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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

PLANS FOR

FARRINGTON HIGHWAY

SAFETY IMPROVEMENTS

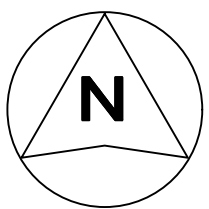
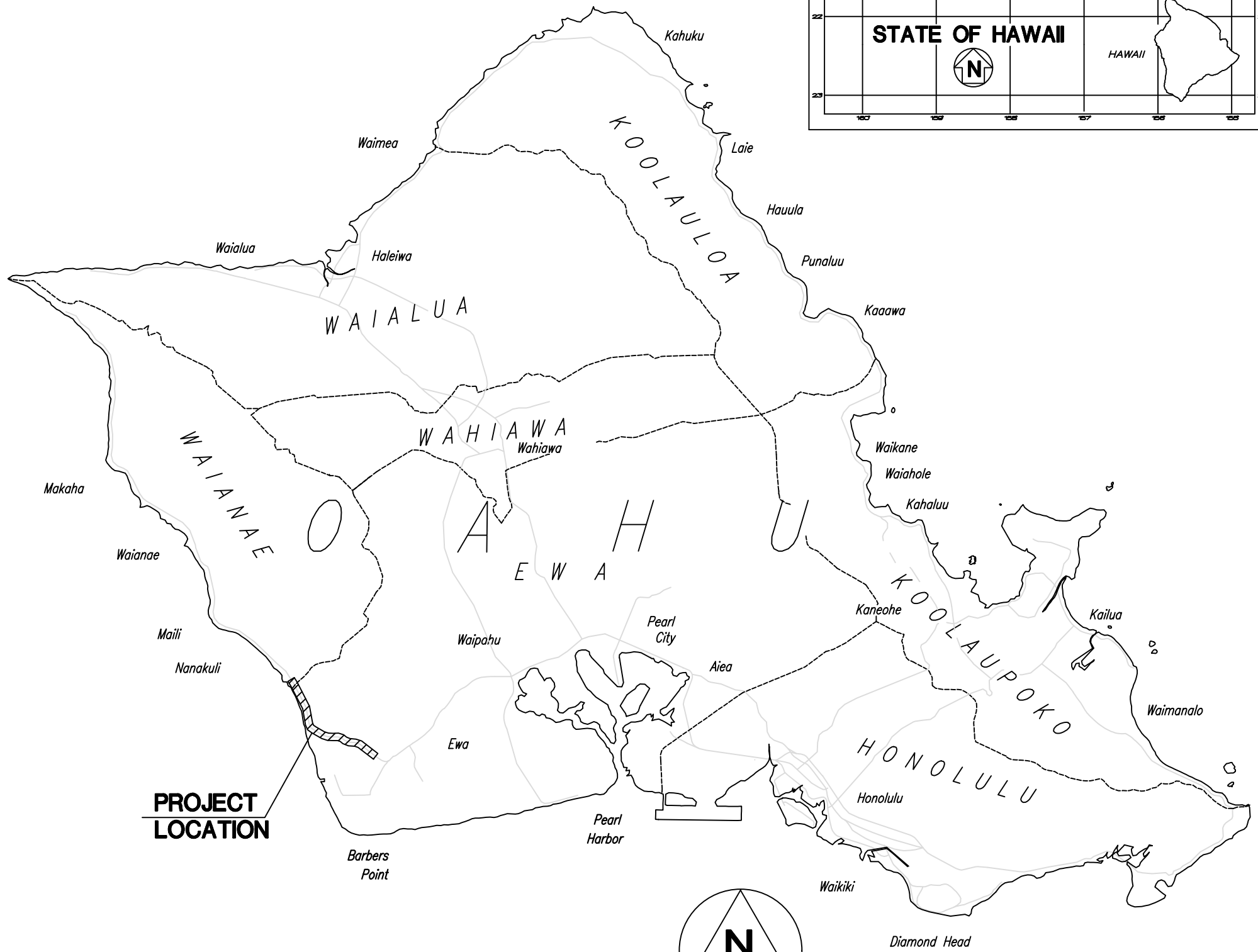
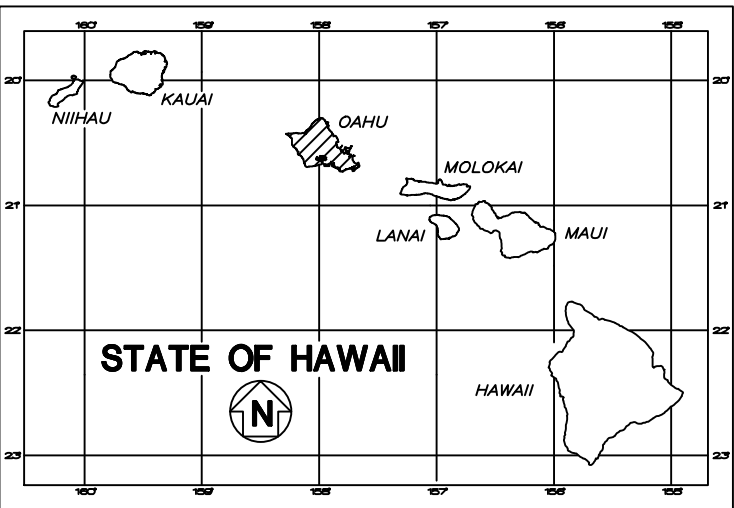
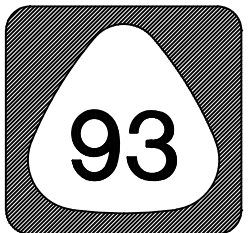
POHAKUNUI AVENUE TO INTERSTATE H-1

FEDERAL-AID PROJECT NO. HSIP-093-1(031)

DISTRICT OF EWA

ISLAND OF OAHU

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	1	62



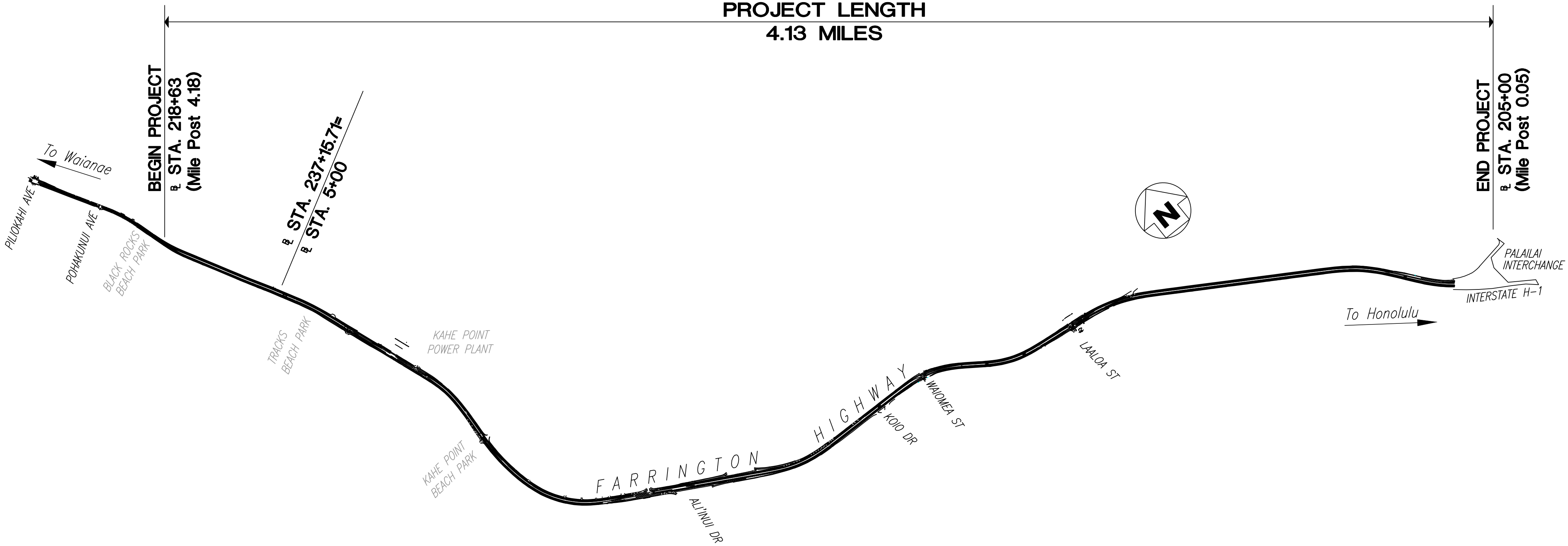
SCALE IN MILES

MILE POST 4.18 TO MILE POST 0.05

DESIGN DESIGNATION
POHAKUNUI AVENUE TO ALI NUI DRIVE OP/
ALI NUI DRIVE OP TO INTERSTATE H-1

ADT (2019)..... 48,900/60,100
DESIGN ADT (2029)..... 53,400/65,600
DHV..... 4,270/5,250
D..... 60/40
T..... 5.0%
V..... 35/45/55 M.P.H.

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED:	07/22/2022
DIR. OF TRANSPORTATION	DATE



LAYOUT PLAN

LENGTH OF PROJECT = 4.13 MILES

SCALE: 1"=1000'

ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	

AECOM DESIGNED BY
HWY-DS MANAGED BY
521-3051 PHONE
April 2022 DATE

ORIGINAL
PLAN

SURVEY PLOTTED BY
DRAWN BY

NOTE BOOK
DESIGNED BY

QUANTITIES BY
CHECKED BY

No.

DATE

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	2	62

STANDARD PLAN NO.	TITLE	DATE
B-01 ●	NOTES & MISCELLANEOUS DETAILS	05/31/07
B-03	BACKFILL DETAILS AT EARTH RETAINING STRUCTURES	05/31/07
B-12	PRESTRESSED CONCRETE PILES & COMPRESSION SPLICE CAN DETAILS	05/31/07
B-12A	PRESTRESSED CONCRETE PILES, PILE & COMPRESSION SPLICE CAN DETAILS & NOTES	05/31/07
B-12B	PILE INTERACTION DIAGRAM	05/31/07
B-13	PRESTRESSED CONCRETE PILE BUILD-UP DETAILS	05/31/07

D-01	CATTLE GATE	05/31/07
D-02	CHAIN LINK FENCE WITH TOPRAIL	05/31/07
D-03	CHAIN LINK FENCE WITHOUT TOPRAIL	05/31/07
D-04	WIRE FENCE WITH METAL POSTS	05/31/07
D-05	TYPICAL DETAILS OF CURBS AND/OR GUTTERS	05/31/07
D-06	TYPICAL DETAIL OF REINFORCED CONCRETE DROP DRIVEWAY	05/31/07
D-07	CENTERLINE AND REFERENCE SURVEY MONUMENTS	05/31/07
D-08	STREET SURVEY MONUMENT	05/31/07
D-15	CONCRETE SIDEWALK	05/31/07
D-16	P.C.C. BUS PAD	05/31/07
D-17	P.C.C. BUS PAD	05/31/07
D-18	P.C.C. PAVEMENT LAYOUT	05/31/07
D-19	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	05/31/07
D-20	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	05/31/07
D-21	P.C.C. LONGITUDINAL JOINT DETAILS	05/31/07
D-22	P.C.C. CONNECTION TO CURBS AND GUTTERS	05/31/07
D-23	JOINTS	05/31/07

L-01	TREE PLANTING	08/16/06
L-02	TREE PLANTING	08/16/06
L-03	TREE TRANSPLANTING	08/16/06
L-04	PALM PLANTING	08/16/06
L-05	SHRUB PLANTING	08/16/06
L-06	LANDSCAPE DETAILS	08/16/06
L-07	LANDSCAPE DETAILS	08/16/06
L-08	LANDSCAPE DETAILS	08/16/06
L-09	LANDSCAPE DETAILS	08/16/06
L-10	LANDSCAPE DETAILS	08/16/06
L-11	PLANTING NOTES	08/16/06
L-12	IRRIGATION DETAILS	08/16/06
L-13	IRRIGATION DETAILS	08/16/06
L-14	IRRIGATION DETAILS	08/16/06
L-15	IRRIGATION DETAILS	08/16/06
L-16	IRRIGATION DETAILS	08/16/06
L-17	IRRIGATION DETAILS	08/16/06
L-18	IRRIGATION DETAILS	08/16/06
L-19	IRRIGATION DETAILS	08/16/06
L-20	IRRIGATION DETAILS	08/16/06
L-21	IRRIGATION DETAILS	08/16/06
L-22	IRRIGATION DETAILS	08/16/06
L-23	IRRIGATION DETAILS	08/16/06
L-24	IRRIGATION NOTES	08/16/06

STANDARD PLAN NO.	TITLE	DATE
H-01A	TYPE A CATCH BASIN	05/31/07
H-01B	TYPE B CATCH BASIN	05/31/07
H-01C	TYPE C CATCH BASIN	05/31/07
H-01D	TYPE D CATCH BASIN	05/31/07
H-01E	CATCH BASIN SECTIONS	05/31/07
H-02A	TYPE A1 CATCH BASIN	05/31/07
H-02B	TYPE B2 CATCH BASIN	05/31/07
H-02C	TYPE C1 CATCH BASIN	05/31/07
H-02D	TYPE D1 CATCH BASIN	05/31/07
H-02E	CATCH BASIN SECTION	05/31/07
H-03 ●	TYPE A, B, AND C STORM DRAIN MANHOLE	05/31/07
H-04	TYPE D STORM DRAIN MANHOLE	05/31/07
H-05	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/07
H-06	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/07
H-07	CATCH BASIN AND MANHOLE CASTINGS	05/31/07
H-08	TYPE 1A-9 AND 1A-9P GRATED DROP INLET	05/31/07
H-09	TYPE 2A-9 AND 2A-9P GRATED DROP INLET	05/31/07
H-10	TYPE A-9 OR A-9P STEEL FRAMES	05/31/07
H-11	TYPE A-9 AND A-9P STEEL GRATES	05/31/07
H-12	TYPE 61614P AND 1211214P GRATED DROP INLET	05/31/07
H-13	TYPE 61616P AND 1211216P GRATED DROP INLET	05/31/07
H-14	TYPE 61214P GRATED DROP INLET	05/31/07
H-15	TYPE 1211214, 1211214P, 1211216, 1211216P STEEL FRAME AND GRATES	05/31/07
H-16	TYPE 61614, 61614P, 61616, 61616P STEEL FRAME AND GRATES	05/31/07
H-17	TYPE 61214 STEEL FRAMES AND GRATES	05/31/07
H-18	TYPE 61214P STEEL GRATES	05/31/07
H-19	TYPE 61614B STEEL FRAME AND GRATES	05/31/07
H-20	CEMENT RUBBLE MASONRY STRUCTURES	05/31/07
H-21	CONCRETE AND CEMENT RUBBLE MASONRY STRUCTURES	05/31/07
H-22	INLET/OUTLET STRUCTURE	05/31/07
H-23	INLET/OUTLET STRUCTURE	05/31/07
H-24	FLARED END SECTION FOR CULVERTS	05/31/07
H-25	FLARED END SECTION FOR CULVERTS	05/31/07
H-26	CONCRETE SPILLWAY INLET	05/31/07
H-27	CAP COUPLING DETAILS STANDARD JOINT	05/31/07
H-28 ●	REINFORCED CONCRETE COLLAR & JACKET	05/31/07
H-29	UNDERDRAIN CLEANOUT STEEL FRAME AND COVER	05/31/07
H-30	UNDERDRAIN CONNECTION TO DRAINAGE STRUCTURE	05/31/07

TE-01 ●	SIGN HEIGHT AND LOCATION	07/11/08
TE-1A ●	SIGN INSTALLATION	07/11/08
TE-02A	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02B	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02C	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-03A	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-03B ●	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-04	REGULATORY SIGNS	07/11/08
TE-05	WARNING SIGNS	07/11/08
TE-06	MISCELLANEOUS SIGNS	07/11/08
TE-07 ●	CONSTRUCTION SIGNS	07/11/08
TE-08	MISCELLANEOUS INTERSECTION SIGNS	07/11/08

STANDARD PLAN NO.	TITLE	DATE
TE-09	BIKE ROUTE SIGN & SUPPLEMENTARY PLATES	07/11/08
TE-10	INTERSTATE ROUTE MARKER	07/11/08
TE-11	STATE ROUTE MARKER AND AUXILIARY MARKERS	07/11/08
TE-12	STATE ROUTE MARKER AND BORDER DETAIL FOR GUIDE SIGNS	07/11/08
TE-12A	ROUTE SIGN ASSEMBLIES	07/11/08
TE-13	STREET NAME SIGN ON MAST ARM	07/11/08
TE-14	MISCELLANEOUS REFLECTOR MARKERS	07/11/08
TE-15 ●	OBJECT MARKERS	07/11/08
TE-16 ●	MILE POSTS	07/11/08
TE-17A	CANTILEVER OVERHEAD SIGN ELEVATION & DETAILS	05/31/07
TE-17B	CANTILEVER SIGN FRAME DETAIL AND SECTION	05/31/07
TE-17C	CANTILEVER SIGN FRAME DETAIL	05/31/07
TE-17D	CANTILEVER SIGN FRAME SECTION	05/31/07
TE-17E	CANTILEVER SIGN FRAME DETAILS	05/31/07
TE-18A	TWO POST OVERHEAD SIGN FRAME ELEVATIONS	05/31/07
TE-18B	TWO POST SIGN FRAMING PLAN SECTION	05/31/07
TE-18C	TWO POST SIGN FRAMING SECTIONS AND DETAILS	05/31/07
TE-18D	TWO POST SIGN FRAME DETAILS	05/31/07
TE-18E	TWO POST SIGN FRAME DETAILS	05/31/07
TE-19A	OVERHEAD SIGN FRAMING SCHEDULE	05/31/07
TE-19B	SIGN POST DRILLED SHAFT FOUNDATION	05/31/07
TE-19C	SPREAD FOOTING	05/31/07
TE-19D	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.1	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.2	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.3	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.4	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.5	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19E	ANCHORAGE DETAILS	05/31/07
TE-19F	ANCHORAGE DETAILS	05/31/07
TE-19G	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-19H	LUMINAIRE WALKWAY SUPPORT	05/31/07
TE-19J	FIXED MESSAGE LUMINAIRE SUPPORT	05/31/07
TE-19K	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19L	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19M	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-20	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20A	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20B	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20C	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-21A	SIGN BREAKAWAY MOUNTS	05/31/07
TE-21B	SIGN BREAKAWAY MOUNTS	05/31/07
TE-22	LAMINATED ALUMINUM SIGN PANELS (OVERHEAD)	05/31/07
TE-23	LAMINATED ALUMINUM SIGN PANELS (GROUND MOUNTED)	07/11/08
TE-24	SOLID ALUMINUM EXTRUDED SIGN PANEL AND	05/31/07

STANDARD PLAN NO.	TITLE	DATE
	ACCESSORY DETAILS	
TE-25	GUIDE SIGNS LUMINAIRE MOUNTINGS	05/31/07
TE-26 ●	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
TE-27	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
TE-28	ENTRANCE AND EXIT PAVEMENT MARKINGS	07/11/08
TE-28A	MISCELLANEOUS PAVEMENT MARKINGS	07/11/08
TE-29	PAVEMENT ARROWS AND SYMBOLS	07/11/08
TE-30	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
TE-31	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
TE-32	TYPE I & II TRAFFIC SIGNAL SYSTEM MISC. DETAILS	05/31/07
TE-33	TYPE II TRAFFIC SIGNAL SYSTEM	08/16/06
TE-33A.1	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-33A.2	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-34	LOOP DETECTOR DETAILS	07/11/08
TE-35	LOOP DETECTORS & DUCT DETAILS	07/11/08
TE-36	TRAFFIC SIGNAL DETAILS	07/11/08
TE-37	PULLBOX & COVER DETAILS	07/11/08
TE-37A	TYPE "A" TRAFFIC PULLBOX	05/31/07
TE-37B	TYPE "A" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37C	TYPE "B" TRAFFIC PULLBOX	05/31/07
TE-37D	TYPE "B" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37E	TYPE "B" TRAFFIC PULLBOX FOUNDATION	05/31/07
TE-37F	TYPE "C" TRAFFIC PULLBOX	05/31/07
TE-37G	TYPE "C" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37H	TYPE "C" TRAFFIC PULLBOX FOUNDATION	05/31/07
TE-37J	TRAFFIC PULLBOX COVER AND DETAILS	05/31/07
TE-38	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-38A.1	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-38A.2	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-39	METAL GUARDRAIL CONNECTION TO CONCRETE BARRIER	07/11/08
TE-40	CONCRETE BARRIER TRANSITION	05/31/07
TE-40A	CONCRETE BARRIER TRANSITION SECTIONS	05/31/07
TE-41	GUARDRAIL TYPE 4 (RIGID BARRIER)	05/31/07
TE-42 ●	PORTABLE CONCRETE BARRIER	05/31/07
TE-43 ●	PORTABLE CONCRETE BARRIER	05/31/07
TE-44	GUARDRAIL TYPE 4 MISCELLANEOUS DETAILS	07/11/08
TE-45 ●	BARRICADES	07/11/08
TE-46	DELINEATION & PAVEMENT MARKINGS AT NARROW BRIDGES	07/11/08
TE-47	HIGHWAY LIGHT STANDARD	05/31/07

NOTE:
STANDARD PLANS APPLICABLE TO THIS PROJECT
ARE INDICATED BY A "●" NEXT TO THE
STANDARD PLAN NO. (For Example: D-07 ●)

RYAN B. VALERO

LICENSED
PROFESSIONAL
ENGINEER
NO. 18051-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Ryan B. Valero

SIGNATURE

4/30/24

EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

DATE: November 2021

SHEET No. 1 OF 1 SHEETS

ORIGINAL PLAN

NOTE BOOK

No. _____

SURVEY PLOTTED BY _____

DRAWN BY _____

TRACED BY _____

DESIGNED BY _____

QUANTITIES BY _____

CHECKED BY _____

DATE _____

GENERAL NOTES (CON'T):

27. The Contractor shall contact Hawaii One Call Center to have respective utility companies and agencies mark where their underground utilities are located. The Contractor shall comply with all requirements of Hawaii One Call law. The Contractor shall be liable for any damage if Hawaii One Call requirements are not strictly adhered to. In accordance with Hawaii State Law Section 269E-7, the Hawaii One Call Center (HOCC) shall provide an inquiry identification number and utility marks shall remain valid for not more than twenty-eight (28) calendar days from the date of issuance and after that date shall require the Contractor to submit a new request for HOCC revalidation. The Contractor shall provide all inquiry identification numbers for each location request to the Engineer.
28. Submit requests for detours, ramp, and lane closures in accordance with Hawaii Standard Specification Subsection 645.03(F). Refer to minimum time frames required for implementation.
29. If the traffic control plan or any traffic control device is not installed per plan, specification, or is deemed unsafe, the Engineer reserves the right to shut down the work at no additional cost/time or withhold payment.
30. The Contractor shall provide for quality control of work. The Contractor shall submit copies of all measurements and test results to the Engineer once obtained.
31. The exact locations and limits of areas to be excavated or cleared shall be located in the field by the Contractor and accepted by the Engineer. The Contractor shall not begin any work until the Engineer verifies and accepts the location and limits of the area. Any area that is not accepted by the Engineer will be considered unauthorized work and shall not be paid for.
32. The Contractor shall verify the presence of existing utilities which may conflict with activities and shall coordinate with the utility company for temporary relocation, as necessary. All costs associated with the temporary relocation shall be borne by the Contractor and shall be incidental to the various pay items.
33. The Contractor shall comply with utility coordination requirements per Standard Specification Section 104.11. As part of coordination requirements, the Contractor shall include carbon copy the Engineer in all correspondences with utilities.
34. All materials shall be new and free of defects, such as rust, damage, or corrosion. The Engineer will determine acceptability. No payment will be made for material that is not accepted by the Engineer.
35. The Contractor shall allow access to all materials that will be used in the project for inspection and/or testing (this includes but is not limited to access to contractor or subcontractor's base yards, manufacturer yard, production plant, separate storage areas). The Engineer reserves the right to reject any material for which access or inspection is not allowed.

36. The Permit to Perform Work Upon State Highway may be suspended or revoked due to non-compliance with any of the following, but not limited to, conditions:
- a) Work or lane closures performed before or after permitted hours.
- b) Failure to maintain roadway surfaces in a smooth and safe condition.
- c) Failure to clean up construction debris generated from project work.
- d) Failure to provide proper traffic control.
- e) Failure to replace damaged pavement markings and signs.
- f) Failure to maintain highway lights and/or traffic signal systems.
- g) Failure to maintain or install traffic control devices.
- h) Failure to address public complaints to the satisfaction of the engineer.
- i) Unauthorized lane closures.
37. All material generated by the project and taken off-site shall be considered solid waste. The Contractor shall dispose of all removed material at an approved Department of Health waste management facility. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer by the last day of the month. Provide documentation from any intermediary facility where solid waste is handled or processed, haul tags, or any documentation as requested by the Engineer. If the Contractor elects to reclassify material as inert full, DOH HEER testing guidance shall be followed at no additional cost to the State. No material generated from this project shall be classified as inert fill material for reuse without testing, obtaining required approvals/permits, providing disposal locations/quantities, and obtaining prior written approval from the engineer. Failure to comply with these requirements may result in fines/liquidated damages in accordance with Special Provisions Section 209 and HDOT's Enforcement Response Plan.
38. Prior to paving or demolition operations, the Contractor shall be responsible for locating, preserving, referencing, and marking all utility and highway facilities that will require adjustments to the new finished grade. The Contractor shall coordinate with the Engineer for site verification and subsequently submit a list of all items to be adjusted to the new finished grade. Coordination with state Construction Surveyor shall be done separately.
39. The Contractor shall develop construction phasing strategies to accomplish construction activities and shall be accepted by HDOT prior to implementation.

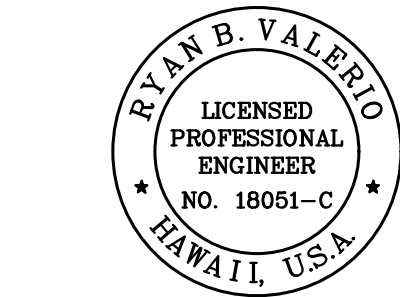
HAWAII ONE CALL CENTER:

1. Before conducting any excavation in the public right of way or on private property, call the Hawaii One Call Center at least five (5) working days before planning to dig. Be sure to give them the address and location of the nearest cross street(s) near where digging is planned.
- Call 811 toll-free 24 hours a day.
For more information, go to www.callbeforeyoudig.org
2. The Hawaii One Call Center will contact all utility companies to tone, mark or identify the location of their underground utilities for free. Mark the area where Contractor plans to excavate in white and label all of the other utilities as listed below.

RED	Electric power lines, cables, or conduits, and lighting cables.
YELLOW	Gas, oil, steam, petroleum or other hazardous liquid or gaseous materials.
ORANGE	Communications, cable TV, alarm or signal lines, cables, or conduits.
BLUE	Water, irrigation, and slurry lines
GREEN	Sewers, storm sewer facilities or other drain lines
WHITE	Proposed excavation.
PINK	Temporary survey markings.
PURPLE	Reclaimed water, irrigation and slurry lines.

PUBLIC HEALTH, SAFETY, AND CONVENIENCE NOTES:

1. The Contractor shall observe and comply with all Federal, State, and Local laws required for the protection of public health and safety and environmental quality.
2. The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the State Department of Health. The City may require supplementary measures as necessary.
3. No Contractor shall perform any trenching operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow onto adjoining properties, streets or natural water-courses. Should such violations occur, the cost incurred shall be borne by the Contractor. For any remedial action by the Director, HDOT shall be payable by the Contractor.
4. The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection, convenience, and safety of the public. The Contractor shall apply for a construction permit with a noise pollution control plan if work should extend beyond permitted working hours.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

SIGNATURE
R. B. Valero

4/30/24
EXPIRATION DATE
OF LICENSE

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	4	62

ARCHAEOLOGICAL NOTES:

1. In the event that an archaeological or historic structure within the work area is inadvertently damaged during construction, cease work in the vicinity of the site and notify the Engineer and the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources of the damage. SHPD will determine the appropriate mitigation measures.
2. In the event that a previously unknown archaeological feature is exposed by construction, cease work in the vicinity of the new feature and notify the Engineer and SHPD of the new discovery.
3. In the event that previously unknown human remains are exposed by construction, cease all work in the area of the remains, and protect the area with an appropriate material. Notify the Engineer and SHPD at 692-8015.
4. If human remains are discovered, HAR Title 13, Subtitle 13, Chapter 300 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the State Historic Preservation Division and the Police Department will be contacted. The appropriate process would then proceed in conformance with HAR 13-300 Subchapter 4, "Procedures for Proper Treatment of Burial Sites and Human Skeletal Remains."
5. If any lava tube or coral cavern is uncovered during earthwork operations, the Contractor shall cease all ground work in the area and immediately notify the Archaeological Monitor and the Engineer. With or without the help of the Archaeological Monitor, the Engineer will assess the situation. If the Engineer has any doubts as to the extent and/or significance of the discovery, the Engineer will contact the appropriate regulatory agency (e.g., State Historic Preservation Division).

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES - 2

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	5	62

ABBREVIATIONS:

AFG	Above Finished Grade
BL	Base Line
BC	Bottom Curb
cb	Catch Basin
CL	Center Line
CRM	Concrete Rubble Masonry
di	Drain Inlet
Dia.	Diameter
e/p	Existing Edge of Pavement
E/P	Edge of Pavement
e/s	Existing Edge of Shoulder
E/S	Edge of Shoulder
et	Existing Edge of Travel Way
ET	Edge of Travel Way
Exist.	Existing
F'c	Minimum Specified Compressive Strength of Concrete
HDOT	Hawaii Department of Transportation
HMA	Hot Mix Asphalt
KAL	Kalaniana'ole Highway Alignment
LF	Linear Feet
Lt.	Left
MBGR	Existing Metal Beam Guardrail
Max.	Maximum
MGS	Midwest Guardrail System
Min.	Minimum
No.	Number
NTS	Not to Scale
NWC	Normal Weight Concrete
o.c.	On Center
O/S, o/s	Offset
PC	Point of Curvature
PCF	Pounds per Cubic Foot
PT	Point of Tangency
P	Property Line
R	Radius
RPM	Raised Pavement Marker
R/W, r/w	Right-of-way
Rt.	Right
SF	Square Feet
Shts.	Sheets
SOH	State of Hawaii
Sta.	Station
TC	Top Curb
Thk.	Thick
TMK	Tax Map Key
Typ.	Typical
UNO	Unless Noted Otherwise

LEGEND

◦ _{rm}	Existing Reflector Marker
▣ _{lp}	Existing Light Pole
— _{swl} —	Single White Line
— _{syl} —	Single Yellow Line
== _{dyl} ==	Double Yellow Line
— _{s/bar} —	Existing Stop Bar
— _{byl} —	Existing Broken Yellow Line
● _{mon.}	Existing Monument
Ⓟ	Existing Traffic Sign
— _{r/w} —	Existing Right-of-Way Line
-----	Existing Fence

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



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OR UNDER MY SUPERVISION.

SIGNATURE
Ryan B. Valero

EXPIRATION DATE
4/30/24
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABBREVIATIONS & LEGEND

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

WATER POLLUTION AND EROSION CONTROL NOTES:

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	6	62

A. GENERAL:

- See Special Provisions Section 209 – Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate the pollutants.
- Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing and maintaining the Best Management Practices (BMP) for the project. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purposes of clarification under Note A.2, "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.
- Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.
- The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209 and special provisions, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
- If necessary, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.
- Submit Site-Specific BMP Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 21 calendar days of date of award. The Site-Specific BMP Review Checklist may be obtained from <http://www.stormwaterhawaii.com>.

8. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP."

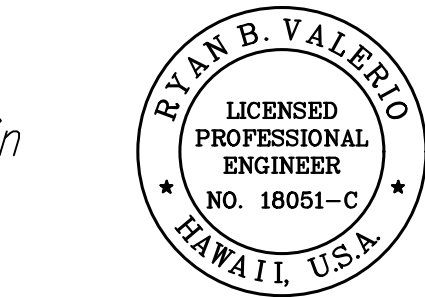
B. WASTE DISPOSAL:

- Waste Materials. Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 30 calendar days of contract execution. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed.
 - Hazardous Waste. Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.
 - Sanitary Waste. Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.
- C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:
- For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measure weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.

- For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.
- Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or a significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "Immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day.
- Remove built-up sediment from silt fence when it has reached one-third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.
- Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.
- Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.
- Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.
- Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold-planed materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. Cover dump trucks hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track-out occurs.

- Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.
- Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.
- Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.
- For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth-disturbing activities for areas where earth-disturbing activities have permanently or temporarily ceased. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, but such activities will resume in the future. For construction areas discharging into waters not impaired for nutrients sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities. Classification of water at the discharge point may be found in the SWPPP.
- For projects without an NPDES Permit for Construction Activities, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

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No. _____	TRACED BY _____	
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SIGNATURE *R. B. Valero* 4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<u>WATER POLLUTION & EROSION CONTROL NOTES</u>
<u>FARRINGTON HIGHWAY</u>
<u>SAFETY IMPROVEMENTS</u>
<u>Pohakunui Avenue to Interstate H-1</u>
<u>Federal Aid Project No. HSIP-093-1(031)</u>
Date: November 2021
SHEET No. 1 OF 2 SHEETS

WATER POLLUTION AND EROSION CONTROL NOTES (CONTINUED):

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	7	62

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan

- a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete	Cleaning Solvents
Detergents	Wood
Paints (enamel and latex)	Masonry Block
Metal Studs	Herbicides and Pesticides
Tar	Curing Compounds
Fertilizers	Adhesives
Petroleum Based Products	

- b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.
- c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
- d. Keep products in their original containers with the original manufacturer's label.
- e. Do not mix substances with one another unless recommended by the manufacturer.
- f. Whenever possible, use a product up completely before disposing of the container.
- g. Follow manufacturer's recommendations for proper use and disposal.
- h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan

- a. Keep products in original containers unless they are not resealable.
- b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).
- c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

3. Onsite and Offsite Product Specific Plan

The following product specific practices shall be followed onsite:

- a. Petroleum Based Products:
Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.
- b. Fertilizers:
Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the

soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

c. Paints:

Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.

d. Concrete Trucks:

Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

4. Spill Control Plan

- a. Post a spill prevention plan to include measures to prevent and clean up each spill.
- b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.
- c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.
- d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.
- e. Clean up all spills immediately after discovery.
- f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of

the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

E. PERMIT REQUIREMENTS:

1. The calculated land disturbance area for this project based on the construction plans is 0.31 acres not including Contractor Staging and Storage areas. If the total of the disturbed area and the Contractor Staging and Storage area is one acre or greater, the Contractor shall obtain the NPDES Construction Activities Permit using HDOT's latest SWPPP template. See Hawaii Administrative Rules Chapter 11-55, Appendix C for the definition of land disturbance. The Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit and complying with requirements of HAR 11-55 including, but not limited to:

- a. Deadlines for initiating and completing initial stabilization
- b. Increased inspection frequency and installation of rain gage if applicable
- c. Deadlines to initiate and complete repairs to BMPs
- d. Reporting requirements and corrective action reports

2. Comply with all applicable State and Federal Permit conditions.

F. SITE-SPECIFIC BMP REQUIREMENTS:

Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/> under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swPPP/> under Concrete Curing and Irrigation Water.

The requirements for Water Pollution, Dust, and Erosion Control submittals are included in Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable Special Provisions. A list of pollutant sources and corresponding BMP used to mitigate the pollutants are included in Section 209 of the Special Provisions under Appendix A.

Follow the requirements below:

1. Protect all Drainage Inlets receiving runoff from disturbed areas (SC-1).

2. Contain on-site runoff using Perimeter Sediment Controls

- a. SC-7 Silt Fence or Filter Fabric Fence
- b. SC-2 Vegetated Filter Strips and Buffers
- c. SC-6 Compost Filter Berm/Sock
- d. SC-8 Sandbag Barrier
- e. SC-9 Brush or Rock Filter

3. Control offsite runoff from entering construction area

- a. EC-3 Run-On Diversion
- b. SC-6 Earth Dike, Swales, and Ditches

4. Incorporate applicable Site Management BMP

- a. SM-1 Employee Training
- b. SM-2 Material Storage and Handling
- c. SM-3 Stockpile Management
- d. SM-6 Solid Waste Management
- e. SM-7 Sanitary Waste Management
- f. SM-9 Hazardous Materials and Waste Management
- g. SM-10 Spill Prevention and Control
- h. SM-11 Vehicle and Equipment Cleaning
- i. SM-12 Vehicle and Equipment Maintenance
- j. SM-13 Vehicle and Equipment Refueling
- k. SM-14 Scheduling
- l. SM-15 Location of Potential Sources of Sediment
- m. SM-16 Staging Area
- n. SM-17 Preservation of Existing Vegetation
- o. SM-19 Dust Control

5. Contain pollutants within the Construction

Staging/Storage Area BMP with applicable Perimeter Sediment Controls and Site Management BMP. Include a Stabilized Construction Entrance/Exit (SC-11) for all areas which exit onto a paved street. Restrict vehicle access to these points.

6. Manage Concrete Waste including installing a Concrete Washout Area (SM-4) and properly disposing of Concrete Curing Water (California Stormwater BMP Handbook NS-12 Concrete Curing).

7. Remove saw cut slurry and hydrodemolition water from the site by vacuuming. Provide storm drain protection and/or perimeter sediment controls during saw cutting and hydrodemolition work.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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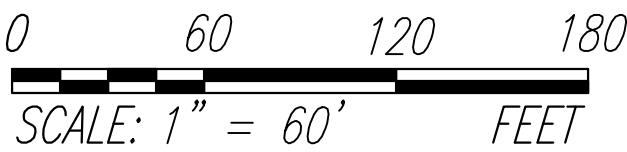
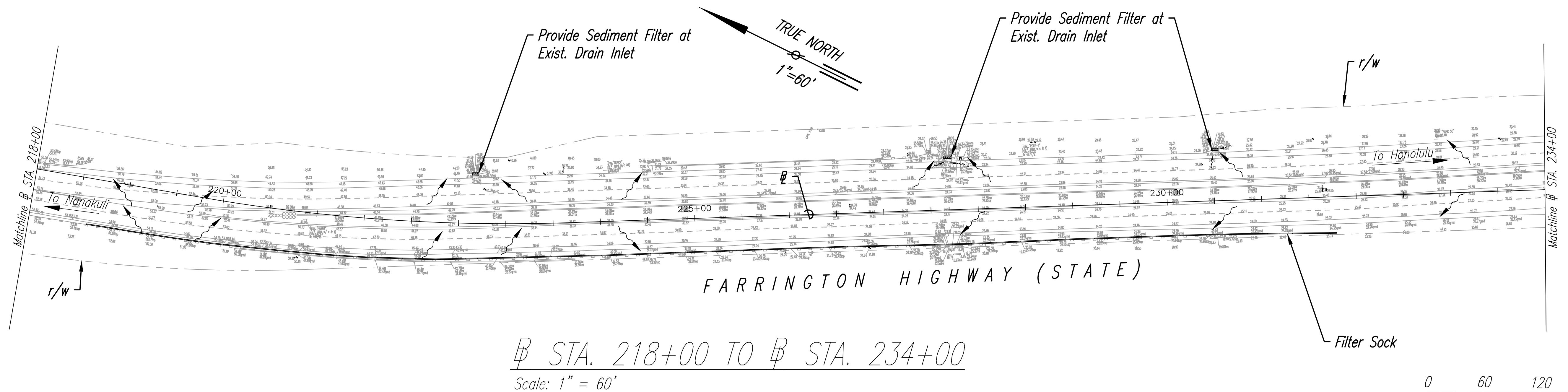
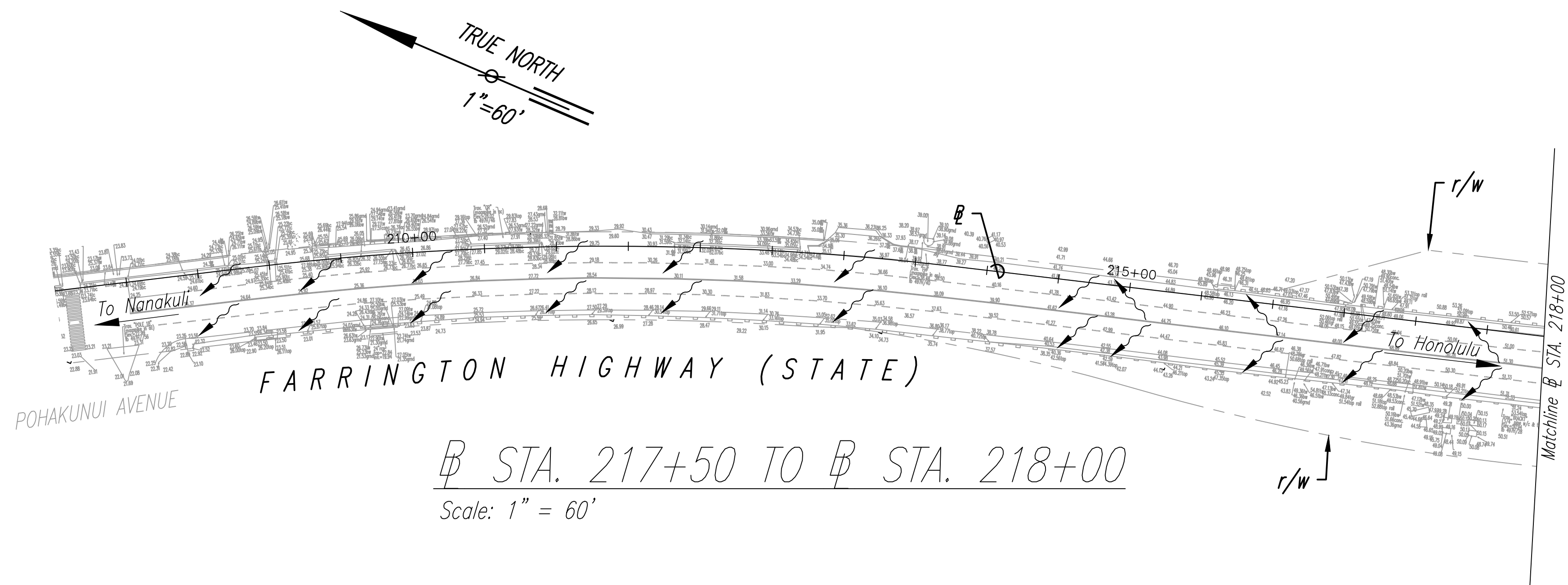
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<u>WATER POLLUTION & EROSION CONTROL NOTES</u>
<u>FARRINGTON HIGHWAY</u>
<u>SAFETY IMPROVEMENTS</u>
<u>Pohakunui Avenue to Interstate H-1</u>
<u>Federal Aid Project No. HSIP-093-1(031)</u>
Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	8	62



NOTE:

1. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

LEGEND

- ~ ~ ~ Direction of Surface Runoff
— Filter Sock



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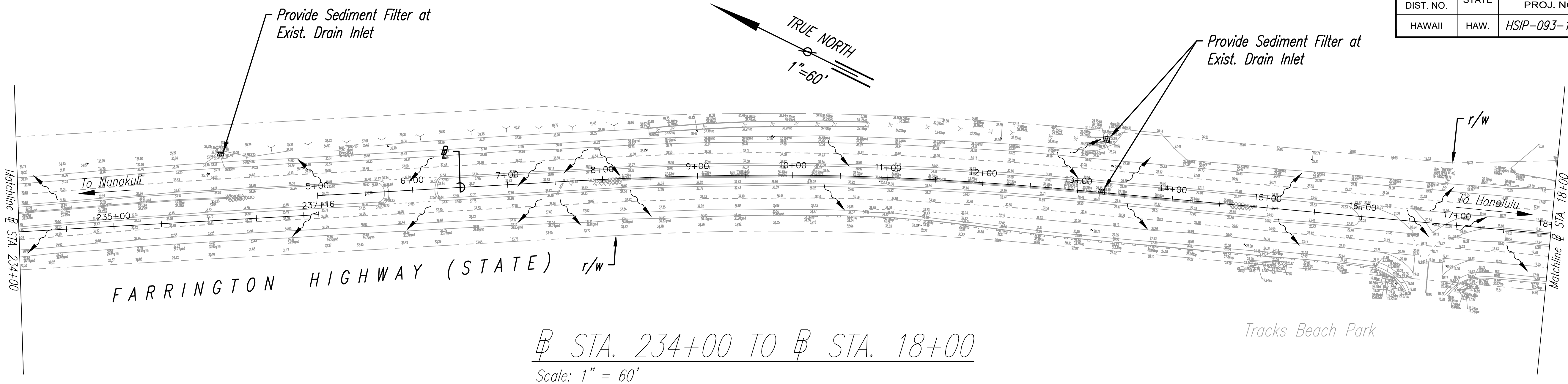
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEDIMENT & EROSION CONTROL PLAN - 1
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

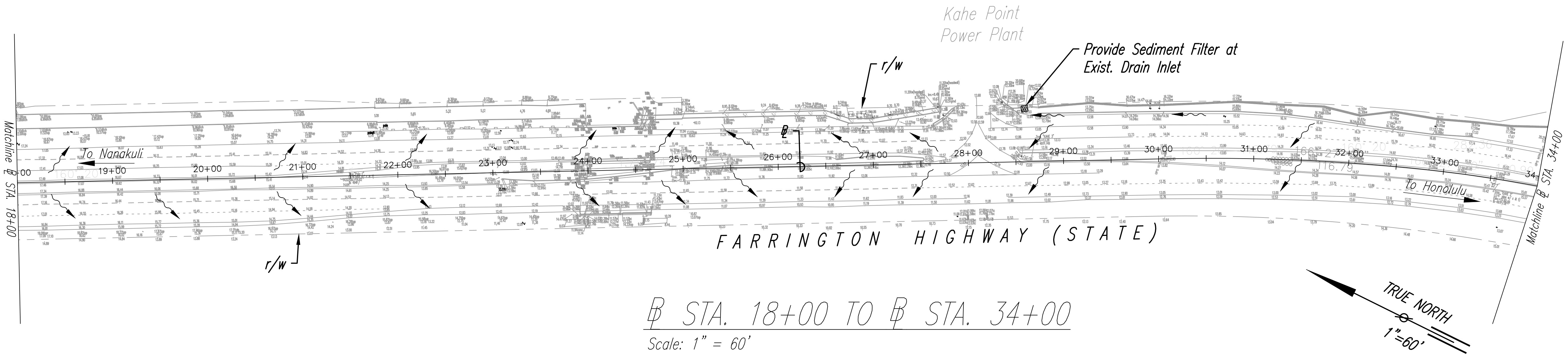
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SHEET No. 1 OF 9 SHEETS

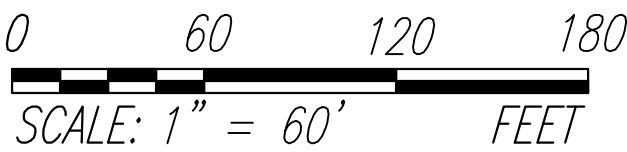
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	9	62



STA. 234+00 TO STA. 18+00
Scale: 1" = 60'



STA. 18+00 TO STA. 34+00
Scale: 1" = 60'



NOTE:

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LEGEND

Direction of Surface Runoff

ORIGINAL PLAN	DATE
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEDIMENT & EROSION CONTROL PLAN - 2

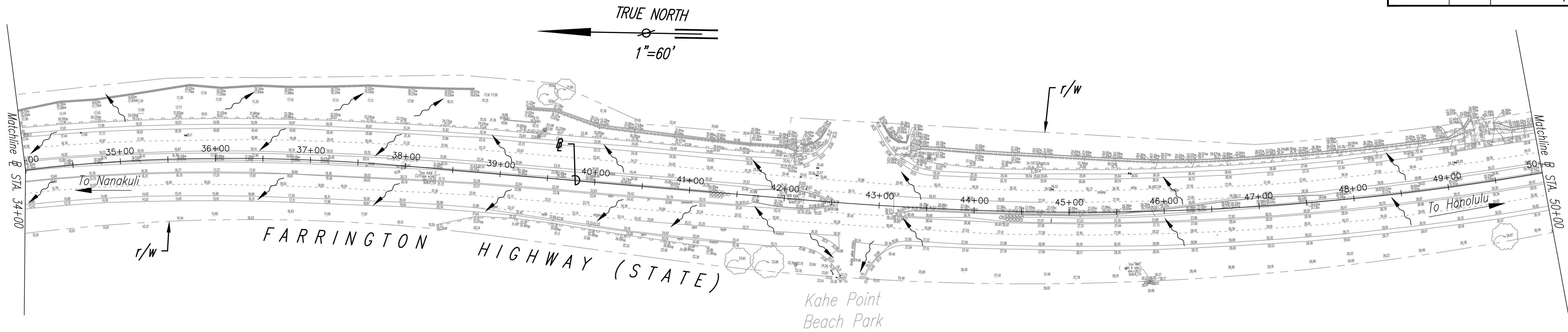
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

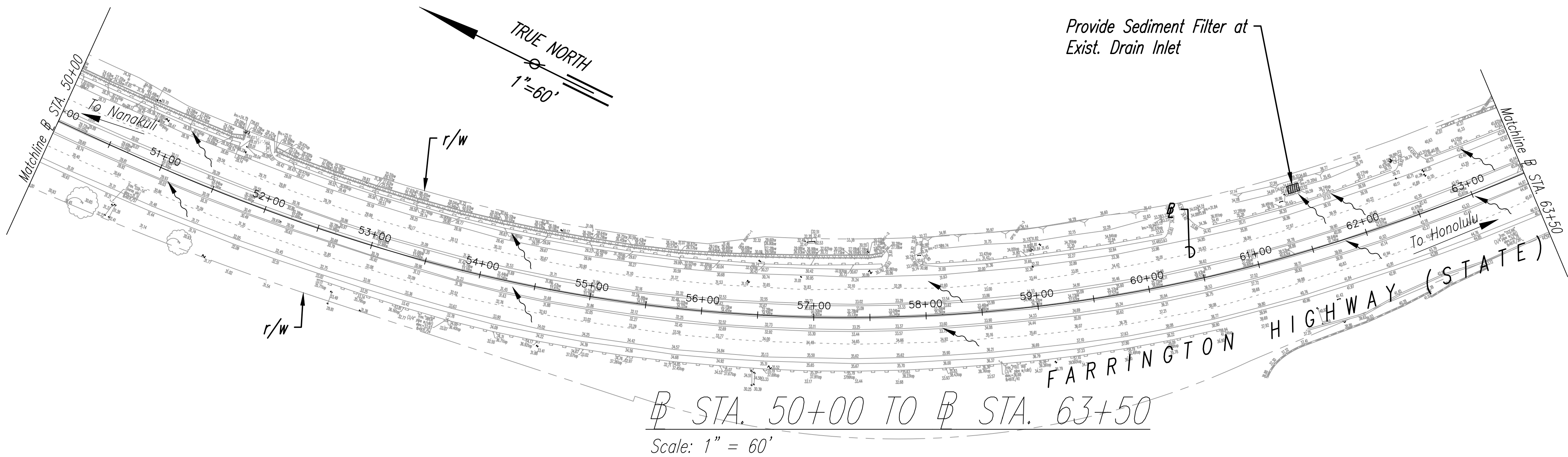
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SHEET No. 2 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	10	62



Sta. 34+00 TO Sta. 50+00
Scale: 1" = 60'



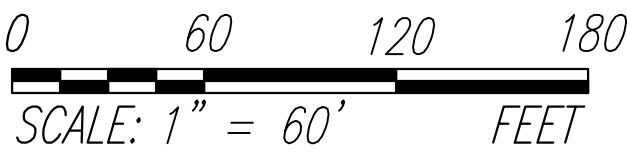
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Scale: 1" = 60'

NOTE:

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LEGEND

Direction of Surface Runoff



DATE	_____
SURVEY PLOTTED BY	_____
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STATE OF HAWAII
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SEDIMENT & EROSION CONTROL PLAN - 3

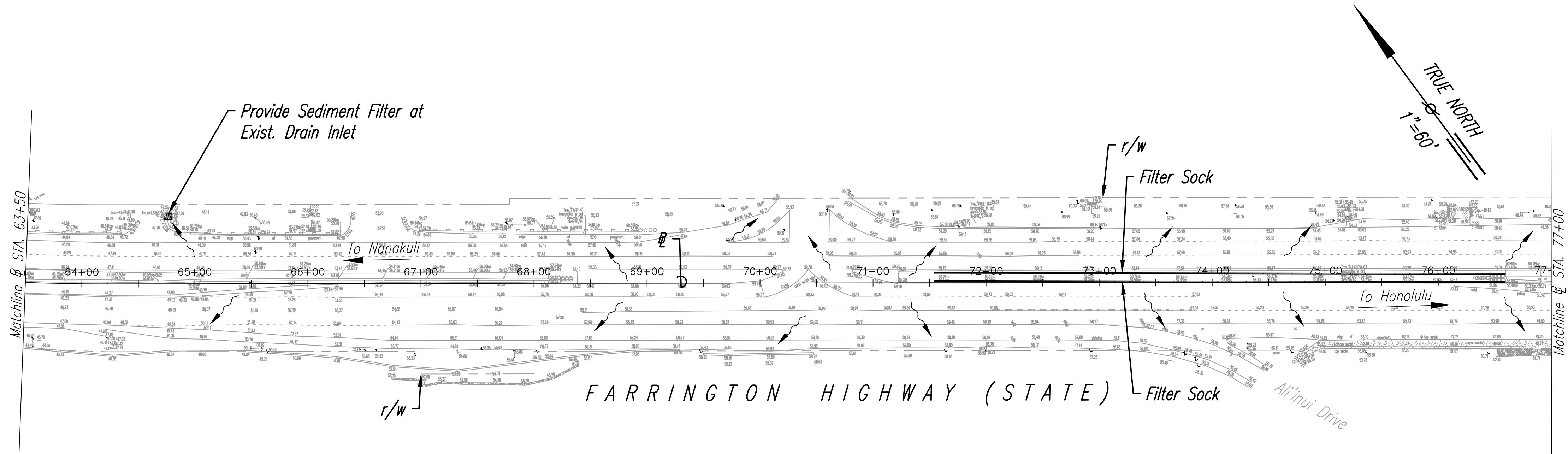
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
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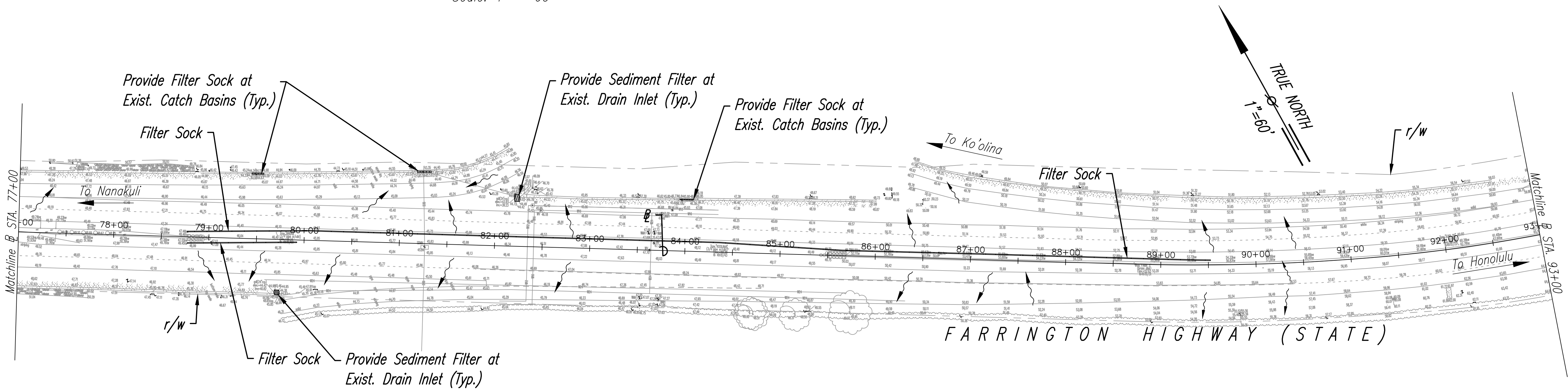
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SHEET No. 3 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	11	62



STA. 63+50 TO STA. 77+00
Scale: 1" = 60'



STA. 77+00 TO STA. 93+00
Scale: 1" = 60'

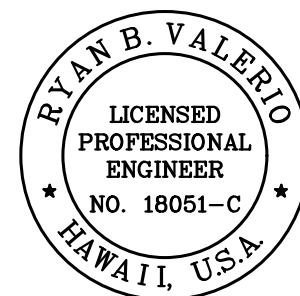
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	CHECKED BY	

LEGEND

- Direction of Surface Runoff
- Filter Sock



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE

4/30/24
EXPIRATION DATE
OF LICENSE

0 60 120 180
SCALE: 1" = 60' FEET

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

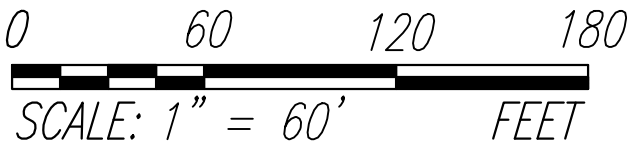
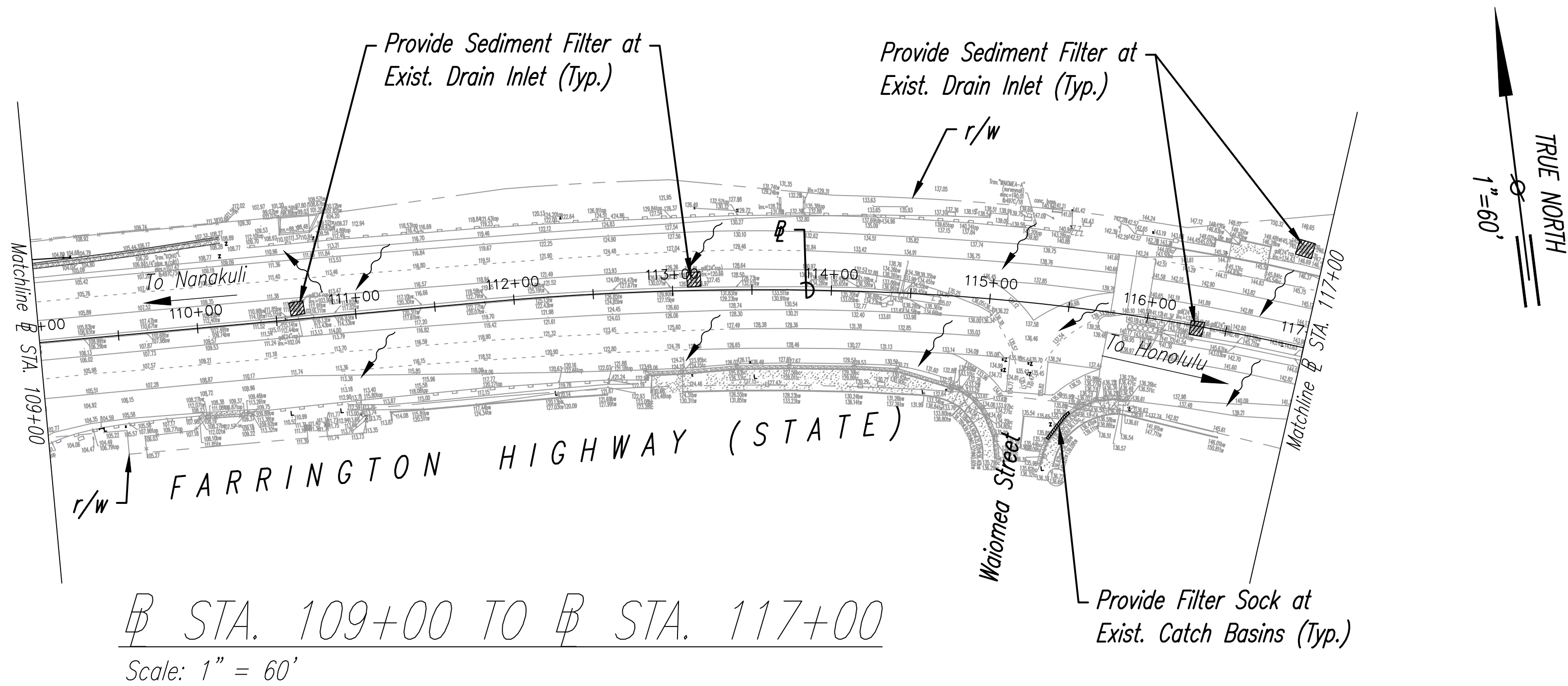
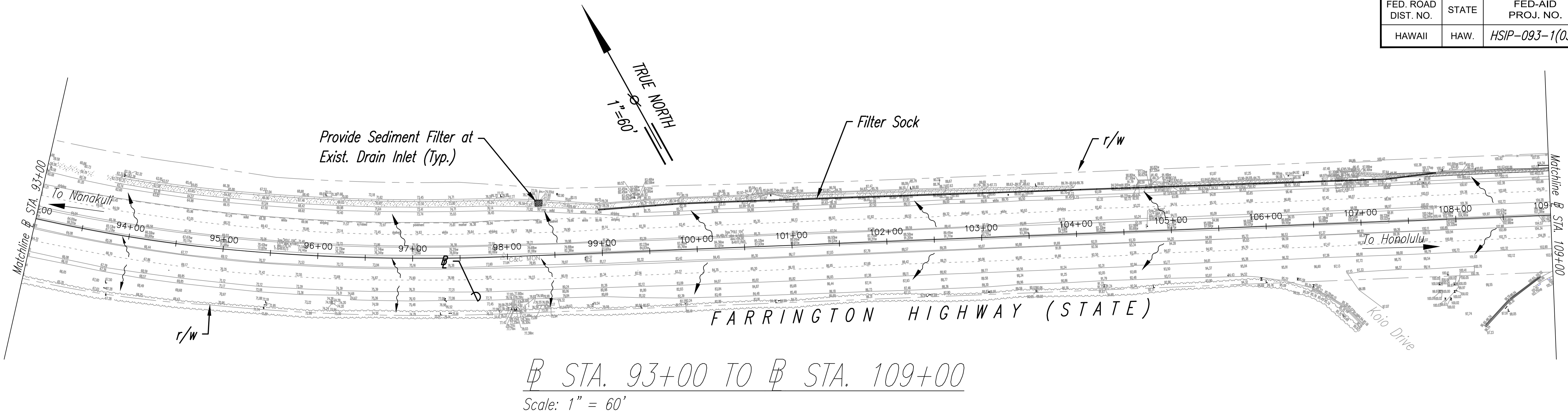
SEDIMENT & EROSION CONTROL PLAN - 4

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Scale: 1"=60' Date: November 2021

SHEET No. 1 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	12	62



NOTE:

1. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

LEGEND

- ~ ~ ~ Direction of Surface Runoff
——— Filter Sock



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SIGNATURE
R. B. Valero

4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEDIMENT & EROSION CONTROL PLAN - 5

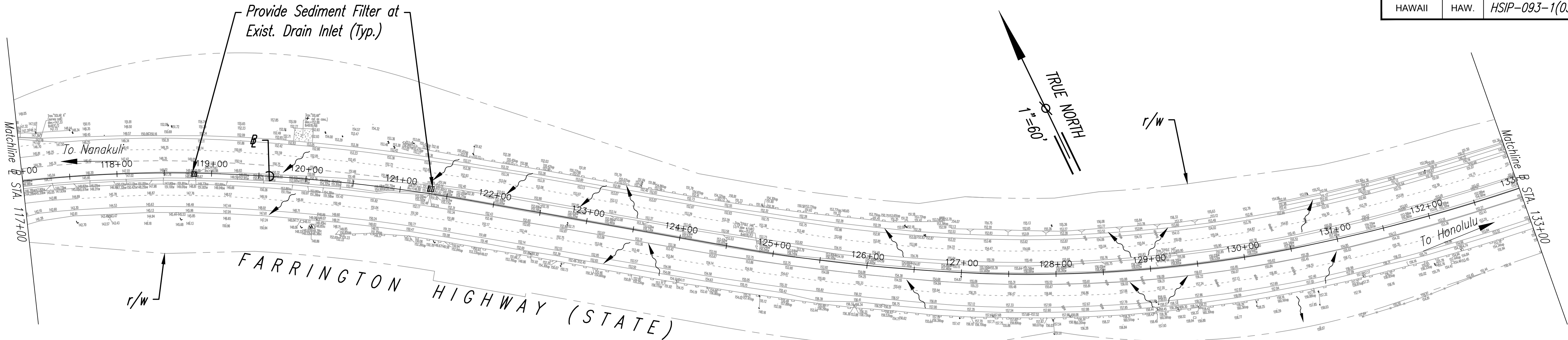
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

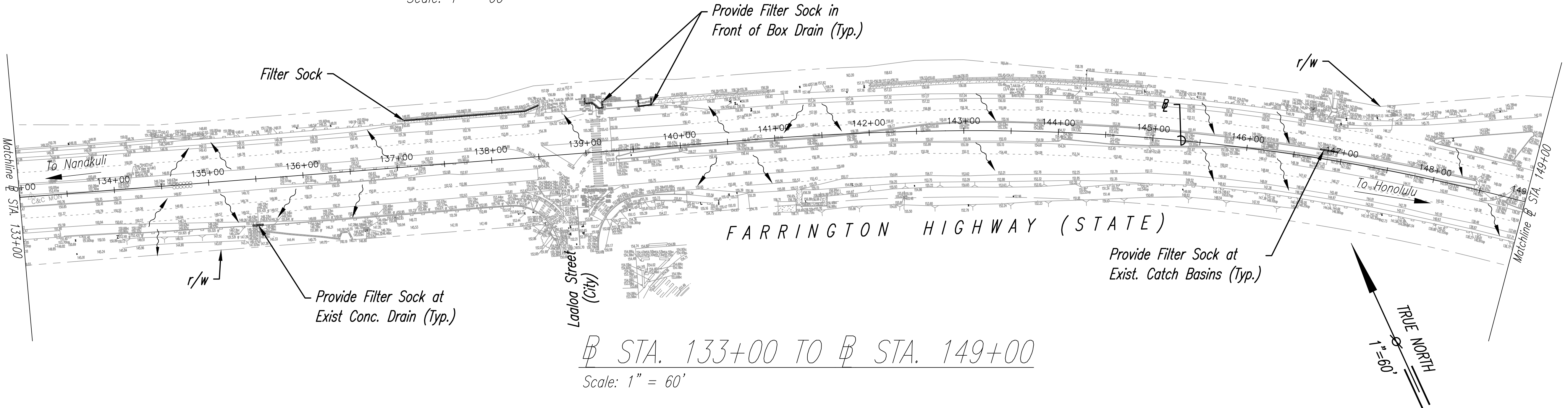
Scale: 1"=60' Date: November 2021

SHEET No. 5 OF 9 SHEETS

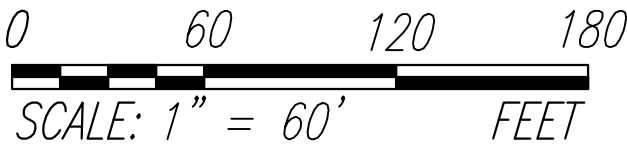
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	13	62



Sta. 117+00 TO Sta. 133+00
Scale: 1" = 60'



Sta. 133+00 TO Sta. 149+00
Scale: 1" = 60'



NOTE:

- Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

LEGEND

- Direction of Surface Runoff
- Filter Sock

ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NO.	



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SIGNATURE

4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

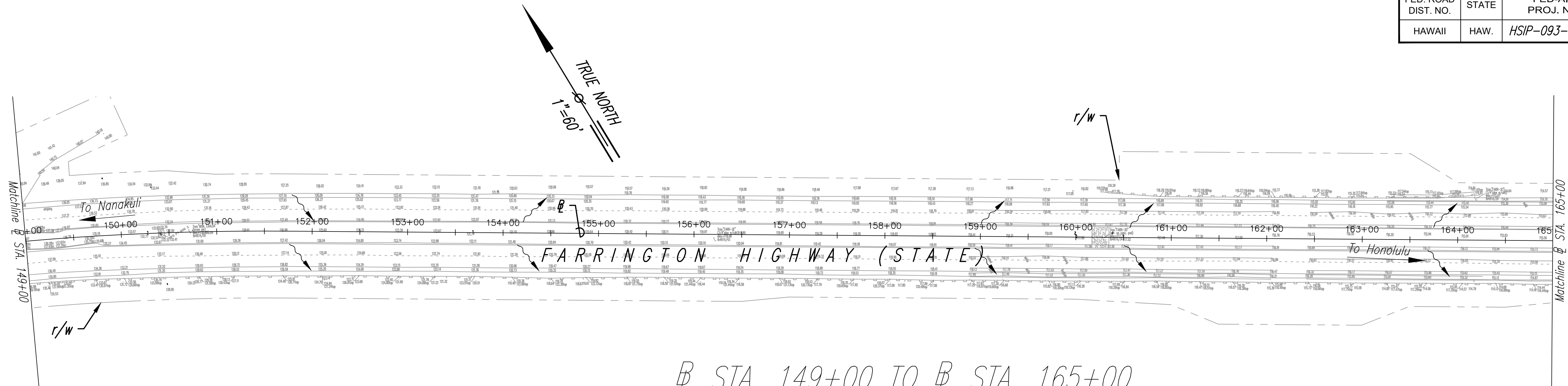
SEDIMENT & EROSION CONTROL PLAN - 6

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

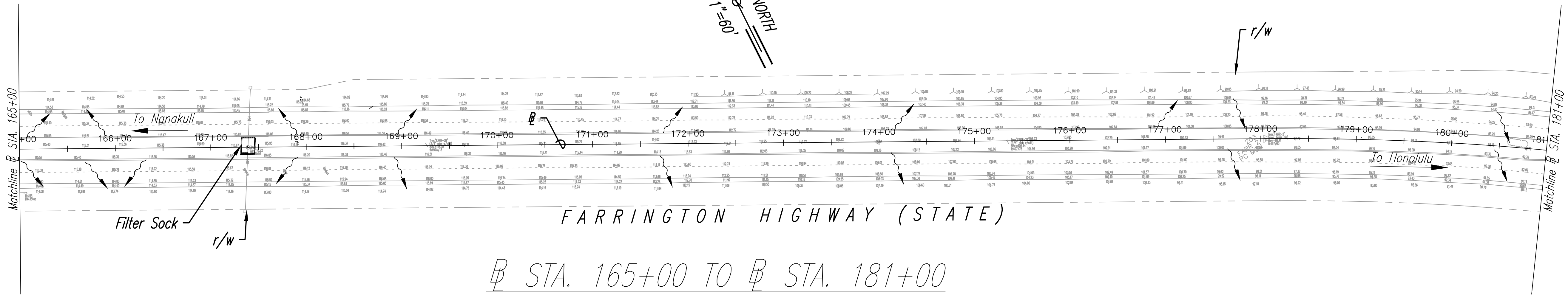
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Scale: 1"=60' Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	14	62



From STA. 149+00 TO STA. 165+00
Scale: 1" = 60'



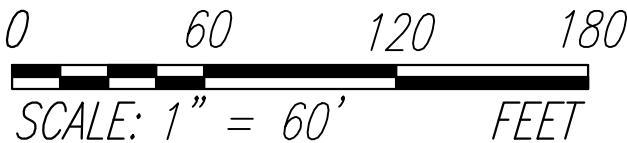
From STA. 165+00 TO STA. 181+00
Scale: 1" = 60'

NOTE:

- Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

LEGEND

- Direction of Surface Runoff
- Filter Sock



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



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Signature: R. B. Valero

4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEDIMENT & EROSION CONTROL PLAN - 7

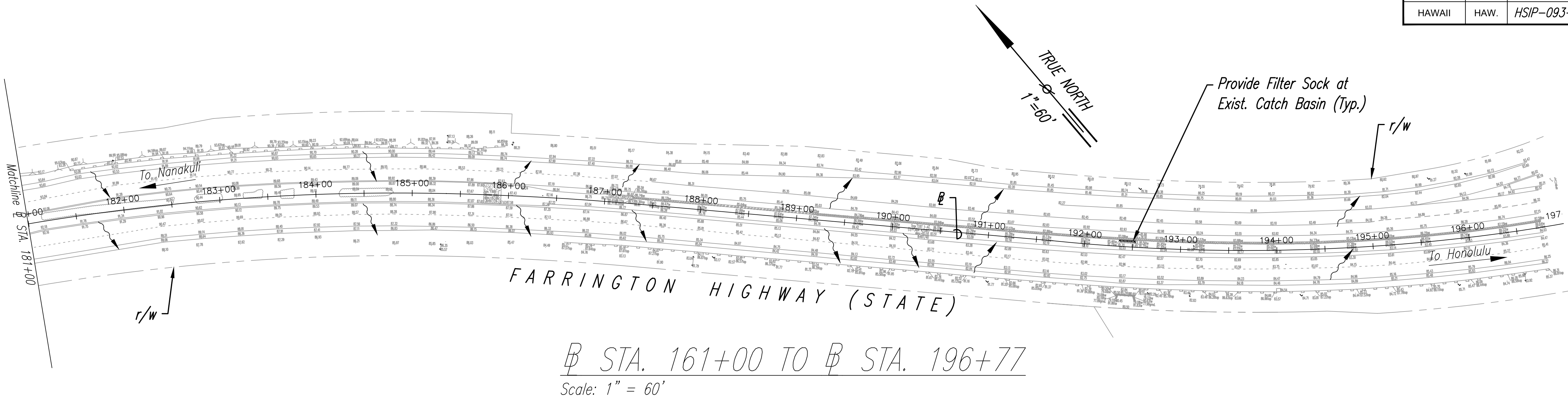
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

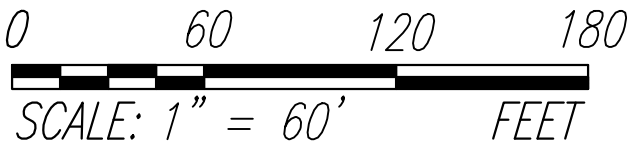
Scale: 1"=60' Date: November 2021

SHEET No. 7 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	15	62



STA. 161+00 TO STA. 196+77
Scale: 1" = 60'



NOTE:

- Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

LEGEND

- ~ ~ ~ Direction of Surface Runoff
— Filter Sock



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SIGNATURE: *Ryan B. Valero*
EXPIRATION DATE: 4/30/24
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEDIMENT & EROSION CONTROL PLAN - 8

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Scale: 1"=60' Date: November 2021

SHEET No. 8 OF 9 SHEETS

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

Compost Filter Sock Notes:

1. Installation:
- a. Installation shall be done according to the Manufacturer's recommendations.

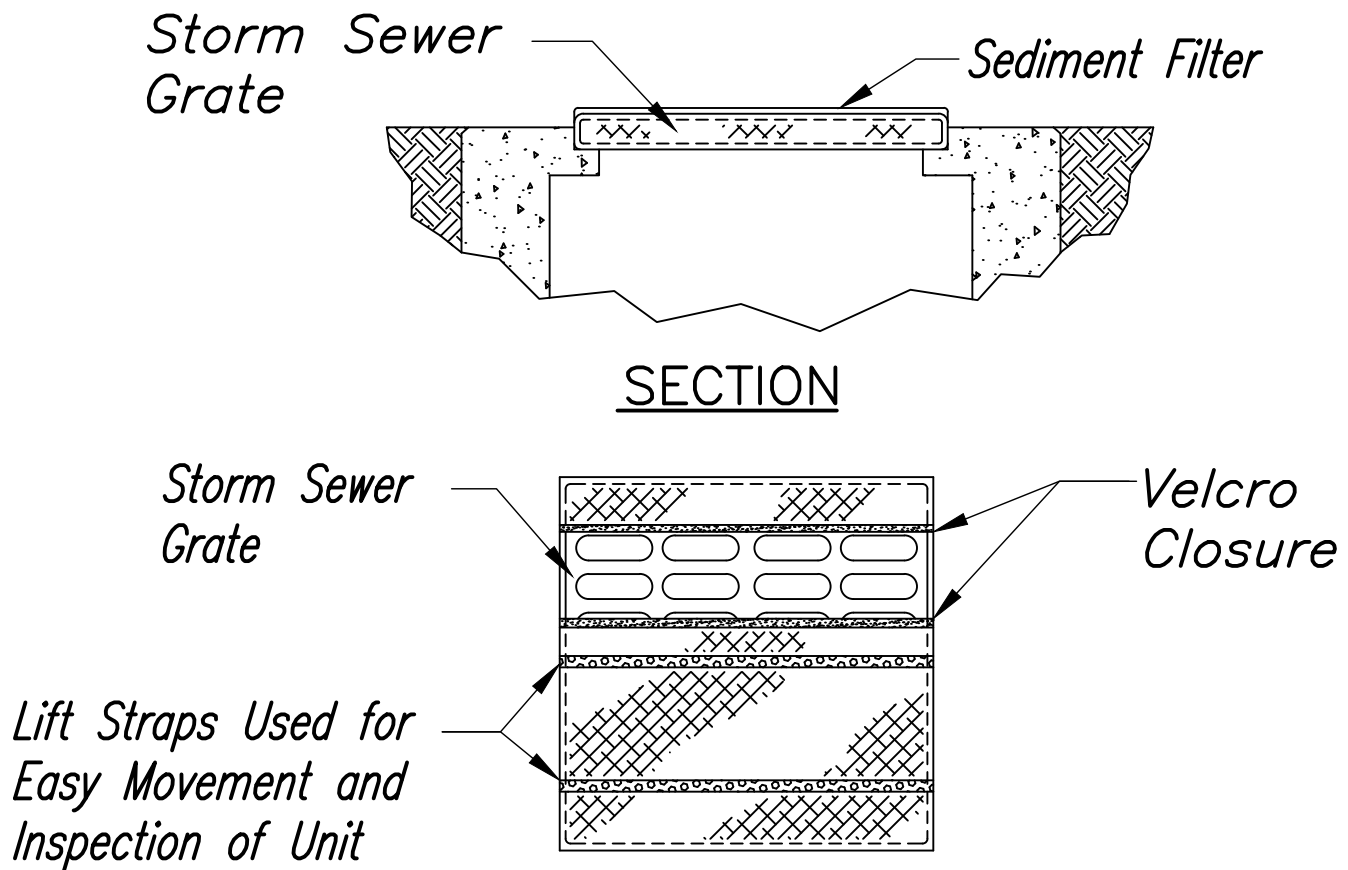
b. Assemble by tying a knot at one one of the mesh sock, filling the sock with compost, and knotting the other end of the sock. A pneumatic blower may be used to fill the sock with compost.

c. For multi-sock use, place socks end-to-end and interlock the ends, or per manufacturer's recommended procedures, whichever is more stringent.

d. Anchor filter socks to ground; stakes shall be installed per the Manufacturer's recommendations. Where staking is not possible, heavy concrete blocks shall be used behind the filter sock for stabilization during rainfall events.

e. Turn ends of filter sock up slope to prevent flow around the ends.
2. Material for compost berm may be left at the site and used as a soil amendment.
3. Inspection & Maintenance:
- a. Contractor shall inspect the filter sock(s) weekly during dry periods, daily during periods of prolonged rainfall, and within 24 hours of any rainfall event of 0.25 inch or greater that occurs within a 24-hour period.

b. The Contractor shall remove all accumulated sediment and debris from vicinity of filter sock(s) after each storm event. Remove sediment which has accumulated to within 1/3 of the berm height.
4. If a severe storm is expected, remove inlet protection devices to prevent flooding on surrounding streets.



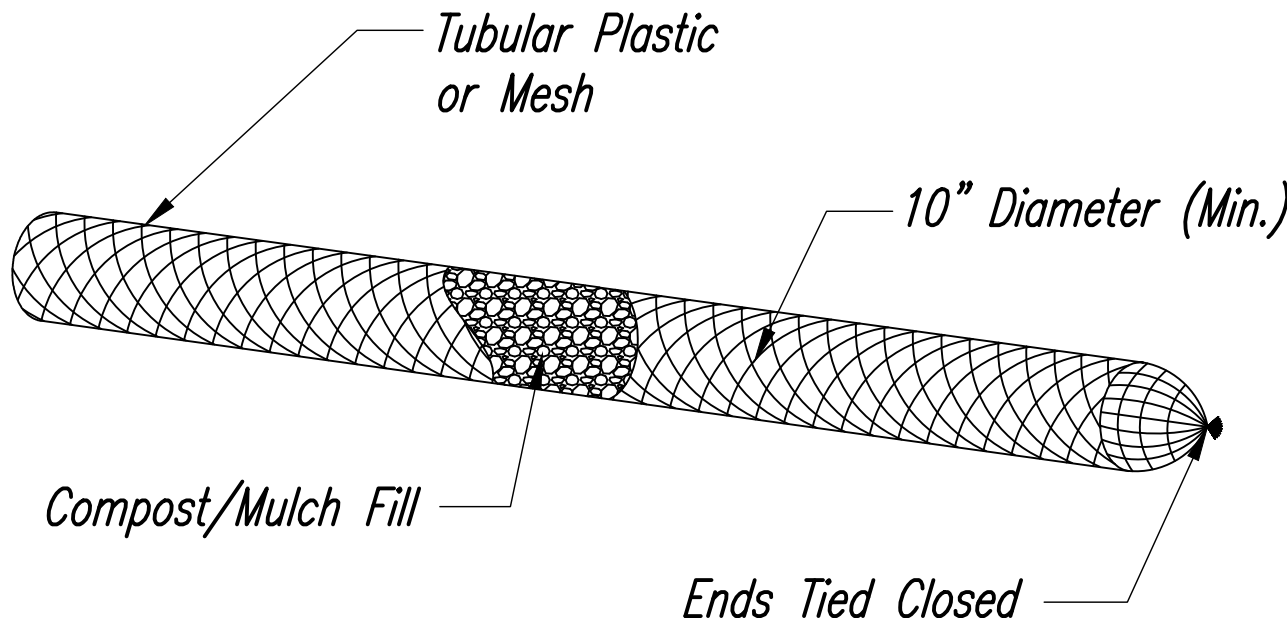
SECTION

PLAN

SEDIMENT FILTER FOR DRAIN INLETS DETAIL

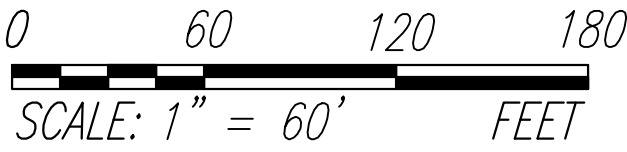
Not To Scale

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	1/min/m ² (gal/min/ft) ²	5907 (145)
Permittivity	ASTM D 4491	Sec ⁻¹	2.1



FILTER SOCK DETAIL

Not To Scale



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



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4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEDIMENT & EROSION CONTROL DETAILS

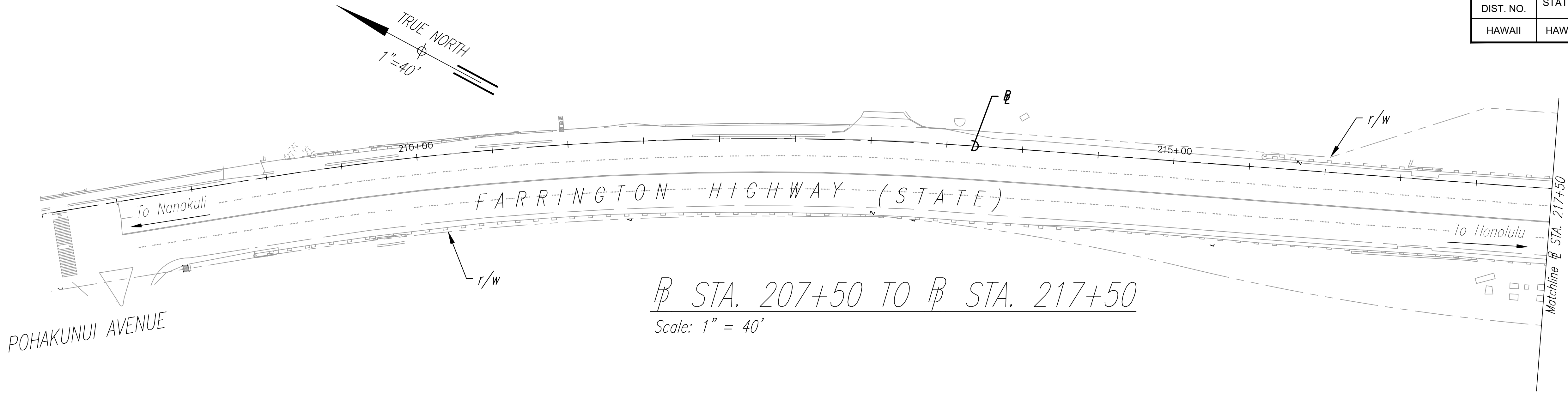
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

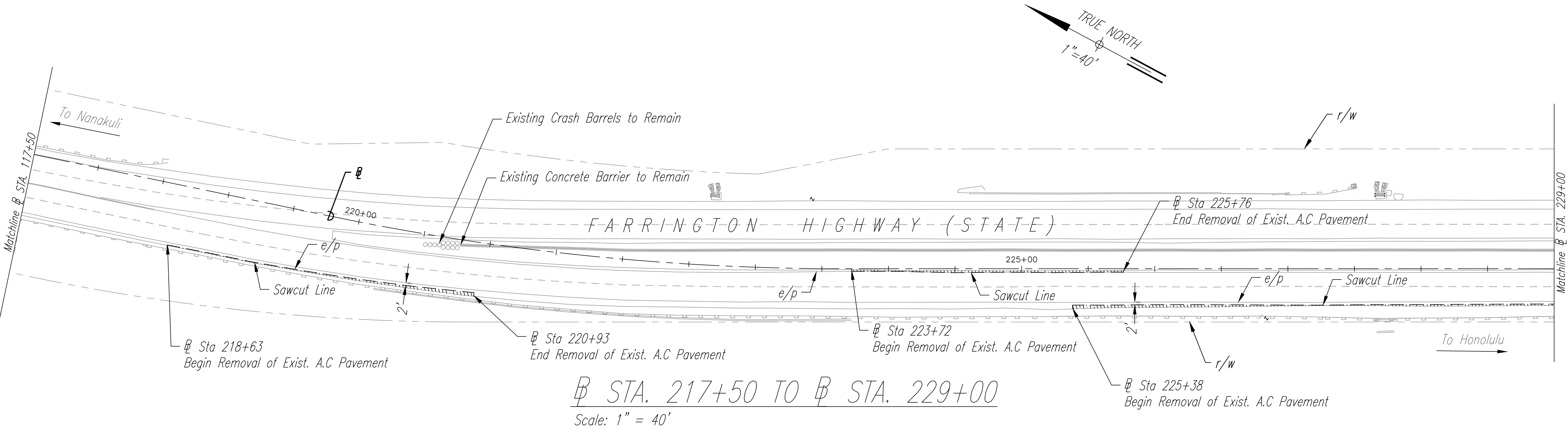
Date: November 2021

SHEET No. 9 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	17	62



Sta. 207+50 TO Sta. 217+50
Scale: 1" = 40'

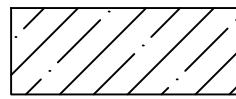


Sta. 217+50 TO Sta. 229+00
Scale: 1" = 40'

NOTE:

- See Roadway Details, Sht. 46, for additional pavement sawcut information.

LEGEND

 A.C. Pavement Removal

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



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OR UNDER MY SUPERVISION.

R. B. Valero
SIGNATURE

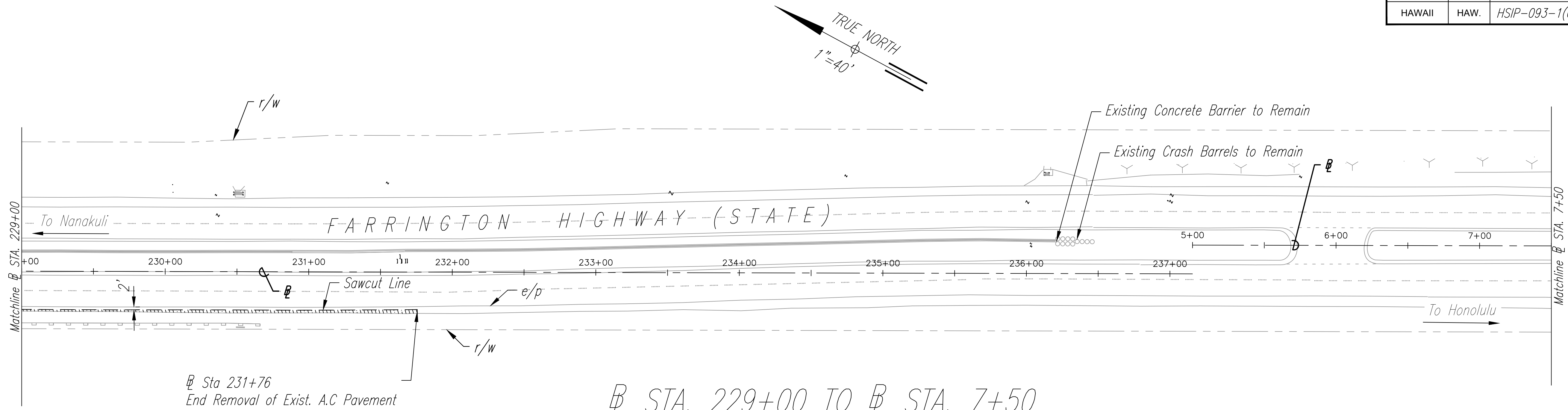
4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

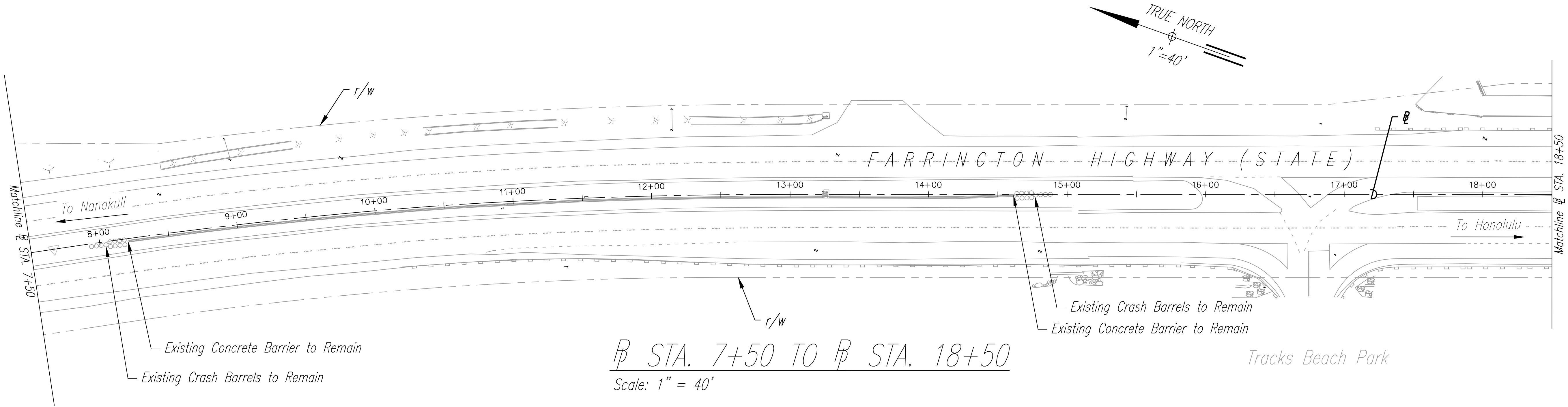
DEMOLITION PLANS - 1
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	18	62



Sta. 229+00 TO Sta. 7+50
Scale: 1" = 40'



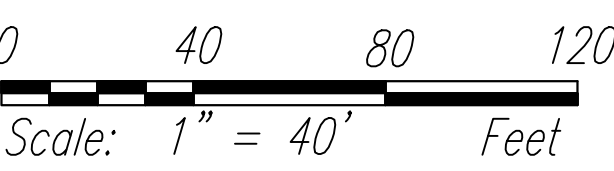
Sta. 7+50 TO Sta. 18+50
Scale: 1" = 40'

NOTE:
1. See Roadway Details, Sht. 46, for additional pavement sawcut information.

LEGEND

	A.C. Pavement Removal
--	-----------------------

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	



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R. B. Valero
SIGNATURE

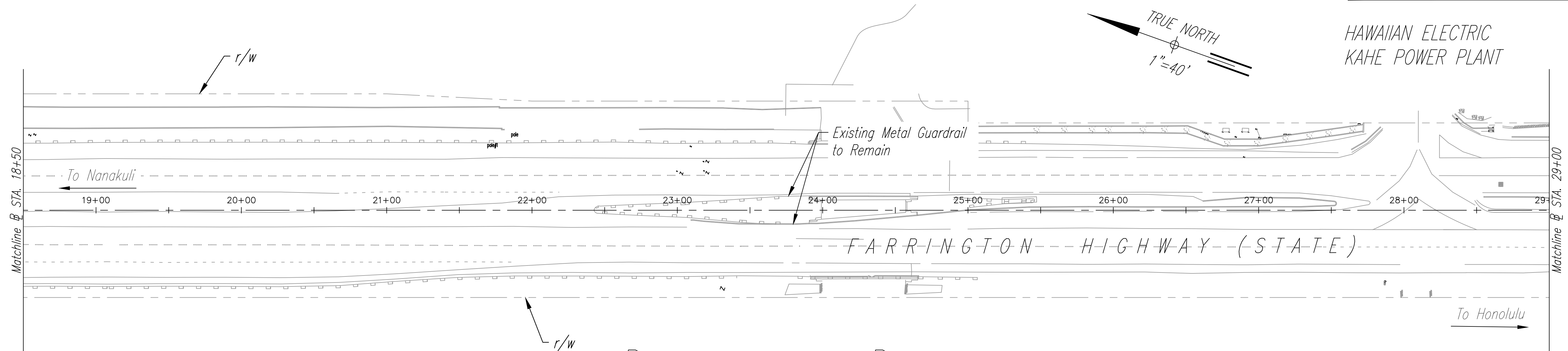
4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

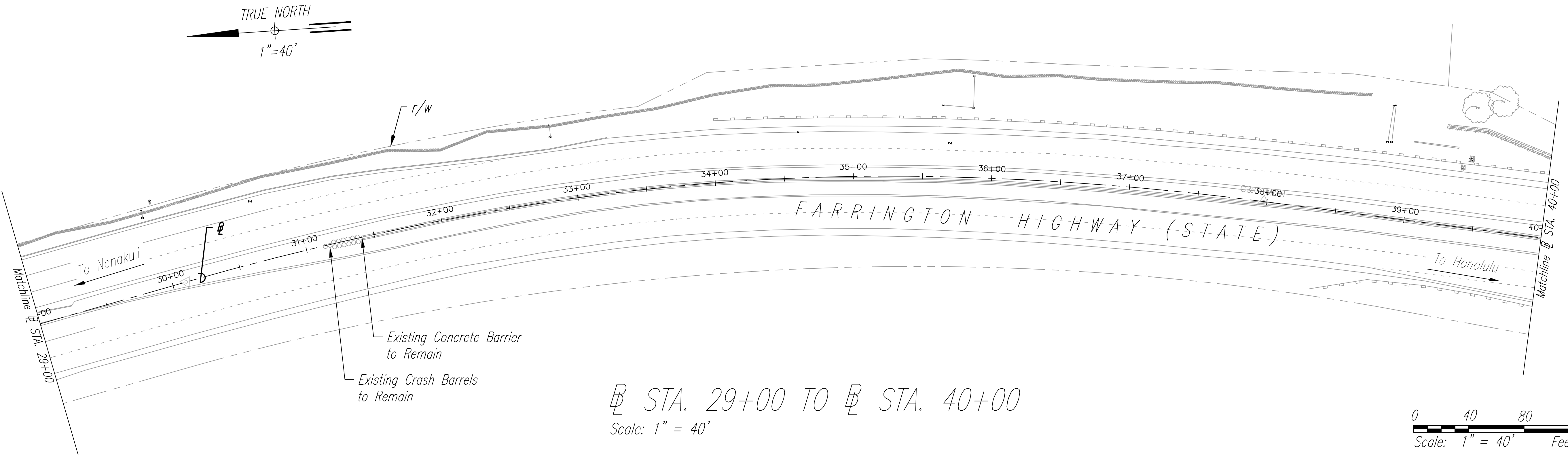
DEMOLITION PLANS - 2
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 2 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	19	62

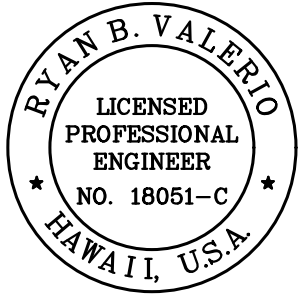


STA. 18+50 TO STA. 29+00
Scale: 1" = 40'



STA. 29+00 TO STA. 40+00
Scale: 1" = 40'

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



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Signature: *R. B. Valero*
EXPIRATION DATE OF LICENSE: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLANS - 3

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

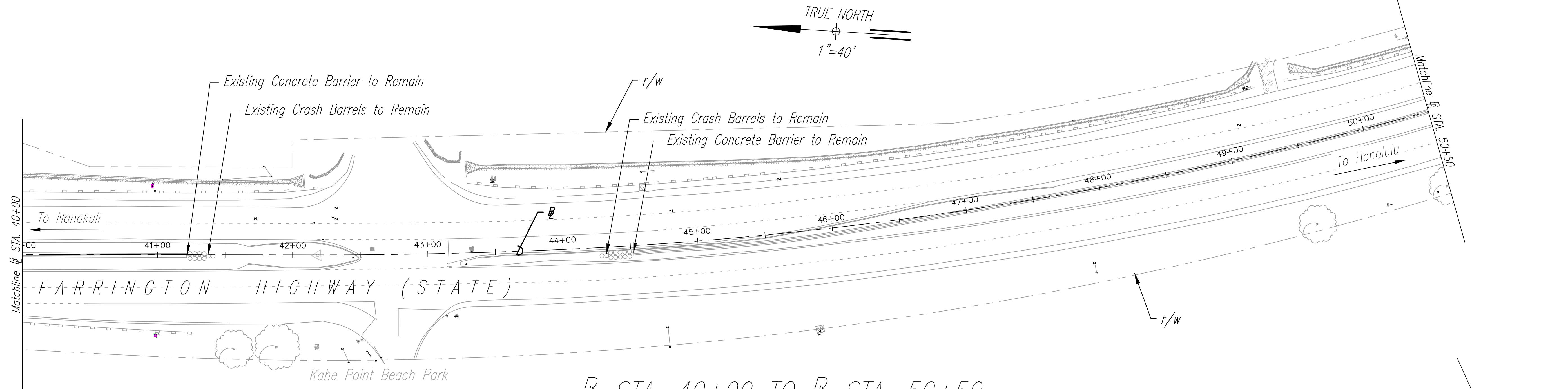
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

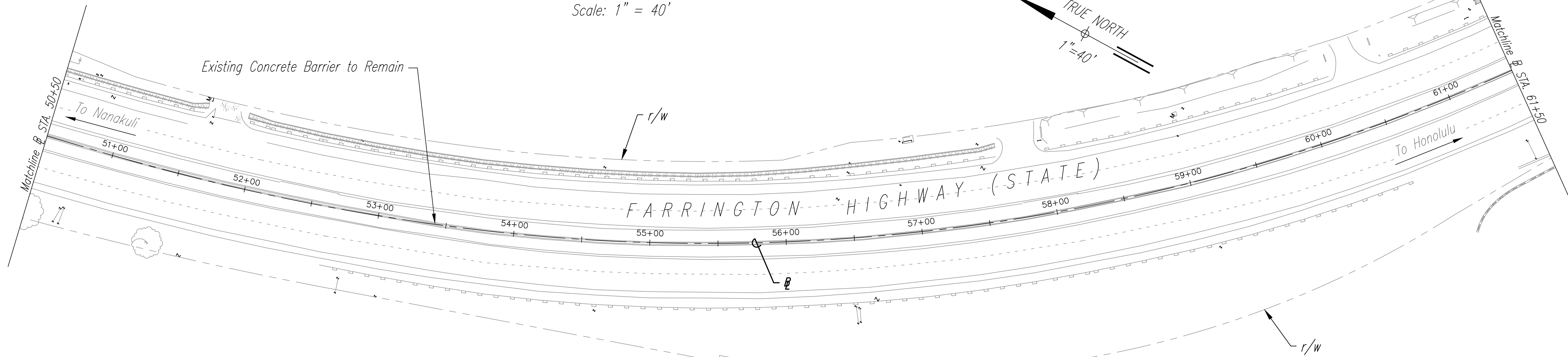
SHEET No. 3 OF 10 SHEETS

NO DEMOLITION WORK - THIS SHEET

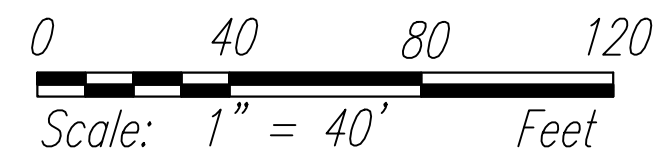
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	20	62



⊥ STA. 40+00 TO ⊥ STA. 50+50
Scale: 1" = 40'



⊥ STA. 50+50 TO ⊥ STA. 61+50
Scale: 1" = 40'



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

NO DEMOLITION WORK — THIS SHEET



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SIGNATURE: *R. B. Valero*
EXPIRATION DATE: 4/30/24
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLANS — 4

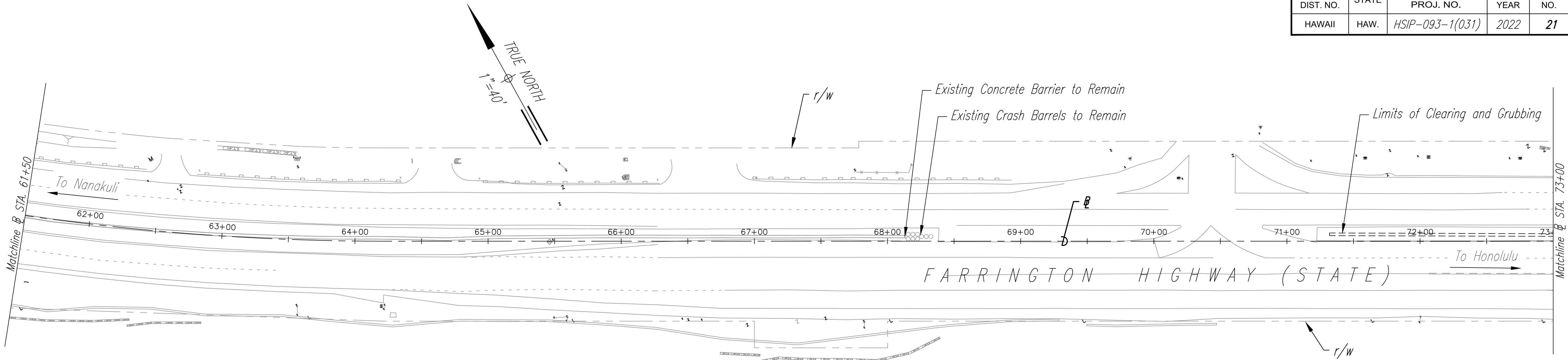
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

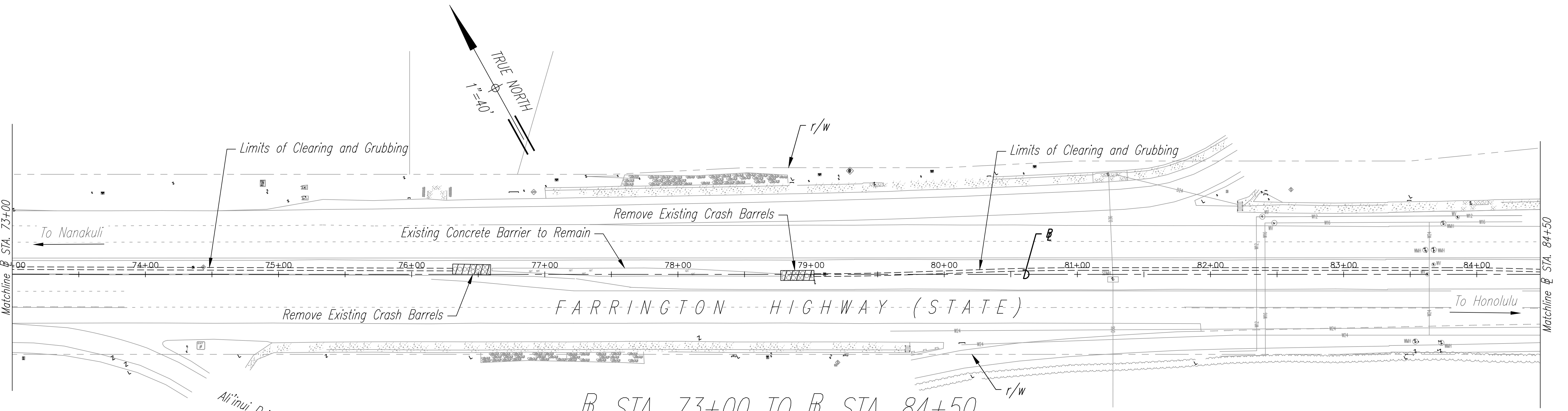
Date: November 2021

SHEET No. 4 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	21	62



⊘ STA. 61+50 TO ⊘ STA. 73+00
Scale: 1" = 40'



⊘ STA. 73+00 TO ⊘ STA. 84+50
Scale: 1" = 40'

LEGEND

- Crash Cushion Removal (Barrels/Attenuator)
- Limits of Clearing and Grubbing

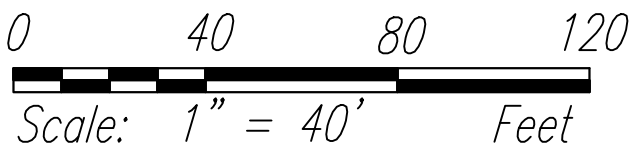
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	
NOTE BOOK	QUANTITIES BY	
	NO.	



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SIGNATURE: *R. B. Valero*

EXPIRATION DATE OF LICENSE: 4/30/24



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLANS - 5

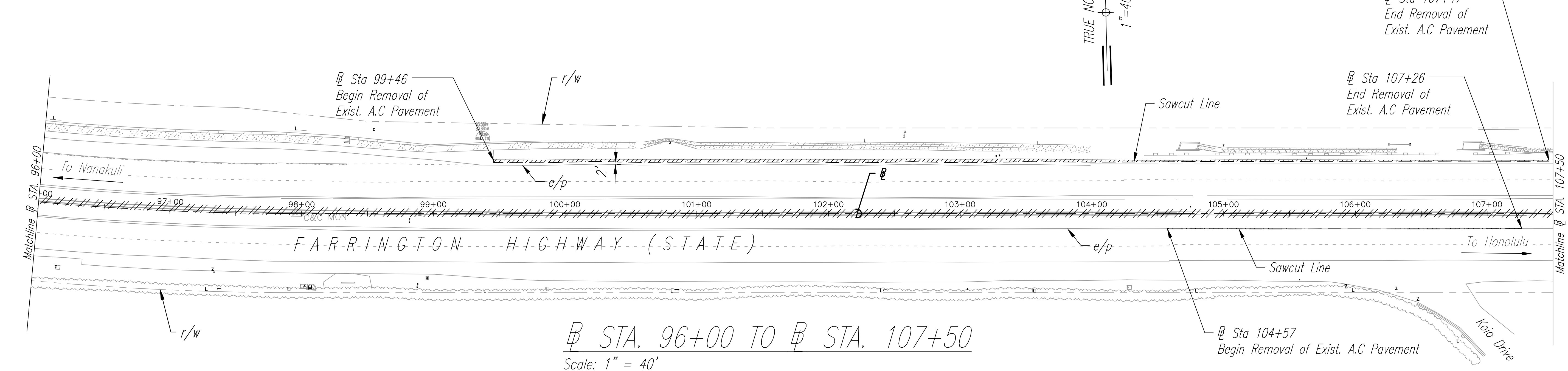
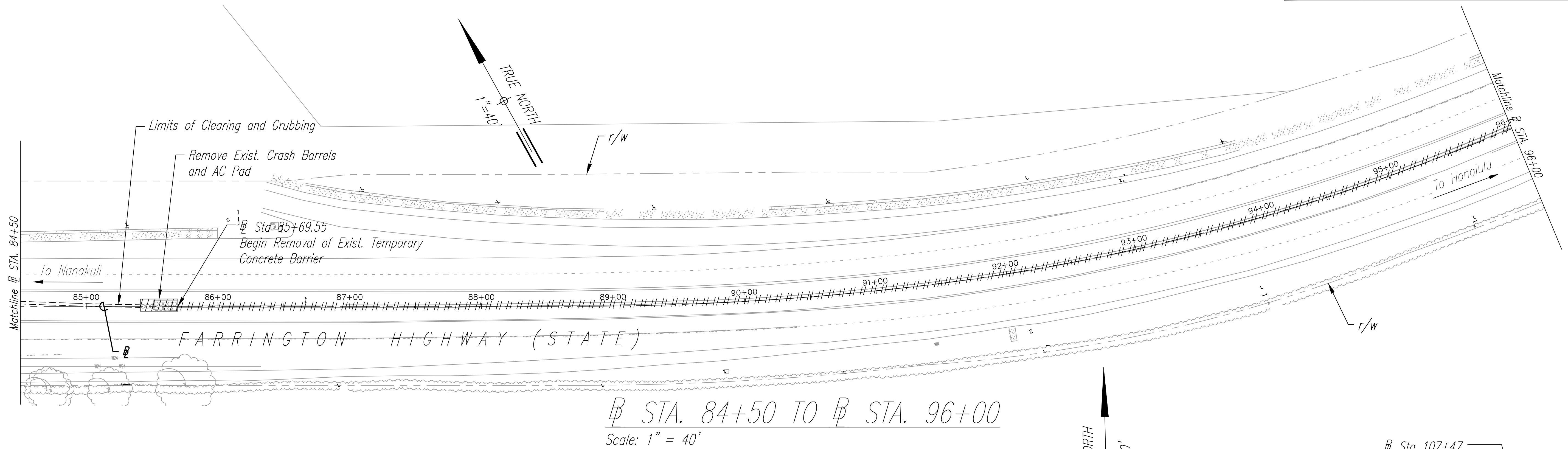
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 5 OF 10 SHEETS

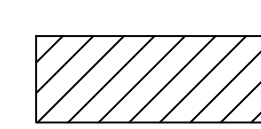
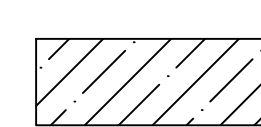
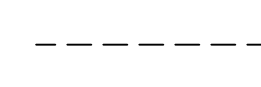
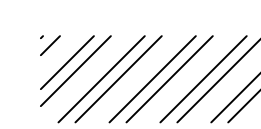
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	22	62



NOTES:

- See Roadway Details, Sht. 46, for additional pavement sawcut information.

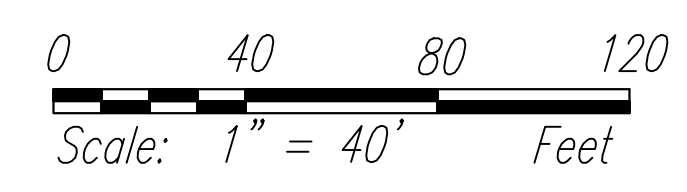
LEGEND

-  Crash Cushion Removal (Barrels/Attenuator)
-  A.C. Pavement Removal
-  Limits of Clearing and Grubbing
-  Temporary Concrete Barrier Removal



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SIGNATURE: *R. B. Valero*
EXPIRATION DATE OF LICENSE: 4/30/24



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLANS - 6

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

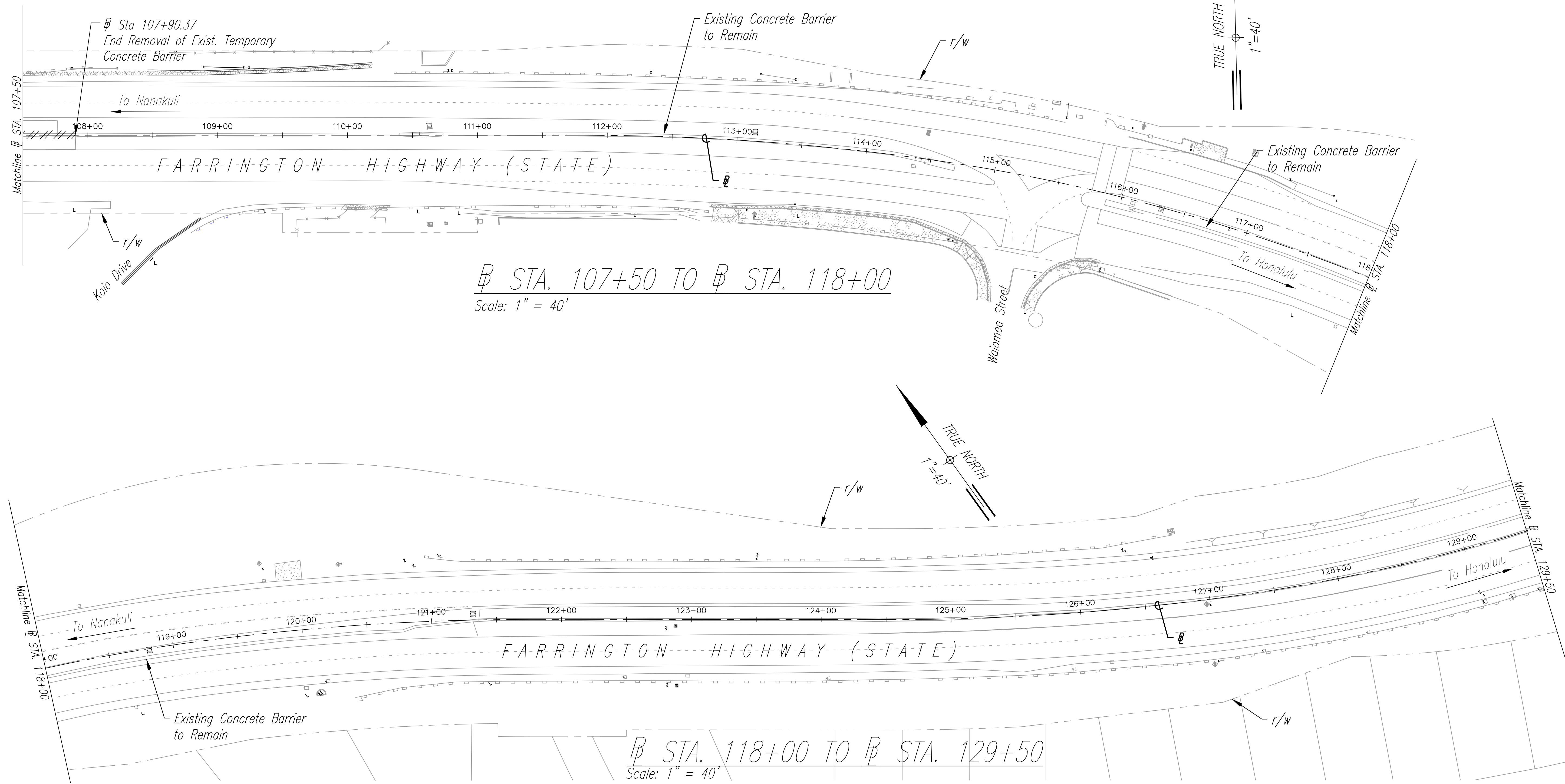
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 2 OF 7 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

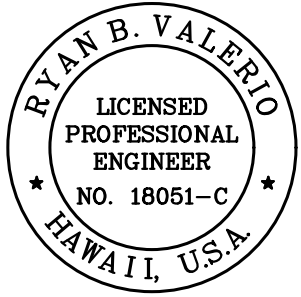
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	23	62



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

LEGEND

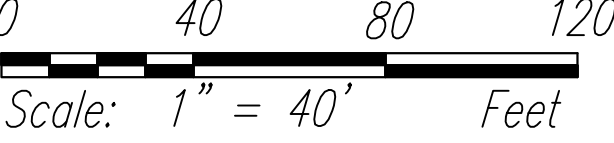
Temporary Concrete Barrier Removal



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SIGNATURE: *R. B. Valero*

EXPIRATION DATE OF LICENSE: 4/30/24



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLANS - 7

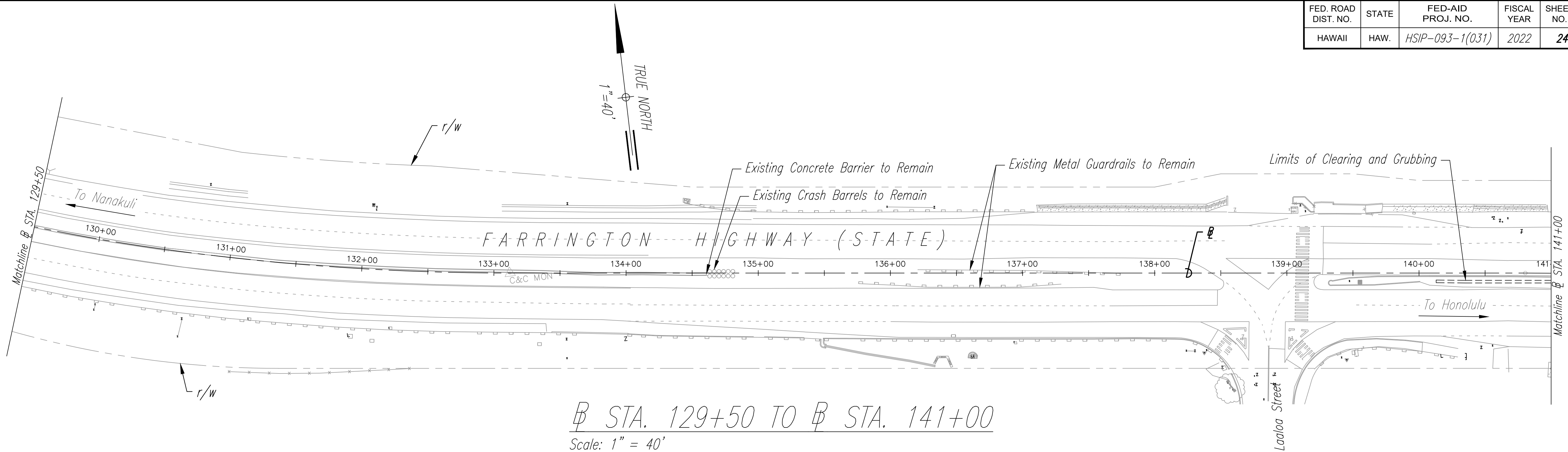
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

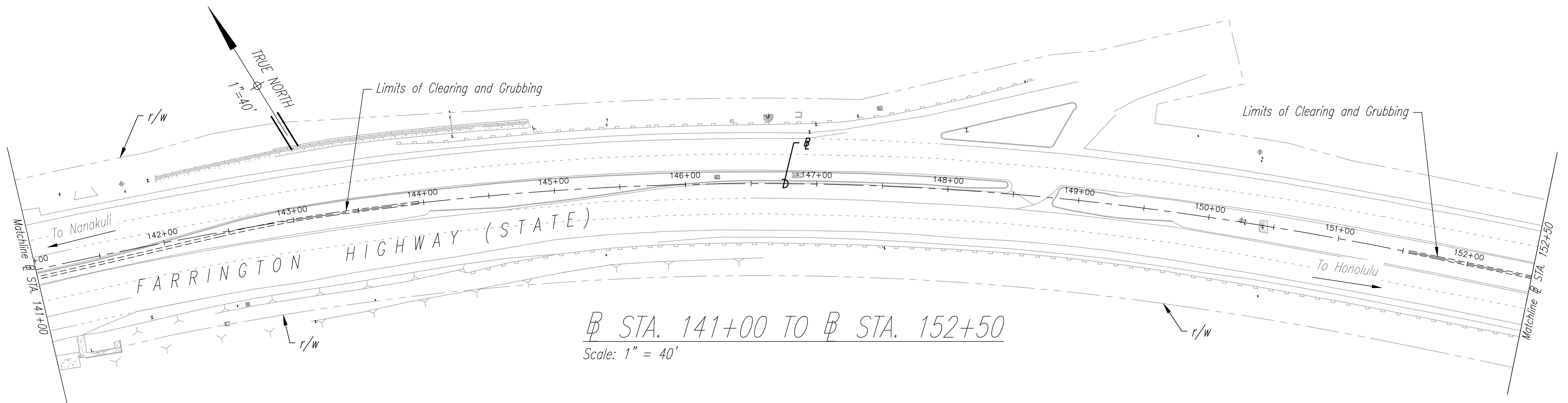
Date: November 2021

SHEET No. 3 OF 7 SHEETS

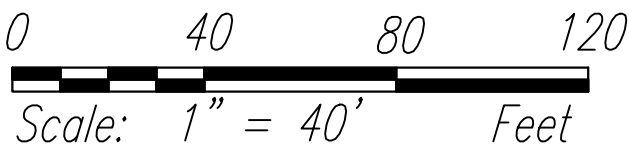
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	24	62



Sta. 129+50 TO Sta. 141+00
Scale: 1" = 40'

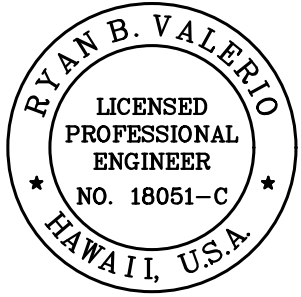


Sta. 141+00 TO Sta. 152+50
Scale: 1" = 40'



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

LEGEND
----- Limits of Clearing and Grubbing



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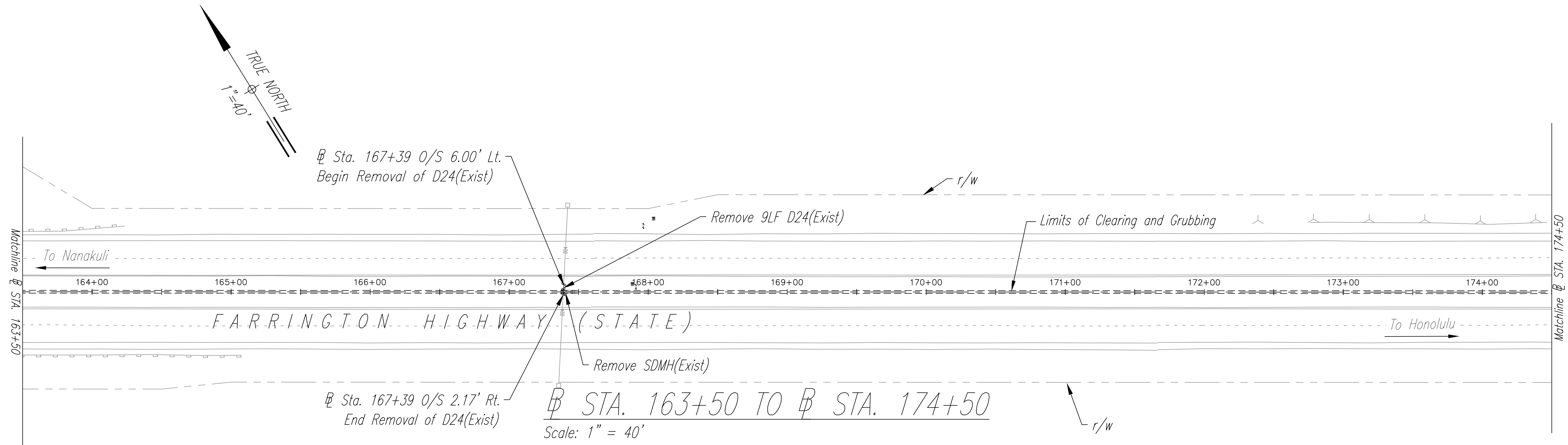
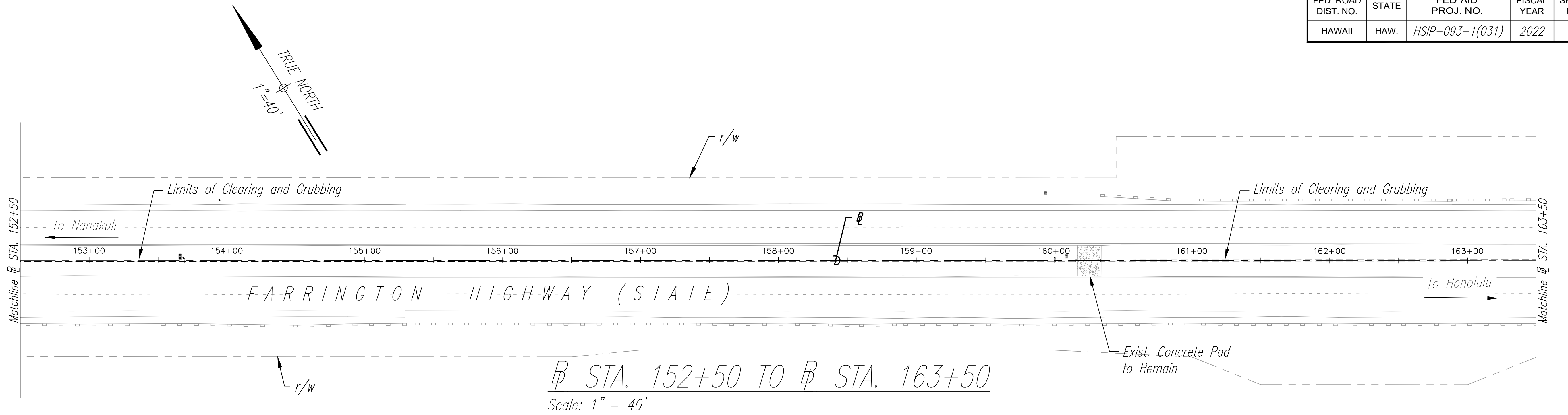
SIGNATURE: *R. B. Valero*
EXPIRATION DATE OF LICENSE: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLANS - 8
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 8 OF 10 SHEETS

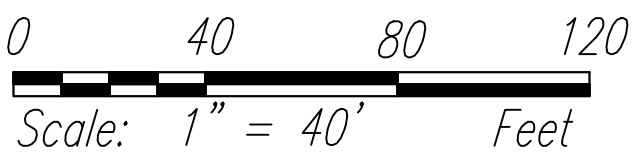
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	25	62



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

LEGEND

- R — Drain Line Removal
- - - - - Limits of Clearing and Grubbing



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EXPIRATION DATE OF LICENSE 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLANS - 9

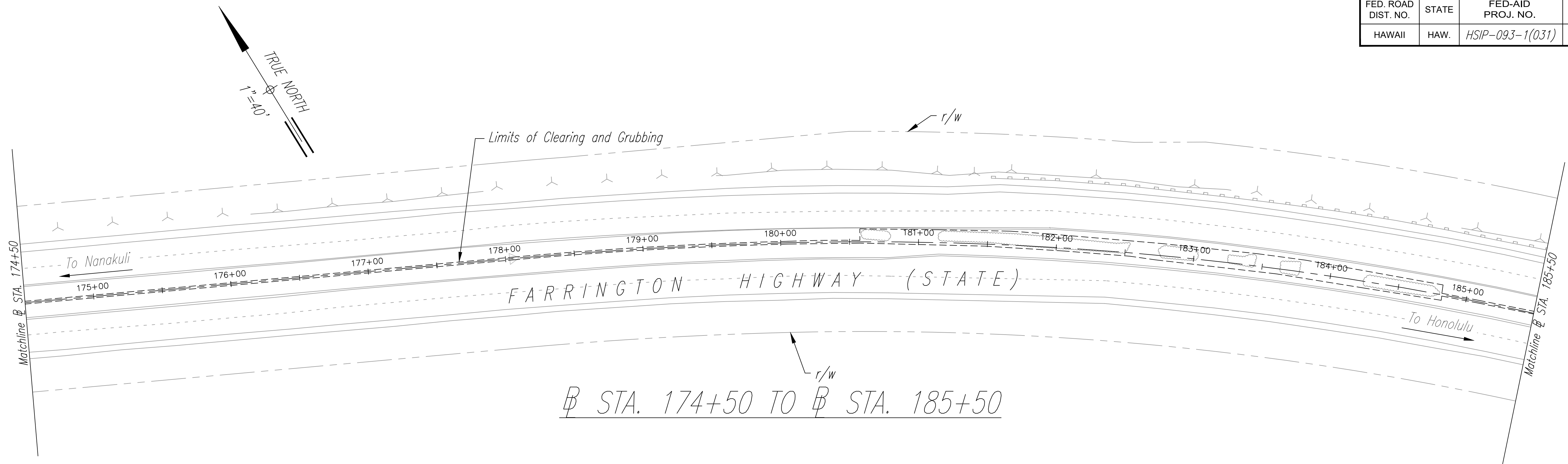
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

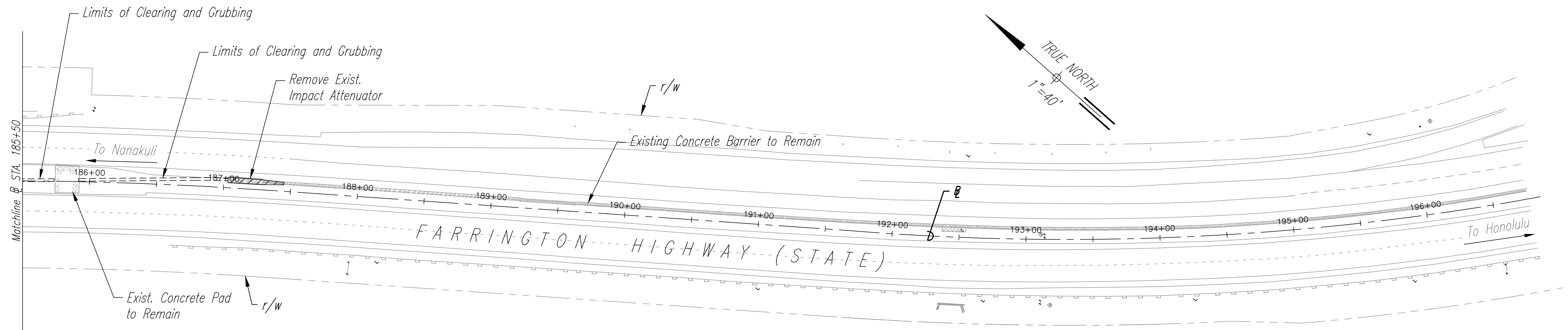
Date: November 2021

SHEET No. 9 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	26	62



Sta. 174+50 TO Sta. 185+50

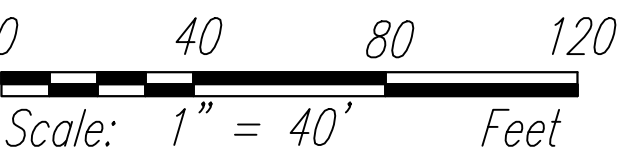


Sta. 185+50 TO Sta. 196+77

Scale: 1" = 40'

- LEGEND
- Crash Cushion Removal (Barrels/Attenuator)
 - Limits of Clearing and Grubbing

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



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Ryan B. Valero
SIGNATURE

4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLANS - 10

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

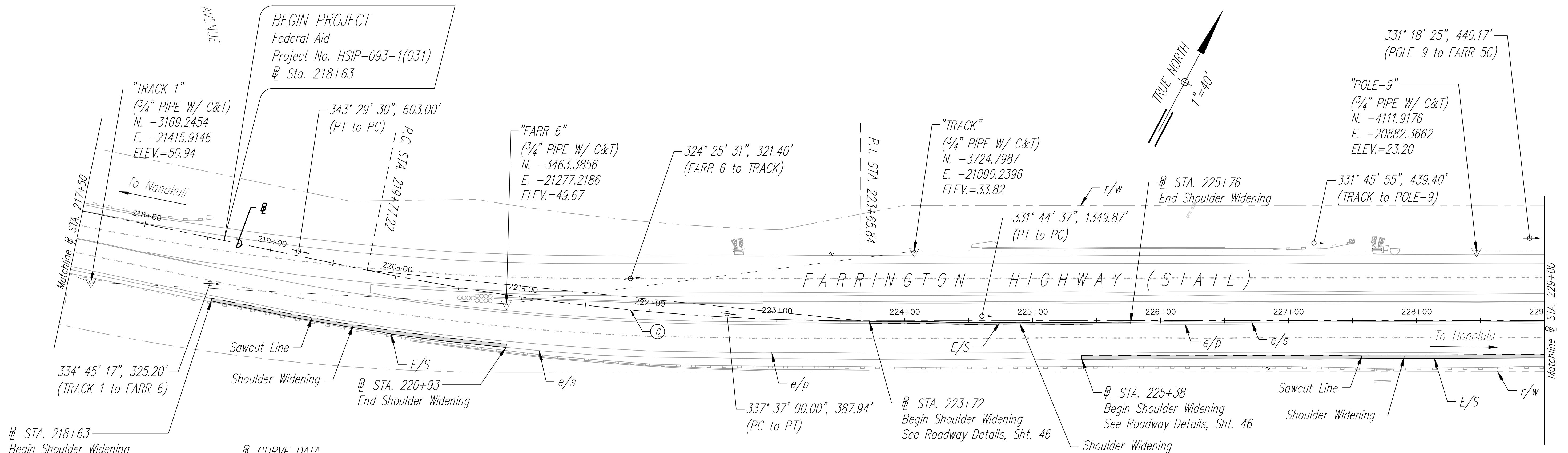
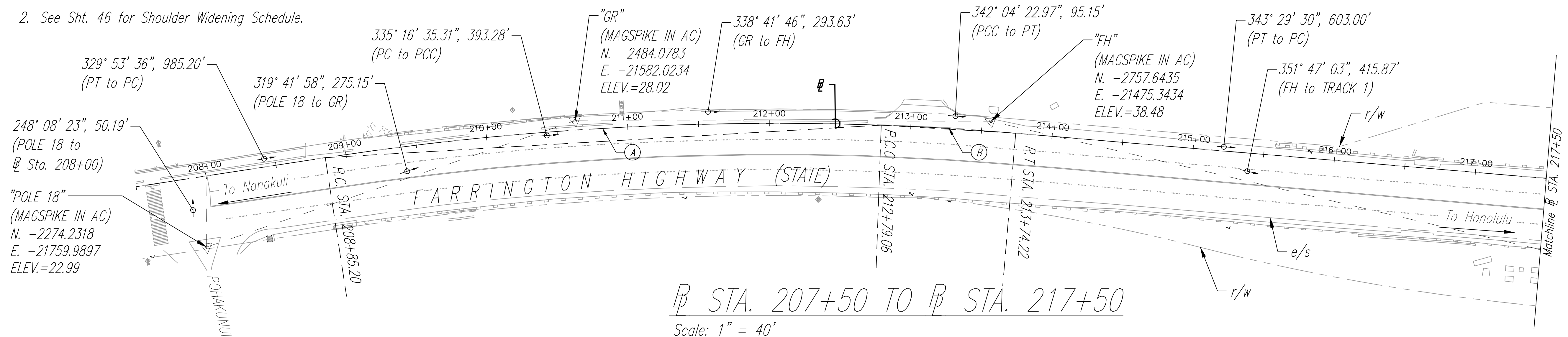
SHEET No. 10 OF 10 SHEETS

NOTES:

1. See Shts. 37 and 38 for Rumble Strip Details and Schedule.

2. See Sht. 46 for Shoulder Widening Schedule.

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	27	62

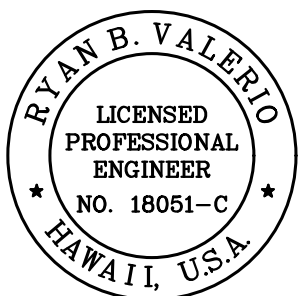


CURVE DATA

①	②	③
$\Delta = 10^{\circ}45'59''$	$\Delta = 2^{\circ}49'56''$	$\Delta = 11^{\circ}45'00''$
$\Delta/2 = 5^{\circ}22'59''$	$\Delta/2 = 1^{\circ}24'58''$	$\Delta/2 = 5^{\circ}52'30''$
$R = 2096'$	$R = 1925'$	$R = 1895'$
$T = 197.51'$	$T = 47.59'$	$T = 194.99'$
$C = 393.28'$	$C = 95.15'$	$C = 387.94'$
$L_c = 393.86'$	$L_c = 95.16'$	$L_c = 388.62'$

LEGEND

- 2" AC Over 12" Aggregate Subbase
- Right-of-Way



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SIGNATURE
R. B. Valero

4/30/24
EXPIRATION DATE OF LICENSE

0 40 80 120
Scale: 1" = 40' Feet

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN - 1
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

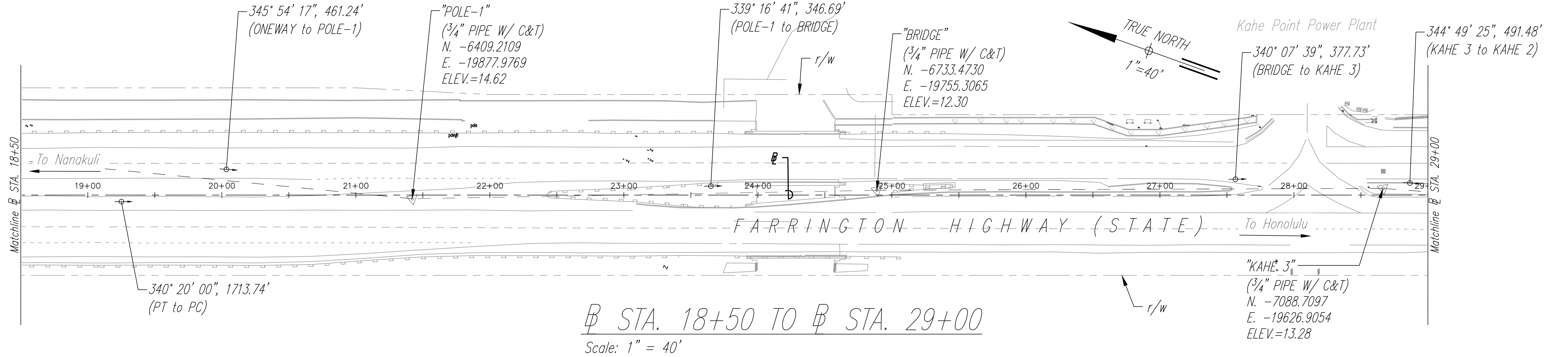
Date: November 2021

SHEET No. 1 OF 10 SHEETS

NOTE:

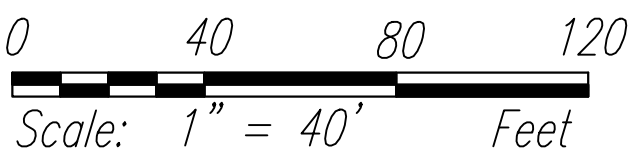
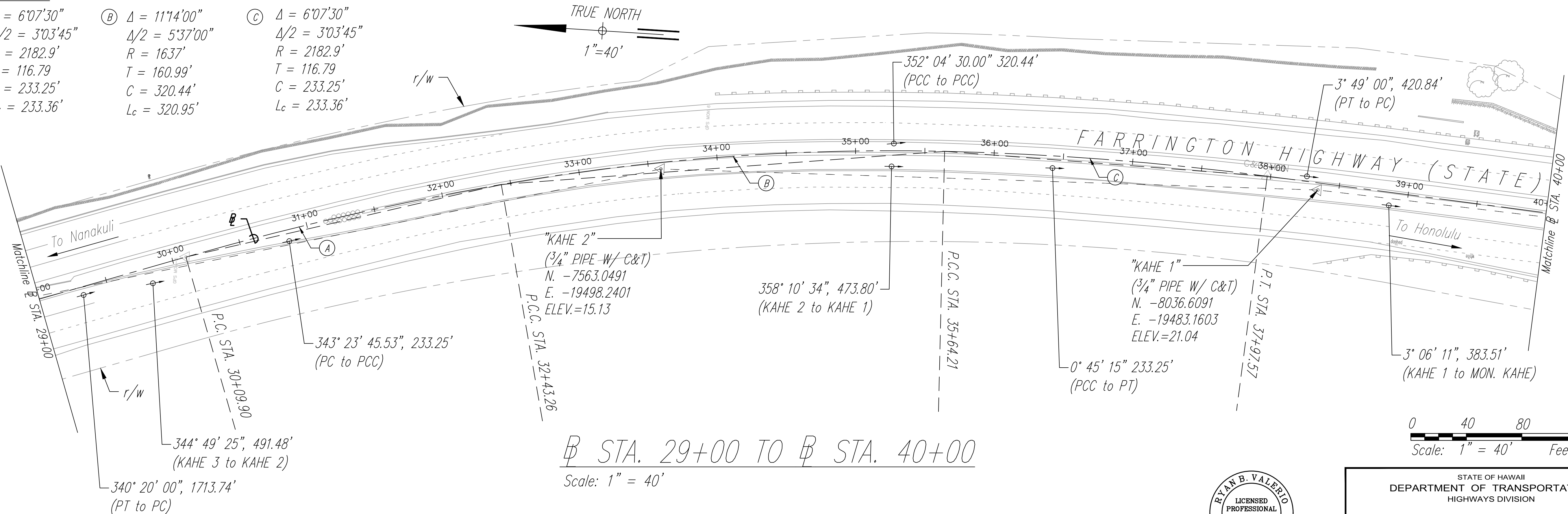
1. See Shts. 37 and 38 for Rumble Strip Details and Schedule.

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	29	62



Ⓢ CURVE DATA

Ⓐ $\Delta = 6^{\circ}07'30''$ $\Delta/2 = 3^{\circ}03'45''$ $R = 2182.9'$ $T = 116.79$ $C = 233.25'$ $L_c = 233.36'$	Ⓑ $\Delta = 11^{\circ}14'00''$ $\Delta/2 = 5^{\circ}37'00''$ $R = 1637'$ $T = 160.99'$ $C = 320.44'$ $L_c = 320.95'$	Ⓒ $\Delta = 6^{\circ}07'30''$ $\Delta/2 = 3^{\circ}03'45''$ $R = 2182.9'$ $T = 116.79$ $C = 233.25'$ $L_c = 233.36'$
---	---	---



LEGEND

----- Right-of-Way

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

RUMBLE STRIP INSTALLATION ONLY – THIS SHEET



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Ryan B. Valero
SIGNATURE

4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN – 3
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 3 OF 10 SHEETS

NOTE:

1. See Shts. 37 and 38 for Rumble Strip Details and Schedule.

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	30	62

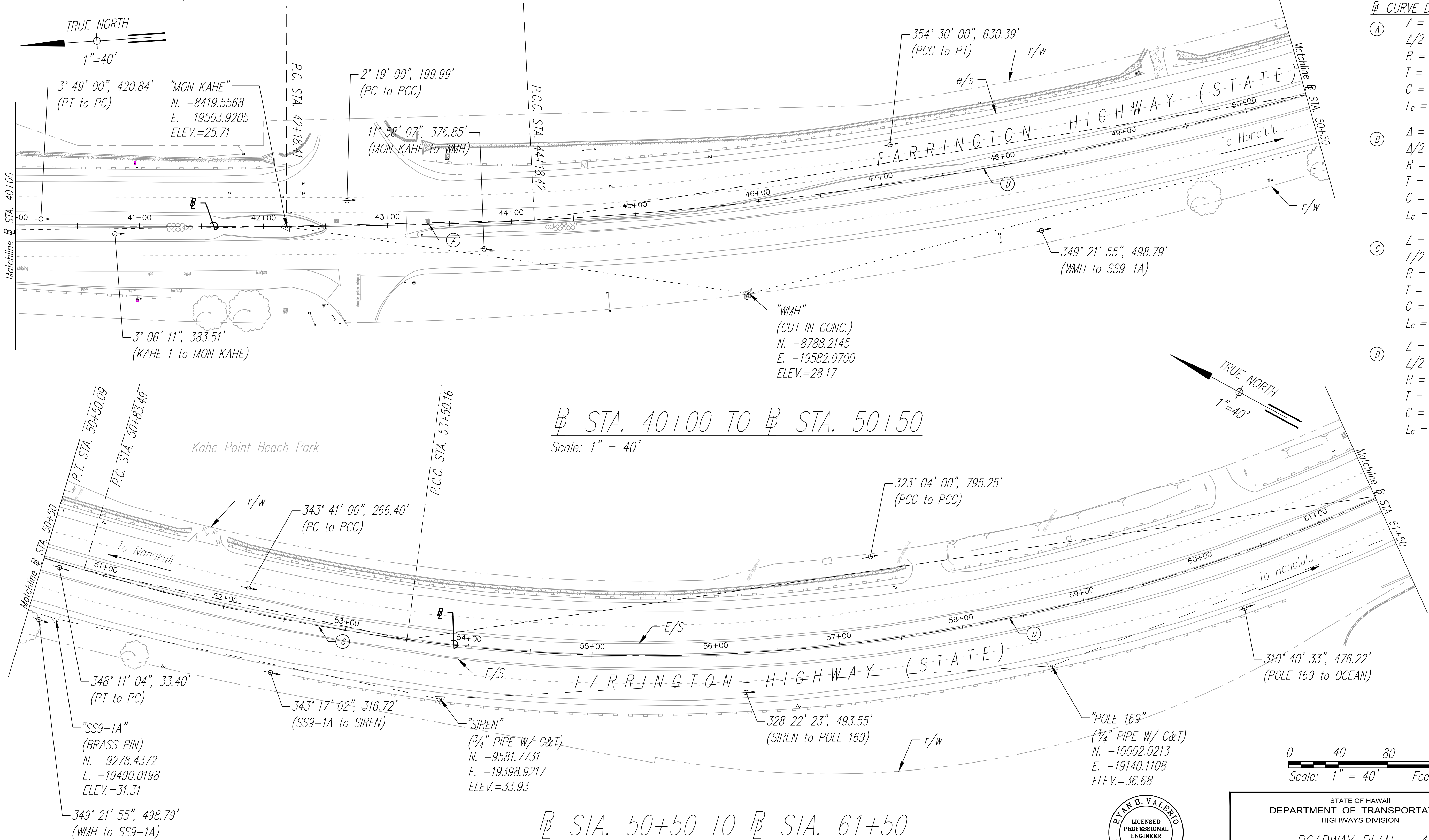
CURVE DATA

A $\Delta = 3^{\circ}00'00''$
 $\Delta/2 = 1^{\circ}30'00''$
 $R = 3819.99'$
 $T = 100.03'$
 $C = 199.99'$
 $L_c = 200.01'$

B $\Delta = 12^{\circ}38'00''$
 $\Delta/2 = 6^{\circ}19'00''$
 $R = 2864.79'$
 $T = 317.12'$
 $C = 630.39'$
 $L_c = 631.67'$

C $\Delta = 8^{\circ}59'58''$
 $\Delta/2 = 4^{\circ}29'59''$
 $R = 1697.78'$
 $T = 133.61'$
 $C = 266.40'$
 $L_c = 266.67'$

D $\Delta = 32^{\circ}14'00''$
 $\Delta/2 = 16^{\circ}07'00''$
 $R = 1432.40'$
 $T = 413.89'$
 $C = 795.25'$
 $L_c = 805.84'$



STA. 40+00 TO STA. 50+50
Scale: 1" = 40'

STA. 50+50 TO STA. 61+50
Scale: 1" = 40'

LEGEND

Right-of-Way

0 40 80 120
Scale: 1" = 40' Feet



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SIGNATURE
R. B. Valero

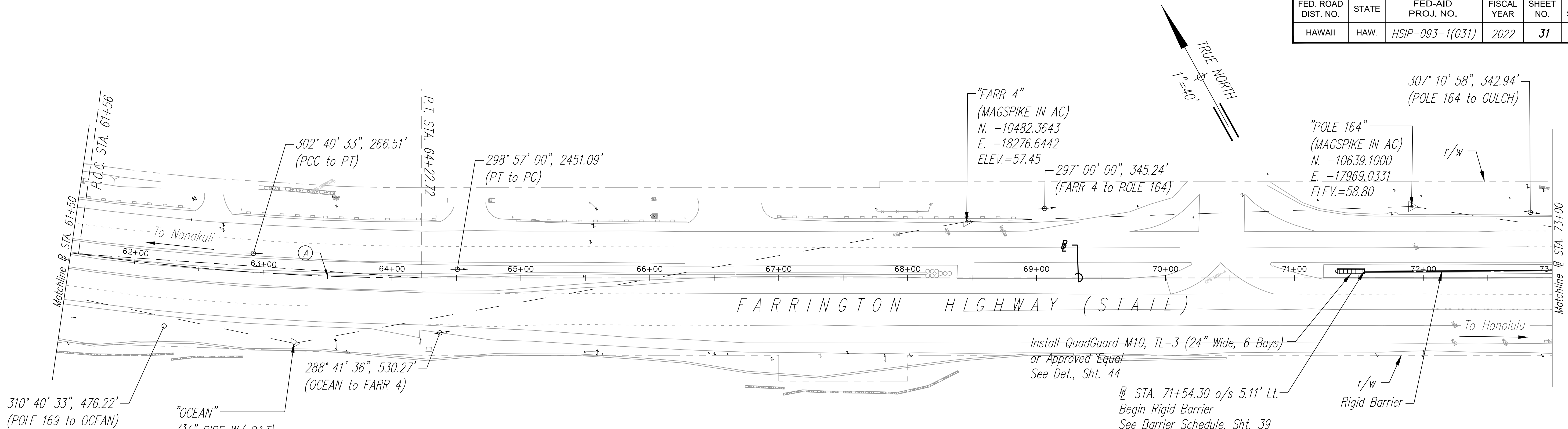
4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

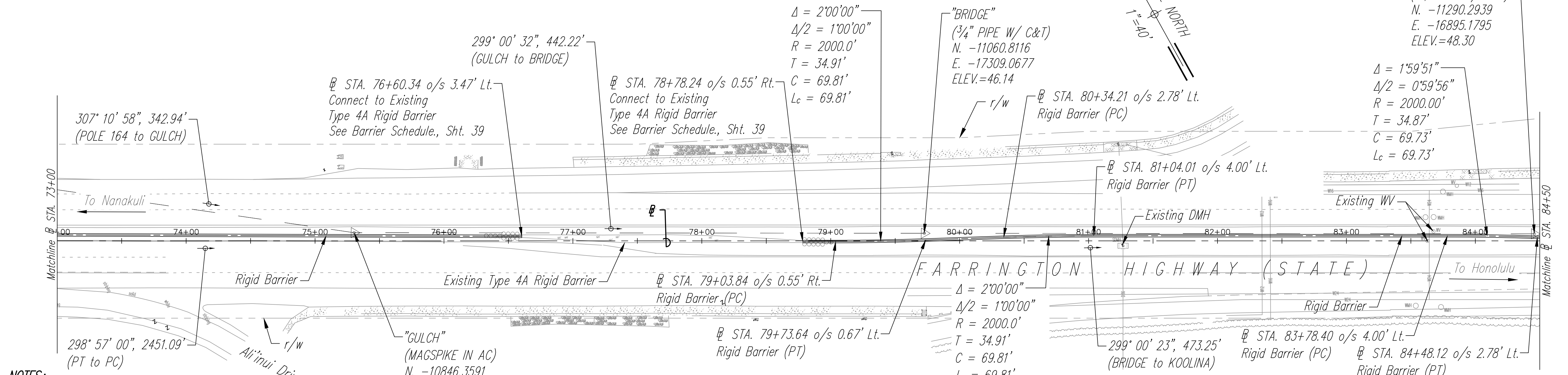
ROADWAY PLAN - 4
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 4 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	31	62



STA. 61+50 TO STA. 73+00
Scale: 1" = 40'



STA. 73+00 TO STA. 84+50
Scale: 1" = 40'

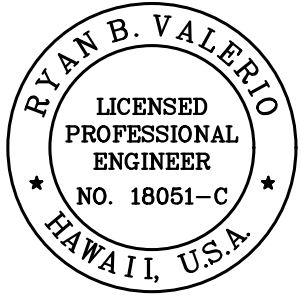
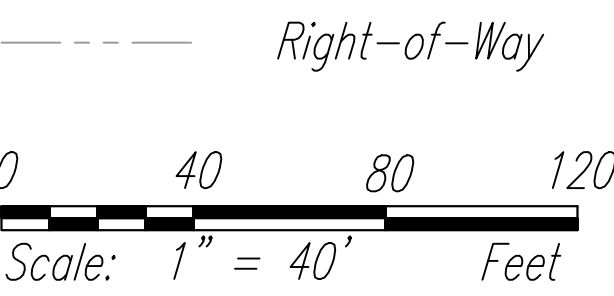
NOTES:

- See Shts. 37 and 38 for Rumble Strip Details and Schedule.
- See Sht. 39 for Rigid Barrier Schedule.
- Contractor shall follow the existing ground surface when profiling the concrete barrier. To avoid sudden dips or rises in the concrete barrier profile, ground elevation profiling shall be taken at 20 feet spacing, for purposes of identifying concrete barrier grade elevation

CURVE DATA

- (A) $\Delta = 8^{\circ}00'00''$
 $\Delta/2 = 4^{\circ}00'00''$
 $R = 1910.28'$
 $T = 133.58'$
 $C = 266.51'$
 $L_c = 266.73'$

LEGEND



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SIGNATURE
R. B. Valero

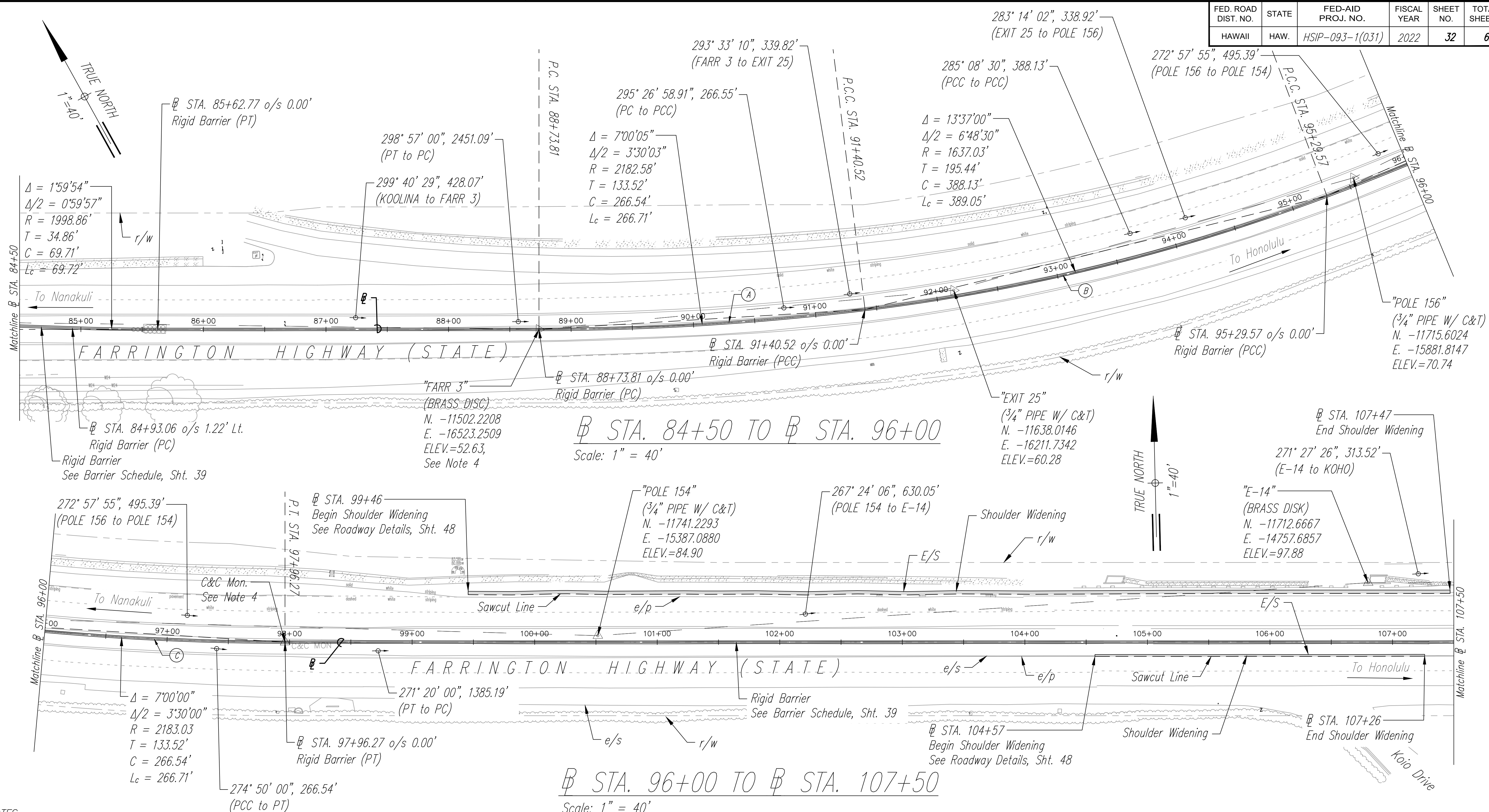
4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN - 5
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 5 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	32	62



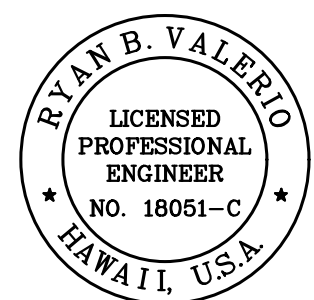
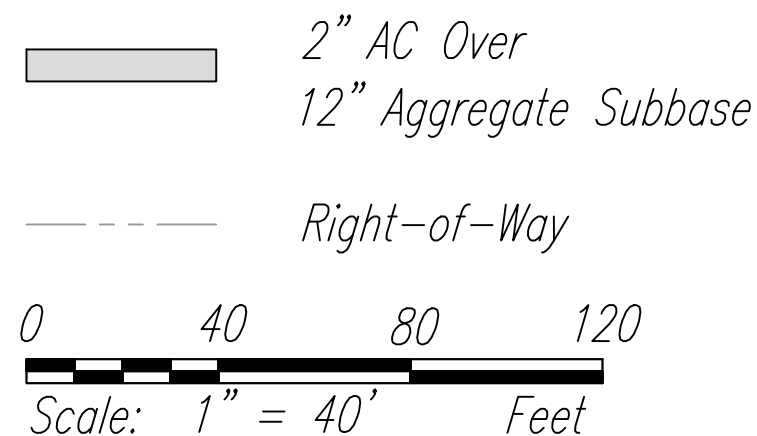
NOTES:

- See Shts. 37 and 38 for Rumble Strip Details and Schedule.
- See Sht. 68 for Rigid Barrier Schedule.
- See Sht. 46 for Shoulder Widening Schedule.
- Contractor shall field locate existing survey monuments. If an existing survey monument is within 1.5' of the proposed rigid barrier centerline, Contractor shall deflect the barrier alignment to avoid conflict with the existing survey monument. See Sht. 45 for Rigid Barrier Deflection Detail.

CURVE DATA

Station	Delta	R	T	C	Lc
84+50 to 96+00	1°59'54"	1998.86'	34.86'	69.71'	69.72'
96+00 to 107+50	7°00'00"	2183.03'	133.52'	266.54'	266.71'
88+73.81 to 91+40.52	7°00'05"	2182.58'	133.52'	266.54'	266.71'
91+40.52 to 95+29.57	13°37'00"	1637.03'	195.44'	388.13'	389.05'
95+29.57 to 107+47	27°27'26"	11712.6667'	14757.6857'	266.54'	266.71'
107+47 to 107+50	27°27'26"	11712.6667'	14757.6857'	266.54'	266.71'

LEGEND



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SIGNATURE
4/30/24
EXPIRATION DATE OF LICENSE

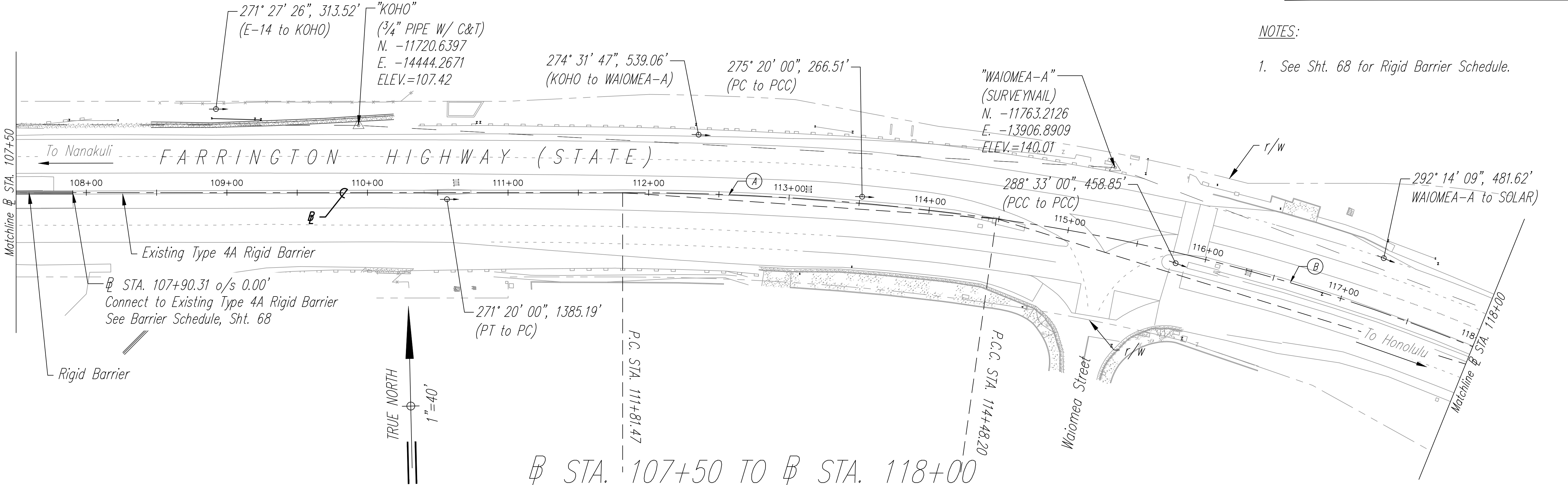
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN - 6
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 4 OF 7 SHEETS

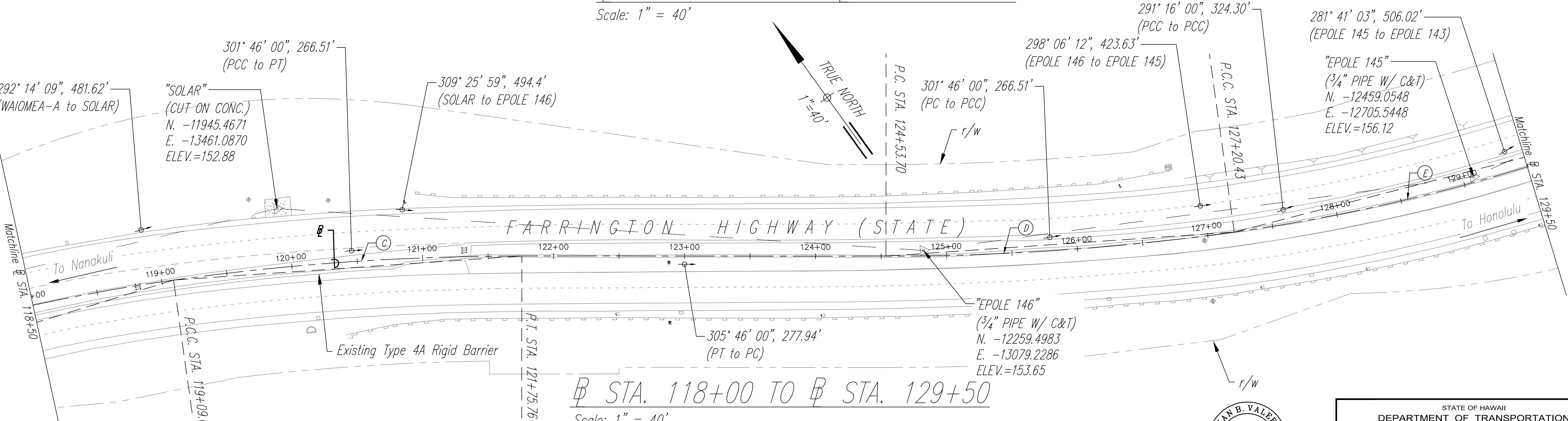
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	33	62

NOTES:
1. See Sht. 68 for Rigid Barrier Schedule.



STA. 107+50 TO STA. 118+00

Scale: 1" = 40'



STA. 118+00 TO STA. 129+50

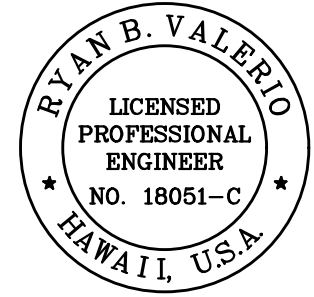
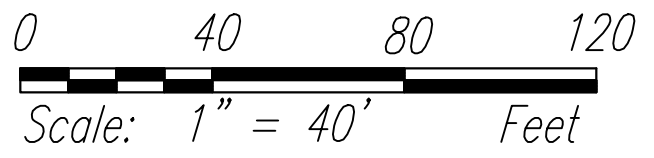
Scale: 1" = 40'

CURVE DATA

(A) $\Delta = 8^{\circ}01'47''$ $\Delta/2 = 4^{\circ}01'54''$ $R = 1903.28'$ $T = 133.59'$ $C = 266.52'$ $L_c = 266.74'$	(B) $\Delta = 18^{\circ}26'00''$ $\Delta/2 = 9^{\circ}13'00''$ $R = 1432.40'$ $T = 232.43'$ $C = 458.85'$ $L_c = 460.84'$	(C) $\Delta = 8^{\circ}00'00''$ $\Delta/2 = 4^{\circ}00'00''$ $R = 1910.29'$ $T = 133.58'$ $C = 266.51'$ $L_c = 266.73'$	(D) $\Delta = 8^{\circ}00'00''$ $\Delta/2 = 4^{\circ}00'00''$ $R = 1910.28'$ $T = 133.58'$ $C = 266.51'$ $L_c = 266.73'$	(E) $\Delta = 13^{\circ}00'00''$ $\Delta/2 = 6^{\circ}30'00''$ $R = 1432.40'$ $T = 163.20'$ $C = 324.30'$ $L_c = 325'$
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LEGEND

Right-of-Way



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SIGNATURE: *R. B. Valero*

4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN - 7
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 5 OF 7 SHEETS

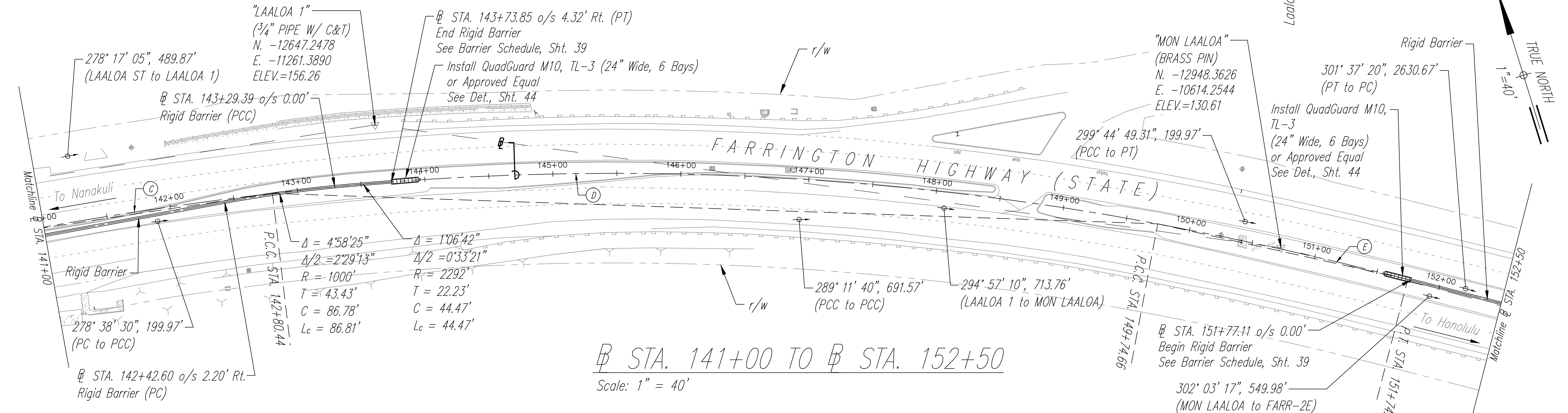
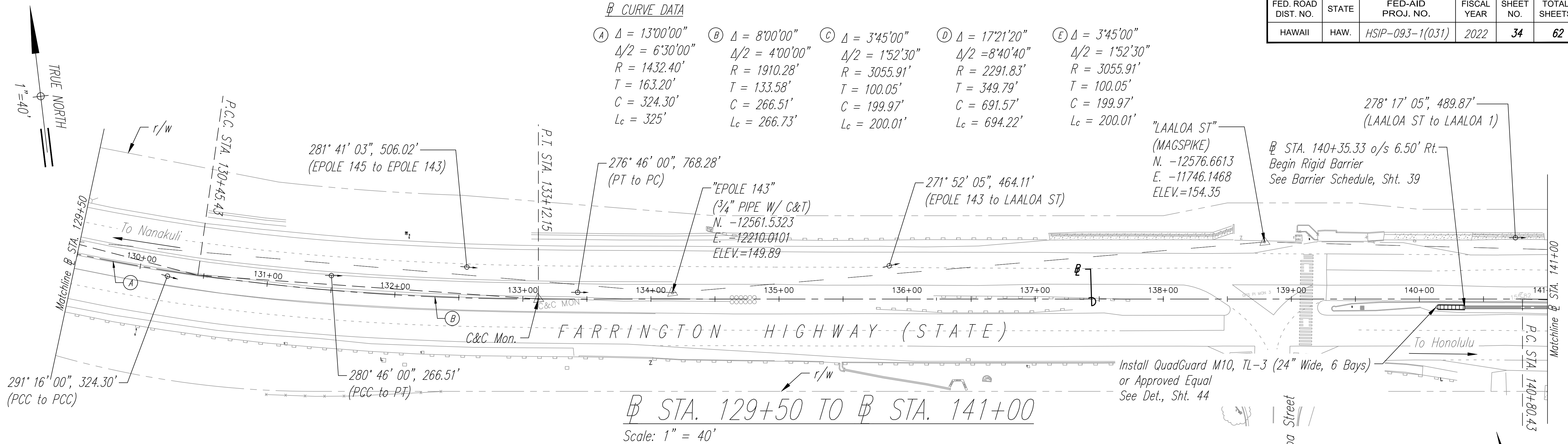
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

ORIGINAL PLAN
No.

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	34	62

Ⓟ CURVE DATA

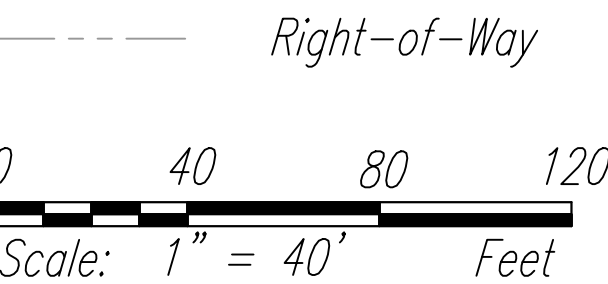
Ⓐ $\Delta = 13^{\circ}00'00''$ $\Delta/2 = 6^{\circ}30'00''$ $R = 1432.40'$ $T = 163.20'$ $C = 324.30'$ $L_c = 325'$	Ⓑ $\Delta = 8^{\circ}00'00''$ $\Delta/2 = 4^{\circ}00'00''$ $R = 1910.28'$ $T = 133.58'$ $C = 266.51'$ $L_c = 266.73'$	Ⓒ $\Delta = 3^{\circ}45'00''$ $\Delta/2 = 1^{\circ}52'30''$ $R = 3055.91'$ $T = 100.05'$ $C = 199.97'$ $L_c = 200.01'$	Ⓓ $\Delta = 17^{\circ}21'20''$ $\Delta/2 = 8^{\circ}40'40''$ $R = 2291.83'$ $T = 349.79'$ $C = 691.57'$ $L_c = 694.22'$	Ⓔ $\Delta = 3^{\circ}45'00''$ $\Delta/2 = 1^{\circ}52'30''$ $R = 3055.91'$ $T = 100.05'$ $C = 199.97'$ $L_c = 200.01'$
---	---	---	--	---



NOTES:

- See Shts. 37 and 38 for Rumble Strip Details and Schedule.
- See Sht. 39 for Rigid Barrier Schedule.
- Contractor shall follow the existing ground surface when profiling the concrete barrier. To avoid sudden dips or rises in the concrete barrier profile, contractor shall survey the existing ground at 20 feet spacing.

LEGEND



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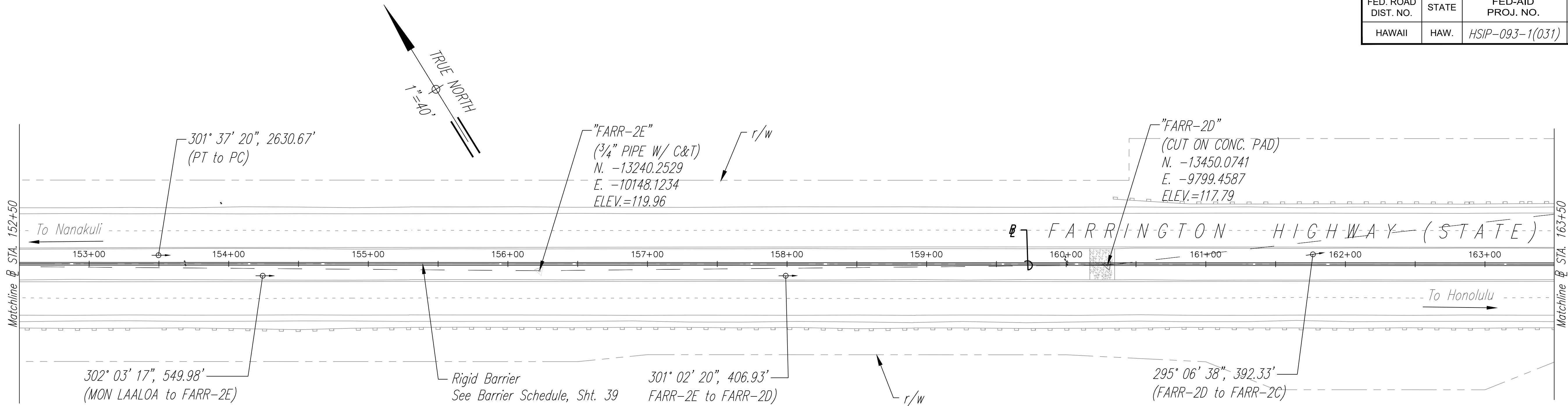
SIGNATURE
R. B. Valero
EXPIRATION DATE
OF LICENSE
4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

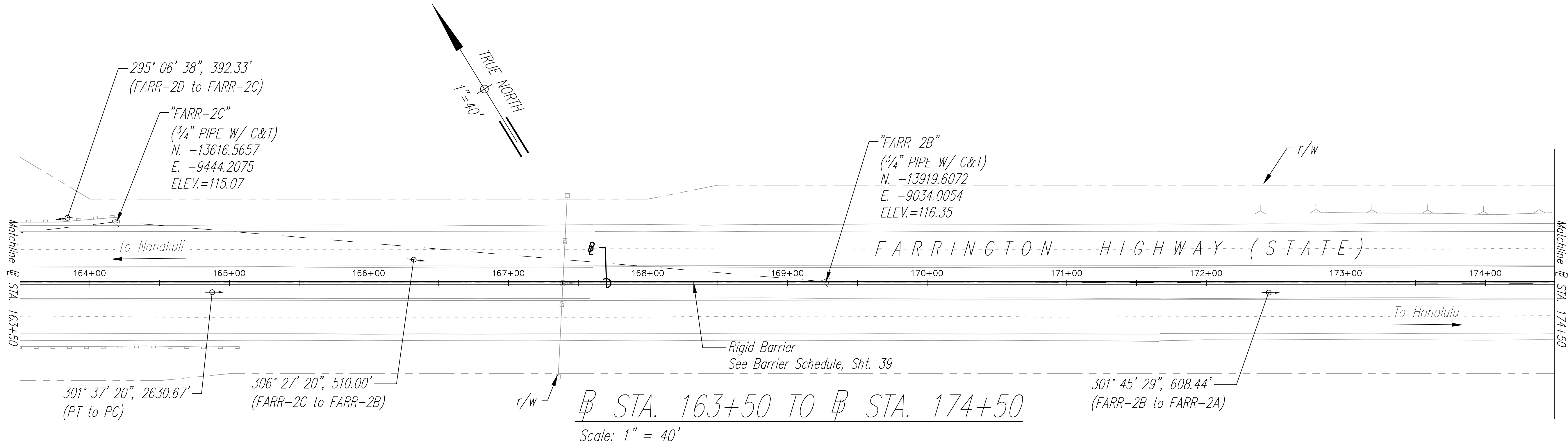
ROADWAY PLAN - 8
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 8 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	35	62



STA. 152+50 TO STA. 163+50
Scale: 1" = 40'



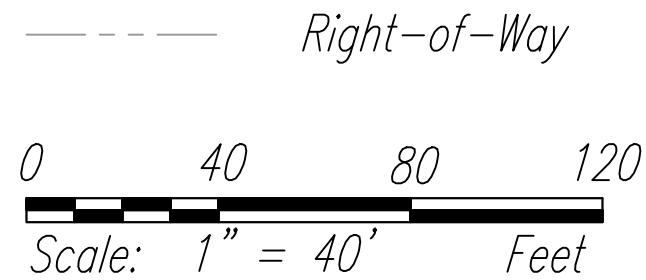
STA. 163+50 TO STA. 174+50
Scale: 1" = 40'

NOTES:

- See Shts. 37 and 38 for Rumble Strip Details and Schedule.
- See Sht. 39 for Rigid Barrier Schedule.
- Contractor shall follow the existing ground surface when profiling the concrete barrier. To avoid sudden dips or rises in the concrete barrier profile, contractor shall survey the existing ground at 20 feet spacing.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

LEGEND



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OR UNDER MY SUPERVISION.

SIGNATURE

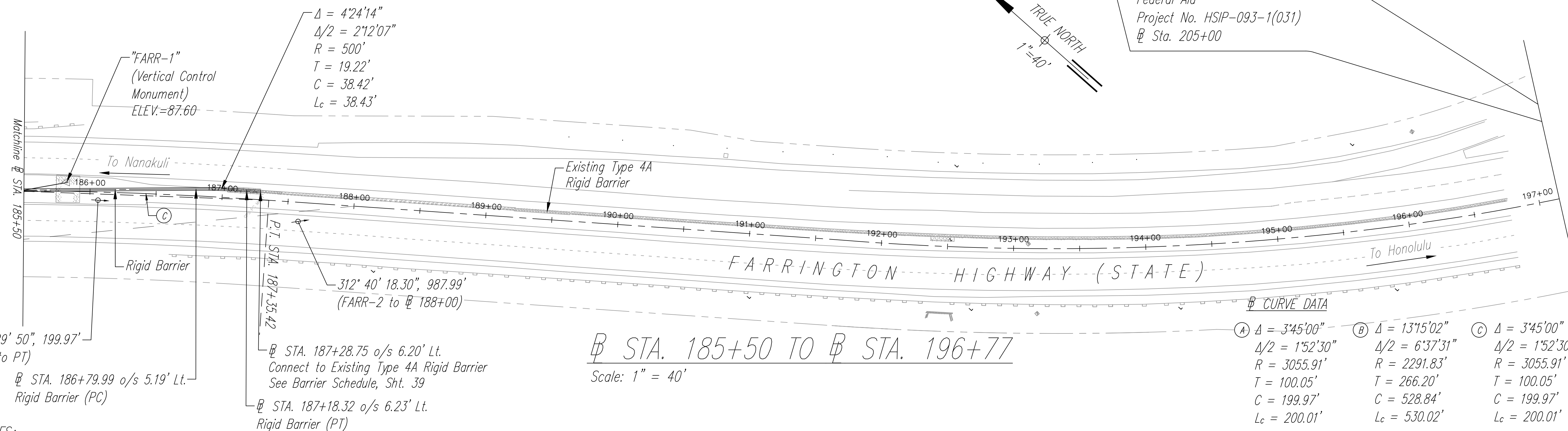
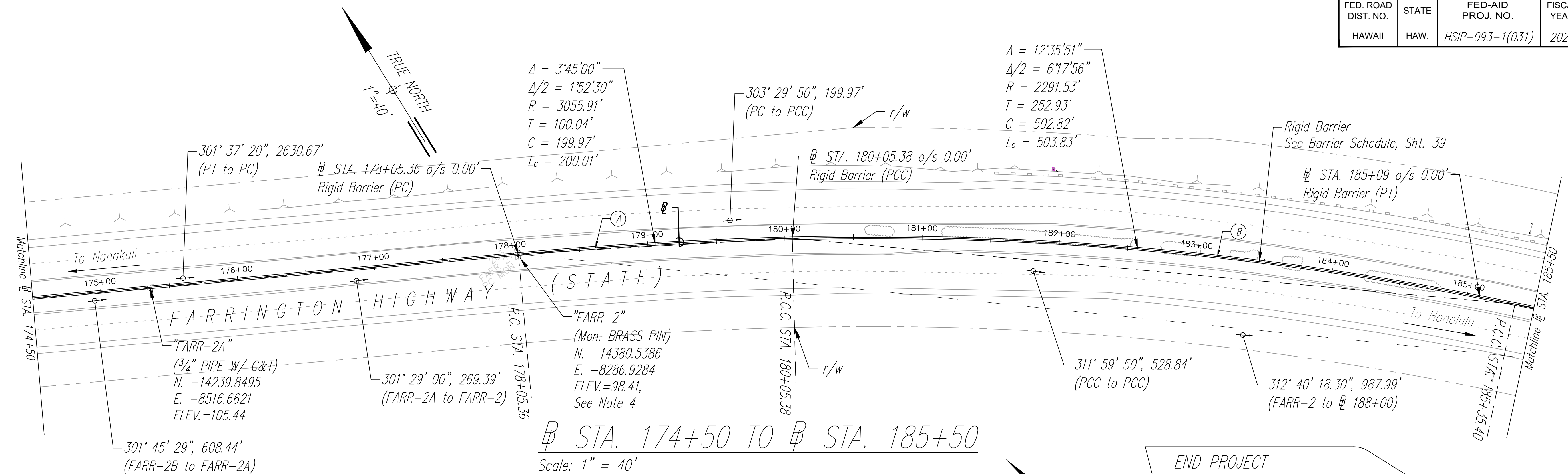
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN - 9
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 9 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	36	62

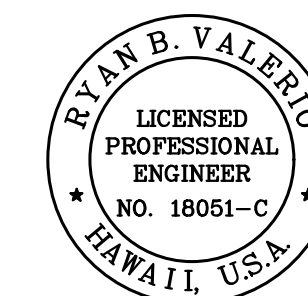
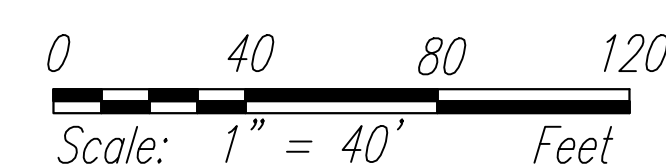


NOTES:

1. See Shts. 37 and 38 for Rumble Strip Details and Schedule.
2. See Sht. 39 for Rigid Barrier Schedule.
3. Contractor shall follow the existing ground surface when profiling the concrete barrier. To avoid sudden dips or rises in the concrete barrier profile, contractor shall survey the existing ground at 20 feet spacing.
4. Contractor shall field locate existing survey monuments. If an existing survey monument is within 1.5' of the proposed rigid barrier centerline, Contractor shall deflect the barrier alignment to avoid conflict with the existing survey monument. See Sht. 45 for Rigid Barrier Deflection Detail.

LEGEND

Right-of-Way



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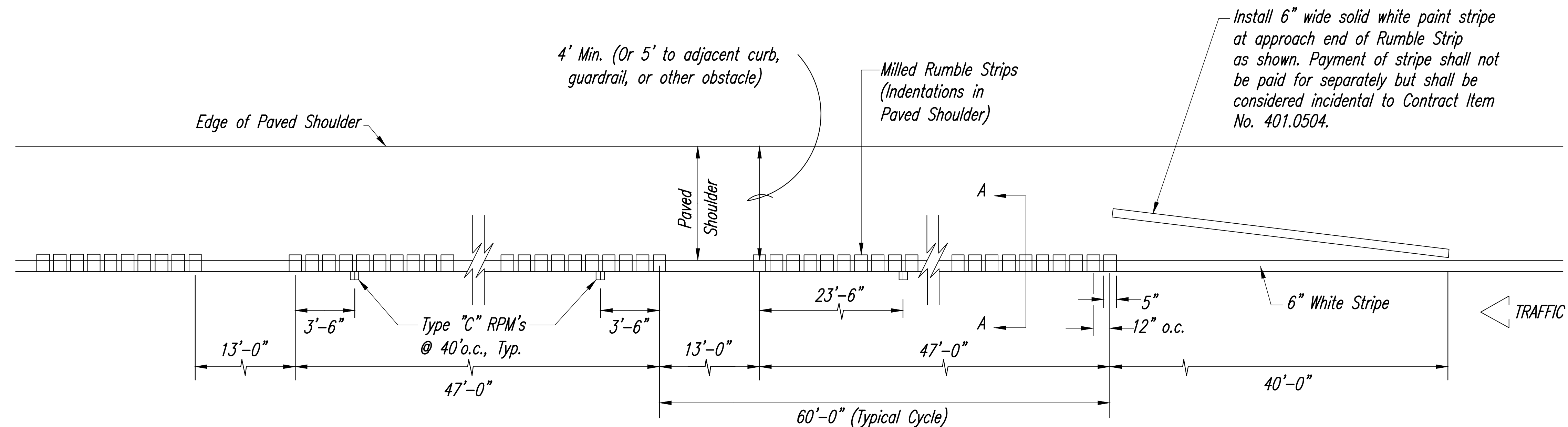
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN - 10
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

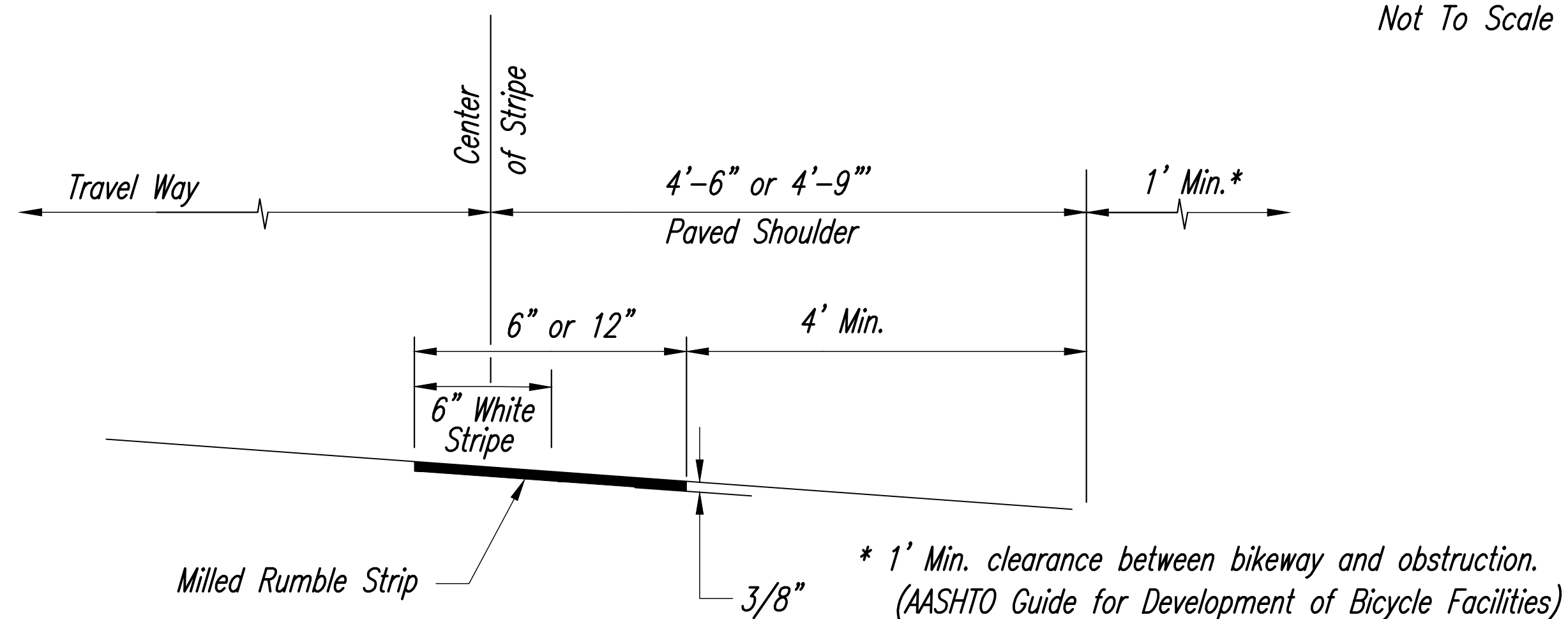
Date: November 2021

SHEET No. 10 OF 10 SHEETS

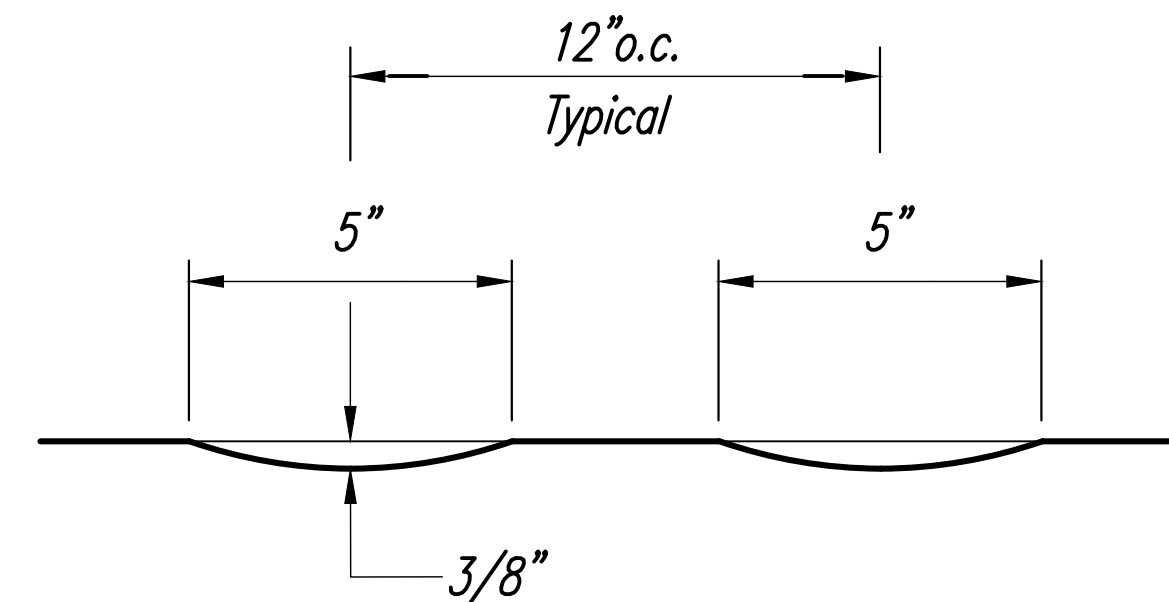
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	37	62



PLAN – BICYCLE FRIENDLY MILLED EDGELINE RUMBLE STRIP
Not To Scale



SECTION A-A
Not To Scale



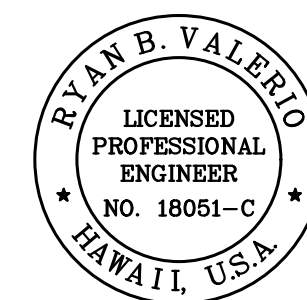
CROSS SECTION – BICYCLE FRIENDLY MILLED EDGELINE RUMBLE STRIP
Not To Scale

NOTES:

1. Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement markings prior to installation.
2. Raised pavement markers shall be installed on level surface between rumble strips. Do not install raised pavement markers inside the milled area.
3. Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
4. Hot spray thermoplastic shall be used for solid line markings within the milled centerline rumble strip area.
5. From Sta. 218+62 to Sta. 220+02, install 6" rumble strips to provide adequate widths and clearance from existing metal guardrail for future bikeway.

BICYCLE FRIENDLY MILLED EDGELINE RUMBLE STRIP INSTALLATION SCHEDULE (OUTSIDE SHOULDER)

EASTBOUND				WESTBOUND			
BEGIN STATION	END STATION	RUMBLE STRIPS (LF)	LENGTH (IN)	BEGIN STATION	BEGIN STATION	RUMBLE STRIPS (LF)	LENGTH (IN)
218+62	220+02	140	6 (See Note 5)	218+62	23+74	3729	12
220+02	10+67	2285	12	24+87	26+97	210	12
21+99	23+74	175	12	33+26	41+59	841	12
24+87	38+78	1377	12	43+98	48+62	459	12
43+76	48+61	493	12	81+89	86+58	470	12
76+29	79+97	368	12	99+46	107+47	802	12
90+57	105+36	1494	12	142+01	146+54	459	12
144+99	196+77	5165	12	150+34	188+00	3782	12



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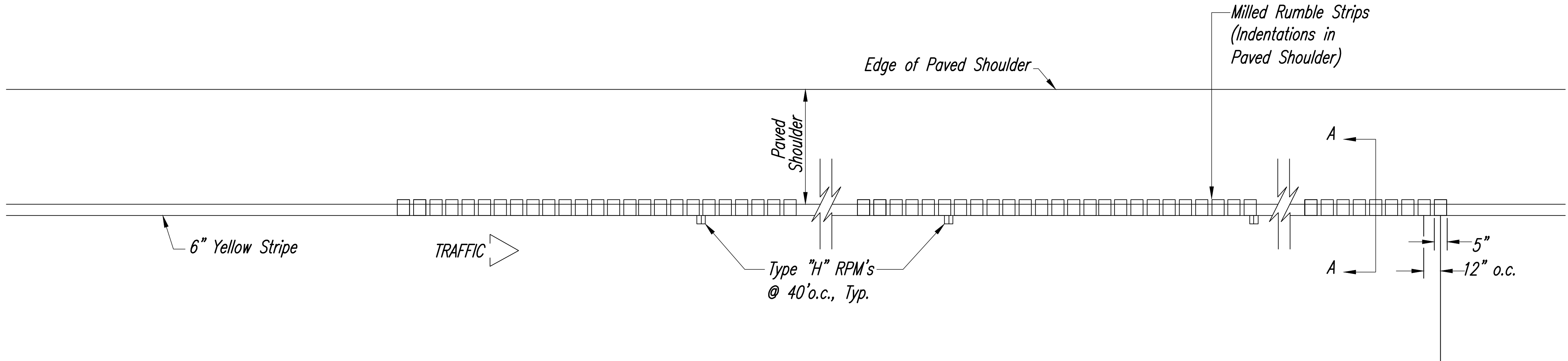
Signature: *R. B. Valero*
EXPIRATION DATE OF LICENSE: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

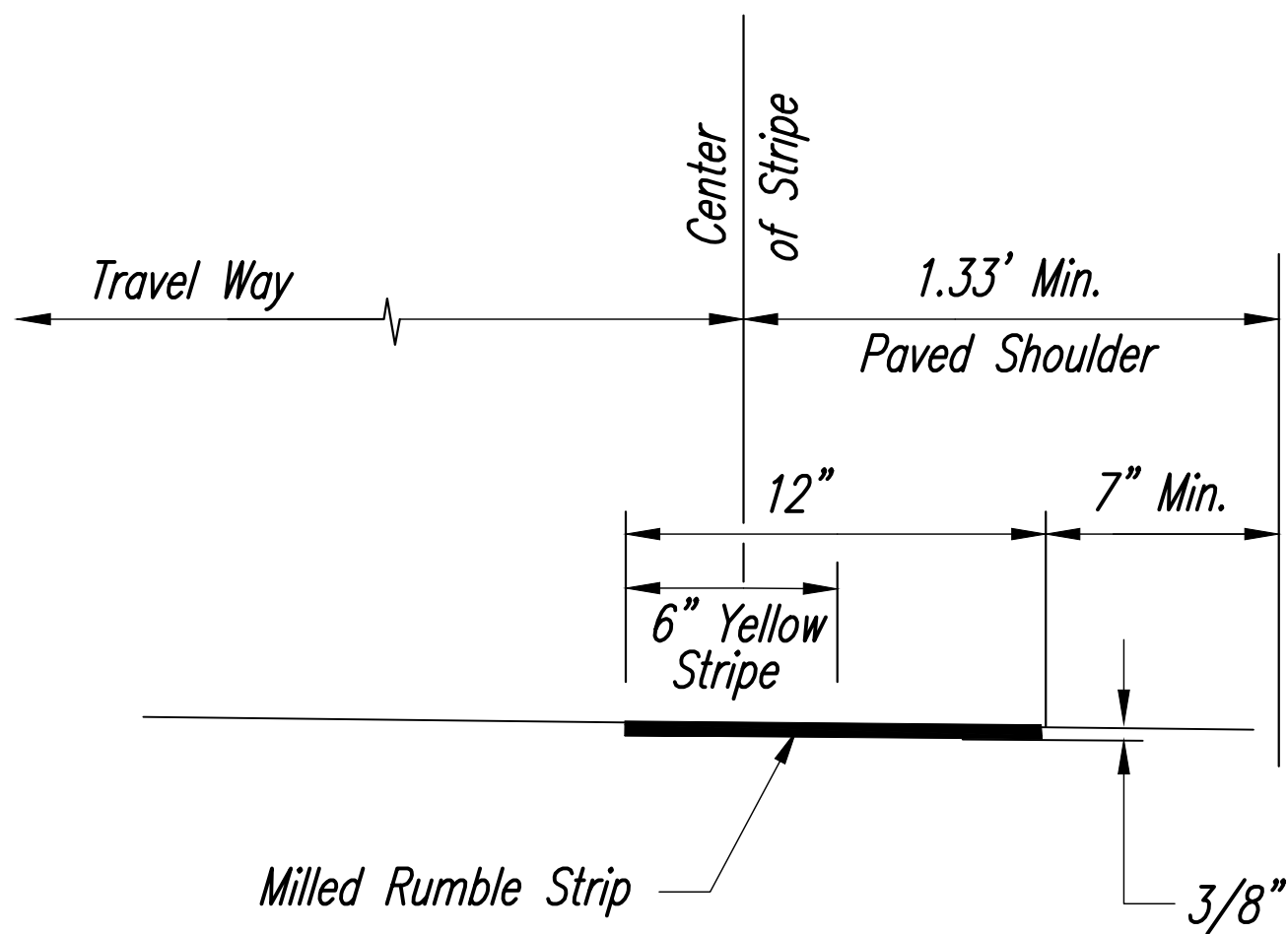
RUMBLE STRIP DETAIL – 1

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

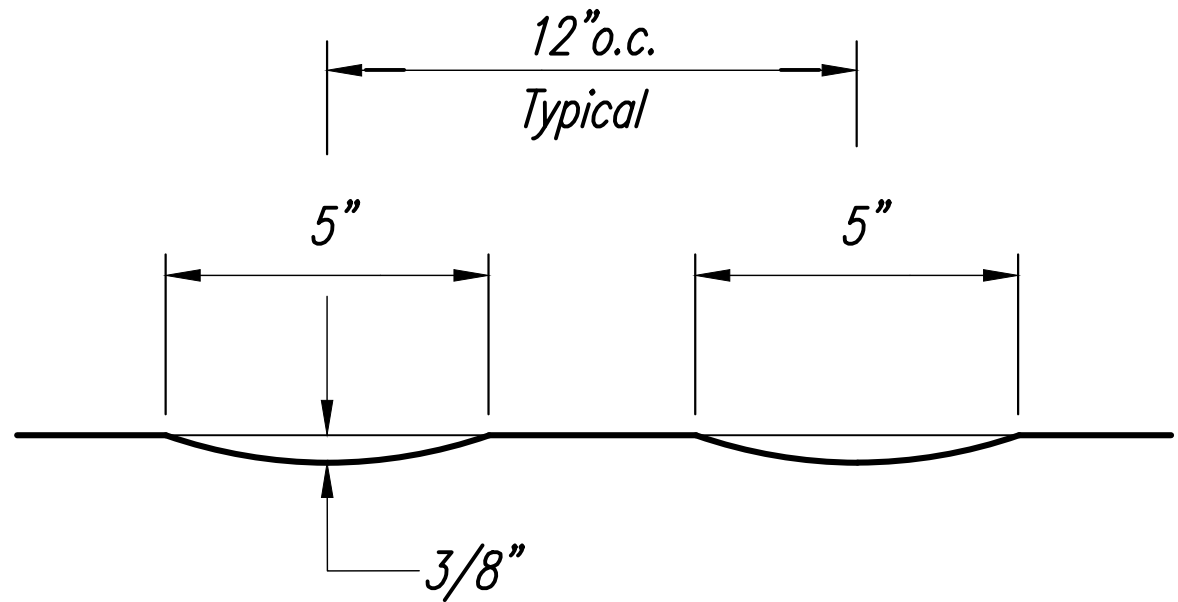
Date: November 2021



PLAN – CONTINUOUS MILLED SHOULDER RUMBLE STRIP
Not To Scale



SECTION A-A
Not To Scale

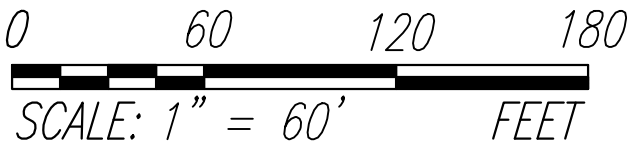


CROSS SECTION
Not To Scale

- NOTES:
1. Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement markings prior to installation.
 2. Raised pavement markers shall be installed on level surface between rumble strips. Do not install raised pavement markers inside the milled area.
 3. Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
 4. Hot spray thermoplastic shall be used for solid line markings within the milled centerline rumble strip area.
 5. Pavement shoulder width based on available topographic information. Contractor to inform the engineer if less than 1.33' of paved shoulder exists (after pavement widening).

CONTINUOUS MILLED EDGELINE RUMBLE STRIP INSTALLATION SCHEDULE (INSIDE SHOULDER)

EASTBOUND				WESTBOUND			
BEGIN STATION	END STATION	RUMBLE STRIPS (LF)	LENGTH (IN)	BEGIN STATION	END STATION	RUMBLE STRIPS (LF)	LENGTH (IN)
219+81	5+24	1759	12	219+80	5+23	1757	12
6+72	15+49	876	12	6+71	15+42	874	12
17+53	23+06	554	12	22+34	23+74	141	12
31+29	41+68	1034	12	24+87	26+97	210	12
43+56	48+62	509	12	28+94	41+67	1278	12
77+22	107+26	3011	12	46+77	48+62	185	12
142+24	144+05	181	12	76+30	107+26	3091	12
149+75	196+77	4700	12	149+75	196+75	4703	12



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RUMBLE STRIP DETAIL – 2
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

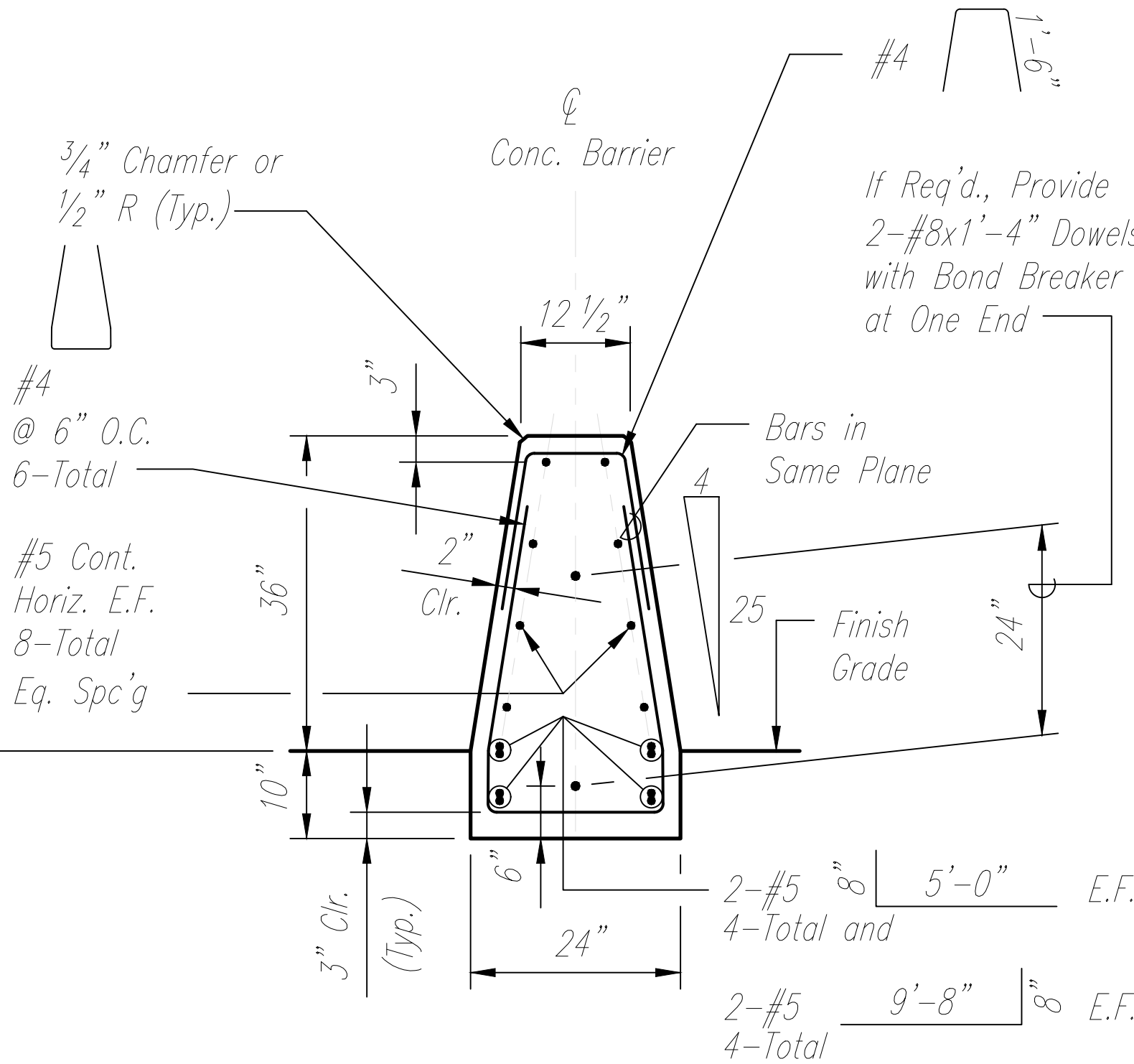
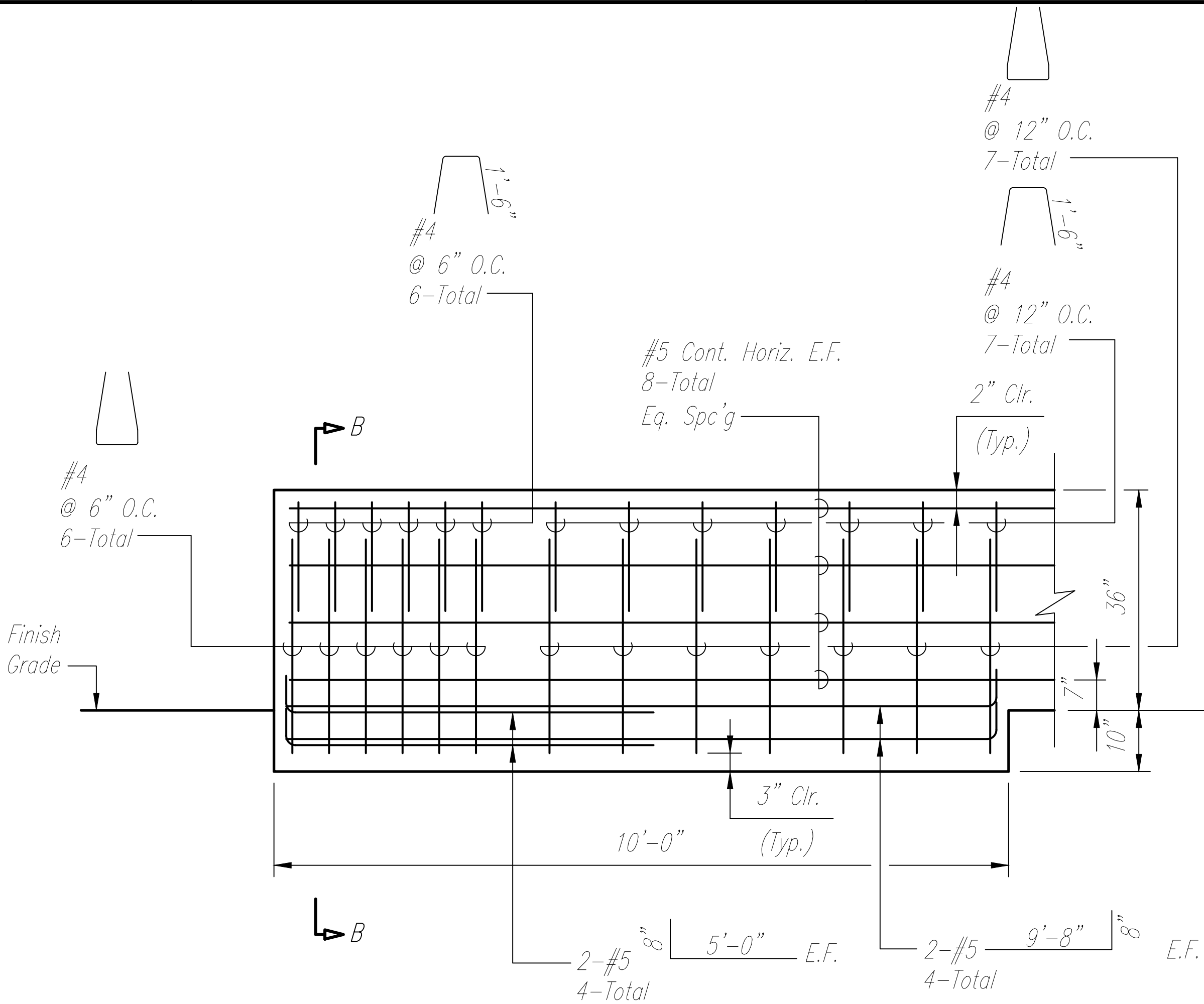
SHEET No. 2 OF 2 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

ORIGINAL PLAN
NOTE BOOK
No. _____

CONCRETE RIGID BARRIER SCHEDULE

STA. LOCATION		CONCRETE RIGID BARRIER TYPE
FROM	TO	
71+54.30	76+45.34	Type 6A
76+45.34	76+60.34	Transition from Type 6A to Type 4A
78+78.24	78+93.24	Transition from Type 4A to Type 6A
78+93.24	85+54.55	Type 6A
85+69.55	88+38.81	Type 6A
88+38.81	88+73.81	Transition from Type 6A to Type 6GA
88+73.81	97+96.27	Type 6GA
97+96.27	98+31.27	Transition from Type 6GA to Type 6A
98+31.27	107+75.31	Type 6A
107+75.31	107+90.31	Transition from Type 6A to Type 4A
140+35.33	143+73.85	Type 6GA
151+77.11	177+70.36	Type 6A
177+70.36	178+05.36	Transition from Type 6A to Type 6GA
178+05.36	186+68.91	Type 6GA
186+68.91	187+03.80	Transition from Type 6GA to Type 6A
187+03.80	187+13.78	Type 6A
187+13.78	187+28.75	Transition from Type 6A to Type 4A

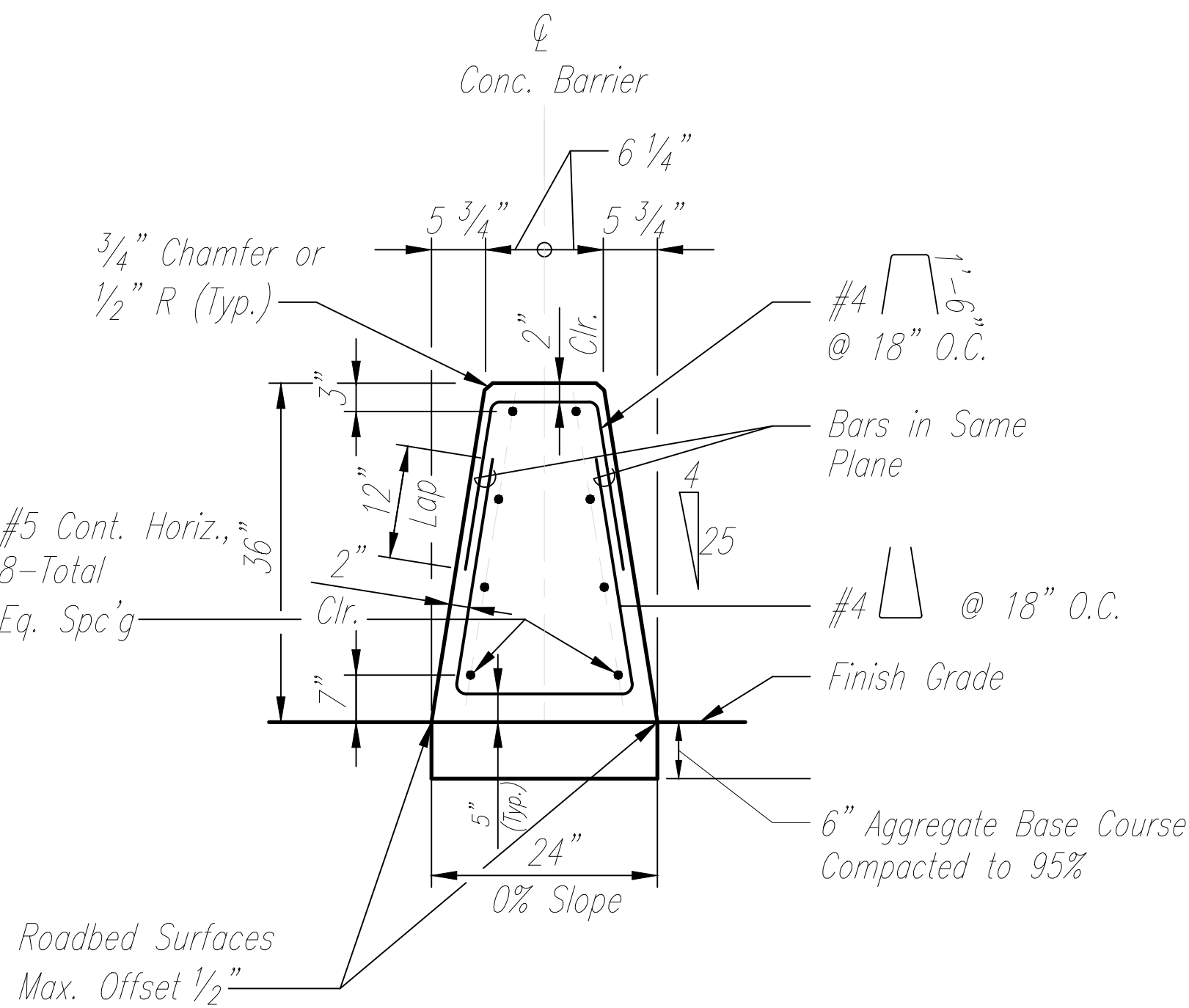


SECTION "B-B"

SINGLE SLOPE RIGID BARRIER TYPE 6A END ANCHORAGE
Not to Scale

NOTES:

1. Footing monolithic or doweled with 2-#8x1'-4" @ 2'-0" O.C. The footing is required at single slope rigid barrier ends and at interruptions in rigid barrier.
2. 10" single slope rigid barrier footing extends 10' back from structure.
3. Control point for offset distance located at centerline of concrete barrier.
4. See Roadway Plans for barrier delineation locations.



SINGLE SLOPE RIGID BARRIER TYPE 6A
Not to Scale



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R. B. Valero

4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 1

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

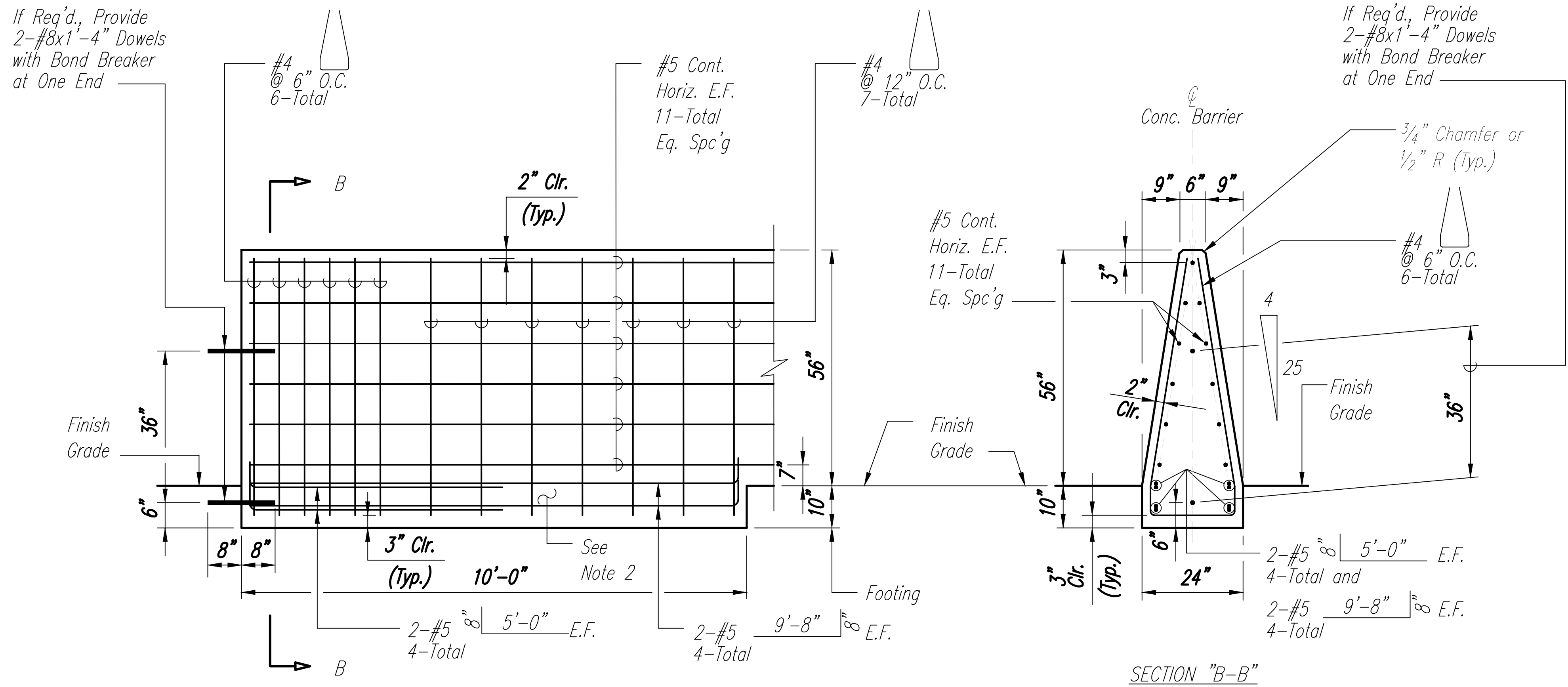
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

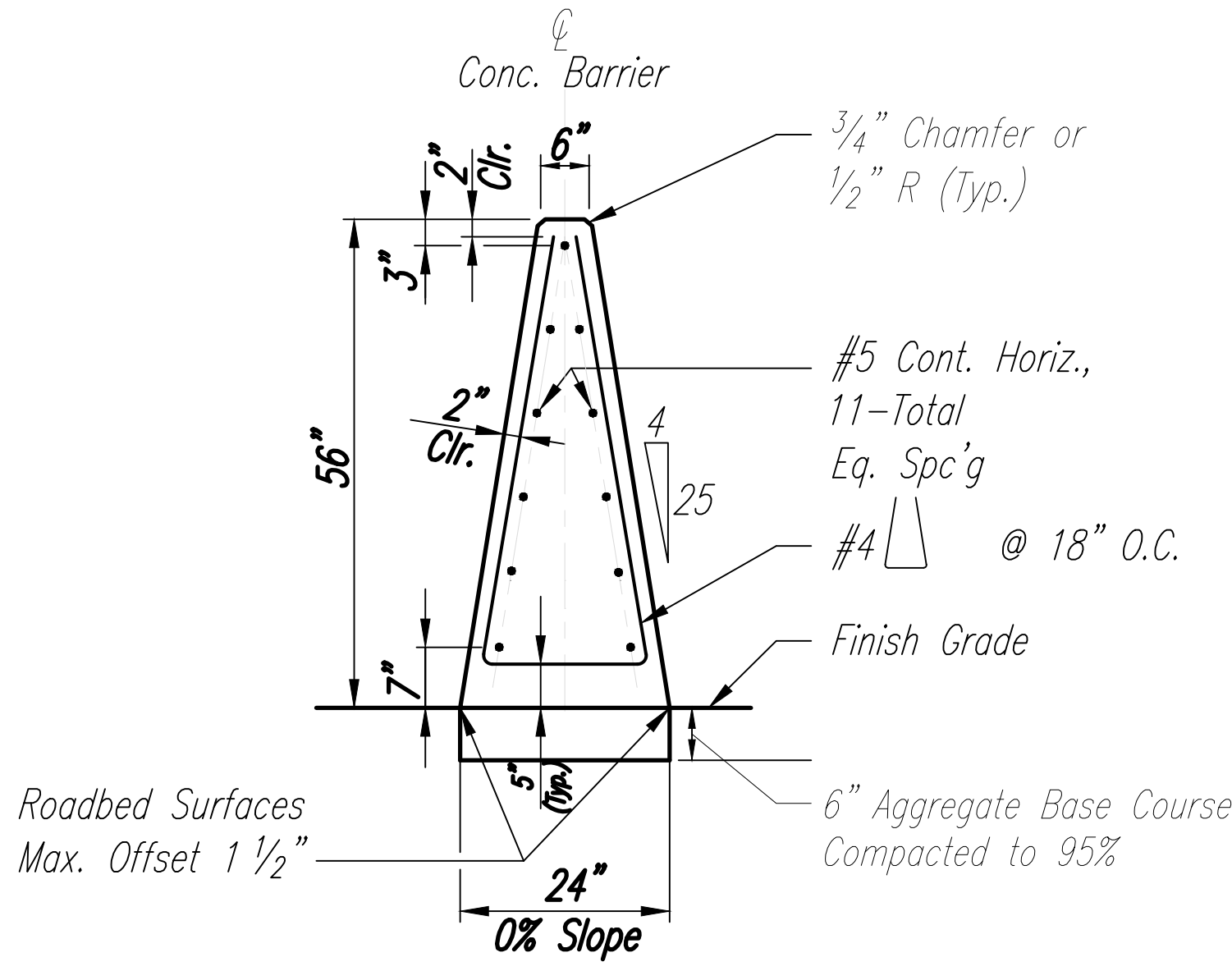
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	40	62

NOTES:

1. Footing monolithic or doweled with 2-#8x8" @ 2'-0". The footing is required at single slope rigid barrier ends and at interruptions in single slope barrier.
2. Control point for offset distance located at centerline of concrete barrier.
3. See Roadway Plans for barrier delineation locations.



SINGLE SLOPE RIGID BARRIER TYPE 6G
END ANCHORAGE
Not to Scale



SINGLE SLOPE RIGID BARRIER TYPE 6GA
(Monolithic concrete glare screen/barrier)
Not to Scale



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Date: 4/30/24

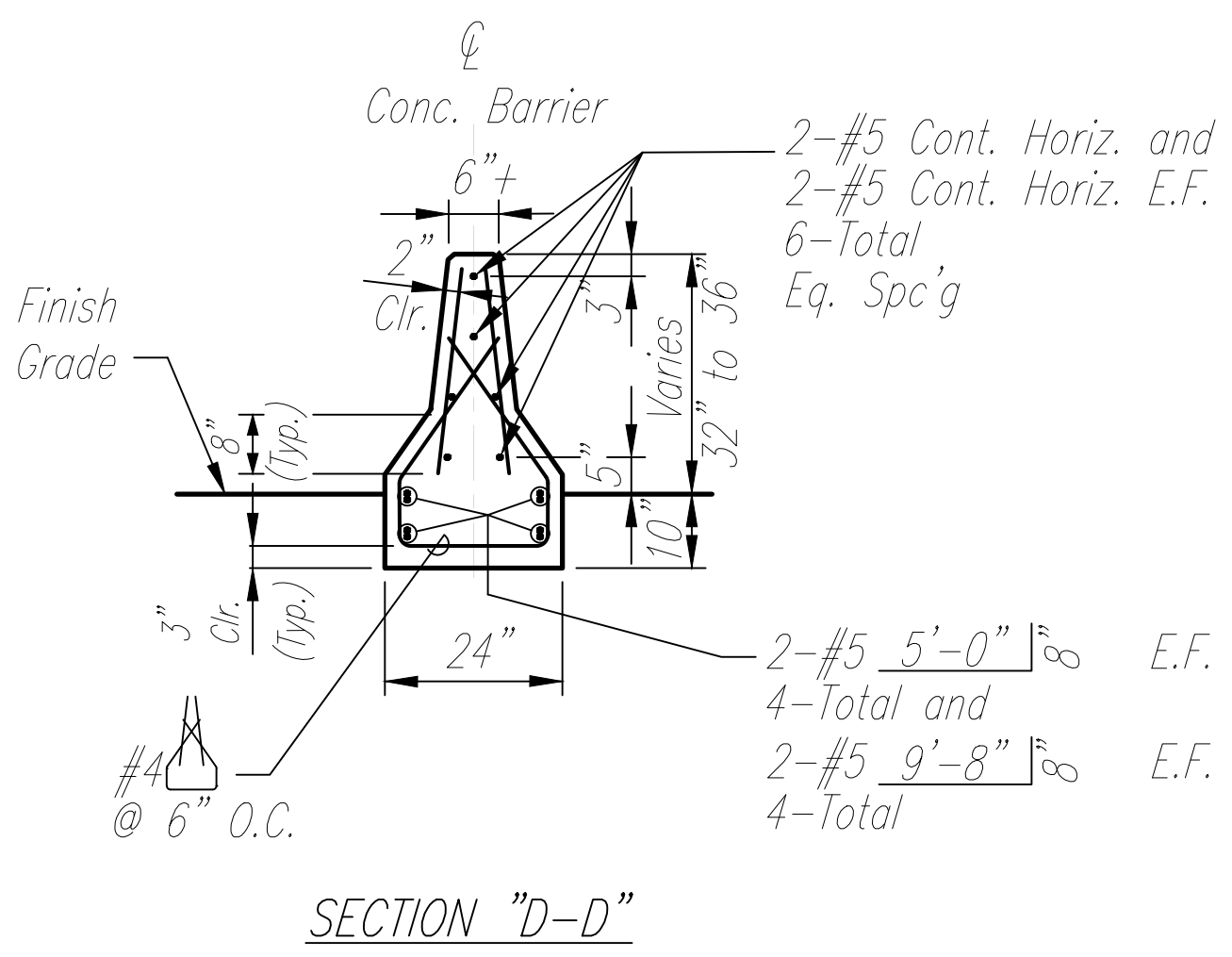
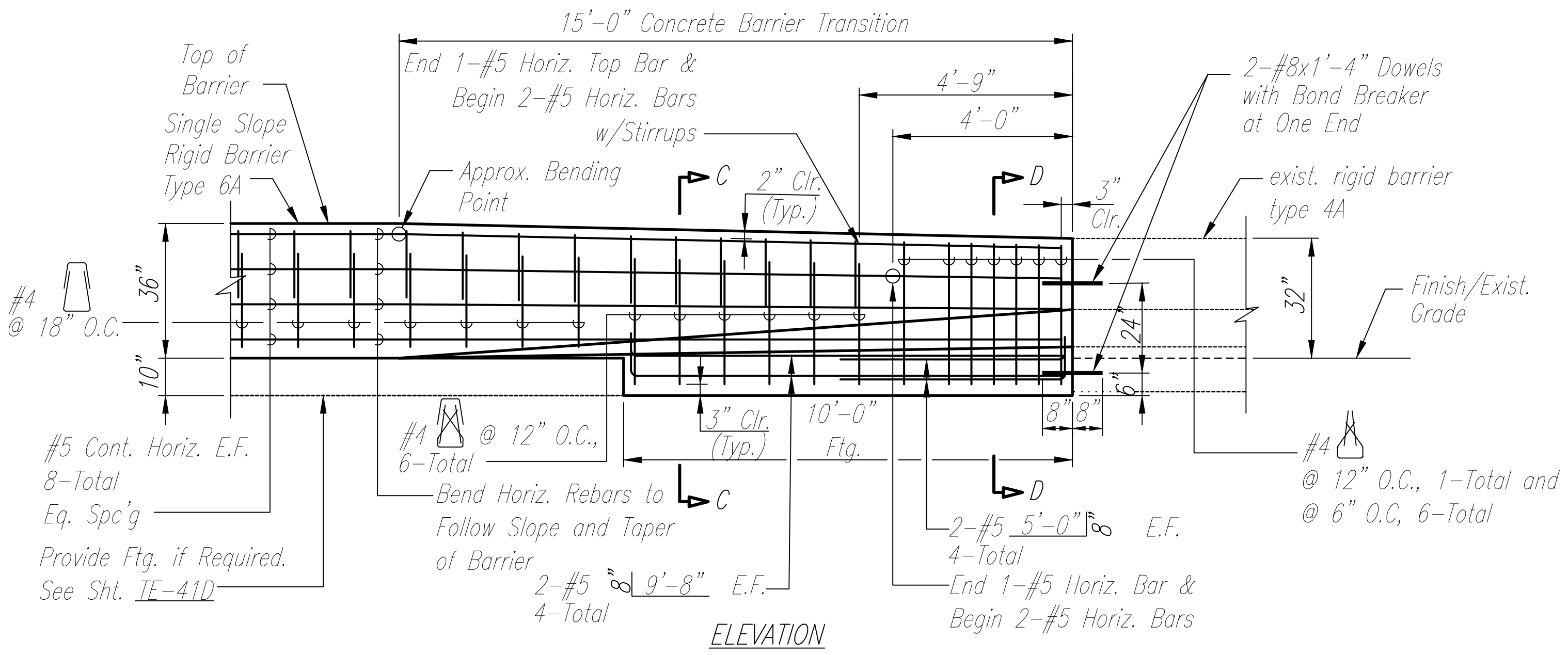
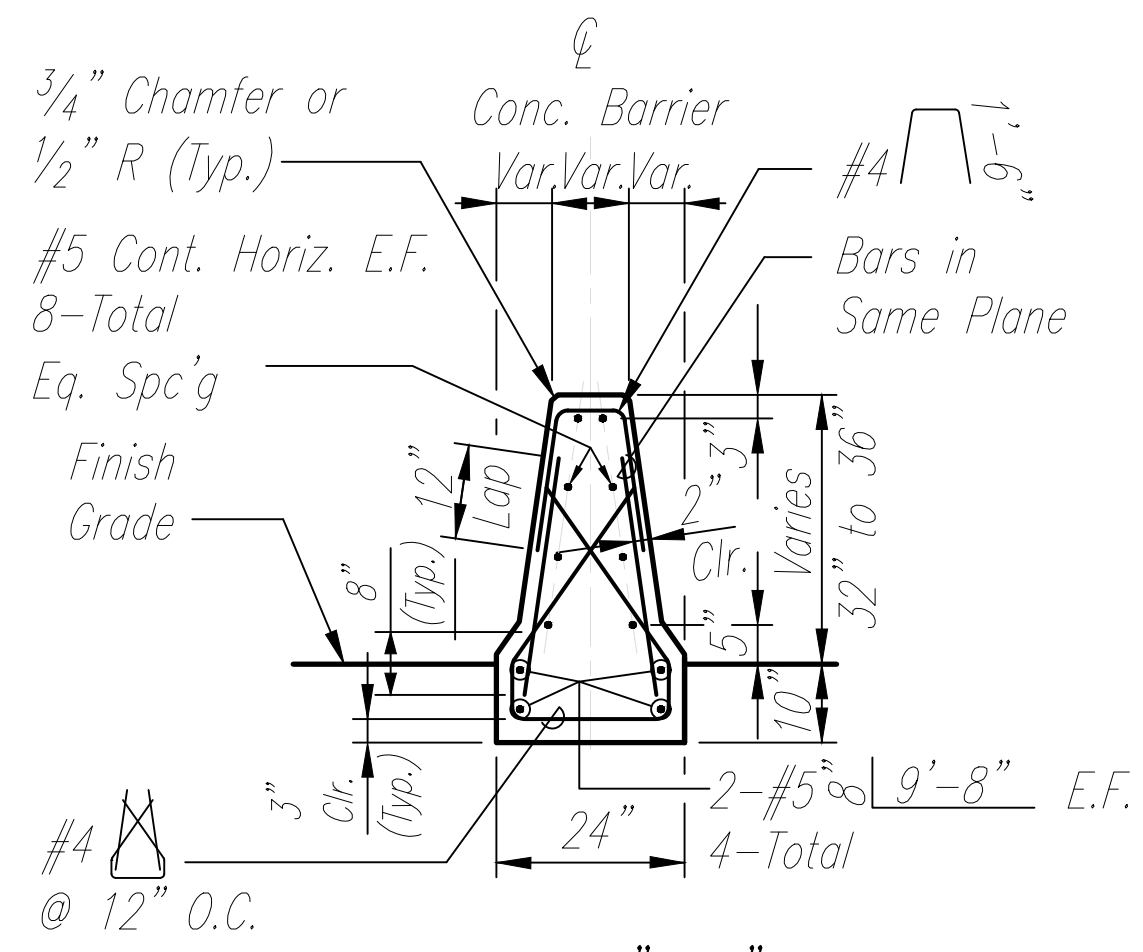
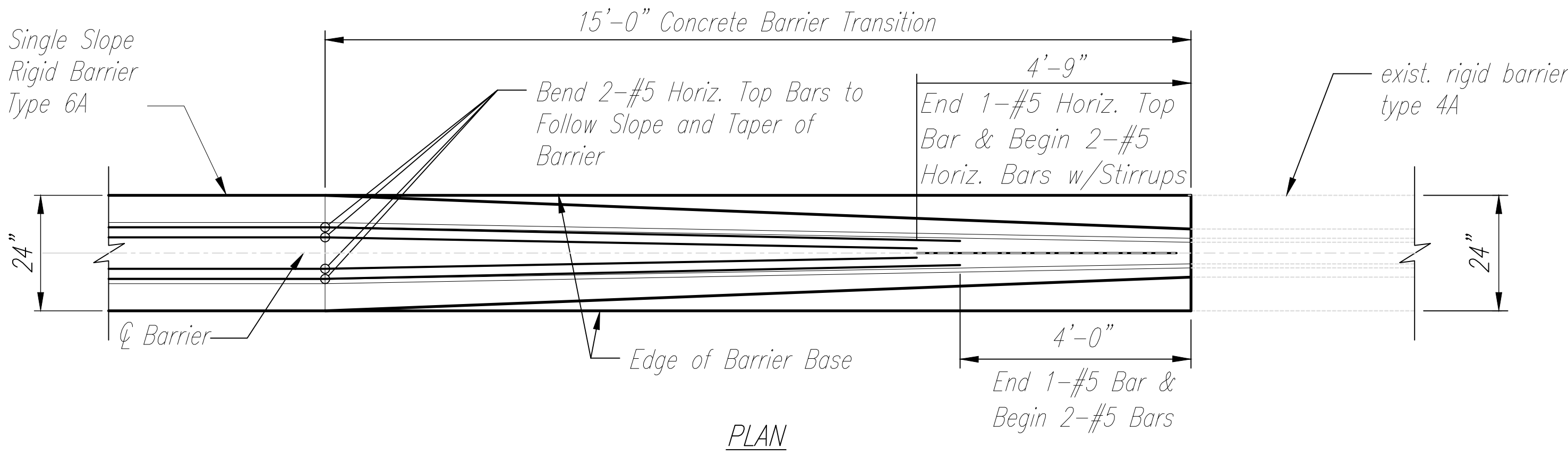
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 2
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	41	62

NOTES:

1. Footing monolithic or doweled with 2-#8x1'-4" @ 2'-0" O.C. The footing is required at single slope rigid barrier ends and at interruptions in rigid barrier.
2. 10" single slope rigid barrier footing extends 10' back from structure.



TRANSITION SINGLE SLOPE RIGID BARRIER TYPE 6A
TO RIGID BARRIER TYPE 4A
Not to Scale

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



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

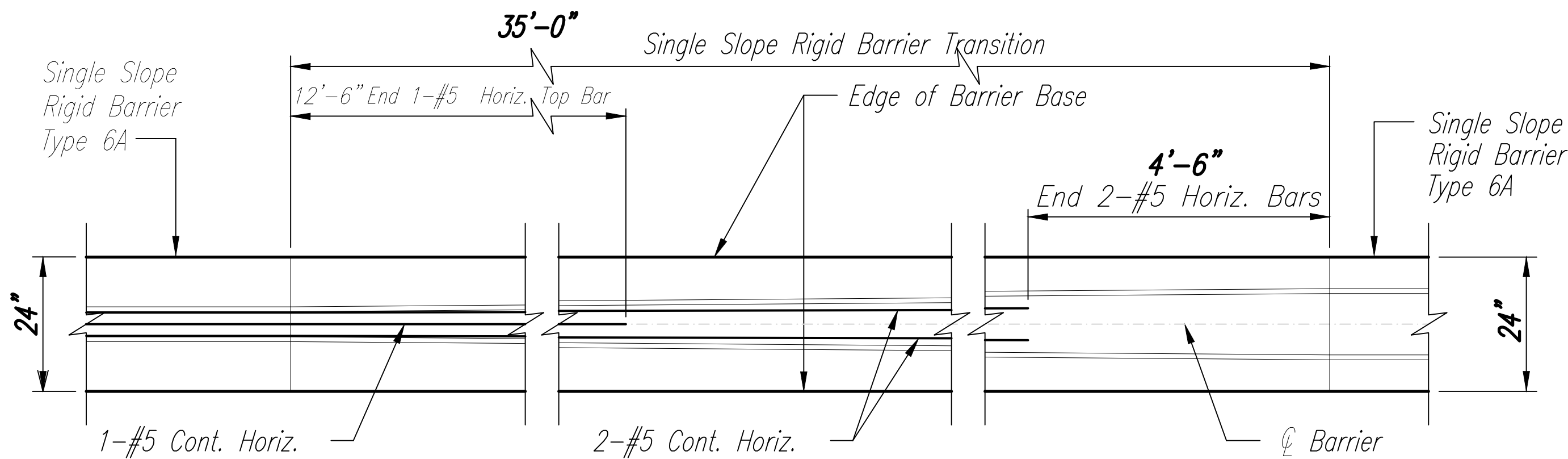
BARRIER DETAILS - 3
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 3 OF 7 SHEETS

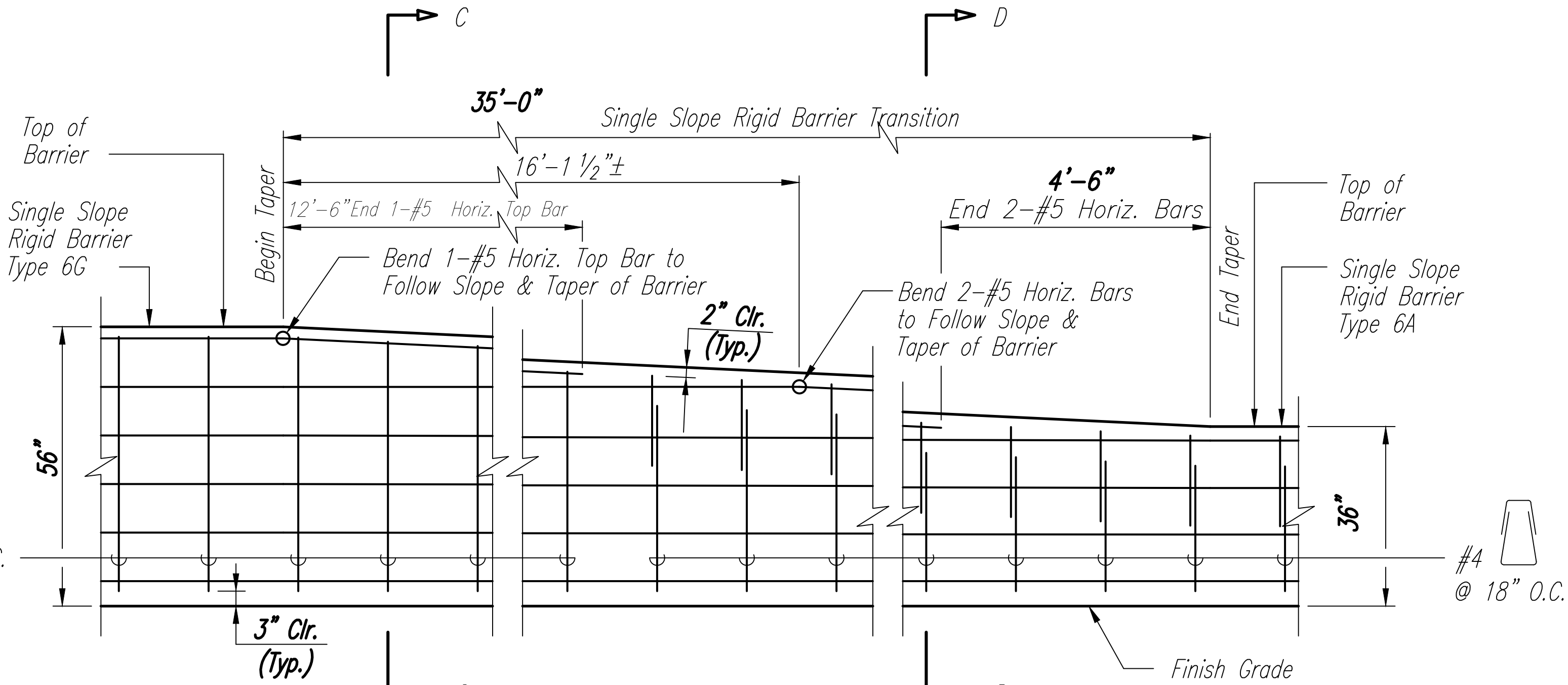
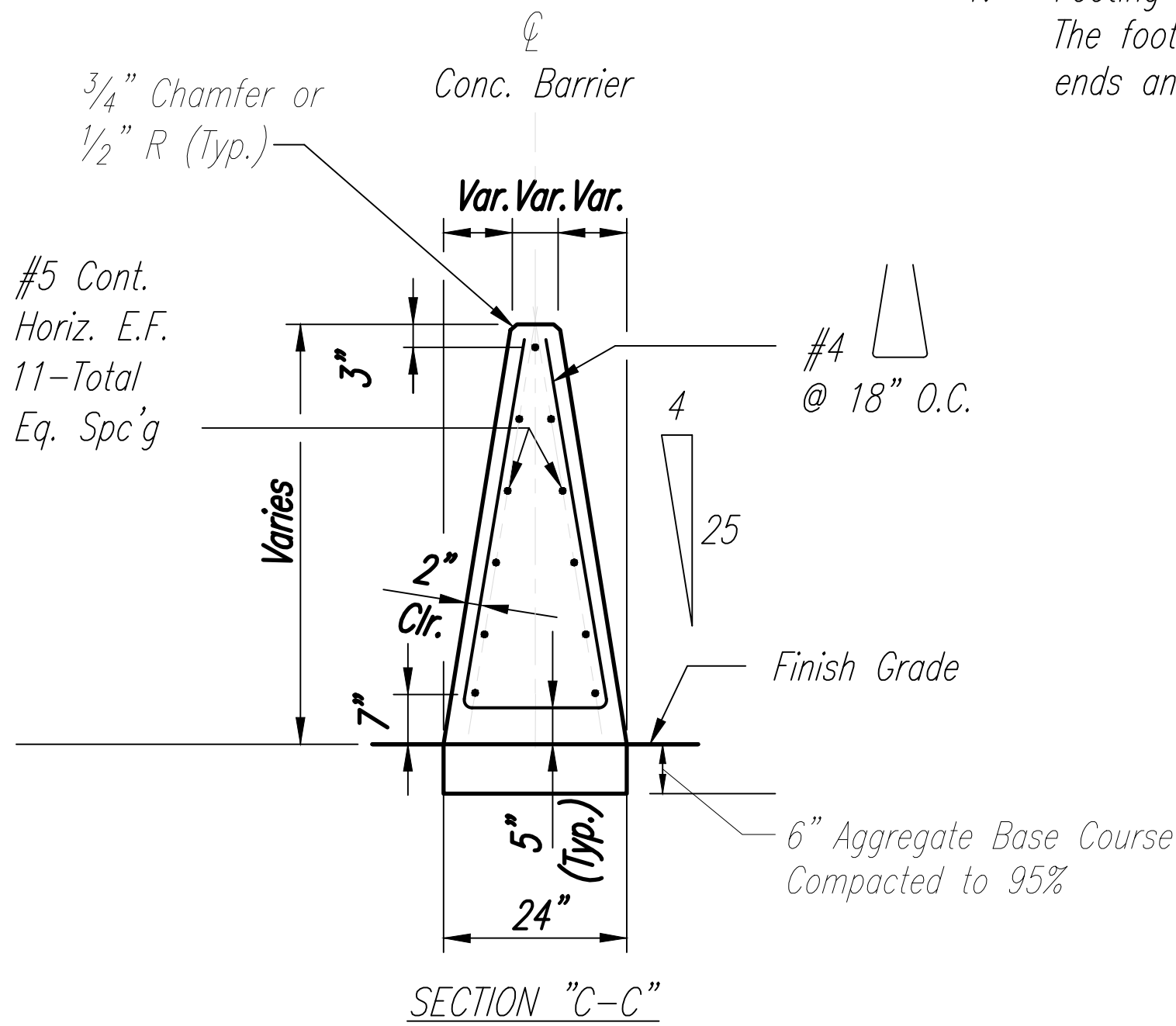
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	42	62

NOTE:

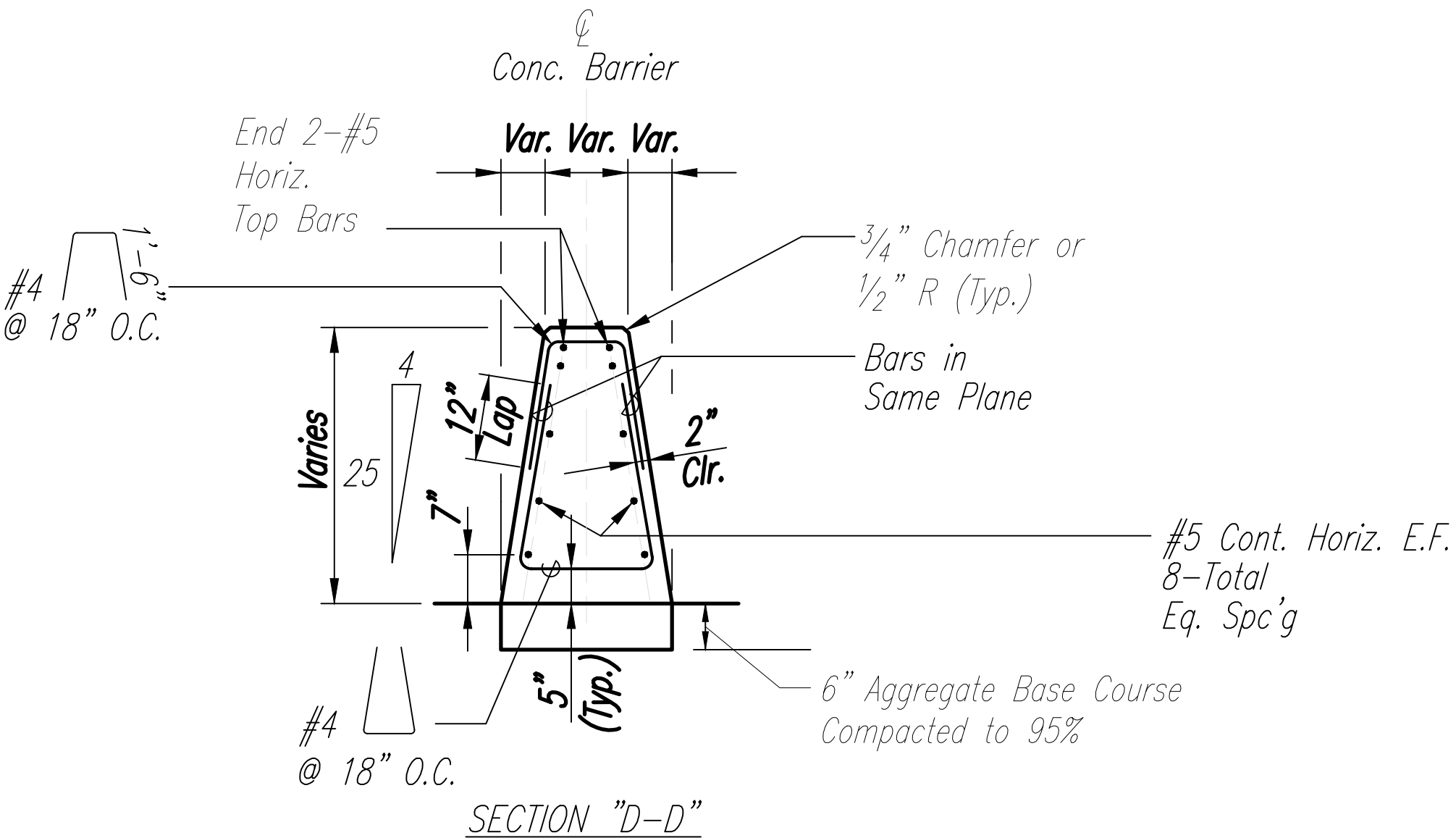
1. Footing monolithic or doweled with 2-#8x8" @ 2'-0. The footing is required at single slope rigid barrier ends and at interruptions in single slope barrier.



PLAN



ELEVATION



TRANSITION SINGLE SLOPE RIGID BARRIER TYPE 6G
TO CONCRETE BARRIER TYPE 6A

Not to Scale

ORIGINAL PLAN	DATE
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QUANTITIES BY	
TRACED BY	
DRAWN BY	
SURVEY PLOTTED BY	



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HIGHWAYS DIVISION

BARRIER DETAILS - 4

**FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS**

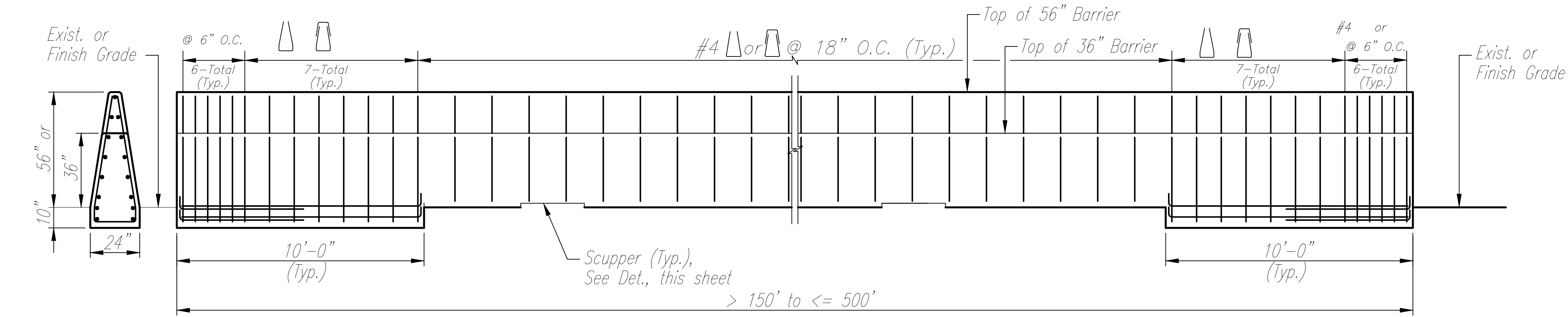
**Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)**

Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	43	62

NOTES:

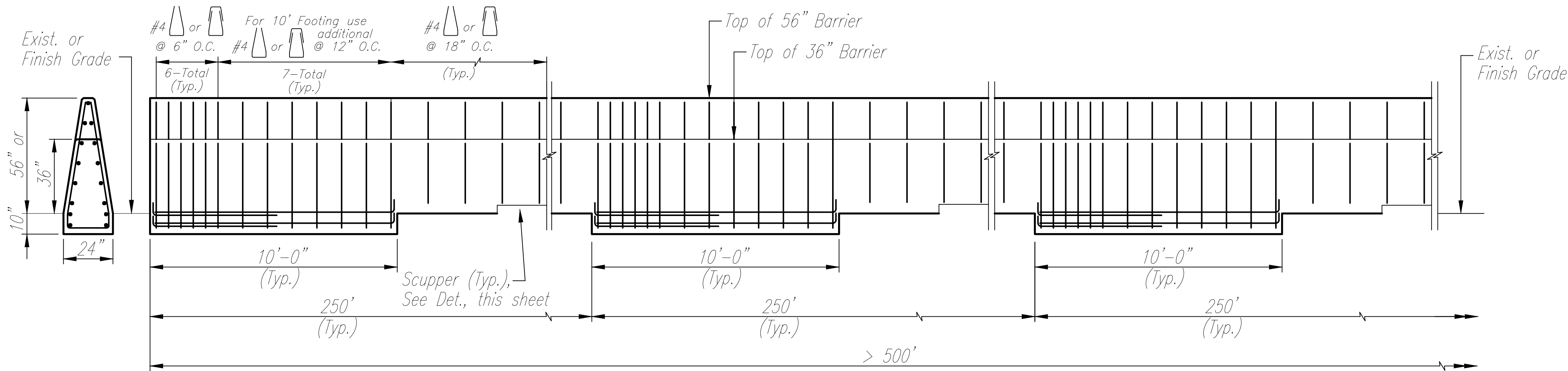
1. Refer to Barrier Details 1-4 for horizontal steel reinforcement details.
2. Construct footing entire length of concrete barrier.
3. 10" footing shall be monolithic with the concrete barrier.
4. When concrete guardrail length is greater than 500 feet, place monolithic 10'x10" footing every 250'.
5. Concrete barrier shall not be placed within 3-feet of fill slope.



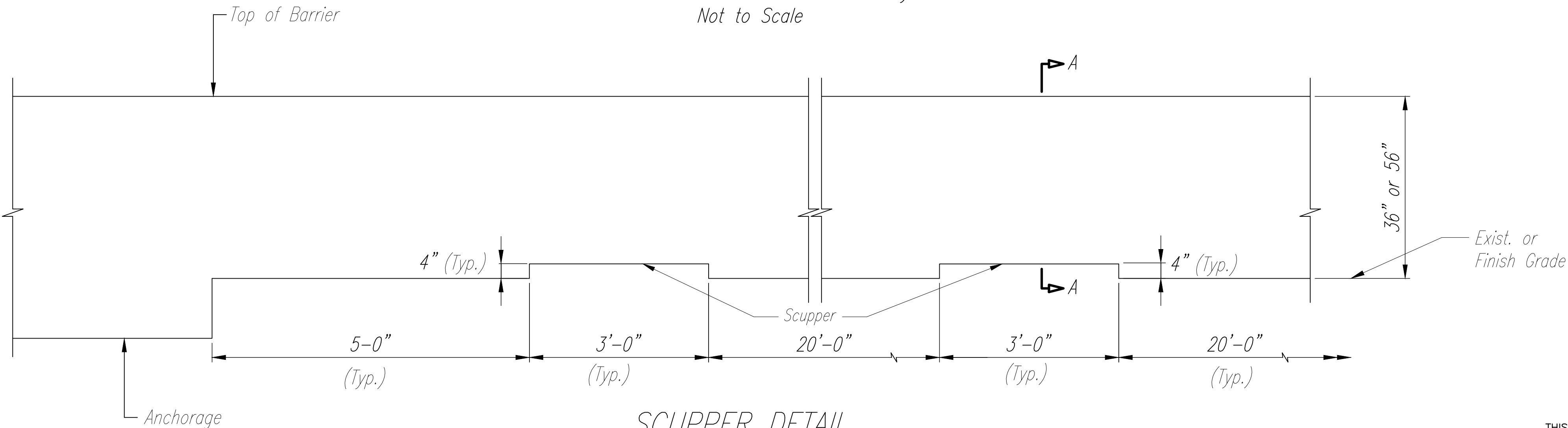
#4 or #4 For 10' Footing, use additional @ 12" O.C.

LENGTH = 150' TO 500'
Horizontal Bars not shown for Clarity
Not to Scale

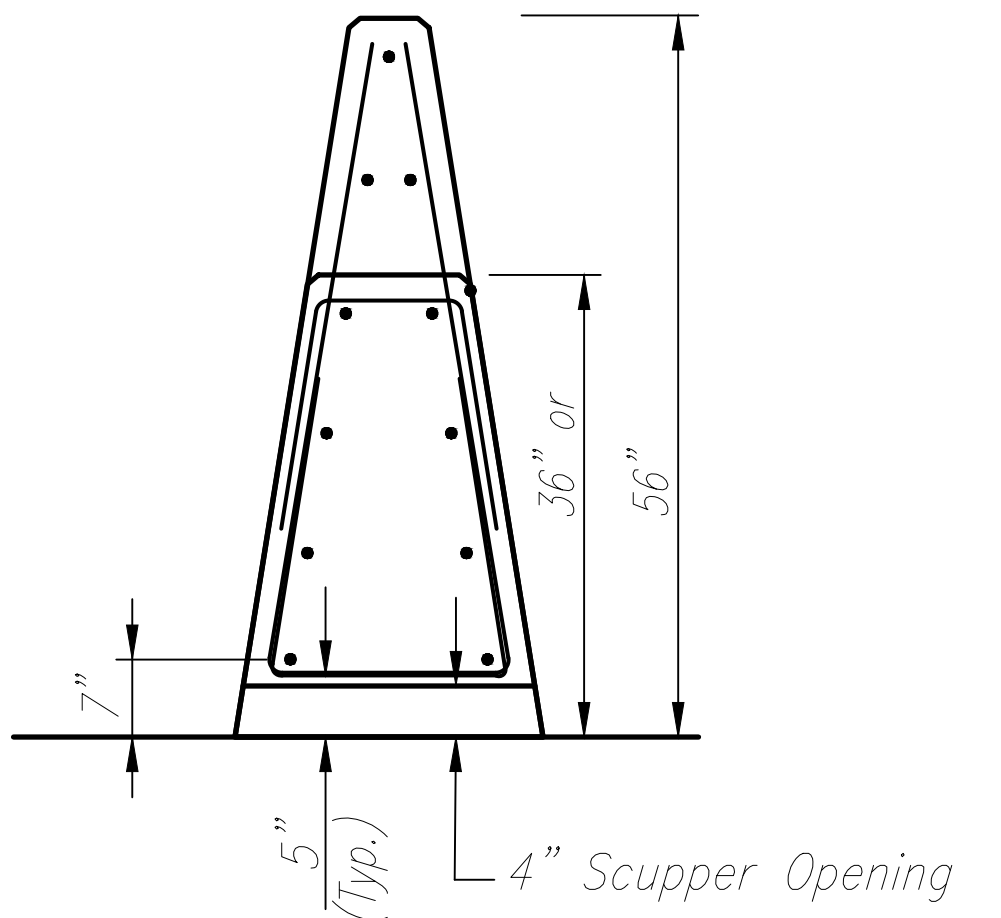
For 10' Footing, use additional @ 12" O.C.



LENGTH > 500'
Horizontal Bars not shown for Clarity
Not to Scale



SCUPPER DETAIL
Not to Scale



SECTION "A-A"



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HIGHWAYS DIVISION

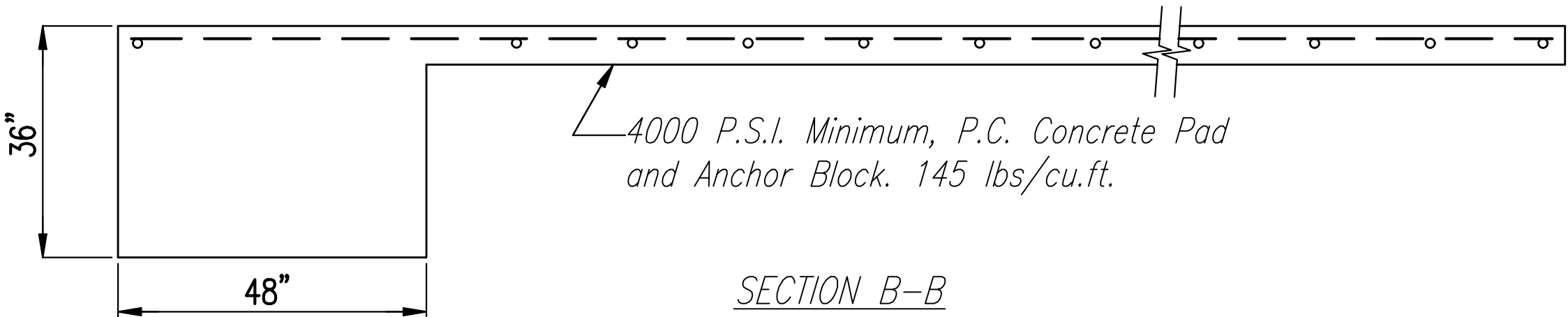
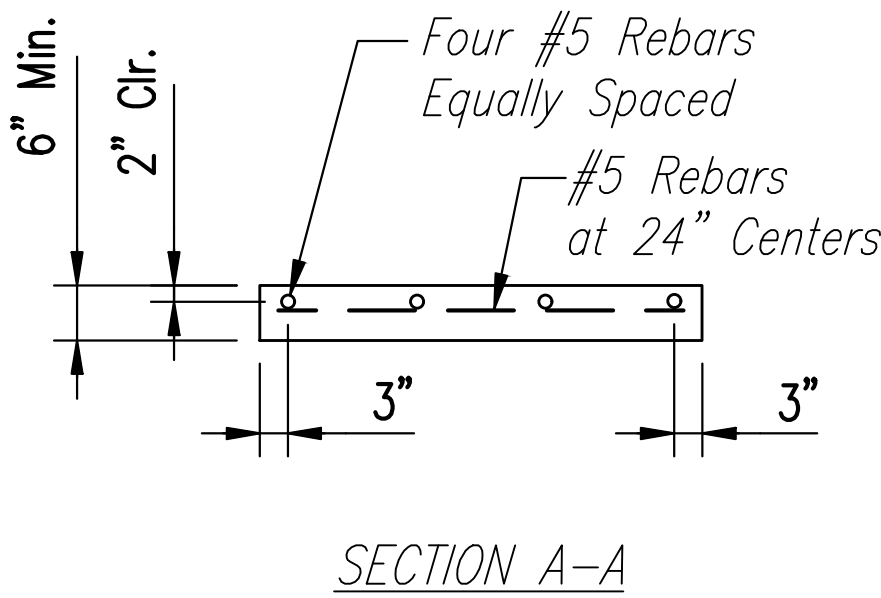
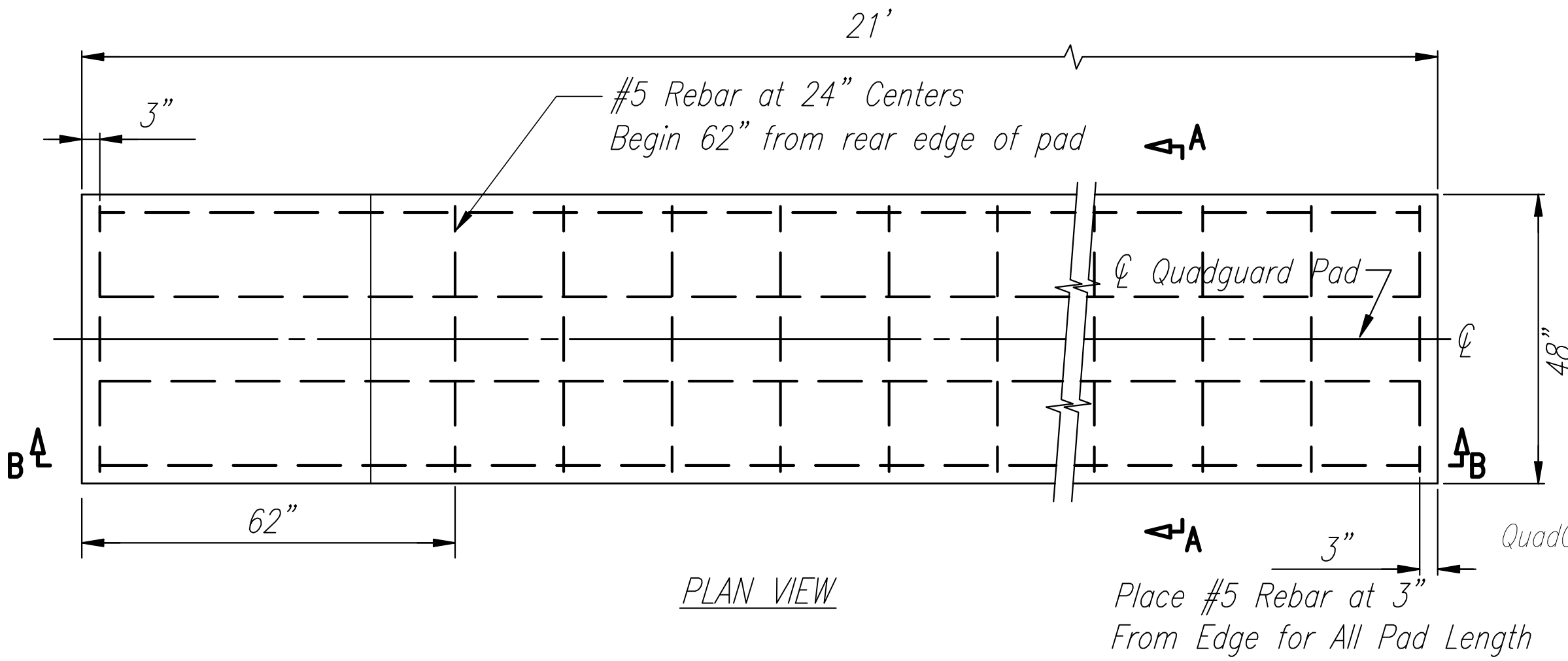
BARRIER DETAILS - 5

**FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS**

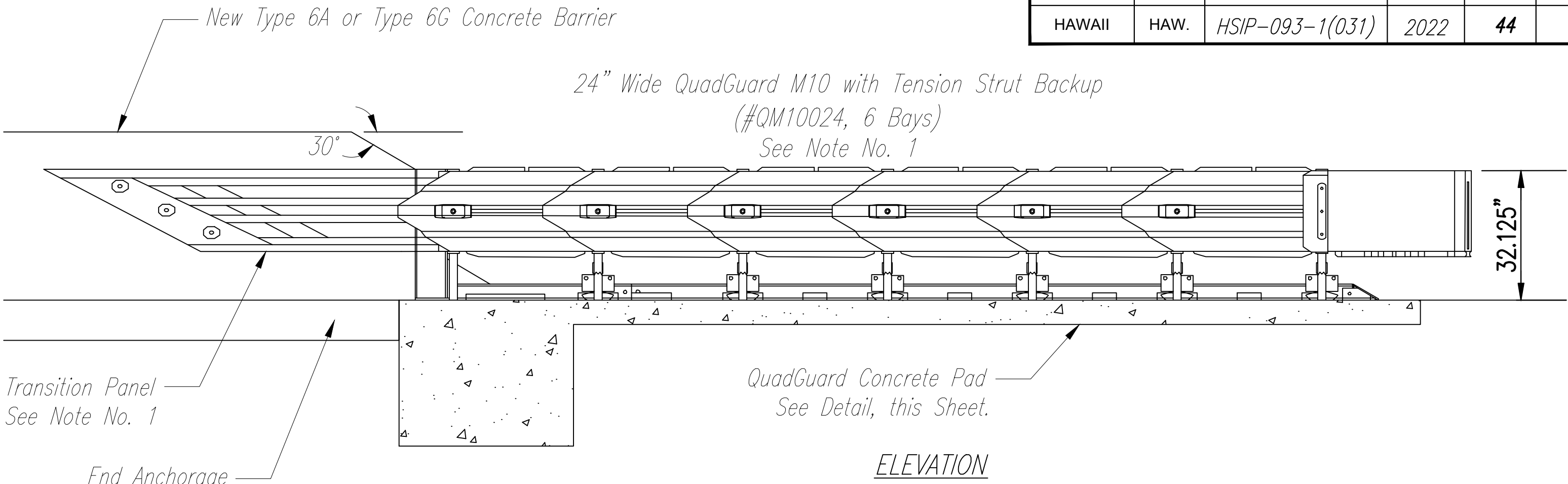
**Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)**

Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	44	62

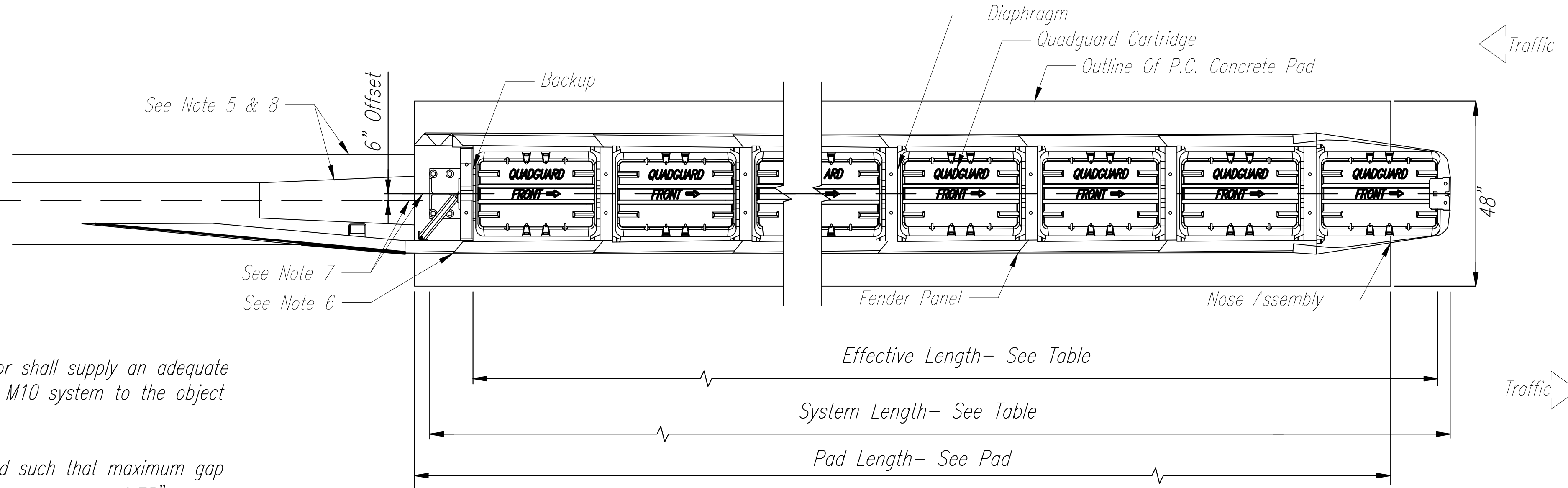


QUADGUARD SYSTEM
CONCRETE PAD, TENSION STRUT, QG
Not to Scale



QUADGUARD M10 SYSTEM
Not to Scale

BAYS	610 (36") Width	SYSTEM LENGTH	EFFECTIVE LENGTH	PAD LENGTH	MAX DESIGN SPEED	NO. OF CARTRIDGES	
**	MODEL NO. (PART NO.)	ft-in	ft-in	ft-in	MPH	TYPE I	TYPE II
3	QM7024 (618693)	12'-11"	11'-8"	12'-0"	43	3	1
6	QM10024 (617607)	21'-11"	20'-8"	21'-0"	62	4	3



NOTES:

- See Manufacturer's Product Description Instruction Manual for QuadGuard limitations, details, and installation.
- Contractor shall coordinate with Manufacturer in the placement of the terminal impact attenuators to ensure proper installation and connection to the rigid barrier in accordance with Manufacturer's recommendation.
- Cross slope of pad shall not exceed 8% , and not vary more than 2% from front to back.
- Object Marker required to cover entire front of Quadguard's nose.
- Information on this sheet is as provided and manufactured by Trinity Highway.
- Where necessary, the contractor shall supply an adequate transition from the Quadguard M10 system to the object being shielded.
- Transition panel shall be angled such that maximum gap from fender panel overlap does not exceed 0.75".
- Caution: Centerline of Quadguard M10 system shall be parallel with Centerline of Barrier $\pm 1'$.
- If barrier base extends beyond backup leg profile or barrier height is over 32" high, trim barrier toe and/or top at 1:4 taper to prevent vehicle contact with blunt end.
- Install Reinforced Concrete Pad Per Manufacturer's Recommendation.

ORIGINAL PLAN	DATE
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

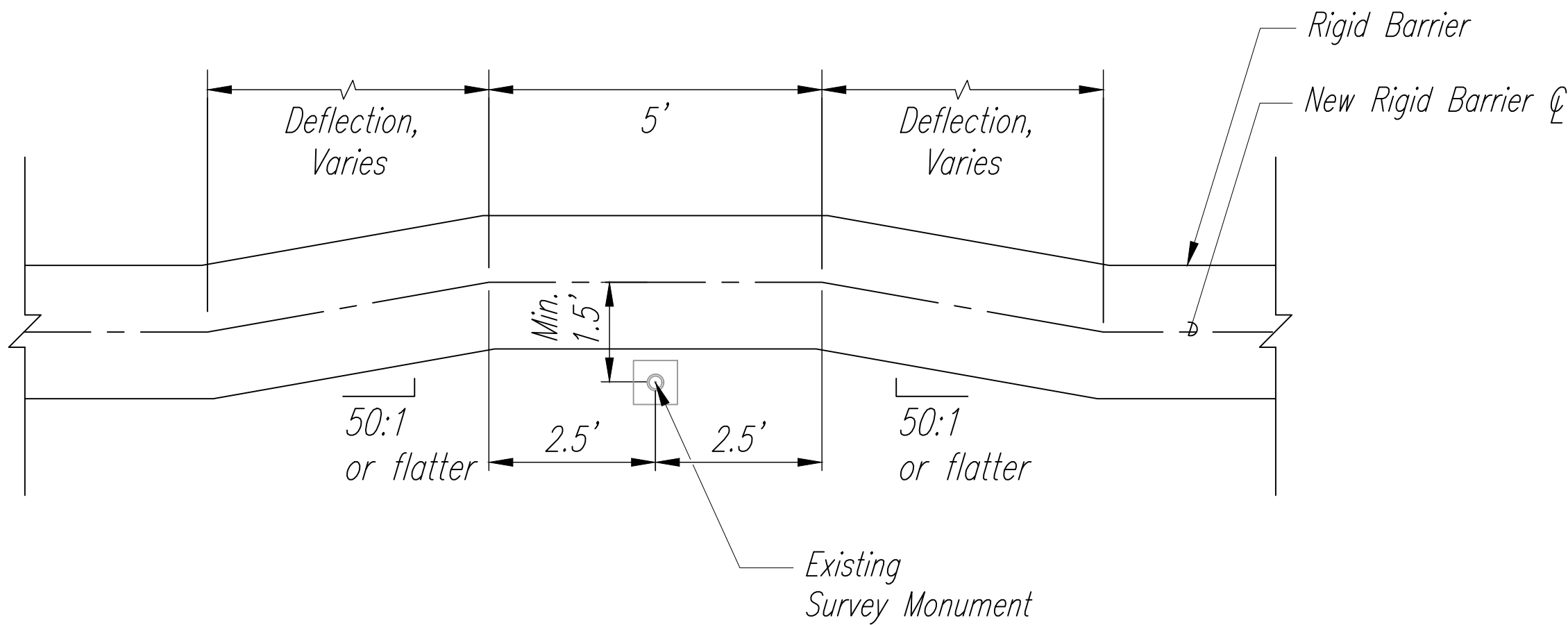
BARRIER DETAILS - 6

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	45	62



RIGID BARRIER DEFLECTION DETAIL
Not to Scale

NOTES:

- Contractor shall field locate the existing survey monuments as noted on the Plans. If the existing survey monument is within 1.5' of the proposed rigid barrier centerline, Contractor shall deflect the barrier alignment, as noted in the detail, to avoid conflict with the existing survey monument.
- Barrier deflection shall be in the direction opposite of the existing survey monument, relative to the original barrier centerline. If the survey monument is located exactly on the centerline, contractor shall deflect the barrier in direction of the higher side slope elevation.

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



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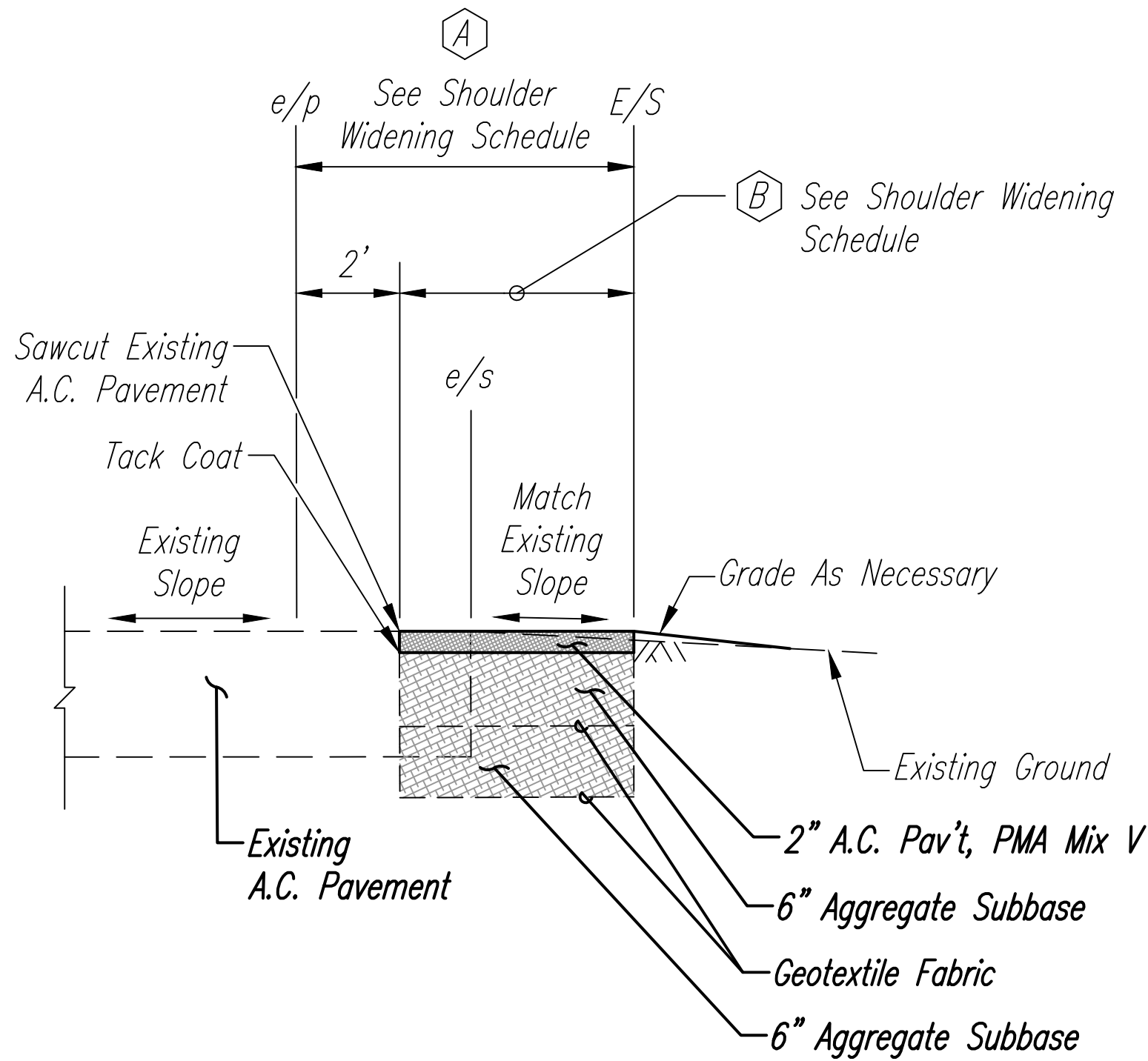
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 7
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

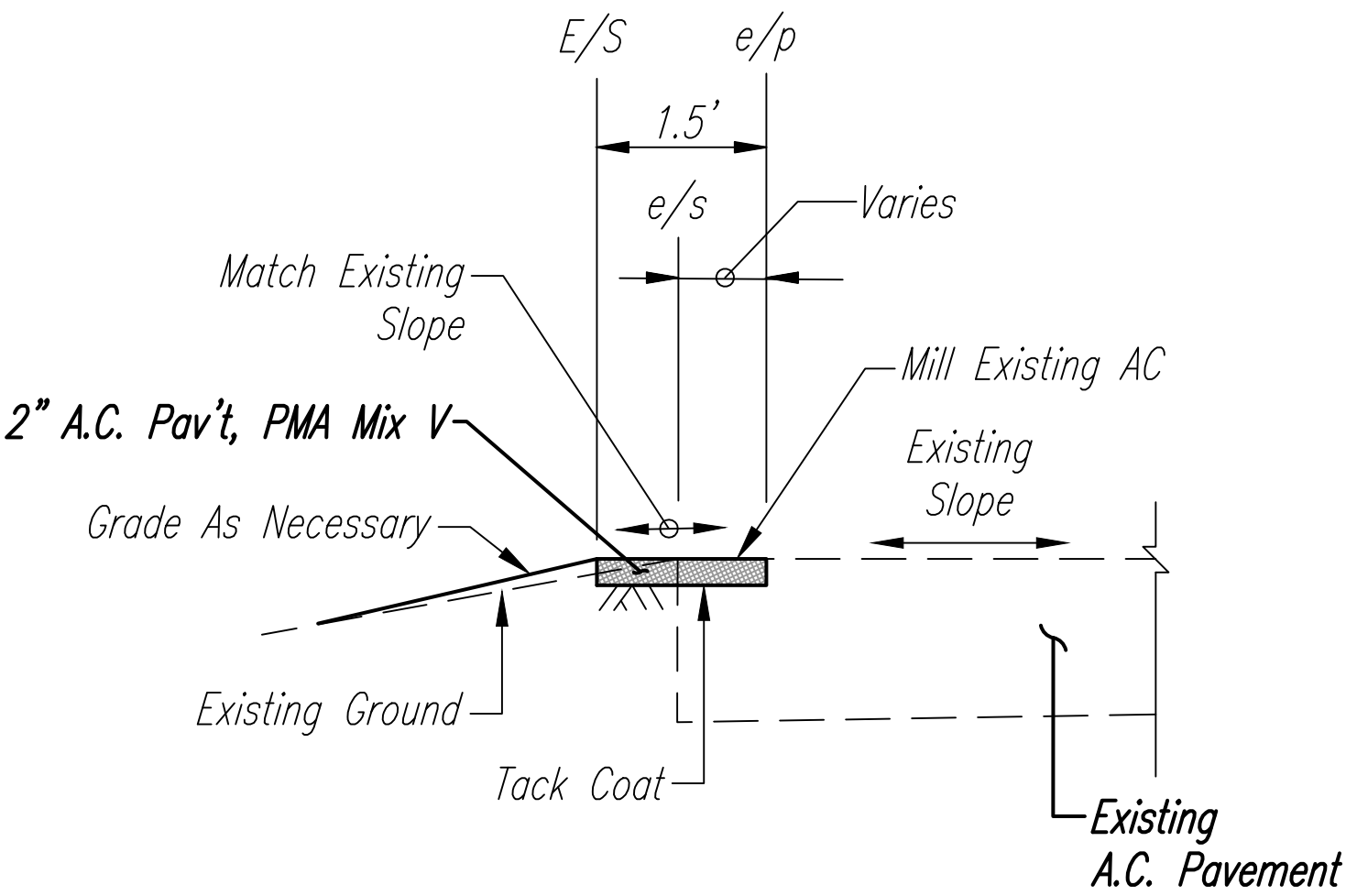
Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	46	62

SHOULDER WIDENING SCHEDULE											
EASTBOUND						WESTBOUND					
BEGIN STATION	END STATION	SHOULDER EDGE	SHOULDER WIDENING DETAIL	A	B	BEGIN STATION	END STATION	SHOULDER EDGE	SHOULDER WIDENING DETAIL	A	B
218+63	220+02	OUTSIDE	1	4.25'	2.25'	99+46	107+47	OUTSIDE	1	4.75'	2.75'
220+02	220+93	OUTSIDE	1	4.75'	2.75'						
223+72	225+76	INSIDE	2	--	--						
225+38	231+76	OUTSIDE	1	4.75'	2.75'						
104+57	107+26	INSIDE	2	--	--						



SHOULDER WIDENING DETAIL-1
Not To Scale



SHOULDER WIDENING DETAIL-2
Not To Scale

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

RYAN B. VALERO

LICENSED PROFESSIONAL ENGINEER

NO. 18051-C

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4/30/24

EXPIRATION DATE OF LICENSE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

ROADWAY DETAILS

FARRINGTON HIGHWAY

SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1

Federal Aid Project No. HSIP-093-1(031)

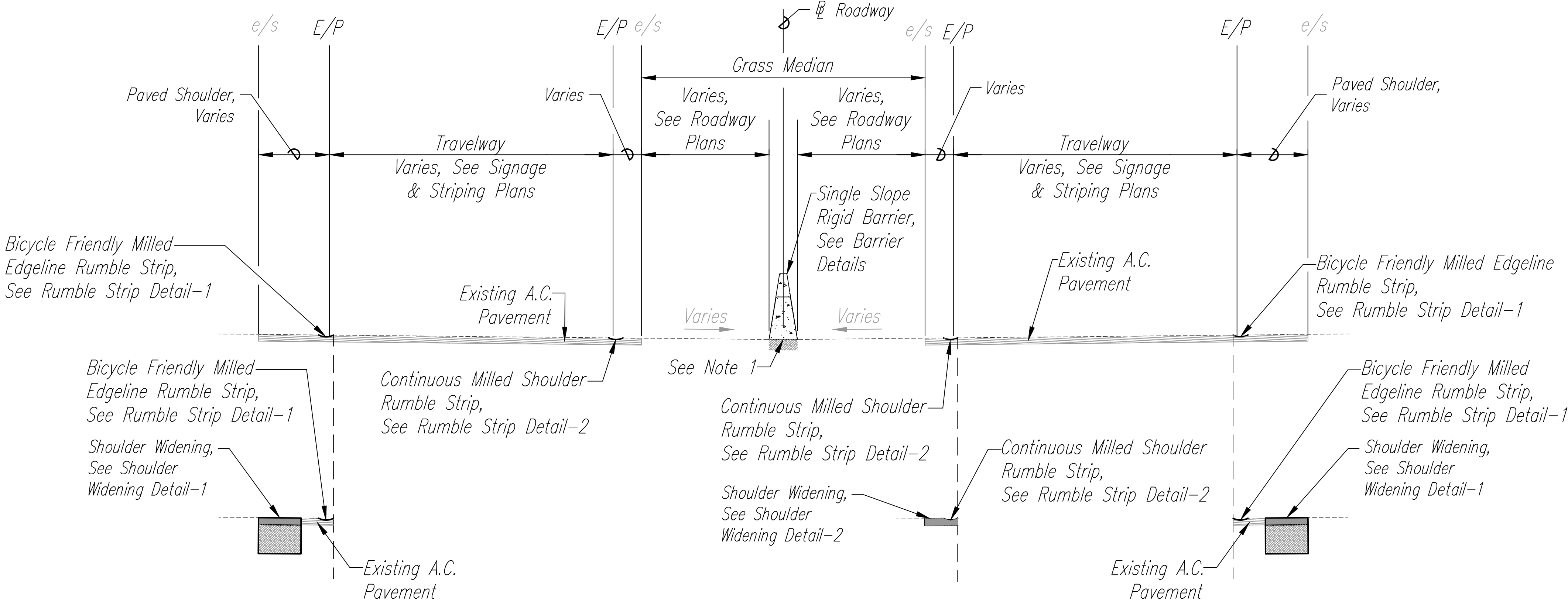
Date: November 2021

SHEET No. 1

OF 1

SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	47	62



TYPICAL ROADWAY SECTION – FARRINGTON HIGHWAY
SCALE: 1" = 5'

NOTES:

1. Contractor shall follow the existing ground surface when profiling the concrete barrier. To avoid sudden dips or rises in the concrete barrier profile, contractor shall survey the existing ground at 20 feet spacing.

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



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R. B. Valero
SIGNATURE

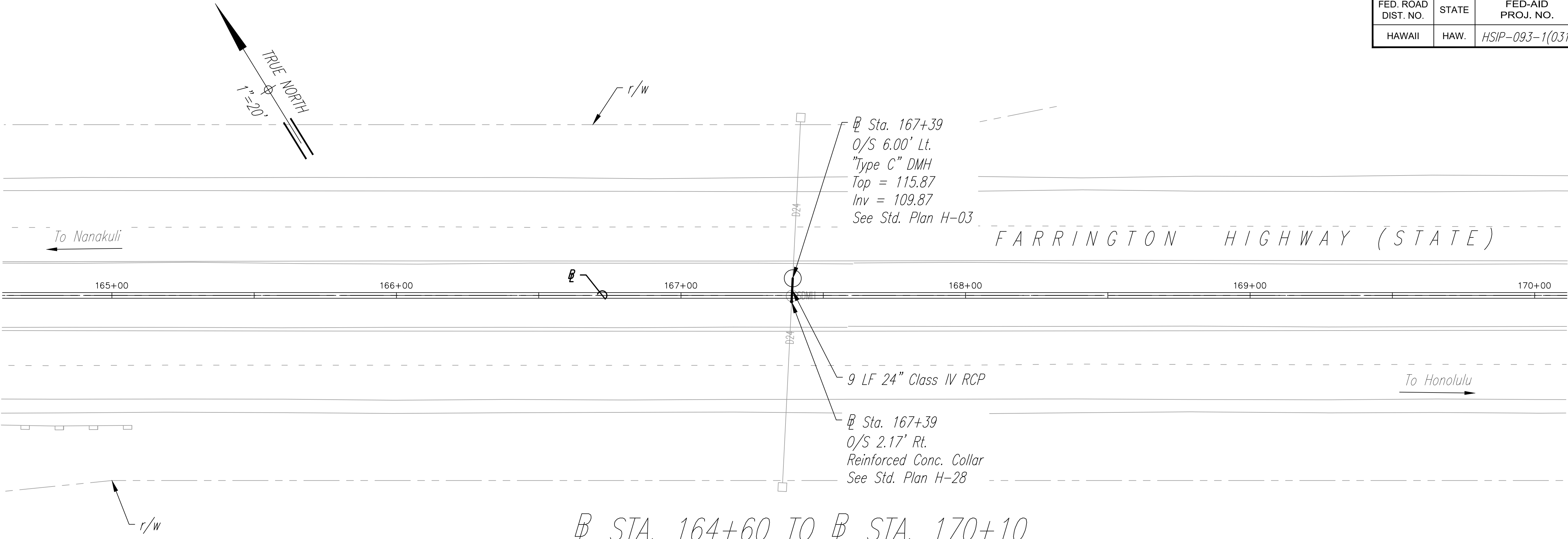
4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL ROADWAY SECTION
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

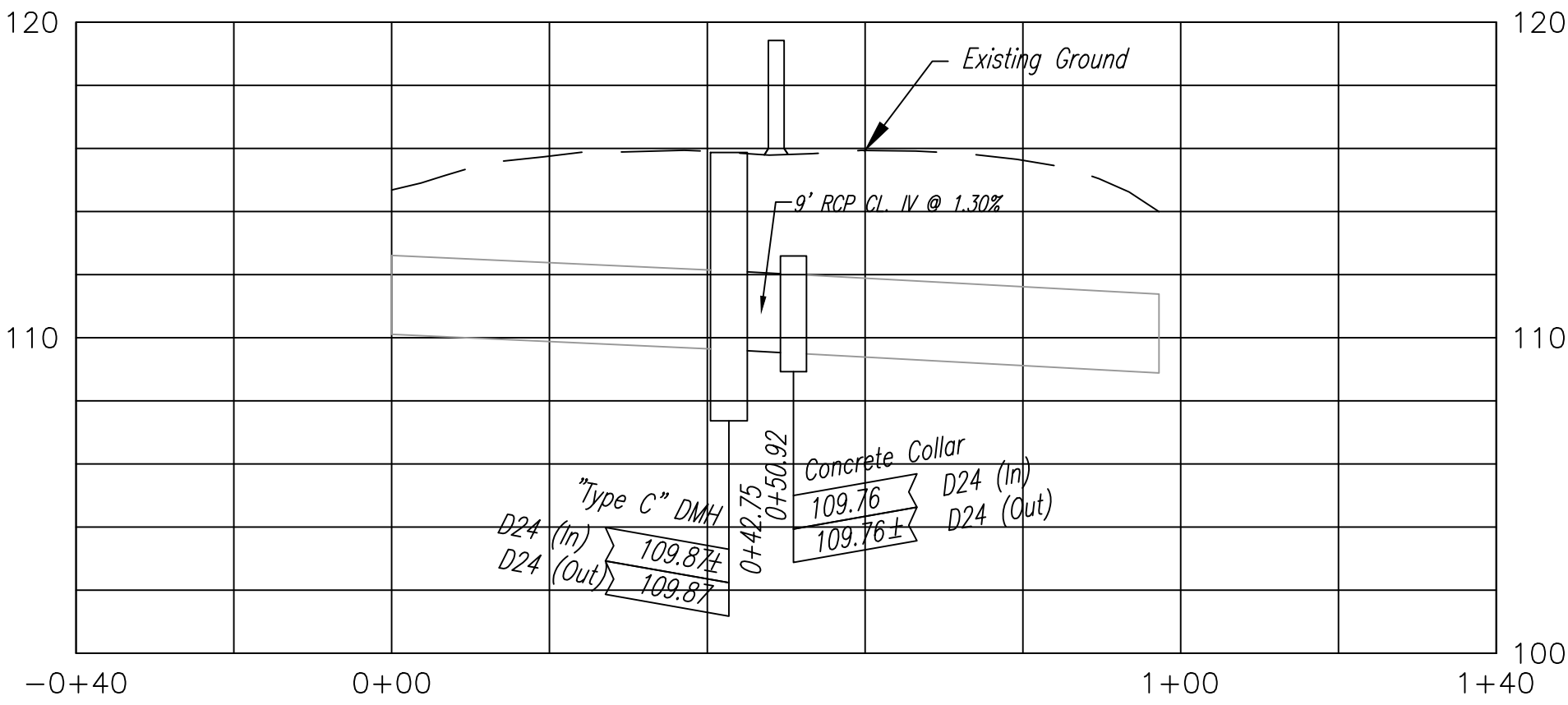
Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	48	62



STATION 164+60 TO STATION 170+10
Scale: 1" = 20'

- Note:
1. Drain manholes shall be Type C with Type P cast iron frame and cover.
 2. Location of existing drainage facilities are from as-built drawings. Contractor shall verify prior to construction.



Profile Drain Line at 167+39
Scale: Hor. 1" = 20'
Ver. 1" = 5'

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



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OR UNDER MY SUPERVISION.

R. B. Valero
SIGNATURE

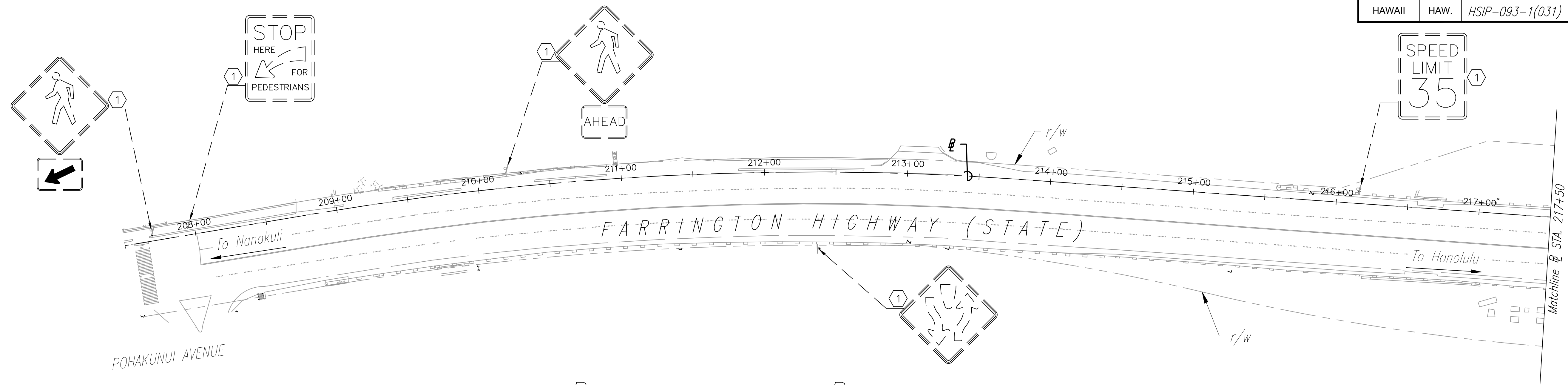
4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

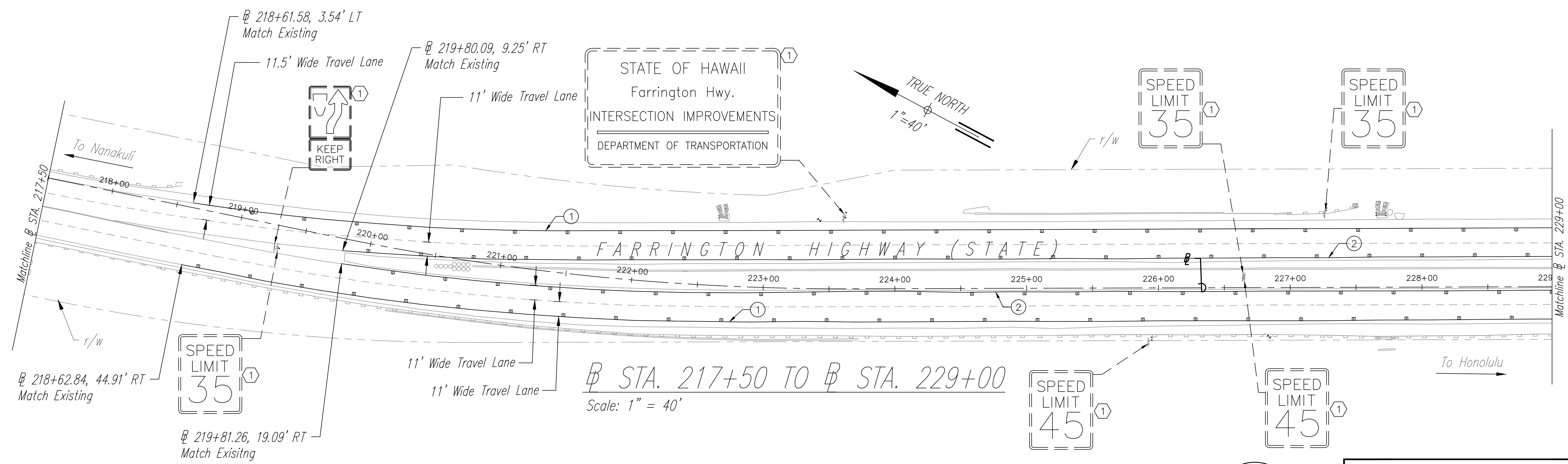
DRAINAGE PLAN
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	49	62



Sta. 207+50 to Sta. 217+50
Scale: 1" = 40'



Sta. 217+50 to Sta. 229+00
Scale: 1" = 40'

ORIGINAL PLAN	DATE	SURVEY PLOTTED BY

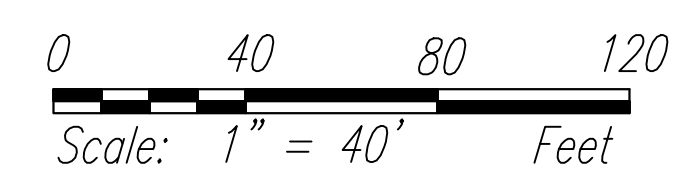
NOTE BOOK	DESIGNED BY	TRACED BY

No.	CHECKED BY	DESIGNED BY

- PAVEMENT MARKING NOTES:
- ① Edge Line - Single Solid 6" White Stripe with Type "C" RPM
 - ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM

- SIGNING NOTES:
- ① Exist. Sign(s) & Post(s) to Remain

- LEGEND:
- Exist. Sign Post (1)
 - ▬ Exist. Sign Post (2)



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R. B. Valero
SIGNATURE

4/30/24
EXPIRATION DATE OF LICENSE



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLAN - 1

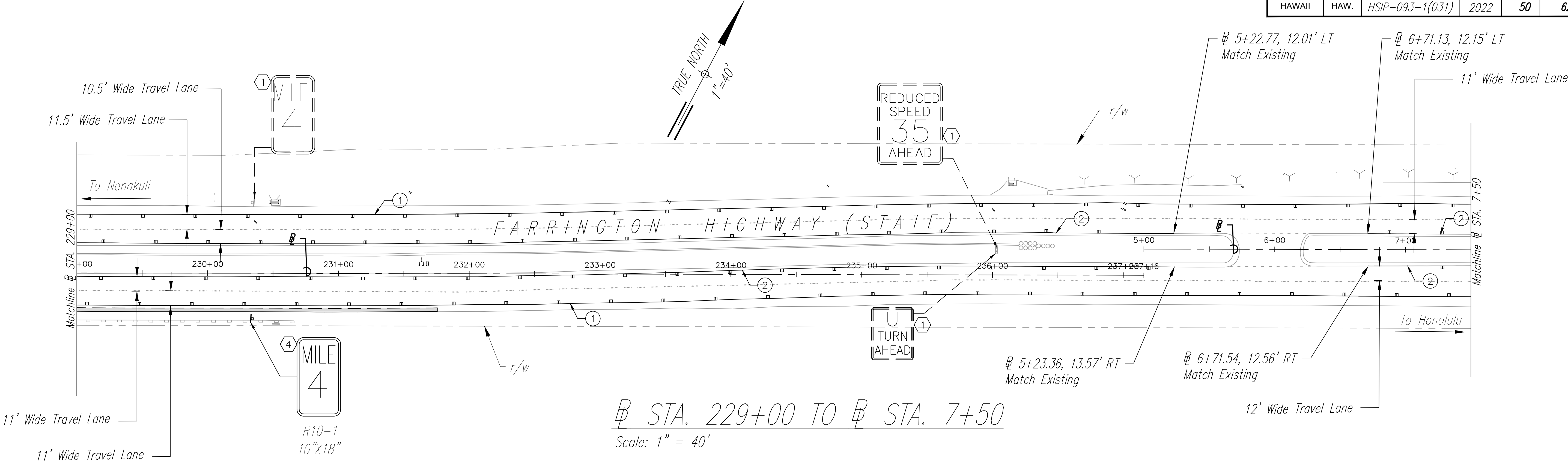
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

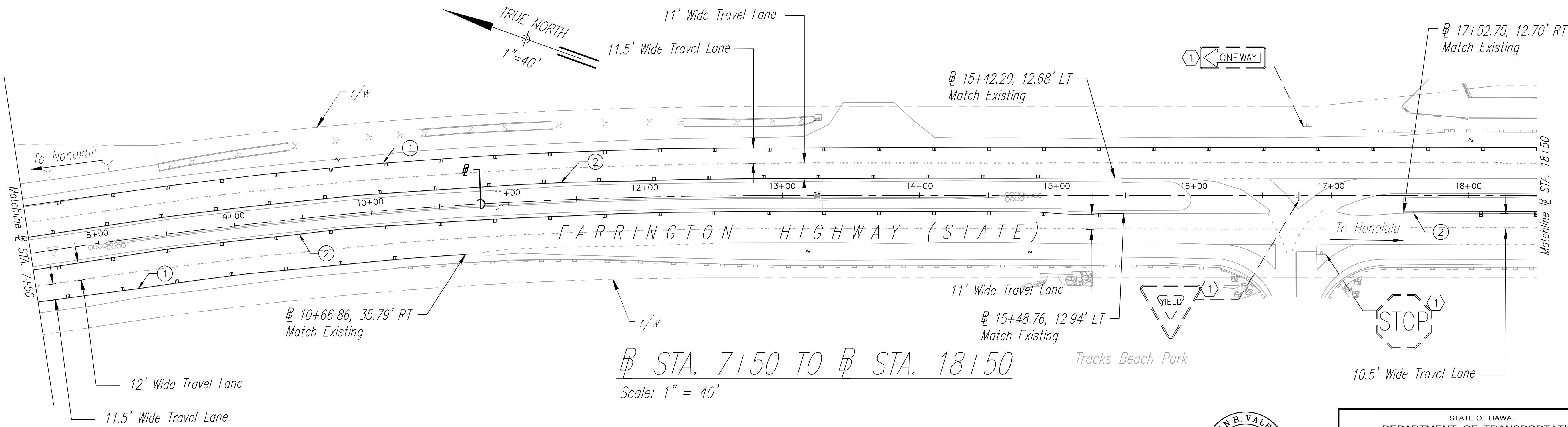
Date: November 2021

SHEET No. 1 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	50	62



Sta. 229+00 TO Sta. 7+50
Scale: 1" = 40'



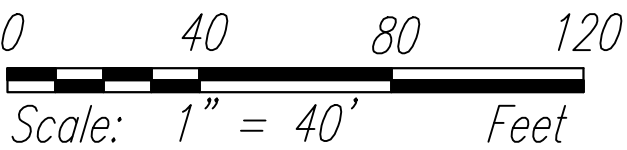
Sta. 7+50 TO Sta. 18+50
Scale: 1" = 40'

DATE	_____
SURVEY PLOTTED BY	_____
PLAN	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

- PAVEMENT MARKING NOTES:
- ① Edge Line - Single Solid 6" White Stripe with Type "C" RPM
 - ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM

- SIGNING NOTES:
- ① Exist. Sign(s) & Post(s) to Remain
 - ④ Install New Sign(s) & Post(s)

- LEGEND:
- ⊕ Exist. Sign Post (1)
 - ⊕ Exist. Sign Post (2)



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SIGNATURE: *R. B. Valero*

4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLAN - 2

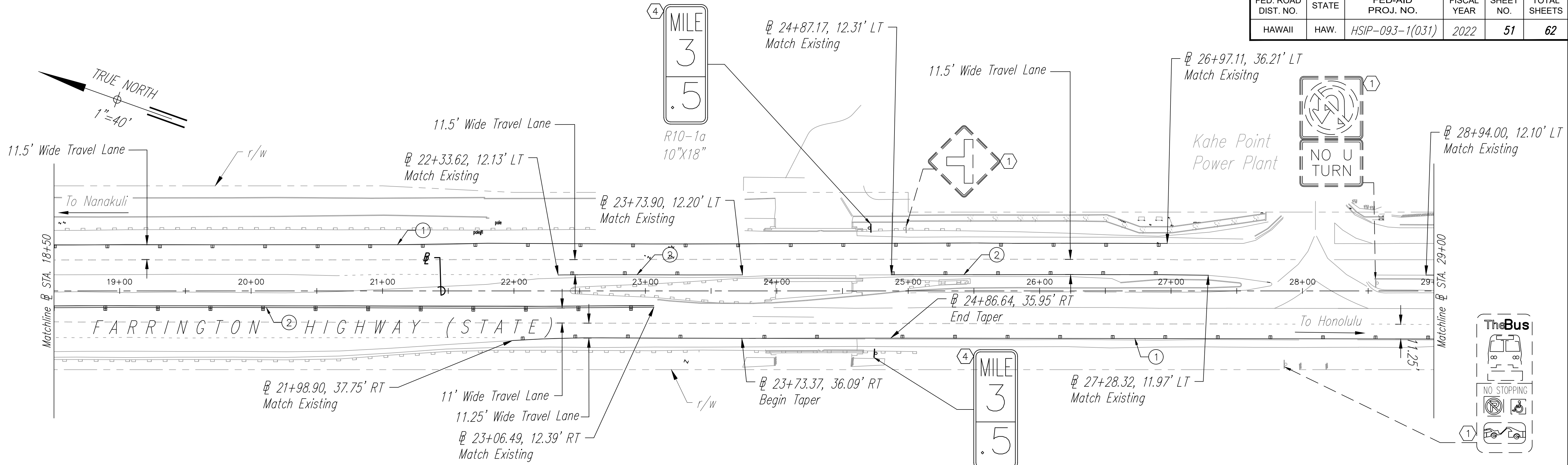
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

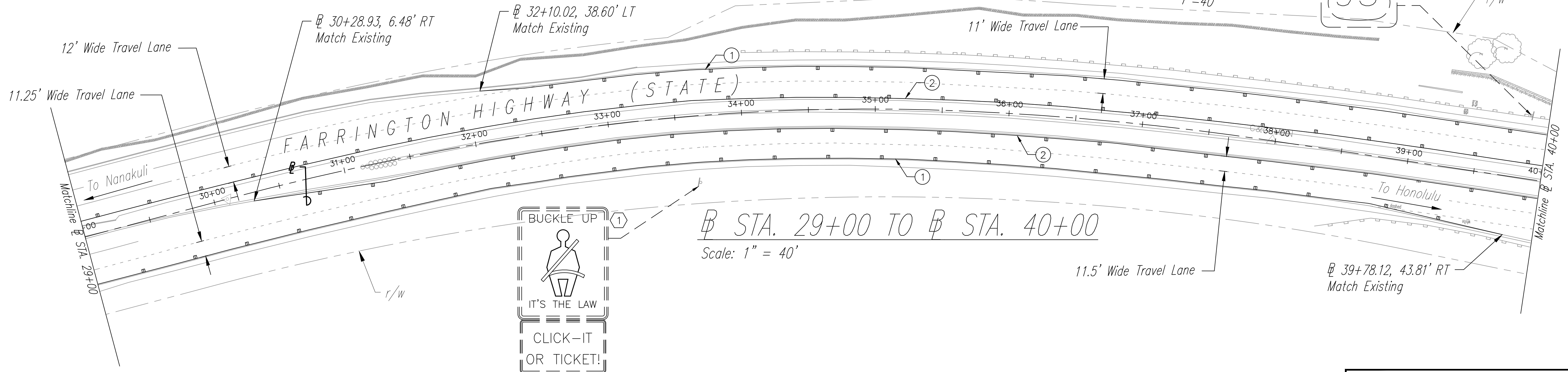
SHEET No. 2 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	51	62



Sta. 18+50 TO Sta. 29+00

Scale: 1" = 40'



Sta. 29+00 TO Sta. 40+00

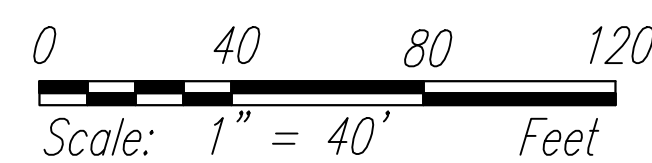
Scale: 1" = 40'

ORIGINAL PLAN	DATE
NO. _____	_____
DESIGNED BY	_____
CHECKED BY	_____
TRACED BY	_____
QUANTITIES BY	_____
PAVED BY	_____

- PAVEMENT MARKING NOTES:
- ① Edge Line - Single Solid 6" White Stripe with Type "C" RPM
 - ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM

- SIGNING NOTES:
- ① Exist. Sign(s) & Post(s) to Remain
 - ④ Install New Sign(s) & Post(s)

- LEGEND:
- Exist. Sign Post (1)



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SIGNATURE: *R. B. Valero*

EXPIRATION DATE OF LICENSE: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLANS - 3

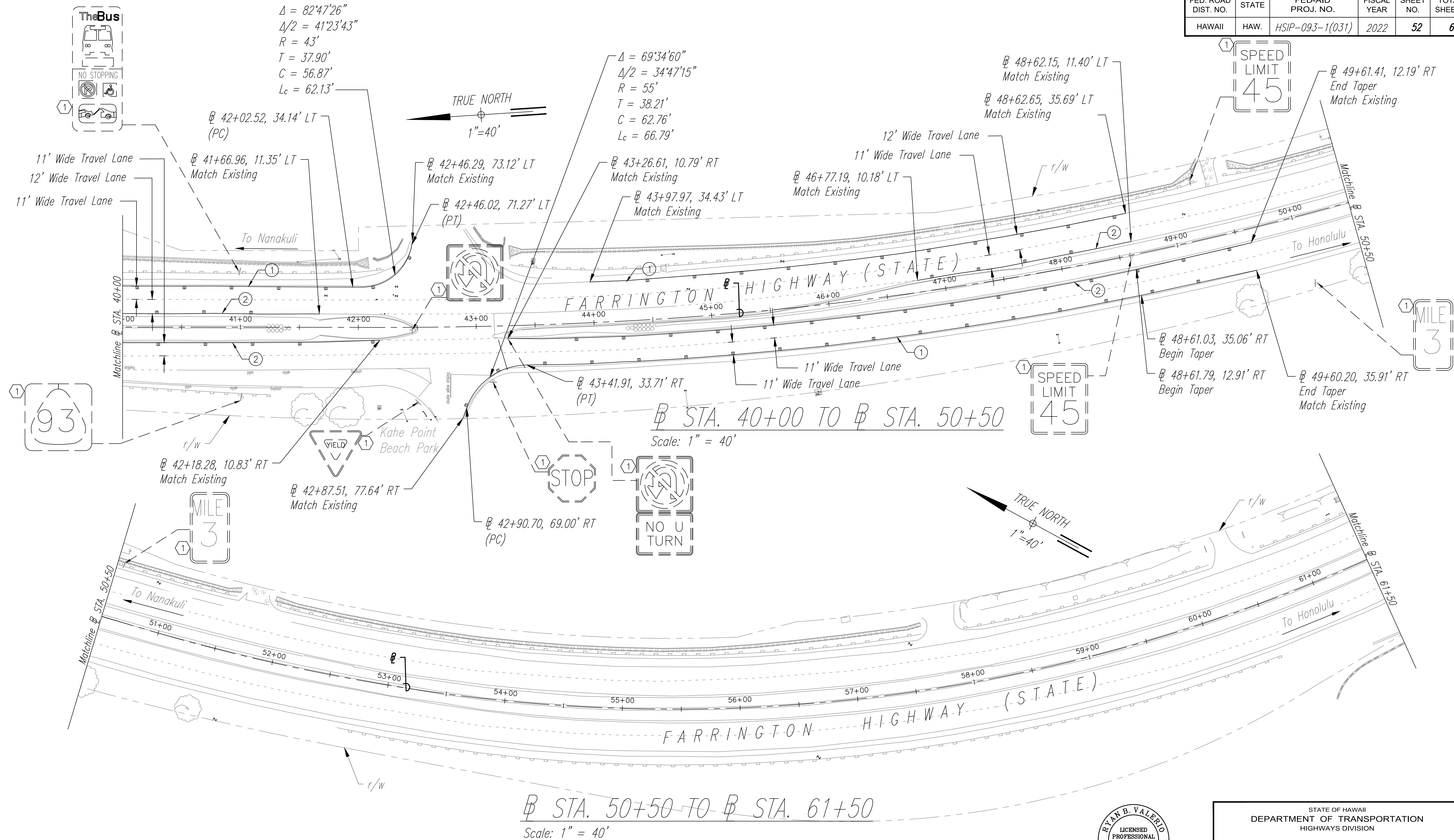
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 3 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	52	62



DATE	_____
SURVEY PLOTTED BY	_____
PLAN	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

PAVEMENT MARKING NOTES:

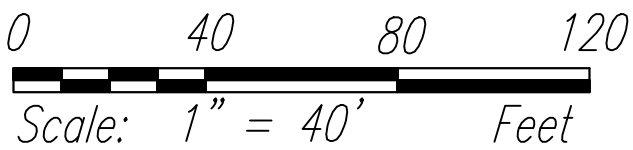
- ① Edge Line - Single Solid 6" White Stripe with Type "C" RPM
- ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM

SIGNING NOTES:

- ① Exist. Sign(s) & Post(s) to Remain

LEGEND:

- ① Exist. Sign Post (1)
- ② Exist. Sign Post (2)



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SIGNATURE: *R. B. Valero*

4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLANS - 4

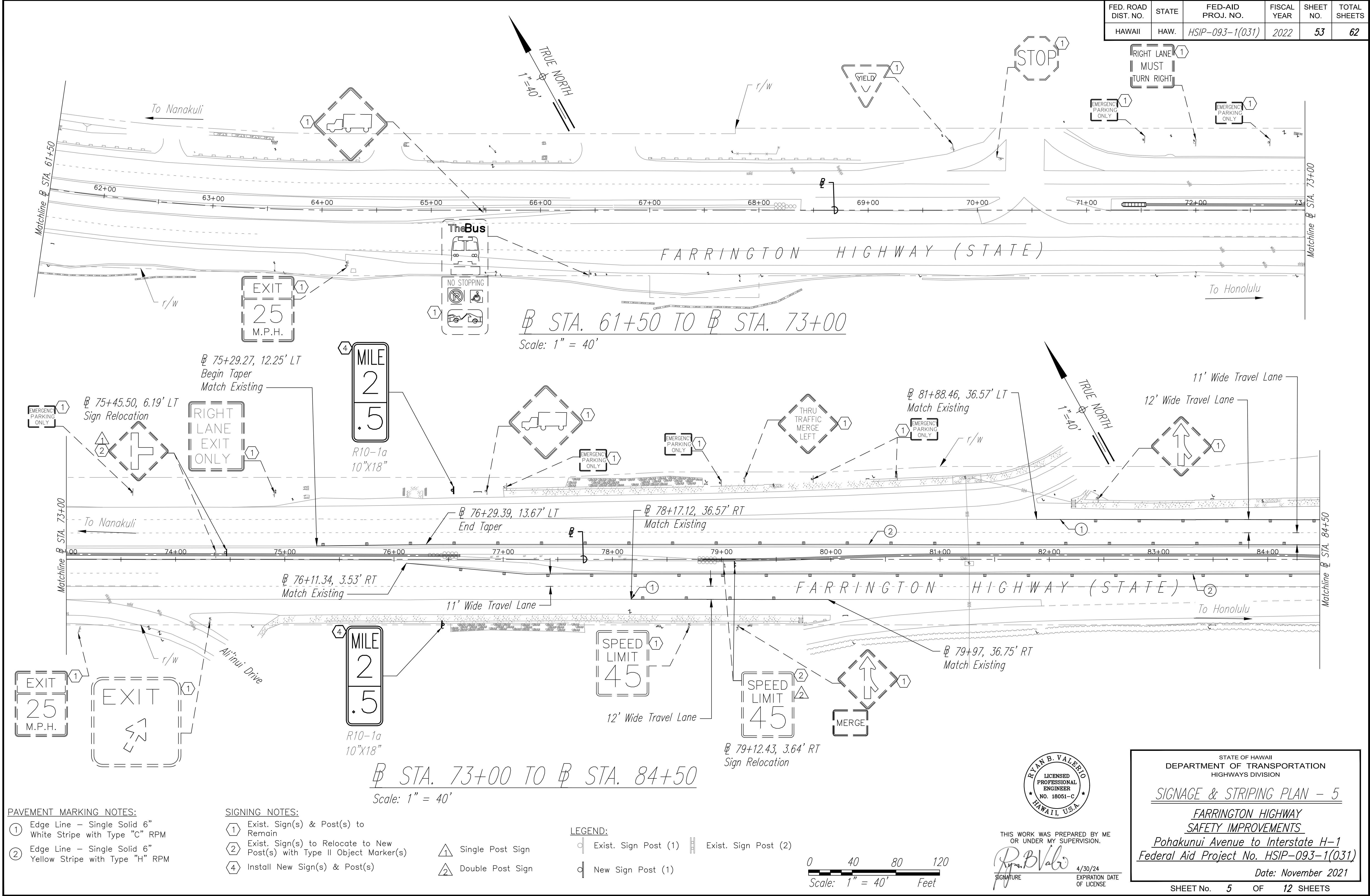
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 4 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	53	62



DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN	_____
DESIGNED BY	_____
TRACED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

PAVEMENT MARKING NOTES:

- ① Edge Line - Single Solid 6" White Stripe with Type "C" RPM
- ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM

SIGNING NOTES:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Exist. Sign(s) to Relocate to New Post(s) with Type II Object Marker(s)
- ④ Install New Sign(s) & Post(s)

LEGEND:

- ① Exist. Sign Post (1)
- ② Exist. Sign Post (2)
- ① New Sign Post (1)



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R. B. Valero
SIGNATURE

4/30/24
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLAN - 5

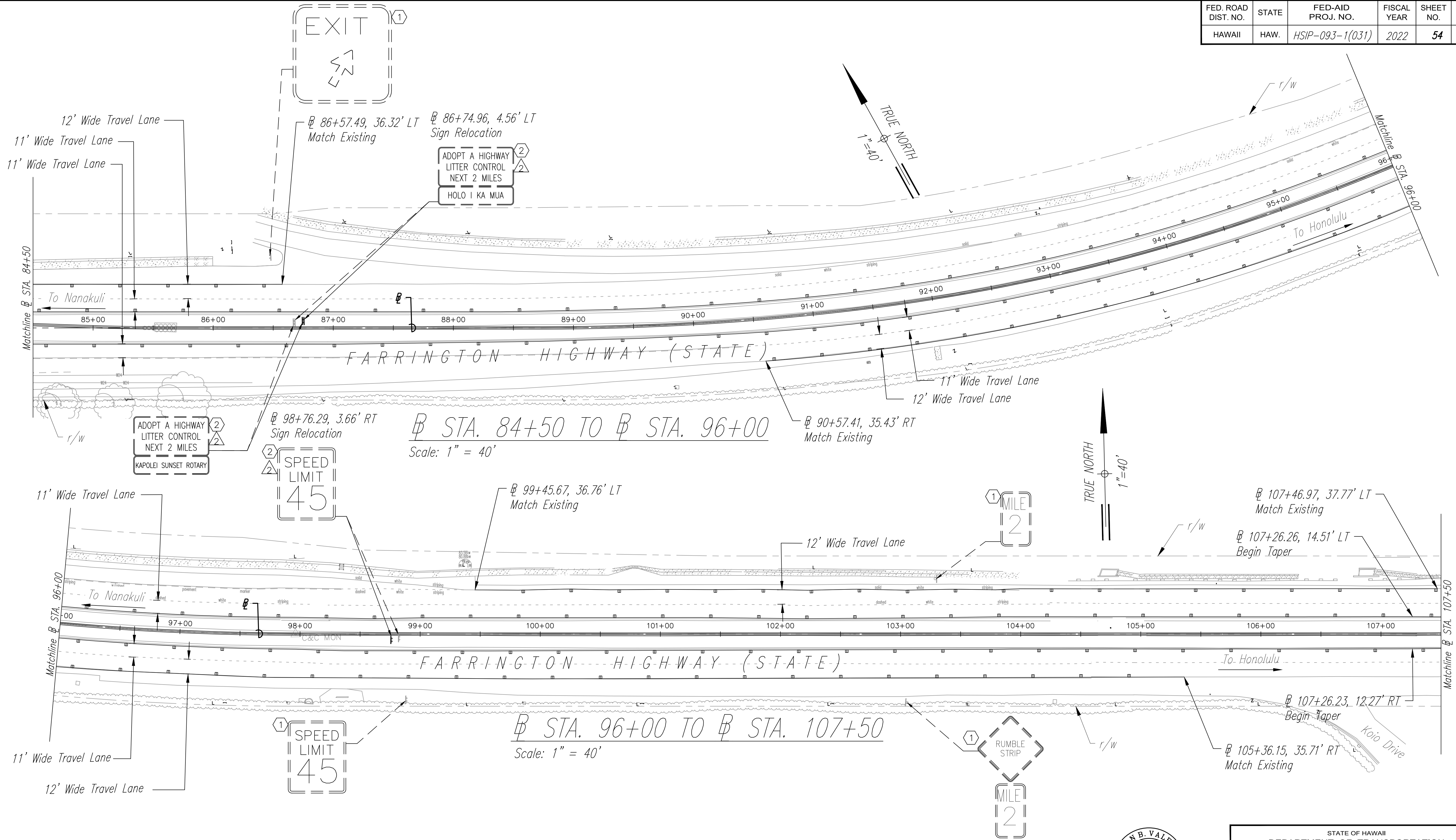
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 5 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	54	62



ORIGINAL PLAN	DATE
NO. 1	4/30/24
DESIGNED BY	
CHECKED BY	
TRACED BY	
QUANTITIES BY	
DATE	

PAVEMENT MARKING NOTES:

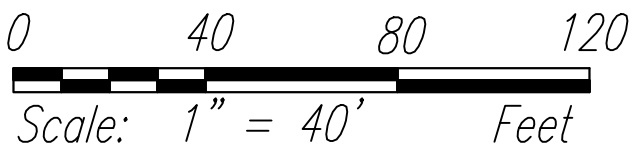
- ① Edge Line - Single Solid 6" White Stripe with Type "C" RPM
- ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM

SIGNING NOTES:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Exist. Sign(s) to Relocate to New Post(s) with Type II Object Marker(s)
- △ Double Post Sign

LEGEND:

- Exist. Sign Post (1)
- Exist. Sign Post (2)
- New Sign Post (2)



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SIGNATURE: *R. B. Valero*

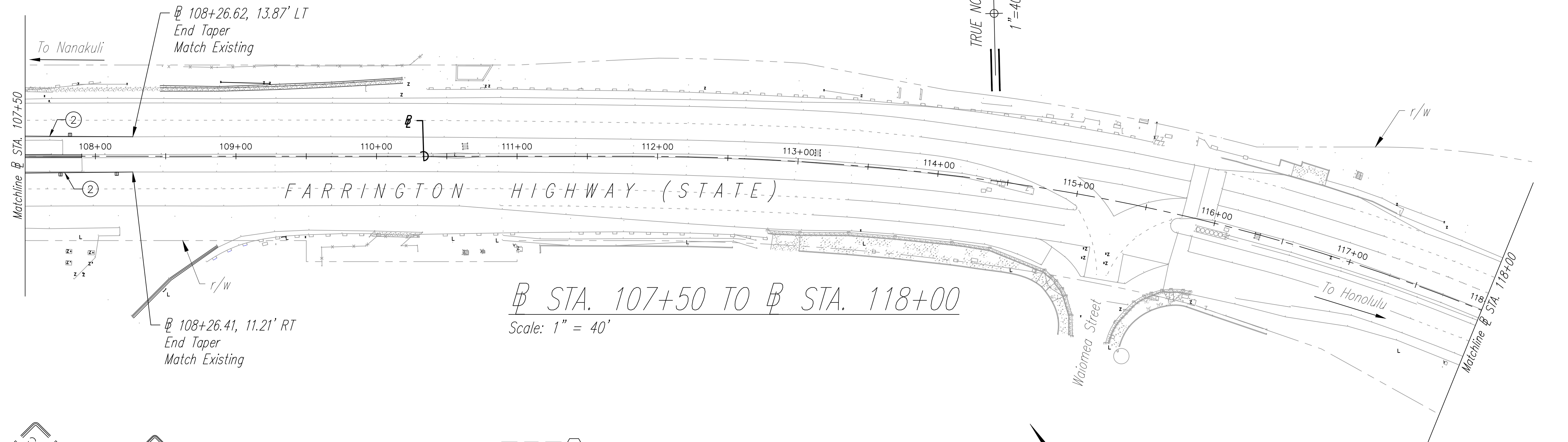
EXPIRATION DATE OF LICENSE: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

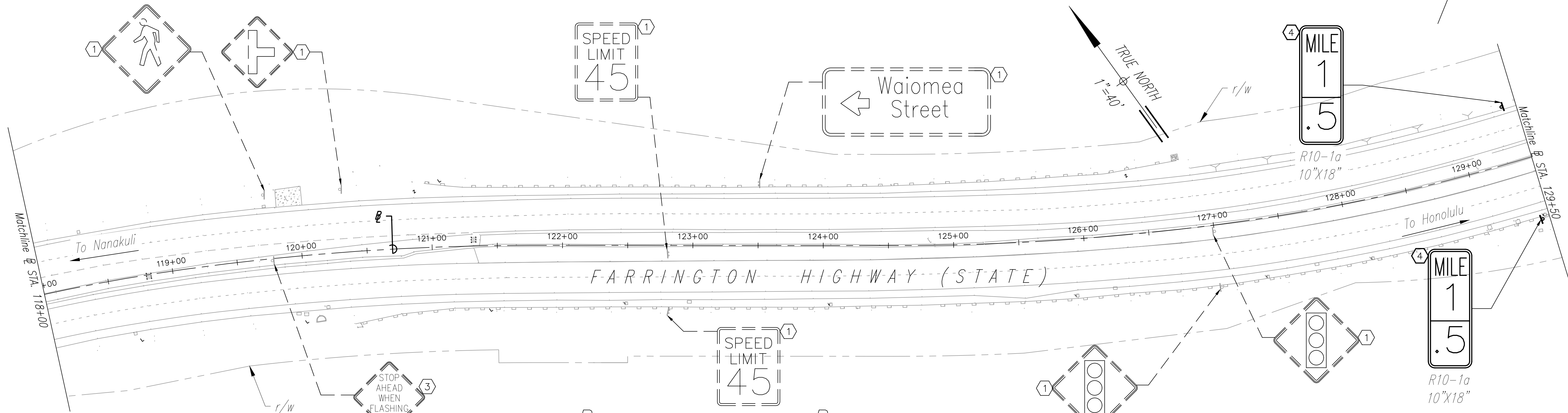
SIGNAGE & STRIPING PLANS - 6
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

SHEET No. 7 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	55	62



From STA. 107+50 TO STA. 118+00
Scale: 1" = 40'



From STA. 118+00 TO STA. 129+50
Scale: 1" = 40'

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

PAVEMENT MARKING NOTES:

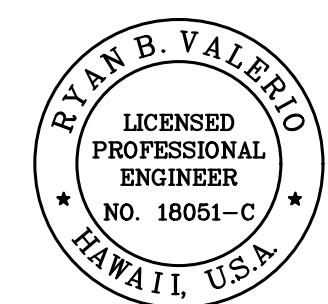
- ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM

SIGNING NOTES:

- ① Exist. Sign(s) & Post(s) to Remain
- ③ Exist. Sign(s) on Lt. Pole to Remain
- ④ Install New Sign(s) & Post(s)
- ① Single Post Sign
- ② Double Post Sign

LEGEND:

- ① Exist. Sign Post (1)
- ② Exist. Sign Post (2)



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SIGNATURE: *R. B. Valero*
EXPIRATION DATE OF LICENSE: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLAN - 7

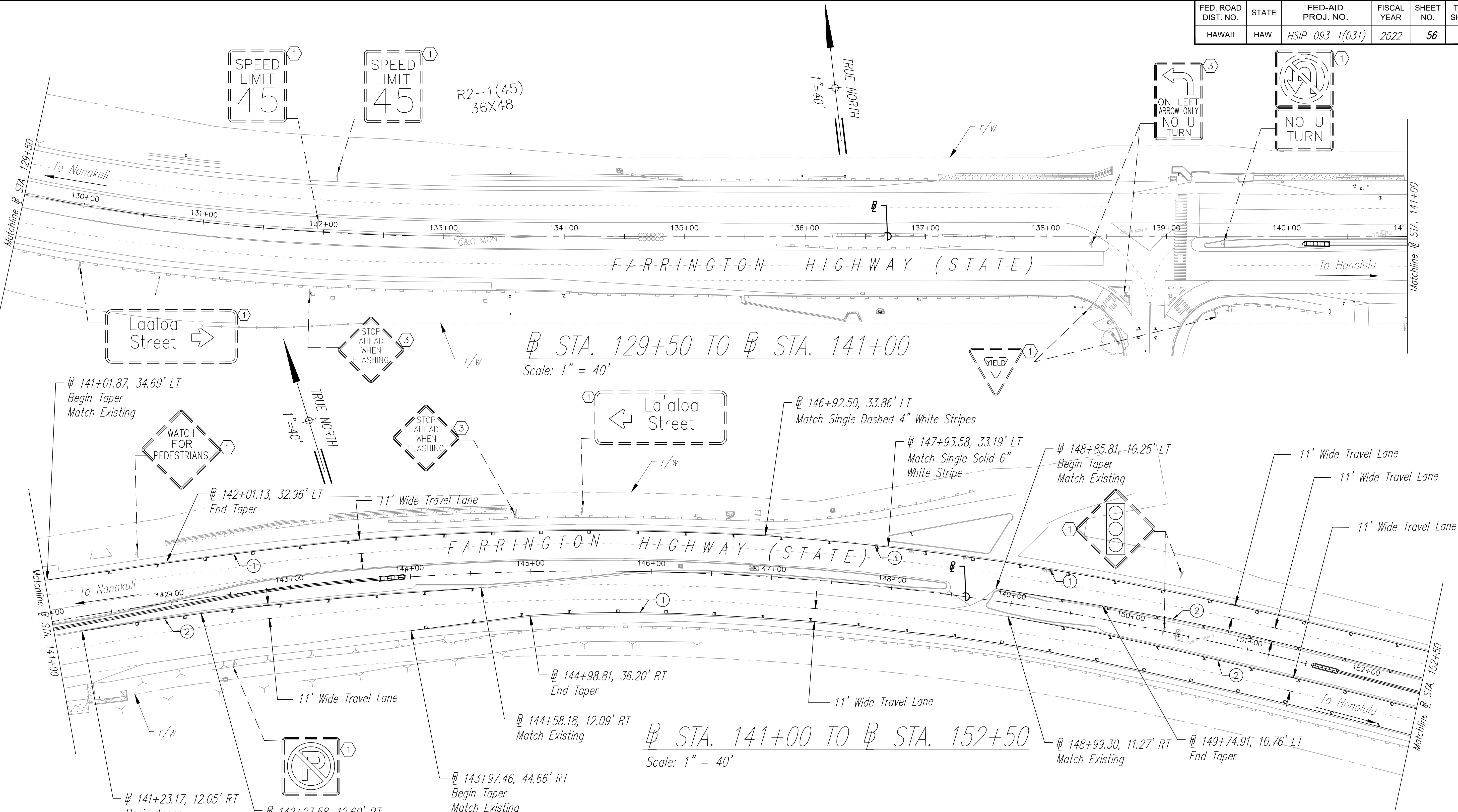
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 7 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	56	62



DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN	_____
DESIGNED BY	_____
TRACED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

PAVEMENT MARKING NOTES:

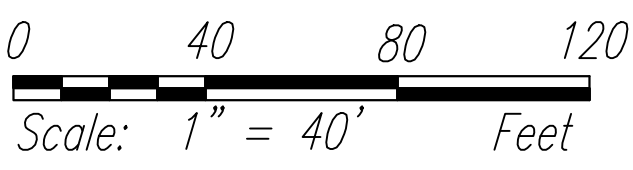
- ① Edge Line - Single Solid 6" White Stripe with Type "C" RPM
- ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM
- ③ Lane Line - Guidance Single Dashed 6" White Stripe

SIGNING NOTES:

- ① Exist. Sign(s) & Post(s) to Remain
- ③ Exist. Sign(s) on Lt. Pole to Remain

LEGEND:

- ① Exist. Sign Post (1)
- ③ Exist. Sign Post (2)



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SIGNATURE: *Ryan B. Valero* 4/30/24 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLAN - 8

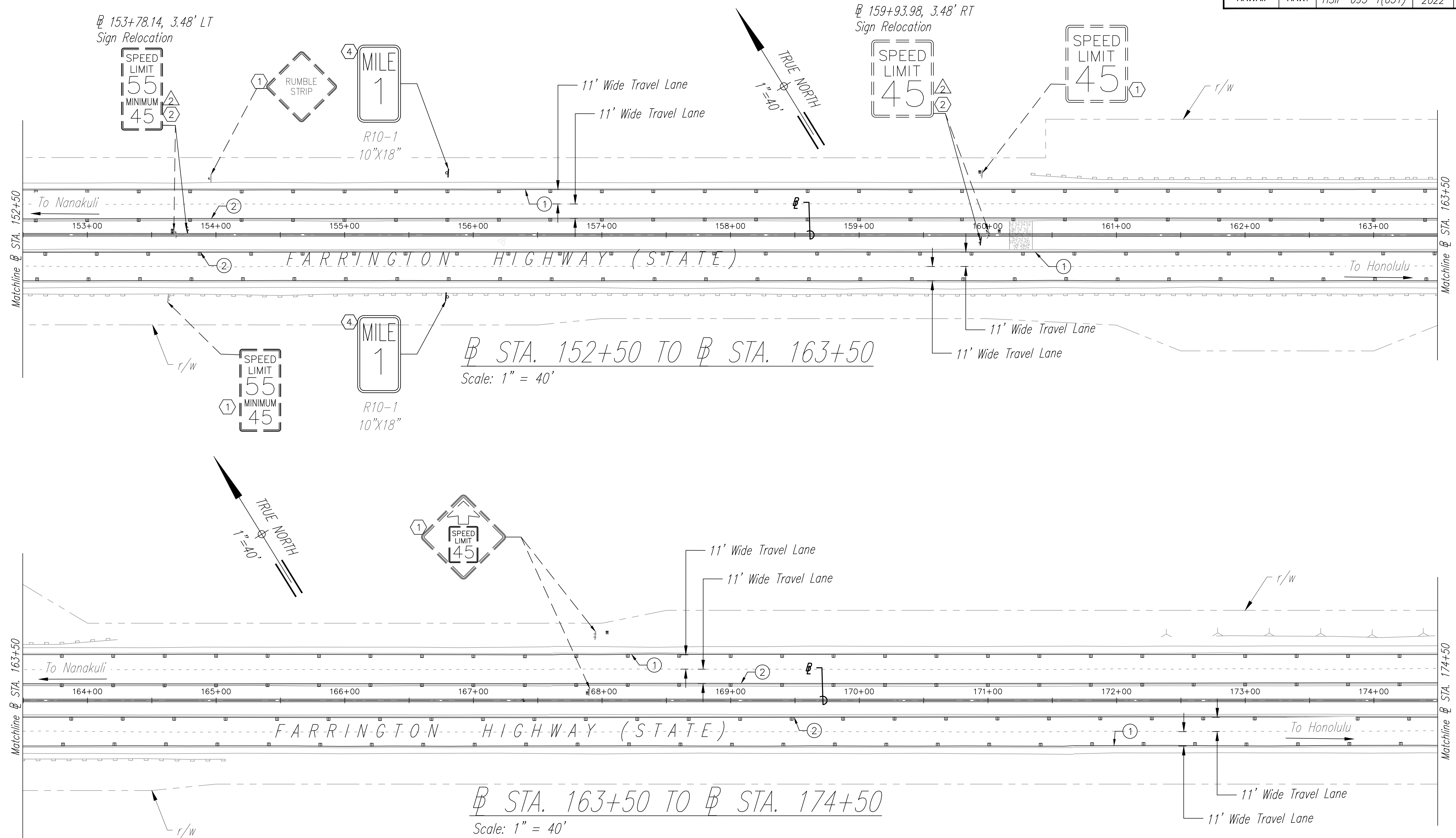
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 8 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	57	62



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

PAVEMENT MARKING NOTES:

- ① Edge Line - Single Solid 6" White Stripe with Type "C" RPM
- ② Edge Line - Single Solid 6" Yellow Stripe with Type "H" RPM

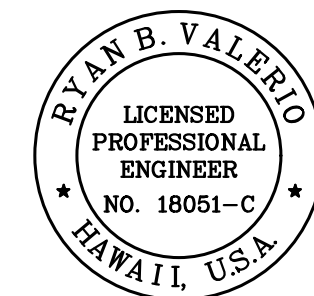
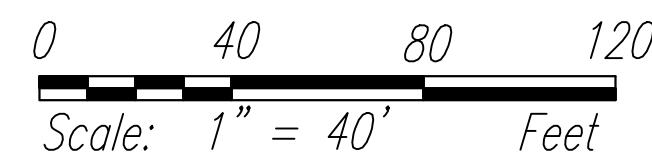
SIGNING NOTES:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Exist. Sign(s) to Relocate to New Post(s) with Type II Object Marker(s)
- ④ Install New Sign(s) & Post(s)

- ② Double Post Sign

LEGEND:

- Exist. Sign Post (1)
- ⌚ Exist. Sign Post (2)
- ⌚ New Sign Post (2)



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SIGNATURE: *R. B. Valero*

EXPIRATION DATE OF LICENSE: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLAN - 9

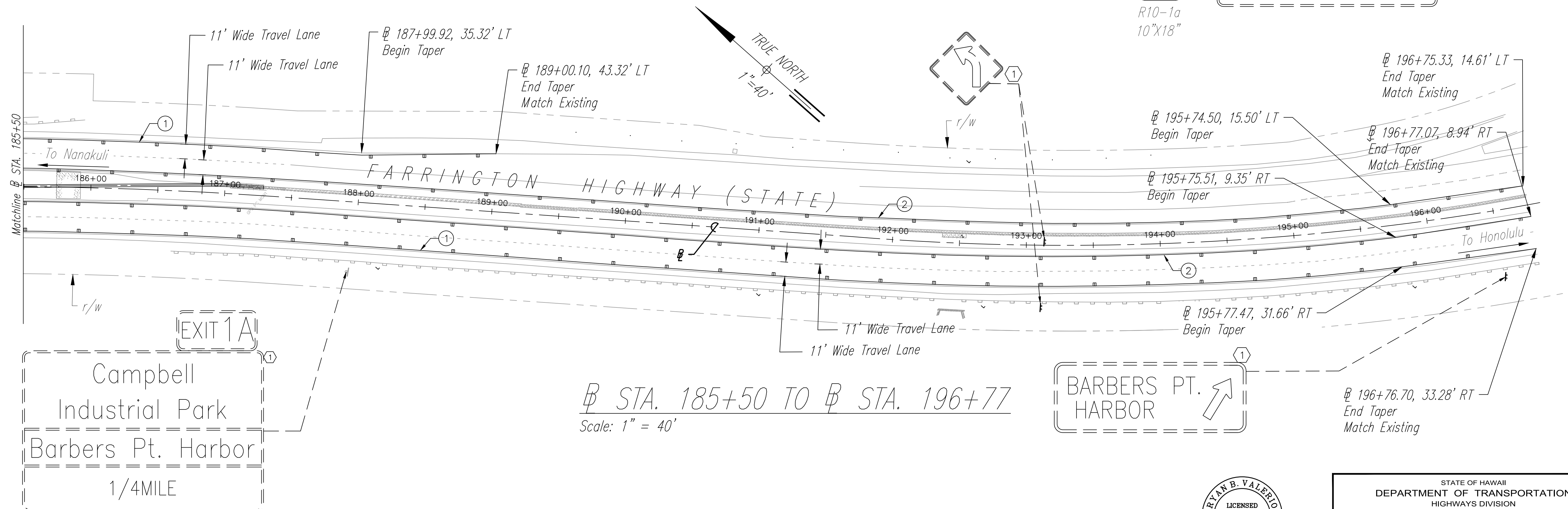
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 9 OF 12 SHEETS

Ko Olinā 1 1/2
Waianae 11



PAVEMENT MARKING NOTES:

① Edge Line – Single Solid 6”
White Stripe with Type “C” RPM


② Edge Line – Single Solid 6”
Yellow Stripe with Type “H” RPM


SIGNING NOTES:

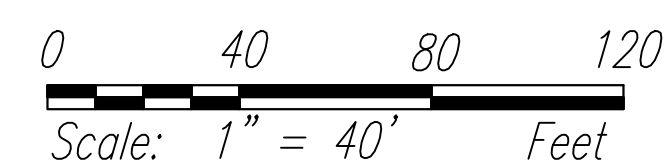
① Exist. Sign(s) & Post(s) to Remain

④ Install New Sign(s) & Post(s)

LEGEND:

 Exist. Sign Post (1)

 Exist. Sign Post (2)



THIS WORK WAS PREPARED
OR UNDER MY SUPERVISION

R. B. Valero 4/2/00

SIGNATURE EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE & STRIPING PLAN - 10

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

SHEET No. 10 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	59	62

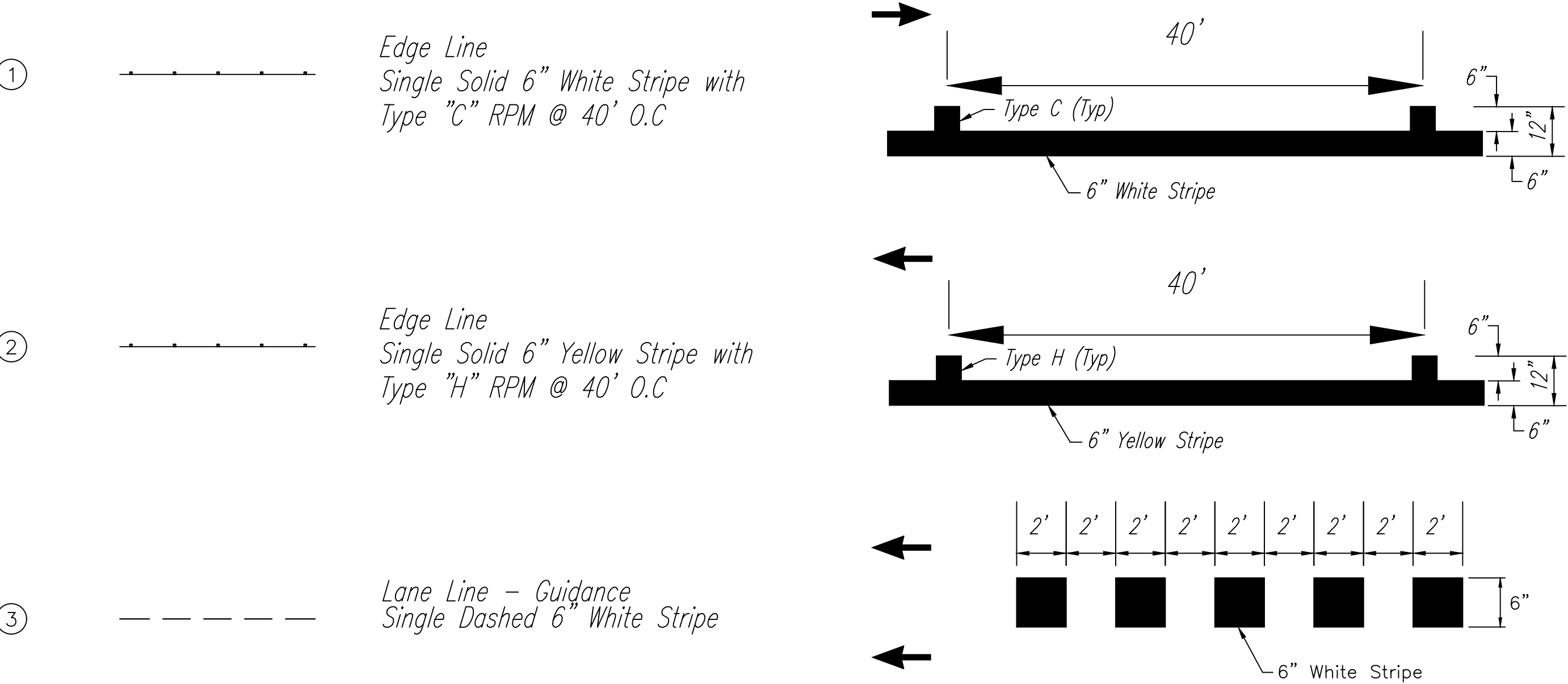
SIGNAGE & STRIPING NOTES:

1. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
2. Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. The Contractor shall consider the work required for the removal of pavement markings incidental to the various contract items.
3. The cost for temporary pavement markings shall be incidental to the various pavement marking contract items.
4. Raised pavement markers shall not be installed within crosswalks.
5. Final locations of all signs shall be approved by the Engineer prior to any installation work.
6. All pavement striping shall be as noted on the legend or plans.
7. Existing signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
8. Backing for all new regulatory and warning signs shall not be spliced.
9. All sign panels shall conform to Section 750.01 of Standard Specifications and the latest editions and amendments of the following FHWA publications:

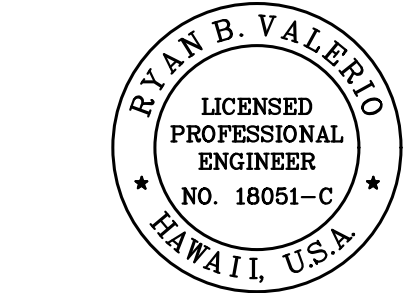
a. "Manual on Uniform Traffic Control Devices for Streets and Highways" (M.U.T.C.D.)

b. "Standard Highway Signs"

c. "Standard Alphabets For Highway Signs"
9. All relocated signs and markers installed on pipe posts or light standard are to be mounted on new square tubes with band brackets and steel braces.
10. Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
11. Removal of existing delineators and posts, as directed by the Engineer or shown on the plans, shall be considered incidental to the various signing items.
12. Sign posts shall be square tubes posts (2" or 2 1/2") unless shown on these plans or directed by Engineer.
13. All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as directed by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
14. Prior to installing new striping, existing striping and markers shall be completely removed according to Specification Section 629.03(D) Removal of Existing Pavement Markings. This work shall be incidental to the various striping pay items and shall not be paid for separately.



PAVEMENT MARKING LEGEND
Not To Scale



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SIGNATURE
R. B. Valero

EXPIRATION DATE
4/30/24
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

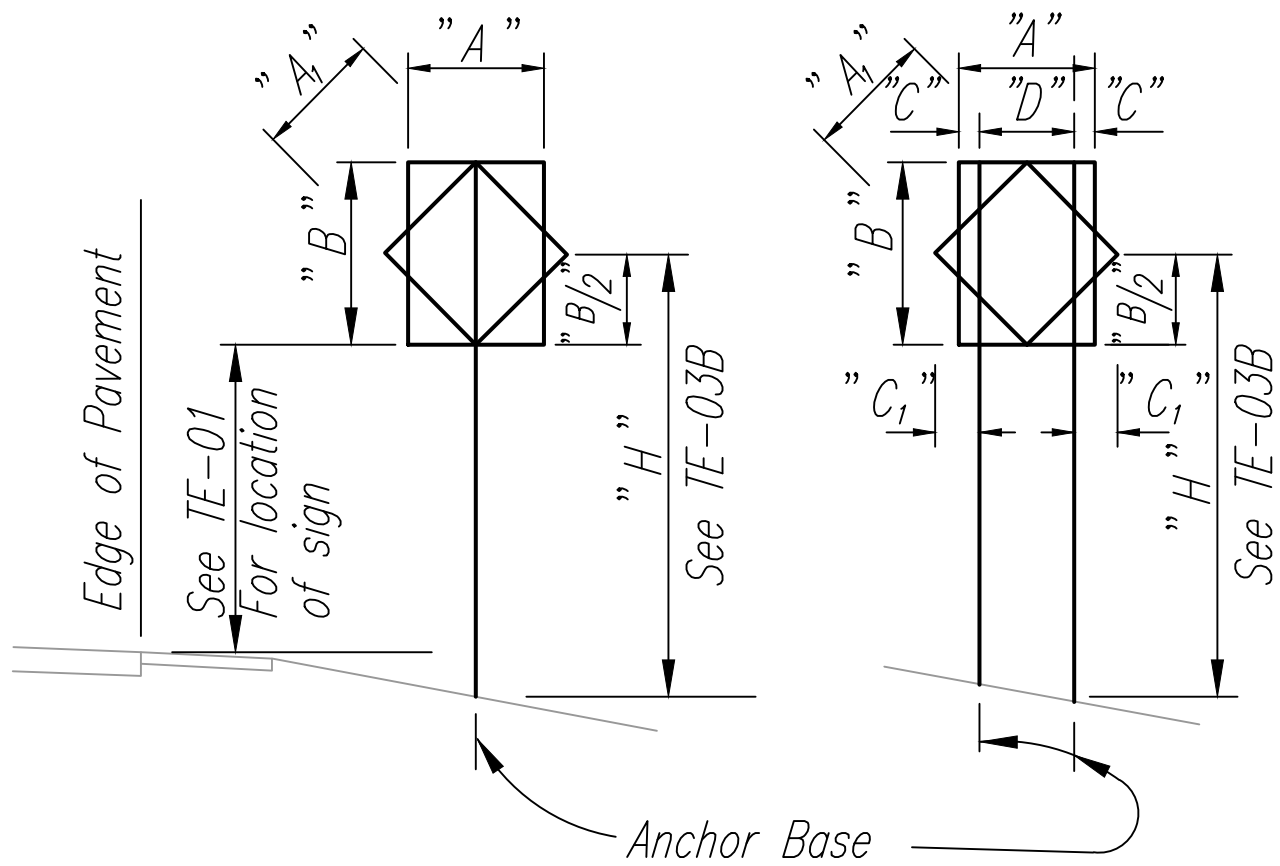
SIGNAGE & STRIPING DETAILS

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	60	62



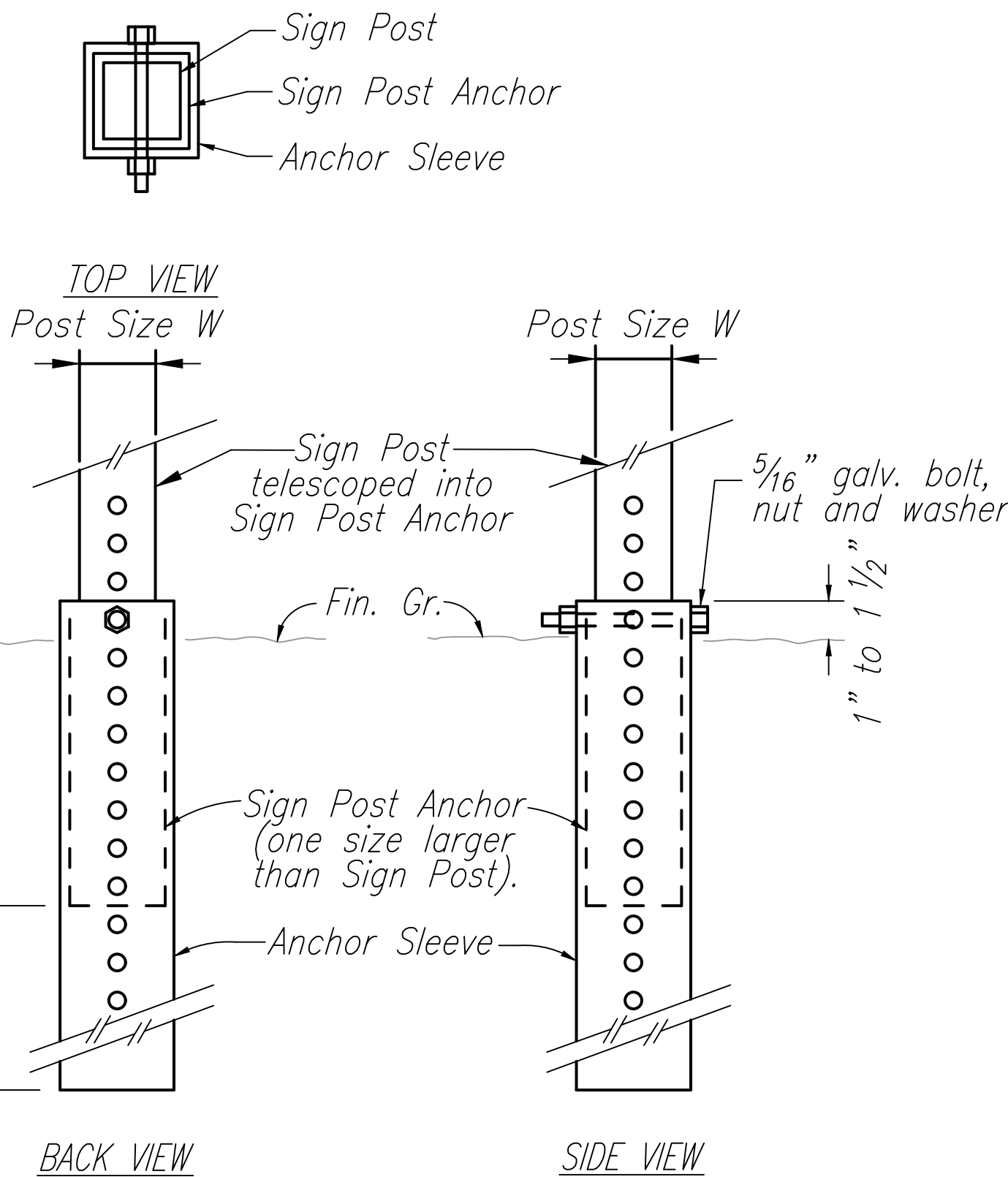
1 - POST
"A" or "A₁" less than 36"

2 - POST
"A" or "A₁" less than 60"

"A" or "A ₁ "	"C"	"C ₁ "
Less than 36"	6"	-
Greater than 36" and less than 48"	9"	19"
Greater than 48"	12"	24"

NOTE: Frame stiffeners are required when D is greater than 24"
See General Notes.

TYPICAL INSTALLATION



SIGN POST INSTALLATION

ANCHOR BASE DETAIL

GENERAL NOTES

- Design Specifications:
 - Design shall conform w/ the latest AASHTO Standard Specifications for the Structural Supports for Highway Signs, Luminaires & Traffic Signals and its interim supplements and modifications by the Highways Division, Department of Transportation State of Hawaii.
 - Latest HDOT Memorandum with subject title "Design Criteria for Bridges and Structures."
- Loads:
 - Basic Wind Speed: 105 mph.
 - Recurrence Interval of 10 years.
- Materials:
 - Post shall conform to the Standard Specifications.
 - All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M314-105 bolt.
 - Lap splice nuts and bolts shall be M180, with an ultimate tensile strength of 180 ksi, min.
 - Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene material as approved by the Engineer.
- General:
 - See General Notes on B-01, TE-01, and TE-03B for additional information.
 - All posts shall be 12 gage unless otherwise specified or shown on the plans.
 - Square tube posts shall be perforated with 7/16" ϕ holes, 1" o.c., 4 sides, along entire length of post.
 - All accessories, fittings and stiffener details (as required) shall be submitted to the Engineer for approval 20 days prior to installation.
 - Alternate designs in accordance with the plans and specifications shall use the Service Load Design Method and shall be stamped by a registered structural engineer of the State of Hawaii and submitted to the Engineer for approval.
 - All sign support posts shall be outside of the clear zone or shielded by an appropriate traffic barrier system. The traffic barrier system shall be submitted to the Engineer for his approval.
 - The Contractor shall use templates while installing the anchor bolts. Anchor bolts shall be vertical.
 - Excavation and backfill shall be considered incidental to the cost of the sign foundation.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	



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Signature: *R. B. Valero*
SIGNATURE

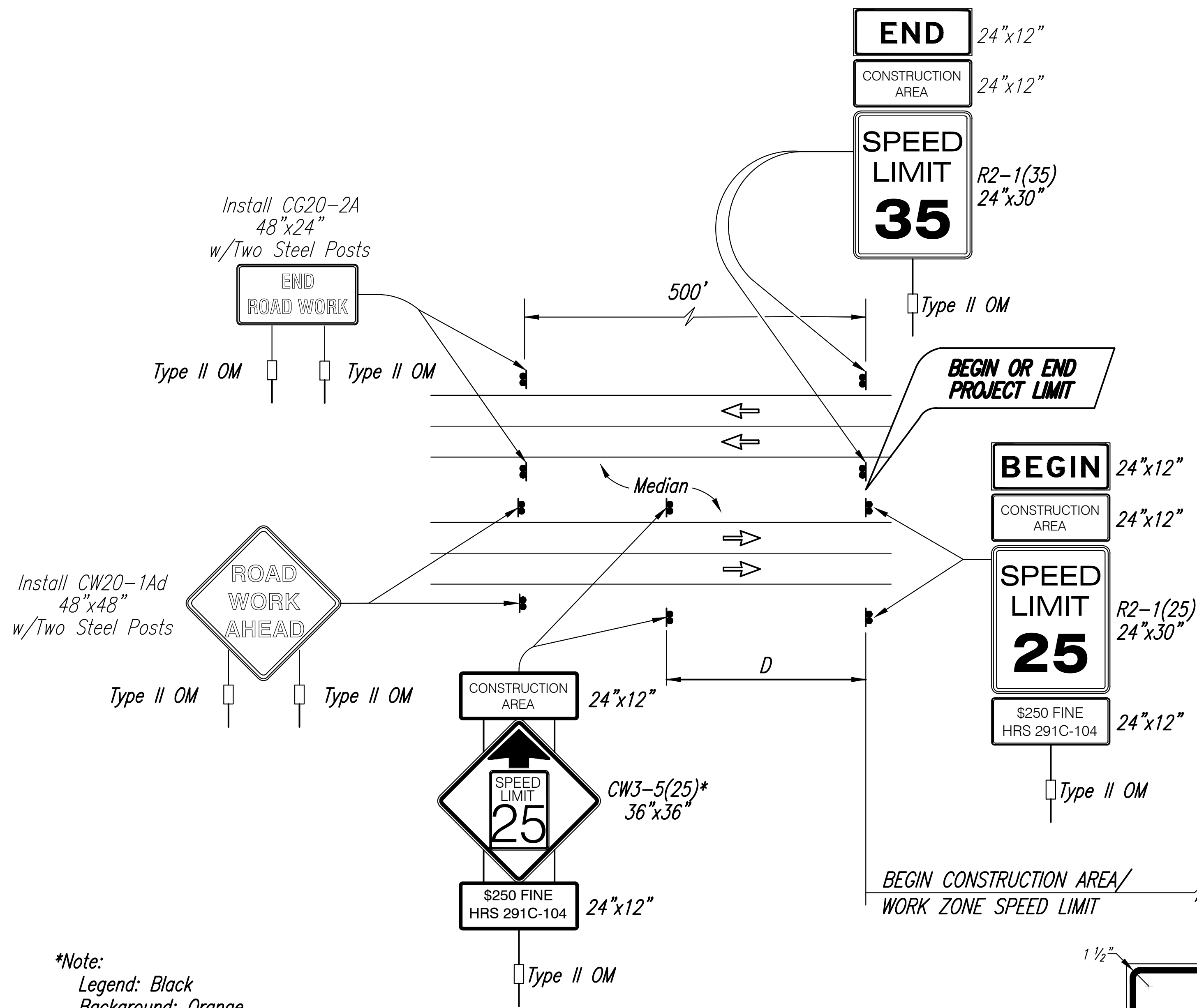
4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNAGE DETAIL
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

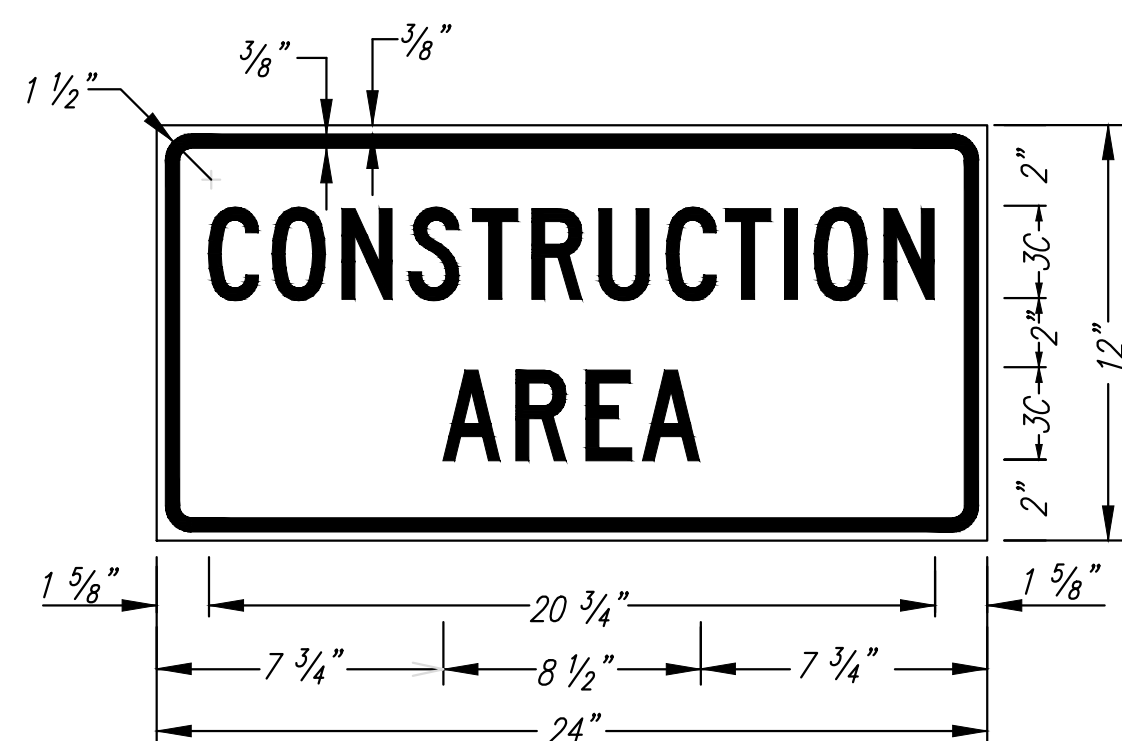
Date: November 2021

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	61	62

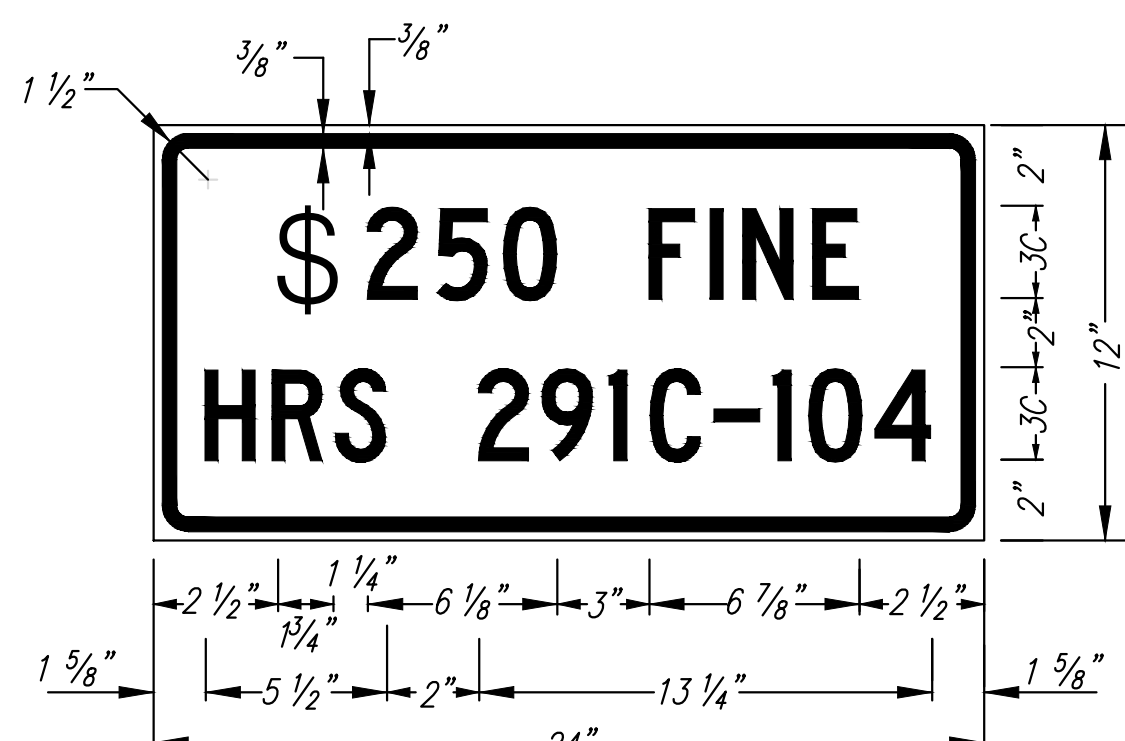


*Note:
Legend: Black
Background: Orange
Speed Limit: Black on White

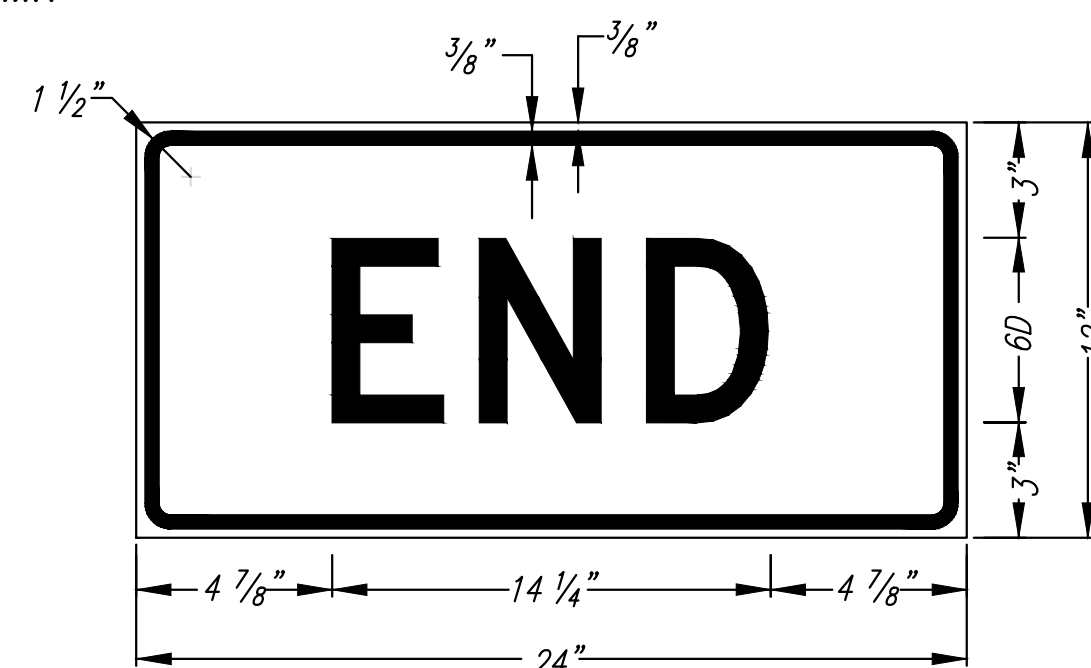
TYPICAL DETAIL FOR CONSTRUCTION SIGNS
ON MULTILANE DIVIDED LOW SPEED HIGHWAY



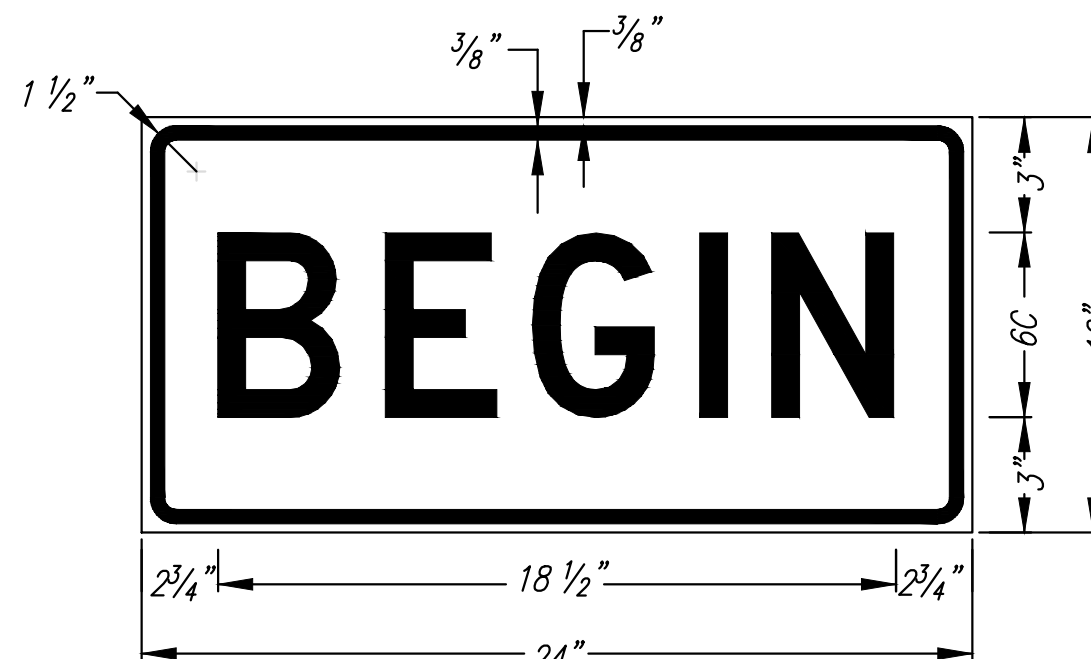
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BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: WHITE



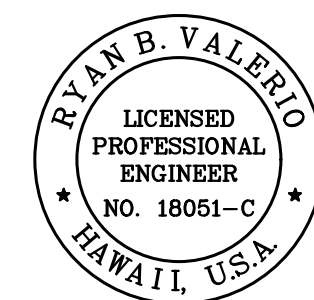
LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: ORANGE

Work Zone Notes:

1. This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Standard Specifications.
2. All existing regulatory speed limit signs with posts within the work zone/project limits shall be removed and replaced with work zone speed limit sign assemblies (R2-1(25) and CW3-5(25) with "CONSTRUCTION AREA" and "\$250 FINE HRS 291C-104" Supplemental Signs).
3. Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.
4. Each construction warning sign assembly shall have a minimum of two (2) Type II OM. Each work zone speed limit assembly shall have a minimum of one (1) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.0100, Traffic Control.
5. Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations.
6. Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.
7. The removal and restoration of existing regulatory speed limit signs with new posts along with the installation, maintenance and removal of work zone speed limit sign assemblies shall be considered incidental to Item No. 645.0100, Traffic Control. Sign covers shall not allow any portion of the sign being covered to be visible. If the sign has more than one side, cover shall completely cover each side.
8. This Work Zone Signing Plan shall be used only for low speed highways (design speeds of 45 mph or less).



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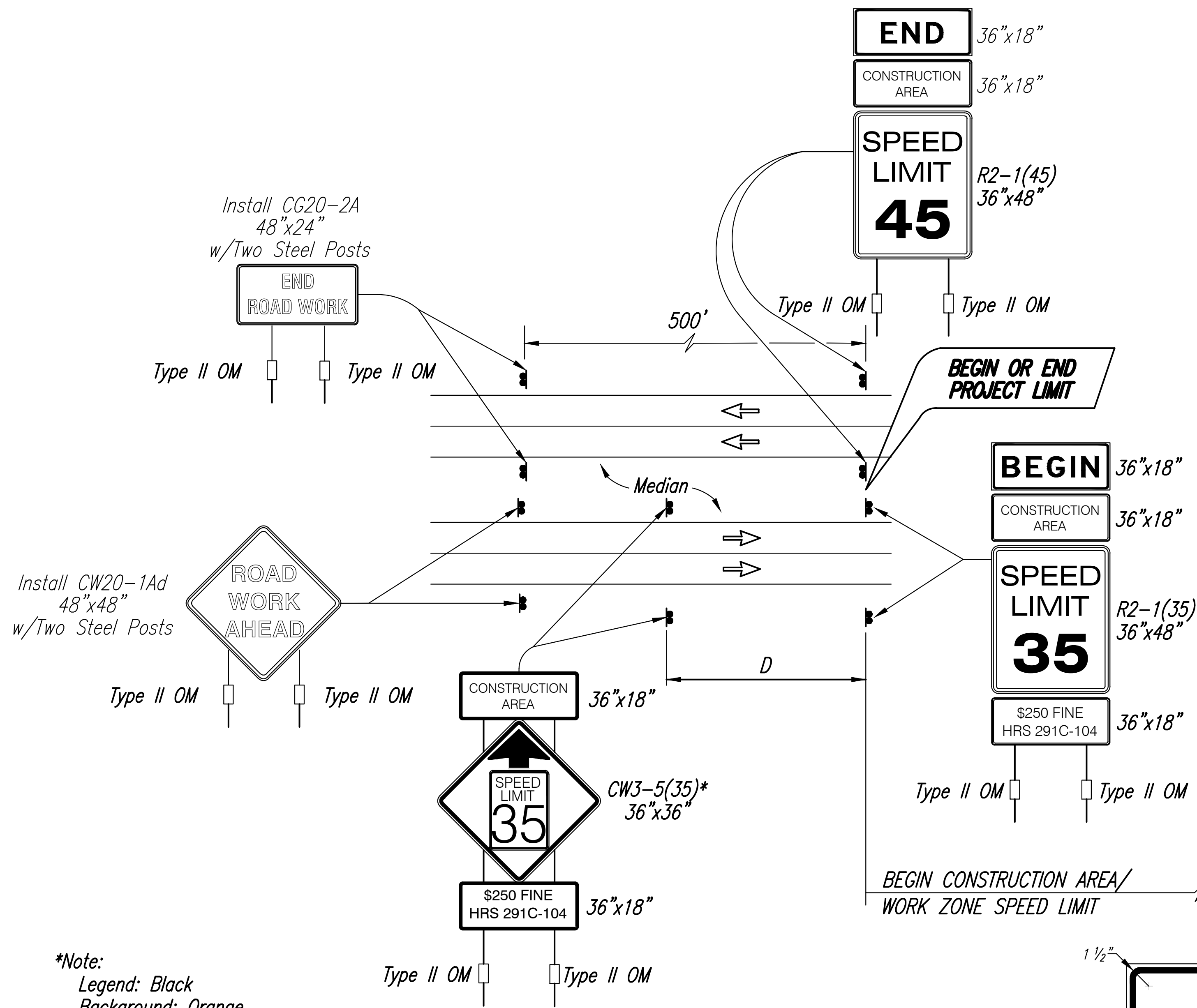
SIGNATURE
R. B. Valero

EXPIRATION DATE
OF LICENSE
4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LOW SPEED DIVIDED HIGHWAY
WORK ZONE SIGNING PLAN, NOTES & DETAILS
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

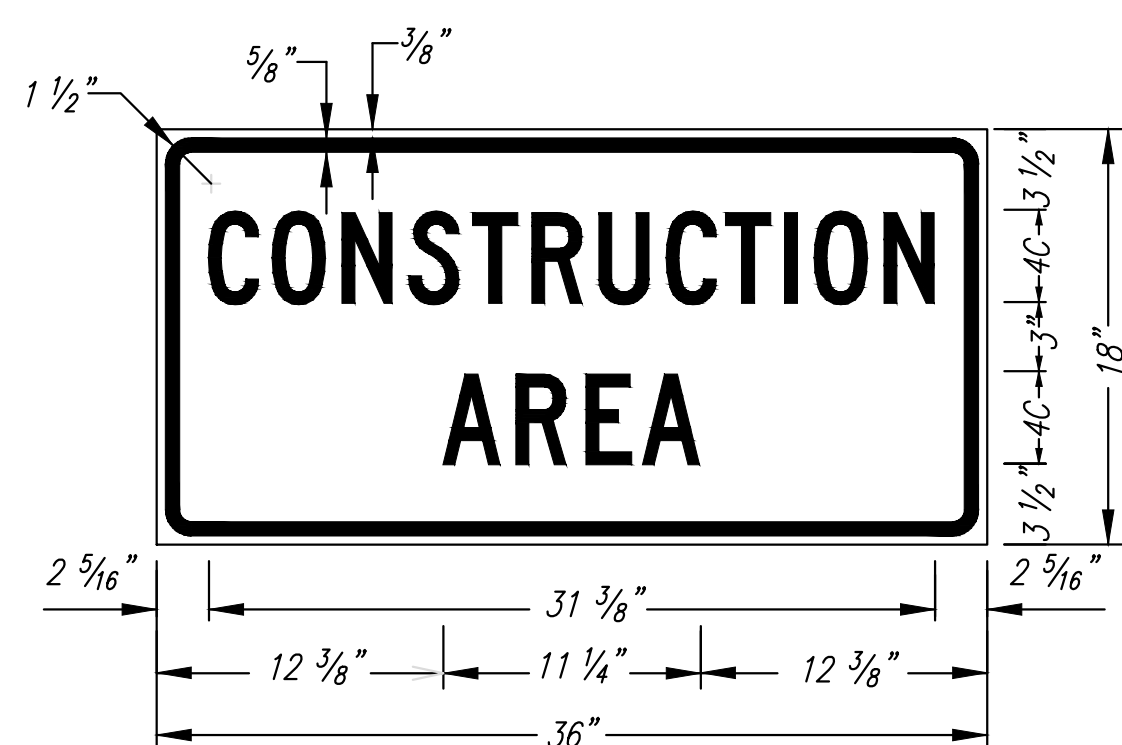
SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(031)	2022	62	62

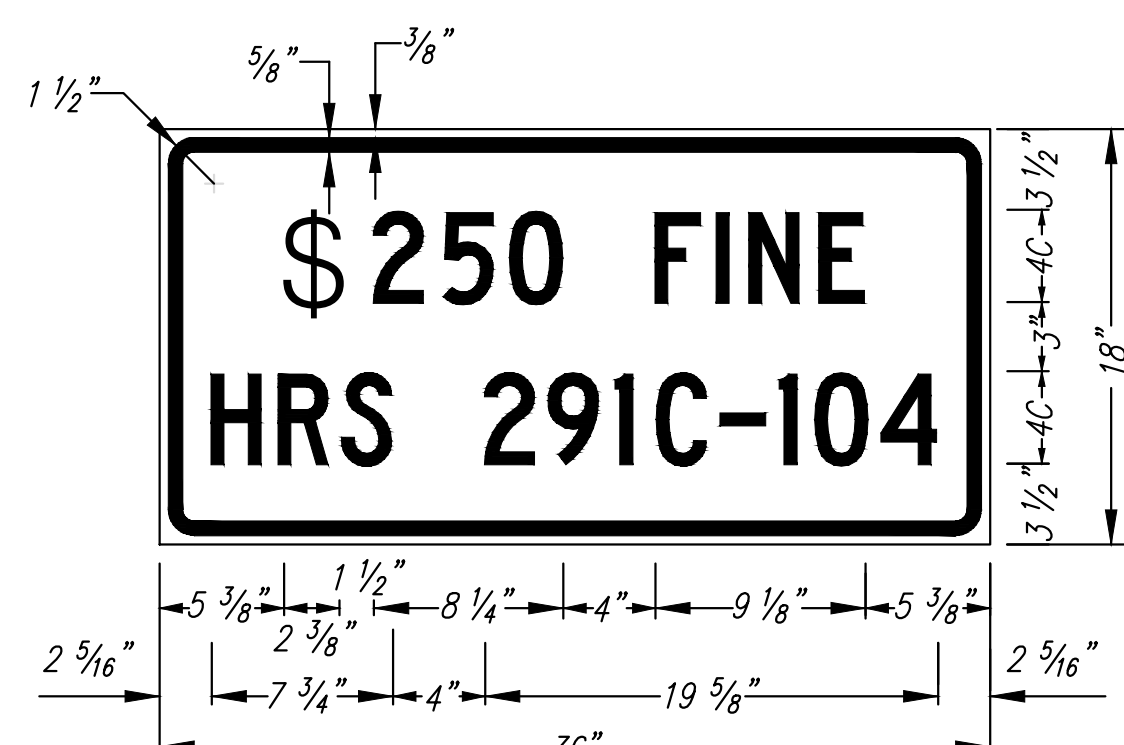


*Note:
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Background: Orange
Speed Limit: Black on White

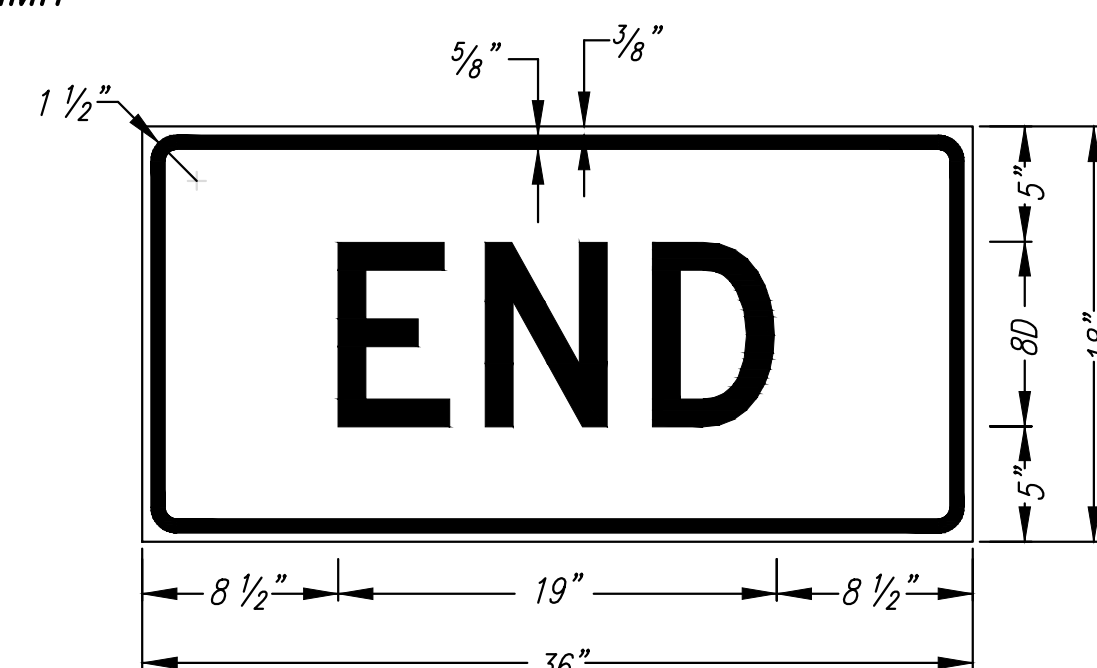
TYPICAL DETAIL FOR CONSTRUCTION SIGNS
ON MULTILANE DIVIDED HIGH SPEED HIGHWAY



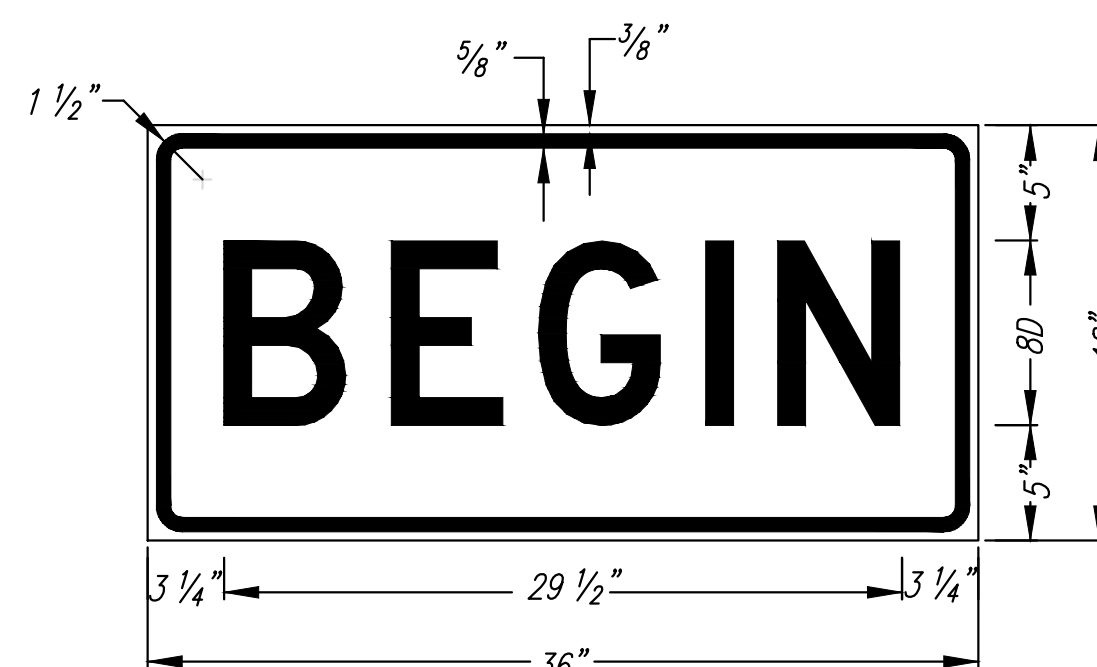
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BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: WHITE



LEGEND: BLACK
BACKGROUND: ORANGE

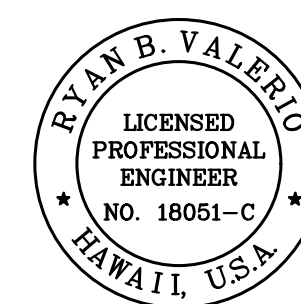


LEGEND: BLACK
BACKGROUND: ORANGE

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DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

SIGNATURE: *R. B. Valero*
EXPIRATION DATE: 4/30/24
OF LICENSE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <u>HIGH SPEED DIVIDED HIGHWAY</u> <u>WORK ZONE SIGNING PLAN, NOTES & DETAILS</u> <u>FARRINGTON HIGHWAY</u> <u>SAFETY IMPROVEMENTS</u> <u>Pohakunui Avenue to Interstate H-1</u> <u>Federal Aid Project No. HSIP-093-1(031)</u> Date: November 2021
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SHEET No. 2 OF 2 SHEETS