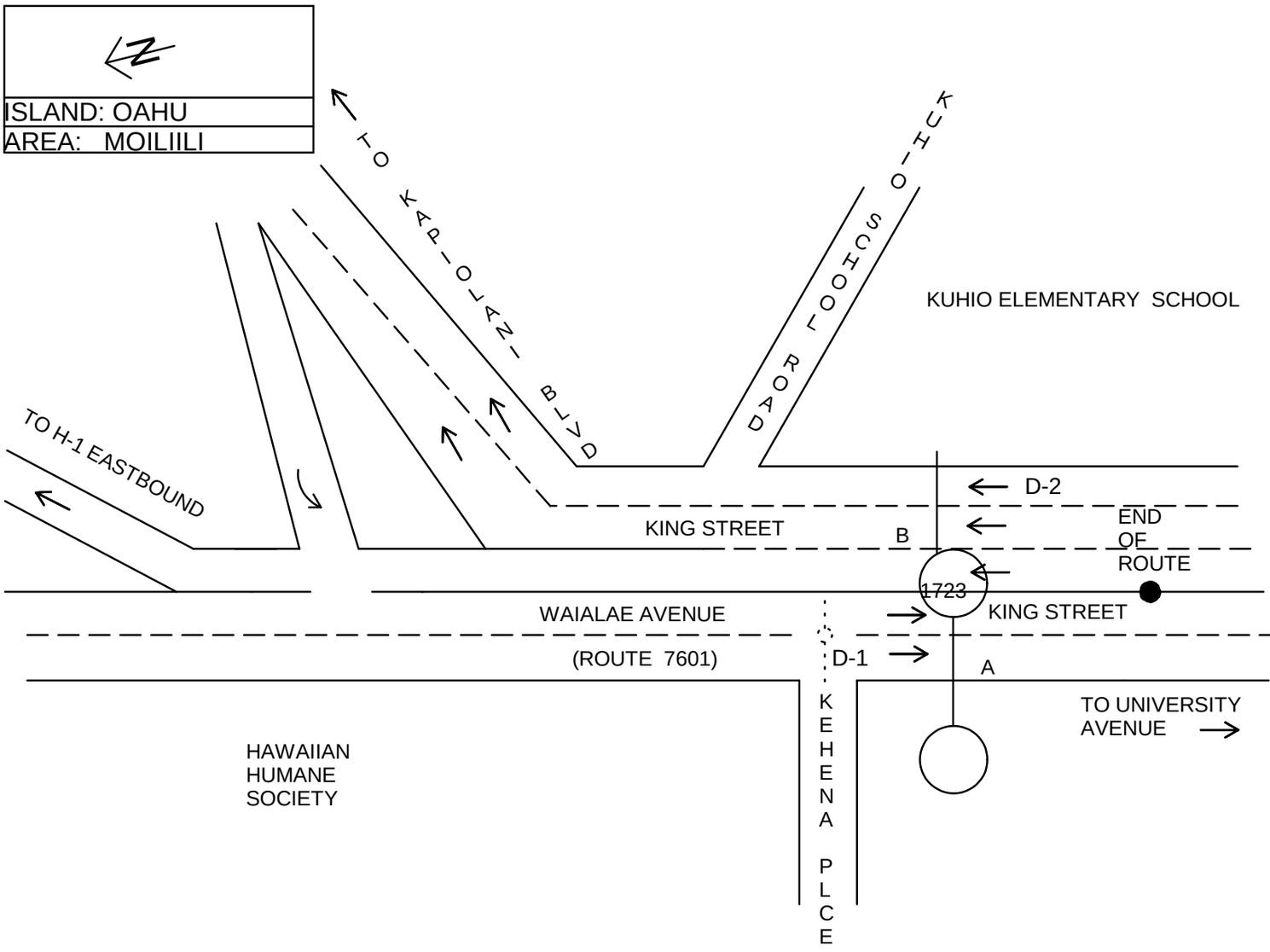
Location: ON RAMP, H-1 EB from Kapiolani Blvd EB (research station), Kapiolani IC R-3

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/17/2016															
12:00-12:15	30	0	30	06:00-06:15	31	0	31	12:00-12:15	107	0	107	06:00-06:15	213	0	213
12:15-12:30	43	0	43	06:15-06:30	29	0	29	12:15-12:30	119	0	119	06:15-06:30	257	0	257
12:30-12:45	29	0	29	06:30-06:45	46	0	46	12:30-12:45	114	0	114	06:30-06:45	209	0	209
12:45-01:00	28	0	28	06:45-07:00	66	0	66	12:45-01:00	107	0	107	06:45-07:00	181	0	181
01:00-01:15	22	0	22	07:00-07:15	101	0	101	01:00-01:15	114	0	114	07:00-07:15	157	0	157
01:15-01:30	21	0	21	07:15-07:30	132	0	132	01:15-01:30	106	0	106	07:15-07:30	152	0	152
01:30-01:45	16	0	16	07:30-07:45	175	0	175	01:30-01:45	114	0	114	07:30-07:45	118	0	118
01:45-02:00	16	0	16	07:45-08:00	164	0	164	01:45-02:00	132	0	132	07:45-08:00	129	0	129
02:00-02:15	11	0	11	08:00-08:15	109	0	109	02:00-02:15	136	0	136	08:00-08:15	110	0	110
02:15-02:30	11	0	11	08:15-08:30	94	0	94	02:15-02:30	124	0	124	08:15-08:30	136	0	136
02:30-02:45	5	0	5	08:30-08:45	103	0	103	02:30-02:45	136	0	136	08:30-08:45	108	0	108
02:45-03:00	8	0	8	08:45-09:00	100	0	100	02:45-03:00	179	0	179	08:45-09:00	115	0	115
03:00-03:15	9	0	9	09:00-09:15	105	0	105	03:00-03:15	184	0	184	09:00-09:15	116	0	116
03:15-03:30	14	0	14	09:15-09:30	96	0	96	03:15-03:30	212	0	212	09:15-09:30	119	0	119
03:30-03:45	7	0	7	09:30-09:45	105	0	105	03:30-03:45	195	0	195	09:30-09:45	104	0	104
03:45-04:00	2	0	2	09:45-10:00	100	0	100	03:45-04:00	226	0	226	09:45-10:00	96	0	96
04:00-04:15	7	0	7	10:00-10:15	104	0	104	04:00-04:15	224	0	224	10:00-10:15	57	0	57
04:15-04:30	6	0	6	10:15-10:30	85	0	85	04:15-04:30	217	0	217	10:15-10:30	76	0	76
04:30-04:45	6	0	6	10:30-10:45	107	0	107	04:30-04:45	234	0	234	10:30-10:45	85	0	85
04:45-05:00	9	0	9	10:45-11:00	100	0	100	04:45-05:00	255	0	255	10:45-11:00	65	0	65
05:00-05:15	11	0	11	11:00-11:15	113	0	113	05:00-05:15	250	0	250	11:00-11:15	57	0	57
05:15-05:30	11	0	11	11:15-11:30	101	0	101	05:15-05:30	255	0	255	11:15-11:30	55	0	55
05:30-05:45	18	0	18	11:30-11:45	100	0	100	05:30-05:45	206	0	206	11:30-11:45	70	0	70
05:45-06:00	25	0	25	11:45-12:00	105	0	105	05:45-06:00	261	0	261	11:45-12:00	48	0	48

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM		PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	580		PM - PEAK HR VOLUME	994	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM		PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	580		PM - PEAK HR VOLUME	994	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	580	PM - PEAK HR VOLUME	994	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	2,371		
PEAK HR TIME	02:00 PM to 03:00 PM	AM 12-HR PERIOD (00:00-12:00)	2,736		
PEAK HR VOLUME	575	PM 6-HR PERIOD (12:00-18:00)	4,207		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	7,040		
PEAK HR TIME	02:00 PM to 03:00 PM	24 HOUR PERIOD	9,776		
PEAK HR VOLUME	575	D (%)			



Station No:	B72 7601 00039

Station Location:			
King Street between Kehena Place and end of route			
Station Mileage:	0.40	GPS Coord (Latitude):	21.29021 N
		GPS Coord (Longitude):	157.81901 W
Begin Survey (Date/Time):	11-16-15 0000	End Survey (Date/Time):	11-19-15 0000
Survey Method: LOOP **HOSE** OTHER		Survey Type: **VOL** CLASS SPEED OTHER	
Survey Crew:	FIELD CREW	Module No.:	

HPMS DATA

Segment Description:

KING STREET - BEGINNING OF 4 LANES TO END OF ROUTE (100' WEST OF KEHENA PLACE)

Segment Begin LRS	0.39	Segment End LRS	0.41	Length	0.02

Facility Name	Juris	Func Class	Area Type	Route No.	Route Mile	D-1 = Direction to End of Route D-2 = Direction to Beginning of Route
KING STREET	S	14	4	7601	0.40	D-1 TO KING STREET D-2 TO KAPIOLANI BLVD

Sketch By: EPJ Date: 5/23/2011 SLD: 2009

Run Date: 2016/06/09

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2015 Program Count - Summary

Site ID: B72760100039 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 29000
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7601
Location: King St btwn Kehena Place _end of route

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/17/2015															
12:00-12:15	18	60	78	06:00-06:15	65	71	136	12:00-12:15	174	281	455	06:00-06:15	146	441	587
12:15-12:30	20	28	48	06:15-06:30	137	77	214	12:15-12:30	166	310	476	06:15-06:30	157	424	581
12:30-12:45	4	29	33	06:30-06:45	202	116	318	12:30-12:45	146	305	451	06:30-06:45	142	451	593
12:45-01:00	14	36	50	06:45-07:00	280	153	433	12:45-01:00	142	318	460	06:45-07:00	120	388	508
01:00-01:15	6	30	36	07:00-07:15	334	188	522	01:00-01:15	132	278	410	07:00-07:15	122	339	461
01:15-01:30	19	23	42	07:15-07:30	353	302	655	01:15-01:30	132	310	442	07:15-07:30	118	253	371
01:30-01:45	28	46	74	07:30-07:45	354	353	707	01:30-01:45	140	276	416	07:30-07:45	87	232	319
01:45-02:00	34	45	79	07:45-08:00	356	350	706	01:45-02:00	162	298	460	07:45-08:00	84	248	332
02:00-02:15	6	32	38	08:00-08:15	318	279	597	02:00-02:15	160	286	446	08:00-08:15	72	220	292
02:15-02:30	11	28	39	08:15-08:30	320	246	566	02:15-02:30	152	332	484	08:15-08:30	89	220	309
02:30-02:45	4	22	26	08:30-08:45	266	218	484	02:30-02:45	180	366	546	08:30-08:45	68	206	274
02:45-03:00	10	11	21	08:45-09:00	260	234	494	02:45-03:00	178	400	578	08:45-09:00	66	191	257
03:00-03:15	9	18	27	09:00-09:15	184	202	386	03:00-03:15	169	379	548	09:00-09:15	69	192	261
03:15-03:30	10	11	21	09:15-09:30	181	238	419	03:15-03:30	184	372	556	09:15-09:30	53	173	226
03:30-03:45	6	12	18	09:30-09:45	164	202	366	03:30-03:45	165	423	588	09:30-09:45	52	152	204
03:45-04:00	8	12	20	09:45-10:00	177	260	437	03:45-04:00	170	420	590	09:45-10:00	66	130	196
04:00-04:15	9	12	21	10:00-10:15	183	235	418	04:00-04:15	180	457	637	10:00-10:15	56	114	170
04:15-04:30	9	16	25	10:15-10:30	191	257	448	04:15-04:30	194	458	652	10:15-10:30	43	102	145
04:30-04:45	15	18	33	10:30-10:45	140	232	372	04:30-04:45	192	410	602	10:30-10:45	49	110	159
04:45-05:00	36	25	61	10:45-11:00	158	247	405	04:45-05:00	206	464	670	10:45-11:00	36	85	121
05:00-05:15	23	26	49	11:00-11:15	159	269	428	05:00-05:15	234	423	657	11:00-11:15	39	68	107
05:15-05:30	29	31	60	11:15-11:30	150	294	444	05:15-05:30	233	431	664	11:15-11:30	46	70	116
05:30-05:45	62	48	110	11:30-11:45	174	288	462	05:30-05:45	224	446	670	11:30-11:45	22	70	92
05:45-06:00	64	58	122	11:45-12:00	176	262	438	05:45-06:00	239	458	697	11:45-12:00	32	49	81

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1381	1284	2665
AM - K FACTOR (%)			8.35
AM - D (%)	51.82	48.18	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	1397	1284	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM		
PM - PEAK HR VOLUME	930	1758	2688
PM - K FACTOR (%)			8.43
PM - D (%)	34.60	65.40	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM	04:00 PM to 05:00 PM	
PM - PEAK HR VOLUME	930	1789	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1381	1284	2665
AM - K FACTOR (%)			8.35
AM - D (%)	51.82	48.18	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM		
PM - PEAK HR VOLUME	930	1758	2688
PM - K FACTOR (%)			8.43
PM - D (%)	34.60	65.40	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	670	1384	2054
DIRECTIONAL PEAK			
PEAK HR TIME	09:30 AM to 10:30 AM	02:00 PM to 03:00 PM	
PEAK HR VOLUME	715	1384	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	5,282	5,573	10,855
AM 12-HR PERIOD (00:00-12:00)	5,736	6,250	11,986
PM 6-HR PERIOD (12:00-18:00)	4,254	8,901	13,155
PM 12-HR PERIOD (12:00-24:00)	6,088	13,829	19,917
24 HOUR PERIOD	11,824	20,079	31,903
D (%)	37.06	62.94	100.00

Run Date: 2016/06/09

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2015 Program Count - Summary

Site ID: B72760100039 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 29000
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7601
Location: King St btwn Kehena Place _end of route

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/18/2015															
12:00-12:15	21	54	75	06:00-06:15	80	66	146	12:00-12:15	165	297	462	06:00-06:15	152	370	522
12:15-12:30	26	55	81	06:15-06:30	140	102	242	12:15-12:30	181	319	500	06:15-06:30	150	434	584
12:30-12:45	11	40	51	06:30-06:45	209	105	314	12:30-12:45	157	252	409	06:30-06:45	179	404	583
12:45-01:00	19	40	59	06:45-07:00	286	167	453	12:45-01:00	202	347	549	06:45-07:00	196	352	548
01:00-01:15	14	34	48	07:00-07:15	309	180	489	01:00-01:15	166	296	462	07:00-07:15	122	364	486
01:15-01:30	23	22	45	07:15-07:30	348	279	627	01:15-01:30	176	350	526	07:15-07:30	112	290	402
01:30-01:45	10	26	36	07:30-07:45	333	349	682	01:30-01:45	172	302	474	07:30-07:45	108	262	370
01:45-02:00	9	36	45	07:45-08:00	353	390	743	01:45-02:00	166	345	511	07:45-08:00	96	237	333
02:00-02:15	9	24	33	08:00-08:15	354	284	638	02:00-02:15	154	352	506	08:00-08:15	86	220	306
02:15-02:30	6	19	25	08:15-08:30	331	228	559	02:15-02:30	166	321	487	08:15-08:30	72	232	304
02:30-02:45	9	11	20	08:30-08:45	314	222	536	02:30-02:45	170	380	550	08:30-08:45	82	210	292
02:45-03:00	5	14	19	08:45-09:00	282	221	503	02:45-03:00	162	350	512	08:45-09:00	68	196	264
03:00-03:15	4	12	16	09:00-09:15	231	194	425	03:00-03:15	180	368	548	09:00-09:15	66	168	234
03:15-03:30	10	9	19	09:15-09:30	154	220	374	03:15-03:30	168	372	540	09:15-09:30	51	166	217
03:30-03:45	9	15	24	09:30-09:45	176	214	390	03:30-03:45	154	394	548	09:30-09:45	52	179	231
03:45-04:00	10	17	27	09:45-10:00	198	212	410	03:45-04:00	158	418	576	09:45-10:00	74	176	250
04:00-04:15	12	20	32	10:00-10:15	169	230	399	04:00-04:15	154	461	615	10:00-10:15	58	125	183
04:15-04:30	12	12	24	10:15-10:30	148	252	400	04:15-04:30	163	432	595	10:15-10:30	42	104	146
04:30-04:45	14	18	32	10:30-10:45	174	257	431	04:30-04:45	184	456	640	10:30-10:45	33	109	142
04:45-05:00	36	22	58	10:45-11:00	183	296	479	04:45-05:00	222	484	706	10:45-11:00	36	97	133
05:00-05:15	35	28	63	11:00-11:15	162	290	452	05:00-05:15	163	464	627	11:00-11:15	42	76	118
05:15-05:30	38	34	72	11:15-11:30	168	270	438	05:15-05:30	182	448	630	11:15-11:30	38	95	133
05:30-05:45	72	65	137	11:30-11:45	166	296	462	05:30-05:45	168	441	609	11:30-11:45	32	88	120
05:45-06:00	72	54	126	11:45-12:00	186	269	455	05:45-06:00	174	396	570	11:45-12:00	21	60	81

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1388	1302	2690
AM - K FACTOR (%)			8.32
AM - D (%)	51.60	48.40	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	1388	1302	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM		
PM - PEAK HR VOLUME	751	1852	2603
PM - K FACTOR (%)			8.05
PM - D (%)	28.85	71.15	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	751	1852	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1388	1302	2690
AM - K FACTOR (%)			8.32
AM - D (%)	51.60	48.40	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM		
PM - PEAK HR VOLUME	751	1852	2603
PM - K FACTOR (%)			8.05
PM - D (%)	28.85	71.15	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	652	1403	2055
DIRECTIONAL PEAK			
PEAK HR TIME	09:00 AM to 10:00 AM	02:00 PM to 03:00 PM	
PEAK HR VOLUME	759	1403	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	5,454	5,593	11,047
AM 12-HR PERIOD (00:00-12:00)	5,940	6,274	12,214
PM 6-HR PERIOD (12:00-18:00)	4,107	9,045	13,152
PM 12-HR PERIOD (12:00-24:00)	6,075	14,059	20,134
24 HOUR PERIOD	12,015	20,333	32,348
D (%)	37.14	62.86	100.00

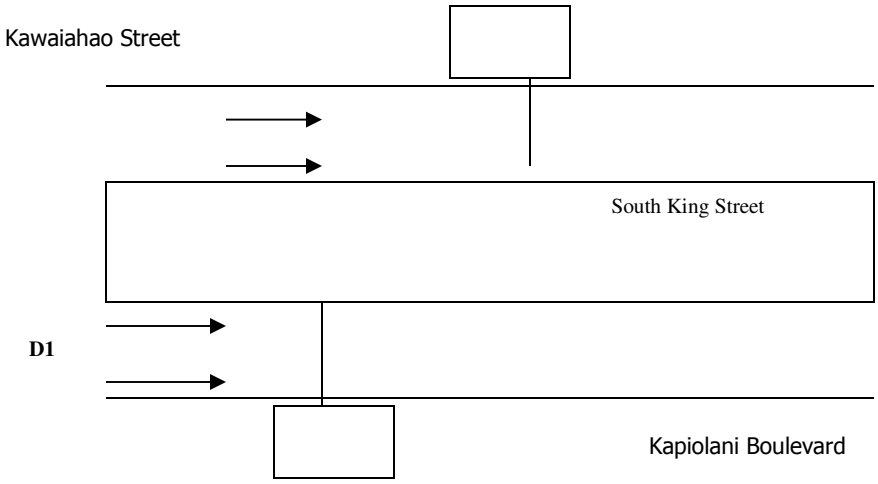
Traffic Data Service

Traffic Station Sketch

N

Island: Oahu
Area: Honolulu

Section ID/Station: B72740200226



	Meter #	File Name	GPS
1.	V521	D0301001_B72740200226	21.30423, -157.8566

Station Description: South King Street: Kawaiahao Street to Kapiolani Boulevard					
Survey Beginning Date/Time: 3/1/16 @ 0000			Survey Ending Date/Time: 3/2/16 @ 2400		
Survey Method:	Road Tube		Data Type:	Vol	
Survey Crew:	LM			V5	
Sketch Updated:			By:	SR	
Remarks:	1381				
FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
South King Street		14		7402	
D1= Direction to End D2= Direction to Begin			D1: Kapiolani Boulevard / Harding Avenue D2: Kawaiahao Street / Kalihi Street		

Run Date: 2017/07/11

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72740200226 **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 26500

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7402

Location: King St - Kawaiahao St to Kapiolani Blvd

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 03/01/2016															
12:00-12:15	34	0	34	06:00-06:15	184	0	184	12:00-12:15	449	0	449	06:00-06:15	545	0	545
12:15-12:30	26	0	26	06:15-06:30	198	0	198	12:15-12:30	396	0	396	06:15-06:30	443	0	443
12:30-12:45	37	0	37	06:30-06:45	357	0	357	12:30-12:45	427	0	427	06:30-06:45	387	0	387
12:45-01:00	32	0	32	06:45-07:00	366	0	366	12:45-01:00	473	0	473	06:45-07:00	316	0	316
01:00-01:15	17	0	17	07:00-07:15	496	0	496	01:00-01:15	413	0	413	07:00-07:15	294	0	294
01:15-01:30	20	0	20	07:15-07:30	540	0	540	01:15-01:30	444	0	444	07:15-07:30	244	0	244
01:30-01:45	23	0	23	07:30-07:45	636	0	636	01:30-01:45	416	0	416	07:30-07:45	241	0	241
01:45-02:00	10	0	10	07:45-08:00	616	0	616	01:45-02:00	464	0	464	07:45-08:00	197	0	197
02:00-02:15	23	0	23	08:00-08:15	499	0	499	02:00-02:15	464	0	464	08:00-08:15	204	0	204
02:15-02:30	23	0	23	08:15-08:30	481	0	481	02:15-02:30	422	0	422	08:15-08:30	177	0	177
02:30-02:45	16	0	16	08:30-08:45	471	0	471	02:30-02:45	511	0	511	08:30-08:45	201	0	201
02:45-03:00	13	0	13	08:45-09:00	427	0	427	02:45-03:00	487	0	487	08:45-09:00	154	0	154
03:00-03:15	17	0	17	09:00-09:15	390	0	390	03:00-03:15	532	0	532	09:00-09:15	184	0	184
03:15-03:30	13	0	13	09:15-09:30	403	0	403	03:15-03:30	500	0	500	09:15-09:30	124	0	124
03:30-03:45	22	0	22	09:30-09:45	404	0	404	03:30-03:45	612	0	612	09:30-09:45	139	0	139
03:45-04:00	16	0	16	09:45-10:00	396	0	396	03:45-04:00	633	0	633	09:45-10:00	119	0	119
04:00-04:15	11	0	11	10:00-10:15	423	0	423	04:00-04:15	614	0	614	10:00-10:15	100	0	100
04:15-04:30	21	0	21	10:15-10:30	451	0	451	04:15-04:30	699	0	699	10:15-10:30	107	0	107
04:30-04:45	44	0	44	10:30-10:45	410	0	410	04:30-04:45	655	0	655	10:30-10:45	77	0	77
04:45-05:00	67	0	67	10:45-11:00	459	0	459	04:45-05:00	769	0	769	10:45-11:00	60	0	60
05:00-05:15	95	0	95	11:00-11:15	414	0	414	05:00-05:15	740	0	740	11:00-11:15	74	0	74
05:15-05:30	84	0	84	11:15-11:30	434	0	434	05:15-05:30	754	0	754	11:15-11:30	52	0	52
05:30-05:45	155	0	155	11:30-11:45	462	0	462	05:30-05:45	618	0	618	11:30-11:45	59	0	59
05:45-06:00	191	0	191	11:45-12:00	440	0	440	05:45-06:00	703	0	703	11:45-12:00	54	0	54

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM		PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	2291		PM - PEAK HR VOLUME	2918	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM		PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	2291		PM - PEAK HR VOLUME	2918	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	2291	PM - PEAK HR VOLUME	2918	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	10,357		
PEAK HR TIME	02:00 PM to 03:00 PM	AM 12-HR PERIOD (00:00-12:00)	11,367		
PEAK HR VOLUME	1884	PM 6-HR PERIOD (12:00-18:00)	13,195		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	17,747		
PEAK HR TIME	02:00 PM to 03:00 PM	24 HOUR PERIOD	29,114		
PEAK HR VOLUME	1884	D (%)			

Run Date: 2017/07/11

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2016 Program Count - Summary

Site ID: B72740200226 **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 26500

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7402

Location: King St - Kawaiahao St to Kapiolani Blvd

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 03/02/2016															
12:00-12:15	37	0	37	06:00-06:15	225	0	225	12:00-12:15	459	0	459	06:00-06:15	633	0	633
12:15-12:30	42	0	42	06:15-06:30	281	0	281	12:15-12:30	451	0	451	06:15-06:30	535	0	535
12:30-12:45	36	0	36	06:30-06:45	353	0	353	12:30-12:45	383	0	383	06:30-06:45	421	0	421
12:45-01:00	22	0	22	06:45-07:00	372	0	372	12:45-01:00	420	0	420	06:45-07:00	242	0	242
01:00-01:15	18	0	18	07:00-07:15	504	0	504	01:00-01:15	452	0	452	07:00-07:15	247	0	247
01:15-01:30	18	0	18	07:15-07:30	551	0	551	01:15-01:30	473	0	473	07:15-07:30	264	0	264
01:30-01:45	27	0	27	07:30-07:45	605	0	605	01:30-01:45	468	0	468	07:30-07:45	232	0	232
01:45-02:00	20	0	20	07:45-08:00	577	0	577	01:45-02:00	500	0	500	07:45-08:00	217	0	217
02:00-02:15	30	0	30	08:00-08:15	525	0	525	02:00-02:15	483	0	483	08:00-08:15	197	0	197
02:15-02:30	18	0	18	08:15-08:30	475	0	475	02:15-02:30	467	0	467	08:15-08:30	157	0	157
02:30-02:45	20	0	20	08:30-08:45	430	0	430	02:30-02:45	480	0	480	08:30-08:45	132	0	132
02:45-03:00	15	0	15	08:45-09:00	412	0	412	02:45-03:00	540	0	540	08:45-09:00	138	0	138
03:00-03:15	5	0	5	09:00-09:15	387	0	387	03:00-03:15	502	0	502	09:00-09:15	147	0	147
03:15-03:30	20	0	20	09:15-09:30	348	0	348	03:15-03:30	577	0	577	09:15-09:30	117	0	117
03:30-03:45	17	0	17	09:30-09:45	385	0	385	03:30-03:45	558	0	558	09:30-09:45	113	0	113
03:45-04:00	19	0	19	09:45-10:00	413	0	413	03:45-04:00	618	0	618	09:45-10:00	119	0	119
04:00-04:15	11	0	11	10:00-10:15	442	0	442	04:00-04:15	582	0	582	10:00-10:15	113	0	113
04:15-04:30	27	0	27	10:15-10:30	408	0	408	04:15-04:30	675	0	675	10:15-10:30	79	0	79
04:30-04:45	39	0	39	10:30-10:45	437	0	437	04:30-04:45	656	0	656	10:30-10:45	96	0	96
04:45-05:00	59	0	59	10:45-11:00	465	0	465	04:45-05:00	675	0	675	10:45-11:00	66	0	66
05:00-05:15	83	0	83	11:00-11:15	415	0	415	05:00-05:15	707	0	707	11:00-11:15	50	0	50
05:15-05:30	120	0	120	11:15-11:30	463	0	463	05:15-05:30	752	0	752	11:15-11:30	70	0	70
05:30-05:45	141	0	141	11:30-11:45	463	0	463	05:30-05:45	687	0	687	11:30-11:45	49	0	49
05:45-06:00	193	0	193	11:45-12:00	448	0	448	05:45-06:00	676	0	676	11:45-12:00	56	0	56

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	2258	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	2258	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	05:00 PM to 06:00 PM	
PM - PEAK HR VOLUME	2822	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	05:00 PM to 06:00 PM	
PM - PEAK HR VOLUME	2822	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	07:15 AM to 08:15 AM
AM - PEAK HR VOLUME	2258
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	05:00 PM to 06:00 PM
PM - PEAK HR VOLUME	2822
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	1970
DIRECTIONAL PEAK	
PEAK HR TIME	02:00 PM to 03:00 PM
PEAK HR VOLUME	1970

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	10,384		
AM 12-HR PERIOD (00:00-12:00)	11,421		
PM 6-HR PERIOD (12:00-18:00)	13,241		
PM 12-HR PERIOD (12:00-24:00)	17,731		
24 HOUR PERIOD	29,152		
D (%)			

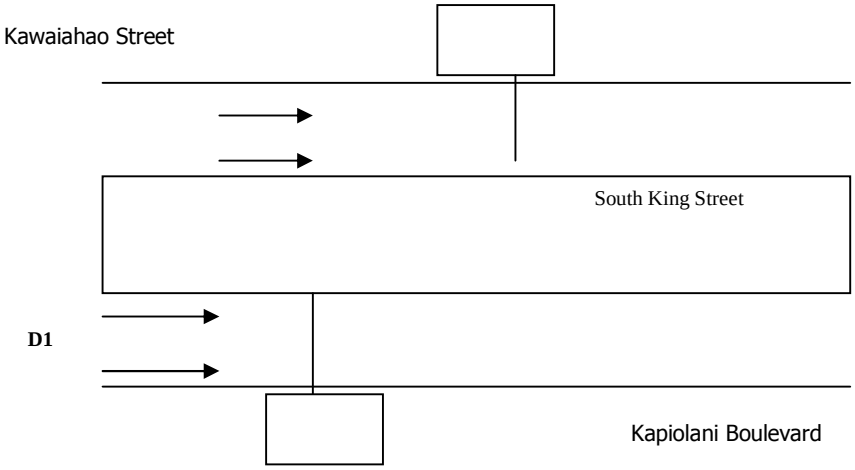
Traffic Data Service

Traffic Station Sketch

N

Island: Oahu
Area: Honolulu

Section ID/Station: B72740200226



Meter #	File Name	GPS
1. V521	D120205_B72740200226	21.30423, -157.8566

Station Description: South King Street: Kawaiahao Street to Kapiolani Boulevard					
Survey Beginning Date/Time: 12/2/2015 @ 0000			Survey Ending Date/Time: 12/3/2015 @ 2400		
Survey Method:	Road Tube		Data Type:	Vol	
Survey Crew:	LM			V5	
Sketch Updated:			By:	SR	
Remarks:	1381				
FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	MILE
South King Street		14		7402	
D1= Direction to End D2= Direction to Begin			D1: Kapiolani Boulevard / Harding Avenue D2: Kawaiahao Street / Kalihi Street		

Run Date: 2016/05/26

Hawaii Department of Transportation

Highways Division **Highways Planning Survey Section**

2015 Program Count - Summary

Site ID: B72740200226 **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 32200

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7402

Location: King St - Kawaiahao St to Kapiolani Blvd

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/02/2015															
12:00-12:15	44	0	44	06:00-06:15	343	0	343	12:00-12:15	999	0	999	06:00-06:15	582	0	582
12:15-12:30	50	0	50	06:15-06:30	383	0	383	12:15-12:30	825	0	825	06:15-06:30	536	0	536
12:30-12:45	33	0	33	06:30-06:45	509	0	509	12:30-12:45	897	0	897	06:30-06:45	499	0	499
12:45-01:00	26	0	26	06:45-07:00	578	0	578	12:45-01:00	819	0	819	06:45-07:00	400	0	400
01:00-01:15	14	0	14	07:00-07:15	701	0	701	01:00-01:15	809	0	809	07:00-07:15	292	0	292
01:15-01:30	20	0	20	07:15-07:30	624	0	624	01:15-01:30	891	0	891	07:15-07:30	243	0	243
01:30-01:45	21	0	21	07:30-07:45	618	0	618	01:30-01:45	921	0	921	07:30-07:45	253	0	253
01:45-02:00	14	0	14	07:45-08:00	383	0	383	01:45-02:00	896	0	896	07:45-08:00	228	0	228
02:00-02:15	16	0	16	08:00-08:15	562	0	562	02:00-02:15	981	0	981	08:00-08:15	217	0	217
02:15-02:30	29	0	29	08:15-08:30	535	0	535	02:15-02:30	940	0	940	08:15-08:30	187	0	187
02:30-02:45	12	0	12	08:30-08:45	460	0	460	02:30-02:45	827	0	827	08:30-08:45	197	0	197
02:45-03:00	9	0	9	08:45-09:00	410	0	410	02:45-03:00	761	0	761	08:45-09:00	205	0	205
03:00-03:15	11	0	11	09:00-09:15	433	0	433	03:00-03:15	596	0	596	09:00-09:15	164	0	164
03:15-03:30	21	0	21	09:15-09:30	408	0	408	03:15-03:30	613	0	613	09:15-09:30	151	0	151
03:30-03:45	16	0	16	09:30-09:45	410	0	410	03:30-03:45	708	0	708	09:30-09:45	133	0	133
03:45-04:00	26	0	26	09:45-10:00	432	0	432	03:45-04:00	661	0	661	09:45-10:00	120	0	120
04:00-04:15	23	0	23	10:00-10:15	438	0	438	04:00-04:15	697	0	697	10:00-10:15	111	0	111
04:15-04:30	22	0	22	10:15-10:30	443	0	443	04:15-04:30	769	0	769	10:15-10:30	113	0	113
04:30-04:45	67	0	67	10:30-10:45	459	0	459	04:30-04:45	772	0	772	10:30-10:45	86	0	86
04:45-05:00	97	0	97	10:45-11:00	493	0	493	04:45-05:00	791	0	791	10:45-11:00	72	0	72
05:00-05:15	139	0	139	11:00-11:15	654	0	654	05:00-05:15	717	0	717	11:00-11:15	76	0	76
05:15-05:30	148	0	148	11:15-11:30	677	0	677	05:15-05:30	798	0	798	11:15-11:30	52	0	52
05:30-05:45	184	0	184	11:30-11:45	911	0	911	05:30-05:45	670	0	670	11:30-11:45	65	0	65
05:45-06:00	220	0	220	11:45-12:00	897	0	897	05:45-06:00	691	0	691	11:45-12:00	51	0	51

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:45 AM to 07:45 AM	
AM - PEAK HR VOLUME	2521	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:45 AM to 07:45 AM	
AM - PEAK HR VOLUME	2521	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	3078	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	3078	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	11:00 AM to 12:00 PM
AM - PEAK HR VOLUME	3139
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	01:30 PM to 02:30 PM	
PM - PEAK HR VOLUME	3738	
PM - K FACTOR (%)		-
PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	01:30 PM to 02:30 PM
PEAK HR VOLUME	3738
DIRECTIONAL PEAK	
PEAK HR TIME	01:30 PM to 02:30 PM
PEAK HR VOLUME	3738

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	12,761		
AM 12-HR PERIOD (00:00-12:00)	14,023		
PM 6-HR PERIOD (12:00-18:00)	19,049		
PM 12-HR PERIOD (12:00-24:00)	24,082		
24 HOUR PERIOD	38,105		
D (%)			

Run Date: 2016/05/26

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2015 Program Count - Summary

Site ID: B72740200226 **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 32200
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7402
Location: King St - Kawaiahao St to Kapiolani Blvd

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/03/2015															
12:00-12:15	41	0	41	06:00-06:15	327	0	327	12:00-12:15	545	0	545	06:00-06:15	713	0	713
12:15-12:30	44	0	44	06:15-06:30	391	0	391	12:15-12:30	530	0	530	06:15-06:30	590	0	590
12:30-12:45	44	0	44	06:30-06:45	482	0	482	12:30-12:45	537	0	537	06:30-06:45	468	0	468
12:45-01:00	23	0	23	06:45-07:00	568	0	568	12:45-01:00	520	0	520	06:45-07:00	385	0	385
01:00-01:15	20	0	20	07:00-07:15	619	0	619	01:00-01:15	526	0	526	07:00-07:15	286	0	286
01:15-01:30	33	0	33	07:15-07:30	575	0	575	01:15-01:30	519	0	519	07:15-07:30	267	0	267
01:30-01:45	28	0	28	07:30-07:45	637	0	637	01:30-01:45	560	0	560	07:30-07:45	248	0	248
01:45-02:00	21	0	21	07:45-08:00	527	0	527	01:45-02:00	575	0	575	07:45-08:00	234	0	234
02:00-02:15	17	0	17	08:00-08:15	550	0	550	02:00-02:15	480	0	480	08:00-08:15	199	0	199
02:15-02:30	16	0	16	08:15-08:30	484	0	484	02:15-02:30	571	0	571	08:15-08:30	212	0	212
02:30-02:45	12	0	12	08:30-08:45	490	0	490	02:30-02:45	587	0	587	08:30-08:45	200	0	200
02:45-03:00	15	0	15	08:45-09:00	435	0	435	02:45-03:00	550	0	550	08:45-09:00	217	0	217
03:00-03:15	21	0	21	09:00-09:15	399	0	399	03:00-03:15	659	0	659	09:00-09:15	155	0	155
03:15-03:30	22	0	22	09:15-09:30	460	0	460	03:15-03:30	650	0	650	09:15-09:30	155	0	155
03:30-03:45	28	0	28	09:30-09:45	492	0	492	03:30-03:45	751	0	751	09:30-09:45	130	0	130
03:45-04:00	20	0	20	09:45-10:00	478	0	478	03:45-04:00	706	0	706	09:45-10:00	136	0	136
04:00-04:15	26	0	26	10:00-10:15	508	0	508	04:00-04:15	707	0	707	10:00-10:15	103	0	103
04:15-04:30	34	0	34	10:15-10:30	469	0	469	04:15-04:30	708	0	708	10:15-10:30	90	0	90
04:30-04:45	79	0	79	10:30-10:45	520	0	520	04:30-04:45	658	0	658	10:30-10:45	72	0	72
04:45-05:00	97	0	97	10:45-11:00	496	0	496	04:45-05:00	782	0	782	10:45-11:00	70	0	70
05:00-05:15	132	0	132	11:00-11:15	490	0	490	05:00-05:15	739	0	739	11:00-11:15	68	0	68
05:15-05:30	151	0	151	11:15-11:30	551	0	551	05:15-05:30	844	0	844	11:15-11:30	60	0	60
05:30-05:45	206	0	206	11:30-11:45	548	0	548	05:30-05:45	710	0	710	11:30-11:45	56	0	56
05:45-06:00	206	0	206	11:45-12:00	500	0	500	05:45-06:00	787	0	787	11:45-12:00	39	0	39

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:45 AM to 07:45 AM	
AM - PEAK HR VOLUME	2399	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:45 AM to 07:45 AM	
AM - PEAK HR VOLUME	2399	

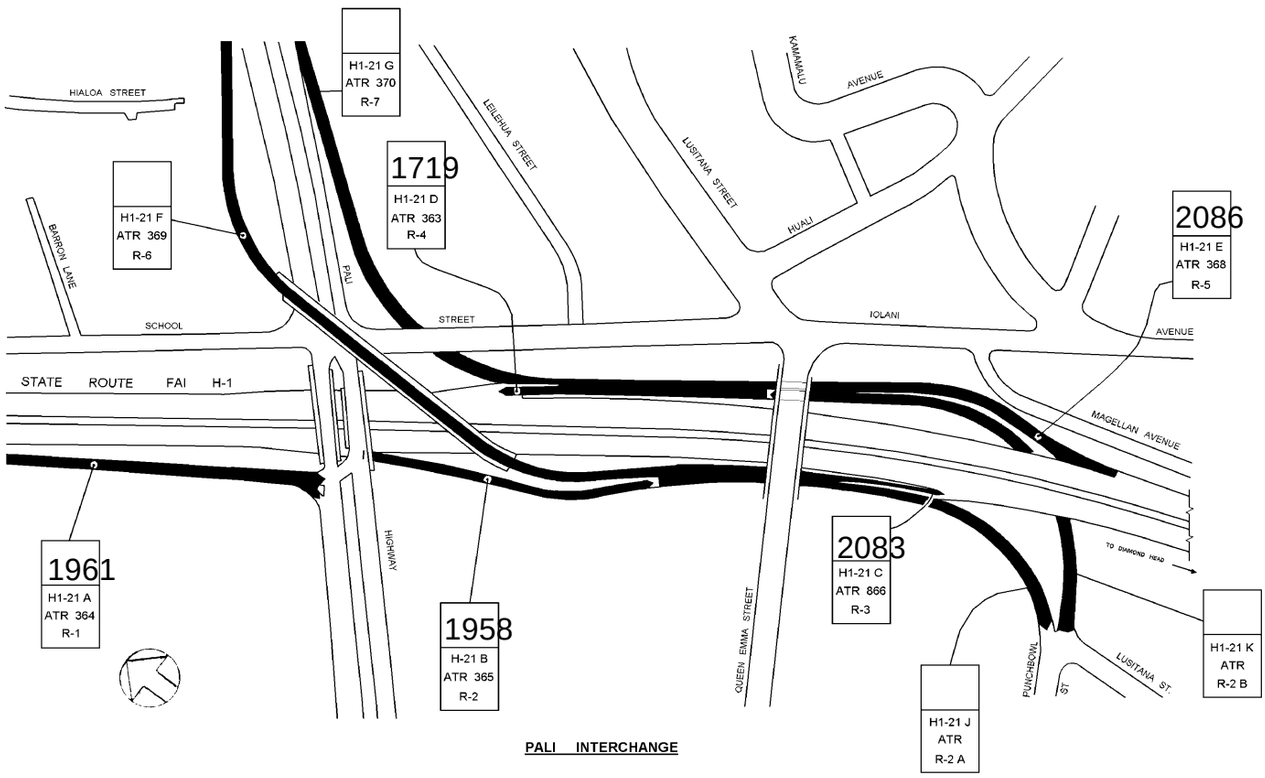
PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	05:00 PM to 06:00 PM	
PM - PEAK HR VOLUME	3080	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	05:00 PM to 06:00 PM	
PM - PEAK HR VOLUME	3080	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	06:45 AM to 07:45 AM
AM - PEAK HR VOLUME	2399
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	05:00 PM to 06:00 PM
PM - PEAK HR VOLUME	3080
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	01:45 PM to 02:45 PM
PEAK HR VOLUME	2213
DIRECTIONAL PEAK	
PEAK HR TIME	01:45 PM to 02:45 PM
PEAK HR VOLUME	2213

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	11,996		
AM 12-HR PERIOD (00:00-12:00)	13,332		
PM 6-HR PERIOD (12:00-18:00)	15,201		
PM 12-HR PERIOD (12:00-24:00)	20,354		
24 HOUR PERIOD	33,686		
D (%)			



PALI INTERCHANGE

Station Description: Pali Interchange					
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					
ATR #	FREEWAY STA #	AUX STA #	DESCRIPTION	RTE #	RTE MILE
364	H1-21A	R-1	OFF RAMP, H-1 EB TO PALI HIGHWAY	H-1	21.25
365	H1-21B	R-2	OFF RAMP, H-1 EB TO PUNCHBOWL STREET	H-1	21.43
363	H1-21D	R-4	ON RAMP, PUNCHBOWL STREET TO H-1 WB	H-1	21.45
866	H1-21C	R-3	ON RAMP, PALI HIGHWAY SB TO H-1 EB	H-1	21.60
368	H1-21E	R-5	OFF RAMP, H-1 WB TO PALI HIGHWAY NB	H-1	21.67
369	H1-21F	R-6	OFF RAMP, PALI HIGHWAY SB TO H-1 EB (R-3) &	61	0.30
			PUNCHBOWL STREET		
370	H1-21G	R-7	ON RAMP, H-1 WB (R-5) & PUNCHBOWL STREET	61	0.29
			TO PALI HIGHWAY NB		
	H1-21J	R-2A			
	H1-21K	R-2B			

Run Date: 2017/08/04

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72000H1-21A **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 14800
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-1_EB_21A
Location: OFF RAMP, H-1 EB to Pali Hwy, Pali IC R-1

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/01/2016															
12:00-12:15	25	0	25	06:00-06:15	241	0	241	12:00-12:15	158	0	158	06:00-06:15	269	0	269
12:15-12:30	28	0	28	06:15-06:30	258	0	258	12:15-12:30	225	0	225	06:15-06:30	244	0	244
12:30-12:45	24	0	24	06:30-06:45	243	0	243	12:30-12:45	253	0	253	06:30-06:45	207	0	207
12:45-01:00	13	0	13	06:45-07:00	251	0	251	12:45-01:00	205	0	205	06:45-07:00	194	0	194
01:00-01:15	23	0	23	07:00-07:15	254	0	254	01:00-01:15	218	0	218	07:00-07:15	169	0	169
01:15-01:30	13	0	13	07:15-07:30	245	0	245	01:15-01:30	234	0	234	07:15-07:30	122	0	122
01:30-01:45	19	0	19	07:30-07:45	254	0	254	01:30-01:45	277	0	277	07:30-07:45	128	0	128
01:45-02:00	8	0	8	07:45-08:00	240	0	240	01:45-02:00	259	0	259	07:45-08:00	141	0	141
02:00-02:15	12	0	12	08:00-08:15	213	0	213	02:00-02:15	280	0	280	08:00-08:15	126	0	126
02:15-02:30	9	0	9	08:15-08:30	252	0	252	02:15-02:30	256	0	256	08:15-08:30	138	0	138
02:30-02:45	13	0	13	08:30-08:45	194	0	194	02:30-02:45	232	0	232	08:30-08:45	113	0	113
02:45-03:00	13	0	13	08:45-09:00	246	0	246	02:45-03:00	271	0	271	08:45-09:00	125	0	125
03:00-03:15	19	0	19	09:00-09:15	221	0	221	03:00-03:15	251	0	251	09:00-09:15	101	0	101
03:15-03:30	10	0	10	09:15-09:30	270	0	270	03:15-03:30	284	0	284	09:15-09:30	76	0	76
03:30-03:45	13	0	13	09:30-09:45	317	0	317	03:30-03:45	258	0	258	09:30-09:45	83	0	83
03:45-04:00	25	0	25	09:45-10:00	266	0	266	03:45-04:00	183	0	183	09:45-10:00	73	0	73
04:00-04:15	35	0	35	10:00-10:15	230	0	230	04:00-04:15	259	0	259	10:00-10:15	70	0	70
04:15-04:30	44	0	44	10:15-10:30	207	0	207	04:15-04:30	258	0	258	10:15-10:30	71	0	71
04:30-04:45	59	0	59	10:30-10:45	229	0	229	04:30-04:45	200	0	200	10:30-10:45	63	0	63
04:45-05:00	74	0	74	10:45-11:00	208	0	208	04:45-05:00	211	0	211	10:45-11:00	62	0	62
05:00-05:15	94	0	94	11:00-11:15	205	0	205	05:00-05:15	228	0	228	11:00-11:15	49	0	49
05:15-05:30	138	0	138	11:15-11:30	203	0	203	05:15-05:30	220	0	220	11:15-11:30	33	0	33
05:30-05:45	178	0	178	11:30-11:45	208	0	208	05:30-05:45	221	0	221	11:30-11:45	41	0	41
05:45-06:00	170	0	170	11:45-12:00	171	0	171	05:45-06:00	244	0	244	11:45-12:00	28	0	28

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:15 AM to 07:15 AM	
AM - PEAK HR VOLUME	1006	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:15 AM to 07:15 AM	
AM - PEAK HR VOLUME	1006	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:15 PM to 04:15 PM	
PM - PEAK HR VOLUME	984	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:15 PM to 04:15 PM	
PM - PEAK HR VOLUME	984	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	09:15 AM to 10:15 AM
AM - PEAK HR VOLUME	1083
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	01:30 PM to 02:30 PM
PM - PEAK HR VOLUME	1072
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	09:15 AM to 10:15 AM
PEAK HR VOLUME	1083
DIRECTIONAL PEAK	
PEAK HR TIME	09:15 AM to 10:15 AM
PEAK HR VOLUME	1083

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	5,626		
AM 12-HR PERIOD (00:00-12:00)	6,685		
PM 6-HR PERIOD (12:00-18:00)	5,685		
PM 12-HR PERIOD (12:00-24:00)	8,411		
24 HOUR PERIOD	15,096		
D (%)			

Run Date: 2017/08/04

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72000H1-21A **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 14800
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-1_EB_21A
Location: OFF RAMP, H-1 EB to Pali Hwy, Pali IC R-1

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/02/2016															
12:00-12:15	28	0	28	06:00-06:15	225	0	225	12:00-12:15	232	0	232	06:00-06:15	211	0	211
12:15-12:30	31	0	31	06:15-06:30	248	0	248	12:15-12:30	241	0	241	06:15-06:30	245	0	245
12:30-12:45	18	0	18	06:30-06:45	255	0	255	12:30-12:45	230	0	230	06:30-06:45	232	0	232
12:45-01:00	19	0	19	06:45-07:00	280	0	280	12:45-01:00	226	0	226	06:45-07:00	244	0	244
01:00-01:15	10	0	10	07:00-07:15	261	0	261	01:00-01:15	238	0	238	07:00-07:15	193	0	193
01:15-01:30	15	0	15	07:15-07:30	245	0	245	01:15-01:30	260	0	260	07:15-07:30	174	0	174
01:30-01:45	20	0	20	07:30-07:45	254	0	254	01:30-01:45	243	0	243	07:30-07:45	147	0	147
01:45-02:00	7	0	7	07:45-08:00	249	0	249	01:45-02:00	260	0	260	07:45-08:00	128	0	128
02:00-02:15	15	0	15	08:00-08:15	263	0	263	02:00-02:15	255	0	255	08:00-08:15	131	0	131
02:15-02:30	6	0	6	08:15-08:30	297	0	297	02:15-02:30	243	0	243	08:15-08:30	116	0	116
02:30-02:45	11	0	11	08:30-08:45	288	0	288	02:30-02:45	278	0	278	08:30-08:45	94	0	94
02:45-03:00	12	0	12	08:45-09:00	312	0	312	02:45-03:00	265	0	265	08:45-09:00	125	0	125
03:00-03:15	9	0	9	09:00-09:15	254	0	254	03:00-03:15	261	0	261	09:00-09:15	109	0	109
03:15-03:30	16	0	16	09:15-09:30	271	0	271	03:15-03:30	240	0	240	09:15-09:30	110	0	110
03:30-03:45	16	0	16	09:30-09:45	289	0	289	03:30-03:45	248	0	248	09:30-09:45	79	0	79
03:45-04:00	19	0	19	09:45-10:00	251	0	251	03:45-04:00	242	0	242	09:45-10:00	78	0	78
04:00-04:15	40	0	40	10:00-10:15	259	0	259	04:00-04:15	214	0	214	10:00-10:15	51	0	51
04:15-04:30	46	0	46	10:15-10:30	247	0	247	04:15-04:30	206	0	206	10:15-10:30	79	0	79
04:30-04:45	51	0	51	10:30-10:45	246	0	246	04:30-04:45	242	0	242	10:30-10:45	63	0	63
04:45-05:00	68	0	68	10:45-11:00	247	0	247	04:45-05:00	207	0	207	10:45-11:00	61	0	61
05:00-05:15	110	0	110	11:00-11:15	253	0	253	05:00-05:15	230	0	230	11:00-11:15	36	0	36
05:15-05:30	136	0	136	11:15-11:30	237	0	237	05:15-05:30	249	0	249	11:15-11:30	34	0	34
05:30-05:45	174	0	174	11:30-11:45	239	0	239	05:30-05:45	233	0	233	11:30-11:45	50	0	50
05:45-06:00	175	0	175	11:45-12:00	221	0	221	05:45-06:00	220	0	220	11:45-12:00	39	0	39

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	08:00 AM to 09:00 AM	
AM - PEAK HR VOLUME	1160	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	08:00 AM to 09:00 AM	
AM - PEAK HR VOLUME	1160	

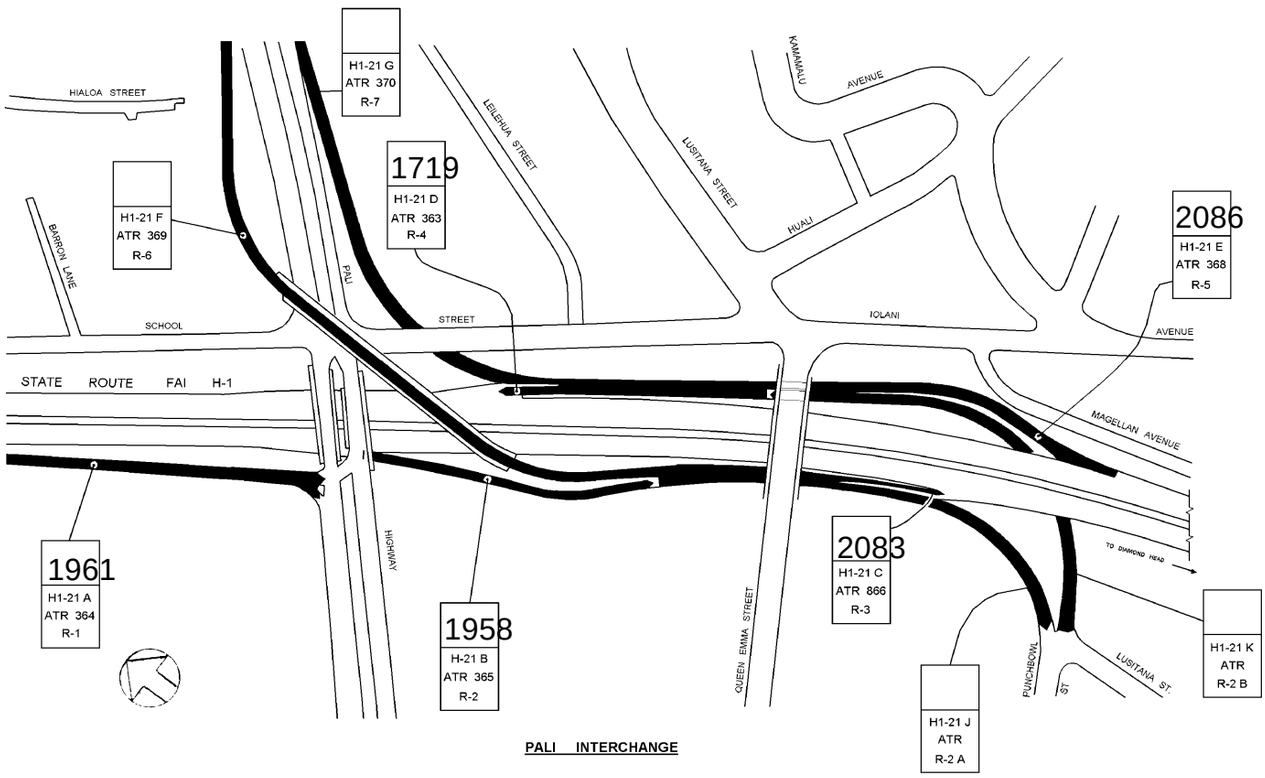
PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	991	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	991	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	08:00 AM to 09:00 AM
AM - PEAK HR VOLUME	1160
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	02:15 PM to 03:15 PM
PM - PEAK HR VOLUME	1047
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	09:15 AM to 10:15 AM
PEAK HR VOLUME	1070
DIRECTIONAL PEAK	
PEAK HR TIME	09:15 AM to 10:15 AM
PEAK HR VOLUME	1070

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	6,191		
AM 12-HR PERIOD (00:00-12:00)	7,243		
PM 6-HR PERIOD (12:00-18:00)	5,763		
PM 12-HR PERIOD (12:00-24:00)	8,592		
24 HOUR PERIOD	15,835		
D (%)			



PALI INTERCHANGE

Station Description: Pali Interchange					
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					
ATR #	FREEWAY STA #	AUX STA #	DESCRIPTION	RTE #	RTE MILE
364	H1-21A	R-1	OFF RAMP, H-1 EB TO PALI HIGHWAY	H-1	21.25
365	H1-21B	R-2	OFF RAMP, H-1 EB TO PUNCHBOWL STREET	H-1	21.43
363	H1-21D	R-4	ON RAMP, PUNCHBOWL STREET TO H-1 WB	H-1	21.45
866	H1-21C	R-3	ON RAMP, PALI HIGHWAY SB TO H-1 EB	H-1	21.60
368	H1-21E	R-5	OFF RAMP, H-1 WB TO PALI HIGHWAY NB	H-1	21.67
369	H1-21F	R-6	OFF RAMP, PALI HIGHWAY SB TO H-1 EB (R-3) &	61	0.30
			PUNCHBOWL STREET		
370	H1-21G	R-7	ON RAMP, H-1 WB (R-5) & PUNCHBOWL STREET	61	0.29
			TO PALI HIGHWAY NB		
	H1-21J	R-2A			
	H1-21K	R-2B			

Run Date: 2017/08/04

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72000H1-21B **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 7300
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-1_EB_21B
Location: OFF RAMP, H-1 EB to Punchbowl St, Pali IC R-2

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/01/2016															
12:00-12:15	8	0	8	06:00-06:15	146	0	146	12:00-12:15	102	0	102	06:00-06:15	54	0	54
12:15-12:30	5	0	5	06:15-06:30	169	0	169	12:15-12:30	129	0	129	06:15-06:30	59	0	59
12:30-12:45	6	0	6	06:30-06:45	171	0	171	12:30-12:45	143	0	143	06:30-06:45	60	0	60
12:45-01:00	3	0	3	06:45-07:00	179	0	179	12:45-01:00	138	0	138	06:45-07:00	52	0	52
01:00-01:15	2	0	2	07:00-07:15	146	0	146	01:00-01:15	116	0	116	07:00-07:15	56	0	56
01:15-01:30	5	0	5	07:15-07:30	141	0	141	01:15-01:30	118	0	118	07:15-07:30	53	0	53
01:30-01:45	2	0	2	07:30-07:45	163	0	163	01:30-01:45	111	0	111	07:30-07:45	40	0	40
01:45-02:00	2	0	2	07:45-08:00	143	0	143	01:45-02:00	107	0	107	07:45-08:00	32	0	32
02:00-02:15	3	0	3	08:00-08:15	147	0	147	02:00-02:15	97	0	97	08:00-08:15	32	0	32
02:15-02:30	4	0	4	08:15-08:30	136	0	136	02:15-02:30	111	0	111	08:15-08:30	27	0	27
02:30-02:45	4	0	4	08:30-08:45	177	0	177	02:30-02:45	106	0	106	08:30-08:45	22	0	22
02:45-03:00	2	0	2	08:45-09:00	159	0	159	02:45-03:00	90	0	90	08:45-09:00	35	0	35
03:00-03:15	4	0	4	09:00-09:15	146	0	146	03:00-03:15	95	0	95	09:00-09:15	25	0	25
03:15-03:30	7	0	7	09:15-09:30	168	0	168	03:15-03:30	97	0	97	09:15-09:30	31	0	31
03:30-03:45	11	0	11	09:30-09:45	163	0	163	03:30-03:45	102	0	102	09:30-09:45	37	0	37
03:45-04:00	11	0	11	09:45-10:00	178	0	178	03:45-04:00	130	0	130	09:45-10:00	28	0	28
04:00-04:15	11	0	11	10:00-10:15	168	0	168	04:00-04:15	122	0	122	10:00-10:15	23	0	23
04:15-04:30	17	0	17	10:15-10:30	159	0	159	04:15-04:30	102	0	102	10:15-10:30	21	0	21
04:30-04:45	31	0	31	10:30-10:45	146	0	146	04:30-04:45	95	0	95	10:30-10:45	21	0	21
04:45-05:00	46	0	46	10:45-11:00	155	0	155	04:45-05:00	74	0	74	10:45-11:00	17	0	17
05:00-05:15	57	0	57	11:00-11:15	128	0	128	05:00-05:15	84	0	84	11:00-11:15	4	0	4
05:15-05:30	93	0	93	11:15-11:30	126	0	126	05:15-05:30	85	0	85	11:15-11:30	16	0	16
05:30-05:45	121	0	121	11:30-11:45	138	0	138	05:30-05:45	84	0	84	11:30-11:45	4	0	4
05:45-06:00	123	0	123	11:45-12:00	126	0	126	05:45-06:00	76	0	76	11:45-12:00	10	0	10

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:00 AM to 07:00 AM	
AM - PEAK HR VOLUME	665	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:00 AM to 07:00 AM	
AM - PEAK HR VOLUME	665	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:30 PM to 04:30 PM	
PM - PEAK HR VOLUME	456	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:30 PM to 04:30 PM	
PM - PEAK HR VOLUME	456	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	09:15 AM to 10:15 AM
AM - PEAK HR VOLUME	677
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	12:15 PM to 01:15 PM
PM - PEAK HR VOLUME	526
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	09:15 AM to 10:15 AM
PEAK HR VOLUME	677
DIRECTIONAL PEAK	
PEAK HR TIME	09:15 AM to 10:15 AM
PEAK HR VOLUME	677

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	3,678		
AM 12-HR PERIOD (00:00-12:00)	4,256		
PM 6-HR PERIOD (12:00-18:00)	2,514		
PM 12-HR PERIOD (12:00-24:00)	3,273		
24 HOUR PERIOD	7,529		
D (%)			

Run Date: 2017/08/04

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72000H1-21B **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 7300
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-1_EB_21B
Location: OFF RAMP, H-1 EB to Punchbowl St, Pali IC R-2

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 11/02/2016															
12:00-12:15	6	0	6	06:00-06:15	144	0	144	12:00-12:15	122	0	122	06:00-06:15	69	0	69
12:15-12:30	4	0	4	06:15-06:30	168	0	168	12:15-12:30	144	0	144	06:15-06:30	62	0	62
12:30-12:45	3	0	3	06:30-06:45	184	0	184	12:30-12:45	151	0	151	06:30-06:45	61	0	61
12:45-01:00	7	0	7	06:45-07:00	180	0	180	12:45-01:00	119	0	119	06:45-07:00	55	0	55
01:00-01:15	3	0	3	07:00-07:15	176	0	176	01:00-01:15	102	0	102	07:00-07:15	48	0	48
01:15-01:30	6	0	6	07:15-07:30	176	0	176	01:15-01:30	136	0	136	07:15-07:30	60	0	60
01:30-01:45	2	0	2	07:30-07:45	124	0	124	01:30-01:45	140	0	140	07:30-07:45	36	0	36
01:45-02:00	2	0	2	07:45-08:00	130	0	130	01:45-02:00	112	0	112	07:45-08:00	52	0	52
02:00-02:15	3	0	3	08:00-08:15	145	0	145	02:00-02:15	121	0	121	08:00-08:15	34	0	34
02:15-02:30	6	0	6	08:15-08:30	159	0	159	02:15-02:30	145	0	145	08:15-08:30	42	0	42
02:30-02:45	3	0	3	08:30-08:45	151	0	151	02:30-02:45	103	0	103	08:30-08:45	27	0	27
02:45-03:00	2	0	2	08:45-09:00	152	0	152	02:45-03:00	133	0	133	08:45-09:00	23	0	23
03:00-03:15	6	0	6	09:00-09:15	132	0	132	03:00-03:15	101	0	101	09:00-09:15	24	0	24
03:15-03:30	9	0	9	09:15-09:30	144	0	144	03:15-03:30	114	0	114	09:15-09:30	34	0	34
03:30-03:45	10	0	10	09:30-09:45	167	0	167	03:30-03:45	90	0	90	09:30-09:45	31	0	31
03:45-04:00	11	0	11	09:45-10:00	155	0	155	03:45-04:00	118	0	118	09:45-10:00	25	0	25
04:00-04:15	12	0	12	10:00-10:15	164	0	164	04:00-04:15	109	0	109	10:00-10:15	16	0	16
04:15-04:30	21	0	21	10:15-10:30	147	0	147	04:15-04:30	90	0	90	10:15-10:30	24	0	24
04:30-04:45	40	0	40	10:30-10:45	138	0	138	04:30-04:45	91	0	91	10:30-10:45	26	0	26
04:45-05:00	57	0	57	10:45-11:00	148	0	148	04:45-05:00	101	0	101	10:45-11:00	16	0	16
05:00-05:15	62	0	62	11:00-11:15	147	0	147	05:00-05:15	69	0	69	11:00-11:15	11	0	11
05:15-05:30	93	0	93	11:15-11:30	136	0	136	05:15-05:30	80	0	80	11:15-11:30	9	0	9
05:30-05:45	122	0	122	11:30-11:45	131	0	131	05:30-05:45	80	0	80	11:30-11:45	11	0	11
05:45-06:00	112	0	112	11:45-12:00	151	0	151	05:45-06:00	91	0	91	11:45-12:00	9	0	9

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:30 AM to 07:30 AM	
AM - PEAK HR VOLUME	716	
AM - K FACTOR (%)		
AM - D (%)		
DIRECTIONAL PEAK		
AM - PEAK HR TIME	06:30 AM to 07:30 AM	
AM - PEAK HR VOLUME	716	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:15 PM to 04:15 PM	
PM - PEAK HR VOLUME	431	
PM - K FACTOR (%)		-
PM - D (%)		
DIRECTIONAL PEAK		
PM - PEAK HR TIME	03:15 PM to 04:15 PM	
PM - PEAK HR VOLUME	431	

AM PERIOD (00:00-12:00)	
TWO DIRECTIONAL PEAK	
AM - PEAK HR TIME	06:30 AM to 07:30 AM
AM - PEAK HR VOLUME	716
AM - K FACTOR (%)	
AM - D (%)	

PM PERIOD (12:00-24:00)	
TWO DIRECTIONAL PEAK	
PM - PEAK HR TIME	12:00 PM to 01:00 PM
PM - PEAK HR VOLUME	536
PM - K FACTOR (%)	-
PM - D (%)	

NON-COMMUTER PERIOD (09:00-15:00)	
TWO DIRECTIONAL PEAK	
PEAK HR TIME	09:30 AM to 10:30 AM
PEAK HR VOLUME	633
DIRECTIONAL PEAK	
PEAK HR TIME	09:30 AM to 10:30 AM
PEAK HR VOLUME	633

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	3,649		
AM 12-HR PERIOD (00:00-12:00)	4,251		
PM 6-HR PERIOD (12:00-18:00)	2,662		
PM 12-HR PERIOD (12:00-24:00)	3,467		
24 HOUR PERIOD	7,718		
D (%)			

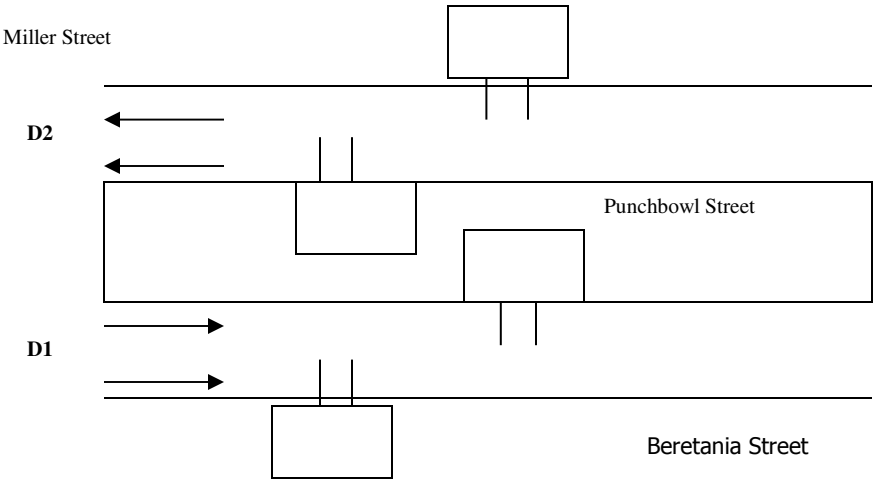
Traffic Data Service

Traffic Station Sketch

N

Island: Oahu
Area: Honolulu

Section ID/Station: B72751600020



	Meter #	File Name	GPS
1.	BT39	D0301015_B72751600020	21.30826, -157.8549
2.	BW69	D0301016_B72751600020	

Station Description: Punchbowl Street: Miller Street to Beretania Street					
Survey Beginning Date/Time: 3/1/16 @ 0000			Survey Ending Date/Time: 3/2/16 @ 2400		
Survey Method:	Road Tube		Data Type:	Vol	
Survey Crew:	LM				
Sketch Updated:			By:	SR	
Remarks:	1381				
FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
Punchbowl Street		14		7505	
D1= Direction to End D2= Direction to Begin			D1: Beretania Street / Ala Moana Boulevard D2: Miller Street / H-1		

Run Date: 2017/07/11

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72751600020 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 19800
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7516
Location: Punchbowl St - Miller St to Beretania St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 03/01/2016															
12:00-12:15	48	9	57	06:00-06:15	99	239	338	12:00-12:15	231	51	282	06:00-06:15	144	203	347
12:15-12:30	39	9	48	06:15-06:30	113	250	363	12:15-12:30	230	29	259	06:15-06:30	99	172	271
12:30-12:45	29	7	36	06:30-06:45	159	234	393	12:30-12:45	238	22	260	06:30-06:45	134	141	275
12:45-01:00	31	9	40	06:45-07:00	144	207	351	12:45-01:00	248	32	280	06:45-07:00	189	142	331
01:00-01:15	36	11	47	07:00-07:15	152	208	360	01:00-01:15	230	30	260	07:00-07:15	163	137	300
01:15-01:30	13	6	19	07:15-07:30	93	228	321	01:15-01:30	223	29	252	07:15-07:30	171	113	284
01:30-01:45	19	8	27	07:30-07:45	41	129	170	01:30-01:45	195	51	246	07:30-07:45	163	84	247
01:45-02:00	15	7	22	07:45-08:00	93	122	215	01:45-02:00	162	124	286	07:45-08:00	150	118	268
02:00-02:15	18	9	27	08:00-08:15	96	138	234	02:00-02:15	152	191	343	08:00-08:15	148	89	237
02:15-02:30	10	9	19	08:15-08:30	47	161	208	02:15-02:30	185	117	302	08:15-08:30	162	76	238
02:30-02:45	19	6	25	08:30-08:45	73	201	274	02:30-02:45	226	142	368	08:30-08:45	111	79	190
02:45-03:00	18	6	24	08:45-09:00	115	183	298	02:45-03:00	191	181	372	08:45-09:00	137	58	195
03:00-03:15	15	4	19	09:00-09:15	146	177	323	03:00-03:15	194	131	325	09:00-09:15	126	65	191
03:15-03:30	13	8	21	09:15-09:30	148	126	274	03:15-03:30	192	54	246	09:15-09:30	115	58	173
03:30-03:45	21	10	31	09:30-09:45	173	150	323	03:30-03:45	77	90	167	09:30-09:45	97	55	152
03:45-04:00	31	14	45	09:45-10:00	152	140	292	03:45-04:00	53	164	217	09:45-10:00	100	48	148
04:00-04:15	17	12	29	10:00-10:15	157	233	390	04:00-04:15	40	154	194	10:00-10:15	98	38	136
04:15-04:30	24	20	44	10:15-10:30	201	212	413	04:15-04:30	24	190	214	10:15-10:30	91	29	120
04:30-04:45	28	42	70	10:30-10:45	177	212	389	04:30-04:45	64	160	224	10:30-10:45	62	33	95
04:45-05:00	31	67	98	10:45-11:00	171	192	363	04:45-05:00	28	166	194	10:45-11:00	68	24	92
05:00-05:15	41	89	130	11:00-11:15	198	229	427	05:00-05:15	23	197	220	11:00-11:15	63	23	86
05:15-05:30	53	125	178	11:15-11:30	211	209	420	05:15-05:30	42	187	229	11:15-11:30	67	20	87
05:30-05:45	83	156	239	11:30-11:45	246	82	328	05:30-05:45	27	169	196	11:30-11:45	83	23	106
05:45-06:00	102	239	341	11:45-12:00	235	43	278	05:45-06:00	171	182	353	11:45-12:00	58	24	82

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM		
AM - PEAK HR VOLUME	568	899	1467
AM - K FACTOR (%)			7.22
AM - D (%)	38.72	61.28	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM	05:45 AM to 06:45 AM	
AM - PEAK HR VOLUME	568	962	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:45 PM to 06:45 PM		
PM - PEAK HR VOLUME	548	698	1246
PM - K FACTOR (%)			6.13
PM - D (%)	43.98	56.02	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	06:00 PM to 07:00 PM	05:15 PM to 06:15 PM	
PM - PEAK HR VOLUME	566	741	

AM PERIOD (00:00-12:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	10:30 AM to 11:30 AM		
AM - PEAK HR VOLUME	757	842	1599
AM - K FACTOR (%)			7.87
AM - D (%)	47.34	52.66	100.00

PM PERIOD (12:00-24:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	02:00 PM to 03:00 PM		
PM - PEAK HR VOLUME	754	631	1385
PM - K FACTOR (%)			6.82
PM - D (%)	54.44	45.56	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	10:30 AM to 11:30 AM		
PEAK HR VOLUME	757	842	1599
DIRECTIONAL PEAK			
PEAK HR TIME	12:00 PM to 01:00 PM	10:00 AM to 11:00 AM	
PEAK HR VOLUME	947	849	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	3,440	4,305	7,745
AM 12-HR PERIOD (00:00-12:00)	4,194	5,187	9,381
PM 6-HR PERIOD (12:00-18:00)	3,446	2,843	6,289
PM 12-HR PERIOD (12:00-24:00)	6,245	4,695	10,940
24 HOUR PERIOD	10,439	9,882	20,321
D (%)	51.37	48.63	100.00

Run Date: 2017/07/11

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72751600020 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 19800
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7516
Location: Punchbowl St - Miller St to Beretania St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 03/02/2016															
12:00-12:15	56	11	67	06:00-06:15	122	274	396	12:00-12:15	188	216	404	06:00-06:15	129	138	267
12:15-12:30	38	13	51	06:15-06:30	131	254	385	12:15-12:30	190	221	411	06:15-06:30	114	182	296
12:30-12:45	34	6	40	06:30-06:45	152	264	416	12:30-12:45	167	219	386	06:30-06:45	97	191	288
12:45-01:00	33	9	42	06:45-07:00	134	238	372	12:45-01:00	196	247	443	06:45-07:00	148	138	286
01:00-01:15	35	11	46	07:00-07:15	163	241	404	01:00-01:15	204	243	447	07:00-07:15	172	110	282
01:15-01:30	12	12	24	07:15-07:30	145	171	316	01:15-01:30	179	205	384	07:15-07:30	155	111	266
01:30-01:45	21	11	32	07:30-07:45	149	182	331	01:30-01:45	163	241	404	07:30-07:45	163	116	279
01:45-02:00	12	6	18	07:45-08:00	151	162	313	01:45-02:00	175	247	422	07:45-08:00	144	101	245
02:00-02:15	17	5	22	08:00-08:15	159	114	273	02:00-02:15	175	207	382	08:00-08:15	145	89	234
02:15-02:30	16	10	26	08:15-08:30	83	231	314	02:15-02:30	160	198	358	08:15-08:30	145	76	221
02:30-02:45	12	5	17	08:30-08:45	155	217	372	02:30-02:45	157	235	392	08:30-08:45	185	69	254
02:45-03:00	15	6	21	08:45-09:00	149	133	282	02:45-03:00	180	238	418	08:45-09:00	165	64	229
03:00-03:15	18	6	24	09:00-09:15	161	217	378	03:00-03:15	157	216	373	09:00-09:15	143	68	211
03:15-03:30	4	11	15	09:15-09:30	146	230	376	03:15-03:30	160	214	374	09:15-09:30	132	61	193
03:30-03:45	18	12	30	09:30-09:45	150	241	391	03:30-03:45	140	193	333	09:30-09:45	104	59	163
03:45-04:00	17	11	28	09:45-10:00	177	163	340	03:45-04:00	104	212	316	09:45-10:00	90	46	136
04:00-04:15	23	21	44	10:00-10:15	172	263	435	04:00-04:15	75	192	267	10:00-10:15	85	49	134
04:15-04:30	24	27	51	10:15-10:30	140	254	394	04:15-04:30	34	203	237	10:15-10:30	82	38	120
04:30-04:45	30	53	83	10:30-10:45	104	238	342	04:30-04:45	41	176	217	10:30-10:45	76	41	117
04:45-05:00	34	65	99	10:45-11:00	146	218	364	04:45-05:00	46	161	207	10:45-11:00	67	21	88
05:00-05:15	51	94	145	11:00-11:15	166	205	371	05:00-05:15	68	139	207	11:00-11:15	77	26	103
05:15-05:30	57	136	193	11:15-11:30	190	232	422	05:15-05:30	44	165	209	11:15-11:30	51	27	78
05:30-05:45	79	187	266	11:30-11:45	167	229	396	05:30-05:45	19	155	174	11:30-11:45	87	21	108
05:45-06:00	109	241	350	11:45-12:00	182	211	393	05:45-06:00	115	157	272	11:45-12:00	62	12	74

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM		
AM - PEAK HR VOLUME	580	997	1577
AM - K FACTOR (%)			6.79
AM - D (%)	36.78	63.22	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM	05:45 AM to 06:45 AM	
AM - PEAK HR VOLUME	608	1033	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:00 PM to 04:00 PM		
PM - PEAK HR VOLUME	561	835	1396
PM - K FACTOR (%)			6.01
PM - D (%)	40.19	59.81	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:00 PM to 04:00 PM	03:00 PM to 04:00 PM	
PM - PEAK HR VOLUME	561	835	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	11:00 AM to 12:00 PM		
AM - PEAK HR VOLUME	705	877	1582
AM - K FACTOR (%)			6.81
AM - D (%)	44.56	55.44	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	12:15 PM to 01:15 PM		
PM - PEAK HR VOLUME	757	930	1687
PM - K FACTOR (%)			7.27
PM - D (%)	44.87	55.13	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	12:15 PM to 01:15 PM		
PEAK HR VOLUME	757	930	1687
DIRECTIONAL PEAK			
PEAK HR TIME	12:15 PM to 01:15 PM	10:00 AM to 11:00 AM	
PEAK HR VOLUME	757	973	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	3,594	5,182	8,776
AM 12-HR PERIOD (00:00-12:00)	4,359	6,151	10,510
PM 6-HR PERIOD (12:00-18:00)	3,137	4,900	8,037
PM 12-HR PERIOD (12:00-24:00)	5,955	6,754	12,709
24 HOUR PERIOD	10,314	12,905	23,219
D (%)	44.42	55.58	100.00

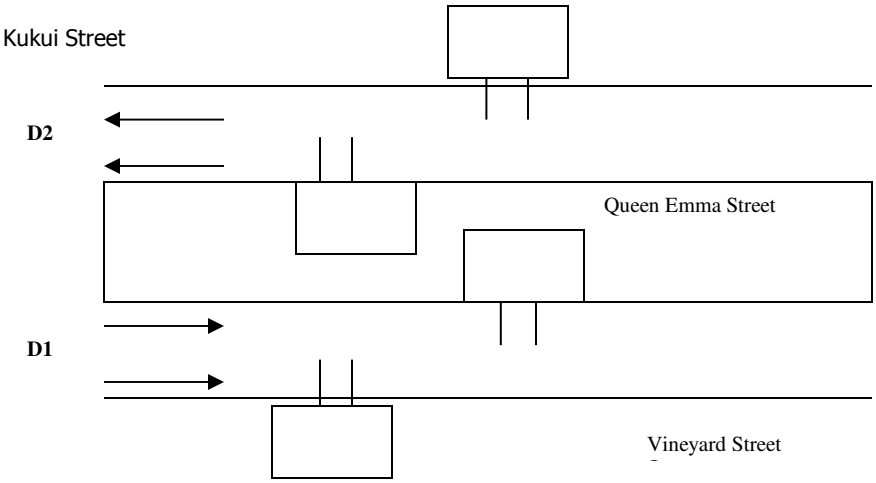
Traffic Data Service

Traffic Station Sketch

N

Island: Oahu
Area: Honolulu

Section ID/Station: B72752300000



	Meter #	File Name	GPS
1.	BW59	D0210031_B72752300000	21.31084, -157.8566
2.	BG89	D0210032_B72752300000	21.31084, -157.8566

Station Description:
Queen Emma Street: Kukui Street to Vineyard Street

Survey Beginning Date/Time:		Survey Ending Date/Time:
2/10/16 @ 0000		2/11/16 @ 2400

Survey Method:	Road Tube	Data Type:	Vol
Survey Crew:	LM		C4
Sketch Updated:		By:	SR

Remarks:	1381

FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
Queen Emma Street		16		7523	

D1= Direction to End
D2= Direction to Begin

D1: Vineyard Street / School Street
D2: Kukui Street / Kukui Street

Run Date: 2017/07/05

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72752300000 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 17300
Functional Class: URBAN:MINOR ARTERIAL **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7523
Location: Queen Emma St - Kukui St to Vineyard St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/10/2016															
12:00-12:15	25	0	25	06:00-06:15	47	43	90	12:00-12:15	292	46	338	06:00-06:15	308	40	348
12:15-12:30	20	2	22	06:15-06:30	52	76	128	12:15-12:30	282	35	317	06:15-06:30	284	26	310
12:30-12:45	9	2	11	06:30-06:45	82	104	186	12:30-12:45	278	33	311	06:30-06:45	245	26	271
12:45-01:00	11	1	12	06:45-07:00	133	130	263	12:45-01:00	288	42	330	06:45-07:00	262	19	281
01:00-01:15	8	1	9	07:00-07:15	164	145	309	01:00-01:15	292	64	356	07:00-07:15	208	29	237
01:15-01:30	16	2	18	07:15-07:30	173	174	347	01:15-01:30	240	53	293	07:15-07:30	208	20	228
01:30-01:45	5	4	9	07:30-07:45	221	165	386	01:30-01:45	268	35	303	07:30-07:45	177	19	196
01:45-02:00	9	1	10	07:45-08:00	201	142	343	01:45-02:00	267	58	325	07:45-08:00	155	18	173
02:00-02:15	3	2	5	08:00-08:15	190	106	296	02:00-02:15	260	50	310	08:00-08:15	141	18	159
02:15-02:30	6	1	7	08:15-08:30	154	105	259	02:15-02:30	287	46	333	08:15-08:30	141	18	159
02:30-02:45	2	0	2	08:30-08:45	182	87	269	02:30-02:45	347	51	398	08:30-08:45	120	15	135
02:45-03:00	6	0	6	08:45-09:00	149	98	247	02:45-03:00	317	43	360	08:45-09:00	113	19	132
03:00-03:15	5	1	6	09:00-09:15	128	77	205	03:00-03:15	355	67	422	09:00-09:15	92	15	107
03:15-03:30	10	4	14	09:15-09:30	153	50	203	03:15-03:30	354	66	420	09:15-09:30	83	5	88
03:30-03:45	2	2	4	09:30-09:45	170	74	244	03:30-03:45	367	47	414	09:30-09:45	63	6	69
03:45-04:00	4	5	9	09:45-10:00	180	60	240	03:45-04:00	409	43	452	09:45-10:00	65	9	74
04:00-04:15	8	1	9	10:00-10:15	163	50	213	04:00-04:15	463	53	516	10:00-10:15	54	4	58
04:15-04:30	13	8	21	10:15-10:30	198	35	233	04:15-04:30	425	51	476	10:15-10:30	45	7	52
04:30-04:45	9	5	14	10:30-10:45	201	53	254	04:30-04:45	384	62	446	10:30-10:45	28	4	32
04:45-05:00	15	5	20	10:45-11:00	213	60	273	04:45-05:00	413	77	490	10:45-11:00	29	7	36
05:00-05:15	12	12	24	11:00-11:15	227	47	274	05:00-05:15	390	76	466	11:00-11:15	34	2	36
05:15-05:30	20	7	27	11:15-11:30	264	47	311	05:15-05:30	369	73	442	11:15-11:30	23	5	28
05:30-05:45	41	25	66	11:30-11:45	242	37	279	05:30-05:45	417	48	465	11:30-11:45	23	4	27
05:45-06:00	51	25	76	11:45-12:00	263	42	305	05:45-06:00	341	42	383	11:45-12:00	25	1	26

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM		
AM - PEAK HR VOLUME	759	626	1385
AM - K FACTOR (%)			7.21
AM - D (%)	54.80	45.20	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	07:00 AM to 08:00 AM	
AM - PEAK HR VOLUME	785	626	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:00 PM to 05:00 PM		
PM - PEAK HR VOLUME	1685	243	1928
PM - K FACTOR (%)			10.04
PM - D (%)	87.40	12.60	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:00 PM to 05:00 PM	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	1685	288	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM		
AM - PEAK HR VOLUME	759	626	1385
AM - K FACTOR (%)			7.21
AM - D (%)	54.80	45.20	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:00 PM to 05:00 PM		
PM - PEAK HR VOLUME	1685	243	1928
PM - K FACTOR (%)			10.04
PM - D (%)	87.40	12.60	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	1211	190	1401
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	09:00 AM to 10:00 AM	
PEAK HR VOLUME	1211	261	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	4,150	2,007	6,157
AM 12-HR PERIOD (00:00-12:00)	4,460	2,123	6,583
PM 6-HR PERIOD (12:00-18:00)	8,105	1,261	9,366
PM 12-HR PERIOD (12:00-24:00)	11,031	1,597	12,628
24 HOUR PERIOD	15,491	3,720	19,211
D (%)	80.64	19.36	100.00

Run Date: 2017/07/05

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72752300000 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 17300
Functional Class: URBAN:MINOR ARTERIAL **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7523
Location: Queen Emma St - Kukui St to Vineyard St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/11/2016															
12:00-12:15	15	1	16	06:00-06:15	46	54	100	12:00-12:15	255	54	309	06:00-06:15	317	42	359
12:15-12:30	11	2	13	06:15-06:30	66	90	156	12:15-12:30	282	26	308	06:15-06:30	280	29	309
12:30-12:45	15	2	17	06:30-06:45	84	91	175	12:30-12:45	284	39	323	06:30-06:45	270	51	321
12:45-01:00	14	0	14	06:45-07:00	107	129	236	12:45-01:00	230	56	286	06:45-07:00	263	47	310
01:00-01:15	4	5	9	07:00-07:15	151	154	305	01:00-01:15	255	49	304	07:00-07:15	252	28	280
01:15-01:30	5	2	7	07:15-07:30	168	168	336	01:15-01:30	254	57	311	07:15-07:30	154	18	172
01:30-01:45	6	5	11	07:30-07:45	218	156	374	01:30-01:45	295	42	337	07:30-07:45	136	20	156
01:45-02:00	7	2	9	07:45-08:00	163	159	322	01:45-02:00	234	63	297	07:45-08:00	138	13	151
02:00-02:15	5	0	5	08:00-08:15	155	157	312	02:00-02:15	307	49	356	08:00-08:15	131	18	149
02:15-02:30	5	0	5	08:15-08:30	116	119	235	02:15-02:30	316	39	355	08:15-08:30	107	21	128
02:30-02:45	4	1	5	08:30-08:45	146	104	250	02:30-02:45	306	58	364	08:30-08:45	113	11	124
02:45-03:00	5	1	6	08:45-09:00	135	108	243	02:45-03:00	279	42	321	08:45-09:00	102	6	108
03:00-03:15	6	1	7	09:00-09:15	129	102	231	03:00-03:15	311	60	371	09:00-09:15	93	11	104
03:15-03:30	4	2	6	09:15-09:30	157	64	221	03:15-03:30	356	54	410	09:15-09:30	83	13	96
03:30-03:45	3	1	4	09:30-09:45	140	55	195	03:30-03:45	350	44	394	09:30-09:45	68	16	84
03:45-04:00	7	1	8	09:45-10:00	139	63	202	03:45-04:00	395	44	439	09:45-10:00	73	9	82
04:00-04:15	4	7	11	10:00-10:15	157	58	215	04:00-04:15	354	54	408	10:00-10:15	76	7	83
04:15-04:30	8	7	15	10:15-10:30	159	64	223	04:15-04:30	370	55	425	10:15-10:30	70	14	84
04:30-04:45	9	6	15	10:30-10:45	205	55	260	04:30-04:45	420	75	495	10:30-10:45	53	11	64
04:45-05:00	11	7	18	10:45-11:00	191	37	228	04:45-05:00	364	62	426	10:45-11:00	41	7	48
05:00-05:15	21	5	26	11:00-11:15	188	55	243	05:00-05:15	379	64	443	11:00-11:15	35	1	36
05:15-05:30	12	6	18	11:15-11:30	244	56	300	05:15-05:30	402	66	468	11:15-11:30	33	2	35
05:30-05:45	26	18	44	11:30-11:45	252	44	296	05:30-05:45	366	61	427	11:30-11:45	40	2	42
05:45-06:00	38	27	65	11:45-12:00	310	57	367	05:45-06:00	341	60	401	11:45-12:00	31	1	32

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	704	640	1344
AM - K FACTOR (%)			7.18
AM - D (%)	52.38	47.62	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	704	640	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM		
PM - PEAK HR VOLUME	1565	267	1832
PM - K FACTOR (%)			9.79
PM - D (%)	85.43	14.57	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	1565	267	

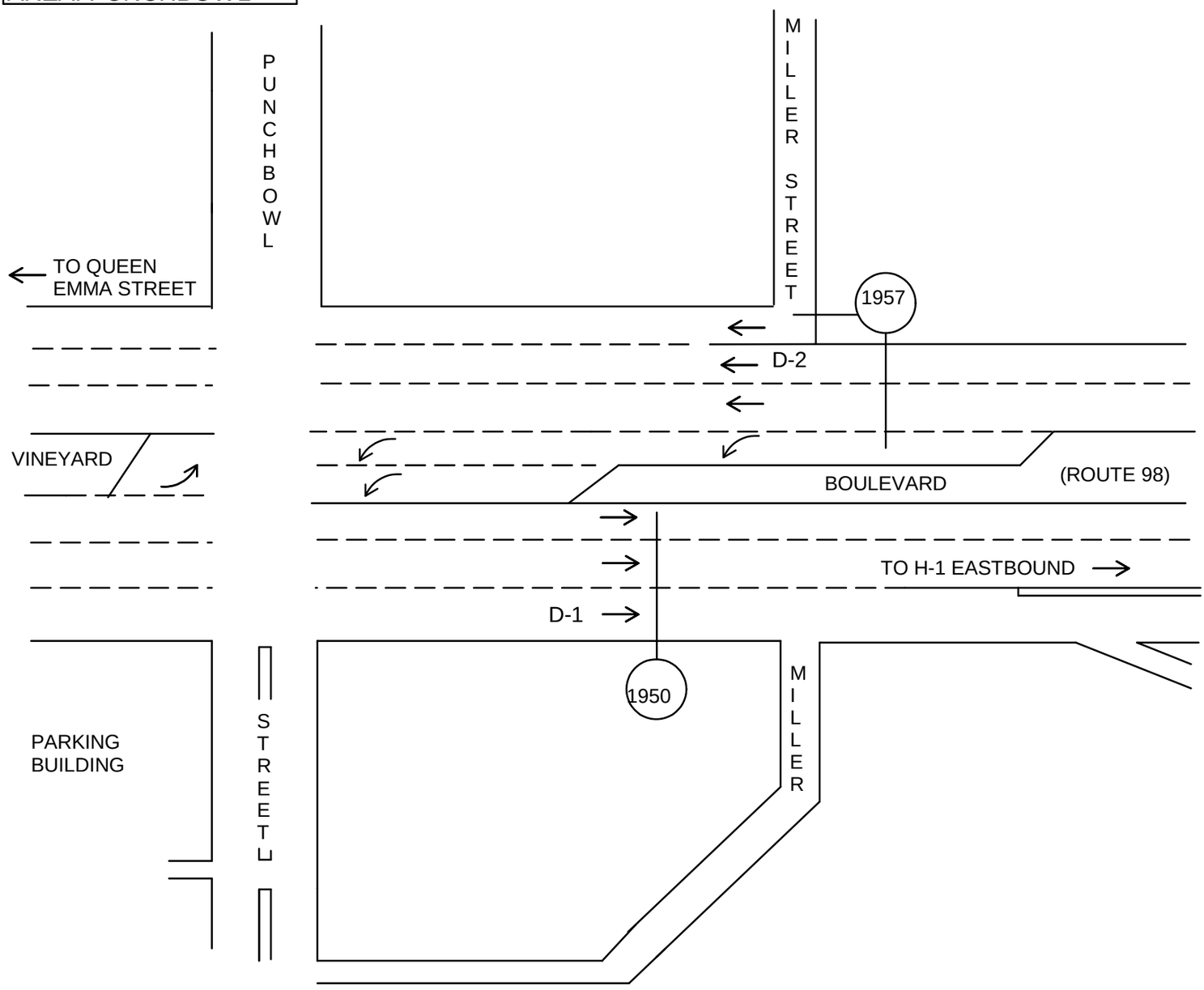
AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	704	640	1344
AM - K FACTOR (%)			7.18
AM - D (%)	52.38	47.62	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM		
PM - PEAK HR VOLUME	1565	267	1832
PM - K FACTOR (%)			9.79
PM - D (%)	85.43	14.57	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	1208	188	1396
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	09:00 AM to 10:00 AM	
PEAK HR VOLUME	1208	284	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	3,826	2,199	6,025
AM 12-HR PERIOD (00:00-12:00)	4,071	2,308	6,379
PM 6-HR PERIOD (12:00-18:00)	7,705	1,273	8,978
PM 12-HR PERIOD (12:00-24:00)	10,664	1,671	12,335
24 HOUR PERIOD	14,735	3,979	18,714
D (%)	78.74	21.26	100.00

ISLAND: OAHU
AREA: PUNCHBOWL



Station No:	B72 0098 00136

Station Location:			
Vineyard Boulevard between Pele Street and Miller Street			
Station Mileage:	1.41	GPS Coord (Latitude):	21.30945 N
		GPS Coord (Longitude):	157.85343 W
Begin Survey (Date/Time):	3-28-16 0000	End Survey (Date/Time):	3-31-16 0000
Survey Method: LOOP **HOSE** OTHER		Survey Type: **VOL** CLASS SPEED OTHER	
Survey Crew:	FIELD CREW	Module No.:	

HPMS DATA

Segment Description:

VINEYARD BOULEVARD - BEGINNING OF 5 LANES TO BEGINNING OF 4 LANES

Segment Begin LRS	1.36	Segment End LRS	1.42	Length	0.06

Facility Name	Juris	Func Class	Area Type	Route No.	Route Mile	D-1 = Direction to End of Route / D-2 = Direction to Beginning of Route	
VINEYARD BOULEVARD	S	14	4	98	1.41	D-1	TO ON-RAMP TO H-1 (E.B.)
						D-2	TO ON-RAMP TO H-1 (W.B.)

Sketch By: EPJ Date: 5/18/2011 SLD: 2009

Run Date: 2017/07/18

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72009800136 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 34800

Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 98

Location: Vineyard Blvd btwn Pele St _Miller St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 03/29/2016															
12:00-12:15	35	36	71	06:00-06:15	148	236	384	12:00-12:15	226	221	447	06:00-06:15	378	174	552
12:15-12:30	37	39	76	06:15-06:30	212	354	566	12:15-12:30	248	220	468	06:15-06:30	320	168	488
12:30-12:45	20	31	51	06:30-06:45	313	369	682	12:30-12:45	268	232	500	06:30-06:45	254	206	460
12:45-01:00	20	8	28	06:45-07:00	334	428	762	12:45-01:00	314	242	556	06:45-07:00	314	184	498
01:00-01:15	26	8	34	07:00-07:15	354	428	782	01:00-01:15	276	211	487	07:00-07:15	282	155	437
01:15-01:30	21	22	43	07:15-07:30	397	442	839	01:15-01:30	306	225	531	07:15-07:30	216	161	377
01:30-01:45	11	13	24	07:30-07:45	370	521	891	01:30-01:45	292	230	522	07:30-07:45	202	135	337
01:45-02:00	14	11	25	07:45-08:00	394	472	866	01:45-02:00	337	240	577	07:45-08:00	196	156	352
02:00-02:15	10	12	22	08:00-08:15	400	483	883	02:00-02:15	300	236	536	08:00-08:15	170	139	309
02:15-02:30	32	16	48	08:15-08:30	314	457	771	02:15-02:30	344	189	533	08:15-08:30	180	120	300
02:30-02:45	18	12	30	08:30-08:45	368	484	852	02:30-02:45	314	235	549	08:30-08:45	132	101	233
02:45-03:00	6	15	21	08:45-09:00	360	476	836	02:45-03:00	357	229	586	08:45-09:00	142	88	230
03:00-03:15	12	9	21	09:00-09:15	347	439	786	03:00-03:15	358	200	558	09:00-09:15	175	115	290
03:15-03:30	20	13	33	09:15-09:30	314	351	665	03:15-03:30	320	224	544	09:15-09:30	178	100	278
03:30-03:45	22	21	43	09:30-09:45	323	369	692	03:30-03:45	401	208	609	09:30-09:45	110	80	190
03:45-04:00	28	26	54	09:45-10:00	317	343	660	03:45-04:00	336	223	559	09:45-10:00	149	77	226
04:00-04:15	20	24	44	10:00-10:15	287	319	606	04:00-04:15	334	218	552	10:00-10:15	128	87	215
04:15-04:30	27	49	76	10:15-10:30	326	266	592	04:15-04:30	410	244	654	10:15-10:30	111	69	180
04:30-04:45	36	59	95	10:30-10:45	332	243	575	04:30-04:45	368	266	634	10:30-10:45	98	45	143
04:45-05:00	44	49	93	10:45-11:00	300	293	593	04:45-05:00	398	240	638	10:45-11:00	89	57	146
05:00-05:15	68	72	140	11:00-11:15	318	243	561	05:00-05:15	436	260	696	11:00-11:15	80	61	141
05:15-05:30	42	97	139	11:15-11:30	278	245	523	05:15-05:30	393	194	587	11:15-11:30	50	32	82
05:30-05:45	110	126	236	11:30-11:45	301	247	548	05:30-05:45	401	192	593	11:30-11:45	46	43	89
05:45-06:00	140	204	344	11:45-12:00	312	263	575	05:45-06:00	398	206	604	11:45-12:00	51	48	99

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1561	1918	3479
AM - K FACTOR (%)			9.05
AM - D (%)	44.87	55.13	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	07:30 AM to 08:30 AM	
AM - PEAK HR VOLUME	1561	1933	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	1612	1010	2622
PM - K FACTOR (%)			6.82
PM - D (%)	61.48	38.52	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	1628	1010	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1561	1918	3479
AM - K FACTOR (%)			9.05
AM - D (%)	44.87	55.13	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	1612	1010	2622
PM - K FACTOR (%)			6.82
PM - D (%)	61.48	38.52	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	09:00 AM to 10:00 AM		
PEAK HR VOLUME	1301	1502	2803
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	09:00 AM to 10:00 AM	
PEAK HR VOLUME	1315	1502	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	7,719	8,771	16,490
AM 12-HR PERIOD (00:00-12:00)	8,538	9,743	18,281
PM 6-HR PERIOD (12:00-18:00)	8,135	5,385	13,520
PM 12-HR PERIOD (12:00-24:00)	12,186	7,986	20,172
24 HOUR PERIOD	20,724	17,729	38,453
D (%)	53.89	46.11	100.00

Run Date: 2017/07/18

Hawaii Department of Transportation

Highways Division — Highways Planning Survey Section

2016 Program Count - Summary

Site ID: B72009800136 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 34800
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 98
Location: Vineyard Blvd btwn Pele St _Miller St

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 03/30/2016															
12:00-12:15	34	23	57	06:00-06:15	169	252	421	12:00-12:15	242	225	467	06:00-06:15	390	170	560
12:15-12:30	41	21	62	06:15-06:30	202	308	510	12:15-12:30	252	187	439	06:15-06:30	384	189	573
12:30-12:45	30	18	48	06:30-06:45	277	339	616	12:30-12:45	228	220	448	06:30-06:45	298	180	478
12:45-01:00	20	12	32	06:45-07:00	342	408	750	12:45-01:00	308	224	532	06:45-07:00	272	174	446
01:00-01:15	30	9	39	07:00-07:15	382	403	785	01:00-01:15	256	212	468	07:00-07:15	270	157	427
01:15-01:30	17	14	31	07:15-07:30	418	428	846	01:15-01:30	278	192	470	07:15-07:30	222	138	360
01:30-01:45	21	16	37	07:30-07:45	396	506	902	01:30-01:45	331	231	562	07:30-07:45	220	150	370
01:45-02:00	11	19	30	07:45-08:00	410	494	904	01:45-02:00	316	242	558	07:45-08:00	220	116	336
02:00-02:15	13	10	23	08:00-08:15	440	511	951	02:00-02:15	280	220	500	08:00-08:15	206	114	320
02:15-02:30	24	15	39	08:15-08:30	387	442	829	02:15-02:30	346	202	548	08:15-08:30	180	135	315
02:30-02:45	16	15	31	08:30-08:45	396	421	817	02:30-02:45	339	223	562	08:30-08:45	172	106	278
02:45-03:00	16	8	24	08:45-09:00	338	402	740	02:45-03:00	374	225	599	08:45-09:00	166	104	270
03:00-03:15	6	23	29	09:00-09:15	355	422	777	03:00-03:15	312	198	510	09:00-09:15	132	113	245
03:15-03:30	24	17	41	09:15-09:30	383	347	730	03:15-03:30	322	207	529	09:15-09:30	109	113	222
03:30-03:45	25	19	44	09:30-09:45	301	318	619	03:30-03:45	356	190	546	09:30-09:45	126	85	211
03:45-04:00	26	24	50	09:45-10:00	316	334	650	03:45-04:00	317	206	523	09:45-10:00	94	86	180
04:00-04:15	21	13	34	10:00-10:15	336	308	644	04:00-04:15	362	222	584	10:00-10:15	88	78	166
04:15-04:30	22	37	59	10:15-10:30	272	272	544	04:15-04:30	413	175	588	10:15-10:30	98	75	173
04:30-04:45	26	41	67	10:30-10:45	326	272	598	04:30-04:45	340	212	552	10:30-10:45	114	74	188
04:45-05:00	46	64	110	10:45-11:00	252	296	548	04:45-05:00	410	208	618	10:45-11:00	87	78	165
05:00-05:15	52	53	105	11:00-11:15	318	222	540	05:00-05:15	446	246	692	11:00-11:15	77	44	121
05:15-05:30	50	90	140	11:15-11:30	246	256	502	05:15-05:30	403	255	658	11:15-11:30	41	57	98
05:30-05:45	112	123	235	11:30-11:45	310	288	598	05:30-05:45	460	226	686	11:30-11:45	73	46	119
05:45-06:00	150	218	368	11:45-12:00	248	230	478	05:45-06:00	416	226	642	11:45-12:00	47	31	78

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1664	1939	3603
AM - K FACTOR (%)			9.48
AM - D (%)	46.18	53.82	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	07:30 AM to 08:30 AM	
AM - PEAK HR VOLUME	1664	1953	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM		
PM - PEAK HR VOLUME	1725	953	2678
PM - K FACTOR (%)			7.04
PM - D (%)	64.41	35.59	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM	05:00 PM to 06:00 PM	
PM - PEAK HR VOLUME	1725	953	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1664	1939	3603
AM - K FACTOR (%)			9.48
AM - D (%)	46.18	53.82	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	05:00 PM to 06:00 PM		
PM - PEAK HR VOLUME	1725	953	2678
PM - K FACTOR (%)			7.04
PM - D (%)	64.41	35.59	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	09:00 AM to 10:00 AM		
PEAK HR VOLUME	1355	1421	2776
DIRECTIONAL PEAK			
PEAK HR TIME	09:00 AM to 10:00 AM	09:00 AM to 10:00 AM	
PEAK HR VOLUME	1355	1421	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	7,820	8,479	16,299
AM 12-HR PERIOD (00:00-12:00)	8,653	9,381	18,034
PM 6-HR PERIOD (12:00-18:00)	8,107	5,174	13,281
PM 12-HR PERIOD (12:00-24:00)	12,193	7,787	19,980
24 HOUR PERIOD	20,846	17,168	38,014
D (%)	54.84	45.16	100.00

APPENDIX B
TRAFFIC ACCIDENT ANALYSIS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC BRANCH

MEMORANDUM

DATE: April 29, 2016
HWY-TS 16-2.0109

TO: HWY-DS

ATTN: MEL CHUNG

FROM: HWY-T

SUBJECT: TRAFFIC ACCIDENT ANALYSIS FOR H-1 FREEWAY RESURFACING, MILLER PEDESTRIAN OVERPASS TO KAPIOLANI INTERCHANGE.

The Traffic Branch has conducted a traffic accident analysis for the subject location under its Highway Safety Improvement Program (HSIP) of Title 23, United States Code, and Section 148. This traffic accident analysis is protected under Title 23, U.S.C., Section 409, and is intended for highway safety and educational purposes only.

We have studied the project limits on H-1 Freeway utilizing accident data from the three (3) most recent years of data available, which is from 2010 to 2012.

The accidents that occurred within the project limits during this study period involved vehicles traveling eastbound and westbound almost equally with eastbound vehicles slightly higher. The most frequent type of human factor reported was inattention. The accidents occurred in all lanes of travel. Majority of the collisions occurred during the daylight hours (65%). Majority of the accidents that occurred within the project limits were rear-end collisions (67%). The next most frequent type of collision was sideswipe in the same direction (10%). The location with the greatest number of major traffic accidents within the project limits is eastbound near the Vineyard Overpass.

The Traffic Branch has identified reinforcing the State milepost reference system as a priority. Milepost reference markers at every 1/2 of a mile should be installed at appropriate locations throughout the limits of this project. Proper locations should be verified with HWY-TD.

Please be reminded that the installation of milled centerline and shoulder rumble strips is a Highways initiative to proactively reduce the frequency and severity of accidents. We recommend considering the installation of this safety measure or an alternative throughout the project limits.

If there are any questions, please call the Traffic Safety Section at 692-7685.

c: HWY-TD
JH:mc