FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-RR-0901(017)	2023	116	117

HIGHWAY LIGHTING FOUNDATION GENERAL NOTES:

1. Design Specifications:

   A. American Association of State Highway and Transportation Officials (AASHTO) 2020 LRFD Bridge Design Specifications, 9th Edition, as amended by Hawaii Department of Transportation (HDOT) document dated August 8, 2014 with subject title "Design Criteria for Bridges and Structures" and HDOT memorandum dated January 8, 2018 with subject title "Changes to Design Criteria for Bridges and Structures".

   B. Design shall conform with the AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, First Edition 2015 with 2020 Interim Revisions.

2. Loads:

   A. Basic Wind Speed: 145 mph.

   B. Recurrence Interval of 1700 years.

   C. Fatigue importance factor, I_f, shall be based on Fatigue Category I for cantilevered highway lighting structures.

   D. Vortex shedding induced loads shall be considered for cantilevered mast arms and pole shafts that do not have tapers or have tapers of less than 0.14 in/ft.

   E. Highway lighting structures shall be designed for a truck induced gust based on a truck speed of 20 mph over the posted speed.

   F. Galloping and natural wind gusts shall be considered for cantilevered highway lighting structures.

   G. Natural Wind Gusts shall be considered for all highway lighting structures.

3. Materials:

   A. Concrete for highway lighting foundation shall develop a minimum 28-day compressive strength of 4,500 psi with a maximum w/c ratio of 0.45.

   B. All concrete shall contain corrosion inhibitor. Dosage shall be as recommended by the manufacturer.

   C. All reinforcing steel shall be ASTM A615 Grade 60 deformed bars unless otherwise noted.

   D. All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M314-105 bolt.

   E. Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene material as approved by the Engineer.

4. General:

   A. The recommendations of the light pole manufacturer shall be followed. Manufacturer shall select pole, anchor bolts, etc. based on criteria given in the contract documents. The Contractor shall submit catalog cuts and calculations to the Engineer for approval.

   B. The Contractor shall use templates while installing the anchor bolts. Anchor bolts shall be vertical.

4. General (Cont.):

   C. The Contractor shall adjust the spiral vertical spacing to allow installation of anchor bolts and plates.

   D. Drilled shaft diameters were determined based on assumed pole designs with parameters such as the bolt circles and base plate diameters. The Contractor is responsible for verifying that the drilled shaft designs, as shown on this sheet, are compatible with the manufacturer's provided pole designs. If it is found incompatible, alternate pole designs are recommended. Otherwise, the contractor is responsible for alternate drilled shaft designs, and is required to submit alternate drilled shaft designs to the Engineer for approval. The shafts shall not be installed until the pole and shaft designs have been finalized and verified for their compatibility.

5. Geotechnical Notes:

   A. Design Loads:
      i. Max. Moment = 21.8 k-ft.

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRILLED SHAFT FOUNDATION FOR LIGHT POLE

FORT BARRETTE ROAD
RAILROAD CROSSING & LIGHTING IMPROVEMENTS
Roosevelt Avenue to Farrington Highway
Federal-Aid Project No. HSIP-RR-0901(017)

Scale: As Noted Date: June 2023

SHEET No. S-1 OF 2 SHEETS

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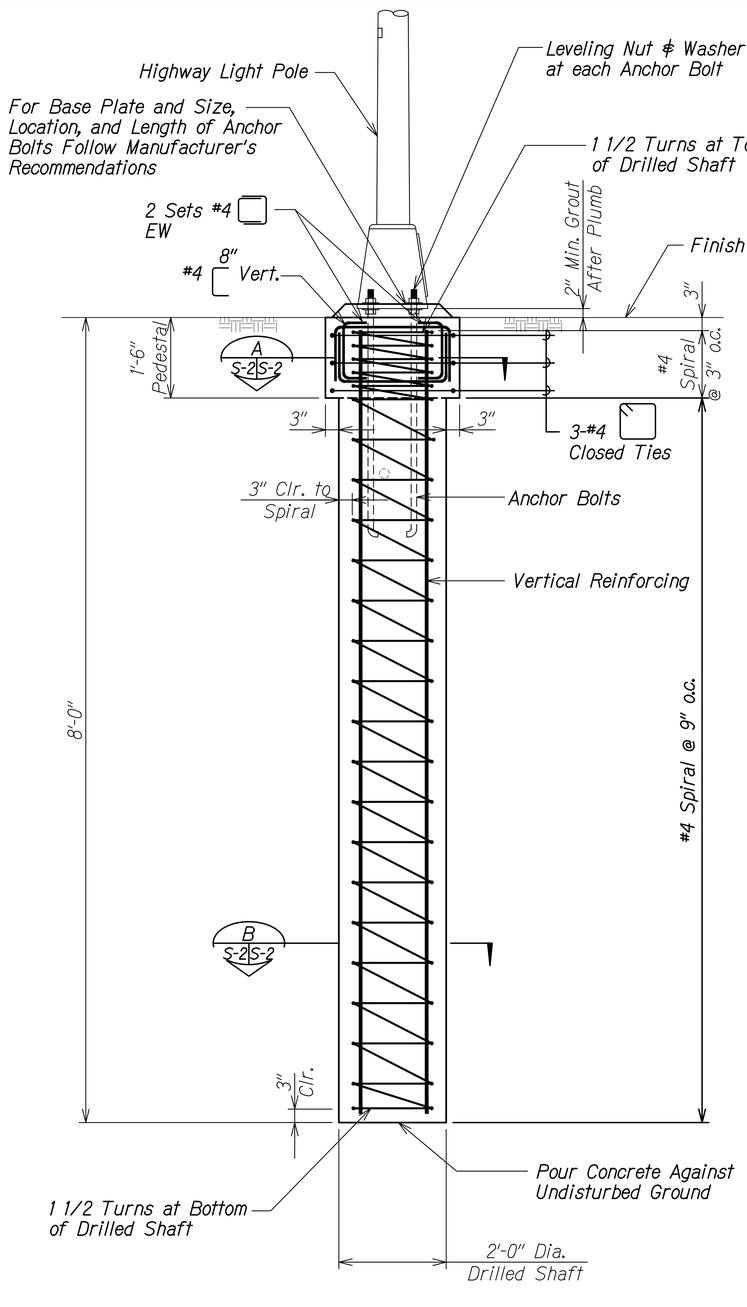
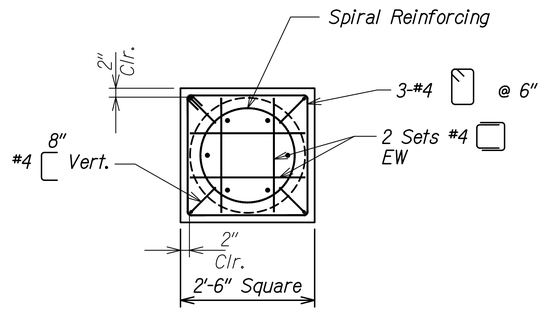
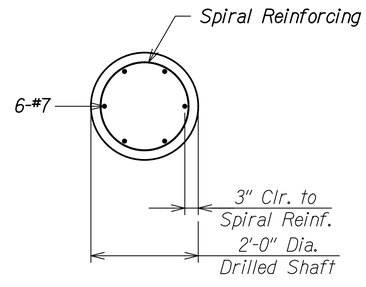
HAWAII	HAW.	HSIP-RR-0901(017)	2023	117	117



ELEVATION
Scale: 3/4" = 1'-0"



SECTION A
Scale: 3/4" = 1'-0"



SECTION B
Scale: 3/4" = 1'-0"

NOTE:

Detail of conduits, anchor bolts, etc, are approximate only. Manufacturer's recommendatons shall be followed. Contractor shall submit catalog cuts to the Engineer for approval.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
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No.	QUANTITIES BY	
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SHEET No. S-2 OF 2 SHEETS