FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	1	52

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4	CONSTRUCTION NOTES
5	WATER AND GAS NOTES
6	OVERALL BRIDGE FOUNDATION PLAN
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8	WATER POLLUTION AND EROSION CONTROL NOTES
9	WATER POLLUTION AND EROSION CONTROL NOTES
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13	EROSION CONTROL DETAILS
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16	LOW SPEED DIVIDED HIGHWAY WORK ZONE SIGNING PLAN, NOTES & DETAIL
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38	PARTIAL FOUNDATION PLAN AND PARTIAL ELEVATION
39	PARTIAL BRIDGE FRAMING PLAN
40	PARTIAL BRIDGE FRAMING PLAN
41	PARTIAL FOUNDATION PLAN
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43	PARTIAL FOUNDATION PLAN
44	TYPICAL SECTION
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46	BENTS 4 AND 27 SECTIONS
47	TYPICAL BENT CAP SECTIONS
48	FOOTING DETAILS
49	FOOTING DETAILS
50	FOOTING DETAILS
51	PLANTER BOX DETAILS
52	PHOTOGRAPHS

MIKE ASSOCIATES LLC
DESIGNED BY

HWY-DS
MANAGED BY

(808) 692-7546
PHONE

JULY 2024
DATE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION
HONOLULU, HAWAII

PLANS FOR

INTERSTATE ROUTE H-1

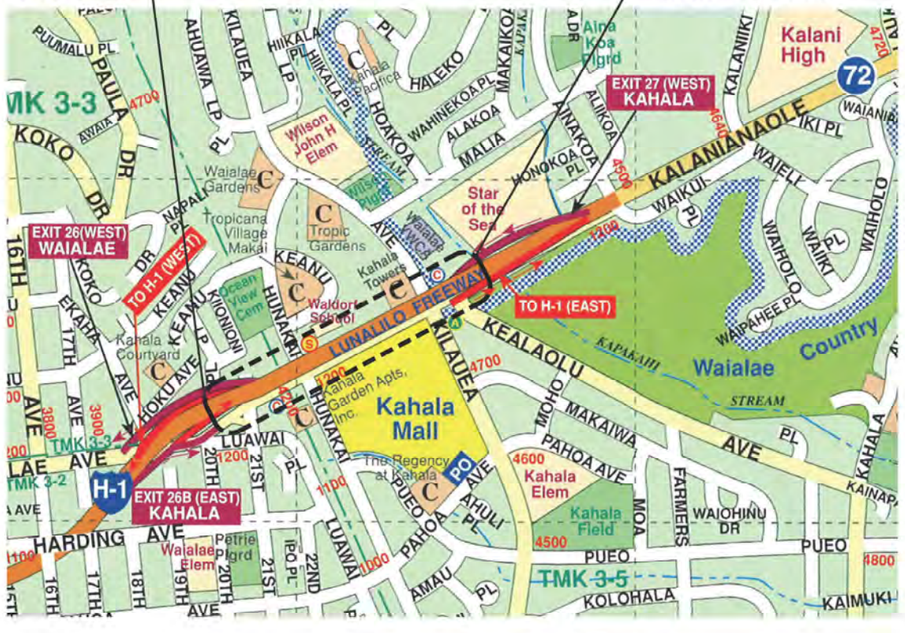
SEISMIC RETROFIT
WAIALAE VIADUCT INBOUND AND OUTBOUND

FEDERAL AID PROJECT NO. NH-H1-1(277)

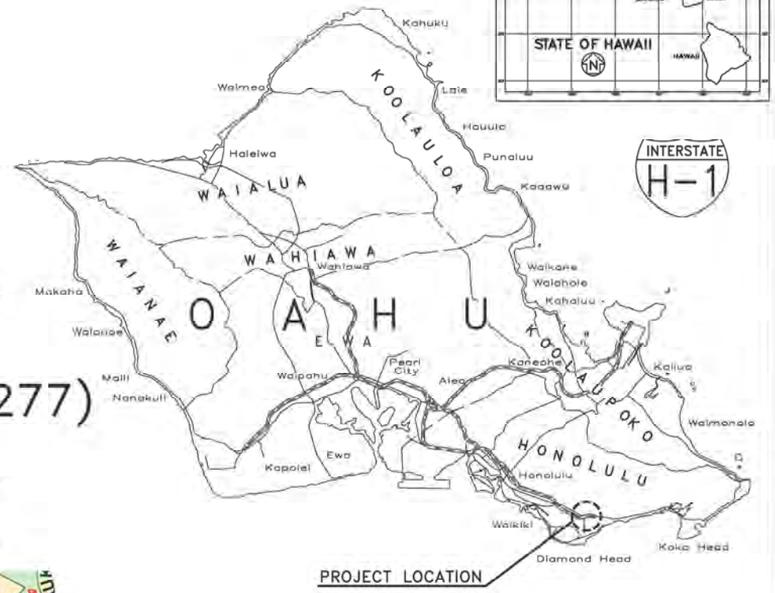
DISTRICT OF HONOLULU
ISLAND OF OAHU

BEGIN PROJECT
ROUTE H-1
STA. 141+05

END PROJECT
ROUTE H-1
STA. 162+63



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED:	
For DIR. OF TRANSPORTATION	Aug 6, 2024 DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	2	52

STANDARD PLANS SUMMARY

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	05/31/07
	SPLICE CAN DETAILS & NOTES	
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 DETAILS	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 STROM 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 FRAME 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-01A ●	SIGN INSTALLATION	07/11/08
TE-02A	GALVANIZED FLANGE CHANNEL SIGN POST MOUNTING	05/31/07
TE-02B	GALVANIZED FLANGE CHANNEL SIGN POST MOUNTING	05/31/07
TE-02C	GALVANIZED FLANGE 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

STANDARD PLAN NO.	TITLE	DATE
TE-07 ●	CONSTRUCTION SIGNS	07/11/08
TE-08	MISCELLANEOUS INTERSECTION SIGNS	07/11/08
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 FRAME 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 ACCESSORY DETAILS	05/31/07
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

STANDARD PLAN NO.	TITLE	DATE
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 BRIDGE	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-03 ●)

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

GRANT J. OKUNAGA
LICENSED PROFESSIONAL ENGINEER
No. 13001-S
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
EXP: 04-30-26

MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS
SUMMARY

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. T-2 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(277)	2024	3	52

GENERAL NOTES:

GENERAL:

1. The scope of work for this project consists of providing fiber reinforced polymer (FRP) reinforcing of select bentcaps and adding concrete and reinforcement to the top of select spread footings and pile caps of Waialae Viaduct. Traffic control is also included in the scope of work.

2. Workmanship and materials shall conform to the drawings, Hawaii Standard Specifications for Road and Bridge Construction (2005 Edition) and Special Provisions. However, where reference is made to performance conforming to other standards, the more stringent shall apply.

3. The Contractor shall compare all the contract documents with each other and report in writing to the Engineer all inconsistencies and omissions.

4. The Contractor shall take field measurements and verify field conditions and shall compare such field measurements and conditions with the drawings before commencing work. Report in writing to the Engineer all inconsistencies and omissions.

5. The Contractor shall be responsible for coordinating the work of all trades.

6. The Contractor shall be responsible for methods of construction, workmanship and job safety. The Contractor shall provide temporary shoring and bracing as required for stability of structural members and systems.

7. Details noted as typical on the drawings shall apply in all conditions unless specifically shown or noted.

8. The Contractor shall coordinate all work at or near Waialae Viaduct with the Engineer and the Engineer and Contractor for the Interstate Route H-1 Seismic Retrofit, Waialae Viaduct Inbound and Outbound, Federal Aid Project No. NH-H1-1(277) project. All lane closures in the area shall be submitted for approval to the Engineer for both projects. In addition to following the requirements of this project in regards to working above any facilities or public areas, the Contractor shall also submit a work plan for any work areas above the Interstate Route H-1 Seismic Retrofit, Waialae Viaduct Inbound and Outbound, Federal Aid Project No. NH-H1-1(277) project. This work plan shall include but not limited to equipment, tools, materials, or any other objects that may fall into the work space of the Interstate Route H-1 Seismic Retrofit, Waialae Viaduct Inbound and Outbound, Federal Aid Project No. NH-H1-1(277) project. The work plan shall be submitted to the Engineer for approval 6 weeks prior to the start of site construction.

CONSTRUCTION REQUIREMENTS:

1. The Contractor shall verify the locations of all existing utility lines and notify their respective owners before commencing with work.

2. The Contractor shall be responsible for the protection of all utilities during construction and shall provide bypasses as necessary to keep utilities in service.

3. At the end of each day's work, the Contractor shall pickup/collect all debris and remove all equipment and other obstructions to permit free and safe passage of public traffic.

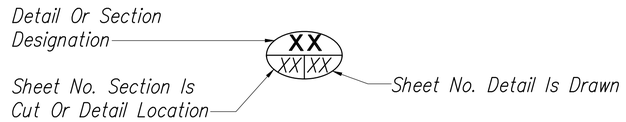
4. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.

5. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting retrofitting operations.

6. The Contractor shall erect construction warning signs in accordance with the latest version of the MUTCD or as directed by the Engineer.

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

SYMBOLS AND ABBREVIATIONS



1 Indicates Typical Retrofit Work

1 Indicates Photo Location And Orientation

Abut	Abutment
AC	Asphaltic Concrete
Adj	Adjacent
Alt	Alternate
Approx	Approximate
℄	Baseline
Bal	Balance
Bet, Btwn	Between
BF	Both Faces
BB	Begin Bridge
BFE	Bottom Footing Elevation
Bm	Beam
B, Bot, Bott	Bottom
Br	Bridge
℄	Center Line
Cant	Cantilever
CF	Cubic Feet
CIP	Cast In Place
Cl, Clr	Clear
Conc	Concrete
Conn	Connection
Cont	Continuous
CRM	Cement Rubble Masonry
CY, Cu Yd	Cubic Yards
Det	Detail
Dia, ø	Diameter
Discont	Discontinuous
Dim	Dimension
Dwg, Dwgs	Drawing, Drawings
Ea	Each
eb	End Bridge
ef	Each Face
Elec	Electrical
El, Elev	Elevation
Emb	Embankment
Embed	Embedment
ep	Edge of Pavement
Eq	Equal
Est	Estimated
ew	Each Way
Exc	Excavation
exist, exst	Existing
Exp, (E)	Expansion
Ext	Exterior
(f)	Fixed
f'c	Specified Strength Of Concrete
Fin	Finish
fg	Finish Grade
Ftg	Footing
FRP	Fiber-Reinforced Polymer
Ga	Gage, Gauge
Galv	Galvanized
Gir	Girder
GRP	Grouted Rubble Paving
gr	Grade
Grd	Ground
Horiz	Horizontal
Hk	Hook
HS	High Strength
ht	Height
Hwy	Highway
in	Inch
Int	Interior
Inv	Invert
Jt	Joint
Lbs, Lb	Pound, Pounds
LF	Linear Feet
Lg	Long
Longit	Longitudinal
LS	Lump Sump
Lt	Left
Max	Maximum
Mech	Mechanical
Min	Minimum
Misc	Miscellaneous
No, #	Number
nts	Not To Scale
oc	On Center
Oct	Octagonal
OG	Outside Girder
Opn'g	Opening
Perf	Perforated
℄	Plate
P/S	Prestressing
Pav't, Pvmt	Pavement
R	Radius
Ref	Reference
Reinf	Reinforcement
Req'd	Required
Rt	Right
ROW, R/W	Right Of Way
SB	SouthBound
Sect	Section
sf	Square Feet
Sht	Sheet
Sim	Similar
Spcs	Spaces
Spcg	Spacing
Spec	Specification
Sta	Station
Std	Standard
Stirr	Stirrup
Struct	Structural
Symm	Symmetrical
Temp	Temporary
Thk	Thick, Thickness
TOF	Top of Footing
Tot	Total
Transv	Transverse
Typ	Typical
Vert	Vertical
w/	With
ww	Wingwall

GRANT J. OKUHARA
LICENSED PROFESSIONAL ENGINEER
No. 13001-S
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
EXP. 04-30-26

MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES,
SYMBOLS AND ABBREVIATIONS

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. T-3 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	4	52

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY:

1. The Contractor shall obtain a permit to perform work upon State highways from the Oahu District Engineer, State Highways, at 727 Kakoi Street, prior to commencement of work within State highway right-of-way.

2. Construction and restoration of all existing highway facilities within the State's right-of-way, including the Legal Relations and Responsibility to the Public, shall be in accordance with the current Hawaii Standard Specifications for Road and Bridge Construction, 2005, and the Specifications for Installation of Miscellaneous Improvements within State Highways, of the State Highways Division.

3. Work may be performed only between the hours of 8:30 a.m. and 3:00 p.m., Monday through Friday, except holidays, unless otherwise permitted by the District Engineer.

   During work hours, only one lane of traffic shall be closed, unless otherwise approved in writing by the District Engineer.

   At certain locations, "No Lane Closure" will be allowed during the "Back to School Jam", Thanksgiving weekend, Christmas/New Year period and at other times as directed by the Highways Division.

4. The Contractor shall provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities, and shall toke all necessary precautions for the protection, convenience, and safety of public traffic. All such protective facilities and precautions to be token shall conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" adopted by the Director of Transportation, and the current U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices, Port 6 – Temporary Traffic Control".

   Lane closures shall conform to the traffic control plans incorporated into these construction plans and must be approved by the Division prior to the issuance of the permit.

5. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way, except at locations designated in writing and approved by the District Engineer.

6. Compaction tests shall be taken in accordance with the specifications for installation of miscellaneous improvements within State highways, as follows:
   a. Subbase: One (1) compaction test per lift per 1,000 square feet of roadway.
   b. Base Course: One (1) compaction test per lift per 1,000 square feet of roadway.
   c. One (1) compaction test per 300 lineal feet of trench.
   d. A copy of the test results shall be submitted to the Resident Engineer.

7. Prior to commencing trench excavation work, the Contractor shall toke a profile along the centerline of the proposed utility trench. This information shall be used in the verification of restoring the roadway to its original condition. A copy of the profile shall be submitted to the District Engineer.

8. The Contractor shall provide on adequate and safe non-skid bridging material, including shoring, over trenches in pavement areas. The bridging shall be able to support all types of vehicular traffic.

9. Unless otherwise noted, no trench shall be opened more than 300 feet in advance of installed and tested pipeline and/or duct line.

10. Existing drainage systems shall be functional at all times.

11. The Contractor shall exercise core to minimize damages to existing highway improvements. All damages shall be repaired by the Contractor, at his expense, to the satisfaction of the District Engineer.

12. All regulatory, guide and construction signs and barricades shall hove a high-intensity reflective background.

13. The Contractor shall submit requests for detours and lane closures in accordance with Hawaii Standard Specification Subsection 645.03(F) and with the minimum time frames required for implementation. Once the request has been approved by HDOT, the Contractor shall provide written Weekly Lane Closure Request to the HDOT Construction field office at least one (1) week prior to commencing work.

14. Driveways shall be kept open unless the owners of the property using these right-of-way ore otherwise provided for satisfactorily.

15. Where pedestrian walkways exist, they shall be maintained in a safe and passable condition or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided. All walkways shall conform to the ADA requirements.

16. The Contractor shall reference, to the satisfaction of the District Engineer, all existing traffic signs, posts and pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts and pavement markings disturbed by his activities, at his expense, unless directed otherwise by the District Engineer or his representative.

17. The Contractor shall exercise care when performing work in or adjacent to the State highway right-of-way. Damages to all existing buried facilities, surface facilities, and overhead utility lines shall be immediately reported to the respective utility companies, and/or City or State agencies. The repair work shall be done at the Contractor's expense.

18. The Contractor shall notify the State Highway's highway lighting supervisor (837-8056) one (1) week prior to commencing work.

19. The Contractor shall notify the City Deportment of Transportation Services, Traffic Signal Engineer (523-4589), one (1) week prior to any signalization intersection work.

20. Traffic signals shall be kept operational during construction. Temporary operational microwave or other approved detection devices shall be installed one (1) week prior to any signalization intersection excavation work. All work shall be done in accordance to the requirements of the Department of Transportation Services, City and County of Honolulu, and paid for by the Contractor.

21. The Contractor shall notify the Deportment of Transportation Services, Public Transit Division at 768-8396 and Oahu Transit Services, Inc. (bus operations: 848-4578 or 848-6016 and para-transit operations: 454-5041 or 454-5020) of scope of work, location, and proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project at least two (2) weeks prior to construction.

22. The permit to perform work upon State Highways may be revoked because of default in any of the following, but not limited to, conditions:
   a. Work 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.

23. The Contractor shall notify the HDOT Construction field office in writing at least one week of all upcoming work. This work shall include any backfilling and compacting trench material; any placing and compacting of base course material; and any paving operations. Any trench restoration work performed by the Contractor that is not witnessed by a State representative will required to be removed and restored with a State representative present. All restoration work will be at the Contractor's expense.

24. Temporary cold mix trench patches will be permitted in any given area for a maximum duration of two weeks, and shall be a minimum of 2 inches thick. All temporary patches shall be placed over properly placed and compacted backfill and base course layers. Contractor shall be responsible for maintaining all temporary patches and to make repairs to unsatisfactory patches within 24 hours.

25. The Contractor will make every effort to minimize the use and the duration of use of steel plates. All steel plates shall have a non-skid surface. The State may require the backfilling and patches of trenches due to the excessive usage of steel plates.

26. Plastic marking tape. Provide plastic marking tape that is acid and alkali resistant polyethylene film 6 inches wide with minimum thickness of 0.004 inch. Provide tape with minimum strength of 1,750 PSI lengthwise and 1,500 PSI crosswise. Manufacture tape with integral wires, foil backing or other means to enable detection by a metal detector when tape is buried up to 3 feet deep. Manufacture tape specifically for marking and locating underground utilities. Provide the metallic core of the tape encased in a protective jacket or provided with other means to protect it from corrosion. Conform to the following tape color and bear a continuous printed inscription describing the specific utility.

   Red: Electric

   Yellow: Gas, oil & dangerous materials

   Orange: Telephone, telegraph, television, police & fire communications

   Blue: Water systems

   Green: Sewer systems

27. The Contractor shall place an advertisement in the newspaper for the temporary road closure. The "Notice to Motorist" shall be placed in the Honolulu Star Advertiser for three consecutive days within one week before the temporary lane closures. The "Notice to Motorist" shall be in accordance with the current Hawaii Standard Specifications for Road and Bridge Construction, 2005, Subsection 10 7.06 – Contractor Duty Regarding Public Convenience and Subsection 645.03(H) – Advertisement.

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

GRANT J. OKUNAGA
LICENSED PROFESSIONAL ENGINEER
No. 13001-S
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
EXP. 04-30-26

MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. T-4 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	5	52

WATER NOTES:

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendments and additions.

2. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply and/or if work is to be done on/or near the water system.

3. The existence and location of underground utilities and structures as shown on the plans are from the latest available data, but are not guaranteed as to their accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.

4. The Contractor shall be responsible for the protection of all waterlines during construction. The Contractor shall be especially careful when excavating behind waterlines, tees, and bends wherever there is a possibility of waterline movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the waterlines, such as constructing special reaction blocks (with Board of Water Supply approval) and/or modifying his construction method.

5. The Contractor shall notify BWS Capital Projects Division, Construction Section in writing or call (808) 748-5730 one week prior to commencing construction activities.

6. Re-approval shall be required if this project is not under construction within a period of two (2) years.

7. Prior to any excavation, the Contractor shall verify in the field, the location of existing waterlines and appurtenances.

8. Any adjustments to the existing water system required during construction, to meet the requirements of the Board of Water Supply Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board of Water Supply.

GAS NOTES:

1. Hawaii Gas' pipelines in the project area are plastic coated and cathodically protected. The Contractor shall be extremely careful when working near these gas pipelines.

2. Written clearances must be obtained from Hawaii Gas, Maps and Records Department, 515 Kamakee Street, at least five (5) working days prior to starting excavation near these gas pipelines.

3. Since gas line locations on field maps are approximate, the Contractor, after obtaining written clearance, shall call Hawaii One Call Center a minimum of five (5) working days before starting excavation to arrange for field location of the existing gas pipelines. The telephone number is 811 or 1-866-423-7287.

4. The contractor shall excavate and backfill around gas pipelines in the presence of a representative of Hawaii Gas. All backfill within six inches of any gas pipeline shall be S4C, sand, man sand, or a select cushion material approved b Hawaii Gas.

5. For relocation of any gas pipeline, the Contractor shall notify Hawaii Gas five (5) working days before starting work. The telephone number is 594-5574. The Contractor shall provide the necessary excavation and backfill, obtain traffic permits, and restore pavement, sidewalks, and other facilities. Any relocation of gas facilities shall be done by Hawaii Gas and paid for by the Contractor.

6. The Contractor shall notify Hawaii Gas immediately after any damage has been caused to existing gas pipelines, coatings, or its cathodic protection devices. The telephone number is 535-5933, 24 hours a day. The Contractor shall be liable for any damage to Hawaii Gas' facilities. Repair work on such damage shall be done by Hawaii Gas with payment for this work to be borne by the Contractor.

7. Minimum vertical and horizontal clearance between the gas pipelines and other pipelines, conduits, ductlines, or other facilities shall be 12 inches. Adequate support and protection for gas pipelines exposed in the trench shall be provided by the Contractor and approved by Hawaii Gas.

8. The Contractor shall work in an expeditious manner in order to keep the uncovered gas pipelines exposed for as short a period of time as possible.

APPROVED:

_____ _____

MANAGER & CHIEF ENGINEER, BWS — DATE

(For work affecting BWS Facilities in City/State Right-of-way and BWS Easement only)

ORIGINAL PLAN
NOTE BOOK
No. _____

SURVEY PLOTTED BY _____ DATE
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TRACED BY " " "
DESIGNED BY " " "
QUANTITIES BY " " "
CHECKED BY " " "

LICENSED PROFESSIONAL ENGINEER No. 13001-S
GRANT J. OKUNAGA
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
EXP. 04-30-26

MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

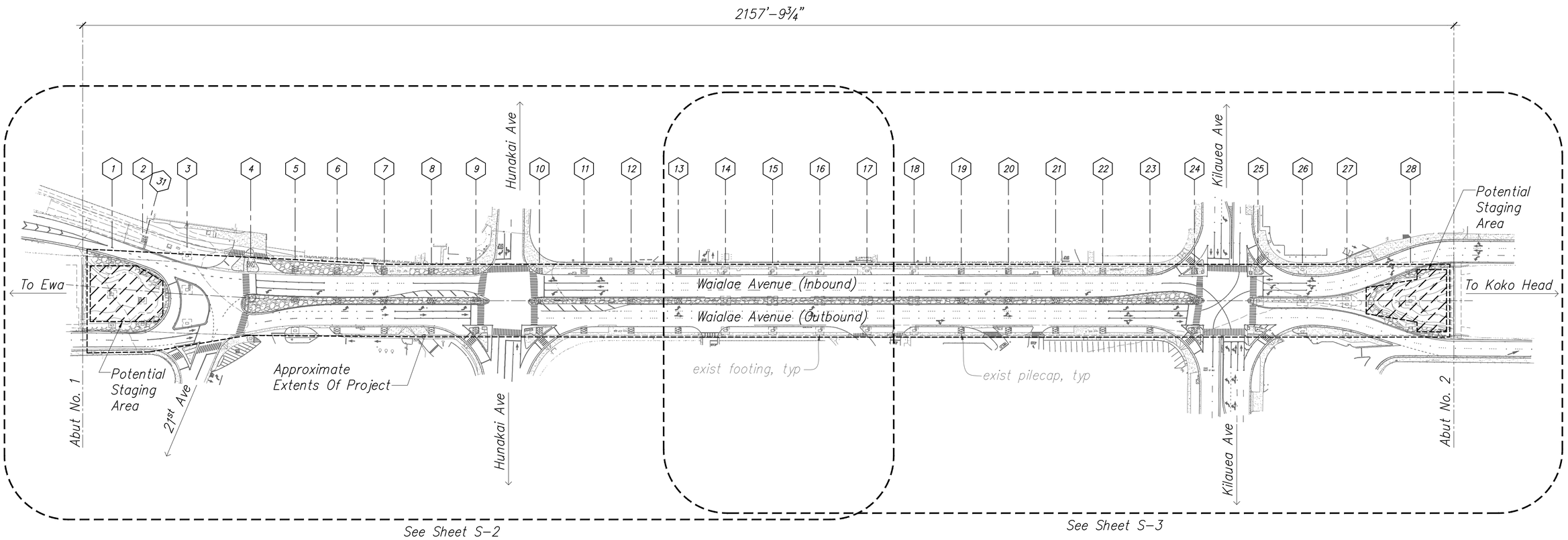
WATER AND GAS NOTES

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. T-5 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(277)	2024	6	52



North

OVERALL BRIDGE FOUNDATION PLAN

Scale: 1" = 80'

1
T-6 | T-6

Graphic Scale

1" = 80'

80' 0' 80' 160'

Scale In Feet

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

GRANT J. OKUNAGA
LICENSED PROFESSIONAL ENGINEER
No. 13001-S
HAWAII U.S.A.

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EXP. 04-30-26

MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

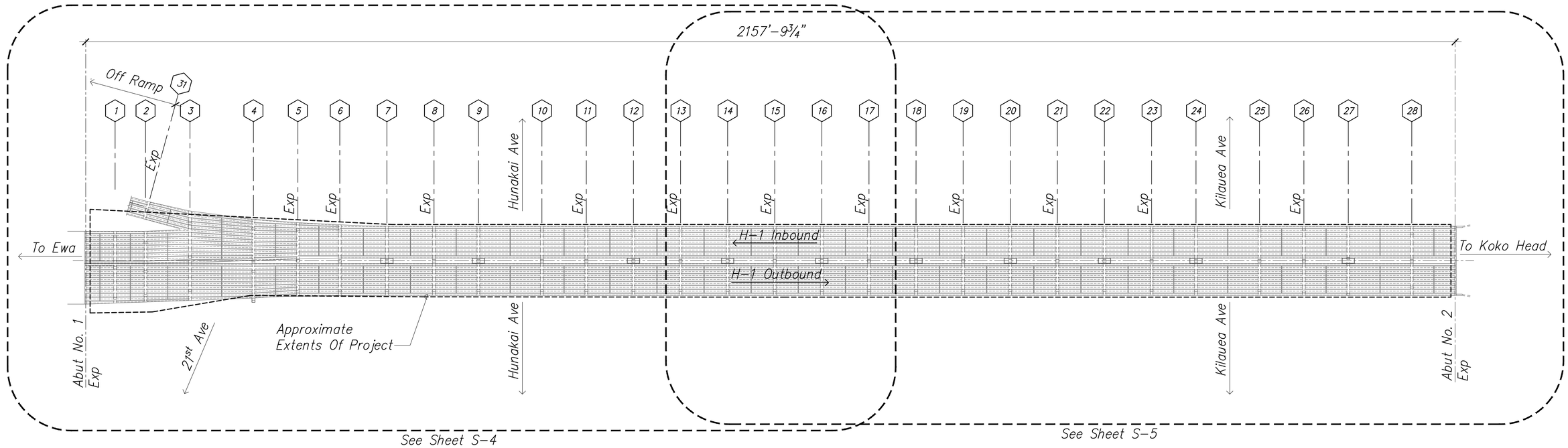
OVERALL BRIDGE FOUNDATION PLAN

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. T-6 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	7	52



North

OVERALL BRIDGE FRAMING PLAN

Scale: 1" = 80'

1 (T-7 | T-7)

Graphic Scale

1" = 80' 80' 0' 80' 160'

Scale In Feet

ORIGINAL PLAN

NOTE BOOK

No.

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

LICENSED PROFESSIONAL ENGINEER No. 13001-S
GRANT J. OKUNAGA
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EXP. 04-30-26

MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

OVERALL BRIDGE FRAMING PLAN

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. T-7 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	8	51

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

B. WASTE DISPOSAL:

1. 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 21 calendar days of date of award. 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.

2. 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.

3. 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:

1. 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 measures weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.

2. For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.

3. 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.

4. 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.

5. 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.

6. Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.

7. Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.

8. 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.

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

NEAL S. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

This work was prepared by me or under my supervision.
Exp. 04-30-26

Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-1 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	9	51

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

9. Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.

10. Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

11. 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.

12. 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.

13. 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.

14. 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.

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.

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

NEAL S. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

This work was prepared by me or under my supervision.
Exp. 04-30-26

Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-2 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	10	51

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

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. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities of one acre or more of disturbed area is required for this project. If the Contractor requires extra land disturbance, including staging and storage areas, that is not covered by the NPDES Permit obtained by the State, the Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit to cover this additional disturbed area. See Hawaii Administrative Rules Chapter 11-55, Appendix C for definition of land disturbance. The Contractor's attention is directed to the applicable NPDES Permit documents on the bid package compact disc.

2. Comply with all applicable State and Federal Permit conditions. Permits may include, but not limited to the following:

   a. NPDES Permit for Construction Activities
   b. NPDES Permit for Construction Dewatering
   c. NPDES Permit for Hydrotesting Waters
   d. Water Quality Certification
   e. Stream Channel Alteration Permit
   f. Section 404 Army Corps of Engineer Permit

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. EC-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
NOTE BOOK No. ____
SURVEY PLOTTED BY ____ DATE ____
DRAWN BY ____
TRACED BY ____
DESIGNED BY ____
QUANTITIES BY ____
CHECKED BY ____

NEAL S. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6186-C
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Wesley R. Segawa & Associates, Inc.

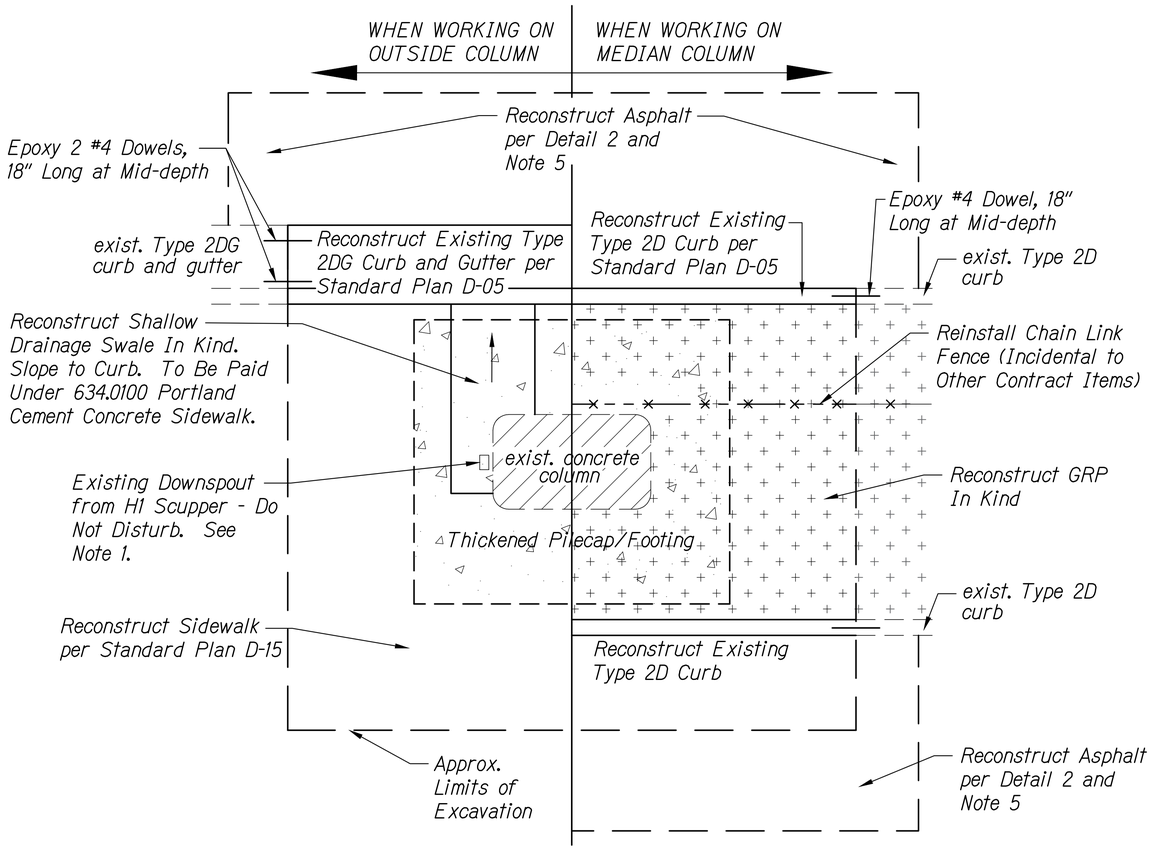
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

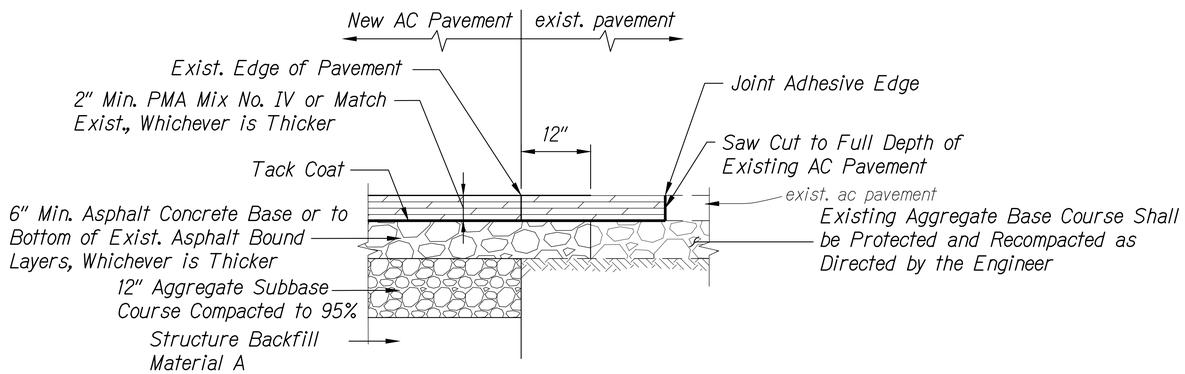
Scale: As Noted Date: July 2024

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	11	51



1 RESTORATION DETAIL
Scale: Not To Scale

NOTES:
1. Plug scupper on H1 to prevent water from entering downspout. Do not plug more than 2 in a row. Unplug as soon as concrete shallow drainage swale is constructed.
2. Relocate signs within excavation area as necessary. Get approval of the new location from the State. Relocation of signs shall be incidental to other contract items.
3. Restore disturbed vegetation in-kind.
4. Get State approval before cutting or relocating any irrigation lines that are encountered.
5. If asphalt reconstruction is necessary, the entire lane width shall be reconstructed and to 6 feet longitudinally beyond either side of the excavation.
6. Remove existing lane markings and install new lane markings.
7. Reconstruct curb ramps and replace tactile warnings to pre-construction conditions. Reconstruction of curb ramps shall be incidental to Portland Cement Concrete Sidewalk.



2 A.C./A.C. PAVEMENT CONNECTION
Scale: Not To Scale

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

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Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

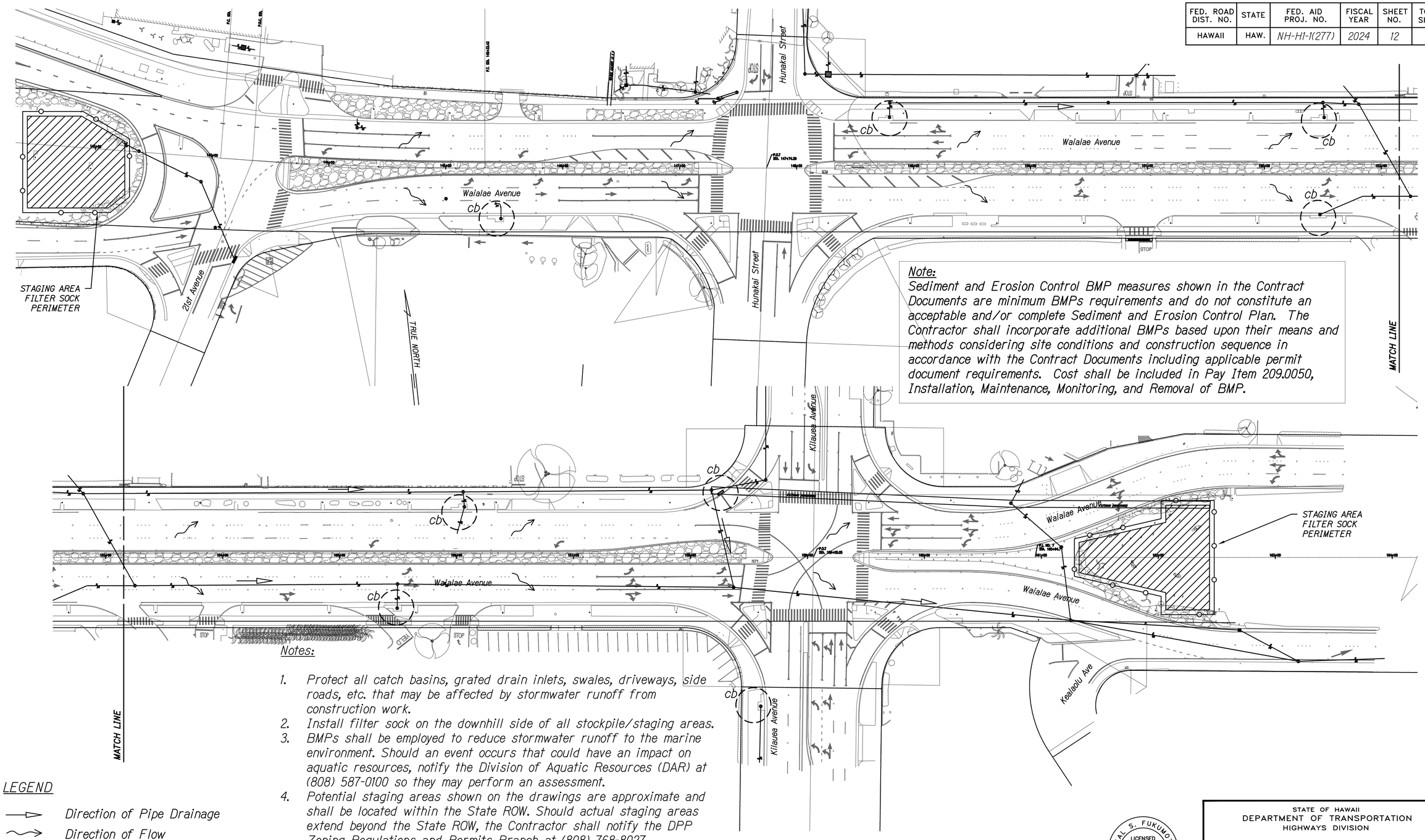
RESTORATION DETAILS

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-4 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	12	51



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 209.0050, Installation, Maintenance, Monitoring, and Removal of BMP.

Notes:

1. *Protect all catch basins, grated drain inlets, swales, driveways, side roads, etc. that may be affected by stormwater runoff from construction work.*
2. *Install filter sock on the downhill side of all stockpile/staging areas.*
3. *BMPs shall be employed to reduce stormwater runoff to the marine environment. Should an event occurs that could have an impact on aquatic resources, notify the Division of Aquatic Resources (DAR) at (808) 587-0100 so they may perform an assessment.*
4. *Potential staging areas shown on the drawings are approximate and shall be located within the State ROW. Should actual staging areas extend beyond the State ROW, the Contractor shall notify the DPP Zoning Regulations and Permits Branch at (808) 768-8027.*
5. *To minimize the presence of nonnative predators to vulnerable birds, Contractor shall remove cats, place bait stations for rodents and mongoose, and provide covered trash receptacles. For more information, contact the Division of Fish and Wildlife (DOFAW) at (808) 792-9400.*
6. *All stockpiles shall be covered in accordance with the DOT Construction Best Management Practices Field Manual.*

LEGEND

- *Direction of Pipe Drainage*
- *Direction of Flow*
- *Silt Fence/Filter Sock*
- *Existing Curb Inlet Catch Basin to be Protected with Curb Inlet Dam. See Detail 2/Sheet CS1*
- *Staging Area*

EROSION CONTROL PLAN
Scale: NTS

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

NEAL S. FUKUMOTO
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

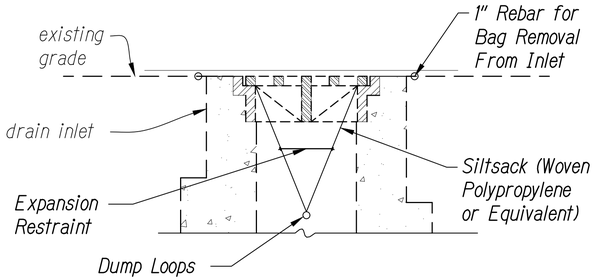
EROSION CONTROL PLAN

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

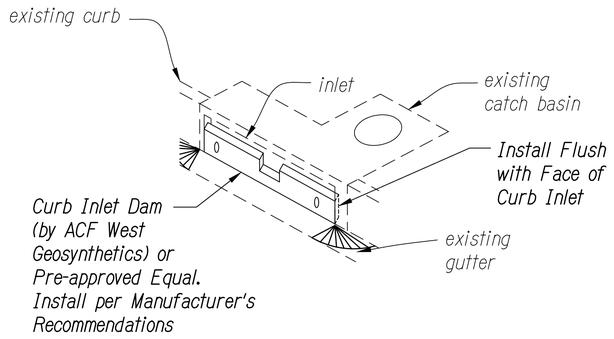
Scale: As Noted *Date: July 2024*

SHEET No. *C-5* OF *51* SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	13	51



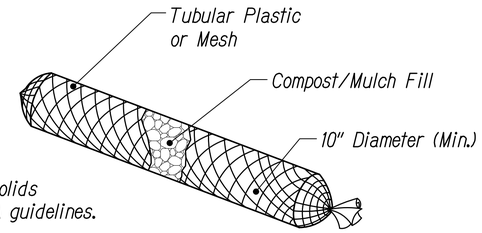
1 GRATED DRAIN INLET PROTECTION DETAIL



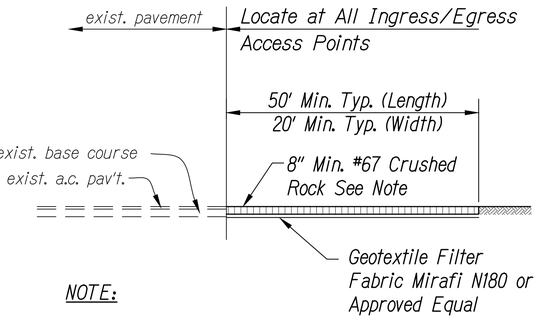
2 CURB INLET PROTECTION DETAIL

Notes:

1. Filter sock shall be "Biosock" compost filter (by Envirotech Biosolutions) or pre-approved equal. Install per manufacturer's recommendations.
2. Filter sock shall not contain biosolids and shall be consistent with EPA guidelines.
3. Staking, where required, shall be installed per manufacturer's recommendations.
4. Minimum overlap shall be 2' on the horizontal plane.



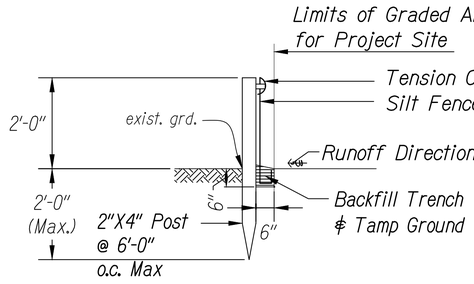
3 FILTER SOCK DETAIL



NOTE:

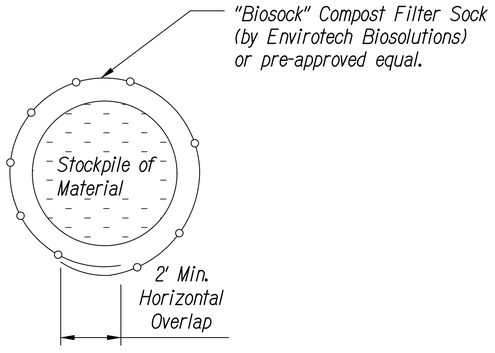
8" Crushed Rock Layer shall be Removed Immediately Prior to Installation of Roadway Base Course.

4 STABILIZED CONSTRUCTION ENTRANCE

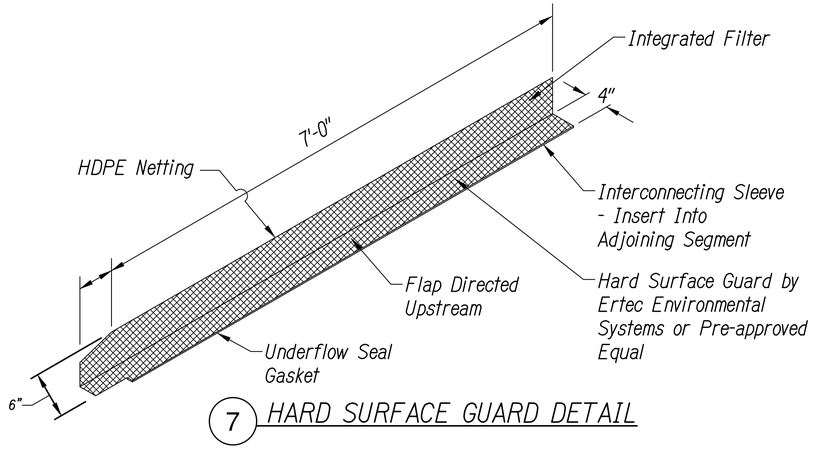


(For Overland Flow Condition)

5 SILT FENCE DETAIL



6 STOCKPILE PROTECTION DETAIL



7 HARD SURFACE GUARD DETAIL

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

NEAL S. FUKUMOTO LICENSED PROFESSIONAL ENGINEER No. 6186-C HAWAII U.S.A.

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Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL DETAILS

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-6 OF 51 SHEETS

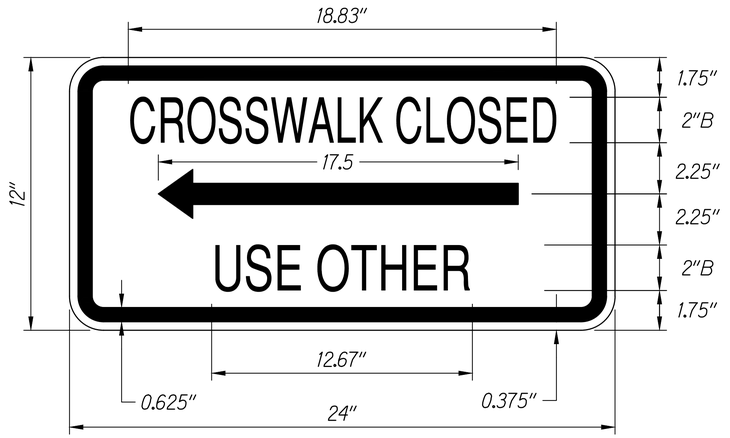
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	14	51

GENERAL NOTES FOR TRAFFIC CONTROL PLAN:

1. The Permittee shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
4. Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of the work.
5. When required by the issuing officer, the permittee shall install a flashing arrow signal as shown on the traffic control plans.
6. All traffic lanes shall be a minimum of 10 feet wide.
7. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
8. The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
9. Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.
10. 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. 645.7000 - Traffic Control.
11. Replace permanent pavement markings and traffic signs upon completion of each phase of work.
12. The project will impact the adjoining local street area network. Notify area representatives, neighborhood board, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBUS and TheHandi-Van), etc. of the details and status of the project.
13. This project will affect bus operations, bus routes, bus stops, and para-transit operations. At least two (2) weeks prior to construction, the Contractor shall provide notification of the scope of work, location, detour, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project to:

    DTS-PTD: 768-8396 and TheBusStop@honolulu.gov
    Oahu Transit Services:
    Bus Operations: 768-9520 and 848-4565 and Field_Operation_Mgr@thebus.org.
    Pana-transit Operations: 454-5006 and 454-5083.

14. All sidewalks shall remain active. A minimum of 36" width shall be provided.
15. Furnish a minimum of two police officers for each area requiring work zone traffic control, in accordance with HSS Section 645.03. Police officers shall be in sight of each other or in direct communication at all times.
16. Contractor shall submit requests for detours and lane closures in accordance with HSS Section 645.03(F).
17. Lane closure will be allowed only from 8:30 AM to 3:00 PM, Monday through Friday, in accordance with HSS Section 645.03(F).
18. All work zone traffic control devices shall comply with HSS Section 645.02.
19. The Contractor shall not block or disable existing traffic signal heads within the work area.



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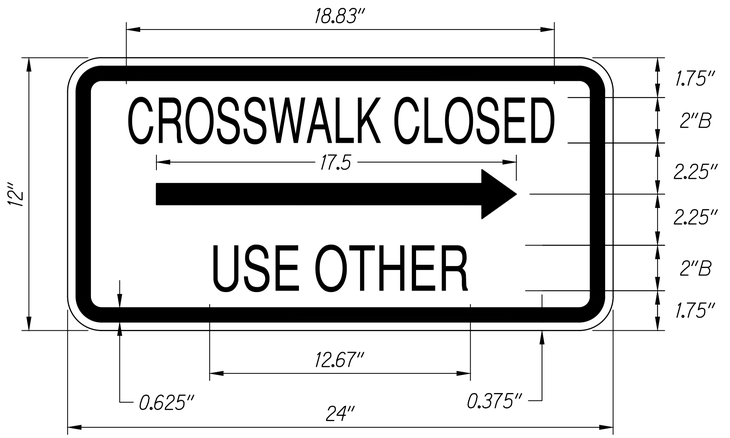
1 R9-11a(L) CUSTOM DETAIL



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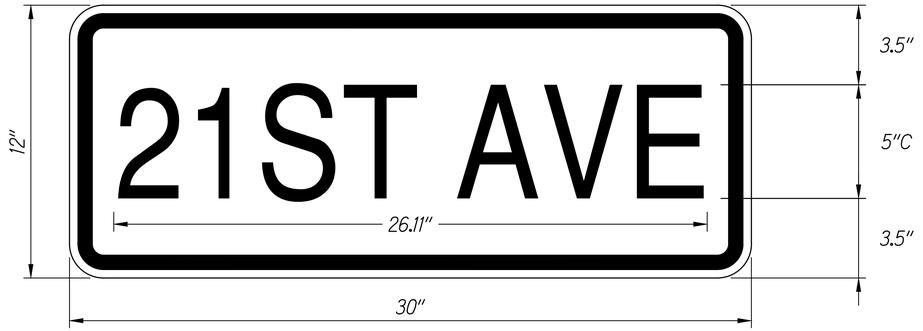
2 R9-11a(R) CUSTOM DETAIL



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3 CUSTOM DETOUR SIGN 1 DETAIL

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

NEAL S. FUKUMOTO
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

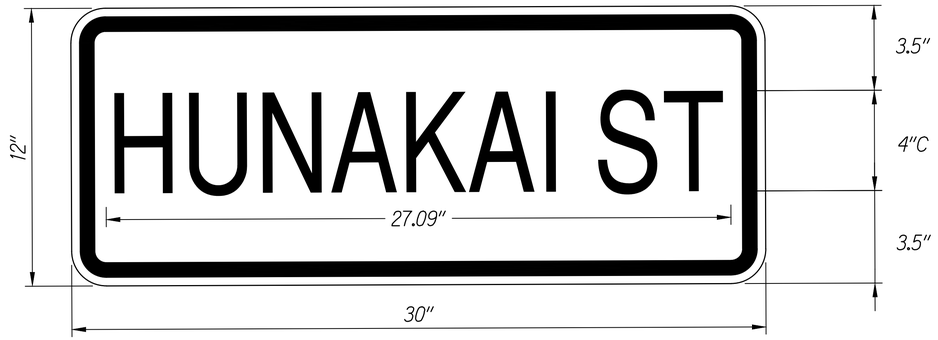
TRAFFIC CONTROL NOTES AND DETAILS 1

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-7 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	15	51



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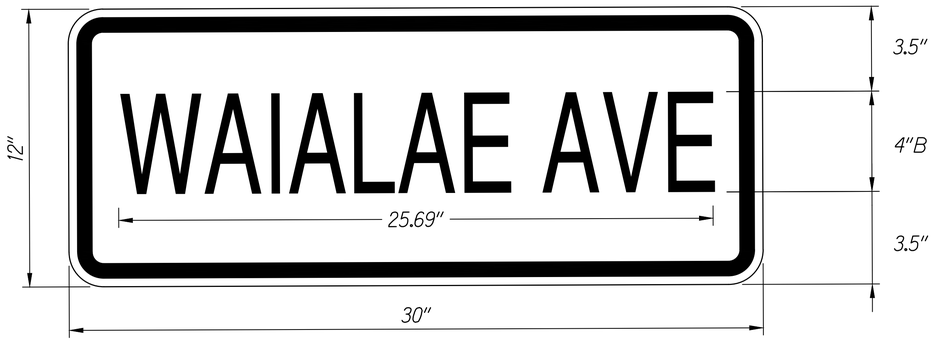
1 CUSTOM DETOUR SIGN 2 DETAIL



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Background: Orange (Retroreflective)

2 CUSTOM DETOUR SIGN 3 DETAIL

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

NEAL S. FUKUMOTO
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

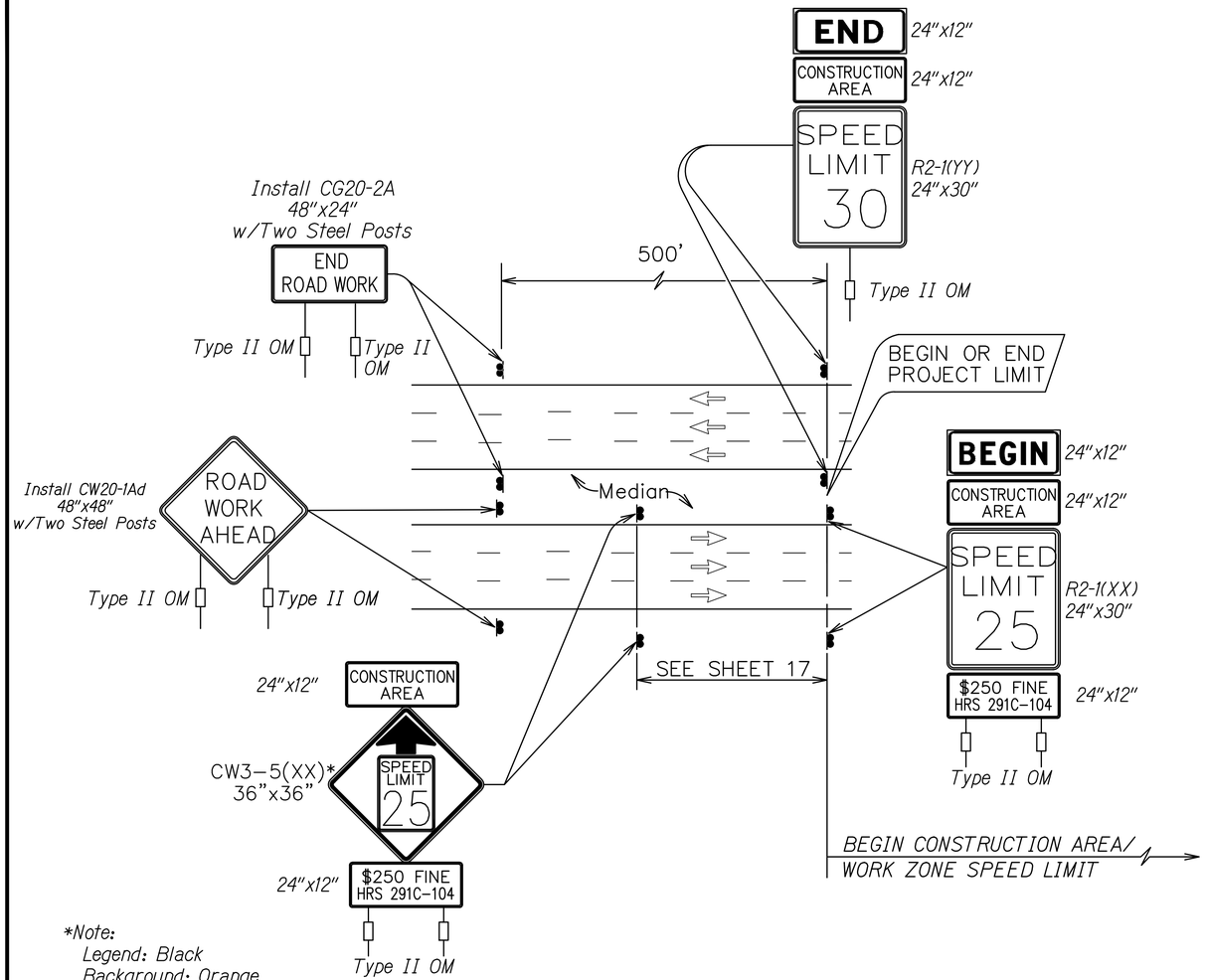
TRAFFIC CONTROL NOTES AND DETAILS 2

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-8 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	16	51



*Note:
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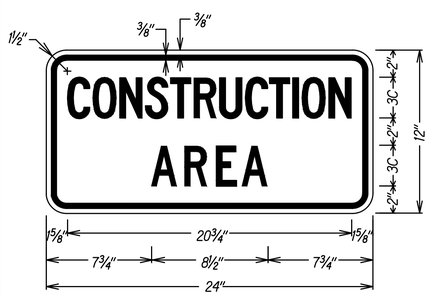
Speed Limit: Black on White

TYPICAL DETAIL FOR CONSTRUCTION SIGNS ON MULTILANE DIVIDED LOW SPEED HIGHWAY



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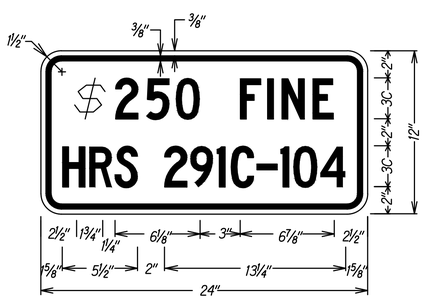

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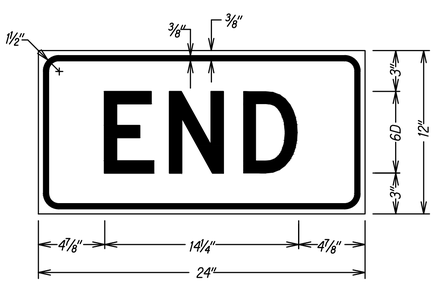
BACKGROUND: WHITE

LEGEND: BLACK
BACKGROUND: ORANGE



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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 Special Provisions.
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(XX) and CW3-5(XX) 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 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. 645.7000 - 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. 645.7000 - Traffic Control. Sign covers shall be commercially manufactured and HDOT approved. 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. "Homemade" or "field made" covers shall not be used or accepted.

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

NEAL S. FUKUMOTO
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No. 6186-C
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Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

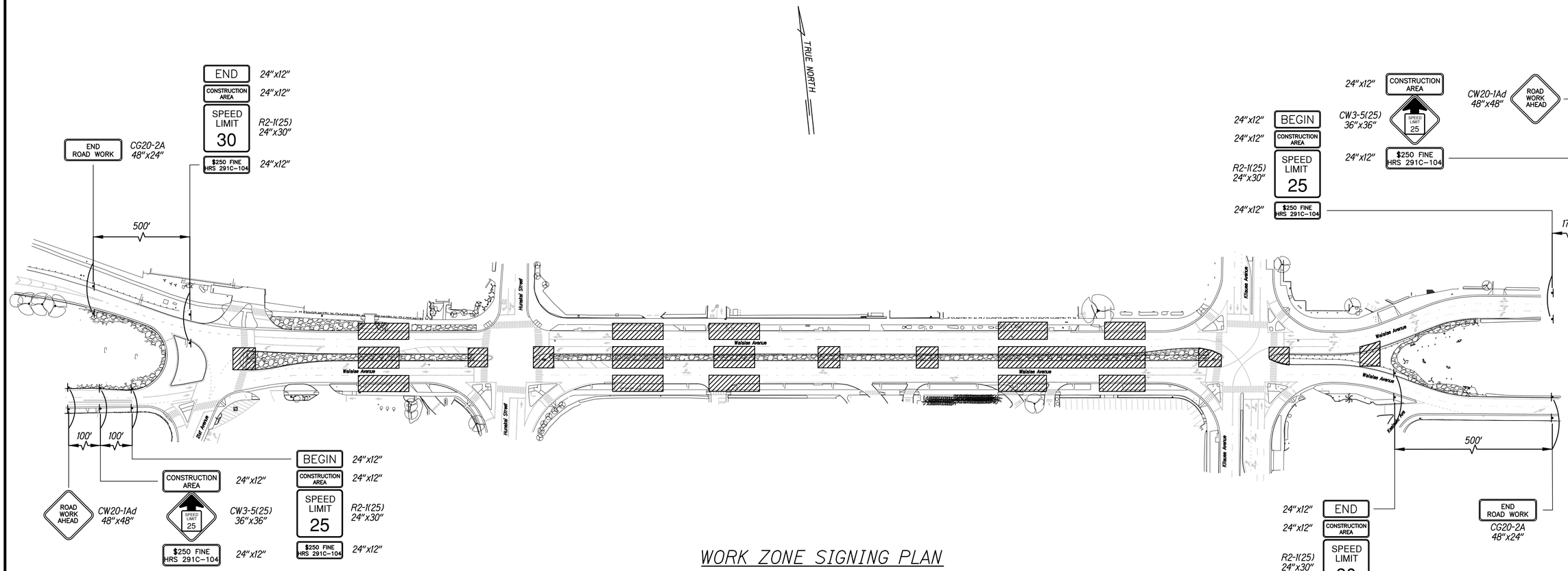
LOW SPEED DIVIDED HIGHWAY WORK ZONE SIGNING PLAN, NOTES & DETAIL

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-9 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	17	51



WORK ZONE SIGNING PLAN

Scale: NTS

LEGEND

Sign

Work Area

NOTES:

1. WORK ZONE SIGNS SHALL REMAIN POSTED FOR THROUGHOUT THE DURATION OF THE ENTIRE PROJECT.
2. WORK ZONE SIGNS SHALL BE POSTED IN ADDITION TO THE SIGNS SHOWN IN THE TRAFFIC CONTROL PLANS.
3. THE LOCATION OF THE WORK ZONE SIGNS SHOWN ON THIS PLAN ARE APPROXIMATE AND SHALL BE PLACED IN RELATION TO THE SIGNS SHOWN IN THE TRAFFIC CONTROL PLANS AND REQUIREMENTS OF THE WORK ZONE SIGNING DETAILS ON SHEET 16.

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

NEAL S. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

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Exp. 04-30-26

Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

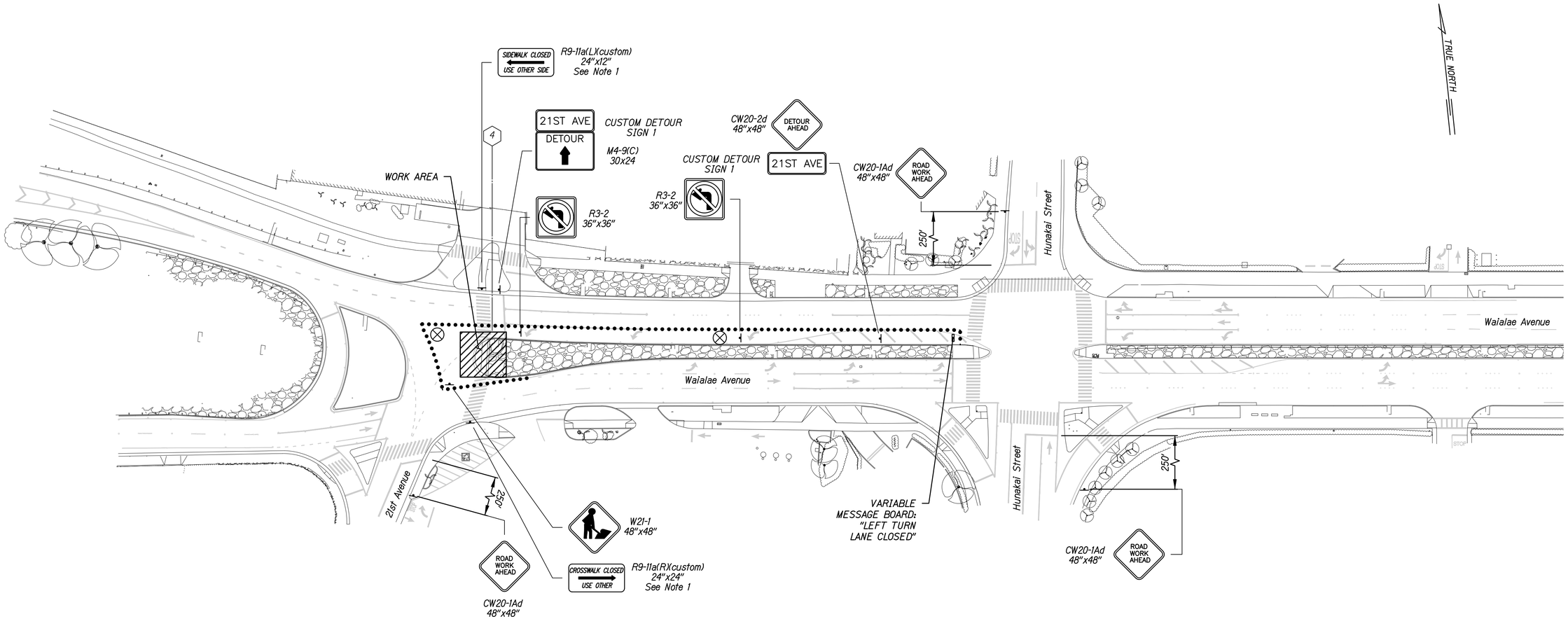
WORK ZONE SIGNING PLAN

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-10 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	18	51



TCP - BENT 4 WESTBOUND LEFT LANE CLOSED

Scale: NTS

NOTES:
1. "CROSSWALK CLOSED" SIGNS SHALL BE MOUNTED ON TYPE II BARRICADES.
2. SEE TRAFFIC CONTROL PLAN 2 FOR DETOUR PLAN ASSOCIATED WITH LEFT TURN LANE CLOSURE AT 21ST AVENUE.
3. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

LEGEND
- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

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

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LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

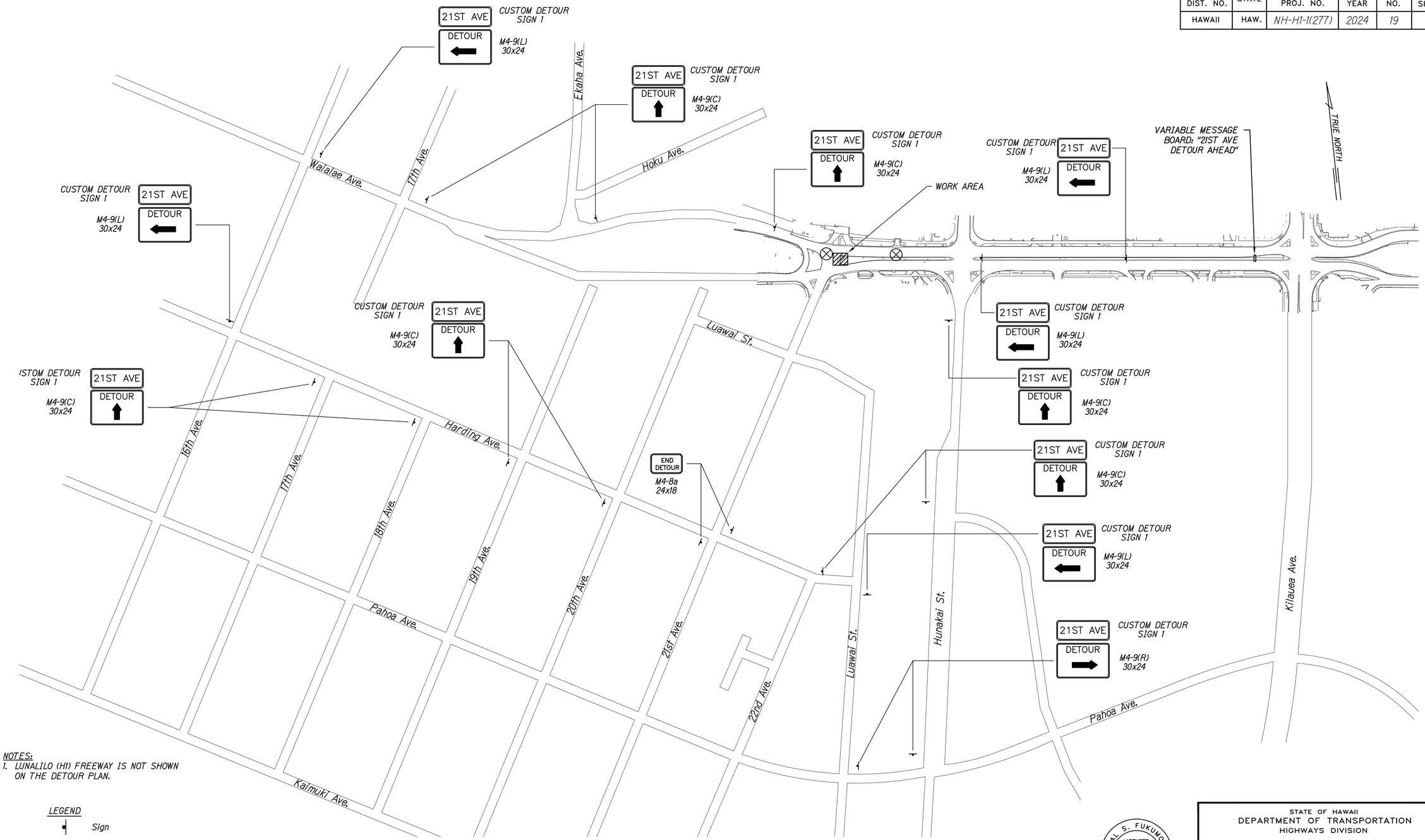
TRAFFIC CONTROL PLAN 1

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-11 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	19	51



NOTES:
1. LUNALILO (HI) FREEWAY IS NOT SHOWN ON THE DETOUR PLAN.

LEGEND
- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

TCP - BENT 4 EASTBOUND LEFT LANE CLOSED; DETOUR ROUTE

Scale: NTS

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

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HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

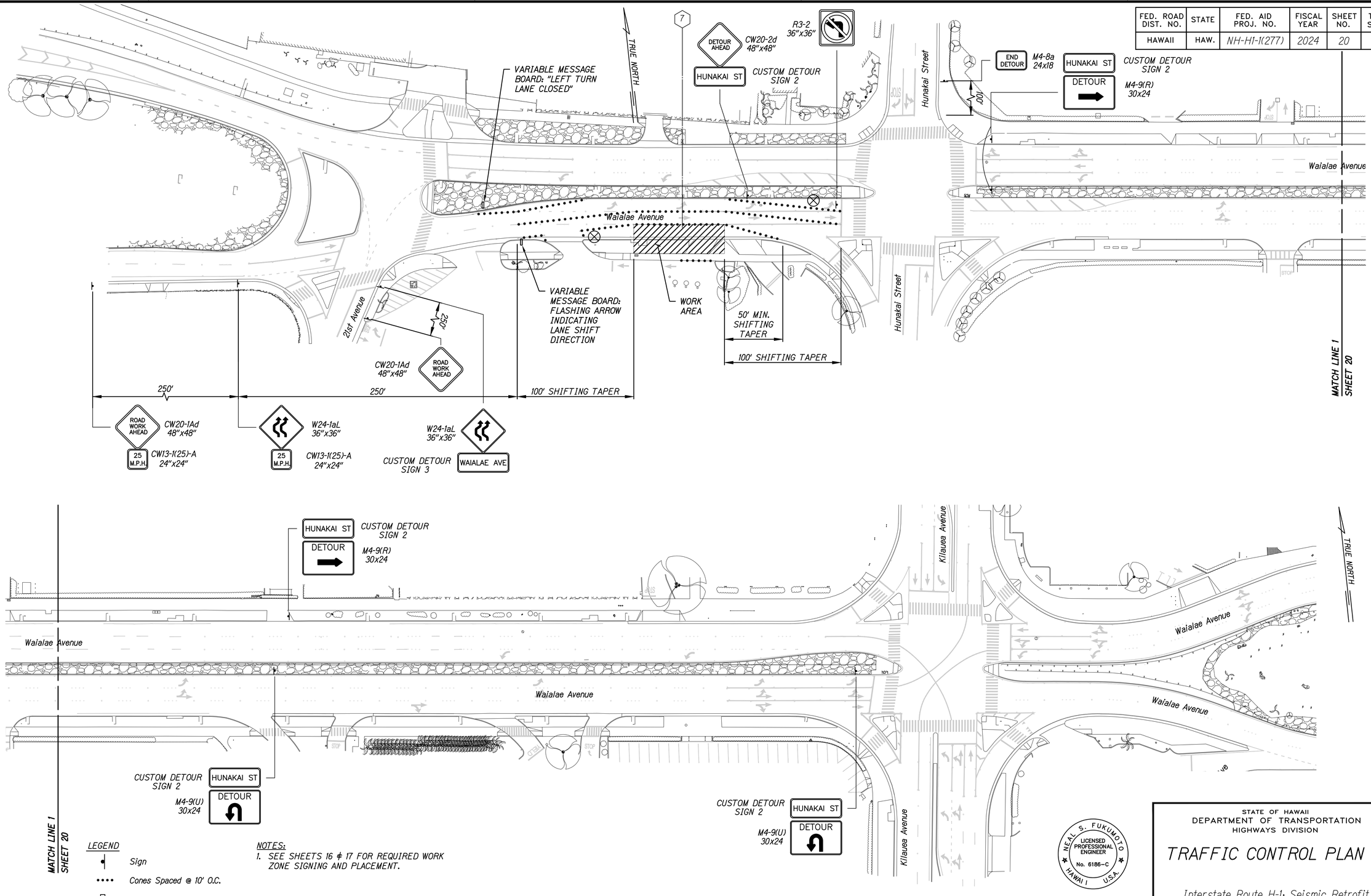
TRAFFIC CONTROL PLAN 2

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-12 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	20	51



LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

TCP - BENT 7 EASTBOUND RIGHT LANE CLOSED

Scale: NTS

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

NEAL S. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

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Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

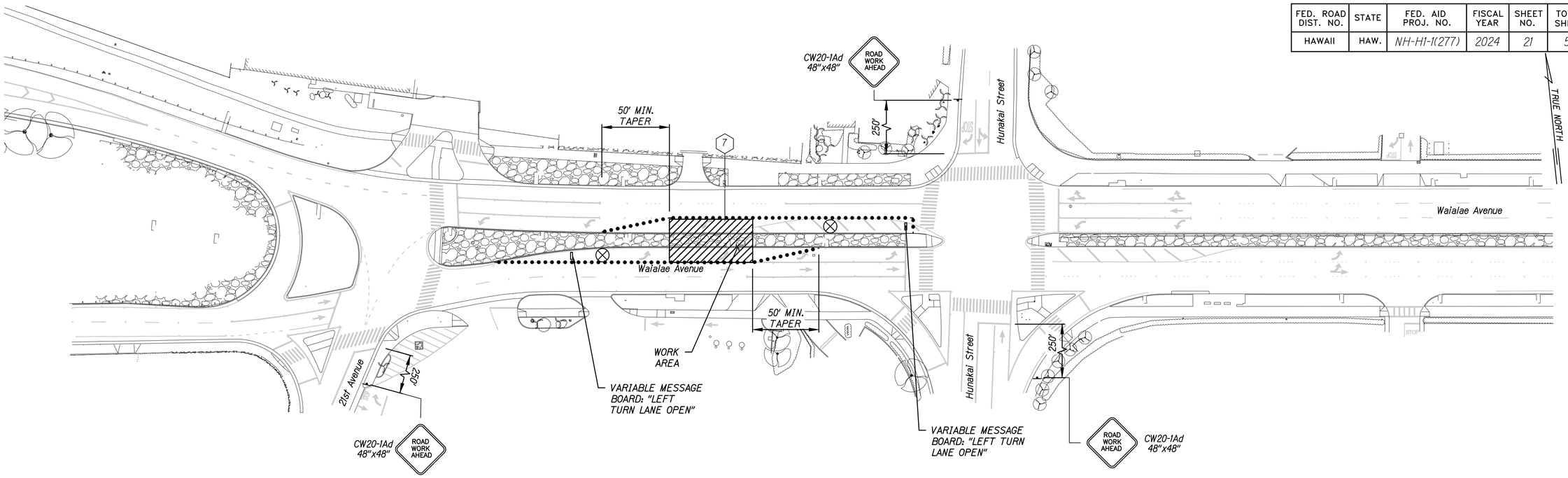
TRAFFIC CONTROL PLAN 3

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

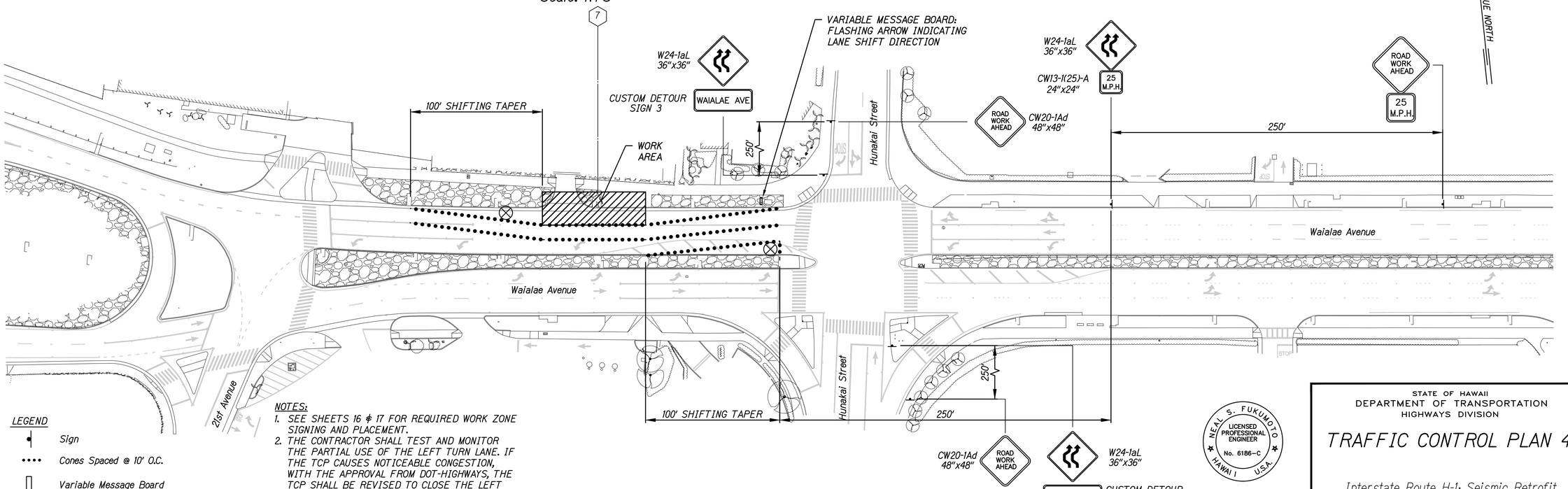
SHEET No. C-13 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	21	51



TCP - BENT 7 EAST & WESTBOUND LEFT LANE CLOSED

Scale: NTS



TCP - BENT 7 WESTBOUND RIGHT LANE CLOSED

Scale: NTS

LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.
2. THE CONTRACTOR SHALL TEST AND MONITOR THE PARTIAL USE OF THE LEFT TURN LANE. IF THE TCP CAUSES NOTICEABLE CONGESTION, WITH THE APPROVAL FROM DOT-HIGHWAYS, THE TCP SHALL BE REVISED TO CLOSE THE LEFT TURN LANE AND UTILIZE THE DETOUR ROUTES SHOWN ON SHEETS 18 & 21. THIS CHANGE SHALL BE AT NO ADDITIONAL COST TO THE STATE.

ORIGINAL PLAN

NOTE BOOK

No.

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

LICENSED PROFESSIONAL ENGINEER
NEAL S. FUKUMOTO
No. 6186-C
HAWAII, U.S.A.

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Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

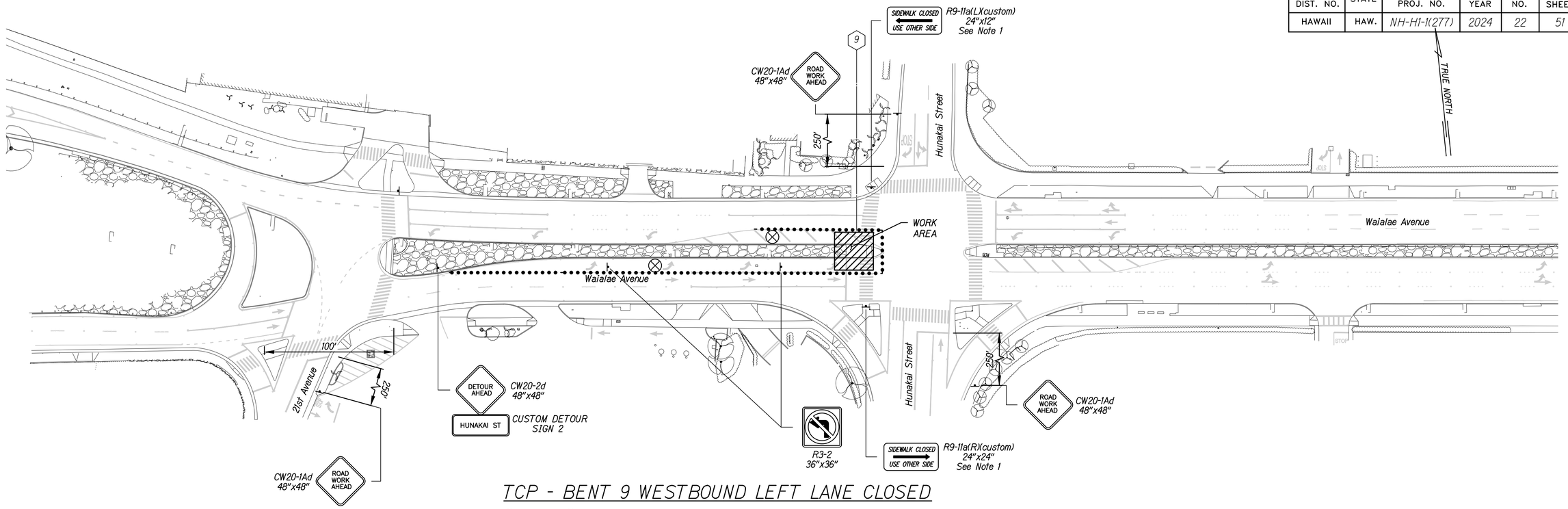
TRAFFIC CONTROL PLAN 4

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

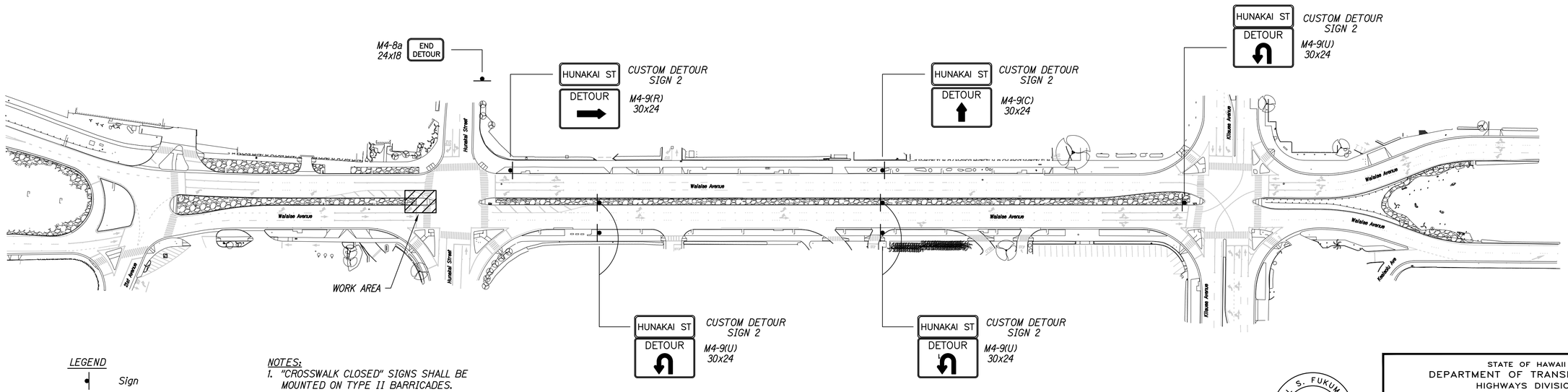
SHEET No. C-14 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	22	51



TCP - BENT 9 WESTBOUND LEFT LANE CLOSED

Scale: NTS



LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. "CROSSWALK CLOSED" SIGNS SHALL BE MOUNTED ON TYPE II BARRICADES.
2. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

TCP - BENT 9 WESTBOUND LEFT LANE CLOSED; DETOUR ROUTE

Scale: NTS

ORIGINAL PLAN
NOTE BOOK No.

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

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LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

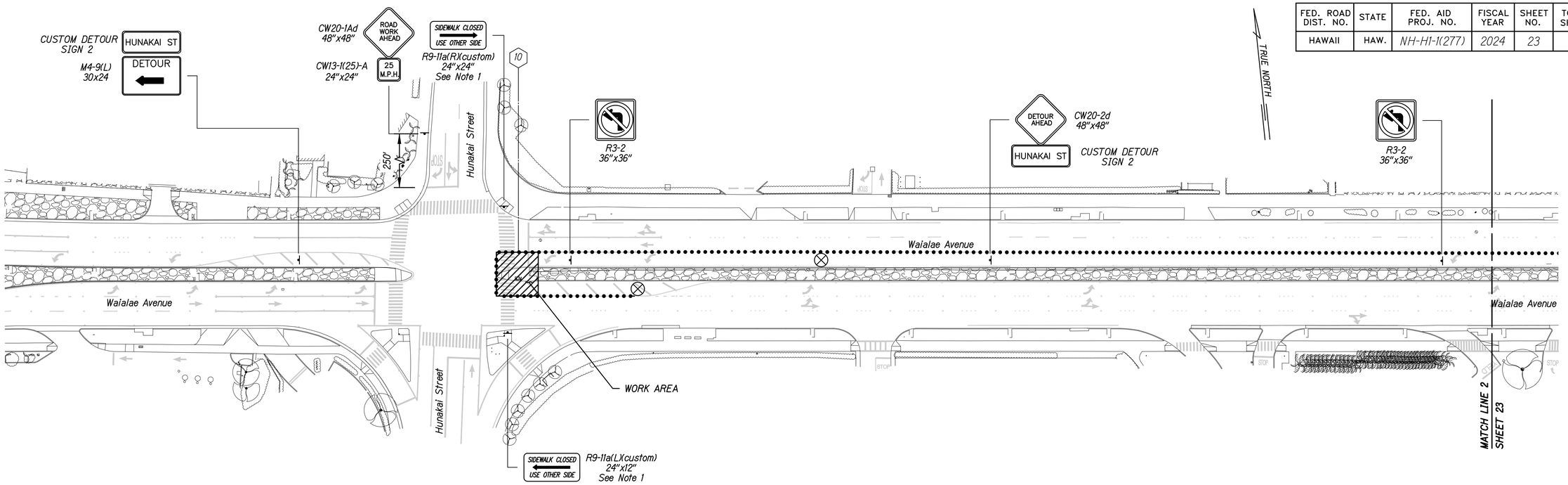
TRAFFIC CONTROL PLAN 5

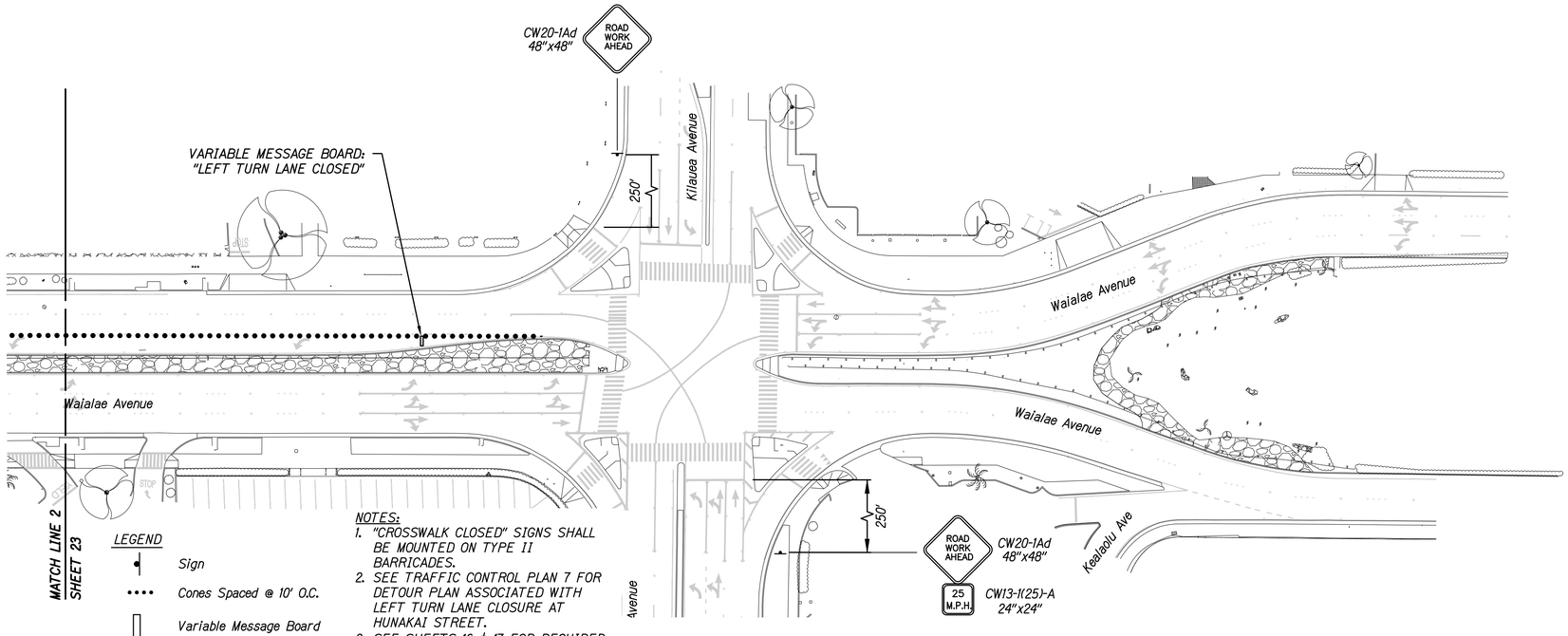
Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-15 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	23	51





LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. "CROSSWALK CLOSED" SIGNS SHALL BE MOUNTED ON TYPE II BARRICADES.
2. SEE TRAFFIC CONTROL PLAN 7 FOR DETOUR PLAN ASSOCIATED WITH LEFT TURN LANE CLOSURE AT HUNAKAI STREET.
3. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

TCP - BENT 10 WESTBOUND LEFT LANE CLOSED

Scale: NTS

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

NEAL S. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

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Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

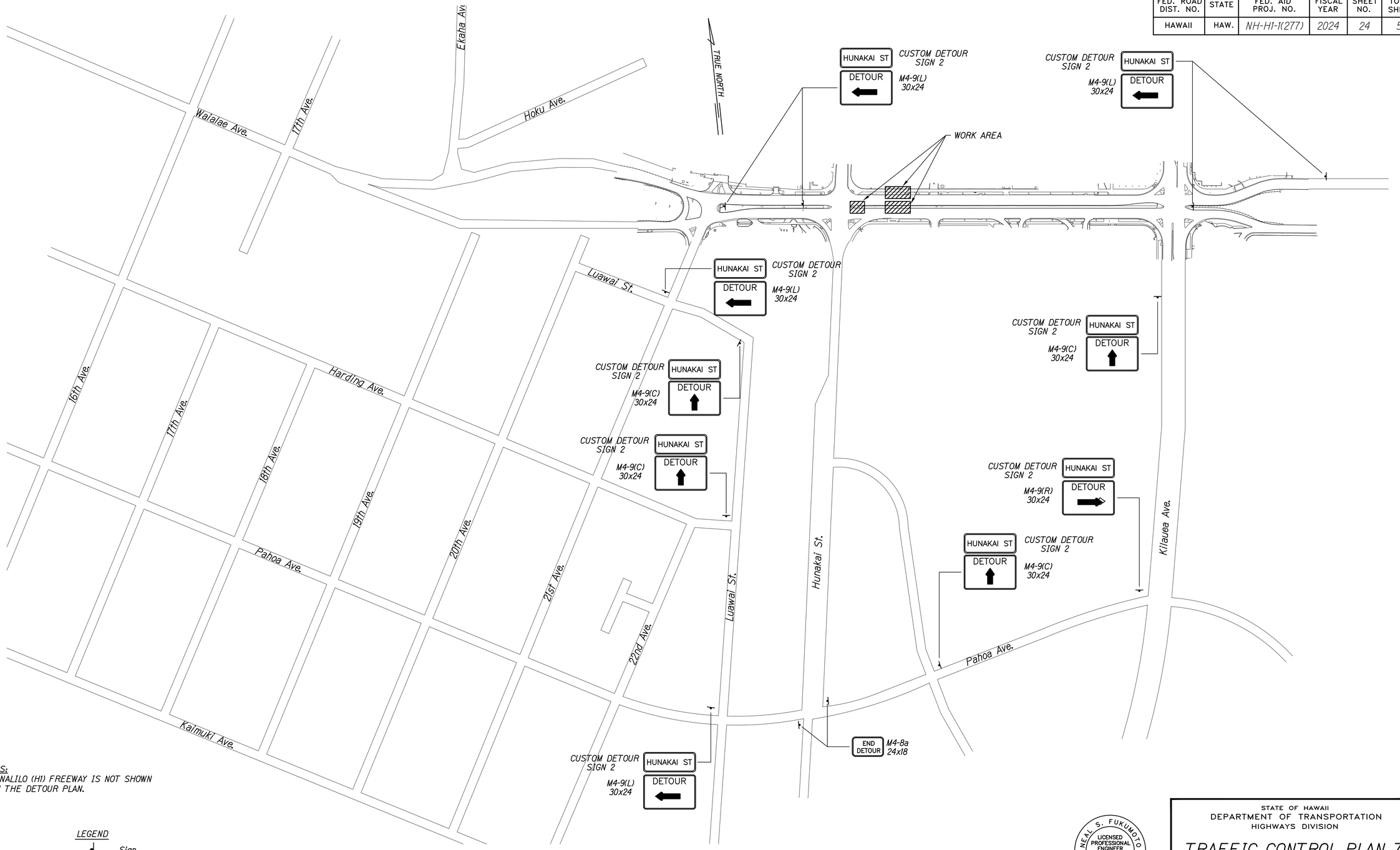
TRAFFIC CONTROL PLAN 6

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-16 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	24	51



NOTES:
1. LUNALILO (HI) FREEWAY IS NOT SHOWN ON THE DETOUR PLAN.

LEGEND

- Sign
- •••• Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- ⊗ Police Officer

TCP - BENT 10 WESTBOUND LEFT LANE CLOSED; DETOUR ROUTE

Scale: NTS

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

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Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

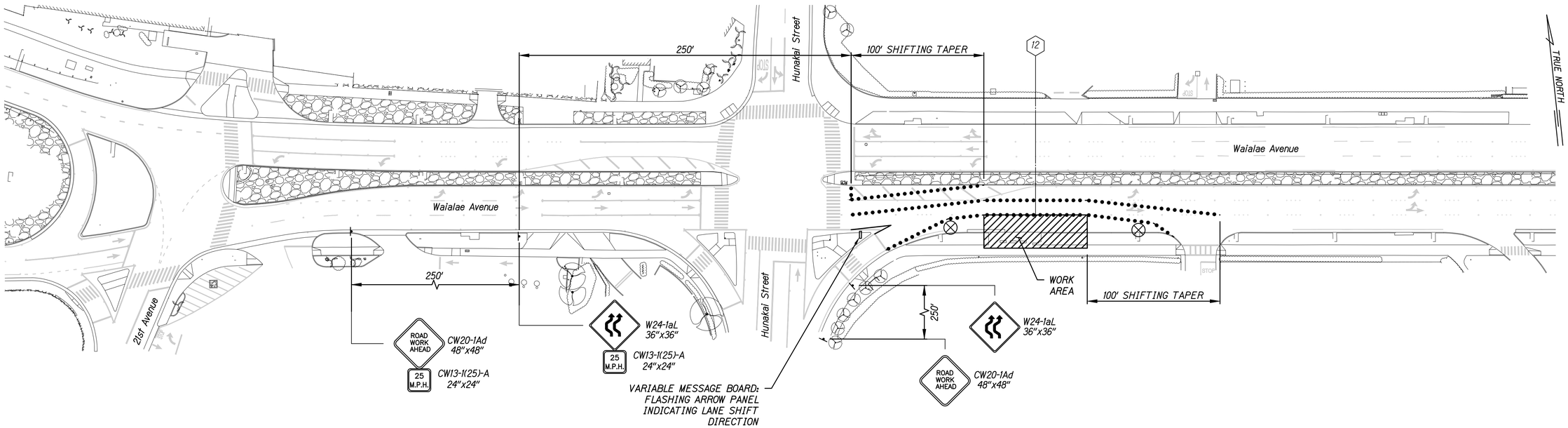
TRAFFIC CONTROL PLAN 7

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-17 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	25	51



TCP - BENT 12 EASTBOUND RIGHT LANE CLOSED

Scale: NTS

LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:
1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

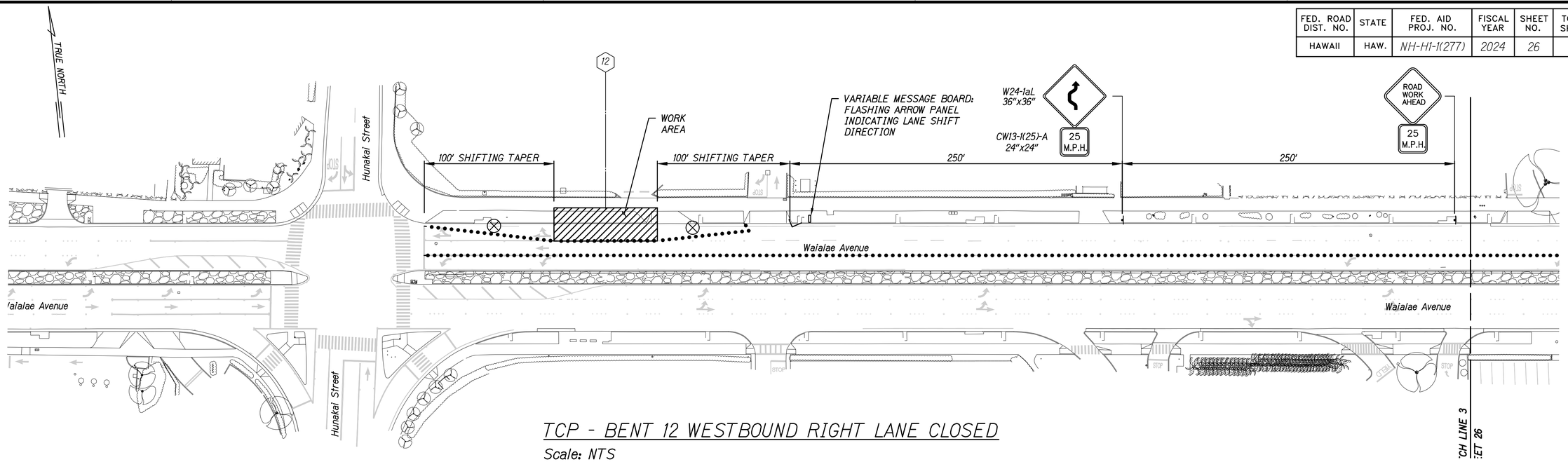
TRAFFIC CONTROL PLAN 8

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

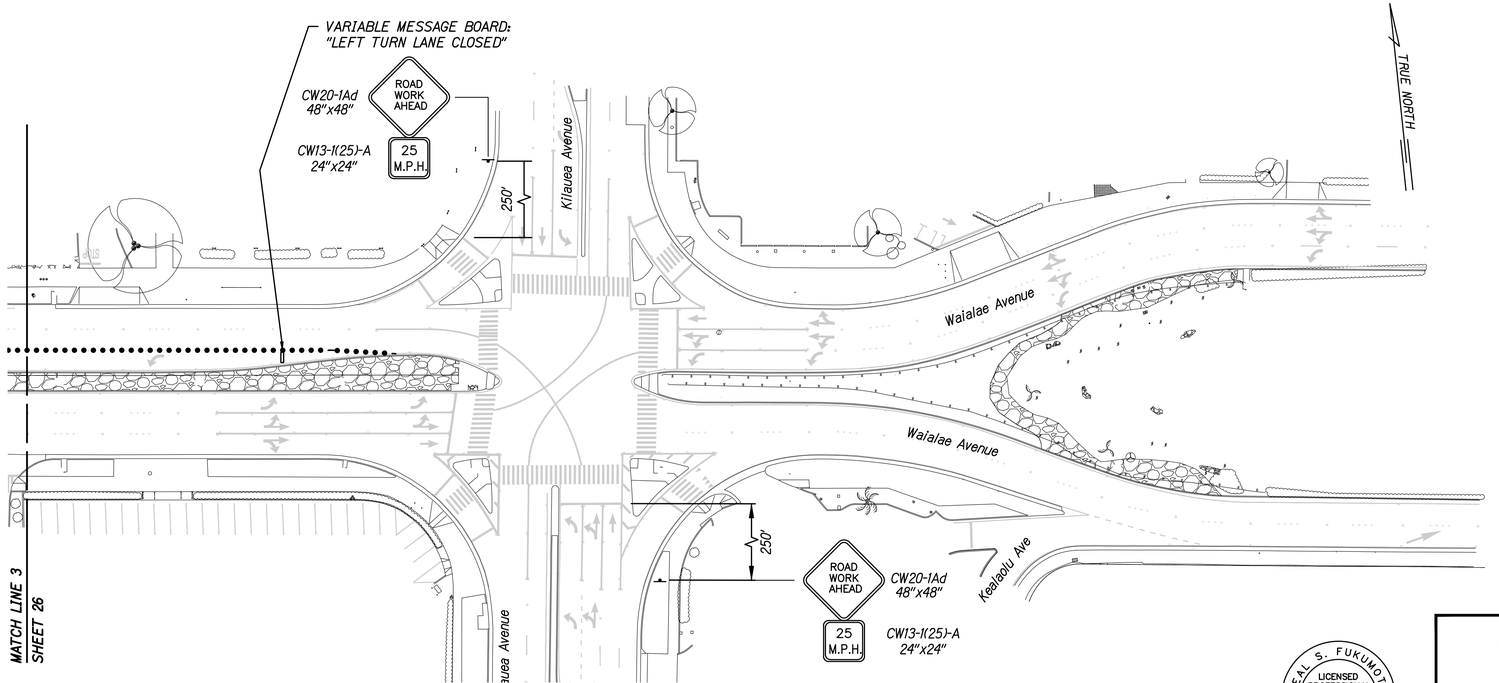
SHEET No. C-18 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	26	51



TCP - BENT 12 WESTBOUND RIGHT LANE CLOSED

Scale: NTS



LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

TCP - BENT 12 WESTBOUND RIGHT LANE CLOSED

Scale: NTS

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

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LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

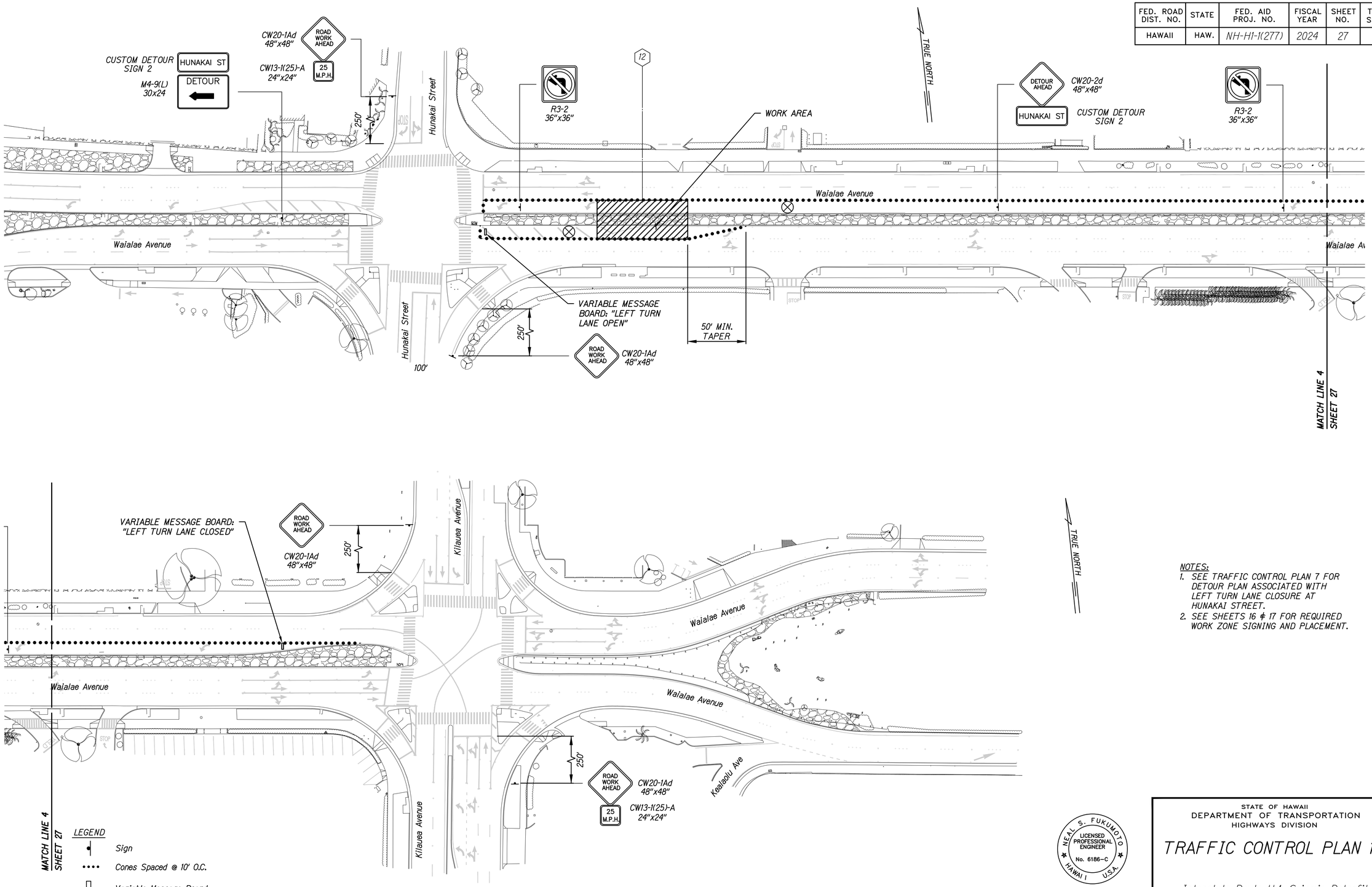
TRAFFIC CONTROL PLAN 9

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-19 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	27	51



TCP - BENT 12 EASTBOUND & WESTBOUND LEFT LANE CLOSED

Scale: NTS

NOTES:
1. SEE TRAFFIC CONTROL PLAN 7 FOR DETOUR PLAN ASSOCIATED WITH LEFT TURN LANE CLOSURE AT HUNAKAI STREET.
2. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

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

NEAL S. FUKUMOTO LICENSED PROFESSIONAL ENGINEER No. 6186-C HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

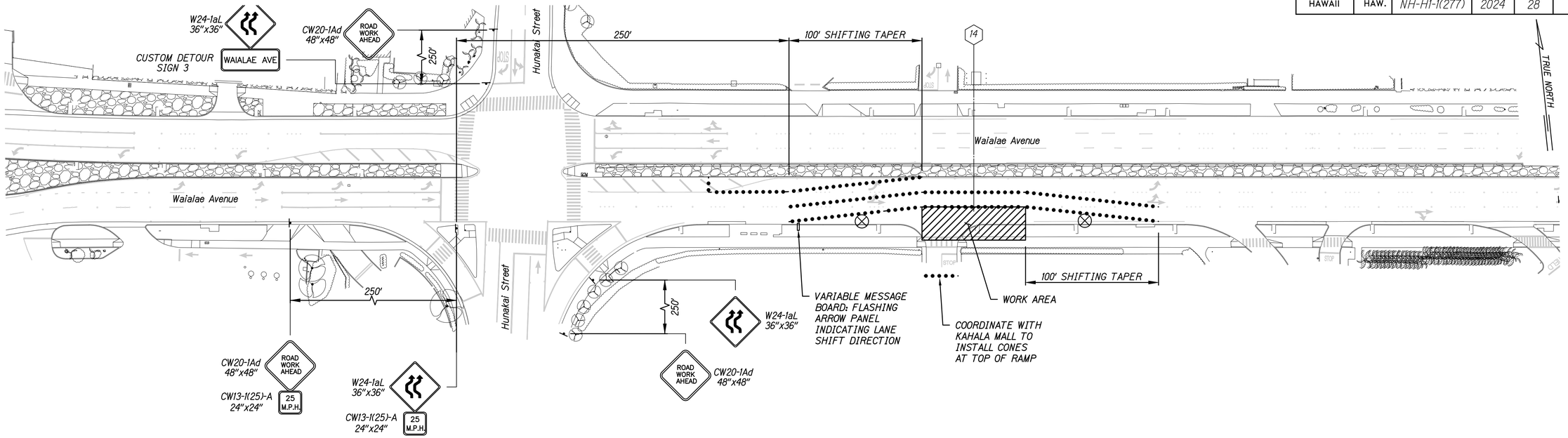
TRAFFIC CONTROL PLAN 10

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

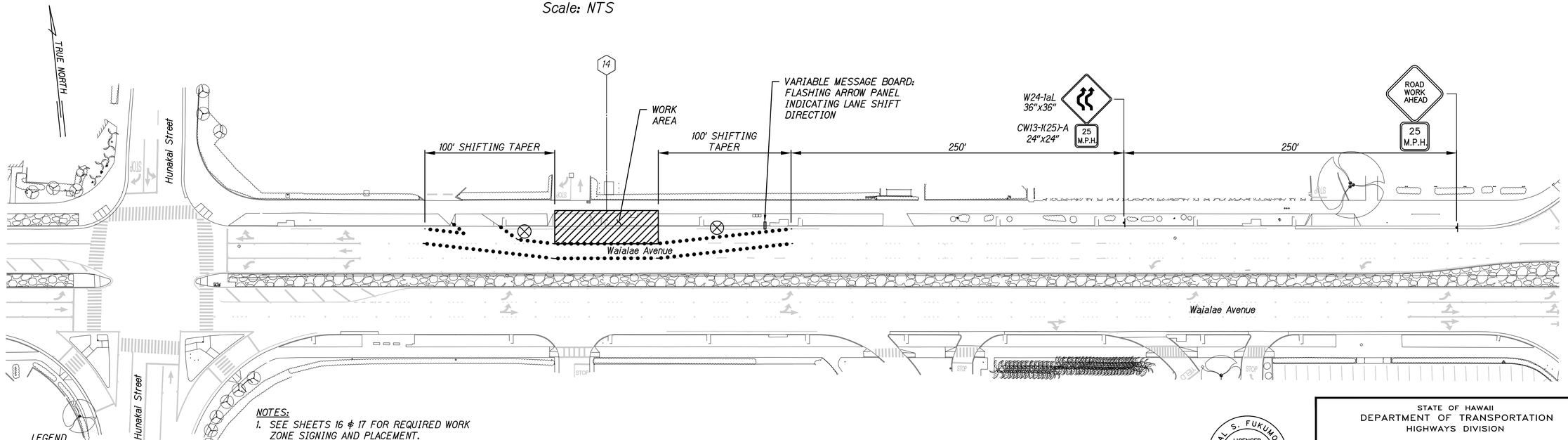
SHEET No. C-20 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	28	51



TCP - BENT 14 EASTBOUND RIGHT LANE CLOSED

Scale: NTS



LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.
2. THE CONTRACTOR SHALL TEST AND MONITOR THE PARTIAL USE OF THE LEFT TURN LANE. IF THE TCP CAUSES NOTICEABLE CONGESTION, WITH THE APPROVAL FROM DOT-HIGHWAYS, THE TCP SHALL BE REVISED TO CLOSE THE LEFT TURN LANE AND UTILIZE THE DETOUR ROUTE SHOWN ON SHEET 23. THIS CHANGE SHALL BE AT NO ADDITIONAL COST TO THE STATE.

TCP - BENT 14 WESTBOUND RIGHT LANE CLOSED

Scale: NTS

ORIGINAL PLAN

NOPE BOOK

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

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Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

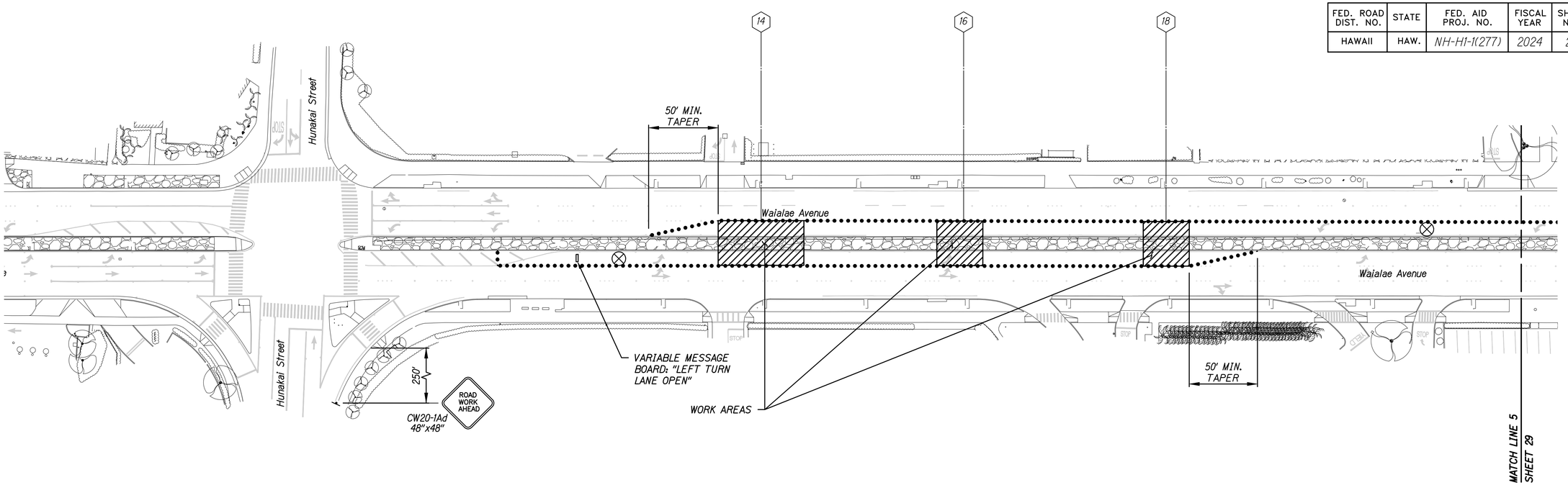
TRAFFIC CONTROL PLAN 11

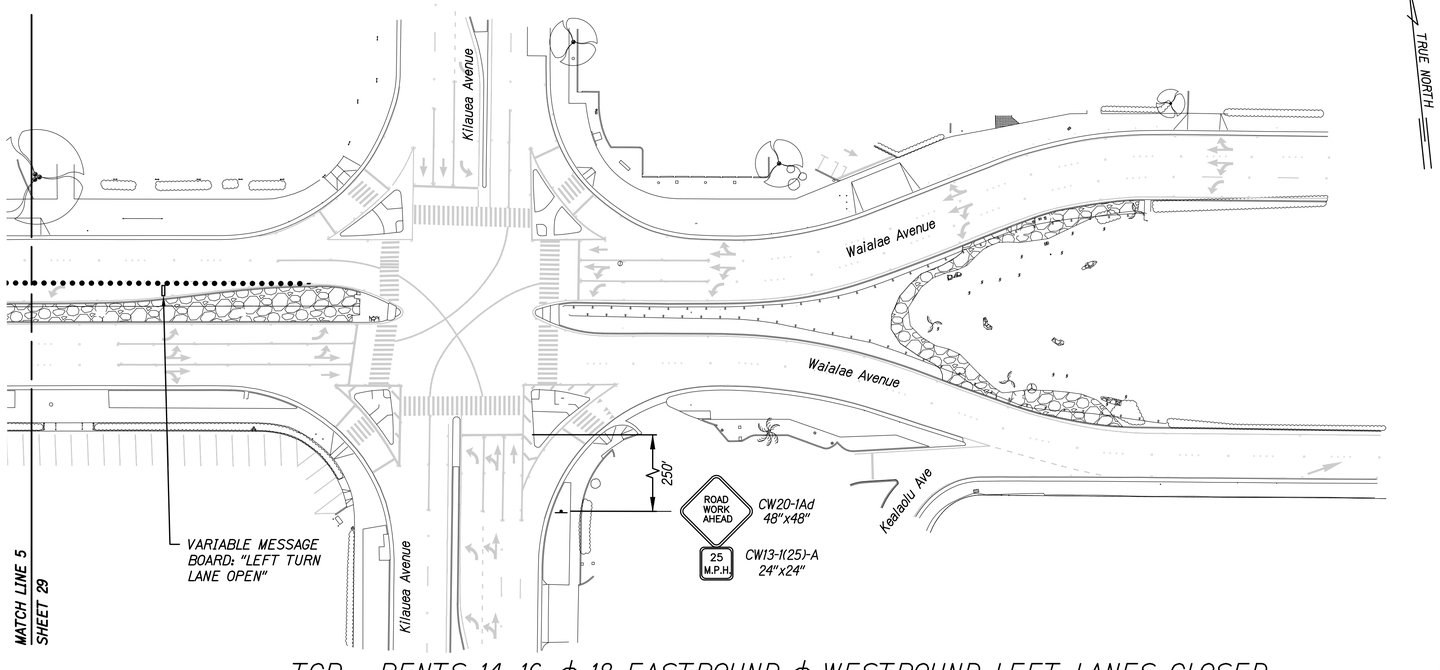
Interstate Route H-1: Seismic Retrofit Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-21 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	29	51





NOTES:
1. ADJUST ENDING TAPER LOCATIONS BASED ON ACTIVE WORK AREAS.
2. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

LEGEND
- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

TCP - BENTS 14, 16, & 18 EASTBOUND & WESTBOUND LEFT LANES CLOSED

Scale: NTS

ORIGINAL PLAN
NOTE BOOK
No.

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

NEAL S. FUKUMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6186-C
HAWAII U.S.A.

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Exp. 04-30-26

Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

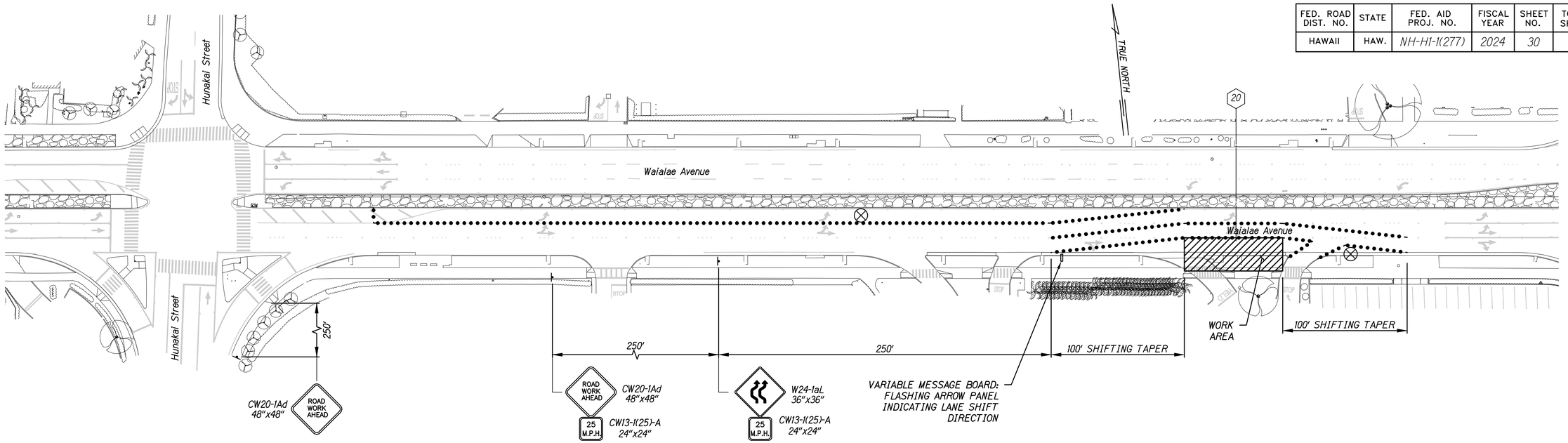
TRAFFIC CONTROL PLAN 12

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

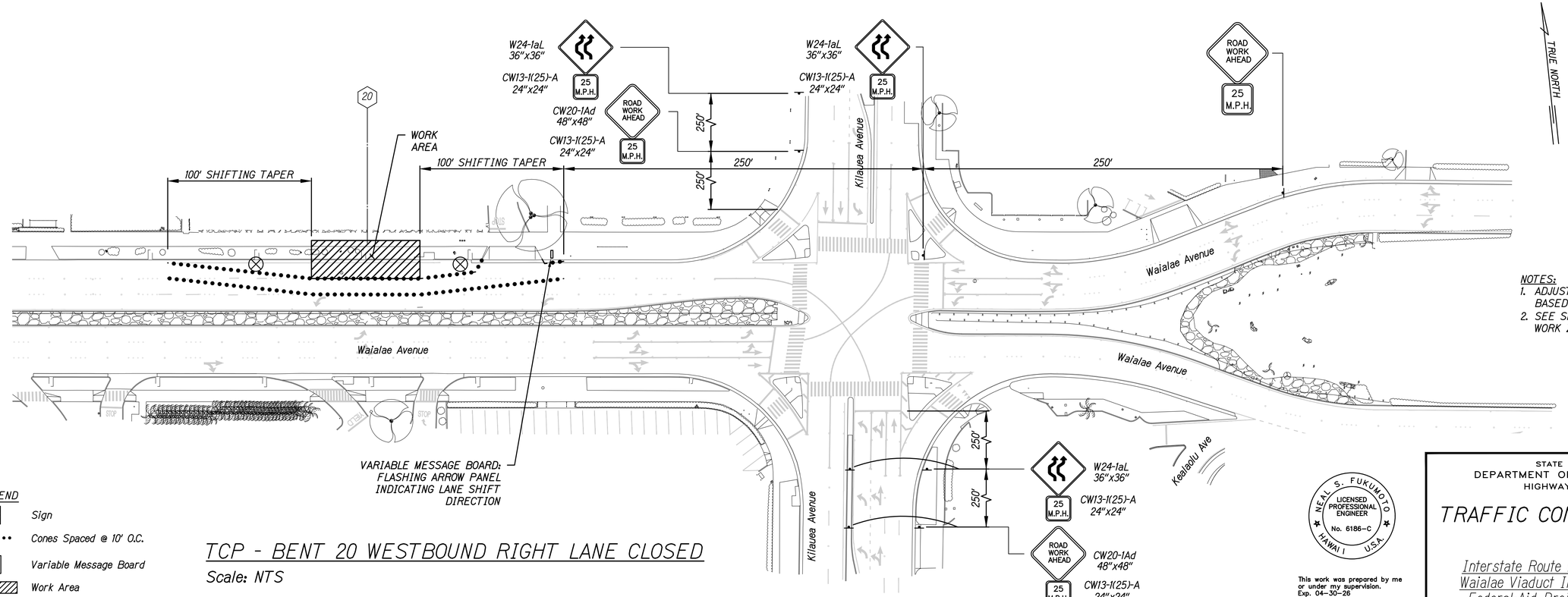
SHEET No. C-22 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	30	51



TCP - BENT 20 EASTBOUND RIGHT LANE CLOSED

Scale: NTS



TCP - BENT 20 WESTBOUND RIGHT LANE CLOSED

Scale: NTS

LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:
1. ADJUST ENDING TAPER LOCATIONS BASED ON ACTIVE WORK AREAS.
2. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

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

ORIGINAL PLAN
NOTE BOOK
No.

NEAL S. FUKUMOTO
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No. 6186-C
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

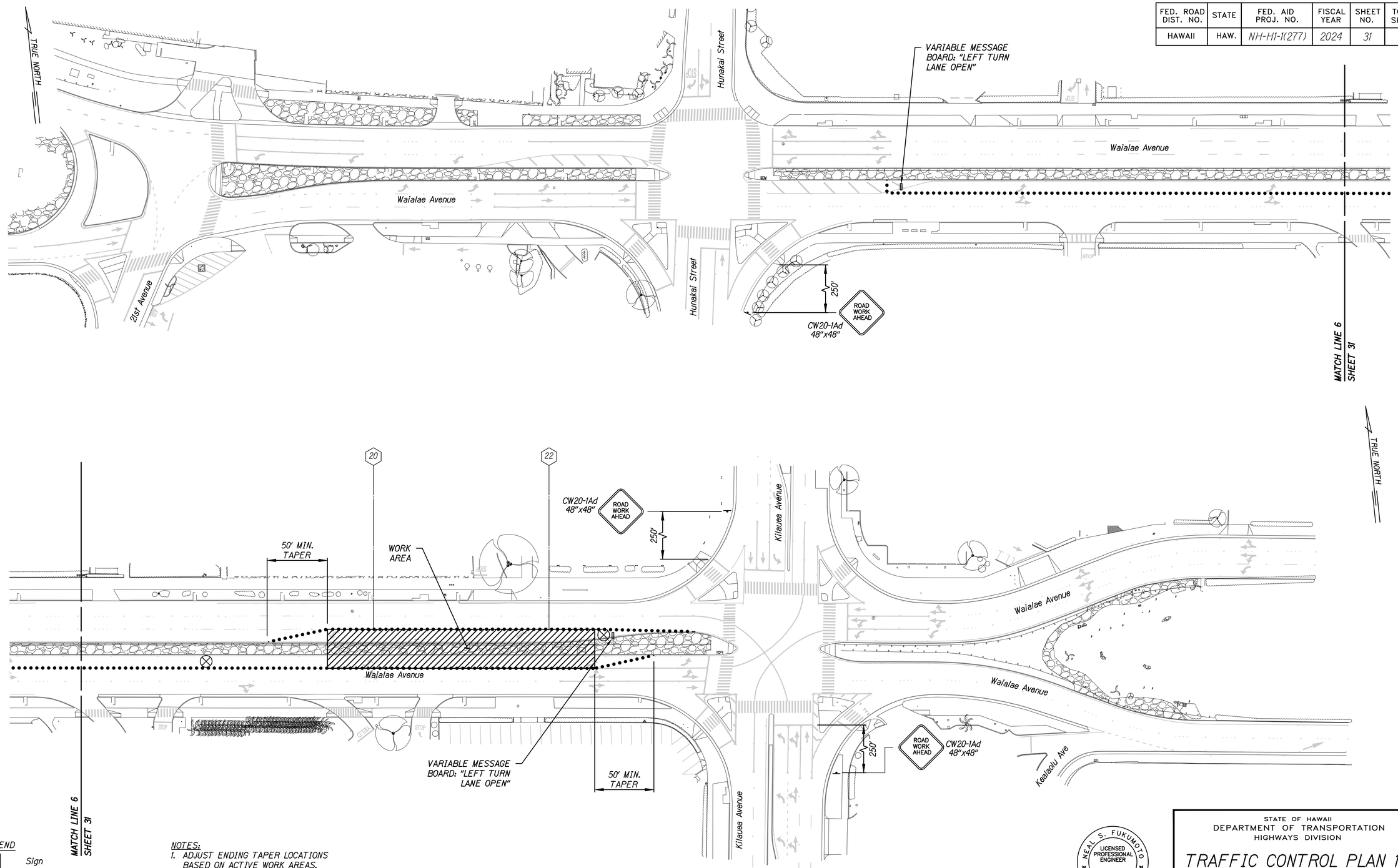
TRAFFIC CONTROL PLAN 13

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-23 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	31	51



LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:
1. ADJUST ENDING TAPER LOCATIONS BASED ON ACTIVE WORK AREAS.
2. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

TCP - BENT 20 & 22 EASTBOUND & WESTBOUND LEFT LANES CLOSED

Scale: NTS

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

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No. 6186-C
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

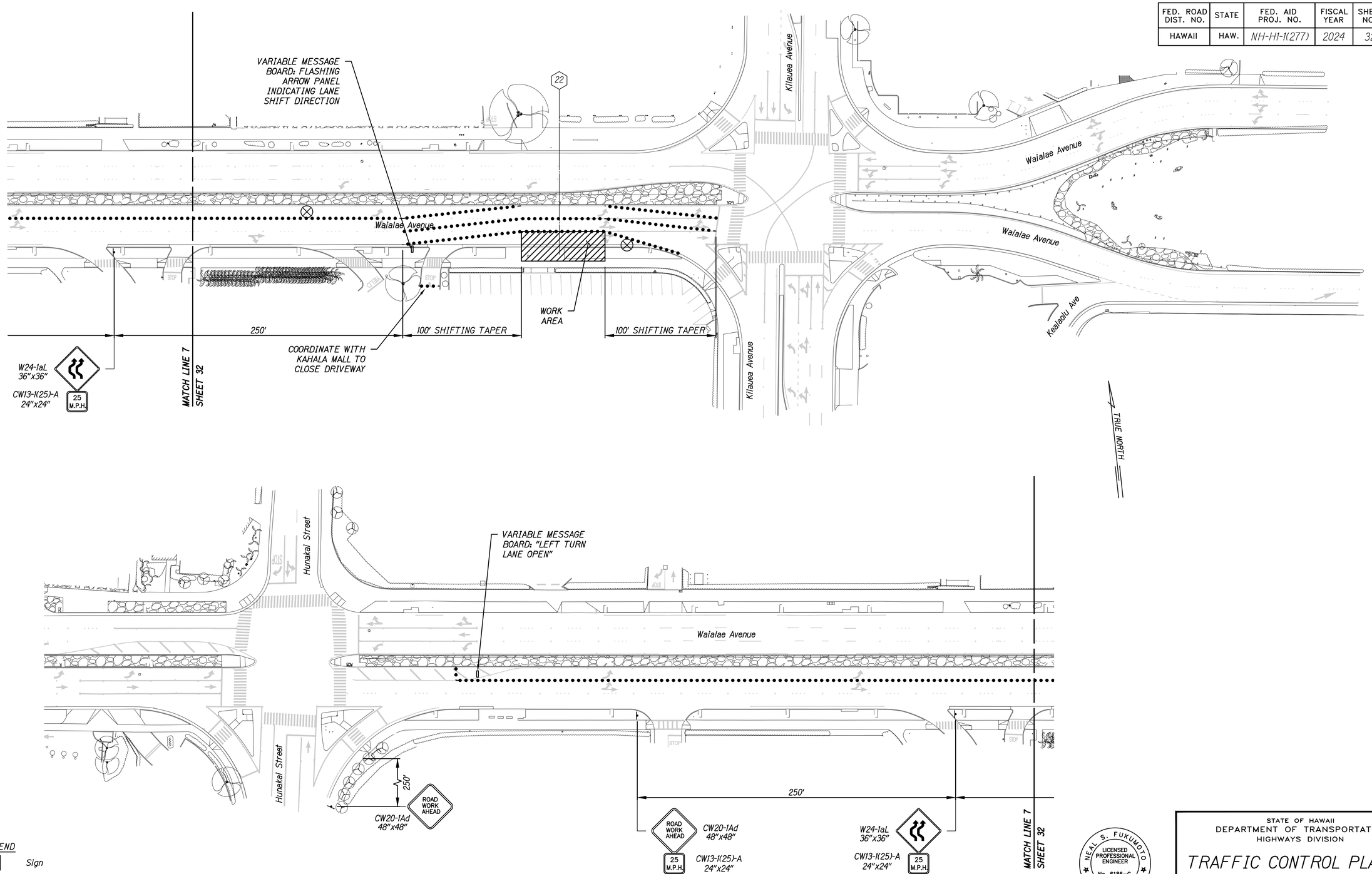
TRAFFIC CONTROL PLAN 14

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-24 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	32	51



LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:
1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

TCP - BENT 22 EASTBOUND RIGHT LANE CLOSED

Scale: NTS

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

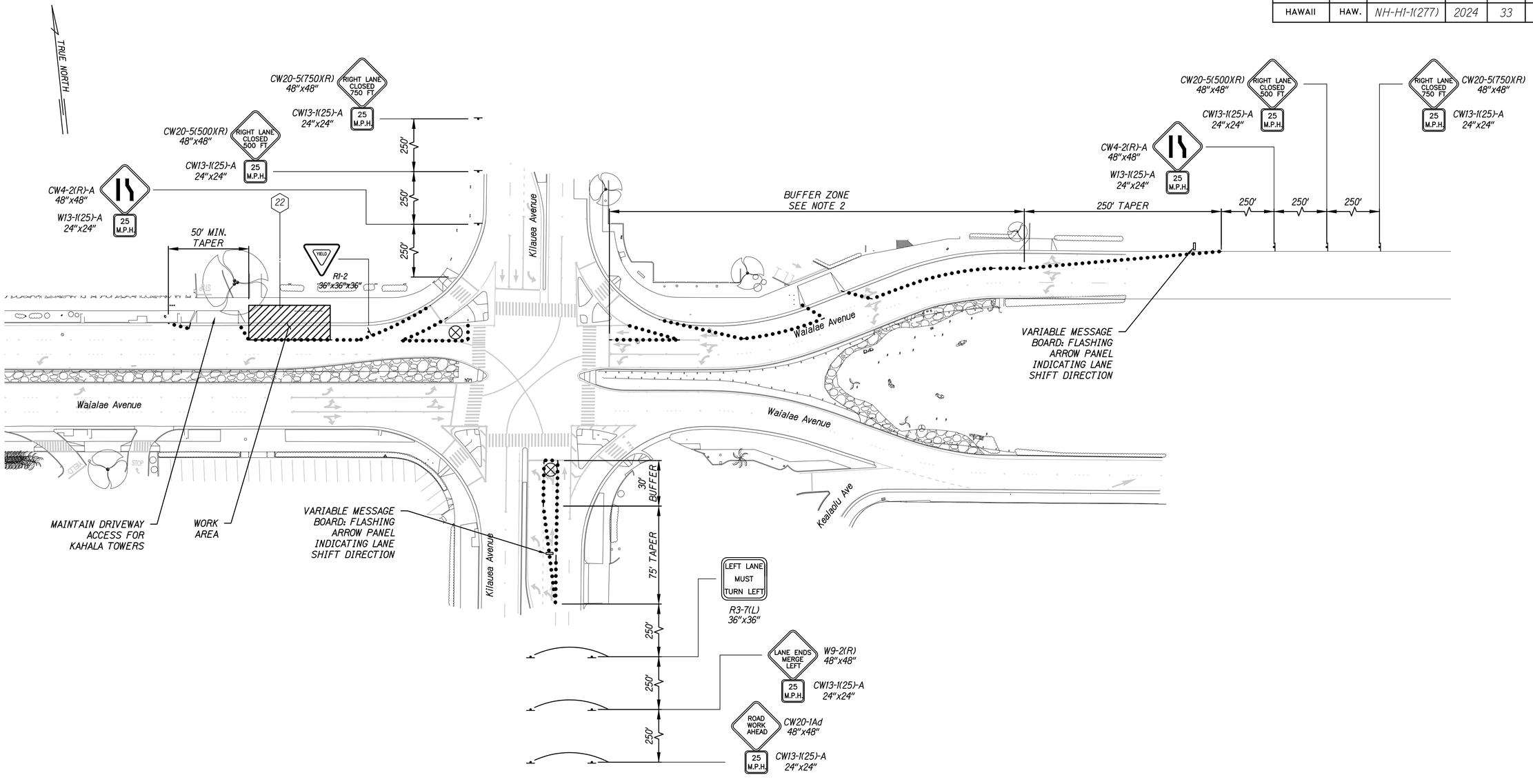
TRAFFIC CONTROL PLAN 15

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-25 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	33	51



TCP - BENT 22 WESTBOUND RIGHT LANE CLOSED

Scale: NTS

LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.
2. BUFFER SPACE SHALL EXTEND TO THE END OF THE HORIZONTAL CURVE. LANE TAPER SHALL NOT BE PLACED ON A HORIZONTAL CURVE.

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

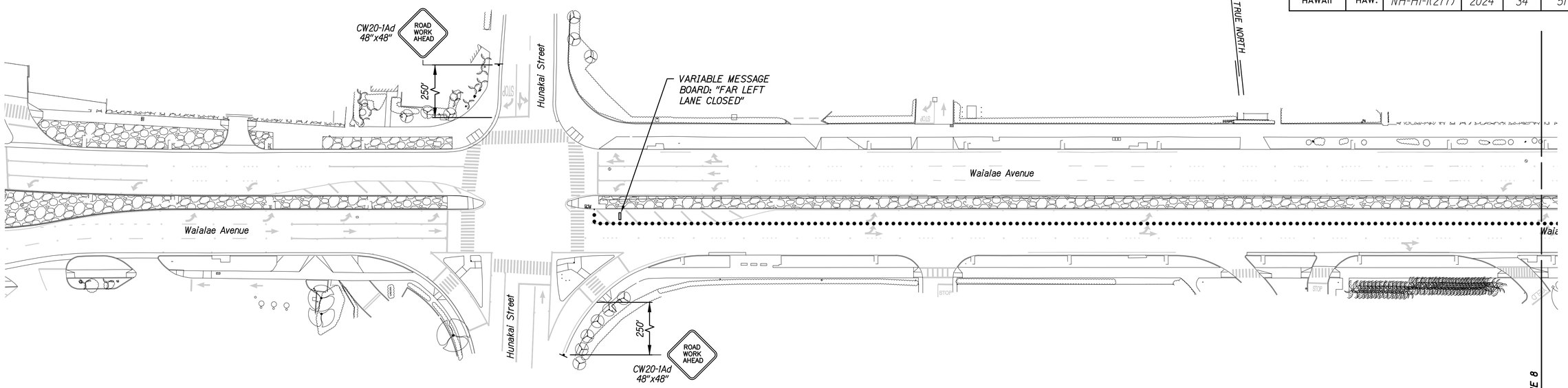
TRAFFIC CONTROL PLAN 16

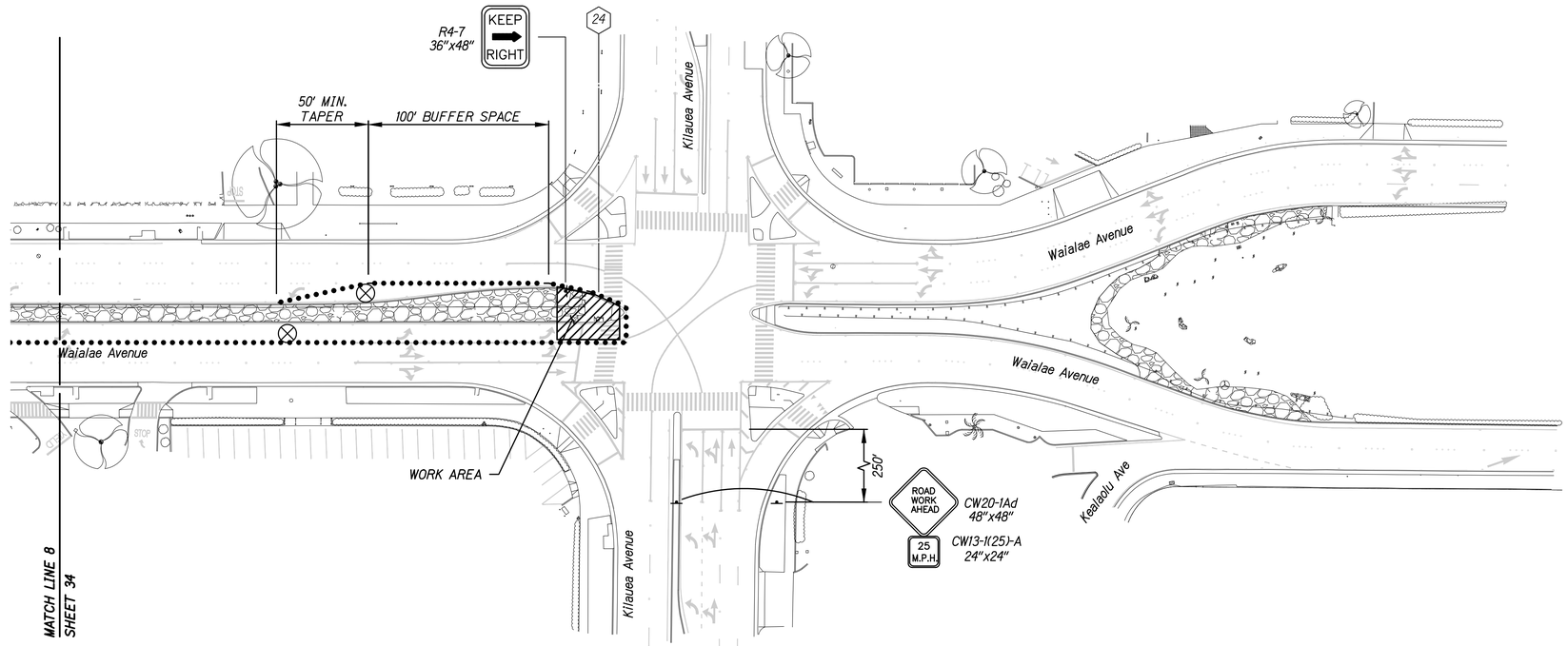
Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-26 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	34	51





LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.

TCP - BENT 24 WESTBOUND RIGHT LANE CLOSED

Scale: NTS

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	TRACED BY	
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
No.	CHECKED BY	

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

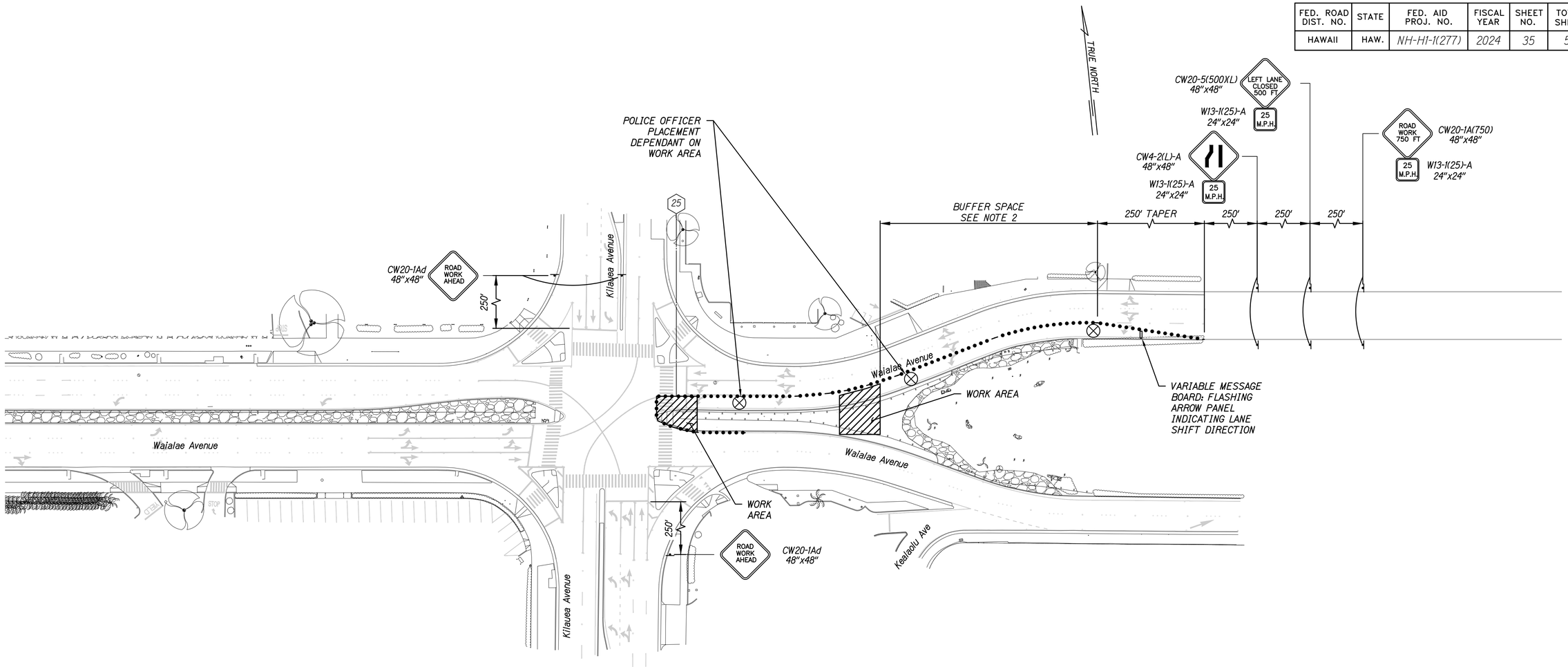
TRAFFIC CONTROL PLAN 17

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-27 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	35	51



TCP - BENT 25 WESTBOUND LEFT LANE CLOSED

Scale: NTS

LEGEND

- Sign
- Cones Spaced @ 10' O.C.
- Variable Message Board
- Work Area
- Police Officer

NOTES:

1. SEE SHEETS 16 & 17 FOR REQUIRED WORK ZONE SIGNING AND PLACEMENT.
2. BUFFER SPACE SHALL EXTEND TO THE END OF THE HORIZONTAL CURVE. LANE TAPER SHALL NOT BE PLACED ON A HORIZONTAL CURVE.

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

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HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN 18

Interstate Route H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. C-28 OF 51 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	36	52

STRUCTURAL NOTES:

DESIGN CRITERIA:

Caltrans Seismic Design Criteria, V2.0 (2019), AASHTO Load and Resistance Factor Design (LRFD) Bridge Design Specifications, Seventh Edition, 2014, with 2016 Interim Revisions, and State of Hawaii, "Design Criteria for Bridges and Structures" dated January 8, 2018.

DESIGN DATA:

1. Seismic
   a. Peak Ground Acceleration, PGA = 0.18g
   b. 7% Probability of Exceedance in 75 years
   c. Site Class D
2. Foundation
   a. Ultimate Soil Bearing Pressure varies between 12 KSF to 36 KSF

FOUNDATION AND EXCAVATION:

1. Contractor shall provide for de-watering of excavation from surface water, ground water or seepage.
2. Contractor shall provide for design and installation of all underpinning, cribbing, sheeting, and shoring necessary to preserve excavations and earth banks.
3. Structural backfill and placement shall be in accordance with Section 703.20 of the Standard Specifications.

CONCRETE:

1. Concrete construction shall conform to Section 503 of the Standard Specifications.
2. Concrete shall be regular weight hard rock concrete and shall have a minimum 28 day compressive strength of 4,000 psi.
3. Maximum water to cementitious materials ratio shall be 0.45.
4. Concrete delivery tickets shall record all free water in the mix: at batching by plant, for consistency by driver, and any additional request by Contractor if permitted by the mix design.
5. All inserts and other items to be cast in the concrete shall be hot-dipped galvanized unless otherwise noted.
6. Reinforcing bars, inserts, and other items to be cast in the concrete shall be secured in position prior to placement of concrete.

REINFORCING STEEL:

1. Reinforcing steel shall be deformed bars conforming to ASTM A706/A706M, Grade 60 unless otherwise noted.
2. Bar bends and hooks shall conform to AASHTO LRFD Bridge Design Specifications, 2nd Edition, Article 5.10.2 – Hooks and Bends.

EPOXY GROUTED DOWELS:

1. Reinforcing steel dowels shall be installed per Section 656 of the Standard Specifications.
2. Epoxy shall be SET-3G or by Simpson Strong Tie Co Inc. or approved equal.

FIBER-REINFORCED POLYMER (FRP):

1. Fiber-Reinforced Polymer (FRP) shall be Tyfo SCH-41 Uni-Directional Carbon Fiber by Fyfe FRP, LLC, or approved equal.
2. FRP wrap shall be four (4) layers of FRP (0.04" Thick Per Layer), 24" wide strips spaced a maximum of 24" on center (full coverage), wrapped around bent cap cross section with primary fibers oriented transverse to the bent cap axis.
3. FRP anchors shall be Tyfo SCH Composite Anchors by Fyfe FRP, LLC, or approved equal.
4. Avoid damaging existing steel reinforcing when drilling holes for FRP anchors.
5. FRP finish shall be Tyfo RR by Fyfe FRP, LLC, or approved equal. Color shall match the existing concrete color.

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

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LICENSED PROFESSIONAL ENGINEER
No. 13001-S
HAWAII U.S.A.

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MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

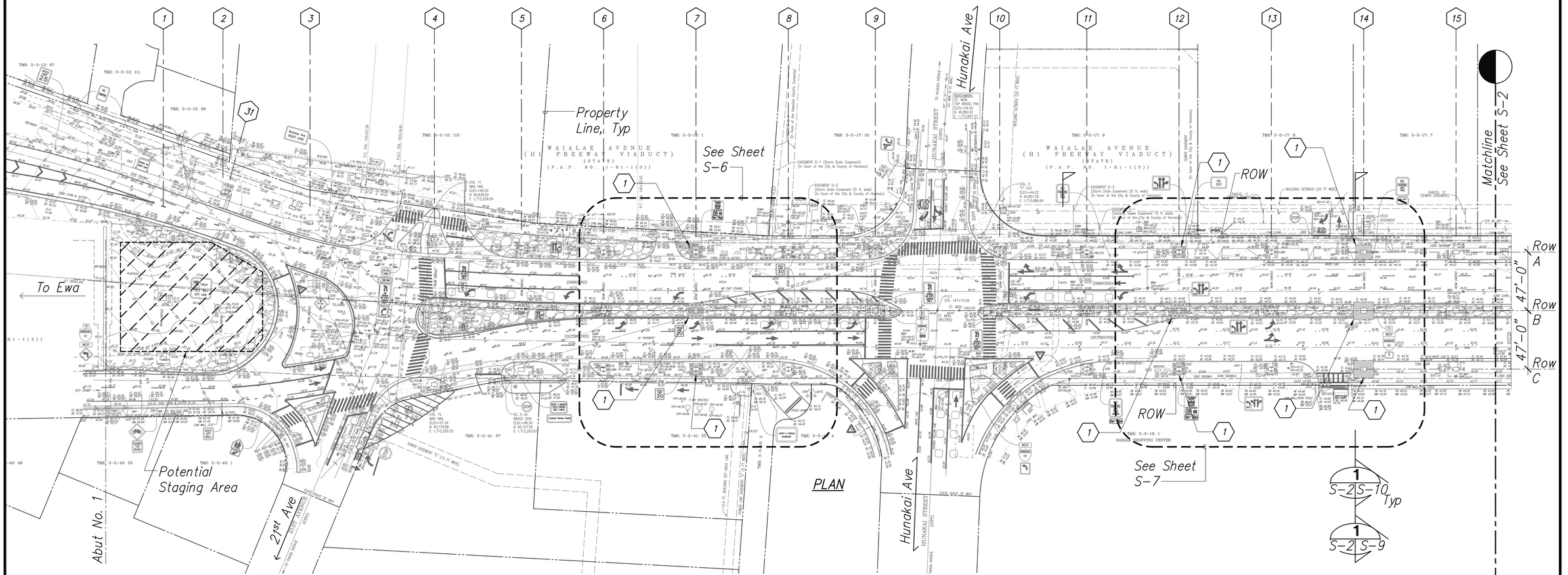
STRUCTURAL NOTES

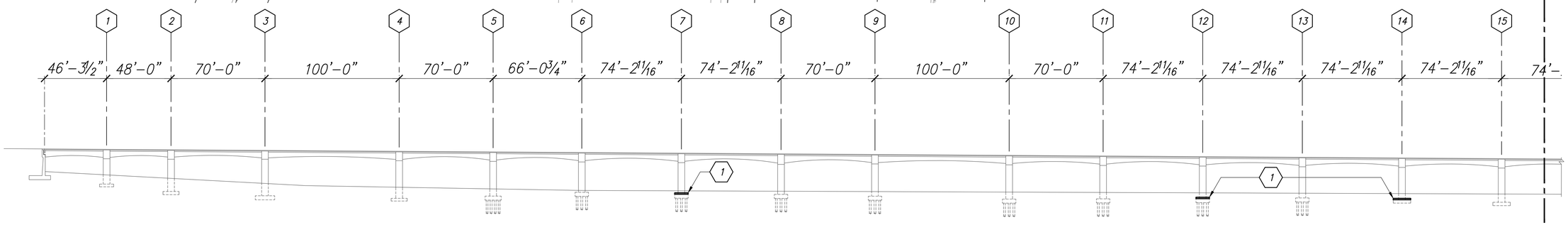
INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-1 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(277)	2024	37	52



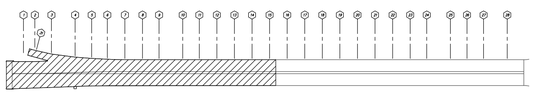


ELEVATION

North

PARTIAL FOUNDATION PLAN (1 S-2 | S-2)

Scale: 1" = 40'



North Key Plan

Legend:

(1) Thicken And Reinforce Pilecap Or Footing (Shaded)

Graphic Scale

1" = 40' 40' 0' 40' 80'

Scale In Feet

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MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PARTIAL FOUNDATION PLAN AND PARTIAL ELEVATION

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-2 OF 52 SHEETS

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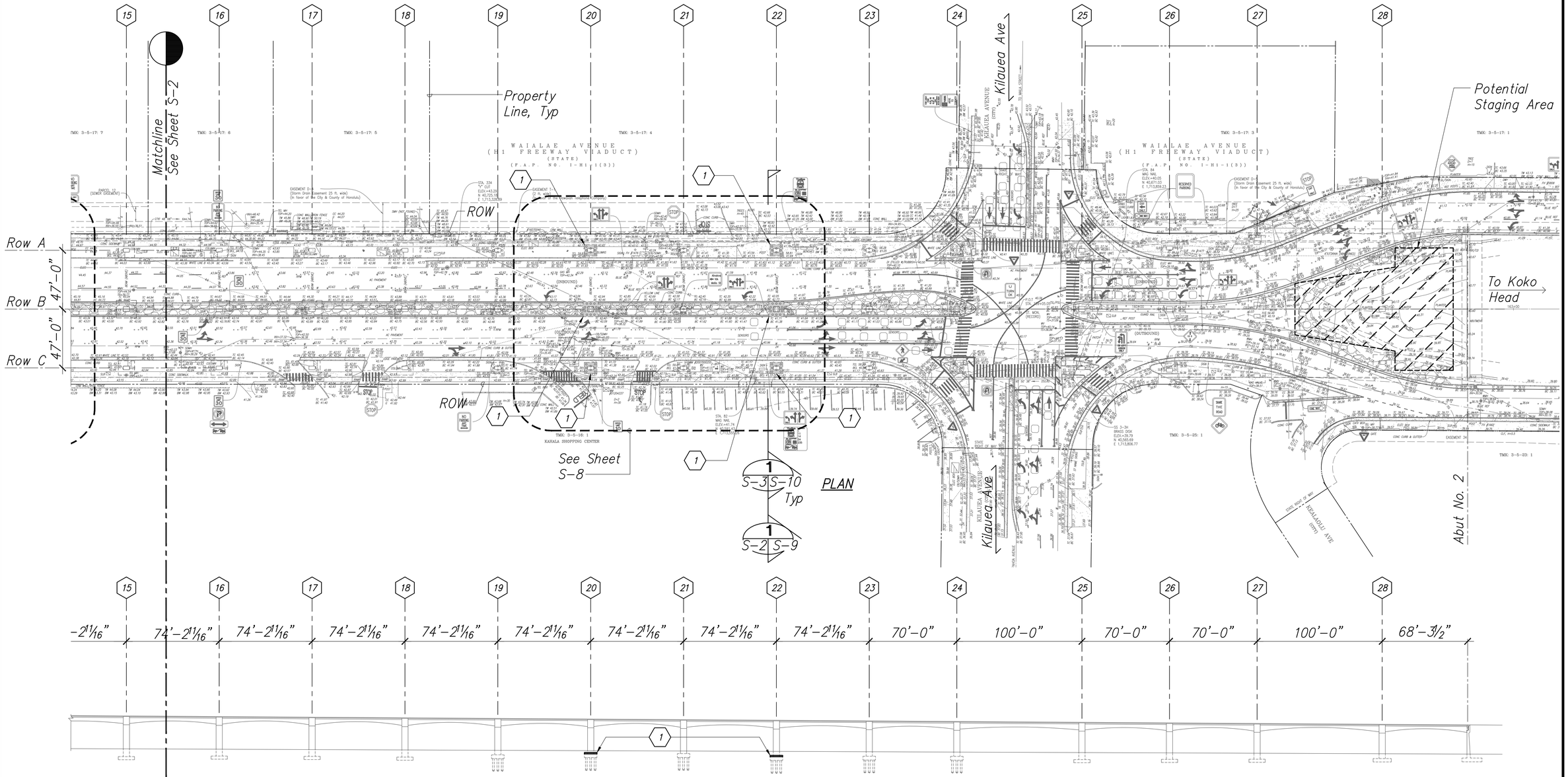
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

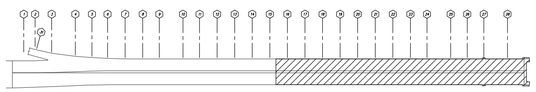
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(277)	2024	38	52



North

PARTIAL FOUNDATION PLAN 1 S-3 S-3

Scale: 1" = 40'



Key Plan

Legend:

(1) Thicken And Reinforce Pilecap Or Footing (Shaded)

Graphic Scale

1" = 40' 40' 0' 40' 80'

Scale In Feet

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PARTIAL FOUNDATION PLAN AND PARTIAL ELEVATION

INTERSTATE ROUTE H-1: Seismic Retrofit Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-3 OF 52 SHEETS

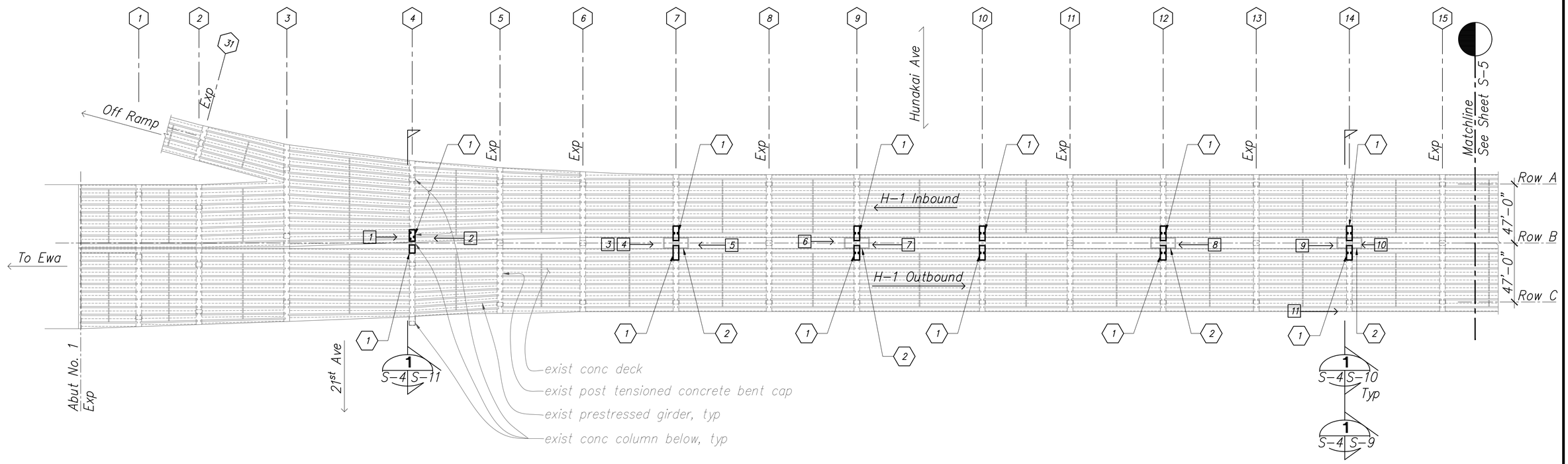
ORIGINAL PLAN

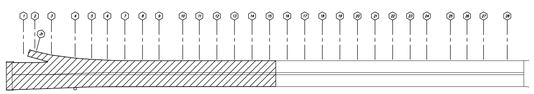
NOTE BOOK

No.

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	39	52





Key Plan

North

PARTIAL BRIDGE FRAMING PLAN

1 / S-4 | S-4

Scale: 1" = 40'

Legend:

1 Wrap Bent Cap w/ FRP

2 Existing Planter

X Indicates Photograph Location, See Sheet S-17 For Photographs

Graphic Scale

1" = 40' 40' 0' 40' 80'

Scale In Feet

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

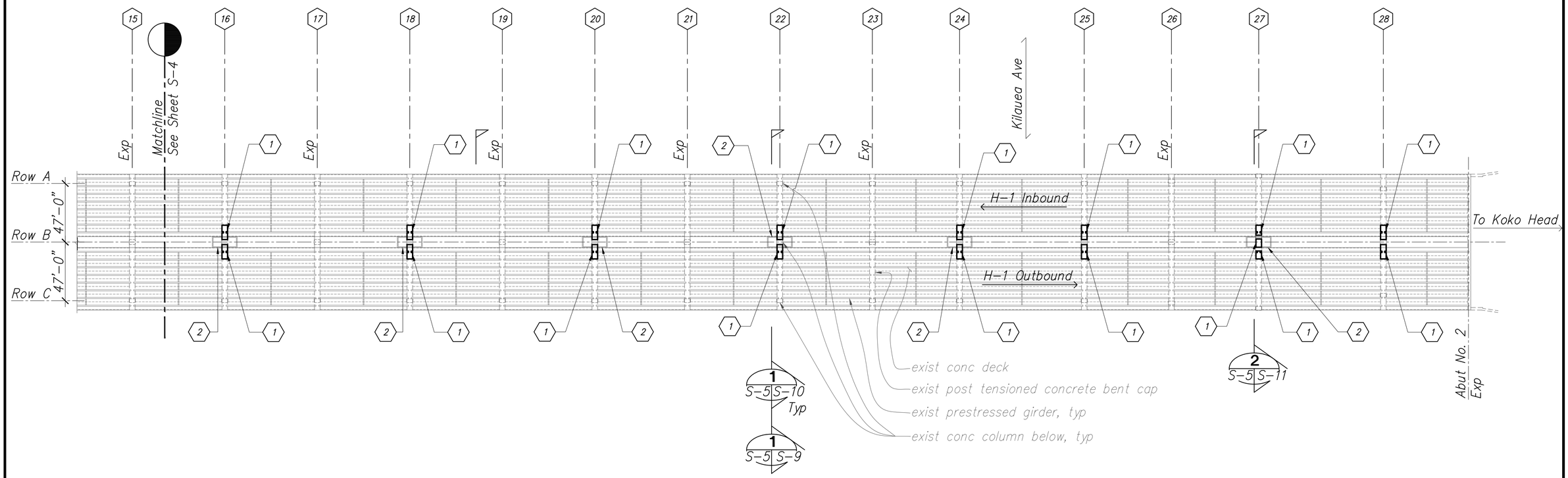
PARTIAL BRIDGE FRAMING PLAN

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-4 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	40	52

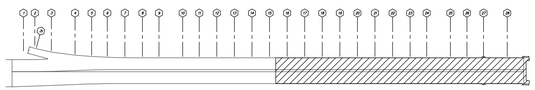


North

PARTIAL BRIDGE FRAMING PLAN

Scale: 1" = 40'

1 S-5 S-5



Key Plan

Legend:

1 Wrap Bent Cap w/ FRP

2 Existing Planter

X Indicates Photograph Location, See Sheet S-17 For Photographs

Graphic Scale

1" = 40' 40' 0' 40' 80'

Scale In Feet

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

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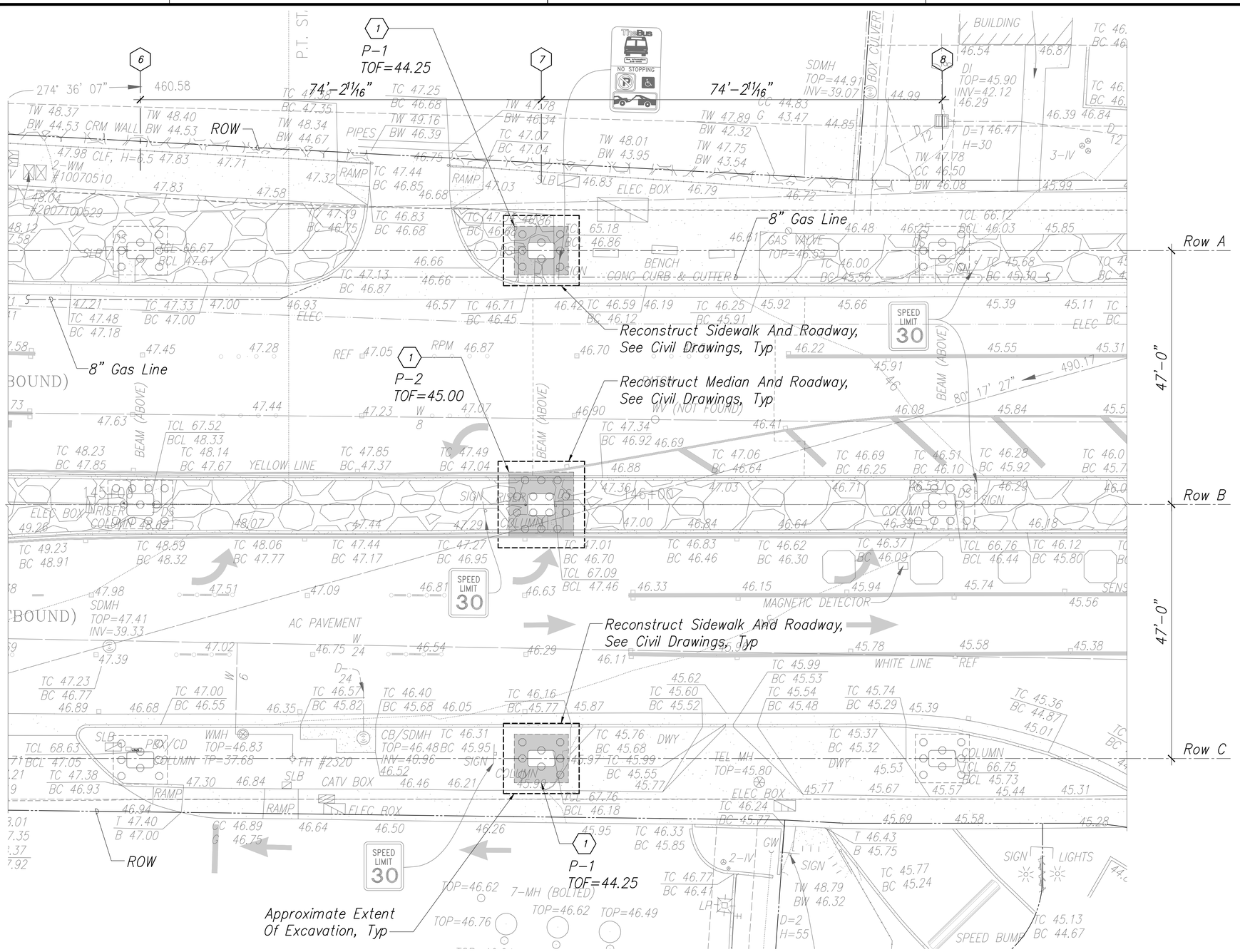
PARTIAL BRIDGE FRAMING PLAN

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-5 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(277)	2024	41	52



North

PARTIAL FOUNDATION PLAN

Scale: 1" = 1'

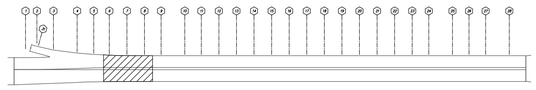
1 / S-6 | S-6

Legend:

(1) Thicken And Reinforce Pilecap Or Footing (Shaded), See Sheets 47 To 49

P-1 Footing Type ([P]ile Cap Or [S]pread)

TOF = Top Of Pile Cap Or Spread Footing Elevation



North Key Plan

Graphic Scale

1" = 10' 10' 0' 10' 20'

Scale In Feet

GRANT J. OKUNAGA LICENSED PROFESSIONAL ENGINEER No. 13001-S HAWAII U.S.A.

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MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PARTIAL FOUNDATION PLAN

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

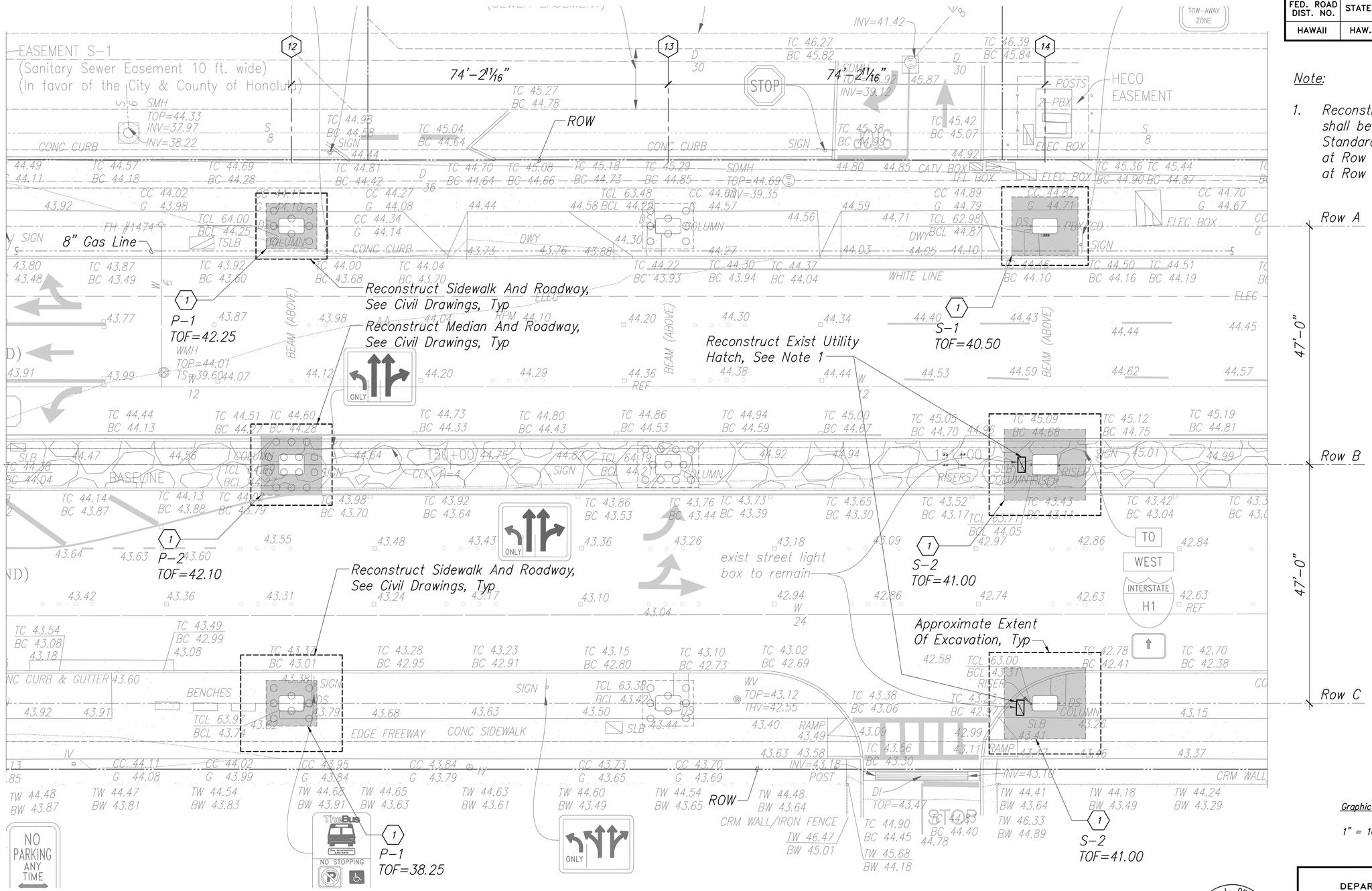
SHEET No. S-6 OF 52 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(277)	2024	42	52

Note:

1. Reconstructed utility hatches shall be Type "A" PullBox Per Standard Plan TE-37. Hatch at Row B is energized. Hatch at Row C is not energized.

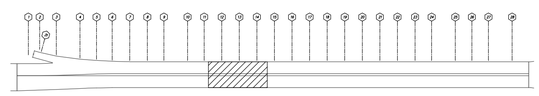


Legend:

(1) Thicken And Reinforce Pilecap Or Footing (Shaded), See Sheets 47 To 49

P-1 Footing Type ([P]ile Cap Or [S]pread)

TOF = Top Of Pile Cap Or Spread Footing Elevation



Key Plan

PARTIAL FOUNDATION PLAN (1 / S-7 | S-7)

Scale: 1" = 10'

Graphic Scale

1" = 10' 10' 0' 10' 20'

Scale In Feet

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PARTIAL FOUNDATION PLAN

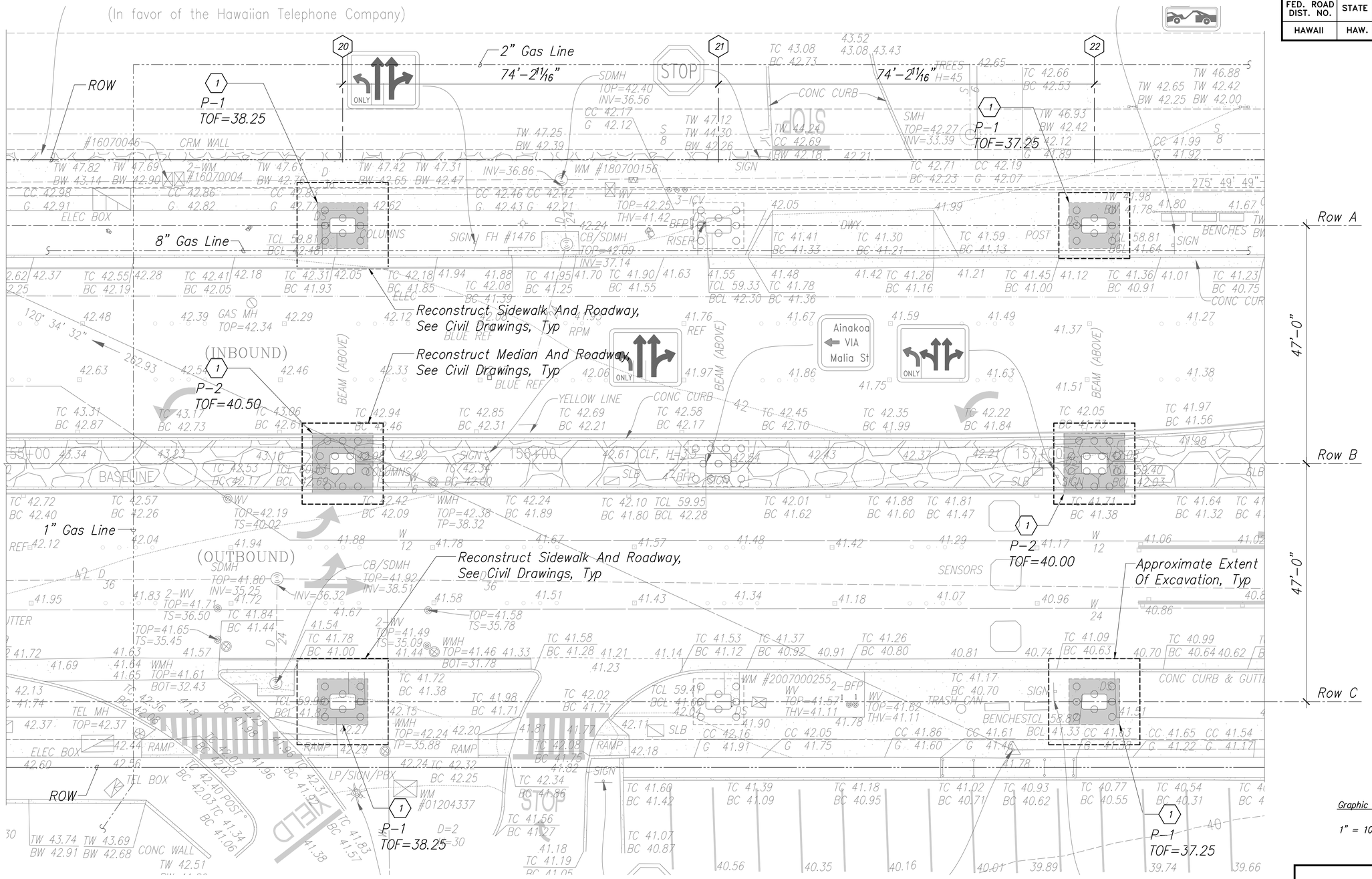
INTERSTATE ROUTE H-1: Seismic Retrofit Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-7 OF 52 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(277)	2024	43	52



North

PARTIAL FOUNDATION PLAN

Scale: 1" = 10'

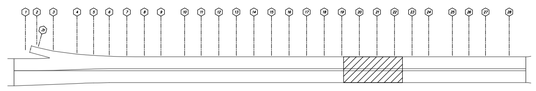
1 | S-8 | S-8

Legend:

(1) Thicken And Reinforce Pilecap Or Footing (Shaded), See Sheets 47 To 49

P-1 Footing Type ([P]ile Cap Or [S]pread)

TOF = Top Of Pile Cap Or Spread Footing Elevation



North Key Plan

GRANT J. OKUNAGA
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No. 13001-S
HAWAII U.S.A.

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Graphic Scale
1" = 10'
10' 0' 10' 20'
Scale In Feet

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PARTIAL FOUNDATION PLAN

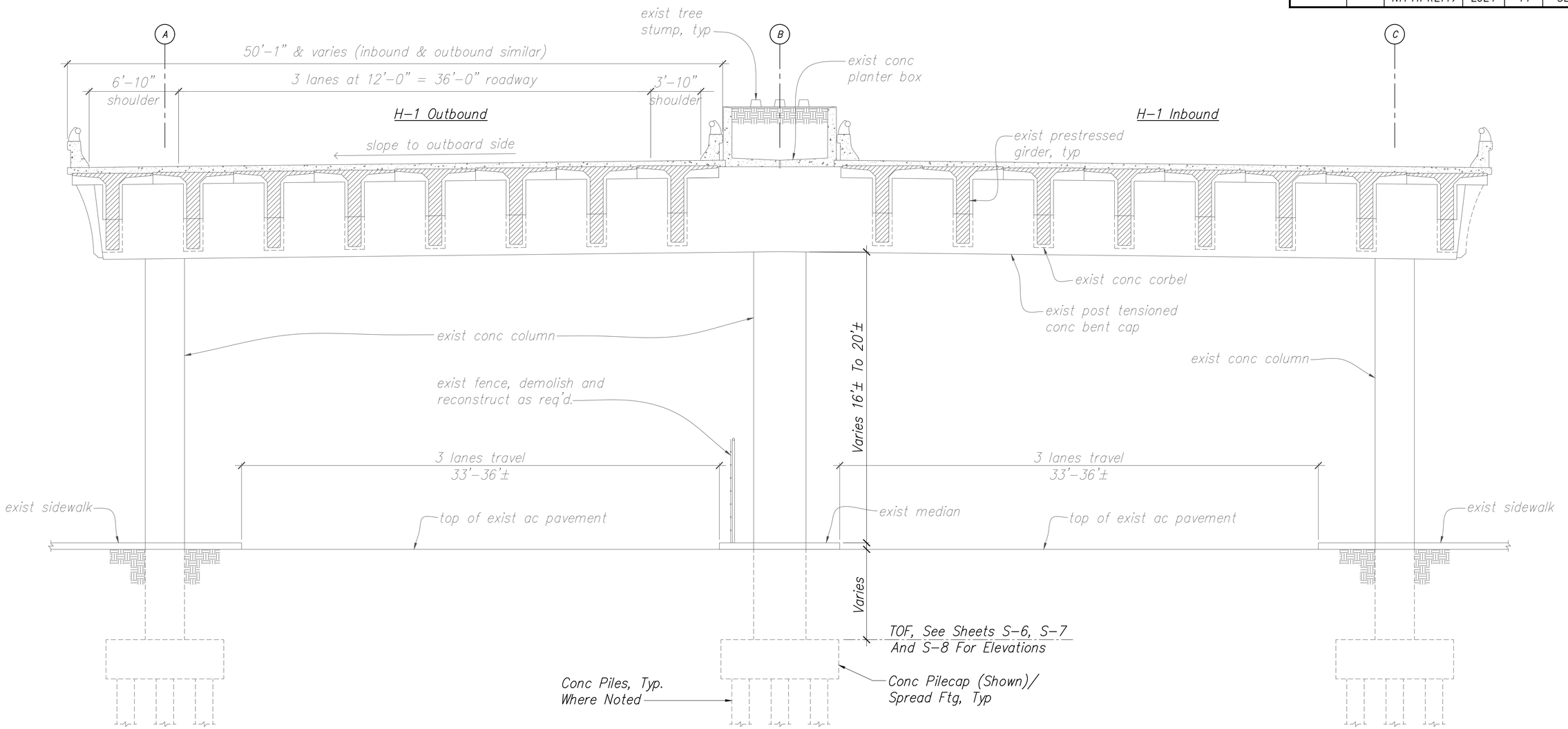
INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-8 OF 52 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	44	52



TYPICAL EXISTING BRIDGE SECTION

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

1 | S-9 | S-2, S-3, S-4, S-5

Graphic Scale
1/4"=1'-0" 4' 2' 0' 4'
Scale In Feet

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

GRANT J. OKUNAGA
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No. 13001-S
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

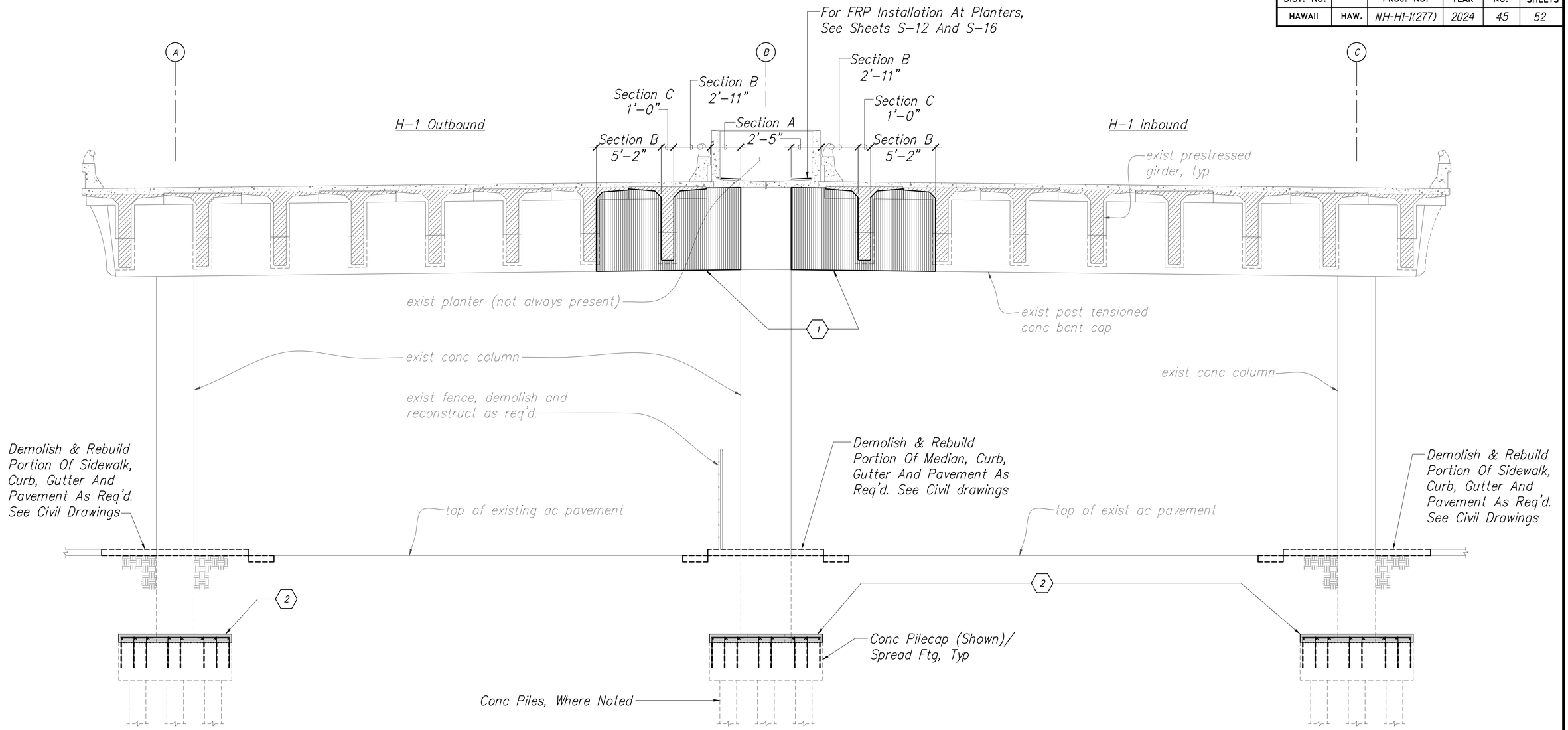
TYPICAL SECTION

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-9 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	45	52



TYPICAL BENT SECTION (1)
Scale: 1/4" = 1'-0"
S-10 | S-2, S-3, S-4, S-5

Legend:

(1) Wrap Bent Cap w/ FRP, See Sheets S-4 And S-5 For Locations

(2) Thicken And Reinforce PileCap Or Footing, See Sheets S-2 And S-3 For Locations

Note:
For Balance Of Information, See Sheet S-9.

Graphic Scale
1/4"=1'-0"
4' 2' 0' 4'
Scale In Feet

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

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No. 13001-S
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

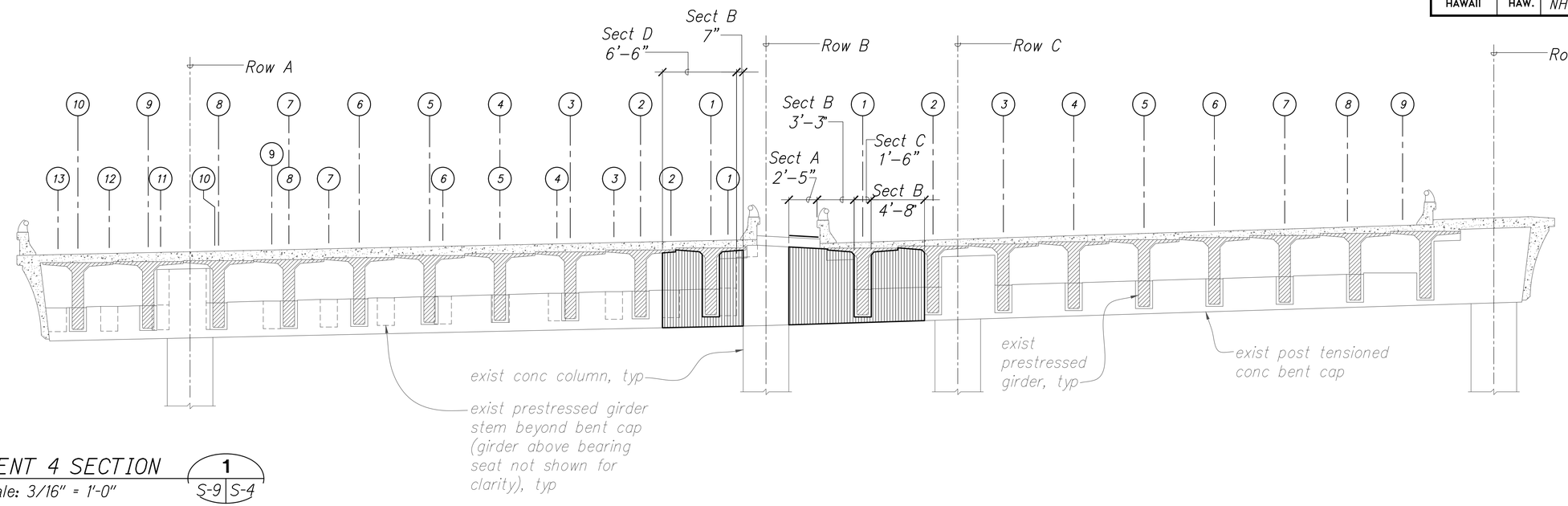
TYPICAL BENT SECTION

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

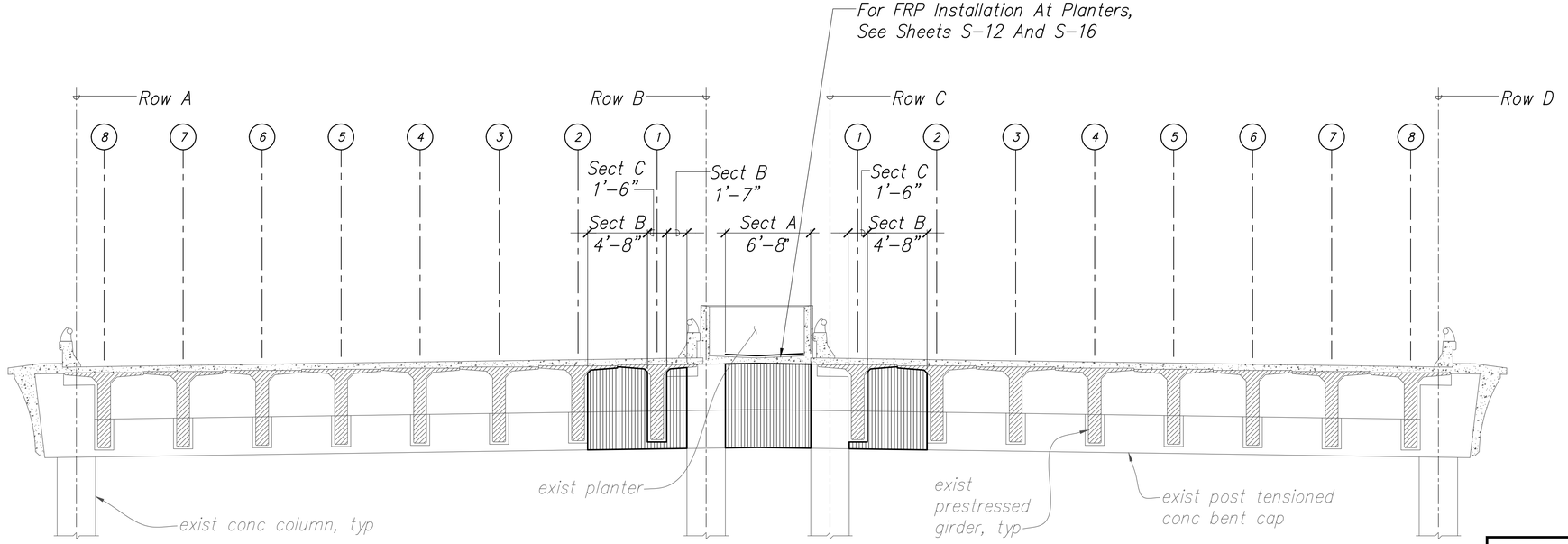
Scale: As Noted Date: July 2024

SHEET No. S-10 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	46	52



BENT 4 SECTION (1) S-9 | S-4
Scale: 3/16" = 1'-0"



BENT 27 SECTION (2) S-9 | S-5
Scale: 3/16" = 1'-0"

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

GRAPHIC SCALE
3/16"=1'-0" 0' 2' 4' 8' 12'
Scale In Feet

GRANT J. OKUNAGA
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No. 13001-S
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

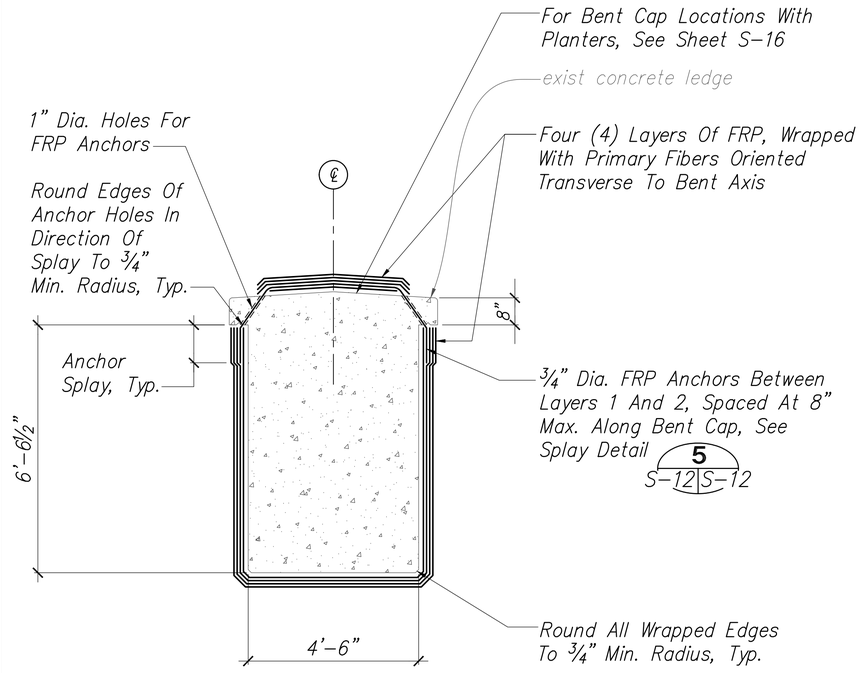
BENT 4 AND 27 SECTIONS

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

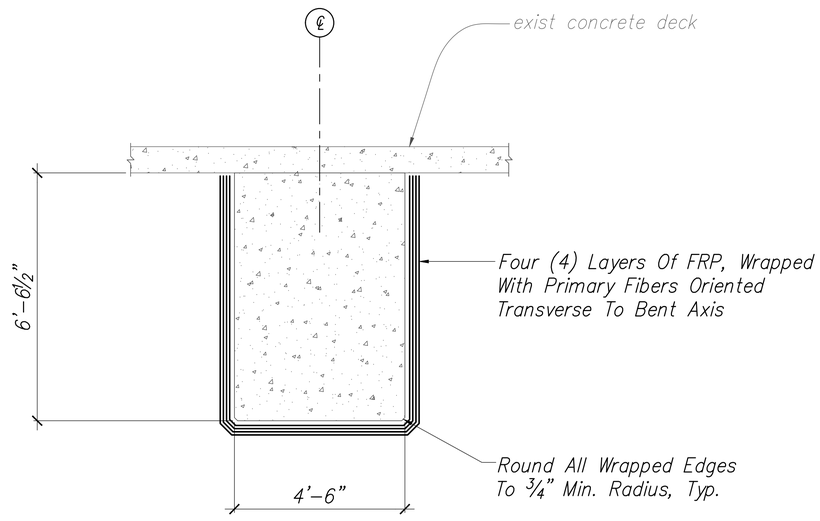
Scale: As Noted Date: July 2024

SHEET No. S-11 OF 52 SHEETS

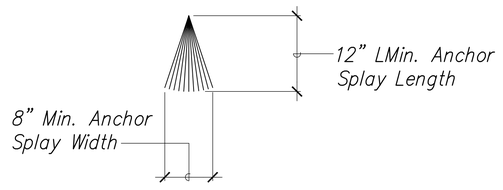
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	47	52



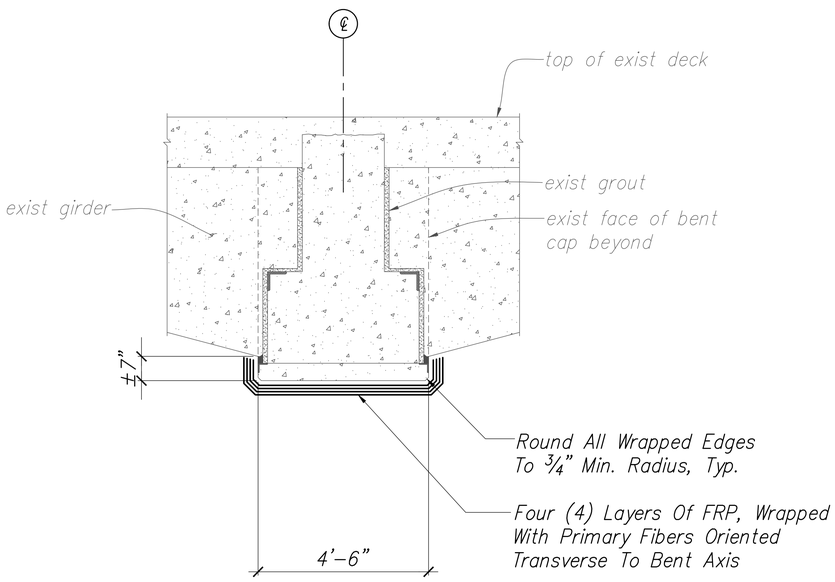
SECTION A 1
Scale: 1/2" = 1'-0" S-12 S-10



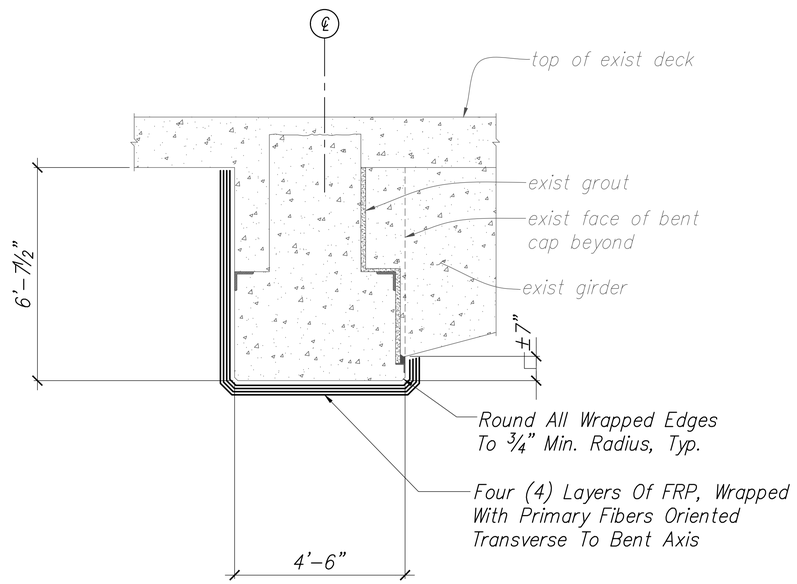
SECTION B 2
Scale: 1/2" = 1'-0" S-12 S-10



SPLAY DETAIL 5
Scale: 1" = 1'-0" S-12 S-12



SECTION C 3
Scale: 1/2" = 1'-0" S-12 S-10



SECTION D 4
Scale: 1/2" = 1'-0" S-12 S-10

Graphic Scale
1/2"=1'-0" 0' 1' 2' 4' Scale In Feet
1"=1'-0" 1' 0 1' 2' Scale In Feet

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

GRANT J. OKUNAGA
LICENSED PROFESSIONAL ENGINEER
No. 13001-S
HAWAII U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

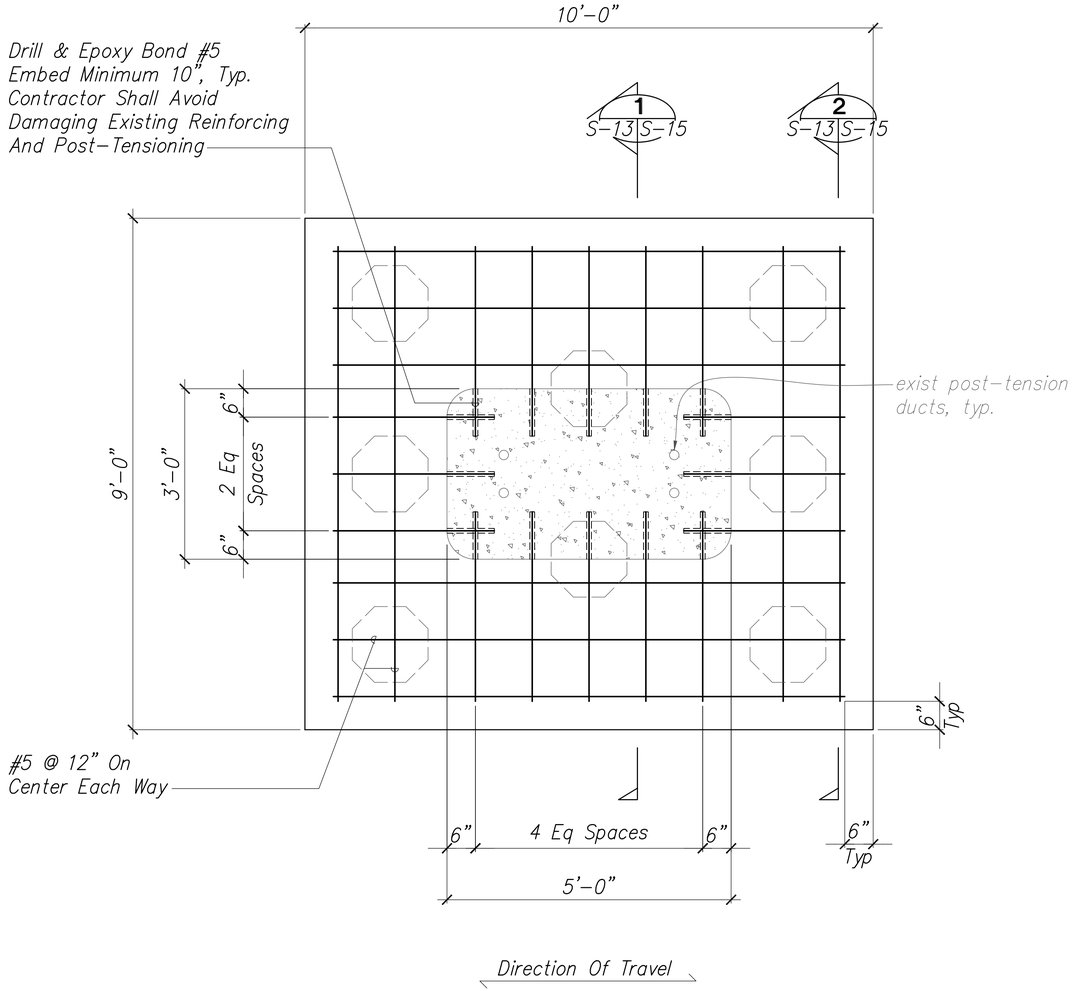
TYPICAL BENT CAP SECTIONS

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

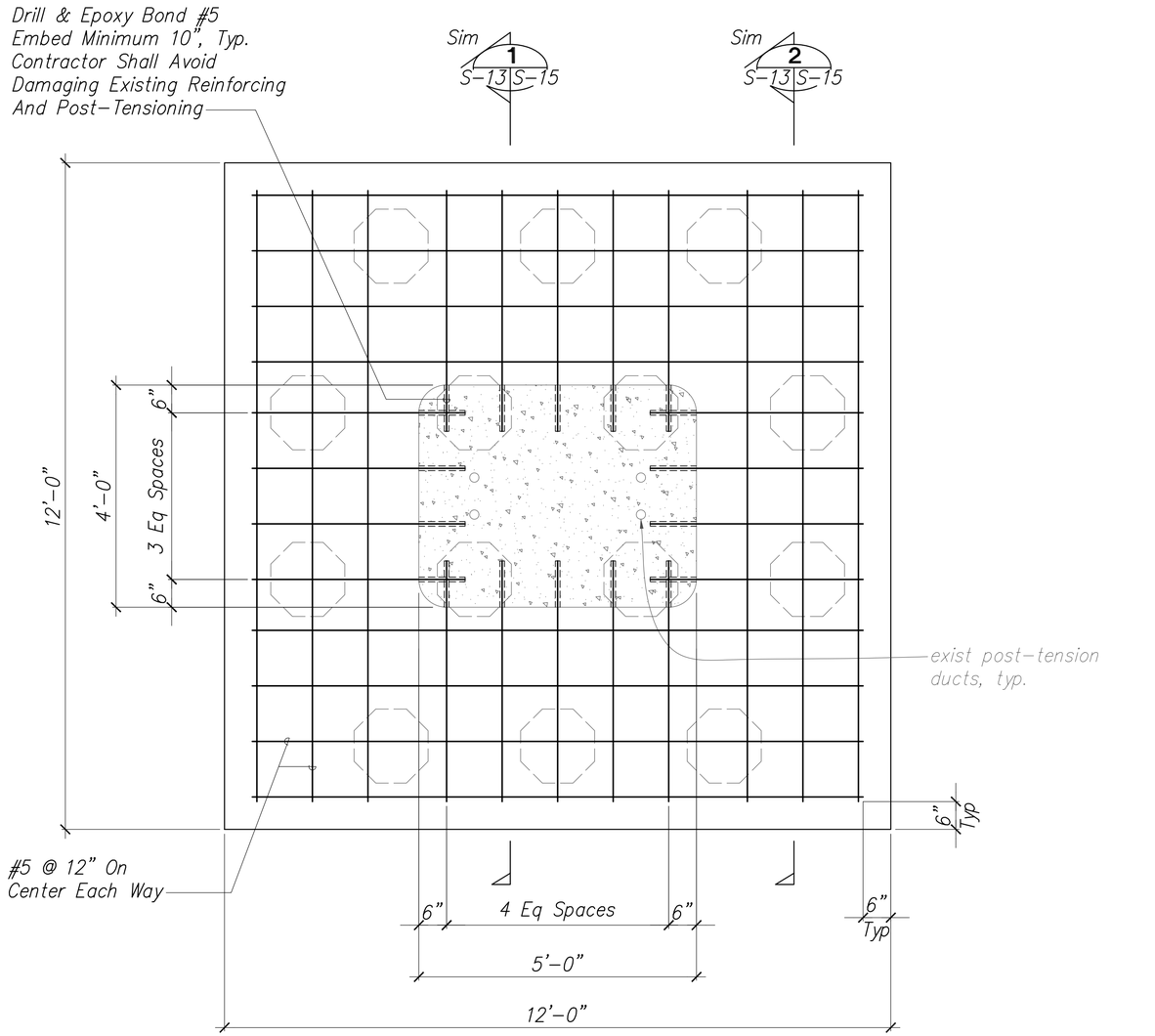
Scale: As Noted Date: July 2024

SHEET No. S-12 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	48	52



P-1



P-2

Graphic Scale
3/4"=1'-0"
0' 1' 2' 3'
Scale In Feet

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

FOOTING DETAILS 1
Scale: 3/4" = 1'-0" S-13 | S-2, S-3

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No. 13001-S
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MKE ASSOCIATES LLC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

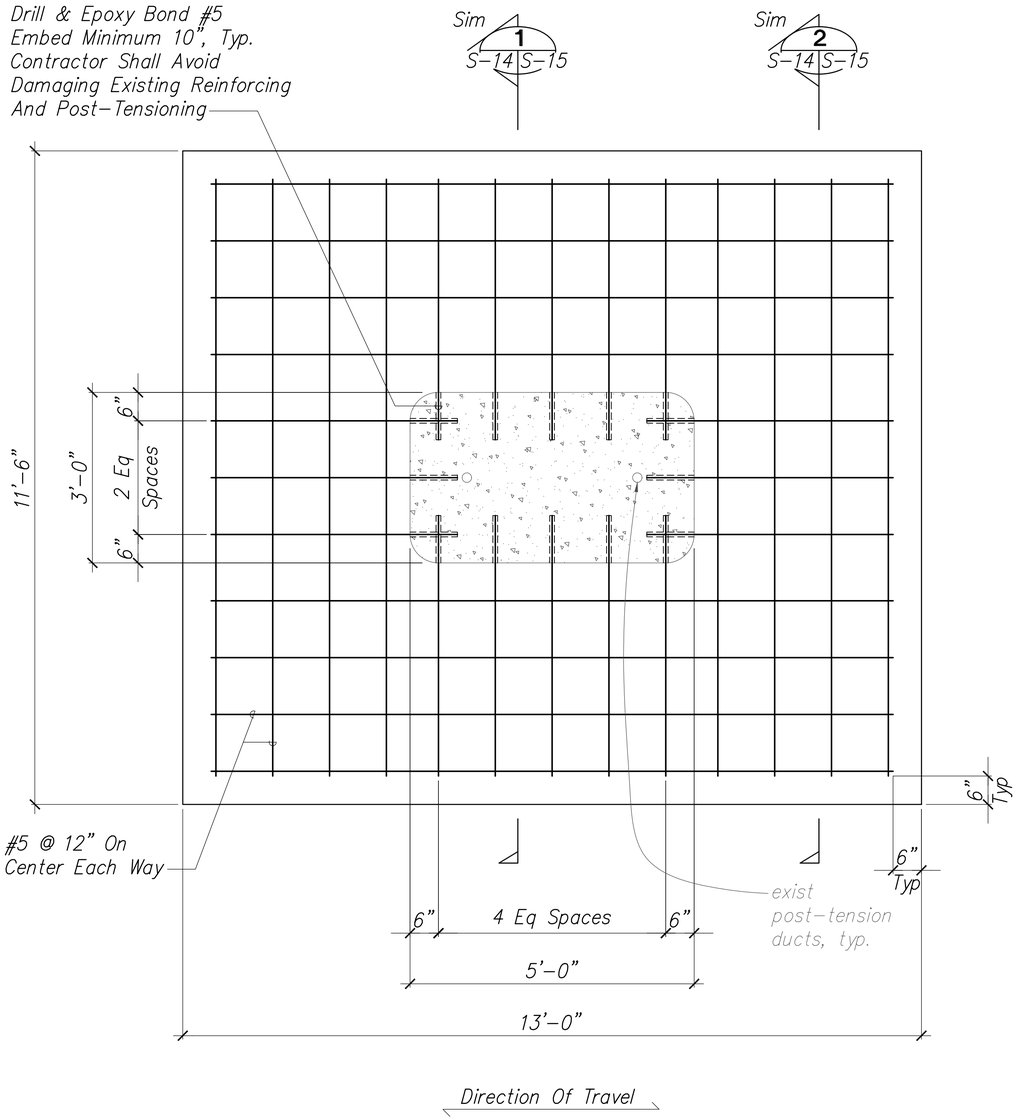
FOOTING DETAILS

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

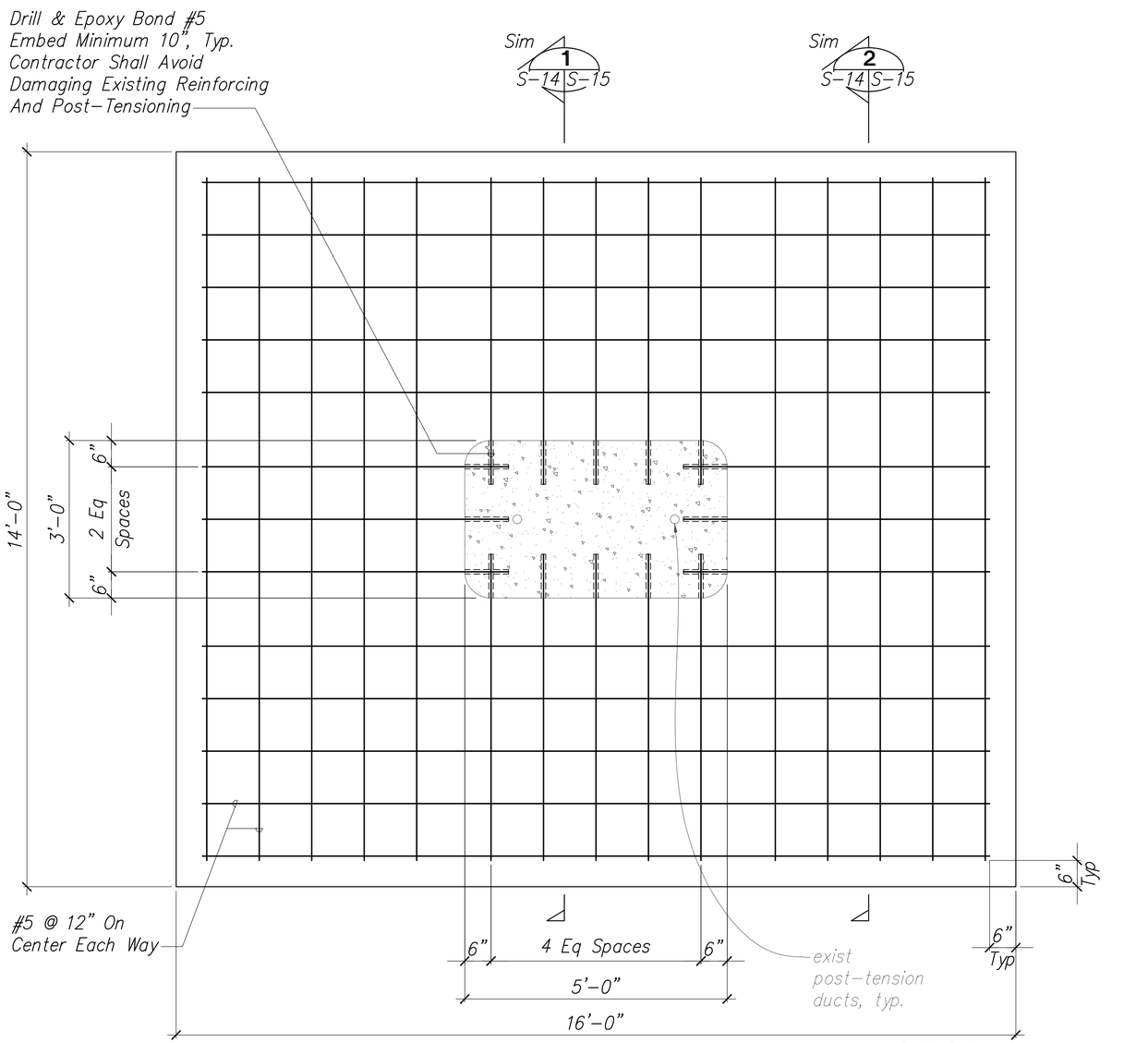
Scale: As Noted Date: July 2024

SHEET No. S-13 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	49	52



S-1



S-2

Graphic Scale
3/4"=1'-0" 0' 1' 2' 3'
Scale In Feet

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

FOOTING DETAILS
Scale: 3/4" = 1'-0"

1
S-14 | S-2, S-3

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LICENSED PROFESSIONAL ENGINEER
No. 13001-S
HAWAII U.S.A.

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STATE OF HAWAII
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HIGHWAYS DIVISION

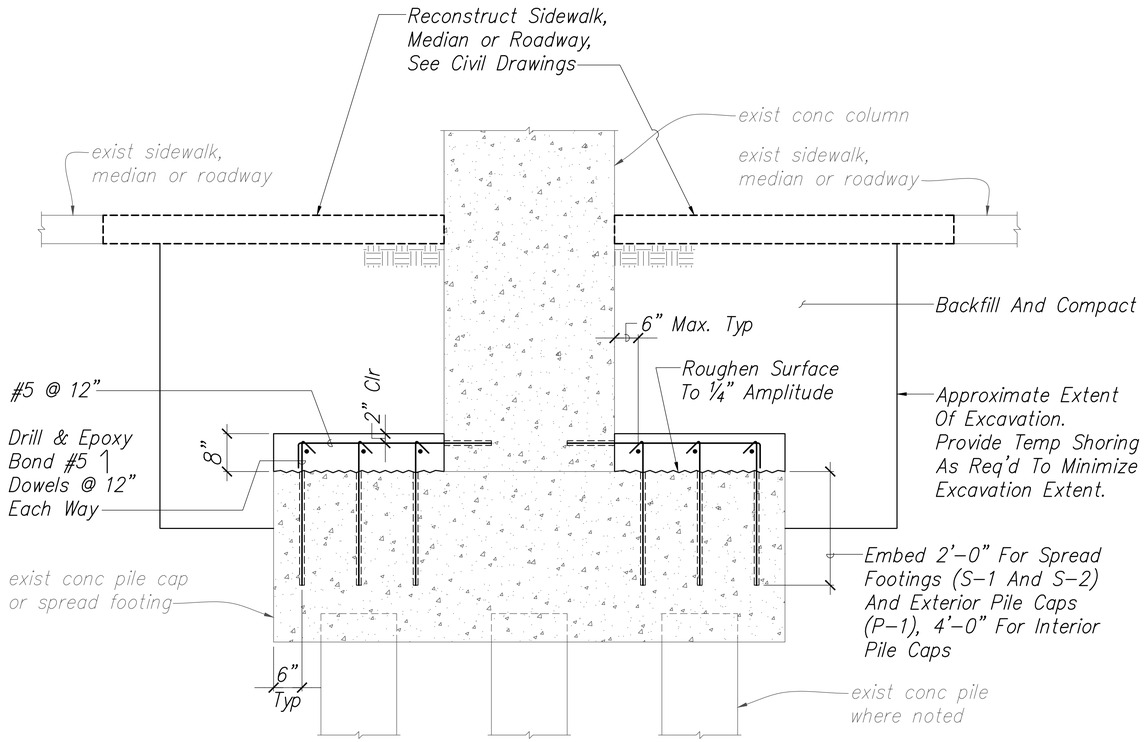
FOOTING DETAILS

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

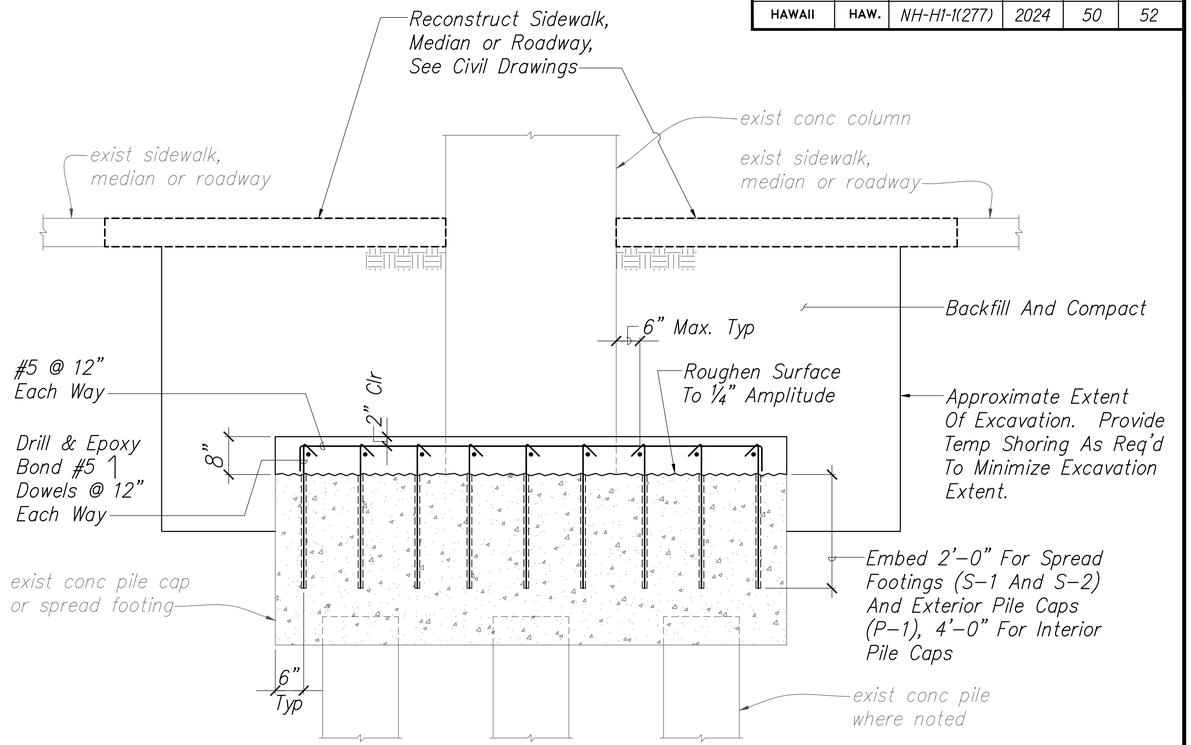
Scale: As Noted Date: July 2024

SHEET No. S-14 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	50	52



SECTION 1
Scale: 3/4" = 1'-0"
S-15 | S-13, S-14



SECTION 2
Scale: 3/4" = 1'-0"
S-15 | S-13, S-14

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

Graphic Scale
3/4"=1'-0" 0' 1' 2' 3'
Scale In Feet

LICENSED PROFESSIONAL ENGINEER No. 13001-S
GRANT J. OKUNAGA
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HIGHWAYS DIVISION

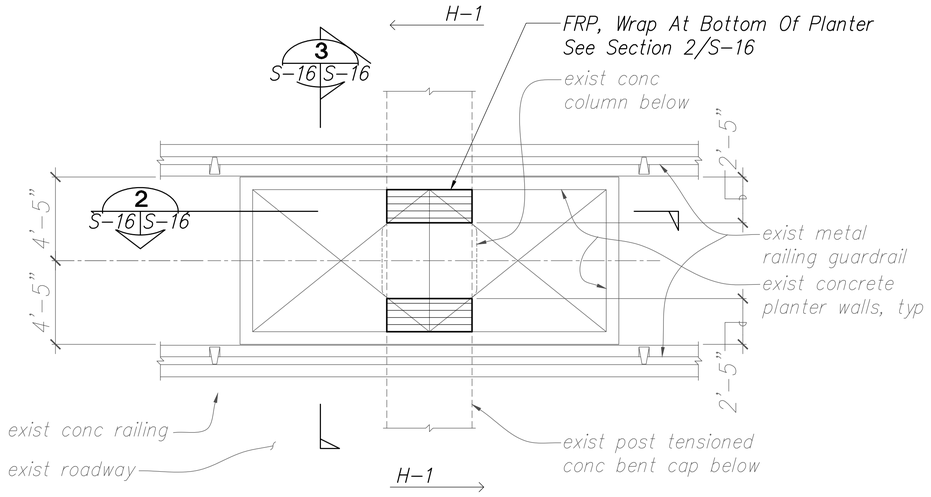
FOOTING DETAILS

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

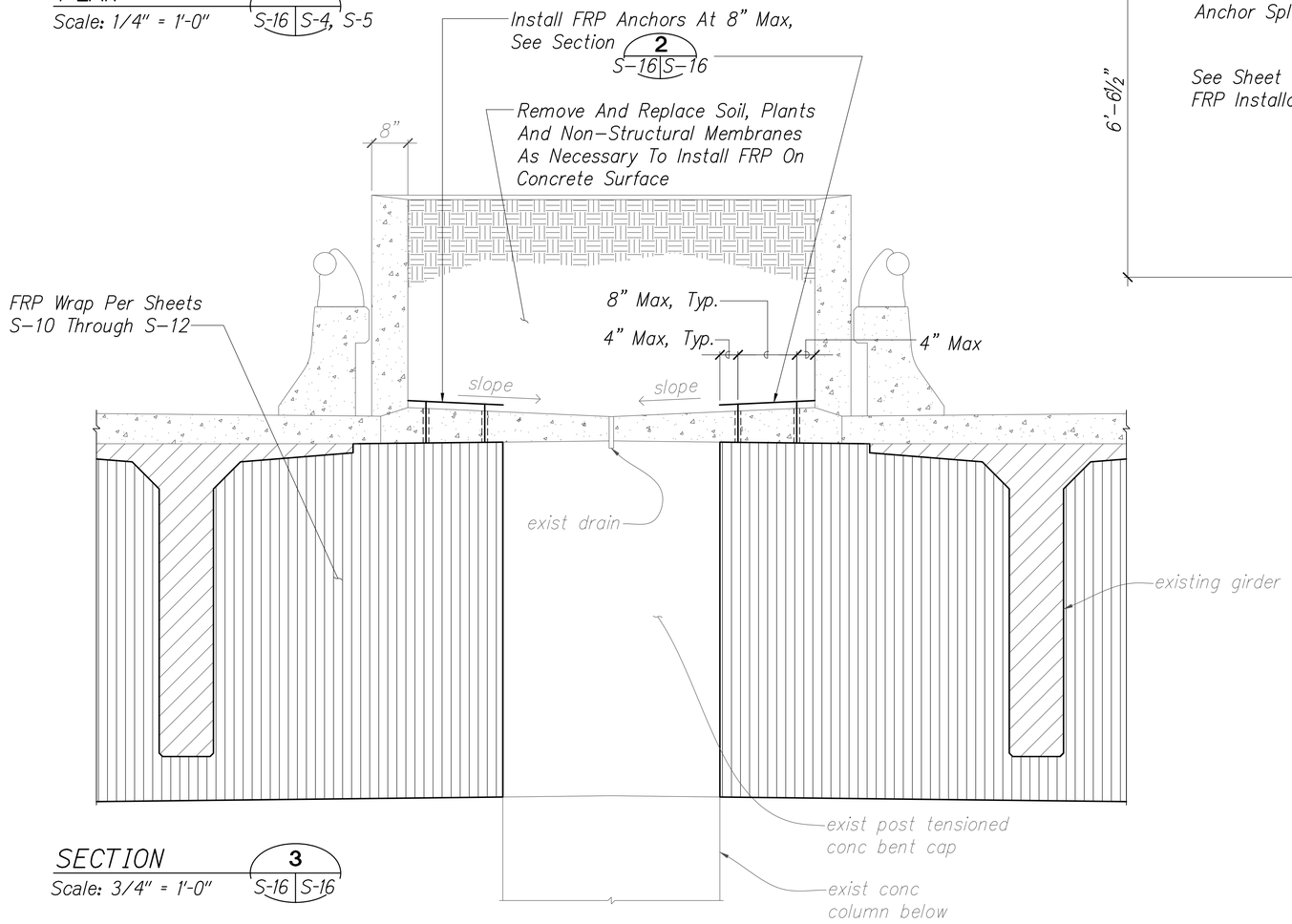
Scale: As Noted Date: July 2024

SHEET No. S-15 OF 52 SHEETS

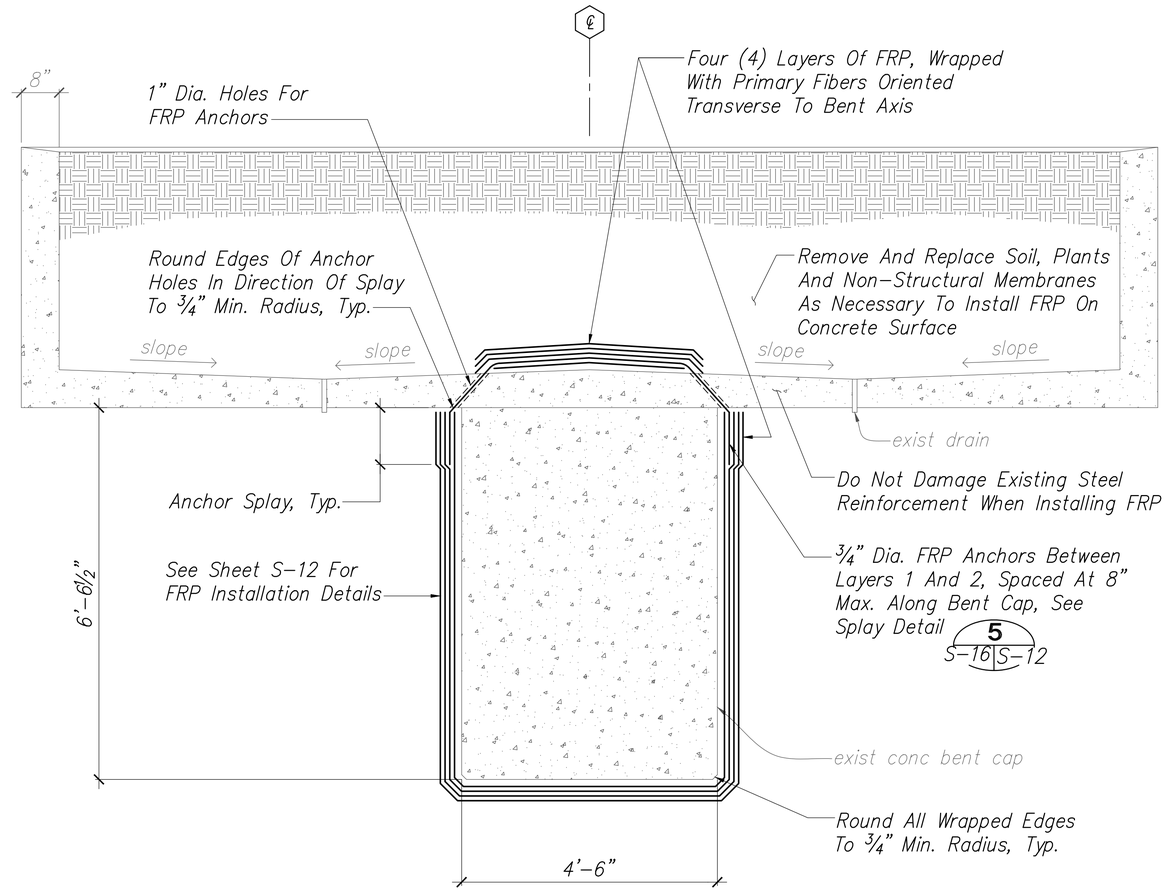
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(277)	2024	51	52



PLAN — Scale: 1/4" = 1'-0" — 1 S-16 | S-4, S-5



SECTION — Scale: 3/4" = 1'-0" — 3 S-16 | S-16



Note:

1. Typical Condition Shown. See Bent Cap Elevations For Alternate Conditions. Repair Similarly.

SECTION — Scale: 3/4" = 1'-0" — 2 S-16 | S-16

Graphic Scale

1/4"=1'-0" 4' 2' 0' 4' Scale In Feet

3/4"=1'-0" 0' 1' 2' 3' Scale In Feet

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

ORIGINAL PLAN
NOTE BOOK
No.

GRANT J. OKUNAGA — LICENSED PROFESSIONAL ENGINEER No. 13001-S — HAWAII U.S.A.

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MKE ASSOCIATES LLC

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTER BOX DETAILS

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-HI-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-16 OF 52 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(277)	2024	52	52

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

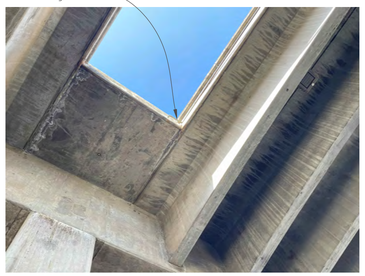

Photo 8

Photo 9

Photo 10

Photo 11

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

PHOTOGRAPHS
NOT TO SCALE

1
S-17 | S-4, S-5

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No. 13001-S
HAWAII U.S.A.

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PHOTOGRAPHS

INTERSTATE ROUTE H-1: Seismic Retrofit
Waialae Viaduct Inbound and Outbound
Federal-Aid Project No. NH-H1-1(277)

Scale: As Noted Date: July 2024

SHEET No. S-17 OF 52 SHEETS