

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD. 2	244

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 AND COMPRESSION SPLICE CAN DETAILS	05/31/07
B-12A	PRESTRESSED CONCRETE PILES, PILE AND COMPRESSION SPLICE CAN DETAILS AND NOTES	05/31/07
B-12B	PILE INTERACTION DIAGRAM	05/31/07
B-13	PRESTRESSED CONCRETE PILE BUILD-UP DETAILS	05/31/07

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

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 B1 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 SECTIONS	05/31/07
H-03	TYPE A, B, AND C STORM DRAIN MANHOLE	05/31/07
H-04	TYPE D STORM DRAIN MANHOLE	05/31/07
H-05	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/07
H-06	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/07
H-07	CATCH BASIN AND MANHOLE CASTINGS	05/31/07
H-08	TYPE 1A-9 AND 1A-9P GRATED DROP INLET	05/31/07
H-09	TYPE 2A-9 AND 2A-9P GRATED DROP INLET	05/31/07
H-10	TYPE A-9 OR A-9P STEEL FRAMES	05/31/07
H-11	TYPE A-9 AND A-9P STEEL GRATES	05/31/07
H-12	TYPE 61614P AND 1211214P GRATED DROP INLET	05/31/07
H-13	TYPE 61616P AND 1211216P GRATED DROP INLET	05/31/07
H-14	TYPE 61214P GRATED DROP INLET	05/31/07
H-15	TYPE 1211214, 1211214P, 1211216, 1211216P STEEL FRAME AND GRATES	05/31/07
H-16	TYPE 61614, 61614P, 61616, 61616P STEEL FRAME AND GRATES	05/31/07
H-17	TYPE 61214 STEEL FRAMES AND GRATES	05/31/07
H-18	TYPE 61214P STEEL GRATES	05/31/07

STANDARD PLAN NO.	TITLE	DATE
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 (18" TO 24")	05/31/07
H-23	INLET/OUTLET STRUCTURE (48" TO 180")	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 AND 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

L-01 ●	TREE PLANTING	05/31/07
L-02 ●	TREE PLANTING	05/31/07
L-03	TREE TRANSPLANTING	05/31/07
L-04	PALM PLANTING	05/31/07
L-05 ●	SHRUB PLANTING	05/31/07
L-06	LANDSCAPE DETAILS	05/31/07
L-07 ●	LANDSCAPE DETAILS	05/31/07
L-08	LANDSCAPE DETAILS	05/31/07
L-09 ●	LANDSCAPE DETAILS	05/31/07
L-10	LANDSCAPE DETAILS	05/31/07
L-11	PLANTING NOTES	05/31/07
L-12	IRRIGATION DETAILS	05/31/07
L-13	IRRIGATION DETAILS	05/31/07
L-14	IRRIGATION DETAILS	05/31/07
L-15	IRRIGATION DETAILS	05/31/07
L-16	IRRIGATION DETAILS	05/31/07
L-17	IRRIGATION DETAILS	05/31/07
L-18	IRRIGATION DETAILS	05/31/07
L-19	IRRIGATION DETAILS	05/31/07
L-20	IRRIGATION DETAILS	05/31/07
L-21	IRRIGATION DETAILS	05/31/07
L-22	IRRIGATION DETAILS	05/31/07
L-23	IRRIGATION DETAILS	05/31/07
L-24	IRRIGATION NOTES	05/31/07

TE-01 ●	SIGN HEIGHT AND LOCATION	05/31/07
TE-1A ●	SIGN INSTALLATION	05/31/07
TE-02A ●	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02B ●	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02C ●	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-03A ●	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-03B ●	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-04 ●	REGULATORY SIGNS	05/31/07
TE-05 ●	WARNING SIGNS	05/31/07
TE-06	MISCELLANEOUS SIGNS	05/31/07
TE-07 ●	CONSTRUCTION SIGNS	05/31/07
TE-08	MISCELLANEOUS INTERSECTION SIGNS	05/31/07
TE-09	BIKE ROUTE SIGN & SUPPLEMENTARY PLATES	05/31/07

STANDARD PLAN NO.	TITLE	DATE
TE-10	INTERSTATE ROUTE MARKER	05/31/07
TE-11 ●	STATE ROUTE MARKER AND AUXILIARY MARKERS	05/31/07
TE-12 ●	STATE ROUTE MARKER AND BORDER DETAIL FOR GUIDE SIGNS	05/31/07
TE-12A ●	ROUTE SIGN ASSEMBLIES	05/31/07
TE-13 ●	STREET NAME SIGN ON MAST ARM	05/31/07
TE-14 ●	MISCELLANEOUS REFLECTOR MARKERS	05/31/07
TE-15 ●	OBJECT MARKERS	05/31/07
TE-16 ●	MILE POSTS	05/31/07
TE-17A	CANTILEVER OVERHEAD SIGN ELEVATION & DETAILS	05/31/07
TE-17B	CANTILEVER SIGN FRAME DETAIL AND SECTIONS	05/31/07
TE-17C	CANTILEVER SIGN FRAME DETAIL	05/31/07
TE-17D	CANTILEVER SIGN FRAME SECTIONS	05/31/07
TE-17E	CANTILEVER SIGN FRAME DETAILS	05/31/07
TE-18A	TWO POST OVERHEAD SIGN FRAME ELEVATIONS	05/31/07
TE-18B	TWO POST SIGN FRAMING PLAN SECTION	05/31/07
TE-18C	TWO POST SIGN FRAMING SECTIONS AND DETAILS	05/31/07
TE-18D	TWO POST SIGN FRAME DETAILS	05/31/07
TE-18E	TWO POST SIGN FRAME DETAILS	05/31/07
TE-19A	OVERHEAD SIGN FRAMING SCHEDULE	05/31/07
TE-19B	SIGN POST DRILLED SHAFT FOUNDATION	05/31/07
TE-19C	SPREAD FOOTING	05/31/07
TE-19D	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.1	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.2	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.3	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.4	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.5	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19E	ANCHORAGE DETAILS	05/31/07
TE-19F	ANCHORAGE DETAILS	05/31/07
TE-19G	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-19H	LUMINAIRE WALKWAY SUPPORT	05/31/07

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*WILSON OKAMOTO CORPORATION*  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD PLANS SUMMARY**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: Date: July 2019

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DESIGNED BY	DATE
CHECKED BY	
QUANTITIES BY	
DESIGNED BY	
TRACED BY	
NOTE BOOK	
ORIGINAL PLAN	



STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.3	244

STANDARD PLAN NO.	TITLE	DATE
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 FROUND 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)	05/31/07
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	05/31/07
TE-27 ●	RAISED PAVEMENT MARKERS AND STRIPING	05/31/07
TE-28 ●	ENTRANCE AND EXIT PAVEMENT MARKINGS	05/31/07
TE-28A ●	MISCELLANEOUS PAVEMENT MARKINGS	05/31/07
TE-29 ●	PAVEMENT ARROWS AND SYMBOLS	05/31/07
TE-30 ●	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	05/31/07
TE-31 ●	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	05/31/07
TE-32 ●	TYPE I & II TRAFFIC SIGNAL SYSTEM MISCELLANEOUS DETAILS	05/31/07
TE-33 ●	TYPE II TRAFFIC SIGNAL SYSTEM	05/31/07
TE-33A.●	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-33A.●	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-34 ●	LOOP DETECTOR DETAILS	05/31/07
TE-35 ●	LOOP DETECTORS & DUCT DETAILS	05/31/07
TE-36 ●	TRAFFIC SIGNAL DETAILS	05/31/07
TE-37 ●	PULLBOX & COVER DETAILS	05/31/07
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	05/31/07
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	05/31/07
TE-45	BARRICADES	05/31/07
TE-46	DELINEATION & PAVEMENT MARKINGS AT NARROW BRIDGES	05/31/07
TE-47 ●	HIGHWAY LIGHT STANDARD	05/31/07

STANDARD PLAN NO.	TITLE	DATE

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NEXT TO THE STANDARD PLAN NO.  
(FOR EXAMPLE: D-07 ) ●



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.  
*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD PLANS SUMMARY**  
**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: **Date: July 2019**

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

SHEET No. **TT3** OF **3** SHEETS

ORIGINAL PLAN	DATE
NOTE BOOK	DATE
DESIGNED BY	DATE
CHECKED BY	DATE



GENERAL NOTES

1. The project includes widening Kuhio Highway between Kuamoo Road and Temporary Kapaa Bypass Road from three lanes to four lanes. The project also includes extending the right turn lane along Kuamoo Road and installing a right turn lane from Kuhio Highway to Kuamoo Road. Associated work includes installing guardrails, sidewalks, curb ramps, pavement markings, signs, culvert extensions, water line relocation, landscaping, and traffic control. The project also includes relocating overhead utility lines along Kuhio Highway from the vicinity of Kuamoo Road to the vicinity of Temporary Kapaa Bypass Road.
2. The Contractor is reminded of the requirements of Subsection 105.16 (A) - Subcontract Requirements, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
3. The Contractor's attention is directed to the following Sections of the Standard Specifications: Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 104.11 - Utilities And Services; and Section 645 - Work Zone Traffic Control.
4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
5. The existence and location of underground utilities, manholes, monuments, buried railroad tracks, and concrete pavements, and other structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The Contractor shall make an independent check on the ground by probing and/or with the various utility companies and governmental agencies to verify the exact locations and depths of the existing utilities and obstructions. The Contractor shall exercise proper care in excavating in the area. Whenever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connection to verify their location and depth prior to excavating for the new lines. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
6. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
7. Existing drainage system will be functional at all times during construction. The Contractor is to furnish material, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.
8. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks and ADA access routes, and side streets and cross streets at all times. This work shall be considered incidental to the various contract items and will not be paid for separately.
9. All slurry and cutting water shall be vacuumed up immediately during saw cutting work. All saw cutting work shall be considered incidental to Roadway Excavation.
10. Design criteria for extension to existing reinforced concrete box culverts:

I. Loads:

A. Superimposed Dead Loads:

1. Highway Area:

- a. Soil: 125 pcf
- b. Pavements: 6"t (max) asphalt concrete

B. Live Loads:

1. Vehicle Loads: AASHTO HL93

II. Materials:

A. Poured-in-Place Concrete:

1. Headwall, Misc.: f'c=3,000 psi

B. Precast Concrete:

1. Precast Concrete - Box Culvert: f'c=4,000 psi

C. Reinforcing Steel:

1. ASTM A615, Grade 60 (Typical)

III. References:

- A. American Association of State Highway and Transportation Officials (AASHTO) LFRD Bridge Design Specifications, 3rd Edition (2004).

B. ACI 318.

11. Smooth riding connections shall be constructed at all times on the project, including the beginning and end of the project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer.
12. The Contractor shall be solely responsible for the protection of adjacent properties, utilities and existing structures from the damages due to construction. Repairing of any damage shall be at the Contractor's own expense, to the satisfaction of the owner.
13. The Contractor shall clean and remove all accumulation of aggregates along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to the various contract items and will not be paid for separately.
14. Removal and disposal of existing curb and gutter, curb, sidewalk and any debris shall be considered incidental to Roadway Excavation and will not be paid for separately. Cold plane material shall be retained as property of the state. Contractor shall deliver these materials to the HDOT Highways baseyard stockpile area. This work shall be considered incidental to the various contract items and will not be paid for separately.
15. Concrete sidewalk shall be reinforced with 6x6 W1.4xW1.4 welded wire fabric. Welded wire fabric shall be supported on concrete blocks.
16. Dressing of sidewalk shall consist of clearing and grubbing, grading, reshaping and compacting with suitable material the area adjacent to the improvement as shown on the plans and/or as directed by the Engineer and shall be considered incidental to sidewalk.
17. Provide smooth transition where new sidewalk construction meets the existing grade or sidewalk.
18. All curb angle points within the curb ramps shall be rounded with R=6".
19. The Contractor shall provide and maintain a temporary pedestrian-safe and easily accessible route or detour with barricades in or near the work zone. This temporary route or detour shall be stable, firm and slip-resistant and shall be Americans With Disabilities Act compliant (This only applies if existing surface is non-ADA compliant). This work shall be incidental to all contract items and will not be paid for separately.
20. The Contractor shall remove and dispose of all existing raised pavement markers, thermo line markings, traffic tapes, and epoxy adhesives prior to the overlaying of Asphalt Pavement, Mix No. IV and will not be paid for separately. These work items shall be considered incidental to Roadway Excavation.
21. Removal of existing crosswalk marking shall be incidental to Crosswalk Marking.

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



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OR UNDER MY SUPERVISION.  
*Wilson Okamoto*  
WILSON OKAMOTO CORPORATION APR 30, 2020 LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

NOTES

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: Date: July 2019

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DATE REVISION

SHEET No. 11 OF 8 SHEETS



GENERAL NOTES (Cont.)

22. All curb ramp transitions (walkways, curbs, gutter) shall be considered incidental to Concrete for Sidewalk for Kuhio Highway.
23. The Contractor shall adjust flush to finish grade all manhole, valve, pull box, and handhole frames and covers, including those not shown on the plans, if there is a change in grade due to construction of the project. If the proposal does not show a contract item, the Engineer will consider them incidental to the various contract items.
24. 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 Engineer.
25. After the project is completed, the Contractor shall restore grades and ground cover disturbed as a result of the project to a condition equal or better than existing before such damage or injury was done.
26. Existing utilities shall remain in service and in place at all times. If relocation of the existing utilities is required by the Contract Documents or for the Contractor's convenience, interruption of service shall be kept to a minimum and shall be done at the Contractor's expense with the approval of the affected utility company.
27. The Contractor shall verify all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the Engineer.
28. All construction work shall be done in accordance with the standards and specifications of the HDOT as amended, unless otherwise specified by the contract plans and specifications.
29. No Contractor shall perform any construction operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow into existing County drainage systems, or adjoining properties, streets or natural watercourses. Should such violations occur, the Contractor may be cited and the Contractor shall immediately make all remedial actions necessary.
30. Tack coat shall be incidental to the various asphalt concrete pavement items.
31. The Contractor shall be held liable for any damages incurred to the existing landscaping as a result of his operations.
32. Contractor shall notify the State construction inspector before commencement of work on any site with trees in close proximity (20'±).
33. Contractor shall comply with conditions as stated in the project NPDES Notice of General Permit Coverage (NGPC), or NPDES Individual Permit.
34. The Contractor must notify the Cadastral Section prior to removal of any State Survey Monument (Brass Disk) so that Cadastral can reference the monument prior to demolition of the existing monument. The Contractor shall bear all costs involved in restoring the State Survey Monuments which are affected by their work.
35. Work may be performed only between the hours of 8:00 p.m. and 4:30 a.m., Monday through Friday, except holidays, unless otherwise permitted by the Engineer. The Contractor is responsible for obtaining Noise Variance Permit from State DOH prior to conducting Night Work operations.
36. All necessary permits including road permit for work within the jurisdiction of the County of Kauai shall be obtained by the Contractor at his own cost.
37. All work of toning, probing, hand digging and all other means of utility verification for the Sandwich Isles Communications (SIC) fiber-optic duct lines shall not be paid for separately, but shall be considered incidental to the various contract items. Contractor shall contact SIC Customer Service Center at 524-8400 or toll free at 1-888-995-7274.
38. All cold planing work shall be followed immediately with paving, temporary striping and re-establishment of the traffic loops before reopening the lanes to traffic. The Contractor may use temporary pole mounted presence detectors to replace any loops taken out of service. The cost for temporary detector shall be considered incidental to pavement work.

LEGEND

	New Pavement Areas - (See Typical Sections for Pavement Structures)
	New P.C.C.
--- E ---	New Electrical Line
--- e ---	Existing Electrical Line
•JP	Relocated Joint Pole
°jp	Existing Joint Pole
•PP	Relocated Power Pole
°pp	Existing Power Pole
°emh	Existing Electrical Manhole
--- t ---	Existing Telephone Line
°tp	Existing Telephone Pole
°tmh	Existing Telephone Manhole
— SC —	New Signal Corps Line
— sc —	Existing Signal Corps Line
— sic —	Existing Sandwich Isles Communication Line
°sich	Existing Sandwich Isles Communication Manhole
□ cpb	Existing Cable TV Pullbox
— c —	Existing Cable TV Line
— w12 —	Existing 12" Water Line
°wmh	Existing Water Manhole
°av	Existing Water Air Valve
°wv	Existing Water Valve Box
□wm	Existing Water Meter
•fh	Existing Fire Hydrant
— f — f — f — f —	New Guard Rail
— f — f — f — f —	Existing Guard Rail
-----	New Right-of-Way
-----	Existing Right-of-Way
— S12 —	New 12" Sewer Line
— s12 —	Existing Sewer Line And Size
°smh	Existing Sewer Manhole
— g6 —	Existing 6" Gas Line
°gv	Existing Gas Valve Box
°gmh	Existing Gas Manhole
•MON.	New Monument
•mon.	Existing Monument

<u>24" RCP</u>	New 24" RCP Drain Line
--- d24 ---	Existing 24" Drain Line
•SDMH	New Storm Drain Manhole Frame & Cover
°sdmh	Existing Storm Drain Manhole
□GDI	New Grated Drop Inlet
□gdi	Existing Grated Drop Inlet
CB	New Catch Basin
cb	Existing Catch Basin
Ⓟ	New Traffic Sign
Ⓟ	Existing Traffic Sign
Ⓟ	New Highway Lighting Standard
Ⓟ	Existing Highway Lighting Standard
ⓧ	New Traffic Signal Pullbox
ⓧ	Existing Traffic Signal Pullbox
ⓧ	Existing Traffic Signal Control Box
ⓧ	Existing Traffic Signal Pole
□□□	New Loop Detector
□□□	Existing Loop Detector
<u>14.50</u> /	New Pavement Grade
<u>14.50±</u> /	Existing Pavement Grade

ABBREVIATIONS

A.C., a.c.	Asphalt Concrete
#	Baseline
E.P.	New Edge Of Pavement
E.S.	New Edge of Shoulder
e.p.	Existing Edge Of Pavement
e.s.	Existing Edge of Shoulder
N.B., n.b.	Northbound
P.C.	Point Of Curvature
P.C.C.	Point Of Compound Curvature
P.C.C.	Portland Cement Concrete
P.I.	Point Of Intersection
P.O.C.	Point on Curvature
P.T.	Point Of Tangency
R	Radius
S.B., s.b.	Southbound
S.E.	Superelevation

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



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.  
*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

NOTES

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: \_\_\_\_\_ Date: July 2019

DATE \_\_\_\_\_ REVISION \_\_\_\_\_

SHEET No. N2 OF 8 SHEETS

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.




WATER CONSTRUCTION NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD. 6	244

1. Unless otherwise specified, all materials and construction of water facilities and appurtenances shall be in accordance with the "Water System Standards, 2002" as adopted by the Department of Water, County of Kauai, including all subsequent amendments and additions.
2. All required project submittals (materials, shop drawings, chlorination plan, etc.) shall be approved by the Department Construction Management Division before a pre-construction conference can be scheduled. Once all project submittals have been approved by DOW Construction Engineer, the DOW Construction Engineer will notify the Contractor that a pre-construction conference can be arranged. The Contractor shall arrange a pre-construction conference at least ten (10) calendar days before construction and shall notify the Department of Water at least three (3) working days prior to start of construction.
3. The Contractor shall submit the names and telephone numbers of its authorized job superintendent and at least three (3) additional persons to contact in case of an emergency during non-working hours.
4. The Contractor shall notify the Department of Water at least 24 hours prior to any trenching, pipe laying, backfilling, testing or disinfection activities to ensure that inspection services will be available.
5. All materials (pipe, lubricants, paints, sealants, form oil, concrete admixtures, etc.) in direct contact with the potable water shall have national sanitation foundation (NSF) certifications. The Contractor shall submit these certifications to the Department of Water for review and approval prior to its application.
6. The location of existing water mains and appurtenances shown on the plans are approximate only. The Contractor shall verify the exact locations in the field. Excavation around any existing water main shall be done by hand.
7. The Contractor shall provide unobstructed access to existing hydrants, valves, and water meters at all times.
8. The Contractor shall secure all excavations in accordance with OSHA regulations.
9. There shall be no physical connection between a public or private potable water system and a non-potable water system, sewer, or appurtenance thereto which could permit the passage of any sewage or polluted water into the potable water supply.
10. Trench excavation, backfilling in lifts, and repaving shall conform to the "Hawaii Standard Specifications for Road and Bridge Construction, 2005" as amended.
11. Warning tape shall be in accordance with Division 200, Section 212.08 of the "Water System Standards". The warning tape shall be four mil thick, non-metallic, acid and alkali resistant polyethylene, and 6-inches wide with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Tape color shall be "safety precaution blue" and shall bear a continuous printed inscription "CAUTION WATER LINE BURIED BELOW". Inscription shall be 2-inches high, black text.
12. All hydrants shall receive a minimum SSPC SP3 surface preparation and coated in accordance with Division 200, Section 206.01 of the "Water System Standards".

13. Unless otherwise directed, prior to the connection of any pipelines and/or laterals to the existing main, the pipelines/laterals installed shall be cleaned, pressure tested, chlorinated, flushed, and sampled in accordance with Division 300, Sections 302.27 to 302.29 of the "Water System Standards".  
Water samples shall be tested for total coliforms by a laboratory certified by the State of Hawaii to perform coliform analysis. Presence of coliform bacteria is unacceptable.  
In addition to the test for coliforms, a separate test for heterotrophic plate count (HPC) shall be conducted. The HPC count shall be less than 300 CFU/mL.  
Prior to chlorination, a water chlorination and sanitation contractor with a C-37D license shall submit a chlorination plan with water source, injection points, sampling points, and procedure clearly defined for approval by the DOW.  
The tested pipelines and/or laterals must be connected to the existing DOW system within 14 calendar days of pulling the first disinfection sample tested by a certified laboratory. The Department of Water will require the Contractor to redo the cleaning, pressure testing, and/or disinfection of the pipelines and/or laterals at the Contractor's expense if the connection is not completed within these 14 calendar days.
14. Polyurethane foam "pigs" shall be "pushed" through the length of the installed pipeline using pressurized water.
15. All connections shall be scheduled in coordination with the Department of Water.
  - A. An advance deposit is required for operating valves, flushing lines, and notifying consumers affected by a water shutdown during connections. The Contractor will be charged the actual cost.
  - B. The Contractor shall place the deposit prior to scheduling the connection date.
  - C. Shutdown connections shall be scheduled on Tuesdays through Thursdays. No connections shall be scheduled on Mondays, Fridays, weekends, and holidays, or from December 18 - January 8 of each year.
  - D. All materials shall be on hand and approved by the Engineer prior to scheduling the connection date.
  - E. Pumps used to de-water the connection area shall be operated in the presence of the engineer prior to scheduling the connection date.
  - F. All connections shall be performed in the presence of the Engineer.
  - G. No live taps shall be scheduled from December 24 - December 31 of each year.
16. In order to prevent damage to the polyethylene encasement from excessive handling, the polyethylene encasement shall be installed around the barrel of the ductile iron pipe at its final location along the trenchline. The polyethylene encased pipe shall be lifted using a fabric type sling or a suitably padded cable or chain to prevent damage to the polyethylene.

APPROVED

  
Manager and Chief Engineer  
Department of Water,  
County of Kauai

7/22/19  
Date

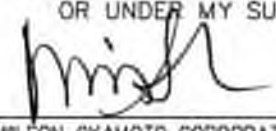
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

17. The Contractor shall take all necessary compaction tests while the waterline trench is being backfilled and while the subbase/basecourse is being placed. If the test results indicate that additional compaction is required, the corrective work shall be completed before any additional trench excavation or placing of subbase/basecourse is allowed.  
The Contractor shall retain the services of a registered Geotechnical Engineer for quality control. The compaction test results shall be certified by the Geotechnical Engineer and submitted to the Department of Water, State Highways Division (for work done within State R/W), and the Department of Public Works (for work done within County R/W). The Geotechnical Engineer shall certify that the compaction results meet the requirements of the current Standard Specifications for Road and Bridge Construction.
18. The Contractor shall connect all existing consumer piping to the new service laterals. The Department of Water will transfer the existing water meters only.
19. All fittings shall be mechanical joint (MJ) at each end unless otherwise noted. "Megalug" retainer glands shall be used with all mechanical joint fittings and valves used in connecting new water mains to existing water mains unless otherwise noted.
20. All water valves that will be abandoned in place shall be placed in the "closed" position. Remove top section of valve box and concrete settlement slab. Fill remainder of valve box with concrete. Place backfill and repair pavement section to applicable State or County Standards. Backfill to finish grade in road shoulder area.
21. The Contractor shall obtain all applicable Department of Health permits prior to the start of construction. Permits include, but are not limited to, National Pollution Discharge Elimination System (NPDES) permits for storm water, hydrostatic test, dewatering, and for construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area.  
The Contractor shall be responsible for the proper disposal of storm water discharges and effluent associated with construction activities including hydrotesting and disinfection operations, to safeguard public health and safety in accordance with applicable Department of Health requirements. All permits and licenses for storm water and construction water disposal, including all application, charges, fees, and taxes, are the responsibility of the Contractor.
22. The Contractor is responsible for dewatering trench as necessary where groundwater is encountered. All associated costs for dewatering shall be borne by the Contractor.

\* For Water Notes Cont., See Sht. N4



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OR UNDER MY SUPERVISION.  
  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

NOTES

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: Date: July 2019

SHEET No. N3 OF 8 SHEETS

ADD.6

DESIGNED BY	DATE
CHECKED BY	
QUANTITIES BY	
DESIGNED BY	
TRACED BY	
DRAWN BY	
SEAL/STAMPED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



WATER CONSTRUCTION NOTES (CONT.)

23. The use of known sewer pump trucks is prohibited for DOW projects for any use, including but not limited to dewatering and testing of new facilities.
24. The Contractor shall verify outside diameter of all existing asbestos- cement (AC) waterlines to be connected. Contractor shall verify use of proper gaskets prior to connection. AC pipe and gasket information shall be submitted to Engineer for approval.
25. All removal, disposal, and connection work that involves asbestos pipe/material shall be done in the presence of or by a licensed asbestos Contractor. The licensed asbestos Contractor shall submit their plan for all associated removal, disposal, and connection work for the project to DOW for review and approval prior to conducting the work.
26. All connections to existing AC pipe shall be at the nearest AC pipe joint. AC pipe shall be removed by entire length(s) to facilitate the connection. Cutting of AC pipe is prohibited.
27. The Contractor shall follow all applicable OSHA, HIOSH, and Federal regulations in handling and disposal of asbestos-cement pipe. Disposal of the pipe shall be at an approved asbestos material disposal site.
28. All waterworks brass fittings shall be in compliance with the amended Section 1417 of Safe Drinking Water Act (SDWA) which takes effect on January 4, 2014. The amendment includes a change to the definition of "lead-free" by reducing lead content from 8% to a weighted average of not more than 0.25% in the wetted surface material. All waterworks brass fittings installed for potable water service on January 4, 2014 and beyond shall conform to the amended definition of "lead-free".  
As indicated in Section 211 of Water System Standards - Brass Products, all brass fittings shall conform to NSF Standard 61 and Section 1417 of the Safe Drinking Water Act (SDWA), in addition, all brass fittings shall conform to NSF Standard 372.
29. The Contractor shall install water facilities only after reaching final subgrade or higher. The Department of Water will not allow installation of any water facilities until the final subgrade layer at minimum has been achieved.
30. Prior to installation of new water lines and/or facilities, the Contractor shall have all facilities surveyed and staked out by a licensed Surveyor and the Contractor shall expose, verify, and backfill all existing underground utilities and structures in close proximity to crossings and connections prior to excavation of pipeline trench. The Contractor shall provide the licensed Surveyor cut sheet and the probing information to the DOW Construction Engineer for review and approval before moving forward with installation via the submittal review process.
31. The Department shall be provided twenty (20) working days for all submittal reviews from the time of submission by the Contractor.
32. Unless otherwise specified, all ductile iron pipes, valves, and fittings shall be encased in one layer of 8 mil minimum thickness polyethylene material in accordance with ANSI A-21.5 and AWWA C105. The polyethylene encasement film shall be manufactured from virgin polyethylene and shall consist of three layers of co-extruded linear low density polyethylene (LLDPE), fused into a single thickness of not less than 8 mils. The inside surface of the polyethylene wrap to be in contact with the pipe exterior shall be infused with a blend of an antimicrobial to mitigate microbiologically influenced corrosion and a volatile corrosion inhibitor to control galvanic corrosion. Polyethylene material shall have permanent markings per AWWA C105.

Copper service laterals shall be encased with polyethylene wrap from the connection to ductile iron pipes to the angle ball valve located in the water meter box.

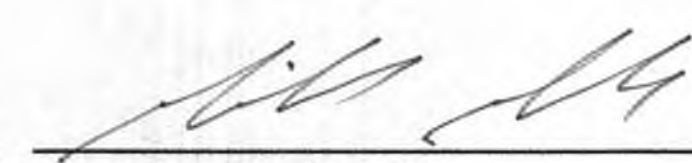
NOTES FOR CONSTRUCTION  
WITHIN COUNTY RIGHT-OF-WAY


1. All pavement shall be restored to its original condition in accordance with Hawaii Standard Specifications For Road and Bridge Construction (2005), and its amendments with 2" asphalt concrete and 8" base course and the "Standard Details For Public Works Construction, September 1984 and its amendments of the Department of Public Works, City and County of Honolulu and the Counties of Kauai, Maui and Hawaii'i."
2. The contractor shall provide, install, maintain all necessary signs, lights, flares, barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of the public traffic. All such protective facilities and precautions to be taken shall conform with rules and regulations governing the use of traffic control devices at work sites on or adjacent to public streets and highways adopted by the highway safety coordinator and US Federal Highway Administration manual on uniform traffic control devices for streets and highways dated 2003 and its amendments.
3. The contractor shall, whenever necessary, properly sheet and brace all excavations to render it secure and shall remove all such sheeting and bracing before completion of the backfill for water mains. The minimum cover requirements (from top of pipe to finished grade over pipe) is three (3) feet.
4. A. A permit shall be obtained by the contractor from the Department of Public Works, at the contractor's expense.  
B. Driveways shall be kept open unless owners of the abutting lots using these right-of-way are otherwise provided for satisfactorily.  
C. All work including repair of damaged pavement and shoulders shall be inspected and approved by the Department of Public Works. All unapproved work shall be considered unacceptable and shall be reworked and corrected as directed by the Department of Public Works, at the contractor's expense.  
D. Damaged shoulders shall be restored to a condition equal to or better than existing condition.  
E. Work on a public street area may be performed only between the hours of 8:00 a.m. to 3:30 p.m. Monday through Friday, except on holidays recognized by the county of Kauai, unless otherwise permitted by the Department of Public Works, County of Kauai.  
F. During non-working hours, all trenches shall be covered with a safe non-skid bridging material and all lanes shall be opened to public vehicular and pedestrian traffic.  
G. No material and/or equipment shall be stockpiled or otherwise stored within county right-of-way except at locations designated in writing and approved by the county engineer.  
H. The contractor shall conduct his operations so as to offer the least possible obstructions and inconvenience to the public and he shall have under construction no greater length or amount of work that he can execute properly with due regard to the rights of the public.
- I. All existing drainage flow conditions shall be maintained.
3. The contractor shall hold a pre-construction meeting with the construction-design section of the Department of Public Works before commencing any work.
33. All design consultant and construction contractor staffing will be required to utilize the Department of Water's PMWEB platform during construction management of the project.

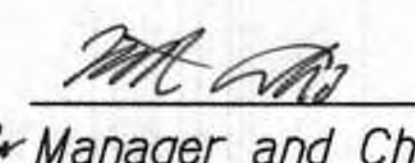
SANDWICH ISLES COMMUNICATIONS, INC NOTES

1. The locations of existing utilities are approximate only. The contractor shall exercise caution and shall maintain proper clearances whenever construction crosses or is in close proximity to sandwich isles communications, inc. (SIC) facilities.
2. Prior to excavating the contractor shall call into Hawaii's one call center and shall comply with Hawaii Revised Statutes Chapter 269e. Contact Hawaii one call at 1-866-423-7287.
3. If required, adjustment shall be made to new construction to provide required clearances from SIC facilities.
4. A SIC inspector or designated representative is required to be present during a breakage into or entry into any structure or conduit system that contain SIC facilities. Temporary duct or cable support shall be provided wherever necessary or required by SIC inspector.
5. The contractor shall notify SIC customer service at least 72 hours prior to excavation, bracing or backfilling, of SIC facilities. Contact SIC customer service at 1-888-995-7274.
6. When excavation is adjacent to, above or below SIC facilities, the contractor shall:
- A. Sheet and/or brace the excavation to provide slides, cave-ins, or settlements to ensure no movement or impact to SIC facilities.
- B. Support existing structures and/or facilities with beams, struts, or underpinning while excavating around or beneath them to prevent any movement

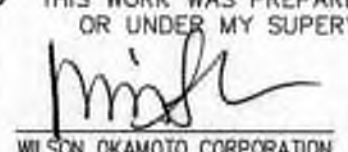
APPROVED

  
for County Engineer  
County Of Kauai  
(For Work Within the County Right of Way)  
Date 7/17/19

  
Chief, Division of Wastewater Management  
(For Work Involving Sewer Lines and Appurtenances)  
Date 8/7/19

  
for Manager and Chief Engineer  
Department of Water,  
County of Kauai  
Date 7/22/19



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.  
  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NOTES	
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD Fed. Aid Proj. No. NH-056-1(50)	
Scale:	Date: July 2019
SHEET No. N4 OF 8 SHEETS	

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



SEWER NOTES

- In the event that any changes in alignment or grade for the proposed sewer mains and laterals are required due to unforeseen conflicts, the Contractor shall notify the Owner's Representative who in turn will be responsible for the required changes.
- Minimum slope for all sewer laterals shall be 1.00 percent unless otherwise specified on the plans. As-built drawings showing lateral location, vertically and horizontally shall be provided.
- The Contractor shall verify the location and invert of all existing utilities whether shown or not shown as required.
- Pipeline inverts shall be installed at a constant slope and on a straight line connecting the invert elevations at manholes.
- Crushed rock cradle shall be required for all sewer lines, except in area of unsuitable soils, the Owner's Representative will determine the pipe support required.
- For the construction and installation of sewer lines, sewer laterals, sewer manholes, and sewer connections, the Contractor shall refer to the County of Kauai's Sewer Design Standards dated June 1973, Standard Details for Public Works Construction dated Sept. 1984 as amended by the Department Public Works , City and County of Honolulu, and the Counties of Kauai, Maui, and Hawaii, and the "Hawaii Standard Specifications for Road and Bridge Construction, 2005" and its amendments.
- Plastic sewer pipes and fittings shall be PVC (polyvinyl-chloride), extra strength bell and spigot, and conform to ASTM Designation D3034.73 with an SDR of 35.
- Section 706.09 PVC Pipe for Sewer System of the "2005 Standard Specifications for Road and Bridge Construction" is the specifications for the pipe with modifications as follows:
  - Bedding and the first lift of backfill from the bottom of the pipe to 6 inches above the pipe barrel shall be crushed rock ASTM Gradation No. 67. The minimum thickness of the bedding below the pipe shall be 4 inches. Bedding shall be compacted to a relative compaction of not less than 90 percent.
  - The trench shall be backfilled only to a height of 6 inches above the crown of the pipe. Further backfilling of the trench will only be permitted after the alignment and grade of the pipe has been inspected and passed. The Contractor will provide proper facilities for access and inspection, including clearing the pipe of all dirt, joint compound, and superfluous or foreign material.
  - No base course for roadways shall be placed until sewer line within said roadway has been inspected and passed. The Contractor shall provide proper facilities for access and inspection, including clearing the pipe of all dirt, joint compound, and superfluous or foreign material.
  - Maximum allowable vertical pipe deflection (reduction in vertical inside diameter) shall be 5 percent. Deflection shall be checked by the Contractor in the presence of the Inspector by using an approved Deflectometer, calibrated television, properly sized "Go, No-Go" mandrel or sewer ball. For the purpose of deflection measures, the base inside diameter without deflection are provided as follows:

SIZE	BASE I.D.
6"	5.9125"
8"	7.92"
10"	9.90"
12"	11.78"


- E. Locations with excessive deflection shall have the pipe replaced and retested.
- F. PVC pipe connection to manholes shall be made with elastomeric water seal stop or seal.

CONSTRUCTION NOTES FOR TRAFFIC CONTROL PLAN

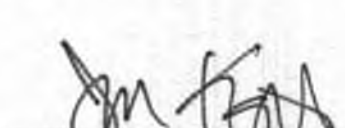
- The permittee shall make minor adjustments at intersections, driveways, ramps, bridges, etc., to fit field conditions.
- Cones or delineators shall be extended to a point where they are visible to approaching traffic.
- Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- Regulatory and warnings 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.
- Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
- When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the Traffic Control Plans.
- Sign spacing (D), taper lengths (T) and spacing of cones or delineators shall be as shown in Table 1, unless otherwise noted on the Traffic Control Plans.
- All traffic lanes shall be a minimum of 10 feet wide.
- All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- The backs of all signs used for traffic control shall be promptly removed or covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces), whenever the messages are not applicable or not in use.
- At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in reverse order of installation.
- Replace permanent pavement markings and traffic signs upon completion of each phase of work.
- Police Officer/Flaggers shall be present at all times.
- Contractor to provide access and/or directional signs to reroute pedestrian traffic.

- When required by the County of Kauai, and advertisement shall be placed in the newspaper by the Contractor for any lane closure. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:
  - Map of the Traffic Change Limits;
  - Notice of starting and ending dates, times and duration;
  - Map to show Lane Closure;
  - Explanation of the Lane Closure, "NOTICE TO MOTORISTS AND PEDESTRIANS".
- The Contractor shall be required to have any lane closure announced daily over the radio two (2) days before starting date until the work is completed. Both advertisements in the newspaper and over the radio shall be paid for by the Contractor. The Contractor shall also notify the hospitals, police, fire and ambulatory services of the lane closure.
- All workers within the County Right of Way who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance Class 2 or 3 requirements of ANSI/ISEA 107-2004. "Workers" are defined as people on foot whose duties place them with the County R/W, such as but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents (eg. EMT and firemen), and law enforcement personnel directing traffic, investigating accidents, handling land closures and installing water service connections (roadway construction).
- The Contractor shall make every effort to minimize the use and duration of steel plates. All steel plates shall have a non-skid surfacing. The County may require the backfilling and patching fo the trench due to the excessive use of steel plates.
- The Contractor shall provide an adequate non-slip bridging material, including shoring over trenches in pavement areas. The bridging shall be able to support all types of vehicular and pedestrian traffic.
- 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.

APPROVED

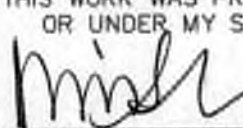
  
County Engineer  
County Of Kauai  
(For Work Within the County Right of Way)

7/17/19  
Date

  
Chief, Division of Wastewater Management  
(For Work Involving Sewer Lines and Appurtenances)

8/9/19  
Date



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

NOTES

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: Date: July 2019

SHEET No. N5 OF 8 SHEETS

9/20/19

△ Reissuing plan for legibility only. No design changes have been made.

DATE

REVISION

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTED BY	_____
NO.	_____







CURB RAMP AND SIDEWALK NOTES

- These typical details are intended as curb ramp guidelines for design and construction.
- A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.
- Subject to field conditions, the Engineer shall determine the final location of curb ramps.
- All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
- Where necessary, existing pullboxes, handholes, manholes, etc. shall be adjusted to match curb ramp grade. Adjustments shall not be paid for separately but shall be considered incidental to the various curb ramp items unless indicated otherwise.
- Transitions from ramps to gutters and roadways shall be flush.
- Curb ramps and sidewalks shall be constructed to eliminate ponding to the maximum extent feasible.
- The pedestrian push button shall meet operational and reach requirements of Section 308.3.1 of the American with Disabilities Act Accessibility Guidelines (ADAAG):
  - Forward Reach. The maximum height for forward reach shall be 48".
  - Side Reach. The maximum height for side reach shall be 48".
  - Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf.
- The maximum slopes of adjoining gutters or road surface immediately fronting the curb ramp shall not exceed 5% for Type A, B, C, D, E, and Combination ramps.
- There shall be a 30"x48" level ground surface (2% max. cross slope, both directions) for a forward or side approach, as appropriate, to a pedestrian push button.
- Construction joints are required to join curb ramps with sidewalks.
- Unless otherwise noted, new gutters are required as shown.
- All curb ramps shall be reinforced with 6x6 W1.4/W1.4 welded wire fabric.
- Surface of sidewalks and curb ramps shall be firm, stable, and slip-resistant. This includes the surfaces of pullboxes, valve covers, manhole covers, etc.
- Bed course material is required for curb ramps, sidewalks, and gutters.
- All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation. If this cannot be met, a minimum 32-inch clear width is allowed for a distance of 24-inches.
- Passing spaces along new sidewalks with 5' clear width or less shall be provided at maximum 200' intervals as required by Section 403.5.3 of the Americans with Disabilities Act Accessibility Guidelines (ADAAG). The passing area shall be a minimum 5' wide by 5' long as feasible.
- If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of-way.
- Objects protruding from utility poles and walls adjacent to the sidewalks (i.e. wall mounted fire hydrants, telephones, meters on poles, etc.) shall be mounted to meet the requirements of Section 307.2 of the American with Disabilities Act Accessibility Guidelines (ADAAG) and will be subject to Engineer's approval.

- If a curb ramp is not constructed according to the plans, the Contractor shall reconstruct the curb ramp at no cost to the State. Construction tolerance for Portland Cement Concrete shall be based on 1/4 inch per 10 ft. (0.2%). Remedial measures will not be accepted.
- Additional information is available from:
  - American with Disabilities Act Accessibility Guidelines (ADAAG), Jan. 1998, The Access Board.
  - Accessible Rights-of-Way: A Design Guide, Nov. 1999, The Access Board.
  - Designing Sidewalks and Trails for Access, Part 1, July 1999, FHWA.
  - Designing Sidewalks and Trails for Access, Part 2, Sept. 2001, FHWA.
- Pay limits for the various types of curb ramps are as shown on these typical details.
- For curb ramps at curb returns, install Construction Joints per Standard Detail D-15 (Detail C), full width sidewalk at curb return.
- When directed by the Engineer, sidewalk transition area shall be extended beyond shown plan limits to match the nearest scoreline.


HISTORICAL PRESERVATION NOTE

- Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find and the find shall be protected from further damage. The Contractor shall immediately notify the DOT Engineer, the County of Kauai, Planning Department at (808) 241-4050 and the State Historic Preservation Division at (808) 652-1560 and/or (808) 651-1510.

SPECIAL NOTES TO DEVELOPER

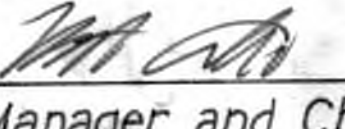
- Certification of Completion for these water system facilities will not be issued until:
- All water Improvements are complete and dedicated to the Department of Water.
  - As-built tracings are submitted to the Department of Water.
  - Final cost breakdown for the water improvements are submitted and approved by the Department of Water. The developer shall certify costs.
  - Roadway and pipeline easements are conveyed to the Department of Water, if applicable.
  - Payment of all applicable fees for the development have been received by the Department of Water. These fees include but are not limited to:
    - Facilities Reserve Charge
  - Other required conditions are completed, if applicable.

APPROVED


for    
County Engineer   
County Of Kaua'i   
(For Work Within the County Right of Way)

7/17/19   
Date



for    
Manager and Chief Engineer   
Department of Water,   
County of Kauai

8/8/19   
Date

THIS WORK WAS PREPARED BY ME   
OR UNDER MY SUPERVISION.   
   
WILSON OKAMOTO CORPORATION LIC. EXP. DATE


STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

NOTES

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: Date: July 2019

SHEET No. N7 OF 8 SHEETS

9/20/19  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION







WATER POLLUTION AND EROSION CONTROL NOTES: (Cont.)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.12	244

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.

14. 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. system or State waters.

E. PERMIT REQUIREMENTS:

1. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities has been approved for this project, Permit No. HI S000142, and terms and conditions are available for viewing at the Contract Office. The Contractor shall submit to the Engineer six sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.03 of the specifications.  
2. If an NPDES Permit for Construction Dewatering is required, the Contractor shall be responsible to obtain the permit from the Department of Health, Clean Water Branch.  
3. The Contractor shall 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

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

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

NOTES

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

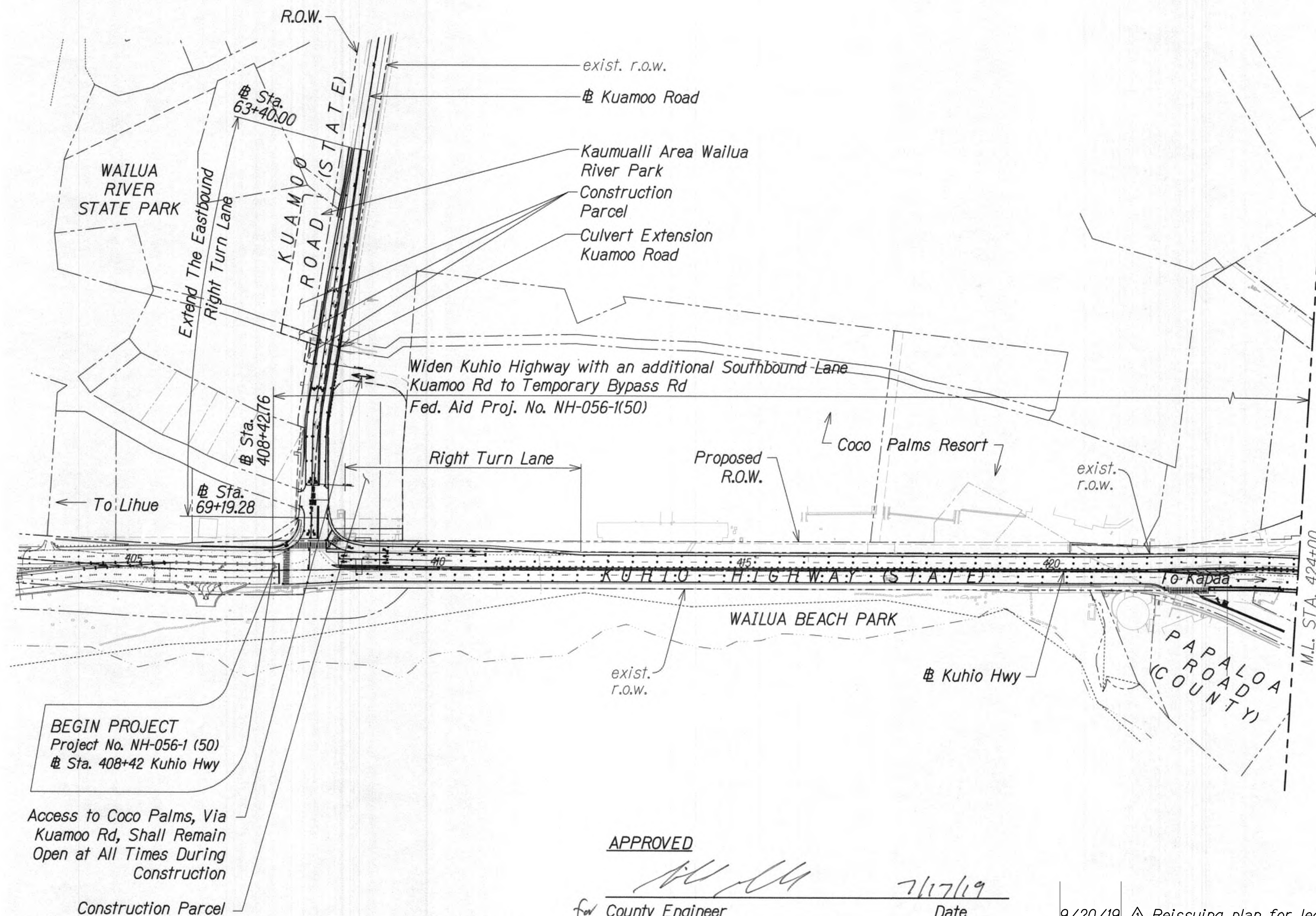
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SHEET No. N9 OF 8 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD13	244

True North  
Scale: 1"=100'



BEGIN PROJECT  
Project No. NH-056-1 (50)  
@ Sta. 408+42 Kuhio Hwy

Access to Coco Palms, Via  
Kuamoo Rd, Shall Remain  
Open at All Times During  
Construction

Construction Parcel

GRAPHIC SCALE:

100' 50' 0 100' 200'  
Scale: 1" = 100'

APPROVED

*[Signature]*  
County Engineer  
County of Kauai  
(For Work Within the County Right-of-Way)

7/17/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility  
only. No design changes have  
been made.

DATE

REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

GENERAL PLAN

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 100' Date: July 2019

SHEET No. C1 OF 2 SHEETS

ADD.13

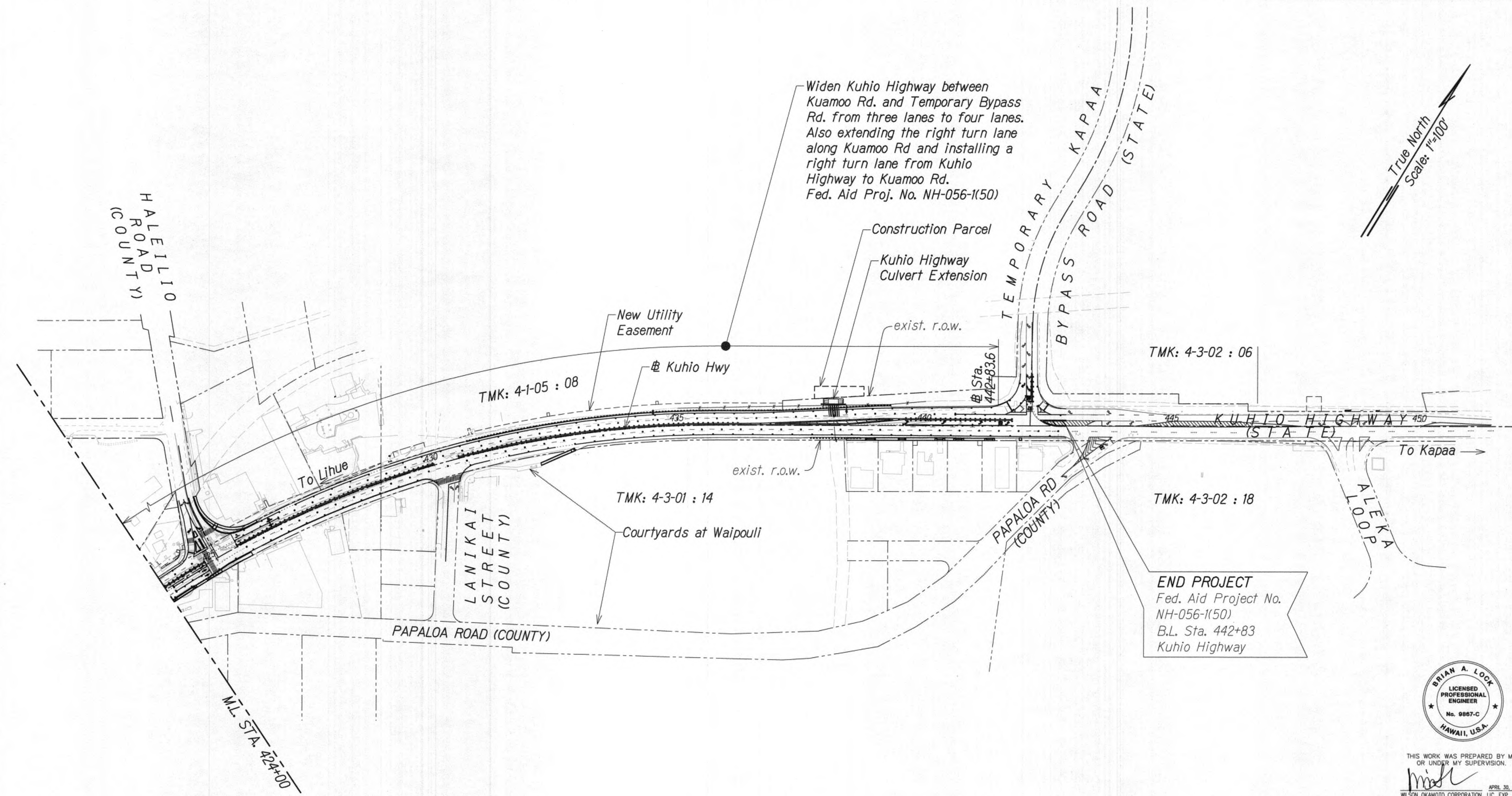
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NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	



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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD14	244

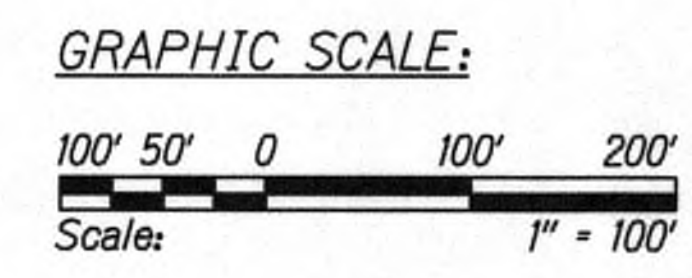


**END PROJECT**  
 Fed. Aid Project No.  
 NH-056-1(50)  
 B.L. Sta. 442+83  
 Kuhio Highway



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*[Signature]*  
 WILSON OKAMOTO CORPORATION APRIL 30, 2020 LIC. EXP. DATE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	
NO. 1		



**APPROVED**  
*[Signature]* 7/17/19  
 Date  
 County Engineer  
 County of Kaua'i  
 (For Work Within the County Right-of-Way)

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

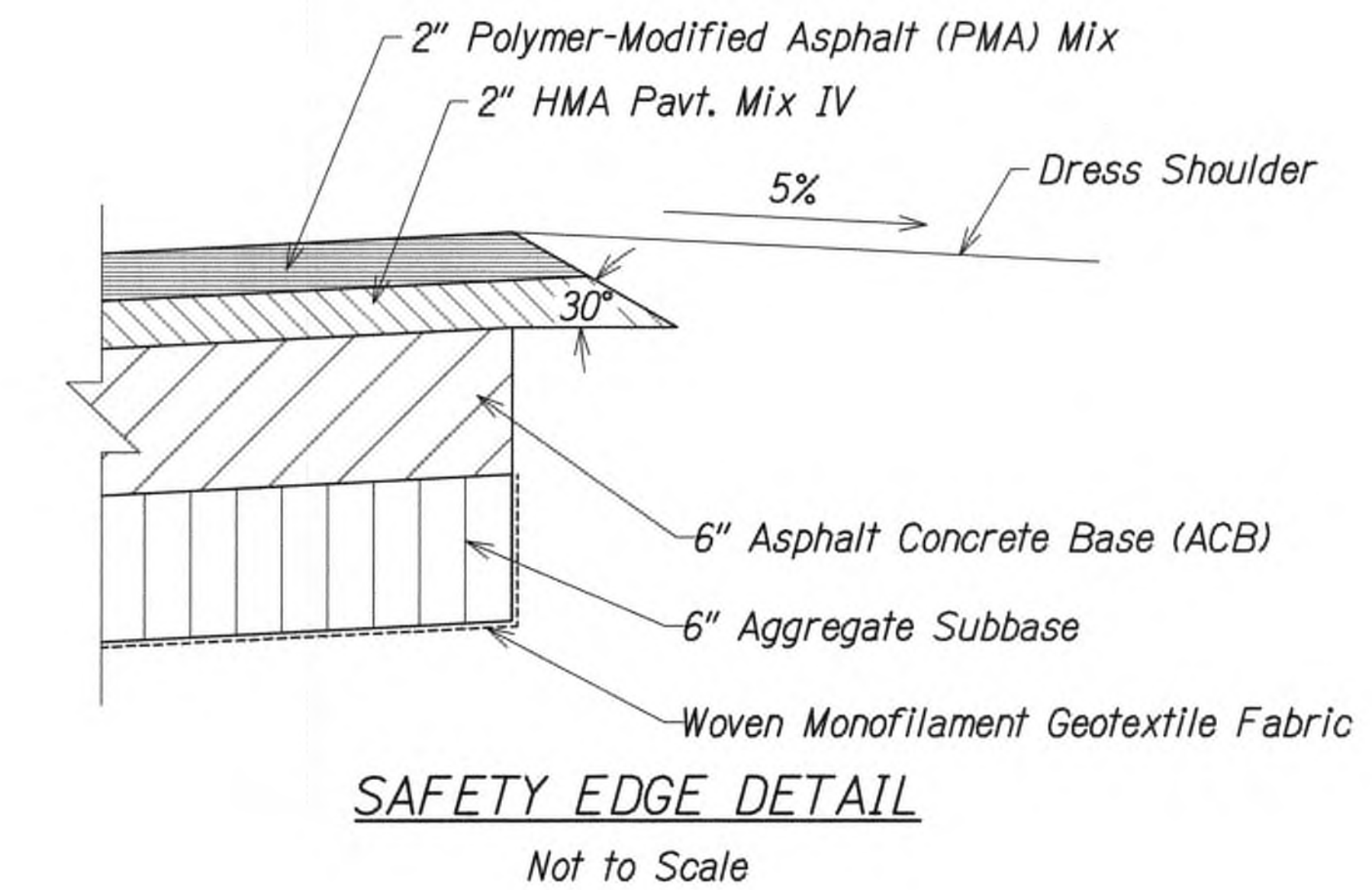
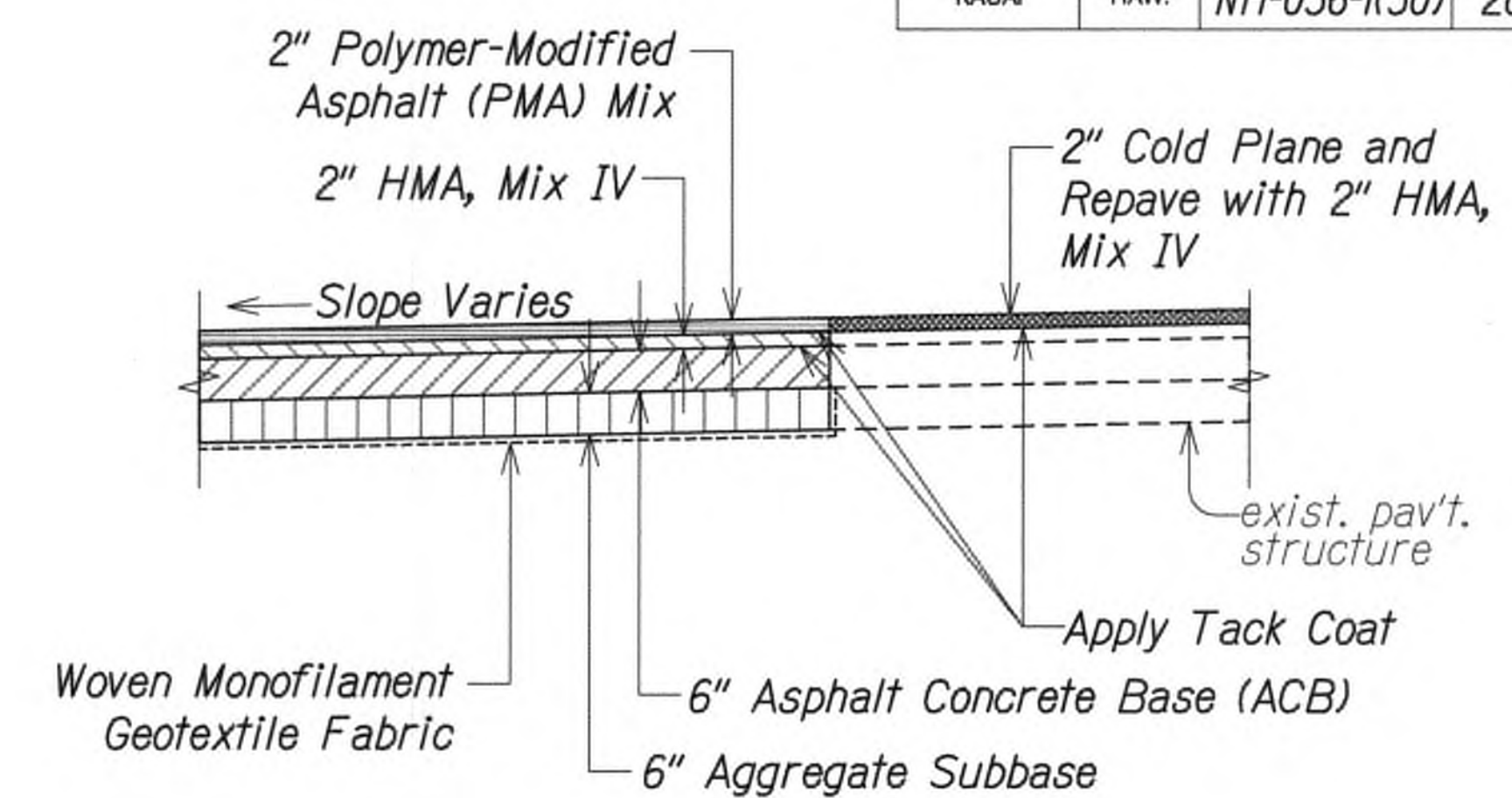
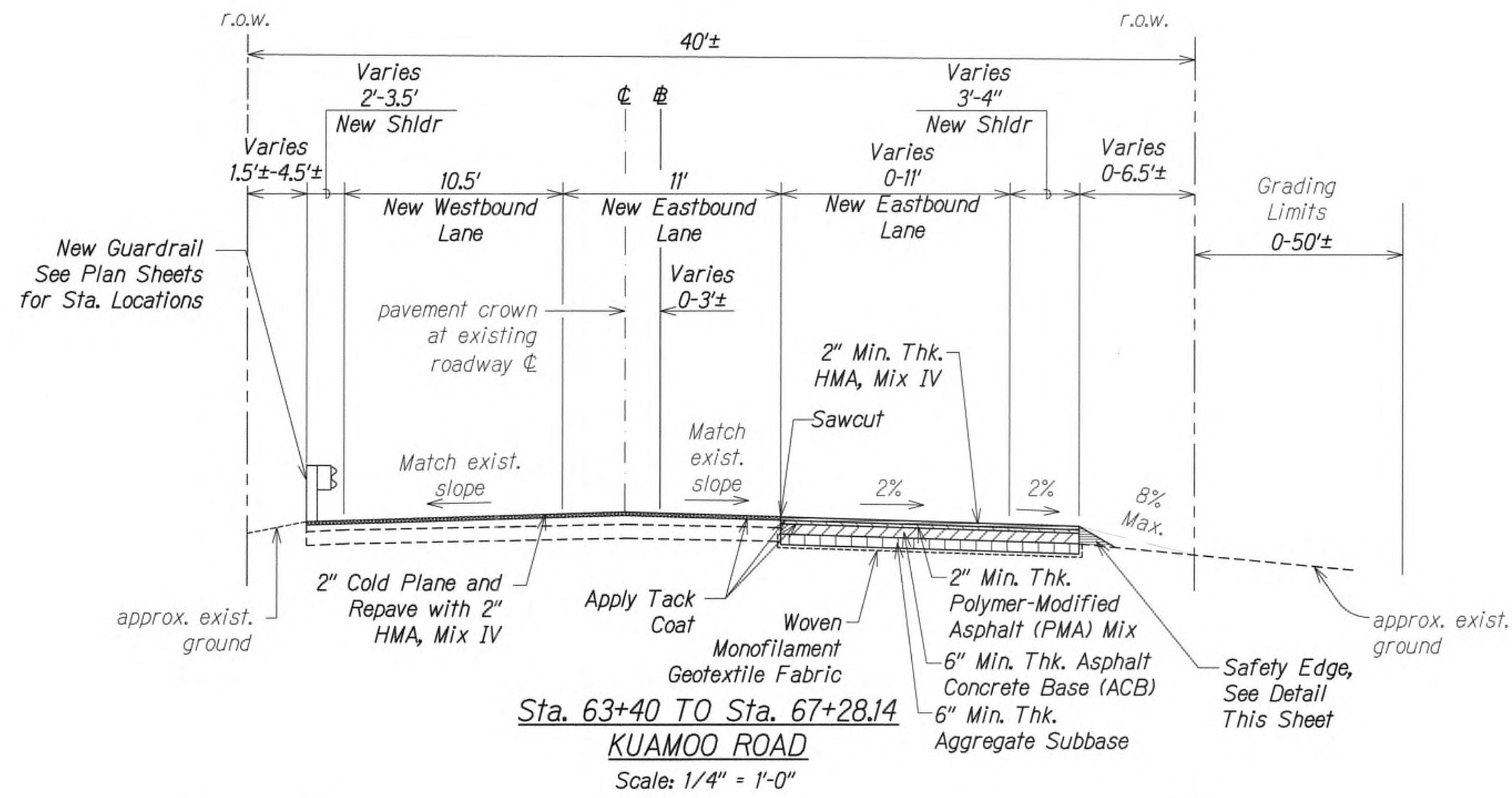
GENERAL PLAN

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 100' Date: July 2019

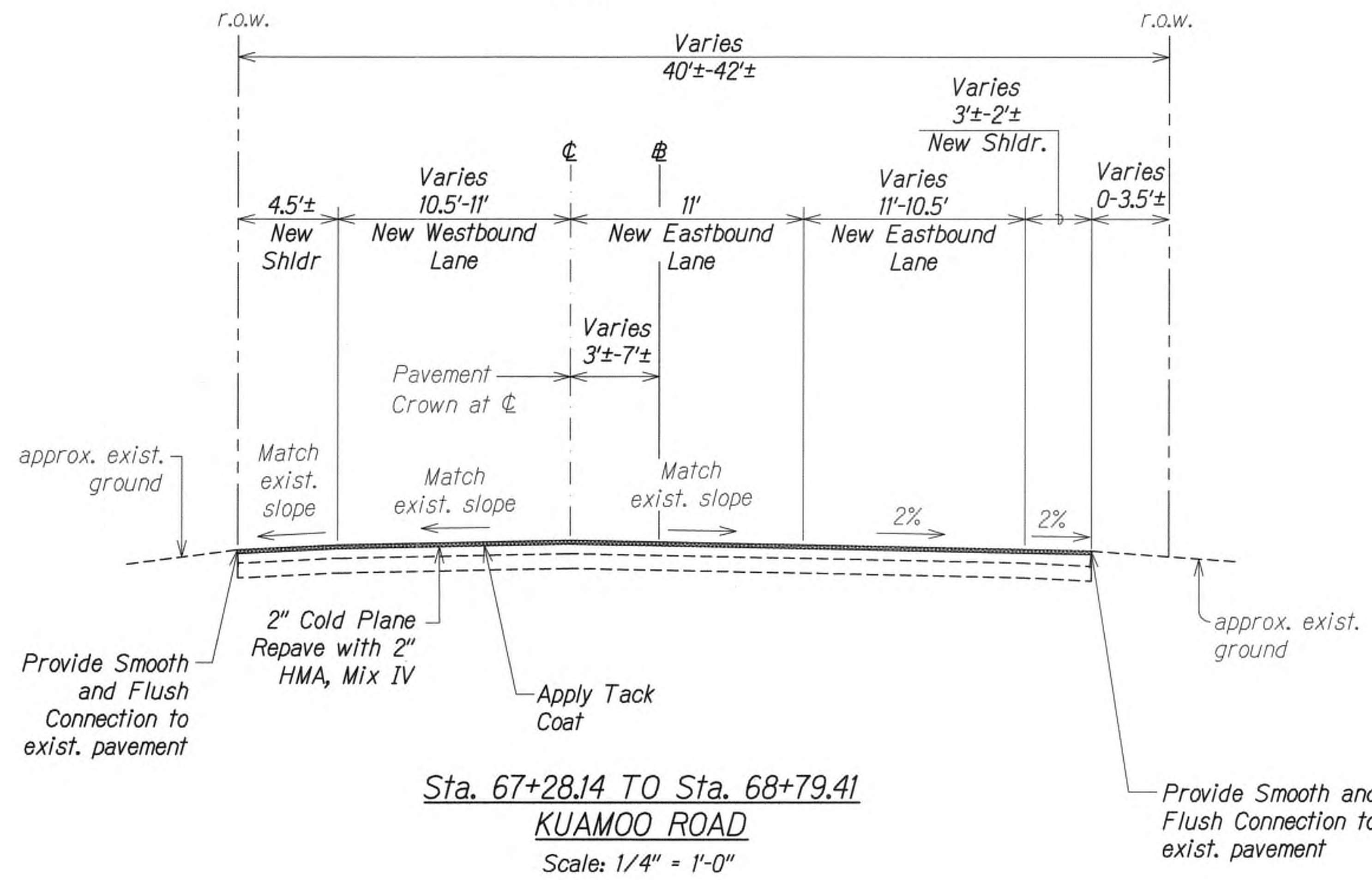
SHEET No. C2 OF 2 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.15	244



- Notes:**
1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
  2. See Roadway Paving Plans For Additional Paving Location and Instruction.
  3. Install Safety Edge Where Edge of Shoulder is Higher Elevation Than the exist. ground. See Det., This Sht.
  4. If Softer Soils Are Encountered, Add a Biaxial or Triaxial Geogrid (BCR of 0.5 To 0.6) On Top of Woven Geotextile.



SURVEY PLANNED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



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 APRIL 30, 2020  
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TYPICAL ROADWAY SECTIONS**

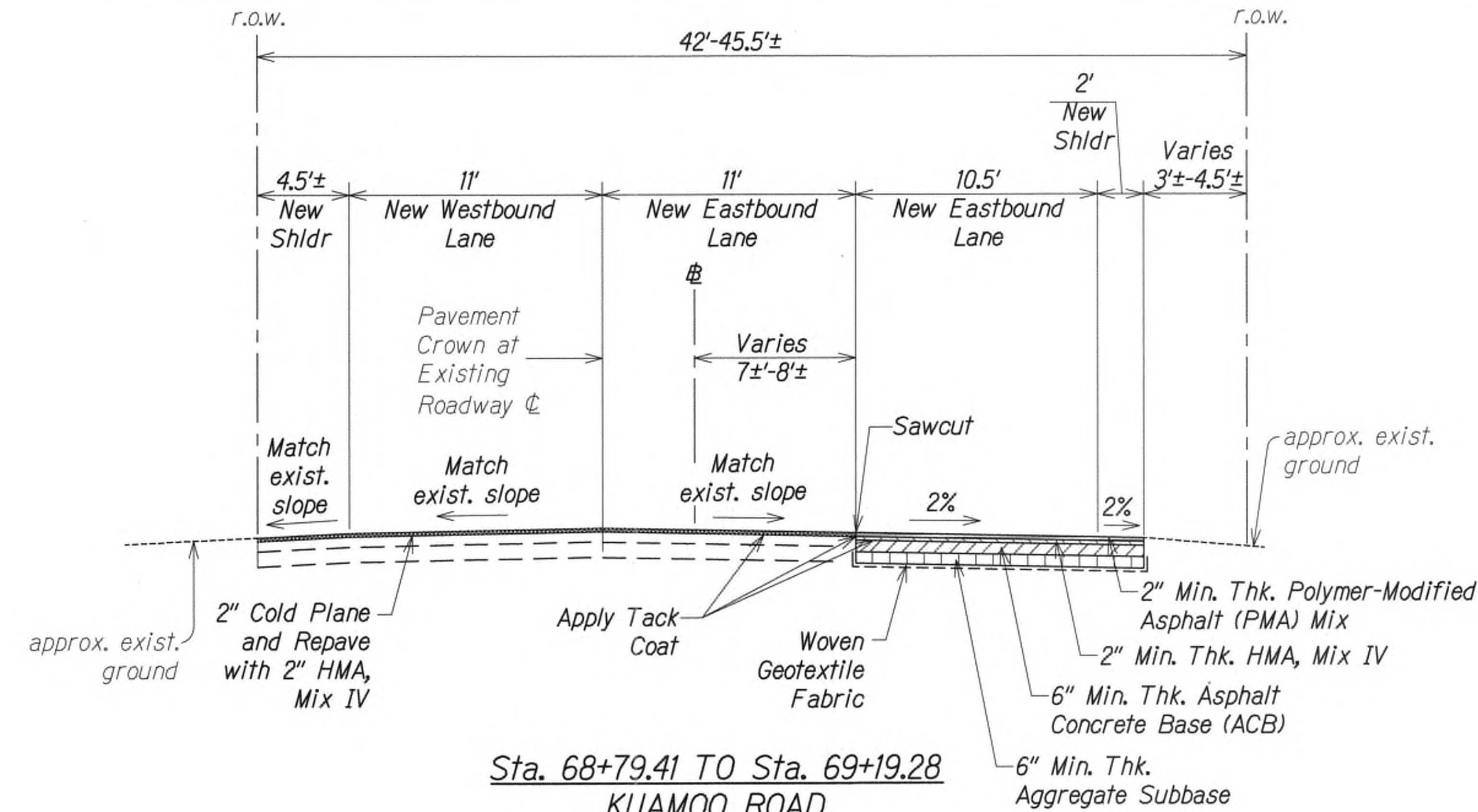
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: As Noted Date: July 2019

SHEET No. *RS1* OF 9 SHEETS

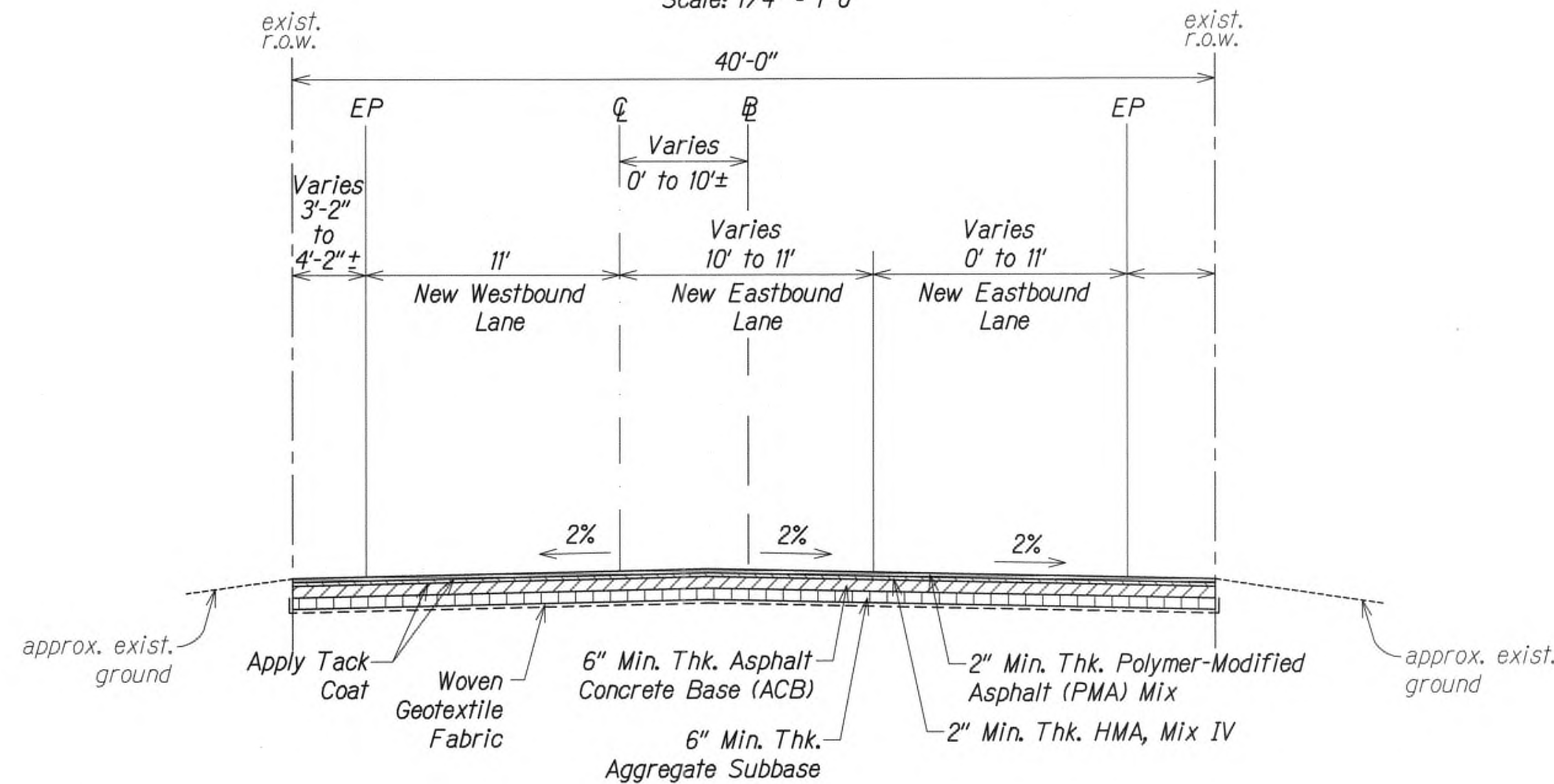
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.16	244



Sta. 68+79.41 TO Sta. 69+19.28  
KUAMOO ROAD  
Scale: 1/4" = 1'-0"



Sta. 69+19.28 TO Sta. 69+48.21  
KUAMOO ROAD  
TYPICAL NORMAL CROWN SECTION  
Scale: 1/4" = 1'-0"

Notes:

1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
2. See Roadway Paving Plans For Additional Paving Location and Instruction.
3. Install Safety Edge Where Edge of Shoulder is Higher Elevation Than the exist. ground. See Det., Sht. RS1
4. If Softer Soils Are Encountered, Add a Biaxial or Triaxial Geogrid (BCR of 0.5 To 0.6) On Top of Woven Geotextile.



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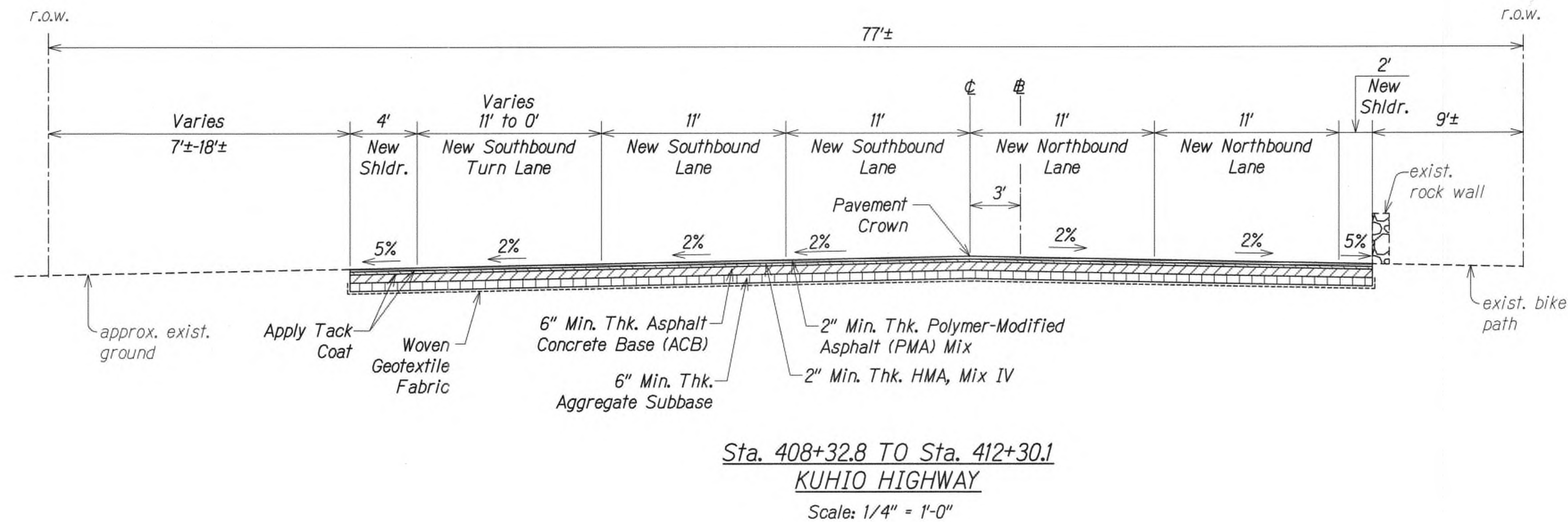
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TYPICAL ROADWAY SECTIONS  
  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.17	244



- Notes:
1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
  2. See Roadway Paving Plans For Additional Paving Location and Instruction.
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ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL ROADWAY SECTIONS**

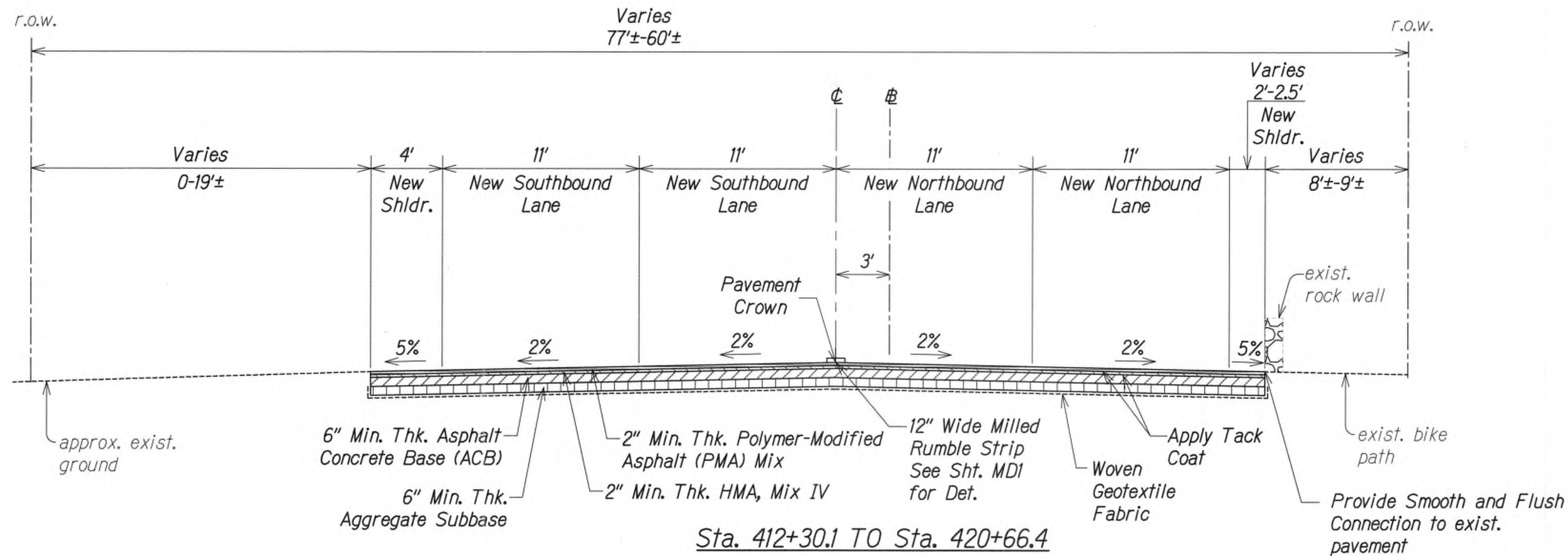
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

DATE: 9/20/19 REVISION:  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

SHEET No. RS3 OF 9 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD18	244

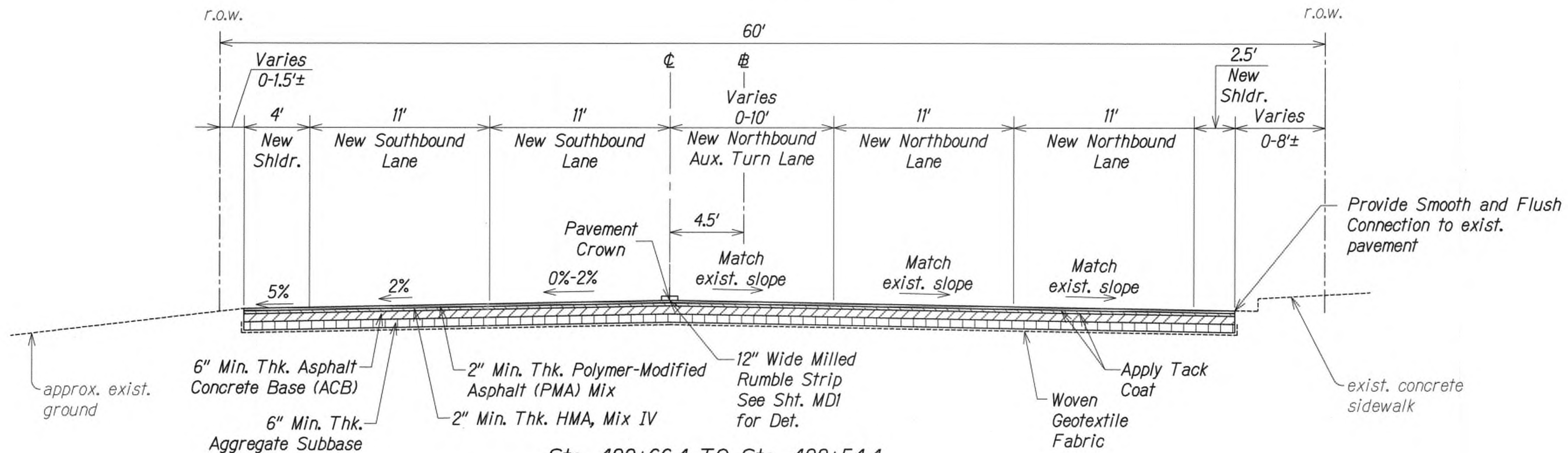


Sta. 412+30.1 TO Sta. 420+66.4  
KUHIO HIGHWAY  
TYPICAL NORMAL CROWN SECTION

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

Notes:

1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
2. See Roadway Paving Plans For Additional Paving Location and Instruction.
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Sta. 420+66.4 TO Sta. 422+54.4  
KUHIO HIGHWAY

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



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APR 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
TYPICAL ROADWAY SECTIONS

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

9/20/19 Δ Reissuing plan for legibility  
only. No design changes have  
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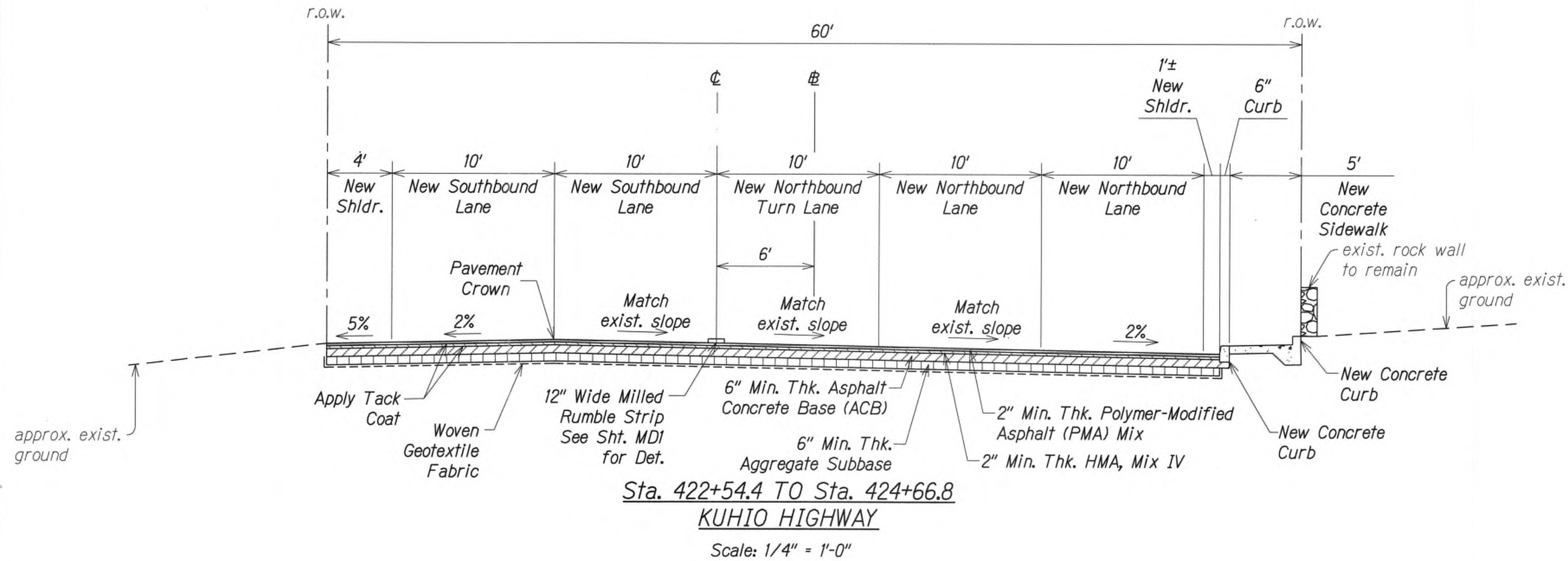
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REVISION

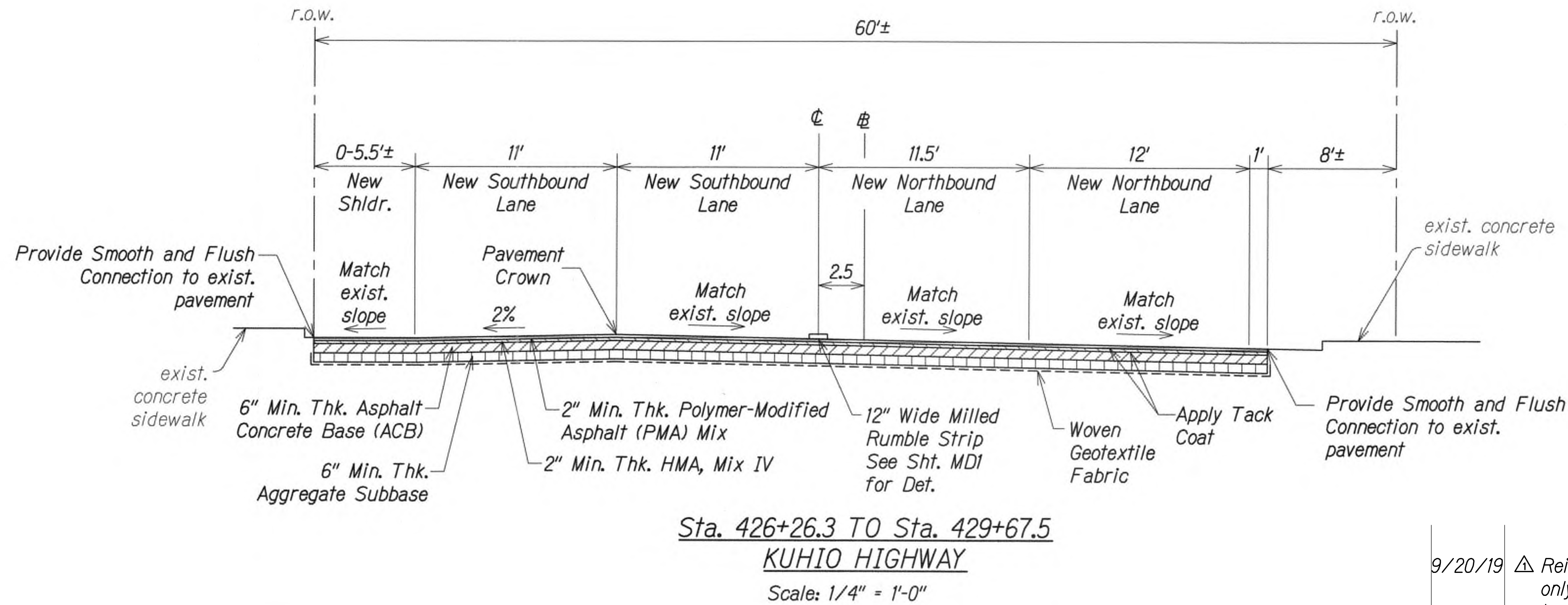
SHEET No. RS4 OF 9 SHEETS

ADD.18





- Notes:
1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
  2. See Roadway Paving Plans For Additional Paving Location and Instruction.
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  4. If Softer Soils Are Encountered, Add a Biaxial or Triaxial Geogrid (BCR of 0.5 To 0.6) On Top of Woven Geotextile.



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL ROADWAY SECTIONS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

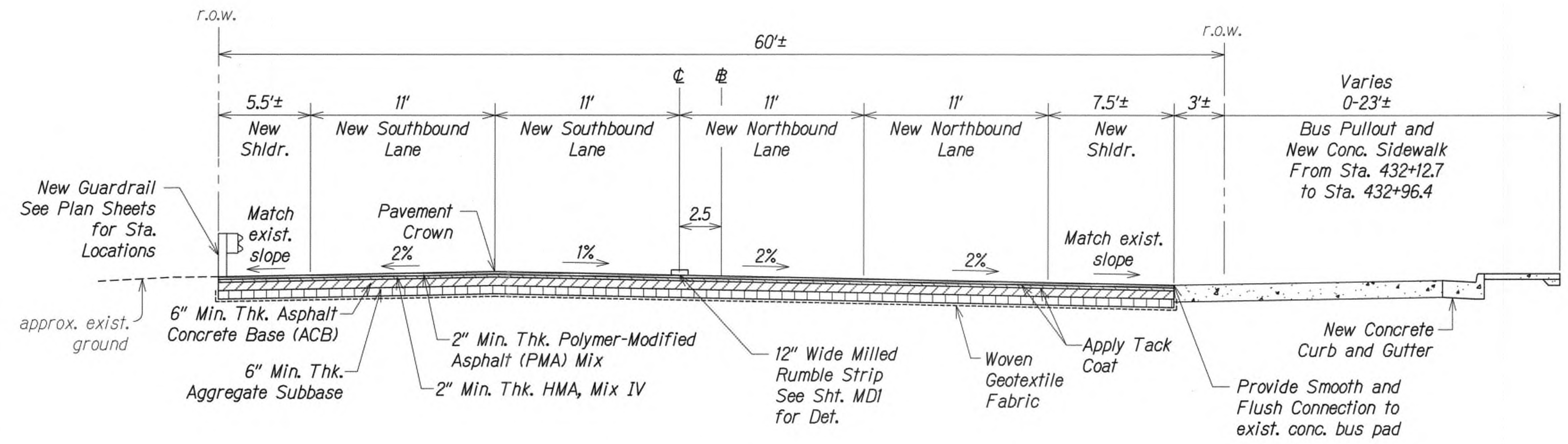
DATE REVISION

SHEET No. RS5 OF 9 SHEETS

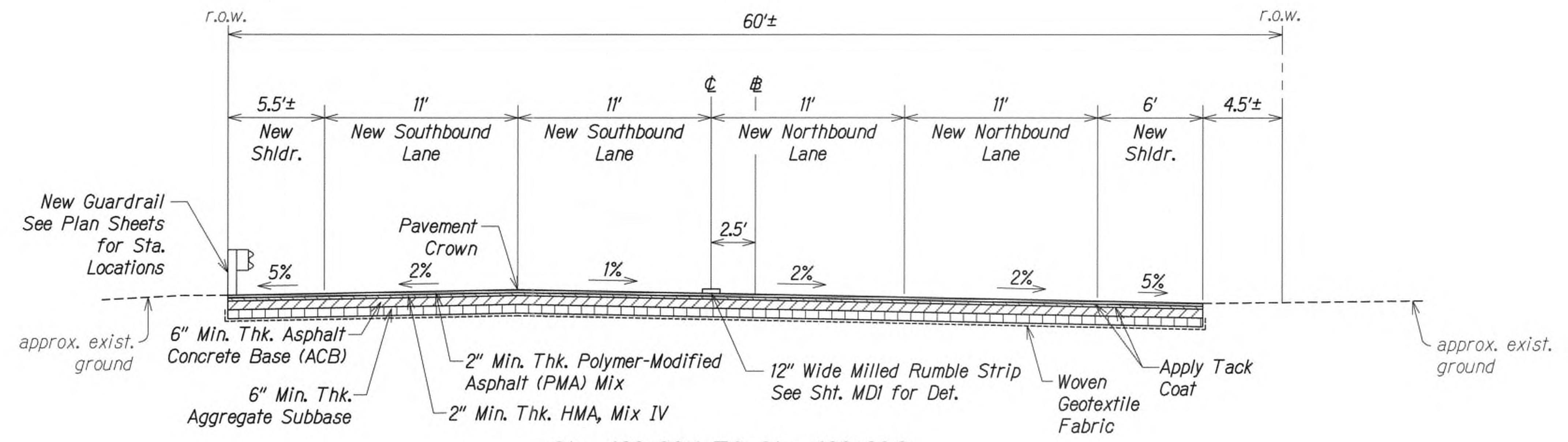
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.





Sta. 430+79.4 TO Sta. 432+96.4  
KUHIO HIGHWAY  
Scale: 1/4" = 1'-0"



Sta. 432+96.4 TO Sta. 436+26.2  
KUHIO HIGHWAY  
Scale: 1/4" = 1'-0"

- Notes:
1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
  2. See Roadway Paving Plans For Additional Paving Location and Instruction.
  3. Install Safety Edge Where Edge of Shoulder is Higher Elevation Than the exist. ground. See Det., Sht. RS1
  4. If Softer Soils Are Encountered, Add a Biaxial or Triaxial Geogrid (BCR of 0.5 To 0.6) On Top of Woven Geotextile.



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*Michael*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL ROADWAY SECTIONS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

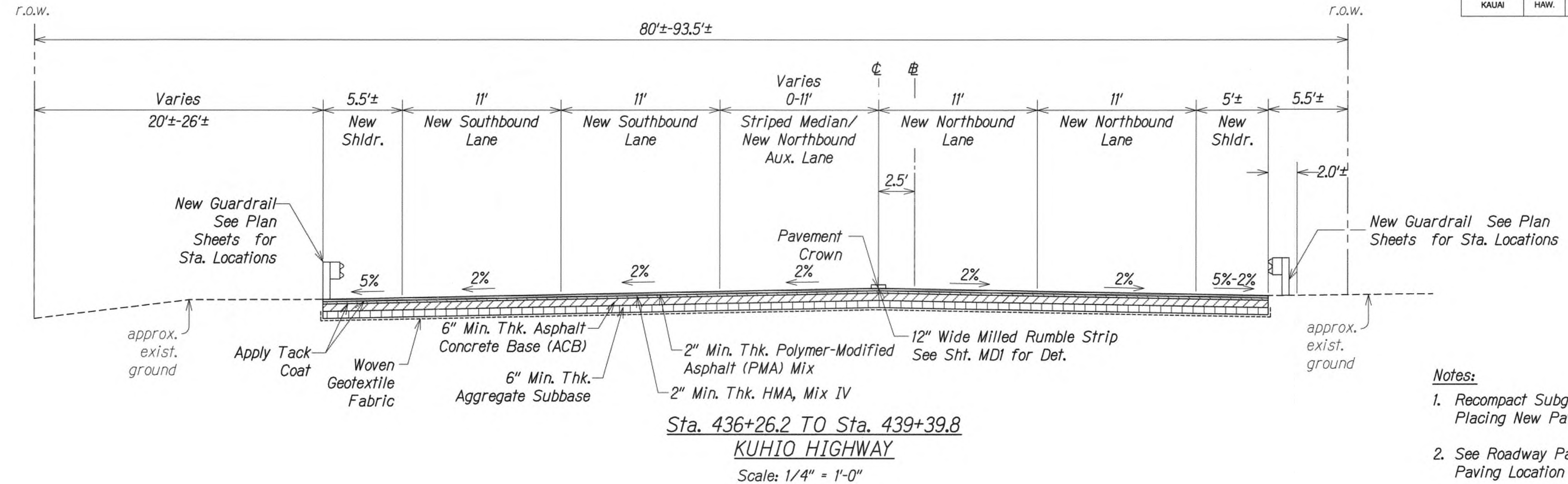
SHEET No. RS6 OF 9 SHEETS

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

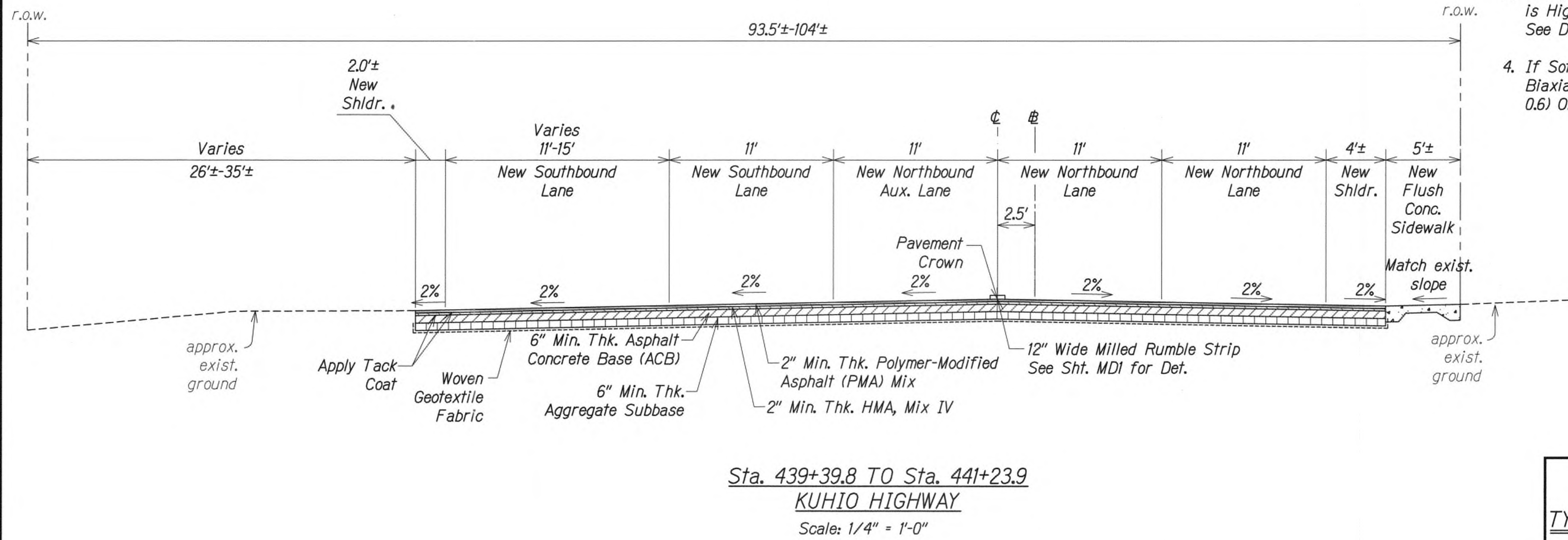
DATE REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.21	244



- Notes:**
1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
  2. See Roadway Paving Plans For Additional Paving Location and Instruction.
  3. Install Safety Edge Where Edge of Shoulder is Higher Elevation Than the exist. ground. See Det., Sht. RS1
  4. If Softer Soils Are Encountered, Add a Biaxial or Triaxial Geogrid (BCR of 0.5 To 0.6) On Top of Woven Geotextile.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Wilson Okamoto*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL ROADWAY SECTIONS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

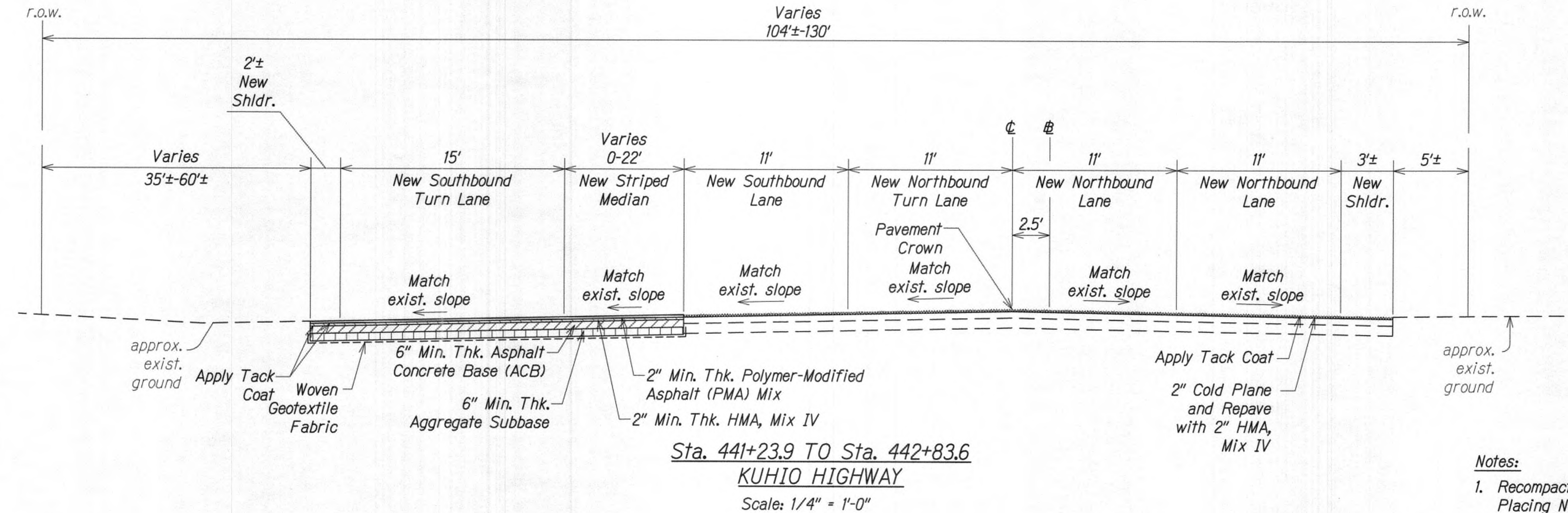
SHEET No. **RS7** OF **9** SHEETS

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

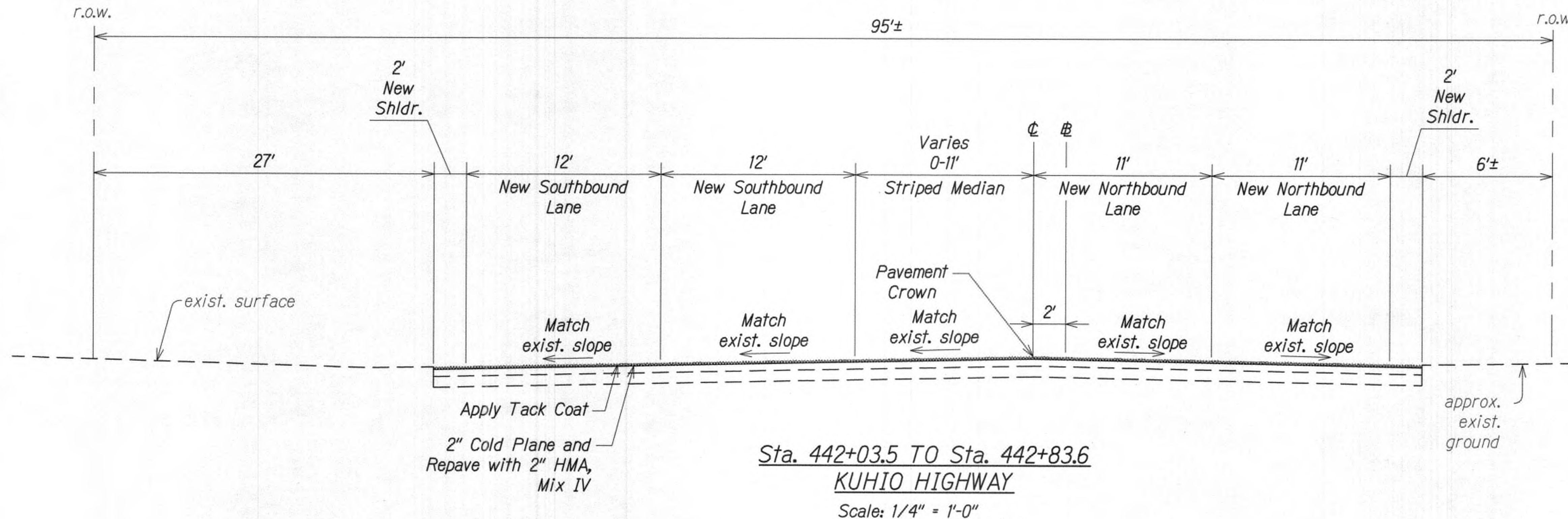


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.22	244



Notes:

1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
2. See Roadway Paving Plans For Additional Paving Location and Instruction.
3. Install Safety Edge Where Edge of Shoulder is Higher Elevation Than the exist. ground. See Det., Sht. RS1
4. If Softer Soils Are Encountered, Add a Biaxial or Triaxial Geogrid (BCR of 0.5 To 0.6) On Top of Woven Geotextile.



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Sta. 442+03.5 TO Sta. 442+83.6  
KUHIO HIGHWAY  
Scale: 1/4" = 1'-0"

APPROVED

County Engineer  
County of Kauai  
(For Work Within the County Right-of-Way)

7/17/19  
Date

9/20/19 Reissuing plan for legibility only. No design changes have been made.

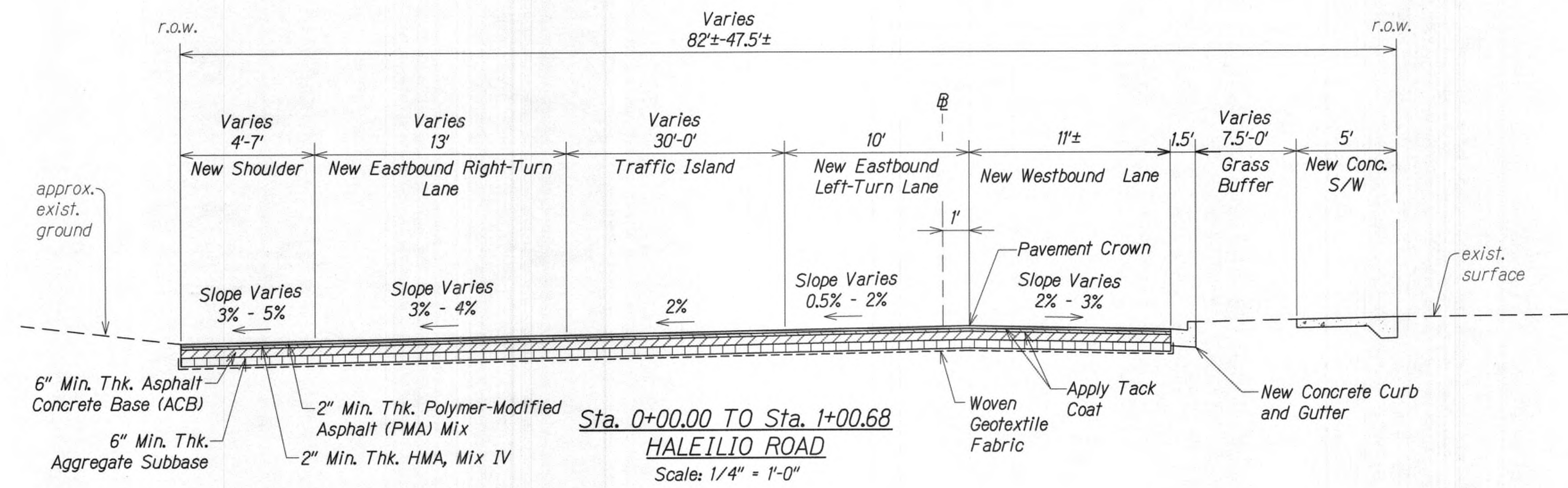
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL ROADWAY SECTIONS**

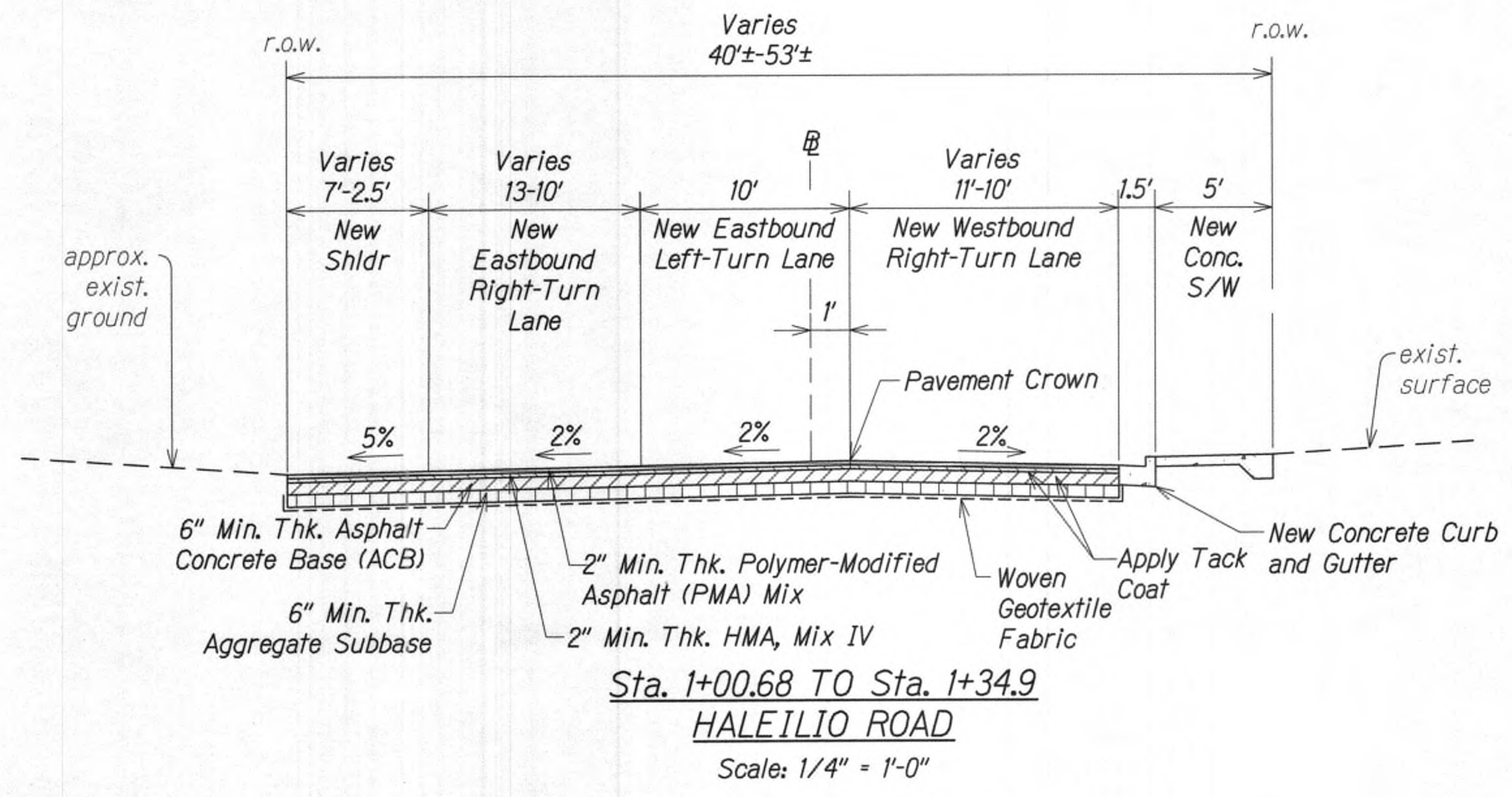
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

SHEET No. RS8 OF 9 SHEETS





- Notes:
1. Recompact Subgrade To 95% RC Before Placing New Pavement Structure.
  2. See Roadway Paving Plans For Additional Paving Location and Instruction.
  3. Install Safety Edge Where Edge of Shoulder is Higher Elevation Than the exist. ground. See Det., Sht. RS1
  4. If Softer Soils Are Encountered, Add a Biaxial or Triaxial Geogrid (BCR of 0.5 To 0.6) On Top of Woven Geotextile.



APPROVED

*[Signature]* 7/17/19

County Engineer  
County of Kaua'i  
(For Work Within the County Right-of-Way)

DATE	9/20/19	REVISION	△ Reissuing plan for legibility only. No design changes have been made.
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BRIAN A. LOCK  
LICENSED PROFESSIONAL ENGINEER  
No. 9867-C  
HAWAII, U.S.A.

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*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

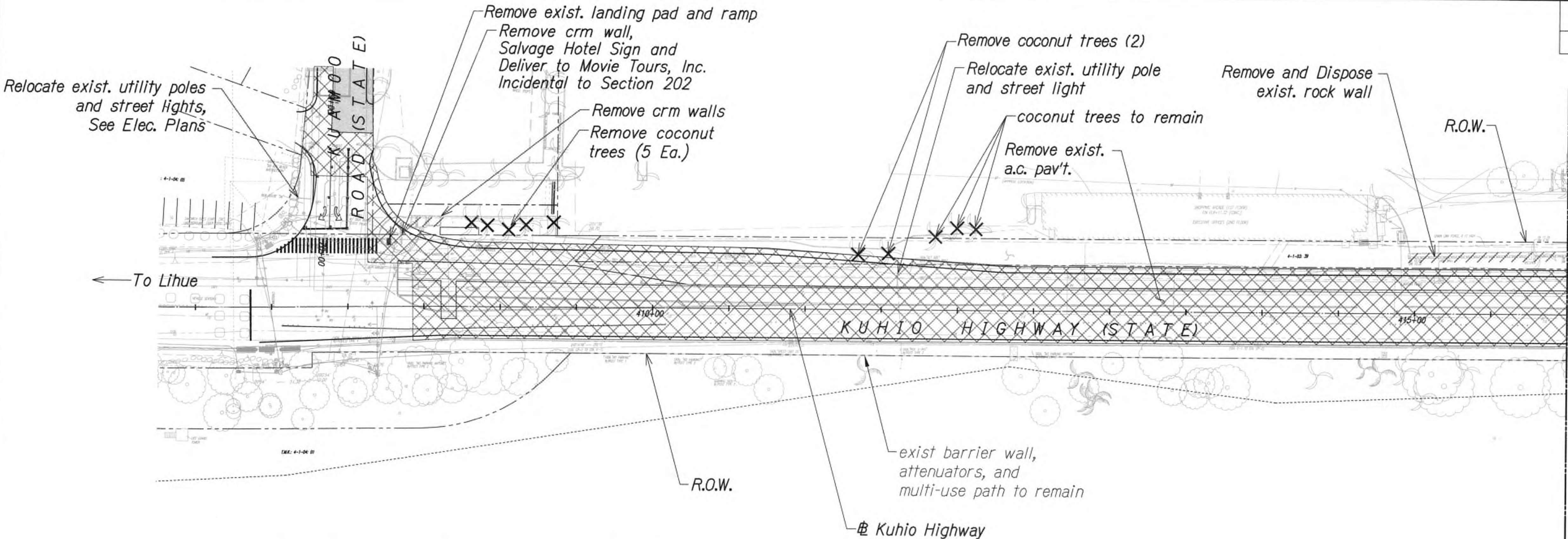
**TYPICAL ROADWAY SECTIONS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

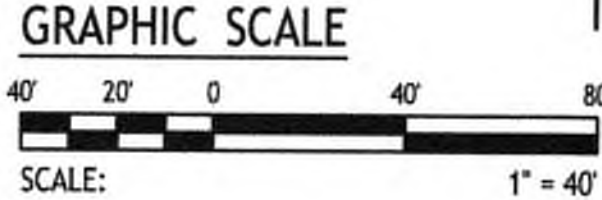
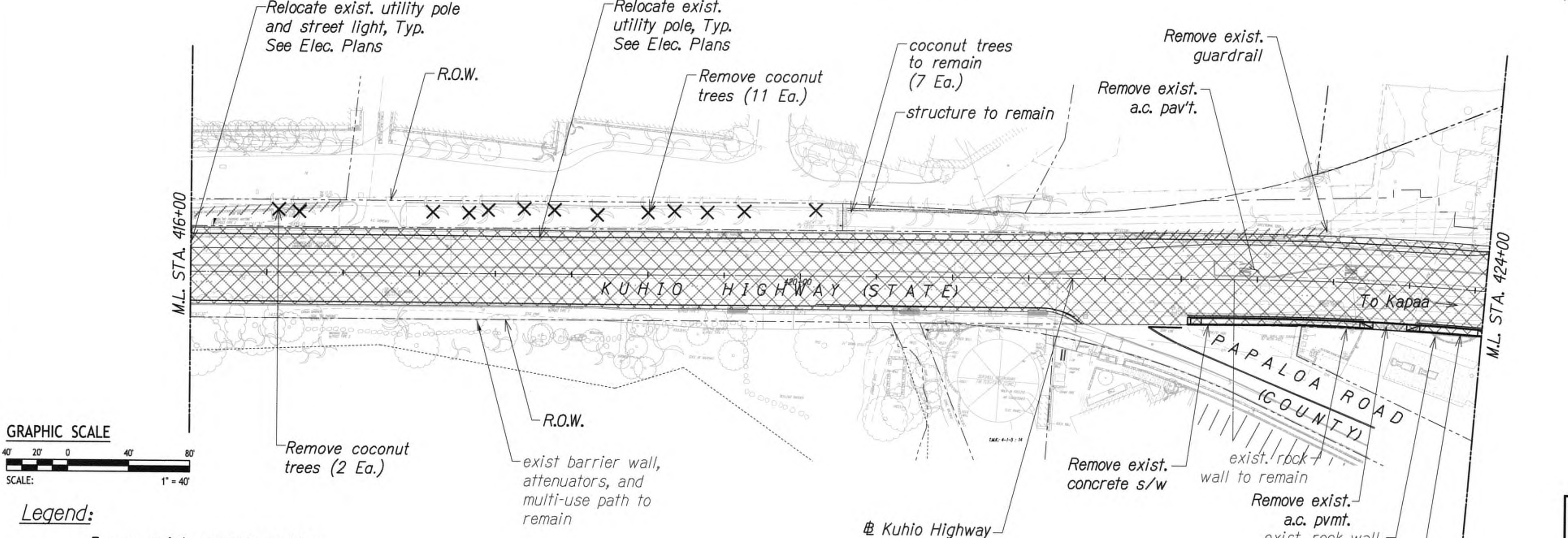
SHEET No. RS9 OF 9 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.24	244



- Note:
1. Within 15 days after NTP, the contractor shall consult with the Engineer. Clean and grub vegetation along mauka right-of-way between Sta. 409+40± to Sta. 420+30± to allow DOT's archaeological consultant to conduct additional inventory survey. The contractors clearing and grubbing work shall be incidental to Section 201.
  2. See Paving Plans For Pavement Removal Limits.



- Legend:
- Remove exist. concrete and/or exist. a.c. pavement including asphalt base and aggregate subbase
  - 2" Cold Plane Repave with 2" HMA, Mix IV

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



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 APRIL 30, 2020  
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

DEMOLITION PLAN  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40'  
Date: July 2019

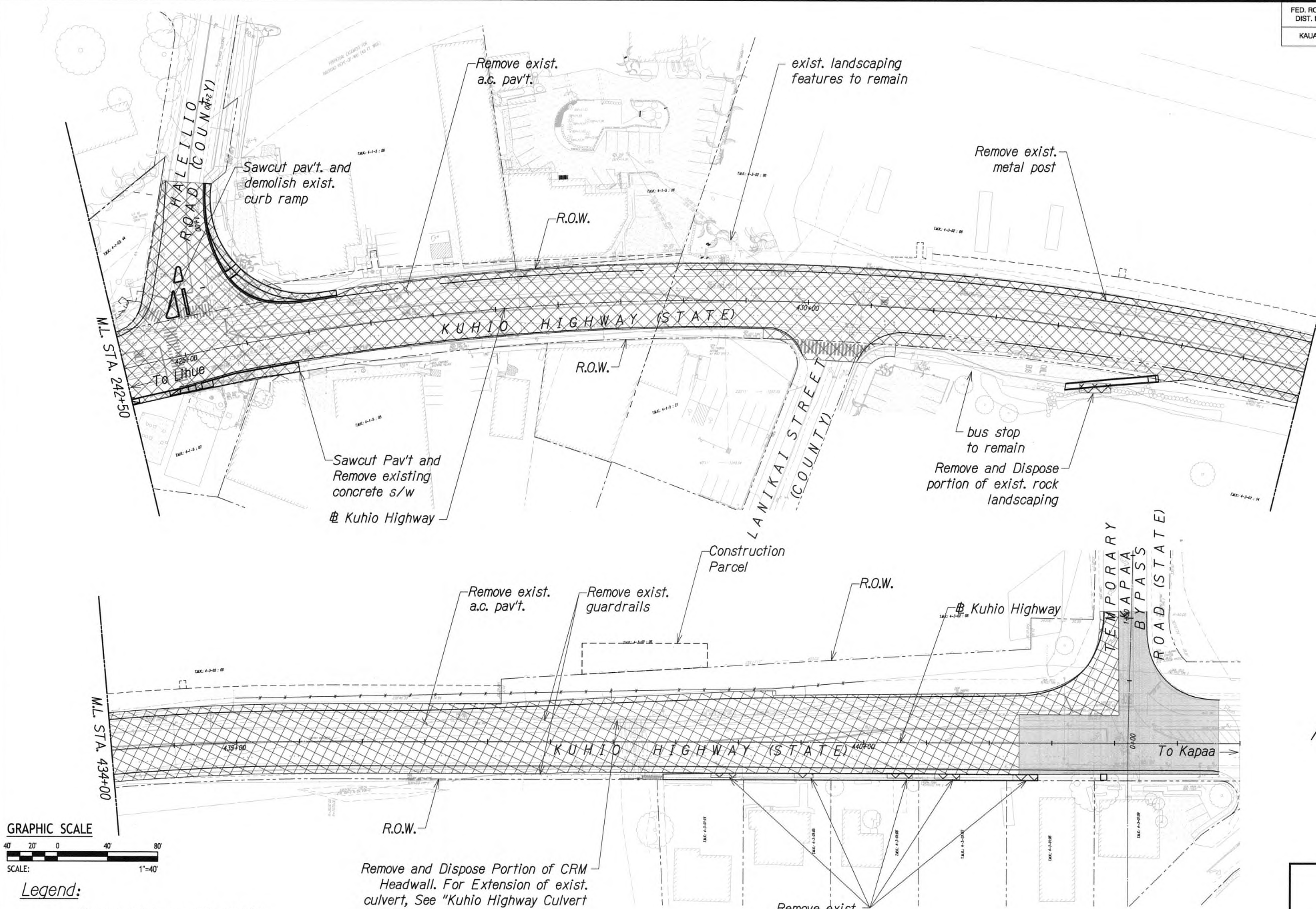
DATE  
9/20/19

REVISION  
△ Reissuing plan for legibility only. No design changes have been made.

SHEET No. DP1 OF 2 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KALUAI	HAW.	NH-056-1(50)	2019	ADD.25	244



M.L. STA. 434+00

Note:

1. incidental to Section 201. grubbing work shall be The contractors clearing and additional inventory survey. consultant to conduct DOT's archaeological B.L. Sta. 448+80± to allow B.L. Sta. 444+00± to B.L. Sta. 441+00± and between B.L. Sta. 430+50± to mauka right-of-way between and grub vegetation along with the Engineer. Clean the contractor shall consult Within 15 days after NTP
2. See paving plans for pavement removal limits

True North  
Scale: 1"=40'



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*WILSON OKAMOTO CORPORATION*  
APRIL 30, 2020  
LIC. EXP. DATE



- Legend:**
- Remove exist. concrete and/or exist. a.c. pavement including asphalt base and aggregate subbase
  - 2" Cold Plane Repave with 2" HMA, Mix IV

**APPROVED**  
*[Signature]*  
County Engineer  
County of Kauai  
(For Work Within the County Right-of-Way)  
Date: 7/17/19

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

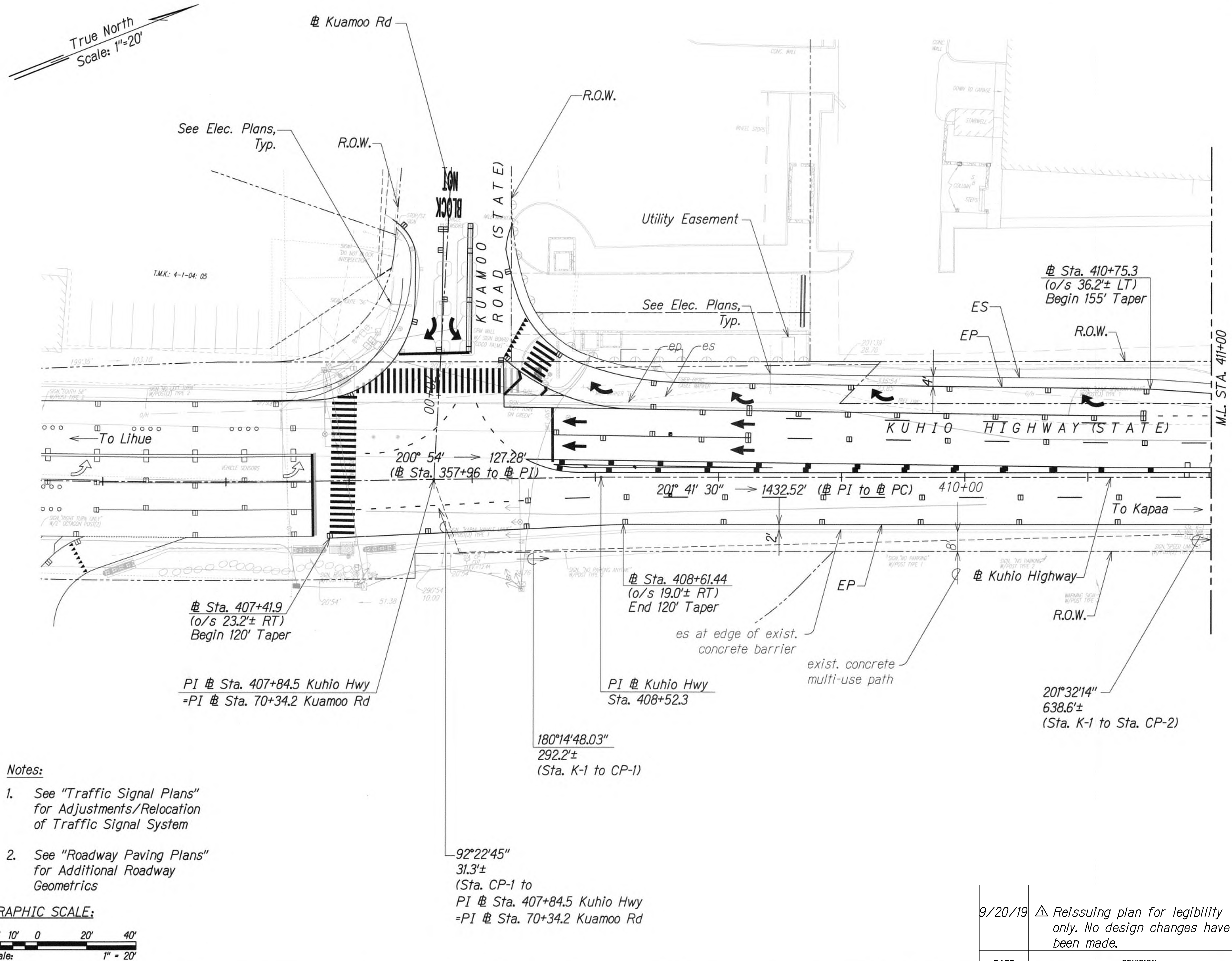
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

DEMOLITION PLAN

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: July 2019

SHEET No. DP2 OF 2 SHEETS





Notes:

- See "Traffic Signal Plans" for Adjustments/Relocation of Traffic Signal System
- See "Roadway Paving Plans" for Additional Roadway Geometrics

GRAPHIC SCALE:



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



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APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**

Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

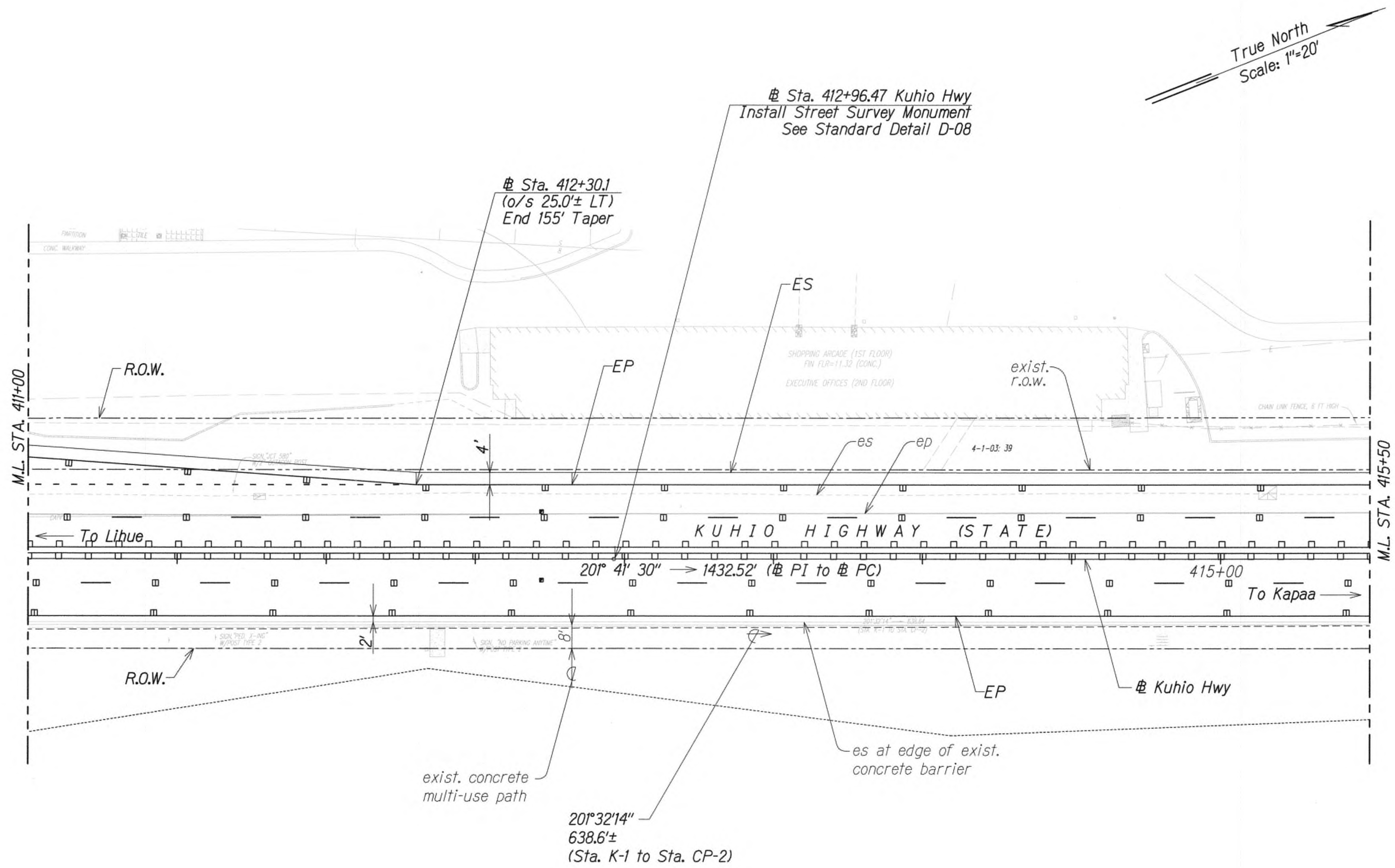
SHEET No. RP1 OF 16 SHEETS

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

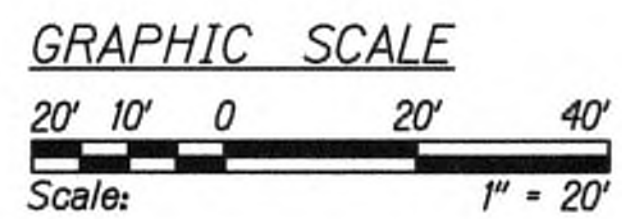


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.27	244



True North  
Scale: 1"=20'

- Notes:
- See "Traffic Signal Plans" for Adjustments/Relocation of Traffic Signal System
  - See "Roadway Paving Plans" for Additional Roadway Geometrics



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



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*msk*

APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
**ROADWAY PLAN**  
  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20'      Date: July 2019  
  
SHEET No. **RP2** OF **16** SHEETS

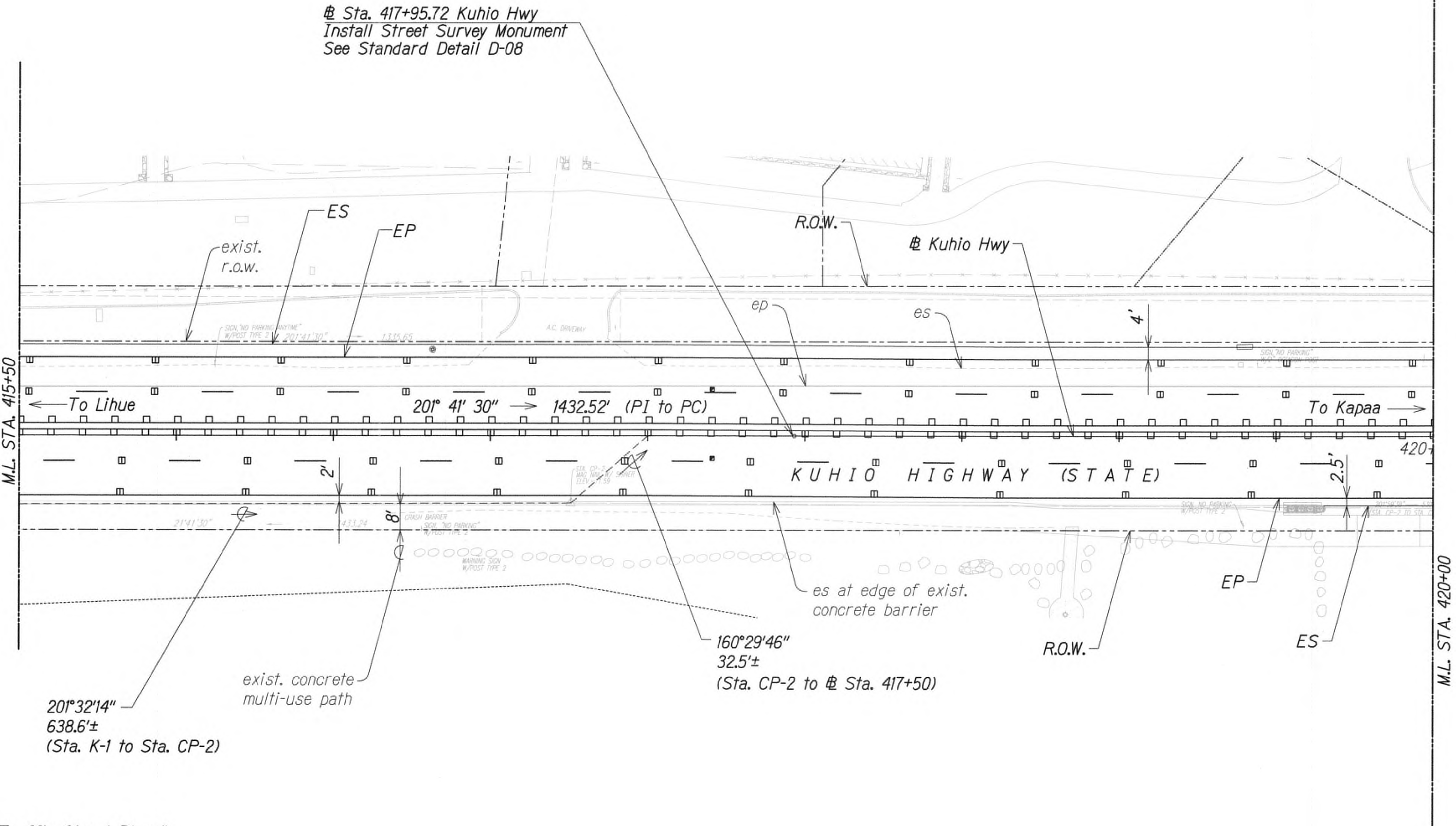
9/20/19    Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
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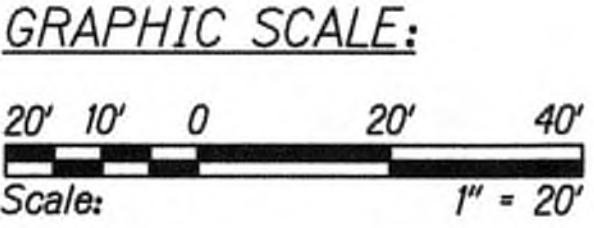


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.28	244

True North  
Scale: 1"=20'



- Notes:
- See "Traffic Signal Plans" for Adjustments/Relocation of Traffic Signal System
  - See "Roadway Paving Plans" for Additional Roadway Geometrics



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



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*mi*  
APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. **RP3** OF 16 SHEETS

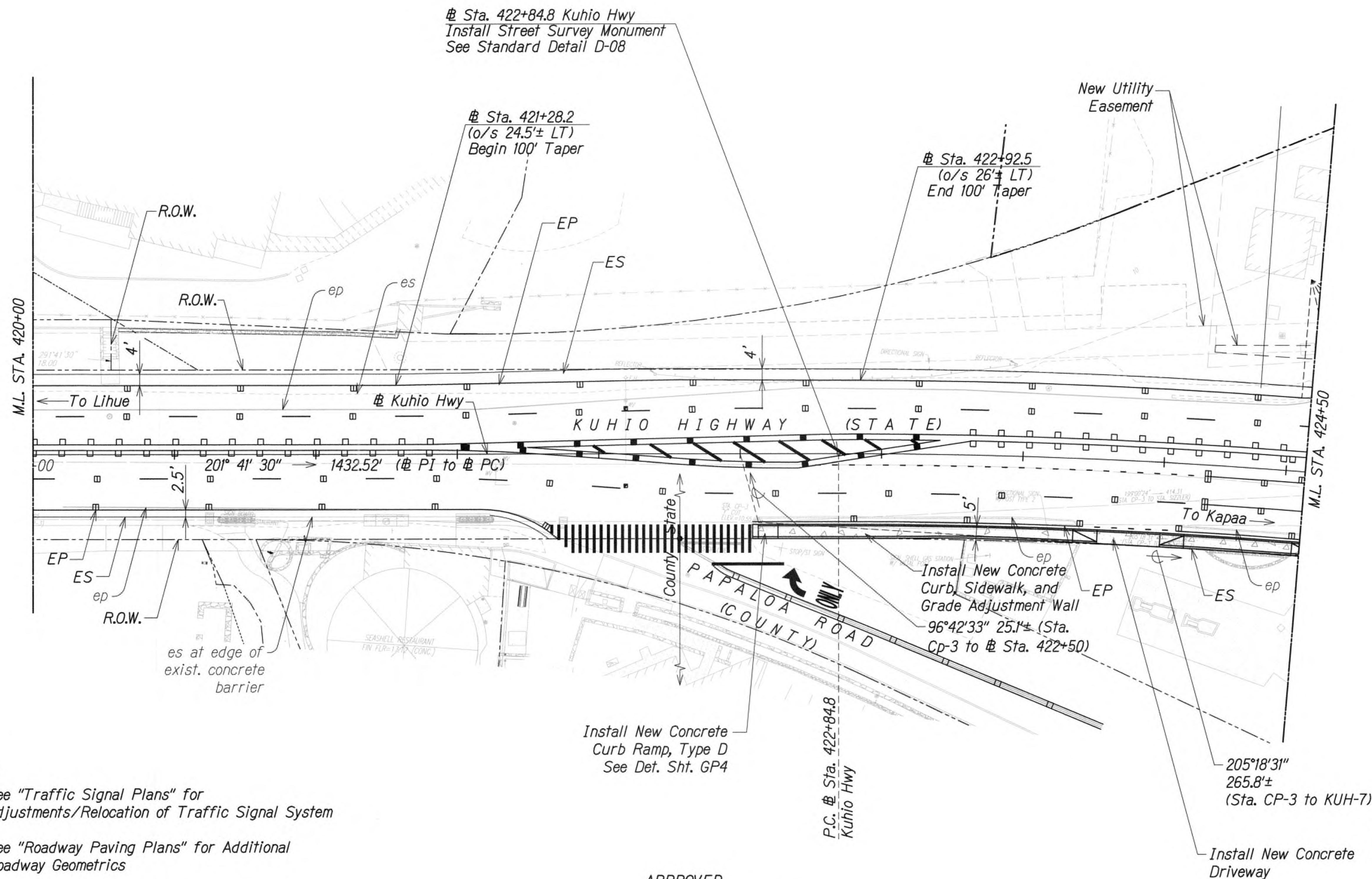
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.29	244

True North  
Scale: 1"=20'



Kuhio Highway  
Curve Data  
 $\Delta = 36^{\circ}59'00''$   
 $\Delta/2 = 18^{\circ}29'30''$   
 $R = 2000.00$   
 $T = 668.87$   
 $Ch = 1268.67$   
 $Lc = 1290.96$

# Notes:

- See "Traffic Signal Plans" for Adjustments/Relocation of Traffic Signal System
- See "Roadway Paving Plans" for Additional Roadway Geometrics
- See "Detectable Warning Details" on Sheet T5

# GRAPHIC SCALE:



APPROVED

For County Engineer  
County of Kauai  
(For Work Within the County Right-of-Way)

Date

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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msh  
APRIL 30, 2020  
WILSON OKAMOTO CORPORATION L.C. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

# ROADWAY PLAN

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

SHEET No. RP4 OF 16 SHEETS

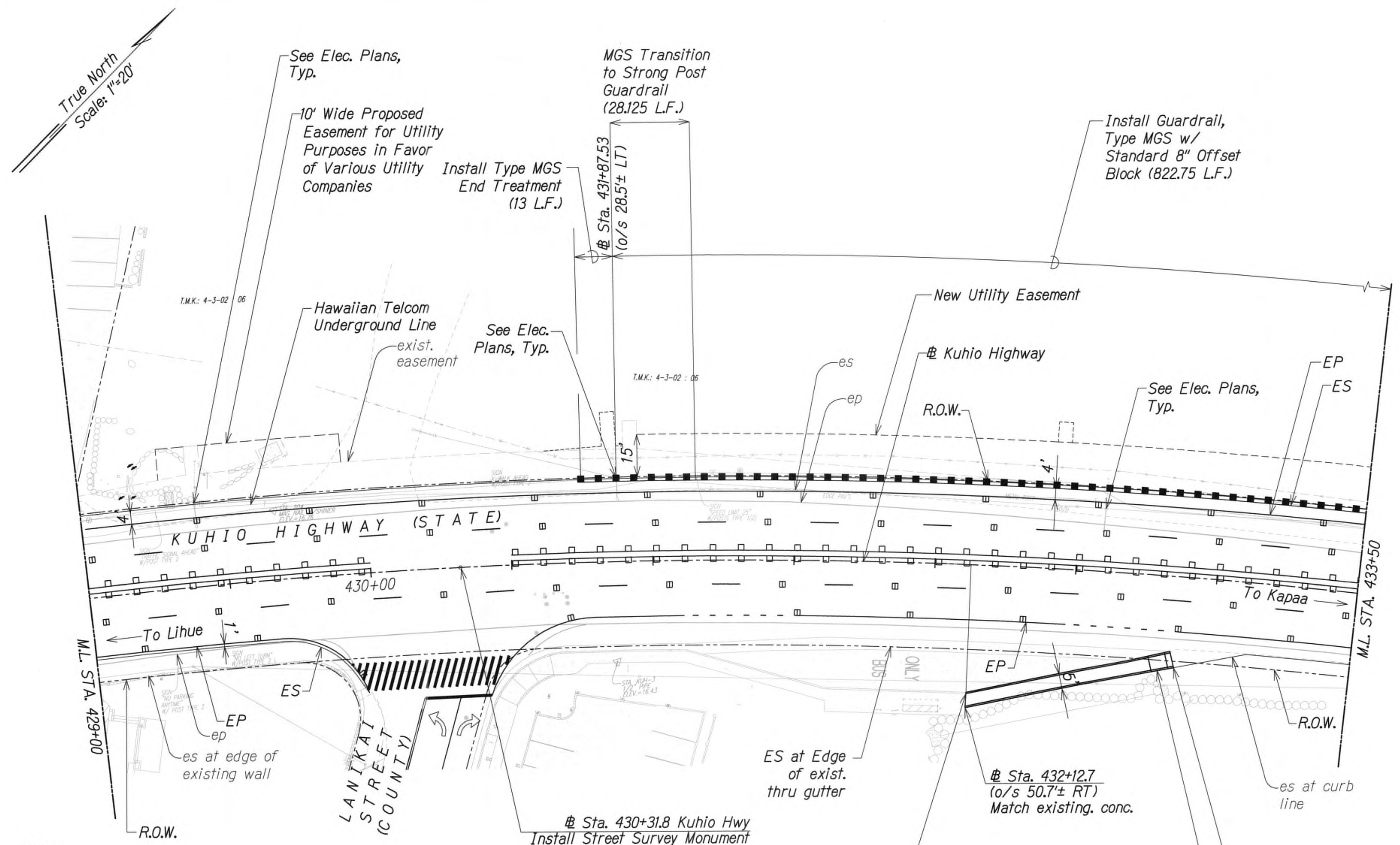
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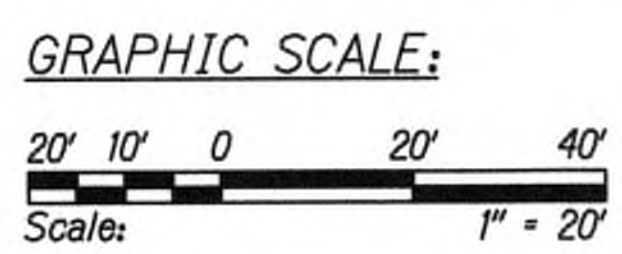
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.31	244



# Kuhio Highway  
Curve Data

$\Delta$	= 36° 59' 00"
$\Delta/2$	= 18° 29' 30"
R	= 2000.00
T	= 668.87
Ch	= 1268.67
Lc	= 1290.96

- Notes:
- See "Traffic Signal Plans" for Adjustments/Relocation of Traffic Signal System
  - See "Roadway Paving Plans" for Additional Roadway Geometrics
  - See "Detectable Warning Details" on Sheet T5
  - Contractor shall submit shop drawings of MSKT-SP-MGS TL-2 End Treatment



APPROVED

*[Signature]* 7/17/19

for County Engineer  
County of Kaua'i  
(For Work Within the County Right-of-Way)

DATE	9/20/19	REVISION	△ Reissuing plan for legibility only. No design changes have been made.
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*[Signature]*

WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**

Fed. Aid Proj. No. NH-056-1(50)

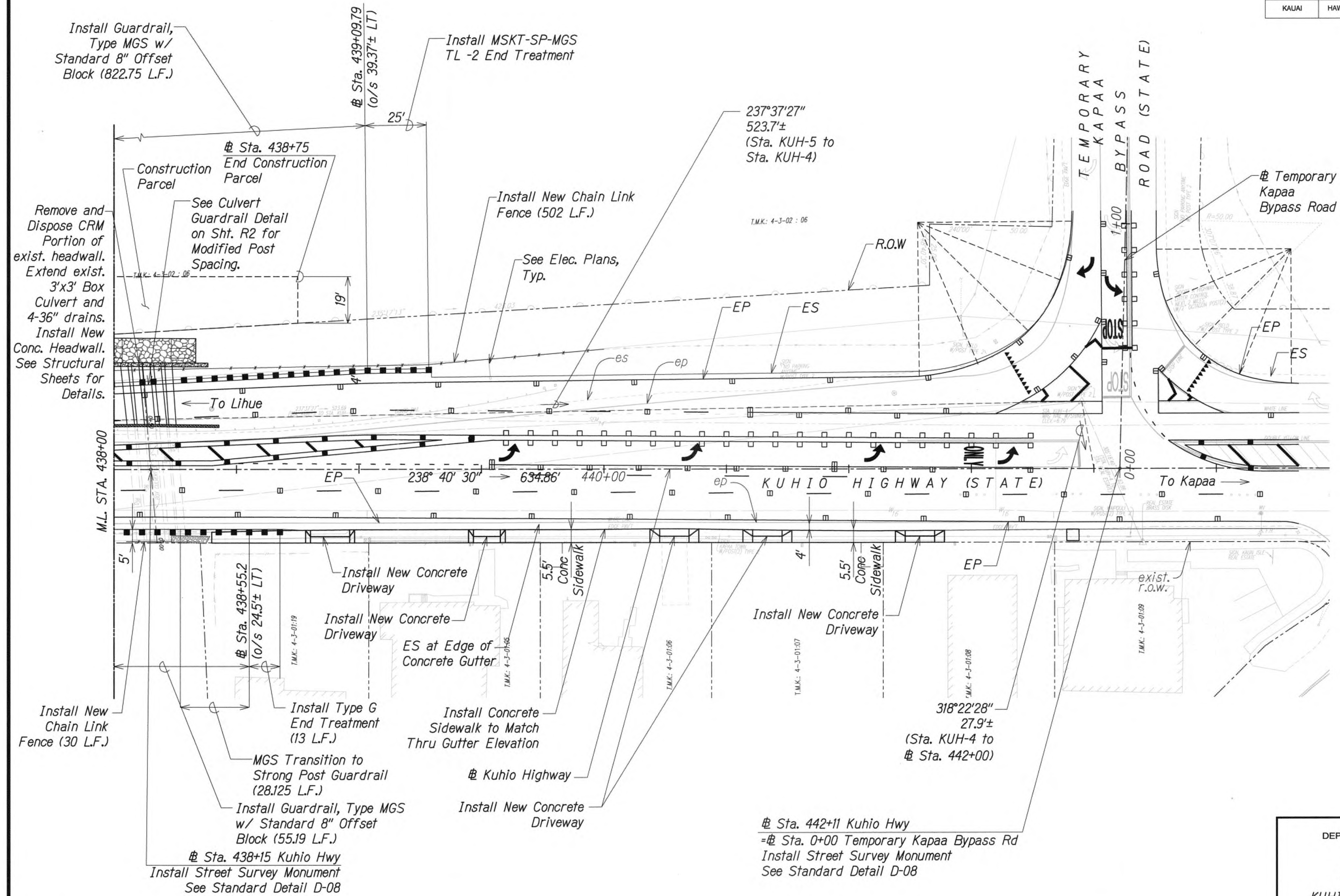
Scale: 1" = 20' Date: July 2019

SHEET No. RP6 OF 16 SHEETS









Notes:

1. See "Traffic Signal Plans" for Adjustments/Relocation of Traffic Signal System
2. See "Roadway Paving Plans" for Additional Roadway Geometrics
3. Contractor shall submit shop drawings of MSKT-SP-MGS TL-2 End Treatment



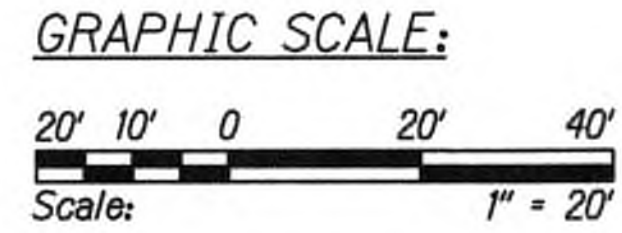
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*mih*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(150)  
Scale: 1" = 20' Date: July 2019

SHEET No. **RP8** OF 16 SHEETS



9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

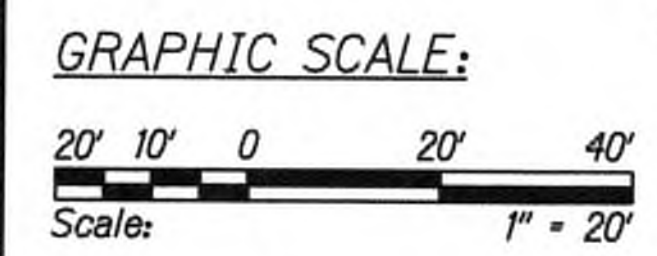
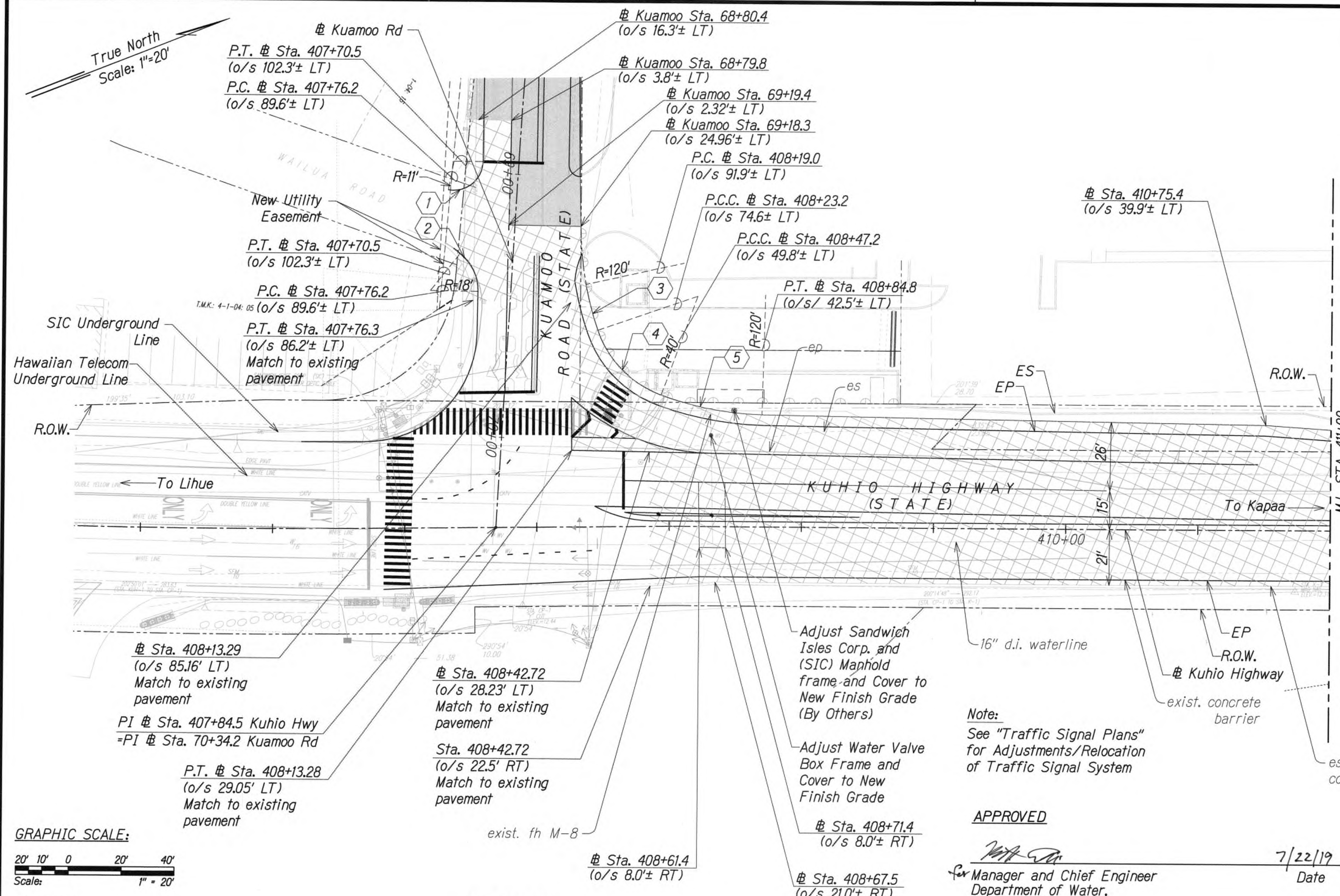
DATE	REVISION
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SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



### WATER NOTES FOR EXISTING WATER FACILITIES

1. Prior to commencing his operations, the Contractor shall contact the County of Kauai, Department of Water Operations Division (phone no. 245-5444) and make arrangements for the Department to "tone" and mark the existing water facilities located within the project limits, such as waterlines, valve boxes, water meter boxes, and manhole frame/covers, etc., shall be adjusted to match the new finished grades noted on the construction plans.
2. When adjustment of valve boxes and manhole frame/covers are required, it shall be the Contractor's responsibility to offset and record the location of the valve boxes and manhole frame/covers as marked by the Department of Water for the purposes of adjusting to the new finish grade. The Contractor shall preserve all of their offset stakes marking locations of the valve boxes and manhole frame/covers. If offset stakes are damaged or lost, it shall be the Contractor's sole responsibility to survey and re-stake the locations of the valve boxes and manhole frame/covers at their expense.
3. Adjusting Water Meter Boxes - If necessary, existing service lateral piping shall be adjusted to maintain a spacing of 10" from the centerline of the piping in the meter box to the bottom of the meter box cover. In new sidewalk areas, replace the Type "B" meter box and cover with Type "X" meter box and cover. The top of all water meter boxes shall be flush with the new sidewalk surface.



**Legend:**

- New Pavement Structure
- 2" Cold Plane Repave with 2" HMA, Mix IV

	1	2	3	4	5
$\Delta$	63° 1' 9"	51° 40' 11"	8° 34' 20"	50° 49' 52"	18° 41' 2"
$\Delta/2$	31° 30' 34"	25° 50' 5"	4° 17' 10"	25° 24' 56"	9° 20' 31"
R	11.00'	18.00'	120.00'	40.00'	120.00'
T	5.52'	7.75'	8.99'	19.01'	19.74'
Ch	9.41'	13.94'	17.94'	34.33'	38.96'
Lc	9.9'	14.43'	7.95'	35.49'	39.13'

**Note:**  
See "Traffic Signal Plans" for Adjustments/Relocation of Traffic Signal System

**APPROVED**

\_\_\_\_\_  
Manager and Chief Engineer  
Department of Water,  
County of Kauai

7/22/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PAVING PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**

Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

SHEET No. RP9 OF 16 SHEETS



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\_\_\_\_\_  
APRIL 30, 2020  
WILSON OKAMOTO CORPORATION L.C. EXP. DATE



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.35	244

# WATER NOTES FOR EXISTING WATER FACILITIES

1. Prior to commencing his operations, the Contractor shall contact the County of Kaua'i, Department of Water Operations Division (phone no. 245-5444) and make arrangements for the Department to "tone" and mark the existing water facilities located within the project limits, such as waterlines, valve boxes, water meter boxes, and manhole frame/covers, etc., shall be adjusted to match the new finished grades noted on the construction plans.
2. When adjustment of valve boxes and manhole frame/covers are required, it shall be the Contractor's responsibility to offset and record the location of the valve boxes and manhole frame/covers as marked by the Department of Water for the purposes of adjusting to the new finish grade. The Contractor shall preserve all of their offset stakes marking locations of the valve boxes and manhole frame/covers. If offset stakes are damaged or lost, it shall be the Contractor's sole responsibility to survey and re-stake the locations of the valve boxes and manhole frame/covers at their expense.
3. Adjusting Water Meter Boxes - If necessary, existing service lateral piping shall be adjusted to maintain a spacing of 10" from the centerline of the piping in the meter box to the bottom of the meter box cover. In new sidewalk areas, replace the Type "B" meter box and cover with Type "X" meter box and cover. The top of all water meter boxes shall be flush with the new sidewalk surface.



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*mlh*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## ROADWAY PAVING PLAN

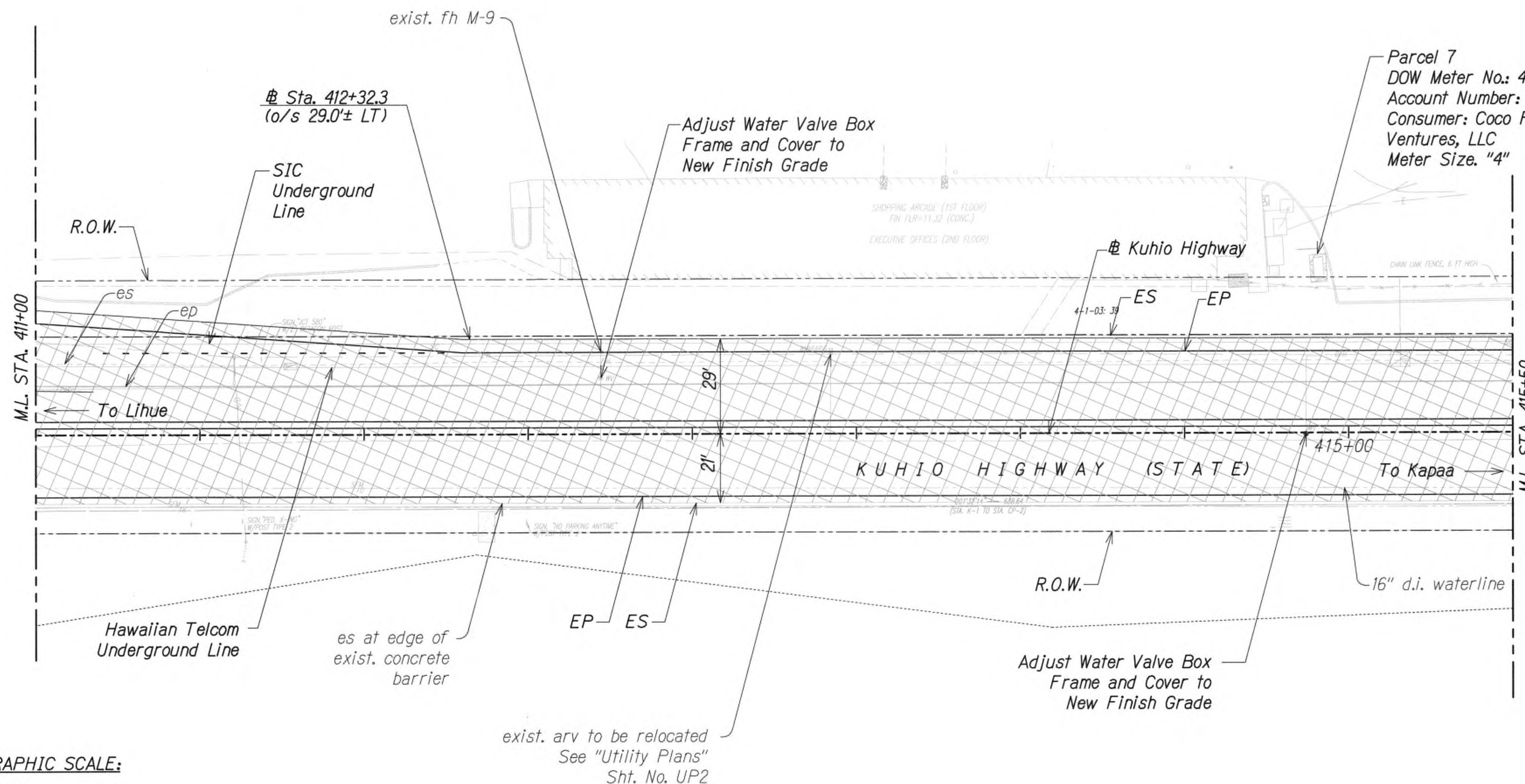
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

SHEET No. RP10 OF 16 SHEETS

ADD.35

True North  
Scale: 1"=20'



### GRAPHIC SCALE:



### Legend:

- New Pavement Structure
- 2" Cold Plane Repave with 2" HMA, Mix IV

### APPROVED

*[Signature]*  
For Manager and Chief Engineer  
Department of Water,  
County of Kauai

7/22/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility  
only. No design changes have  
been made.

DATE REVISION

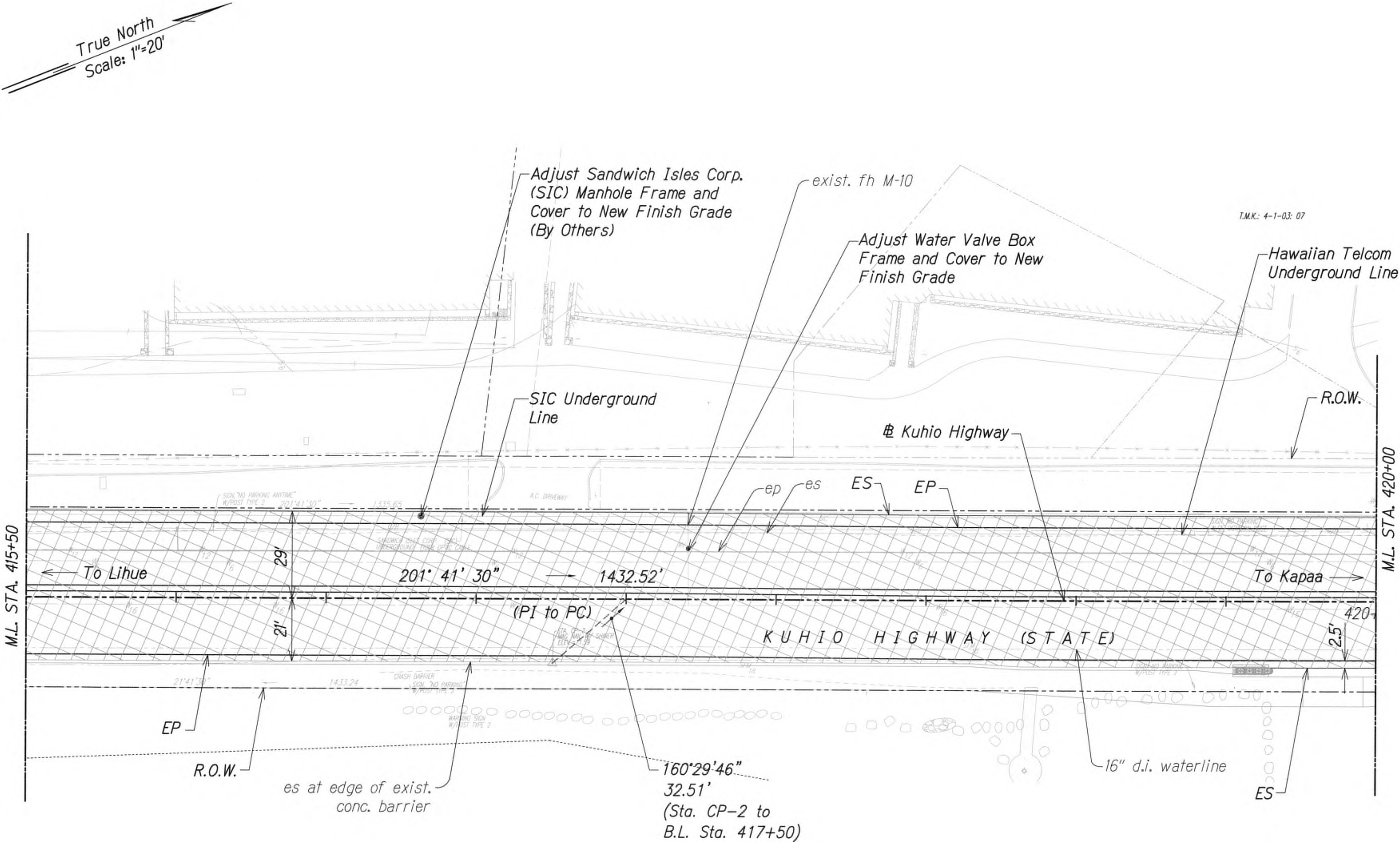
DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
QUANTITIES BY	
ORIGINAL PLAN	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.36	244

# WATER NOTES FOR EXISTING WATER FACILITIES

1. Prior to commencing his operations, the Contractor shall contact the County of Kaua'i, Department of Water Operations Division (phone no. 245-5444) and make arrangements for the Department to "tone" and mark the existing water facilities located within the project limits, such as waterlines, valve boxes, water meter boxes, and manhole frame/covers, etc., shall be adjusted to match the new finished grades noted on the construction plans.
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## GRAPHIC SCALE:



## Legend:

- New Pavement Structure
- 2" Cold Plane Repave with 2" HMA, Mix IV

APPROVED

*[Signature]*  
for Manager and Chief Engineer  
Department of Water,  
County of Kauai

7/22/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## ROADWAY PAVING PLAN

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

SHEET No. RP11 OF 16 SHEETS

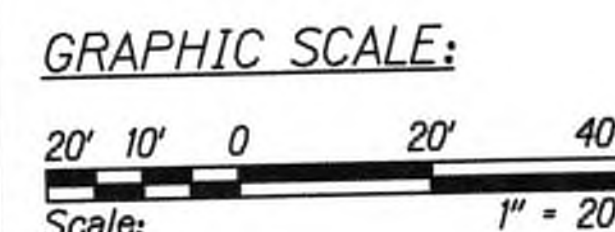
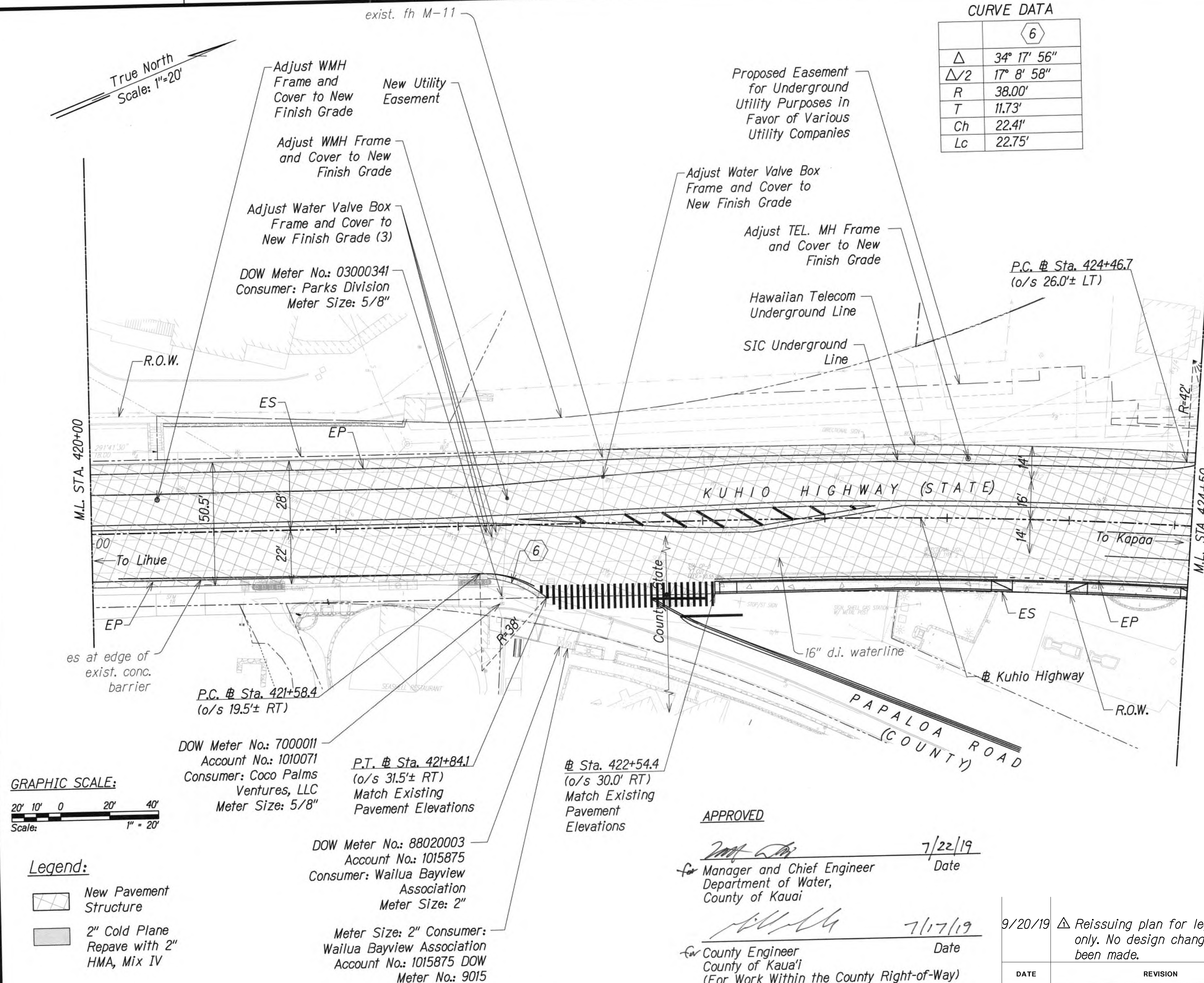


# CURVE DATA

	6
$\Delta$	34° 17' 56"
$\Delta/2$	17° 8' 58"
R	38.00'
T	11.73'
Ch	22.41'
Lc	22.75'

## WATER NOTES FOR EXISTING WATER FACILITIES

1. Prior to commencing his operations, the Contractor shall contact the County of Kaua'i, Department of Water Operations Division (phone no. 245-5444) and make arrangements for the Department to "tone" and mark the existing water facilities located within the project limits, such as waterlines, valve boxes, water meter boxes, and manhole frame/covers, etc., shall be adjusted to match the new finished grades noted on the construction plans.
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### Legend:

- New Pavement Structure
- 2" Cold Plane Repave with 2" HMA, Mix IV

DOW Meter No.: 7000011  
Account No.: 1010071  
Consumer: Coco Palms Ventures, LLC  
Meter Size: 5/8"

P.T. # Sta. 421+84.1  
(o/s 31.5'± RT)  
Match Existing Pavement Elevations

DOW Meter No.: 88020003  
Account No.: 1015875  
Consumer: Wailua Bayview Association  
Meter Size: 2"

Meter Size: 2" Consumer: Wailua Bayview Association  
Account No.: 1015875 DOW  
Meter No.: 9015

# Sta. 422+54.4  
(o/s 30.0' RT)  
Match Existing Pavement Elevations

### APPROVED

Manager and Chief Engineer  
Department of Water,  
County of Kauai  
Date: 7/22/19

County Engineer  
County of Kaua'i  
(For Work Within the County Right-of-Way)  
Date: 7/17/19

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## ROADWAY PAVING PLAN

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

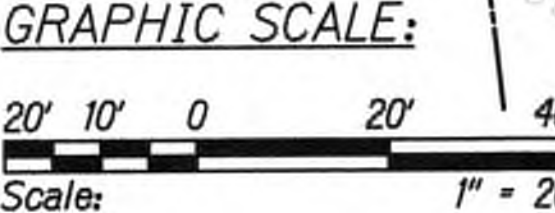
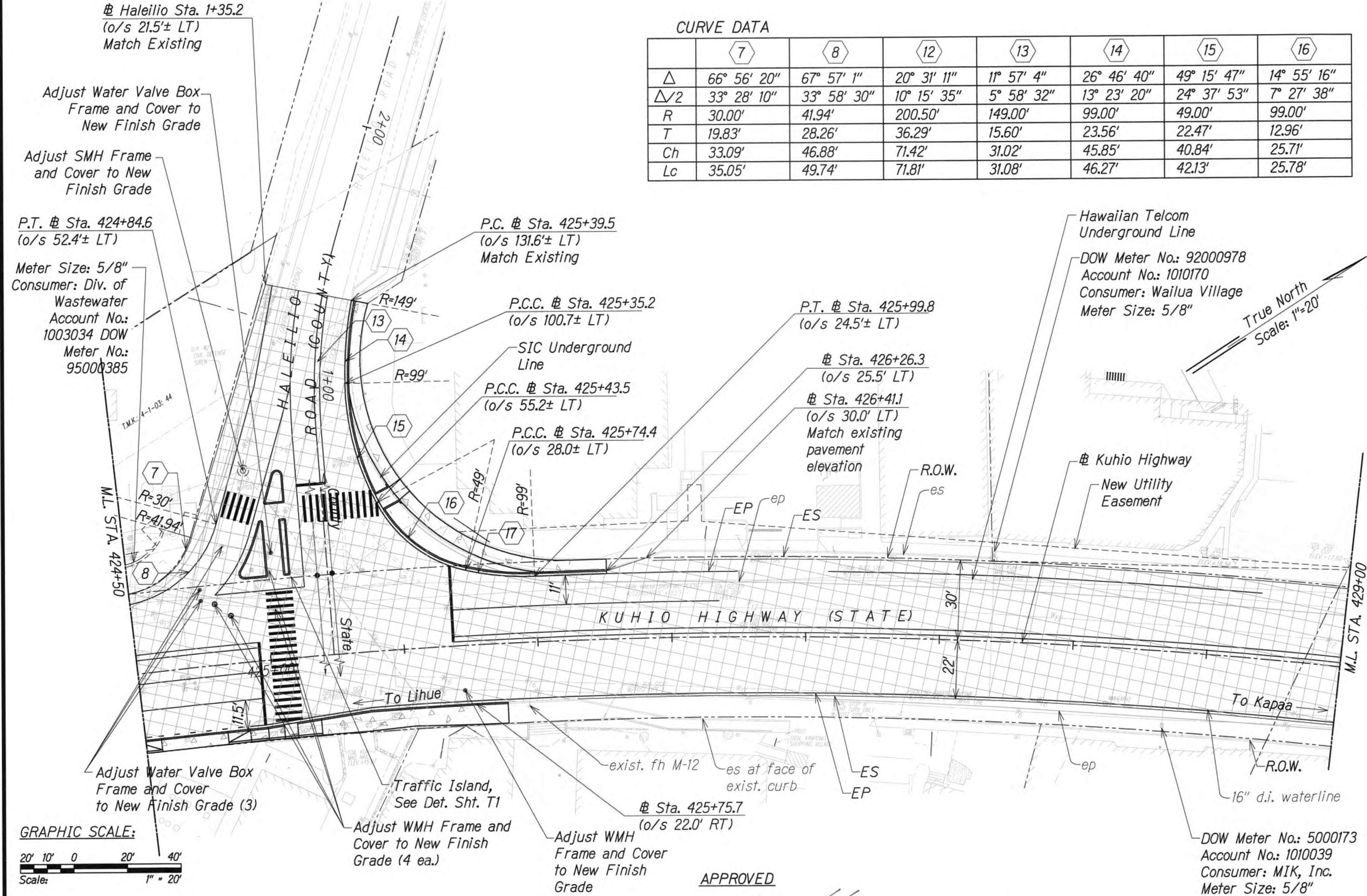
SHEET No. RP12 OF 16 SHEETS



CURVE DATA

	7	8	12	13	14	15	16
$\Delta$	66° 56' 20"	67° 57' 1"	20° 31' 11"	11° 57' 4"	26° 46' 40"	49° 15' 47"	14° 55' 16"
$\Delta/2$	33° 28' 10"	33° 58' 30"	10° 15' 35"	5° 58' 32"	13° 23' 20"	24° 37' 53"	7° 27' 38"
R	30.00'	41.94'	200.50'	149.00'	99.00'	49.00'	99.00'
T	19.83'	28.26'	36.29'	15.60'	23.56'	22.47'	12.96'
Ch	33.09'	46.88'	71.42'	31.02'	45.85'	40.84'	25.71'
Lc	35.05'	49.74'	71.81'	31.08'	46.27'	42.13'	25.78'

- WATER NOTES FOR EXISTING WATER FACILITIES
1. Prior to commencing his operations, the Contractor shall contact the County of Kauai, Department of Water Operations Division (phone no. 245-5444) and make arrangements for the Department to "tone" and mark the existing water facilities located within the project limits, such as waterlines, valve boxes, water meter boxes, and manhole frame/covers, etc., shall be adjusted to match the new finished grades noted on the construction plans.
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- Legend:
- New Pavement Structure
  - 2" Cold Plane Repave with 2" HMA, Mix IV

Note:  
See "Traffic Signal Plans" for Adjustments/Relocation of Traffic Signal System

APPROVED

For County Engineer  
County of Kauai  
(For Work Within the County Right-of-Way)

For Manager and Chief Engineer  
Department of Water,  
County of Kauai

Date

Date

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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WILSON OKAMOTO CORPORATION  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ROADWAY PAVING PLAN

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

SHEET No. RP13 OF 16 SHEETS







FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.40	244

WATER NOTES FOR EXISTING WATER FACILITIES

1. Prior to commencing his operations, the Contractor shall contact the County of Kaua'i, Department of Water Operations Division (phone no. 245-5444) and make arrangements for the Department to "tone" and mark the existing water facilities located within the project limits, such as waterlines, valve boxes, water meter boxes, and manhole frame/covers, etc., shall be adjusted to match the new finished grades noted on the construction plans.
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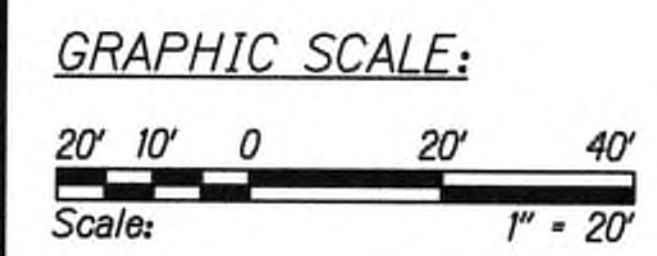
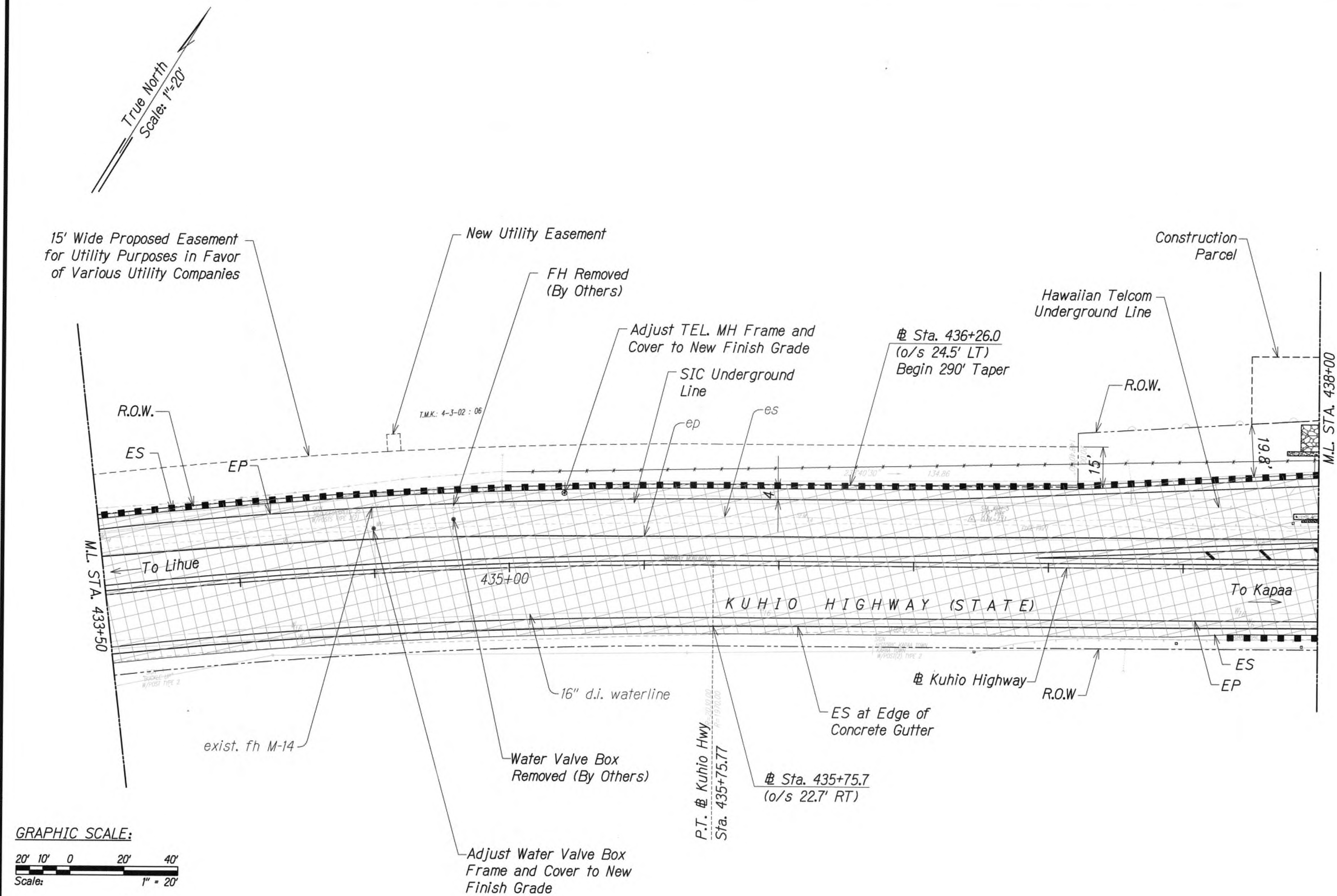


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*[Signature]*  
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ROADWAY PAVING PLAN  
  
KUHIU HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20'  
Date: July 2019

SHEET No. RP15 OF 16 SHEETS



- Legend:
- New Pavement Structure
  - 2" Cold Plane Repave with 2" HMA, Mix IV

APPROVED

*[Signature]* 7/22/19  
 Manager and Chief Engineer Date  
 Department of Water,  
 County of Kauai

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

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



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.41	244

### WATER NOTES FOR EXISTING WATER FACILITIES

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*msh*  
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

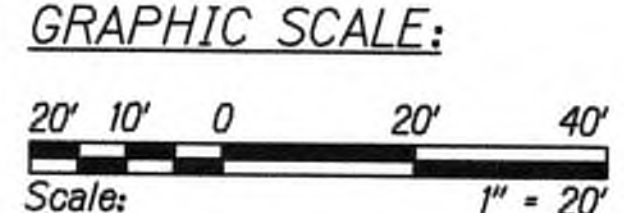
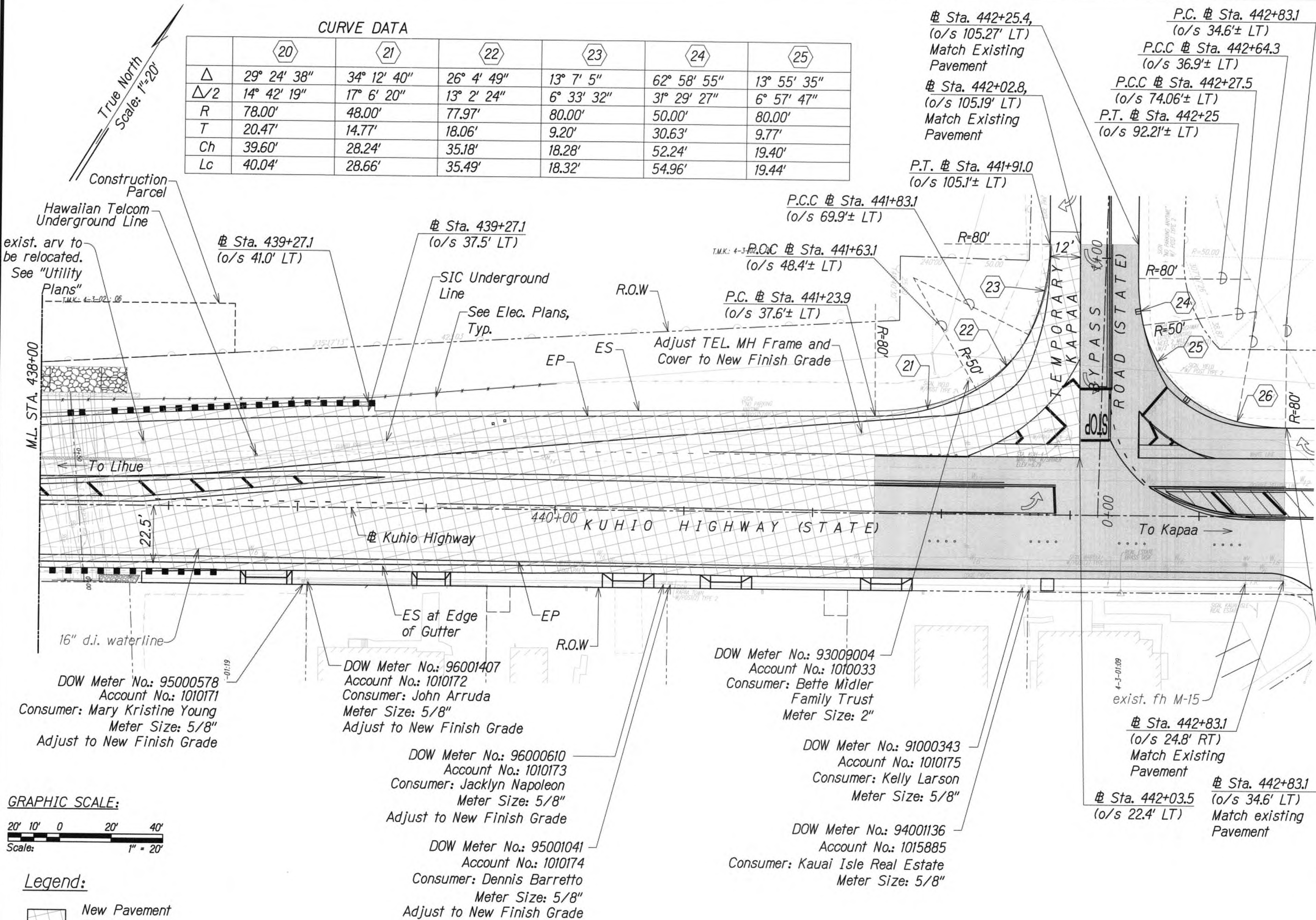
### ROADWAY PAVING PLAN

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 20' Date: July 2019

SHEET No. RP16 OF 16 SHEETS

ADD.41

CURVE DATA						
	20	21	22	23	24	25
Δ	29° 24' 38"	34° 12' 40"	26° 4' 49"	13° 7' 5"	62° 58' 55"	13° 55' 35"
Δ/2	14° 42' 19"	17° 6' 20"	13° 2' 24"	6° 33' 32"	31° 29' 27"	6° 57' 47"
R	78.00'	48.00'	77.97'	80.00'	50.00'	80.00'
T	20.47'	14.77'	18.06'	9.20'	30.63'	9.77'
Ch	39.60'	28.24'	35.18'	18.28'	52.24'	19.40'
Lc	40.04'	28.66'	35.49'	18.32'	54.96'	19.44'



- Legend:**
- New Pavement Structure
  - 2" Cold Plane Repave with 2" HMA, Mix IV

### APPROVED

*[Signature]*  
 Manager and Chief Engineer  
 Department of Water,  
 County of Kauai

7/22/19  
 Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

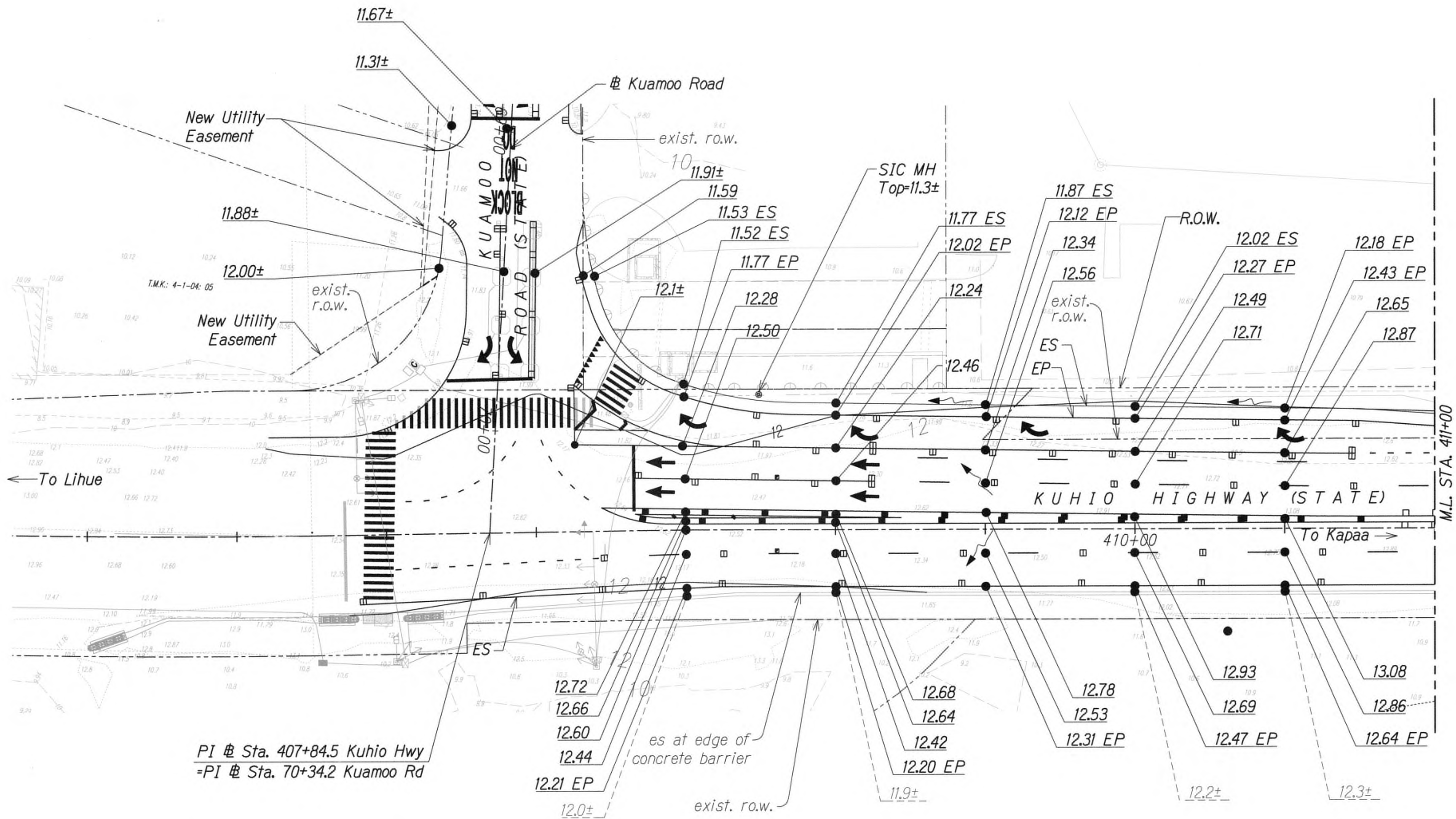
DATE REVISION

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	

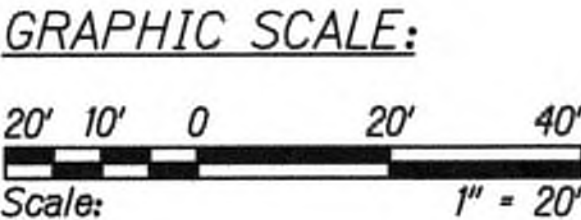


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.42	244

True North  
Scale: 1"=20'



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTED BY	
NO.	



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DATE REVISION

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*mlh*

WILSON OKAMOTO CORPORATION L.C. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**GRADING PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. GP1 OF 10 SHEETS

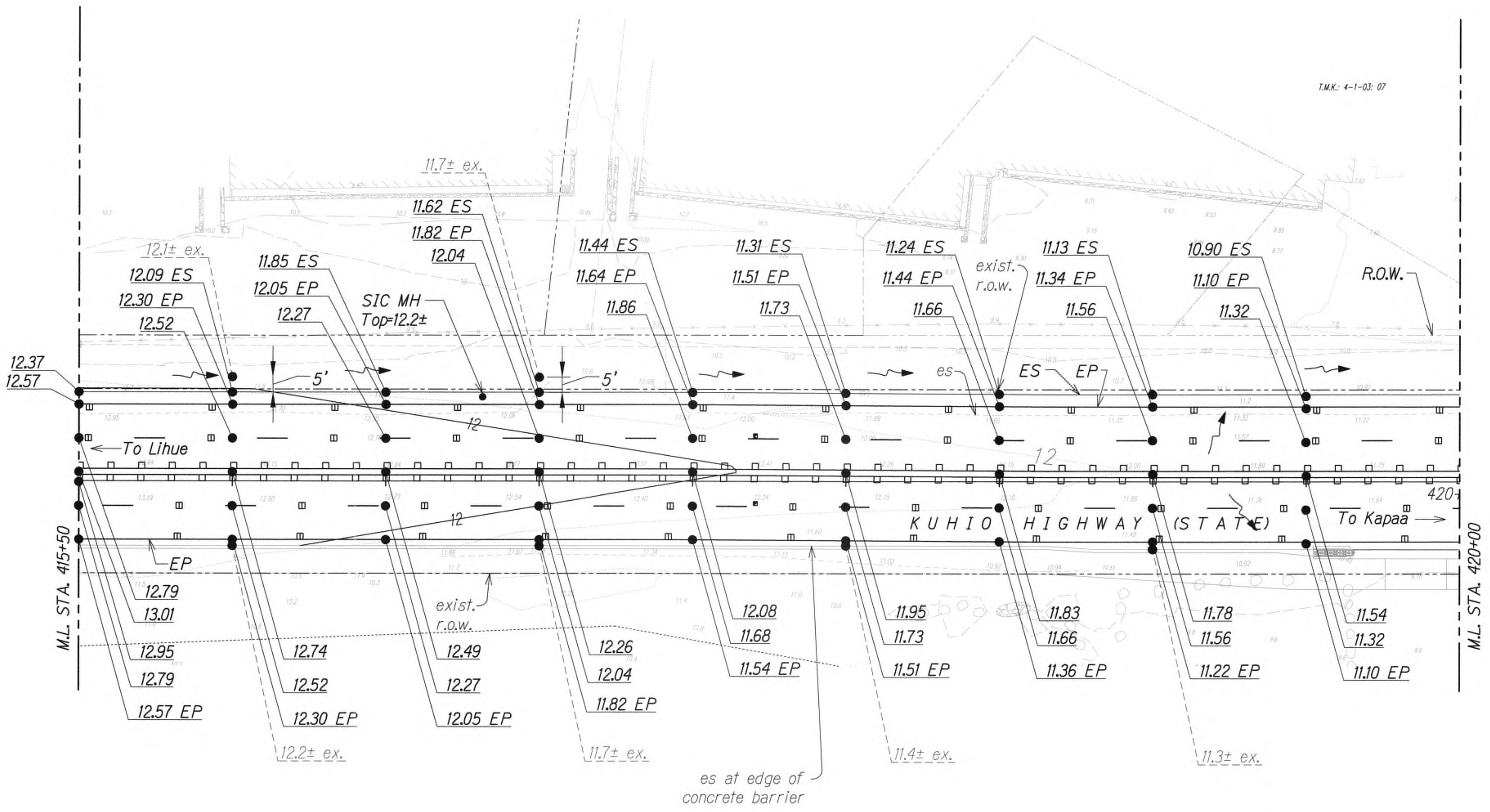




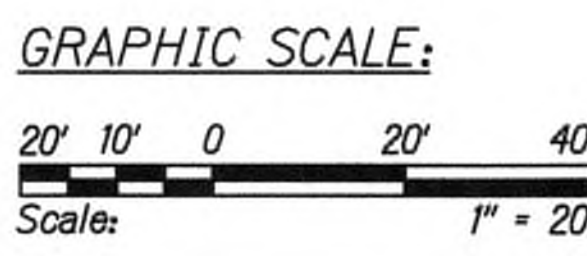


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.44	244

True North  
Scale: 1"=20'



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



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*mlh*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

GRADING PLAN

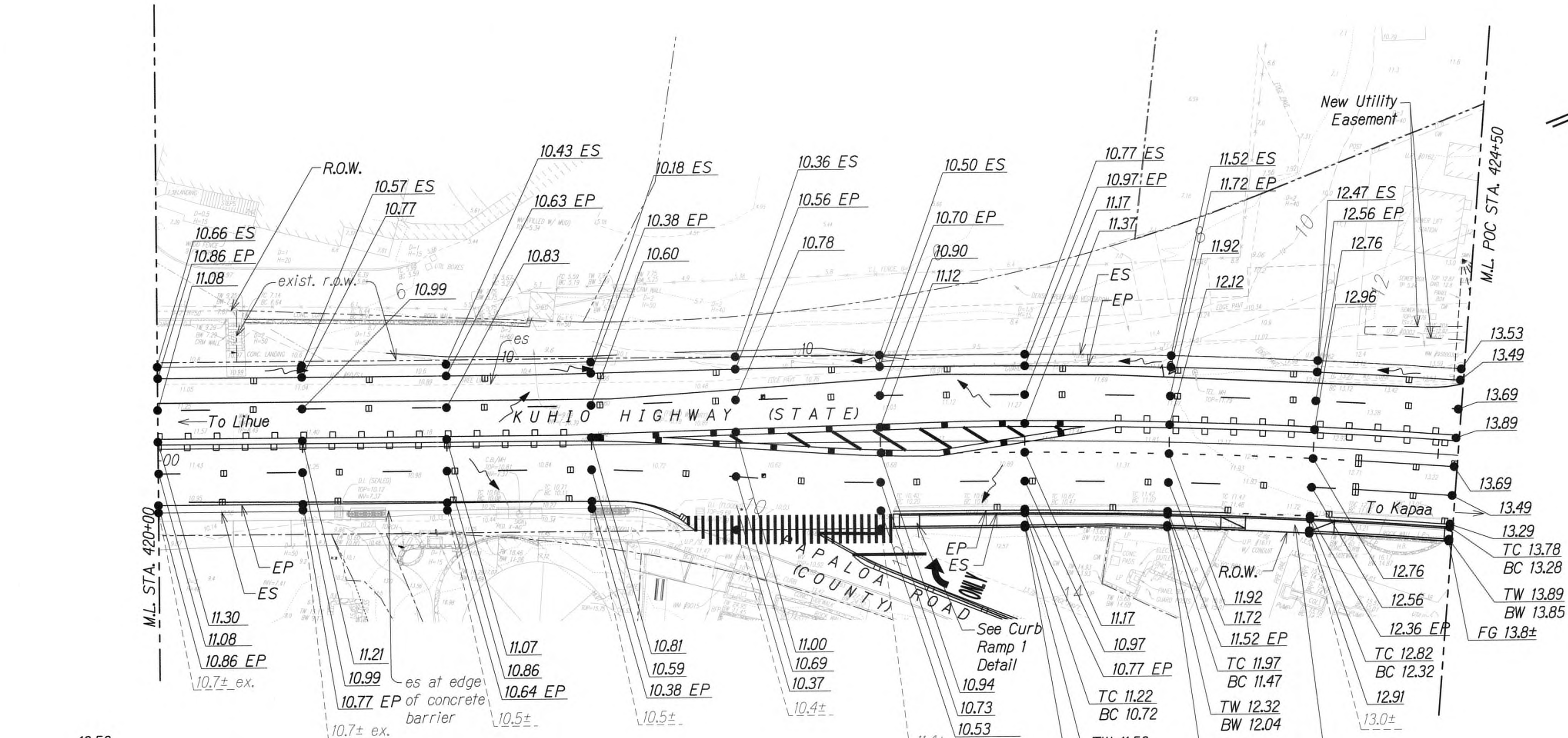
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. GP3 OF 10 SHEETS

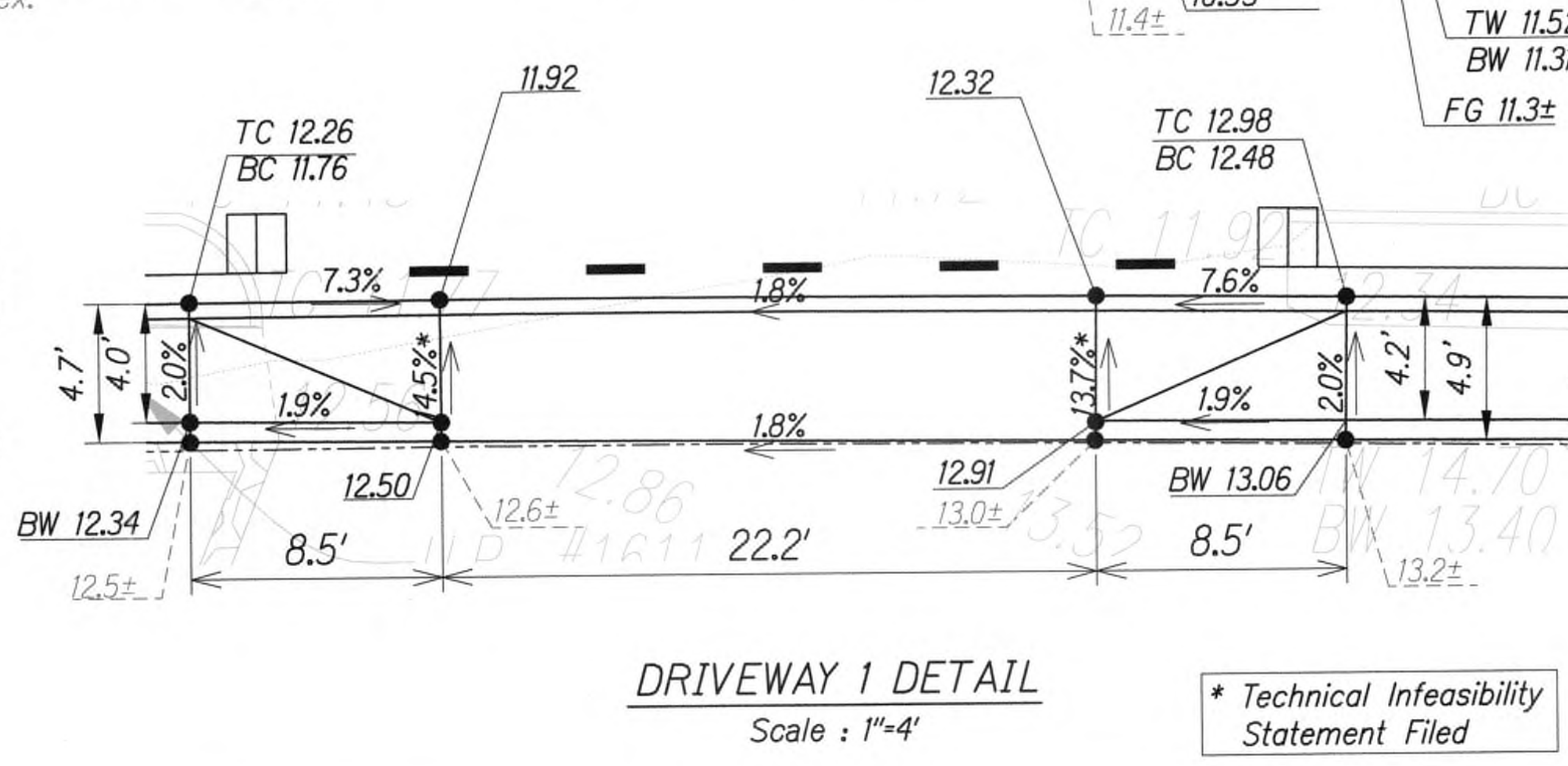
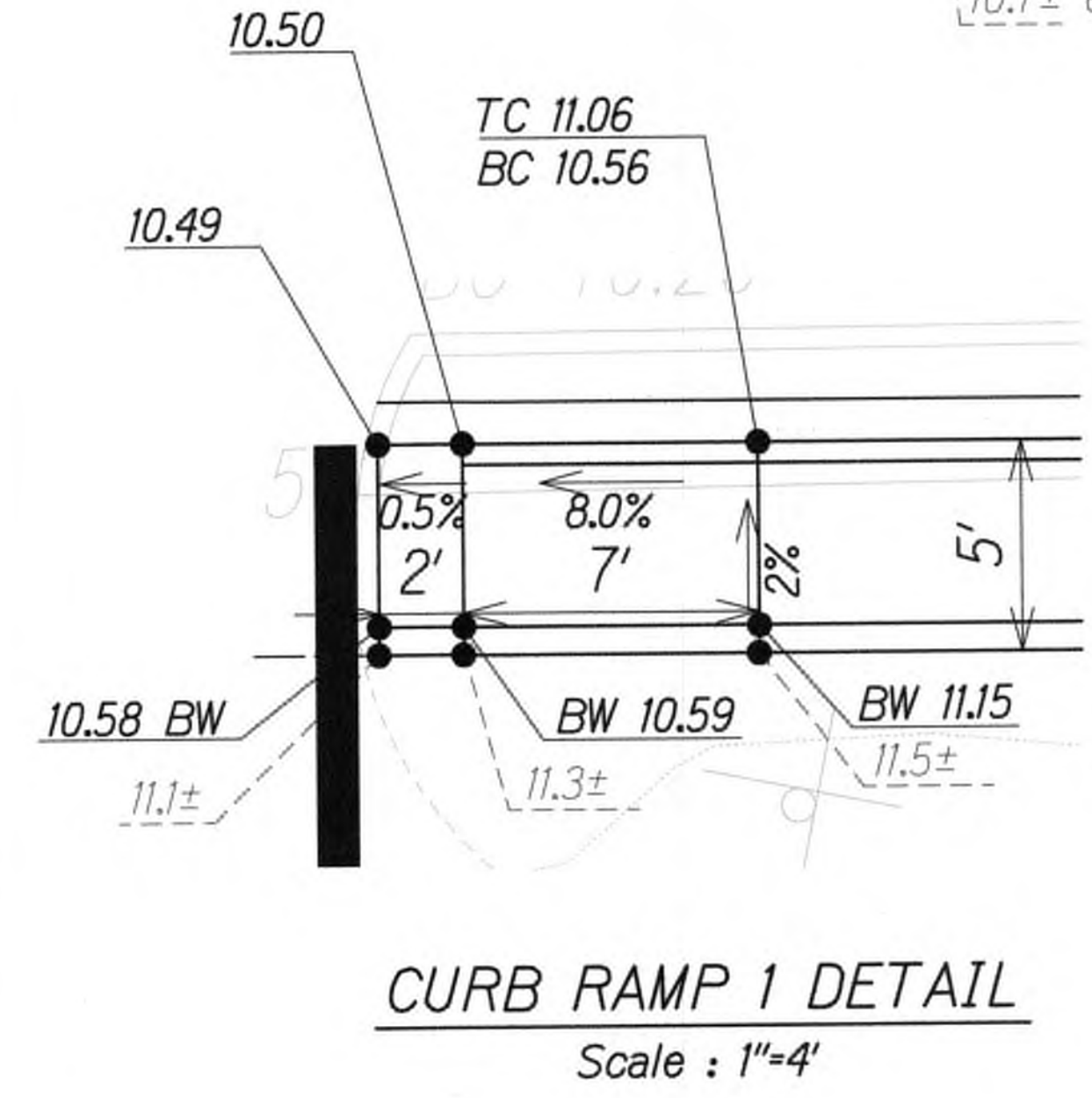
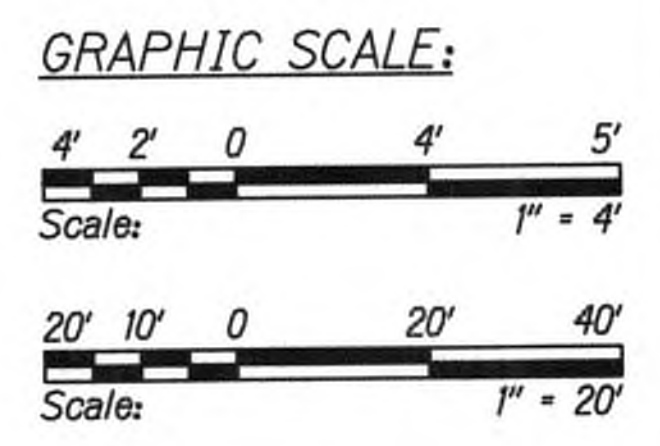
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD45	244



True North  
Scale: 1"=20'



APPROVED  
 [Signature]  
 County Engineer  
 County of Kaua'i  
 (For Work Within the County Right-of-Way)  
 Date: 7/17/19



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 [Signature]  
 APRIL 30, 2020  
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**GRADING PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 20' Date: July 2019

SHEET No. GP4 OF 10 SHEETS

SURVEY PLATTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

\* Technical Infeasibility Statement Filed

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

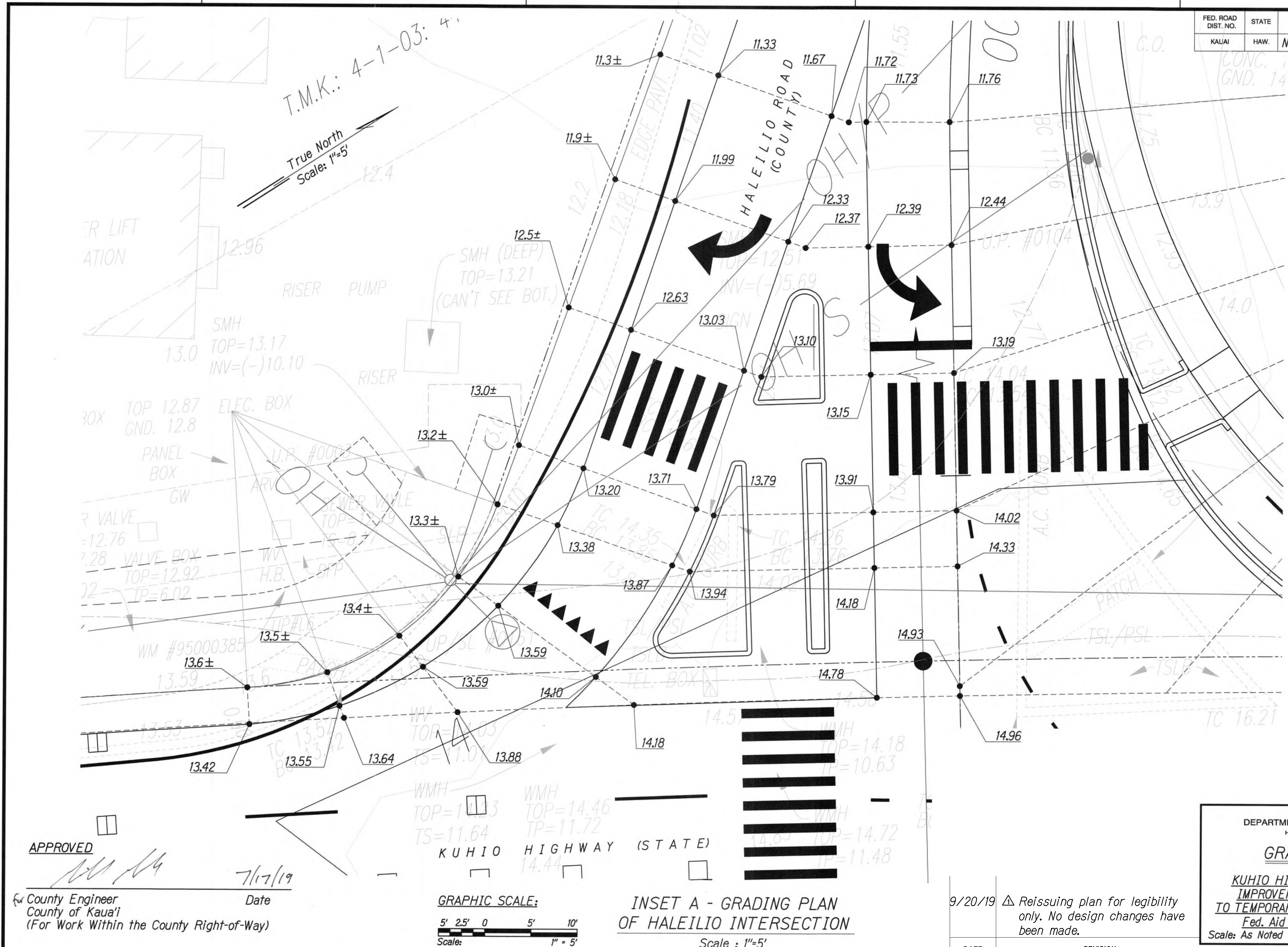
DATE	REVISION
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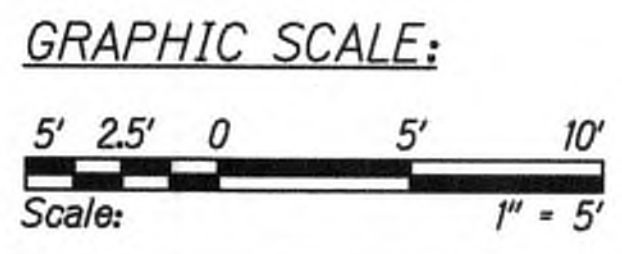


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.47	244



DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NO. _____	

APPROVED \_\_\_\_\_  
 Date 7/17/19  
 For County Engineer  
 County of Kauai  
 (For Work Within the County Right-of-Way)



INSET A - GRADING PLAN  
 OF HALEILIO INTERSECTION  
 Scale : 1"=5'

9/20/19	Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

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 APRIL 30, 2020  
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

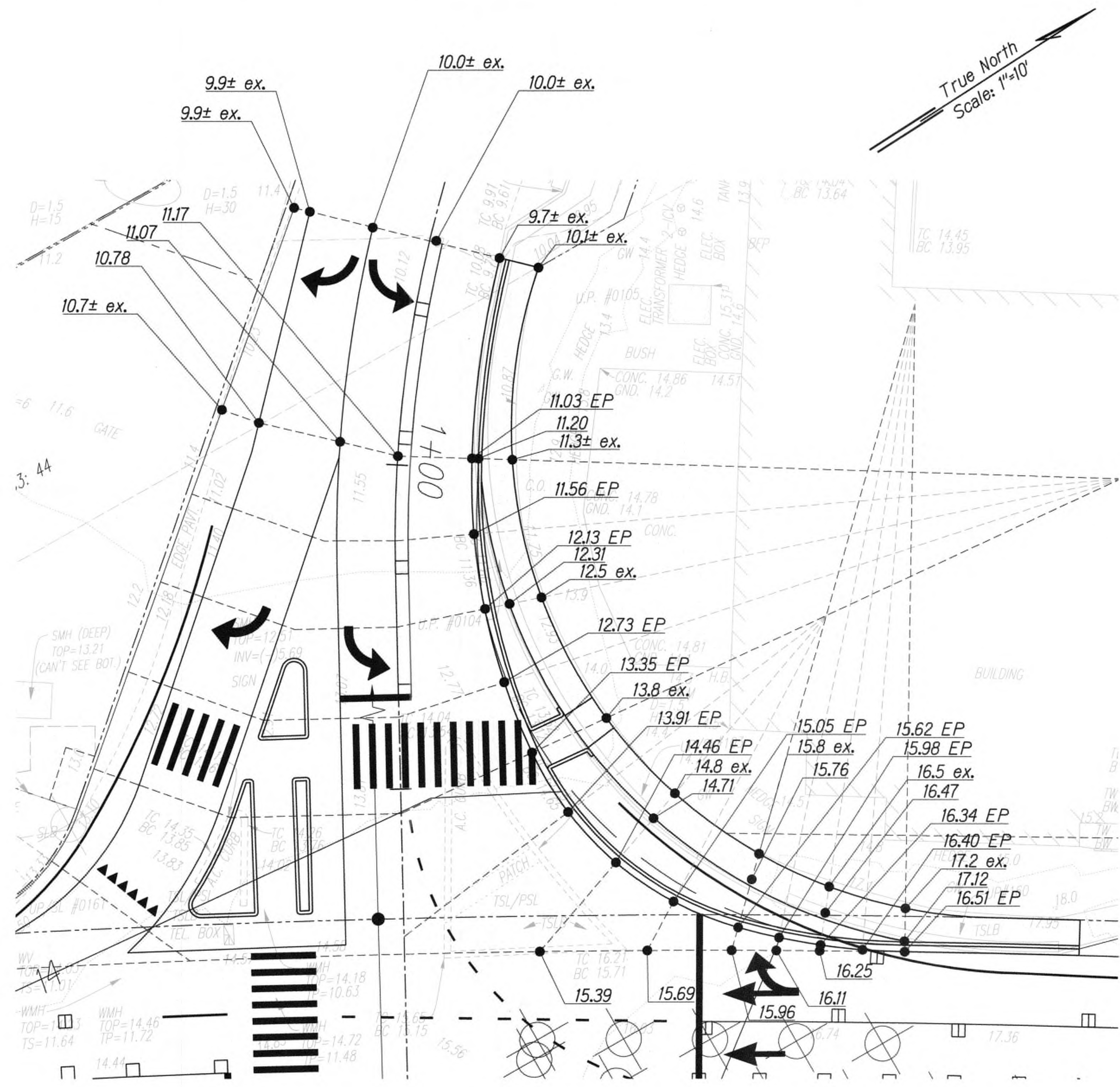
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**GRADING PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: As Noted Date: July 2019

SHEET No. GP6 OF 10 SHEETS







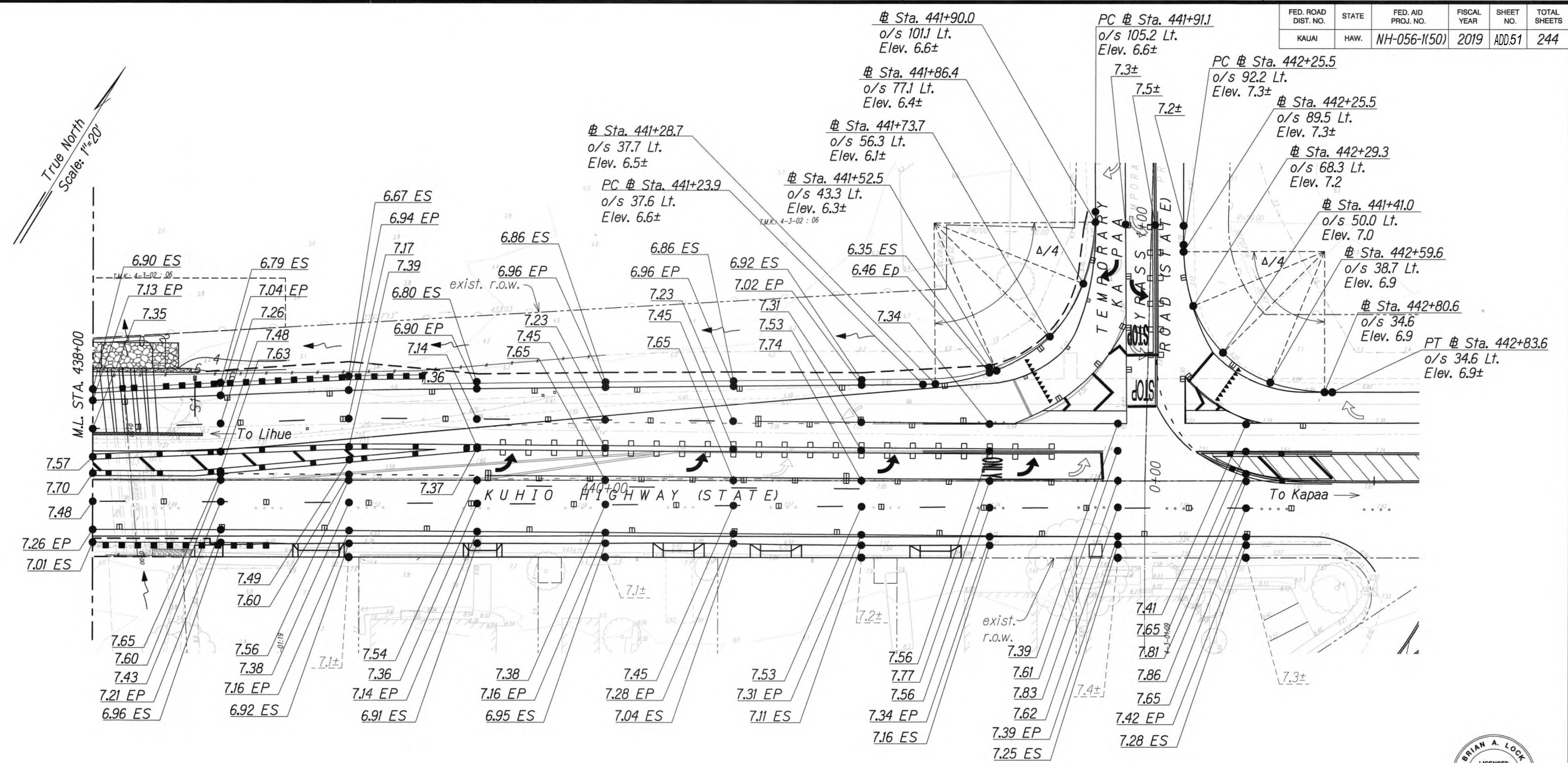




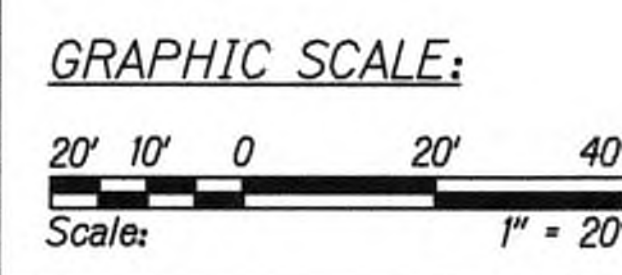




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.51	244



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



9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
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 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

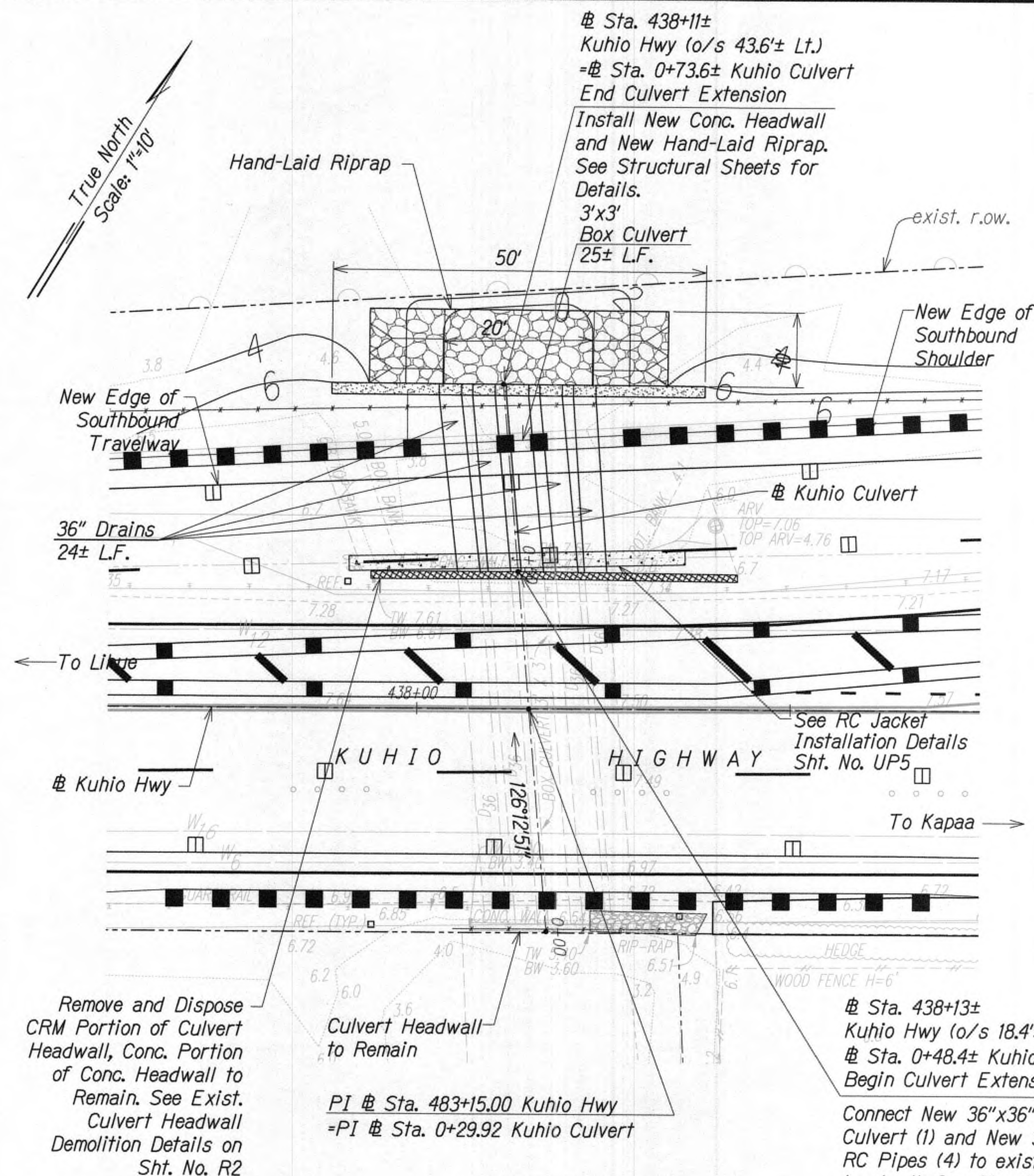
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**GRADING PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: As Noted Date: July 2019  
 SHEET No. GP10 OF 10 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.52	244



**LAYOUT PLAN**  
**EXTENSION OF EXISTING BOX CULVERT**  
**AT STA. 438+15**  
Scale: 1" = 10'

**Notes:**

- Concrete or debris from demolition work shall be removed and not allowed to fall into water way.
- Contractor shall utilize water proof form work for cast-in-place concrete headwall foundation and collar. Contractor shall not use chemical treated wood for waterproof form work. Contractor shall keep foundation dry by draining, bailing, pumping, driving sheathings; or by constructing cofferdams and cribs.
- Contractor shall clean existing culverts.
- Contractor shall protect 14" sewer force main during culvert installation.

**GRAPHIC SCALE:**

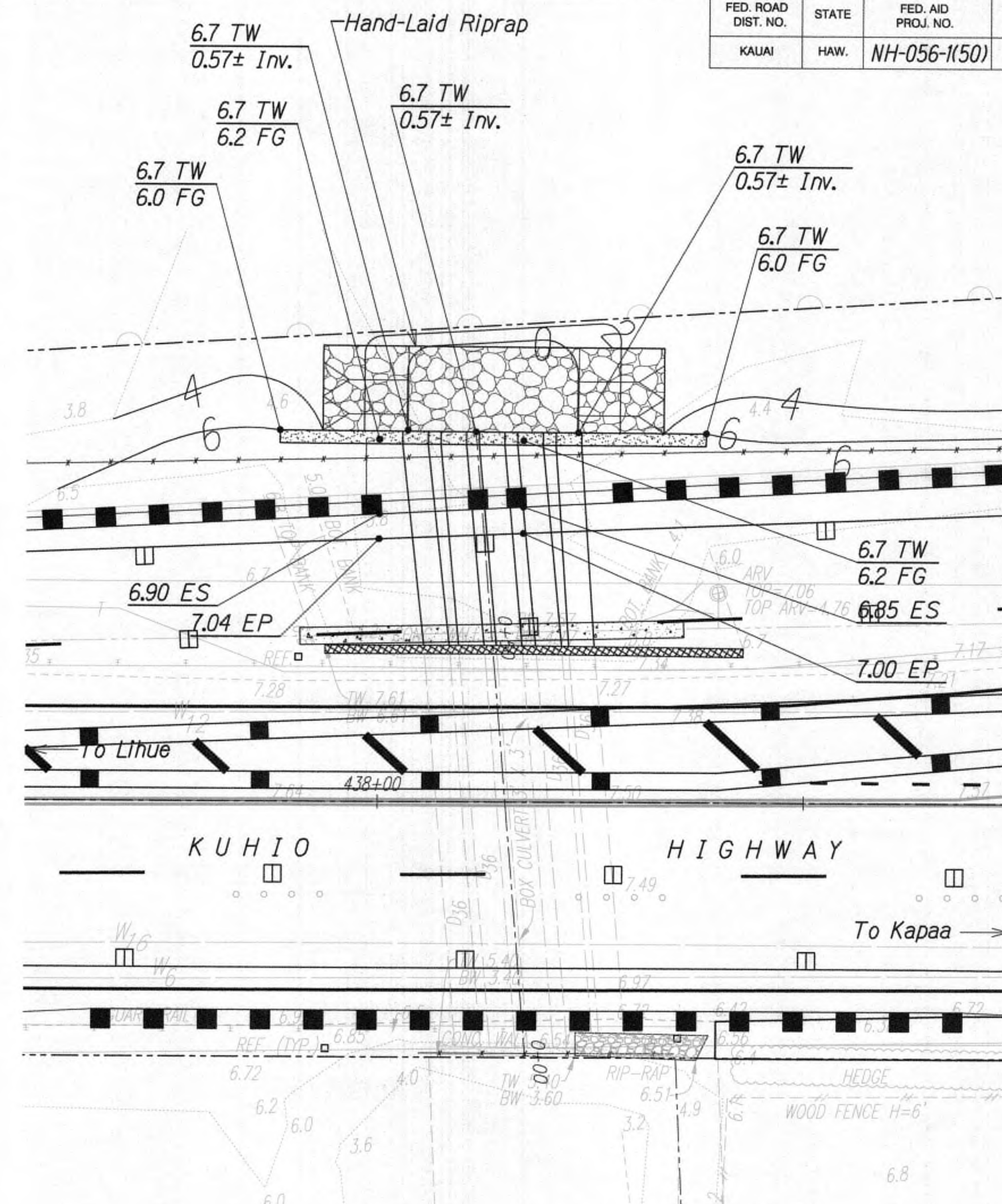


**APPROVED**

*[Signature]*  
Chief, Division of Wastewater Management  
(For Work Involving Sewer Appurtenances)

8/9/19  
Date

**GRADING PLAN**  
**EXTENSION OF EXISTING BOX CULVERT**  
**AT STA. 438+15**  
Scale: 1" = 10'



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OR UNDER MY SUPERVISION.  
*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KUHIO HIGHWAY**  
**CULVERT EXTENSION**  
**KUHIO HIGHWAY SHORT-TERM**  
**IMPROVEMENTS KUAMOO ROAD**  
**TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

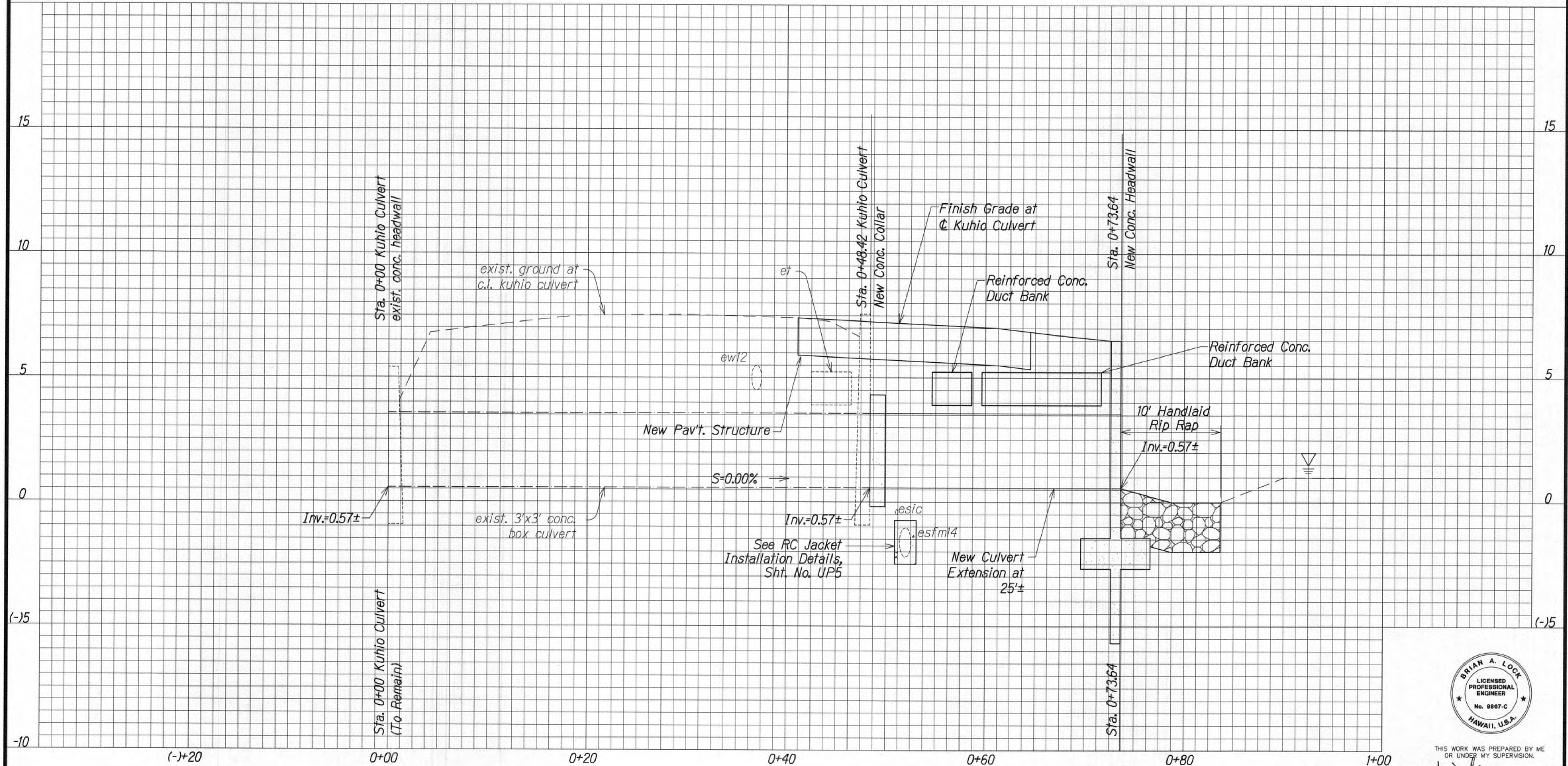
SHEET No. R1 OF 3 SHEETS

**ADD.52**









**PROFILE - 3'x3' BOX CULVERT**  
 Scale : Horiz. 1" = 5'  
 Vert. 1" = 2'

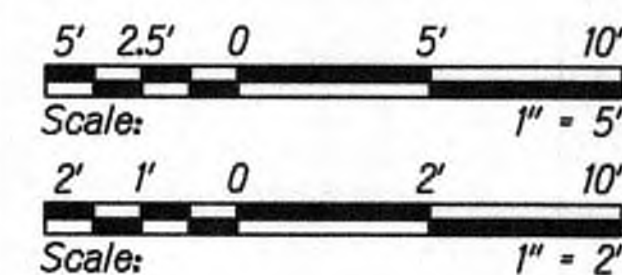
**Note:**

1. Protect Sandwich Isles communication and sewer force main from damage

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION

**GRAPHIC SCALE:**



**APPROVED**

*[Signature]*  
 Chief, Division of Wastewater Management  
 (For Work Involving Sewer Lines and Appurtenances)

8/9/19  
 Date



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 APRIL 30, 2020  
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**PROFILE - KUHIO HIGHWAY**  
**CULVERT EXTENSION**  
**KUHIO HIGHWAY SHORT-TERM**  
**IMPROVEMENTS KUAMOO ROAD**  
**TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: As Noted Date: July 2019  
 SHEET No. R3 OF 3 SHEETS

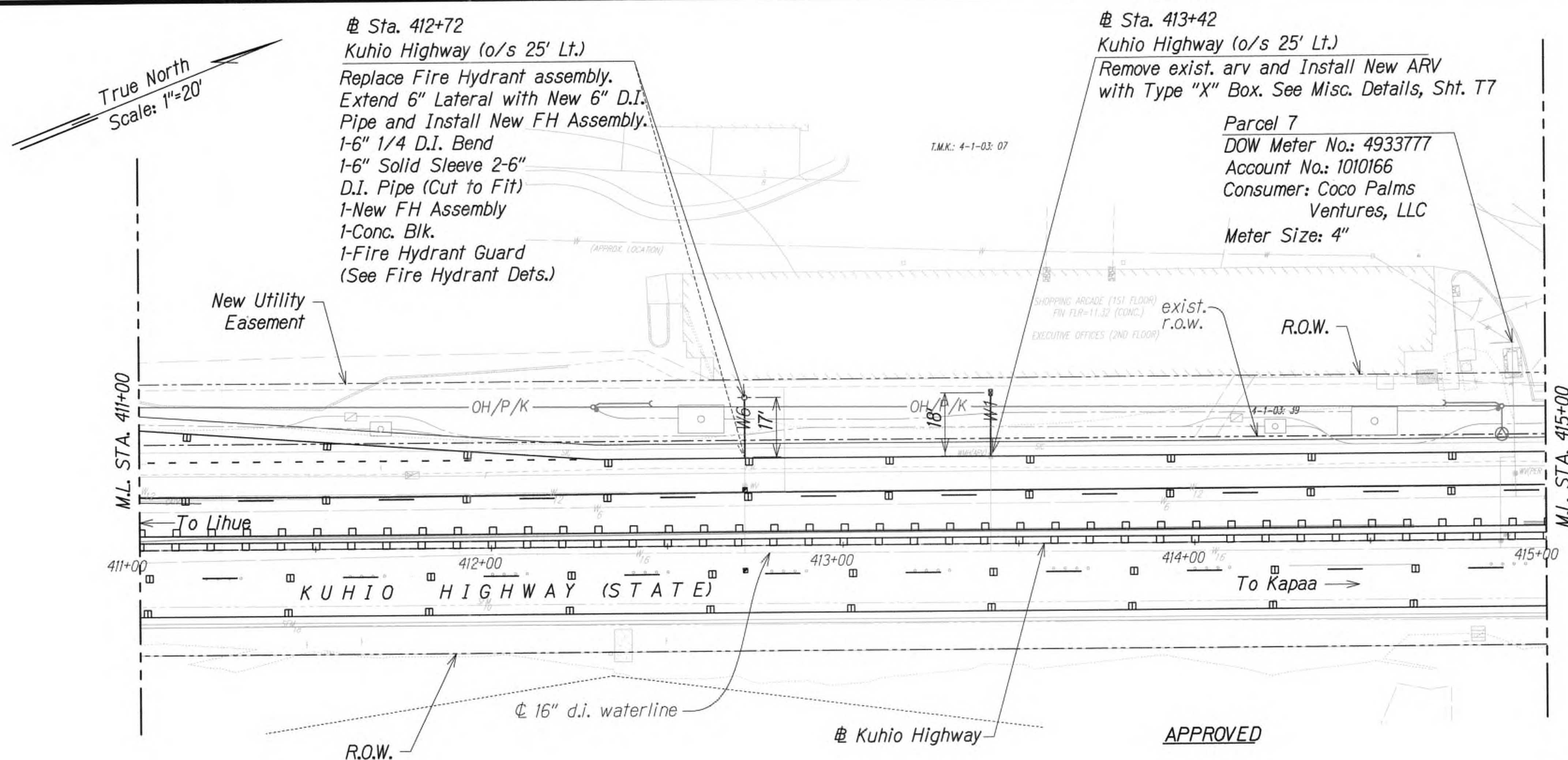
**ADD.54**







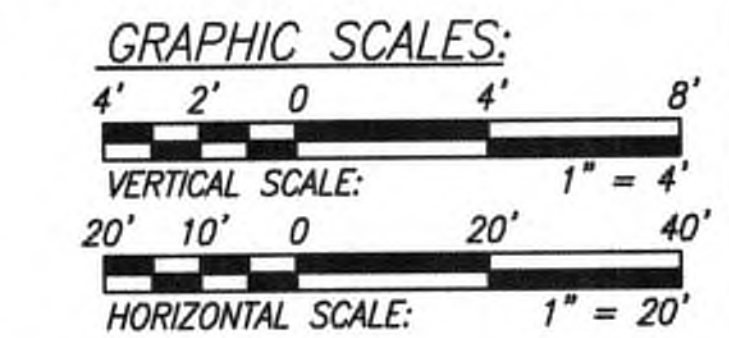
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA1	HAW.	NH-056-1(50)	2019	ADD.56	244



@ Sta. 413+42  
 Kuhio Highway (o/s 25' Lt.)  
 Remove exist. arv and Install New ARV with Type "X" Box. See Misc. Details, Sht. T7  
 Parcel 7  
 DOW Meter No.: 4933777  
 Account No.: 1010166  
 Consumer: Coco Palms Ventures, LLC  
 Meter Size: 4"

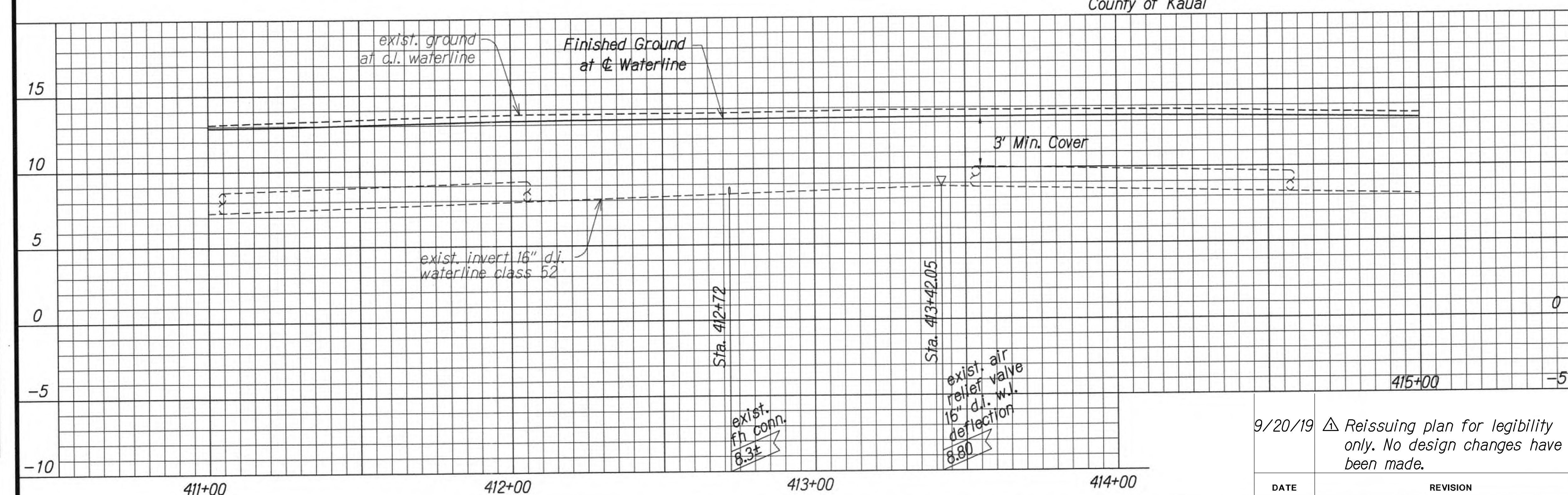
@ Sta. 412+72  
 Kuhio Highway (o/s 25' Lt.)  
 Replace Fire Hydrant assembly. Extend 6" Lateral with New 6" D.I. Pipe and Install New FH Assembly.  
 1-6" 1/4 D.I. Bend  
 1-6" Solid Sleeve 2-6" D.I. Pipe (Cut to Fit)  
 1-New FH Assembly  
 1-Conc. Blk.  
 1-Fire Hydrant Guard (See Fire Hydrant Dets.)

- Notes:**
1. D.I. pipe and fittings shall be double wrapped with polyethylene.
  2. Contractor shall abandon pipe in place. All unused pipe shall be removed and disposed and trench shall be backfilled and restored.
  3. Contractor shall maintain water service at all times except for scheduled shutdowns for connections.
  4. Existing Fire Hydrants shall be removed, cleaned, and returned to Department of Water's baseyard in Lihue.
  4. The Fire Department shall be notified whenever a fire hydrant is placed out of and returned to service.
  5. Install "Megalug" retainer glands at all MJ end fittings.
  6. The Right-of-Way and all relevant property corners at the service lateral and fire hydrant locations shall be surveyed and marked by a licensed surveyor prior to construction. Incidental to Section 624.



APPROVED  
  
 Manager and Chief Engineer  
 Department of Water,  
 County of Kauai

7/22/19  
 Date



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



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 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**UTILITY PLAN**  
 KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: As Noted Date: July 2019  
 SHEET No. UP2 OF 11 SHEETS

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
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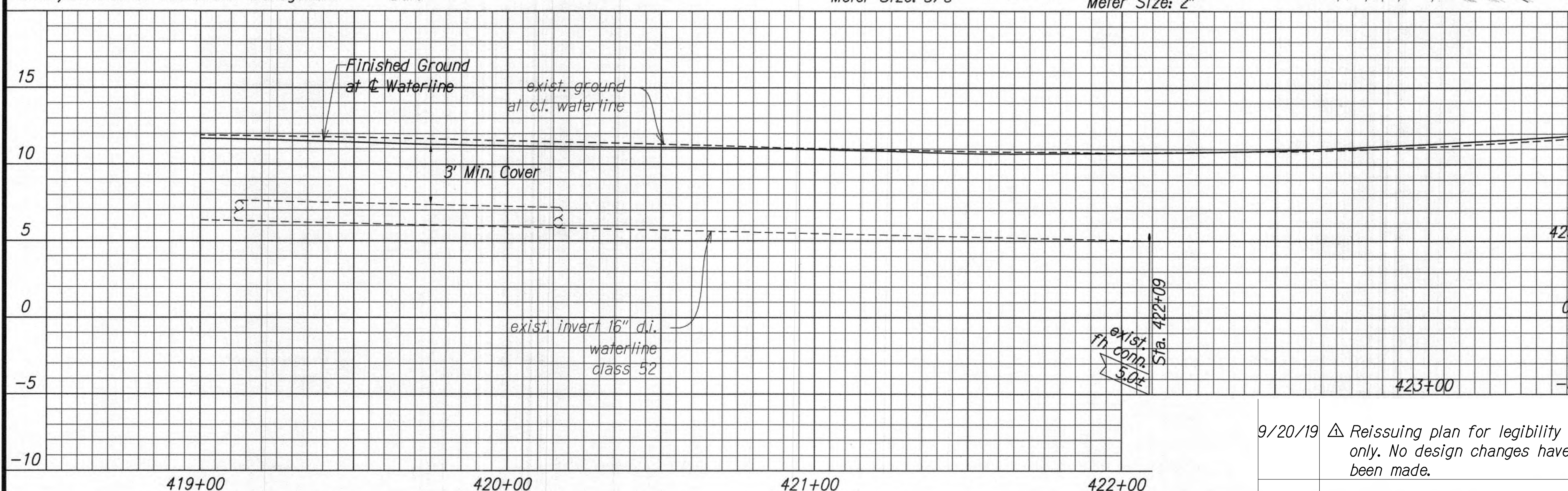
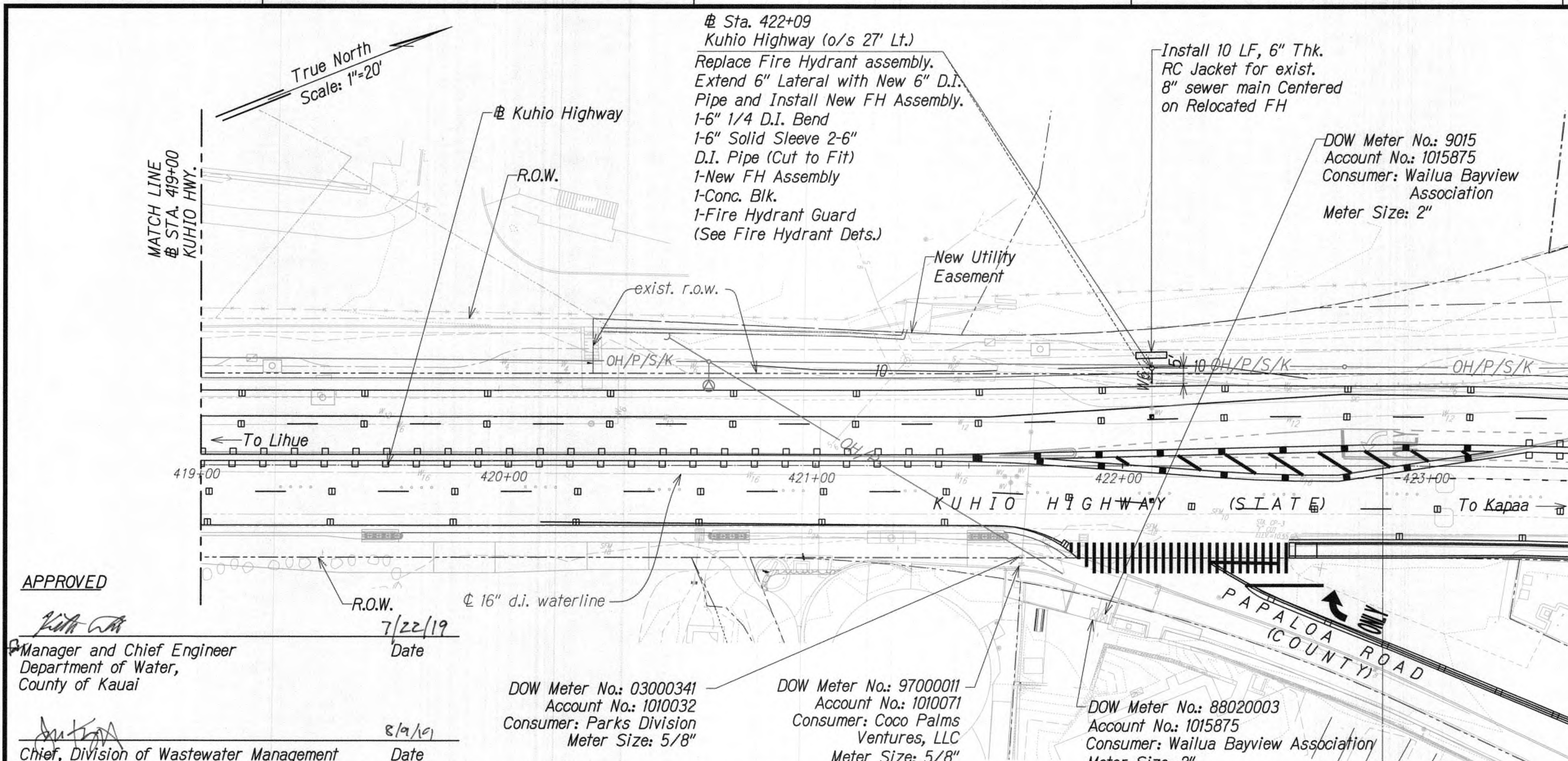
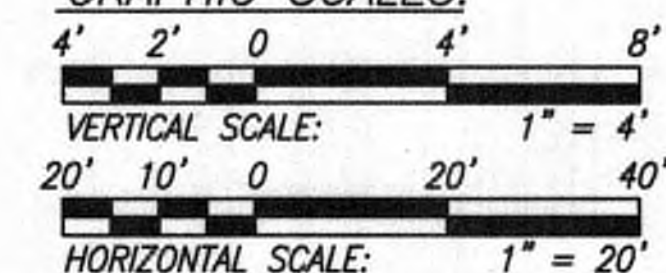


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA1	HAW.	NH-056-1(50)	2019	ADD.58	244

# Notes:

1. D.I. pipe and fittings shall be double wrapped with polyethylene.
2. Contractor shall abandon pipe in place. All unused pipe shall be removed and disposed and trench shall be backfilled and restored.
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6. The Right-of-Way and all relevant property corners at the service lateral and fire hydrant locations shall be surveyed and marked by a licensed surveyor prior to construction. Incidental to Section 624.

## GRAPHIC SCALES:



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## UTILITY PLAN

KUHIOW HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

SHEET No. UP4 OF 11 SHEETS

ADD.58

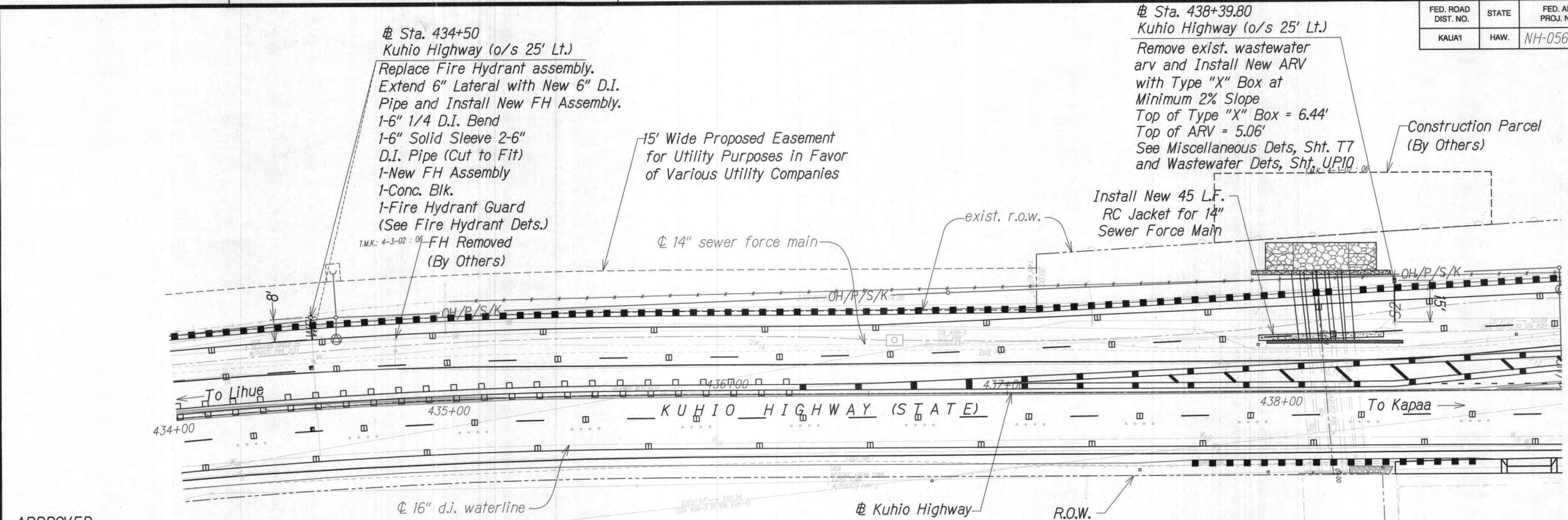
9/20/19 Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

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



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.59	244



APPROVED

*[Signature]*  
Manager and Chief Engineer  
Department of Water,  
County of Kauai

7/22/19  
Date

*[Signature]*  
Chief, Division of Wastewater Management

8/9/19  
Date

Notes:

1. D.I. pipe and fittings shall be double wrapped with polyethylene.
2. Contractor shall abandon pipe in place. All unused pipe shall be removed and disposed and trench shall be backfilled and restored.

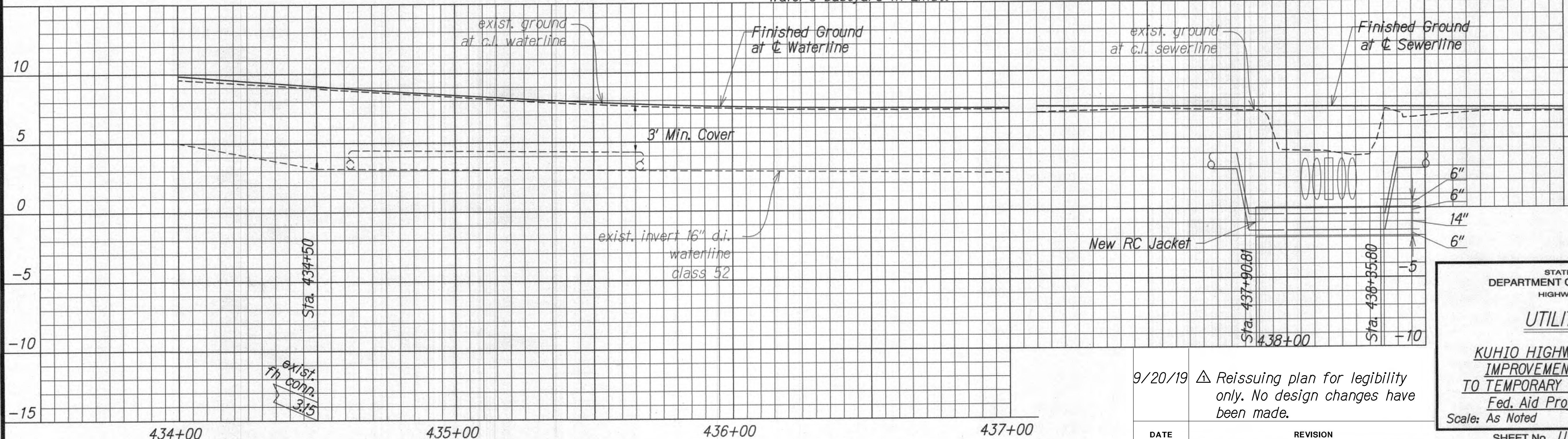
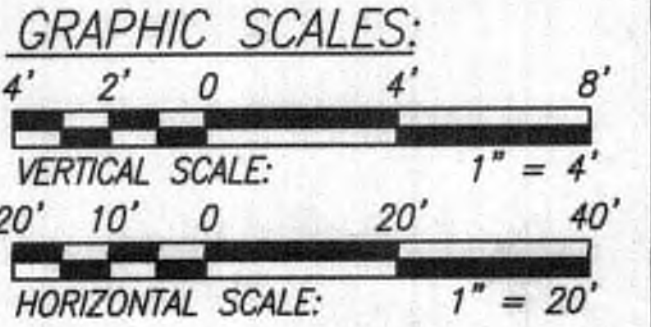
3. Contractor shall maintain water service at all times except for scheduled shutdowns for connections.

4. Existing Fire Hydrants shall be removed, cleaned, and returned to Department of Water's baseyard in Lihue.

5. The Fire Department shall be notified whenever a fire hydrant is placed out of and returned to service.

6. Install "Megalug" retainer glands at all MJ end fittings.

7. The Right-of-Way and all relevant property corners at the service lateral and fire hydrant locations shall be surveyed and marked by a licensed surveyor prior to construction. Incidental to Section 624.



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*[Signature]*  
APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**UTILITY PLAN**

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

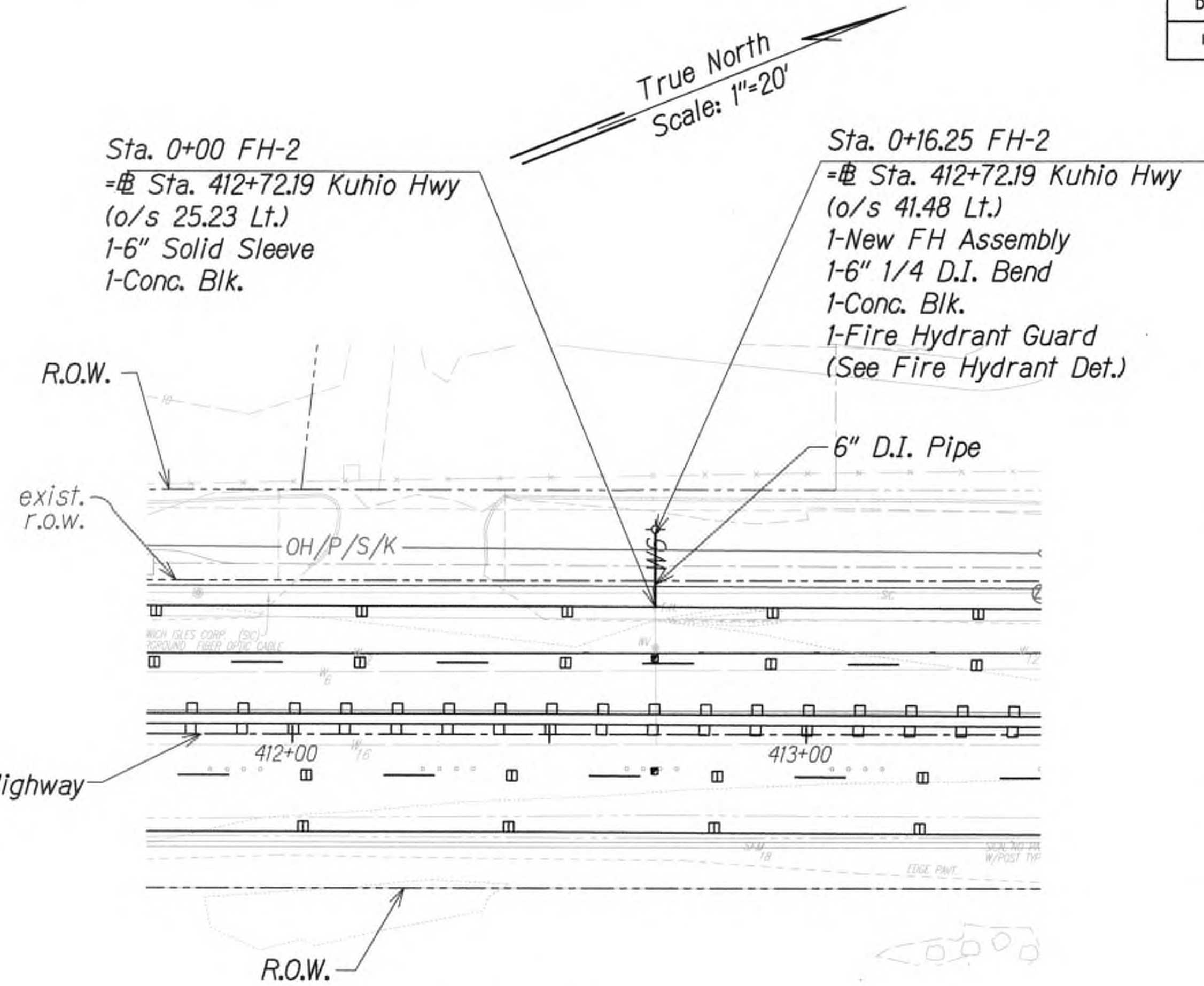
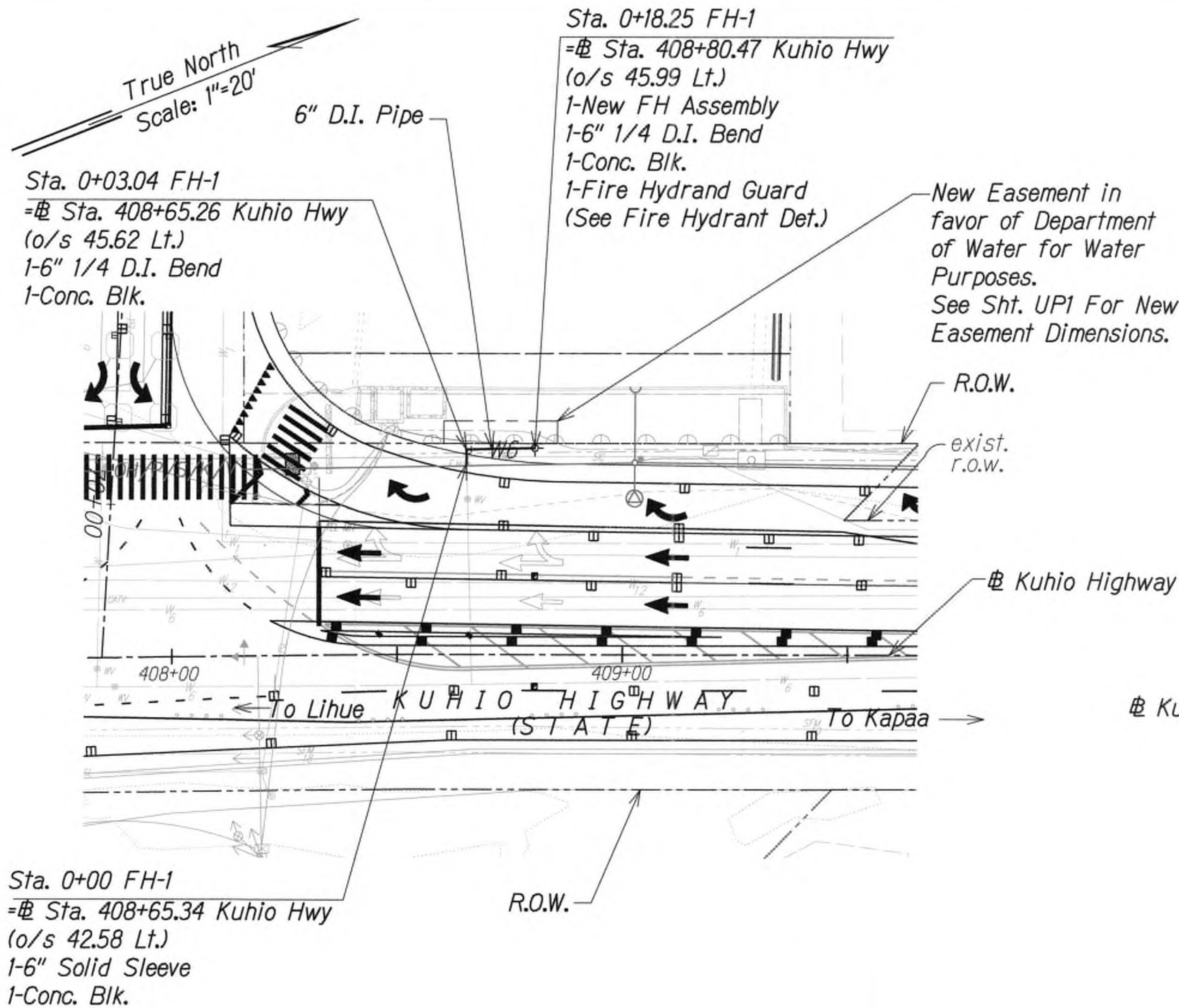
SHEET No. UP5 OF 11 SHEETS

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.60	244

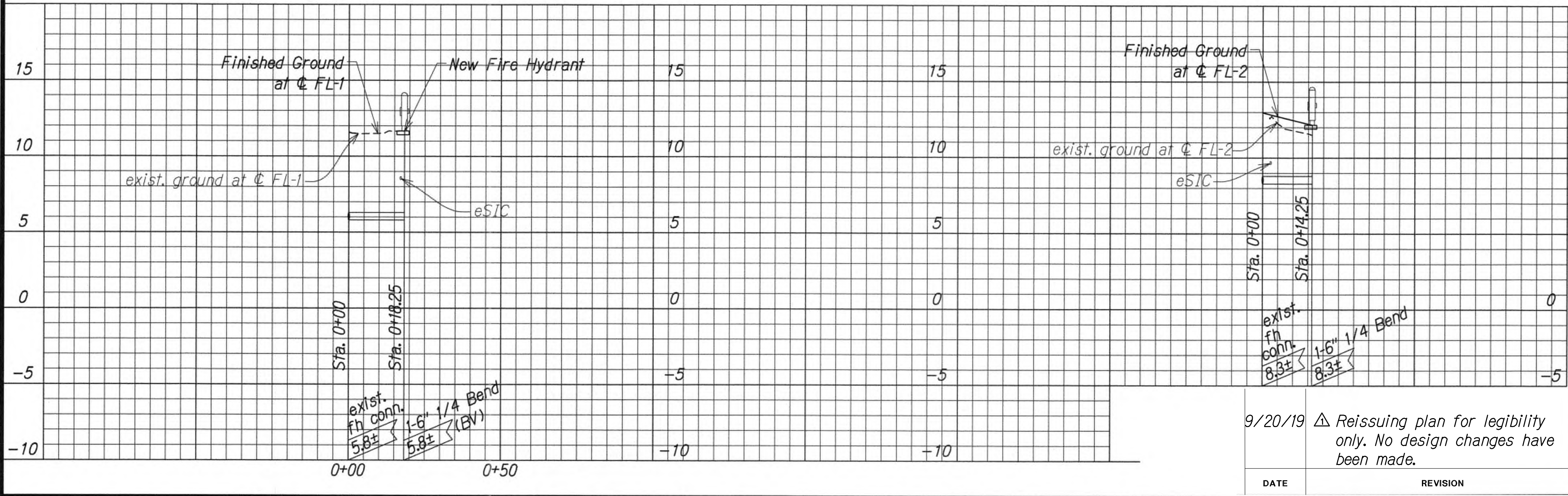
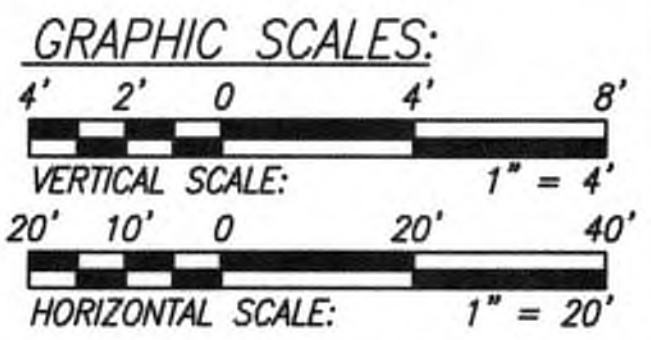


APPROVED

*[Signature]*  
For Manager and Chief Engineer  
Department of Water,  
County of Kauai

7/22/19  
Date

- Notes:
1. D.I. pipe and fittings shall be double wrapped with polyethylene.
  2. Contractor shall abandon pipe in place. All unused pipe shall be removed and disposed and trench shall be backfilled and restored.
  3. Contractor shall maintain water service at all times except for scheduled shutdowns for connections.
  4. Existing Fire Hydrants shall be removed, cleaned, and returned to Department of Water's baseyard in Lihue.
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*[Signature]*  
APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

UTILITY PLAN

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD

Fed. Aid Proj. No. NH-056-1(50)

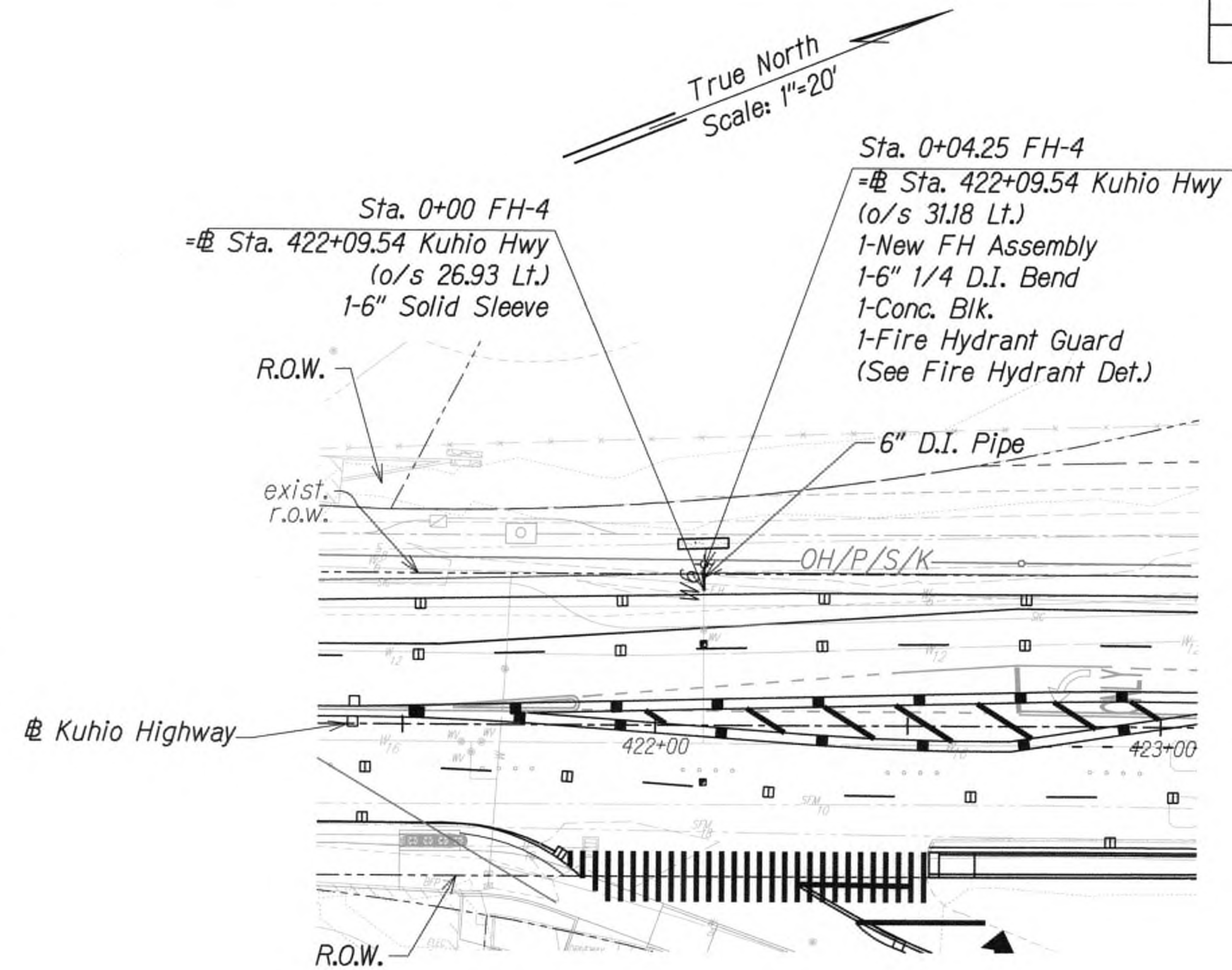
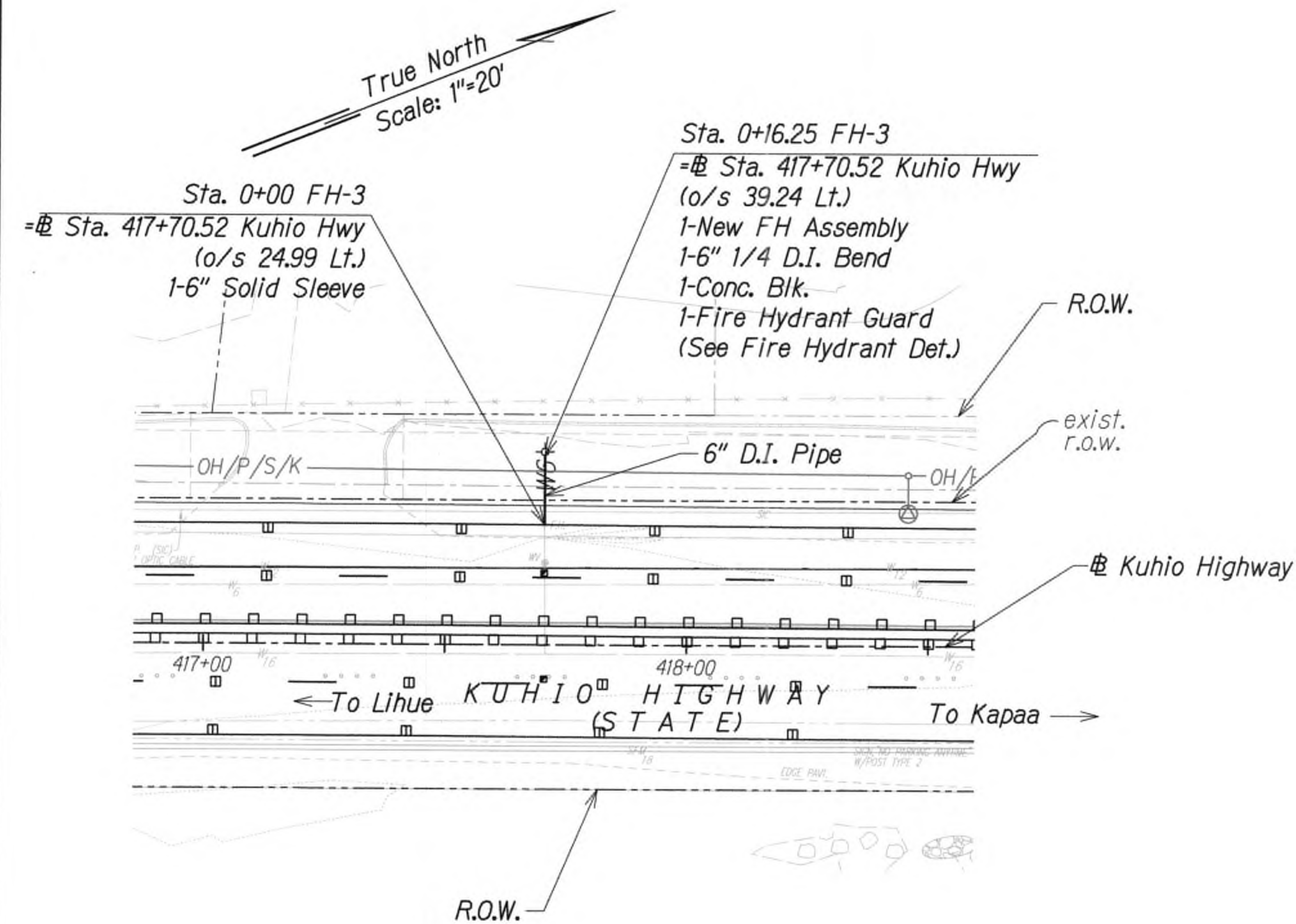
Scale: As Noted Date: July 2019

SHEET No. UP6 OF 11 SHEETS

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



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.61	244



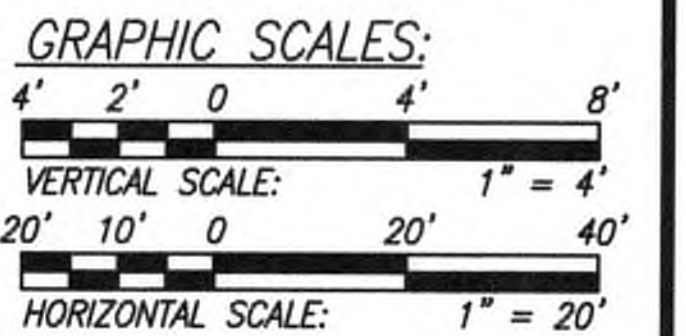
APPROVED

*[Signature]*  
 Manager and Chief Engineer  
 Department of Water,  
 County of Kauai

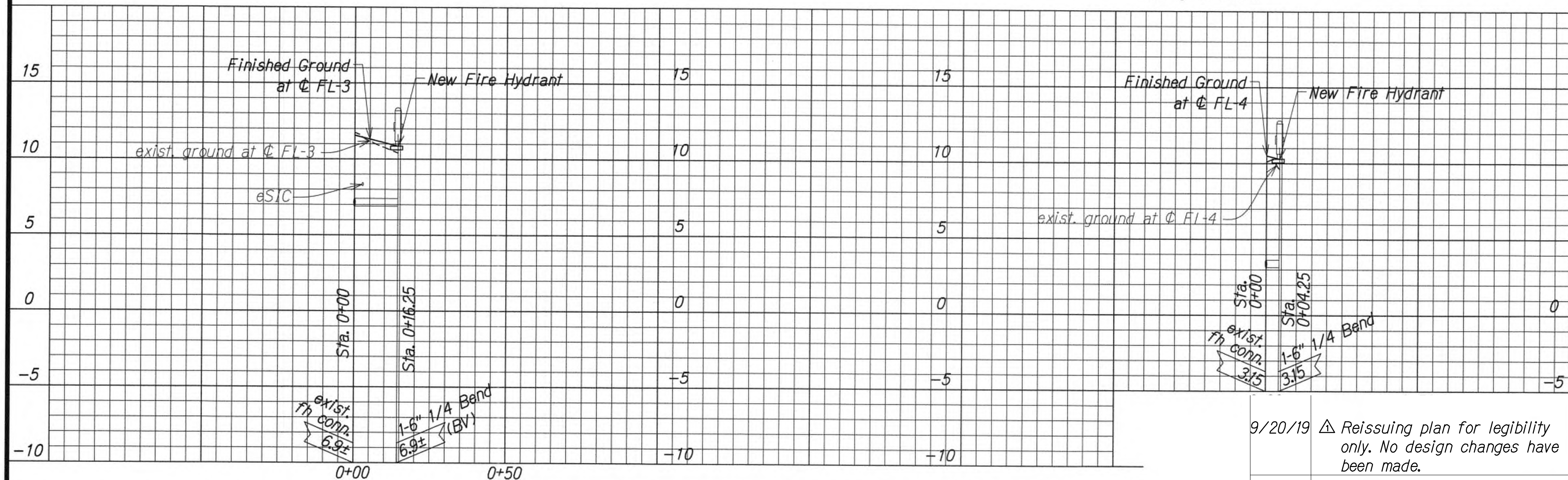
7/22/19  
 Date

#### Notes:

1. D.I. pipe and fittings shall be double wrapped with polyethylene.
2. Contractor shall abandon pipe in place. All unused pipe shall be removed and disposed and trench shall be backfilled and restored.
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6. The Right-of-Way and all relevant property corners at the service lateral and fire hydrant locations shall be surveyed and marked by a licensed surveyor prior to construction. Incidental to Section 624.



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



9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]*  
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**UTILITY PLAN**

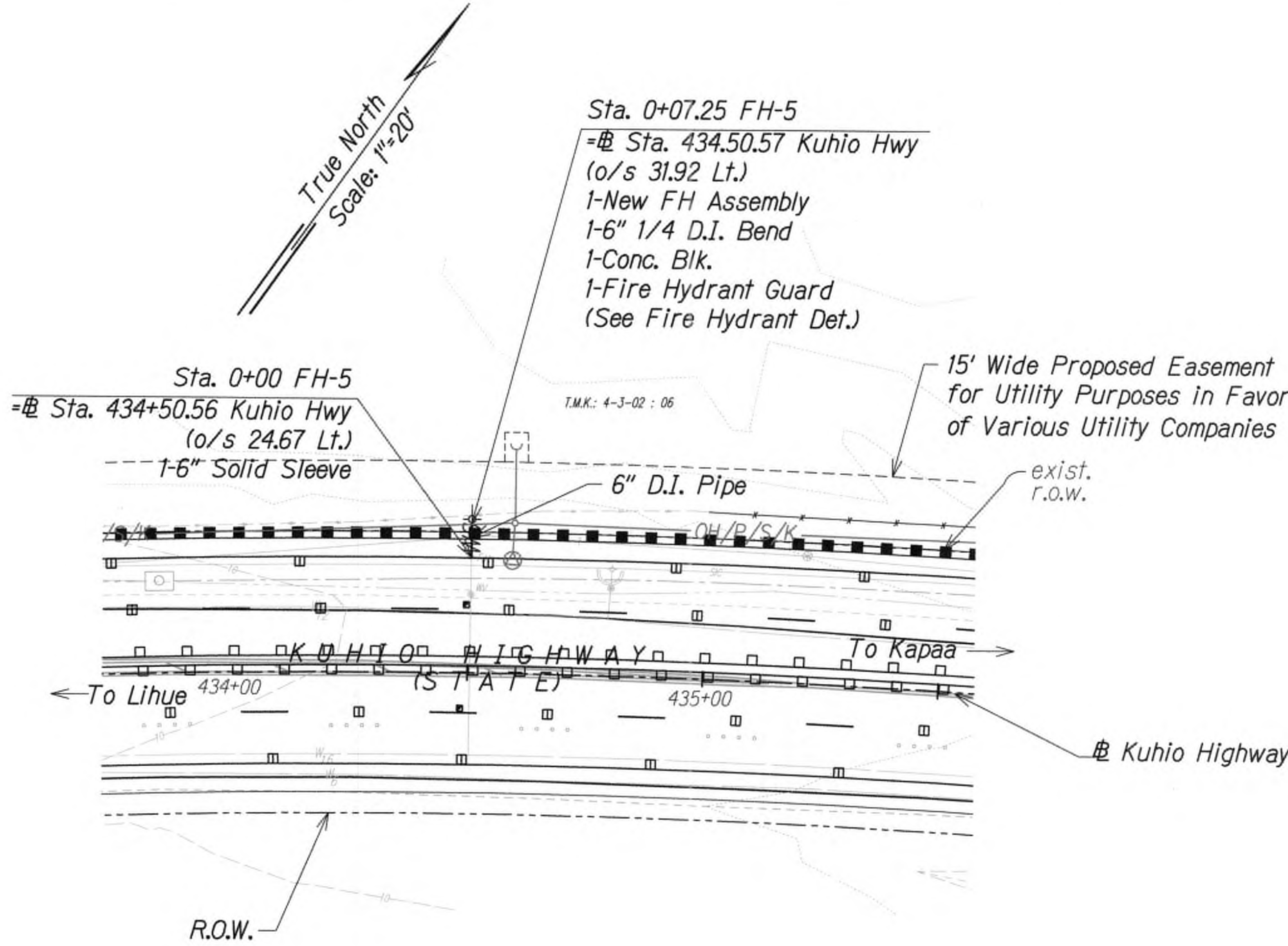
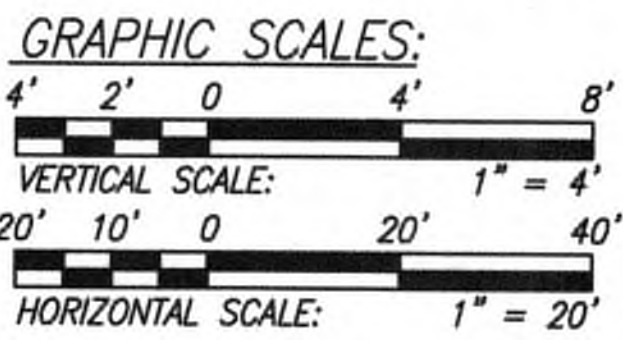
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: As Noted Date: July 2019

SHEET No. UP7 OF 11 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA1	HAW.	NH-056-1(50)	2019	ADD.62	244

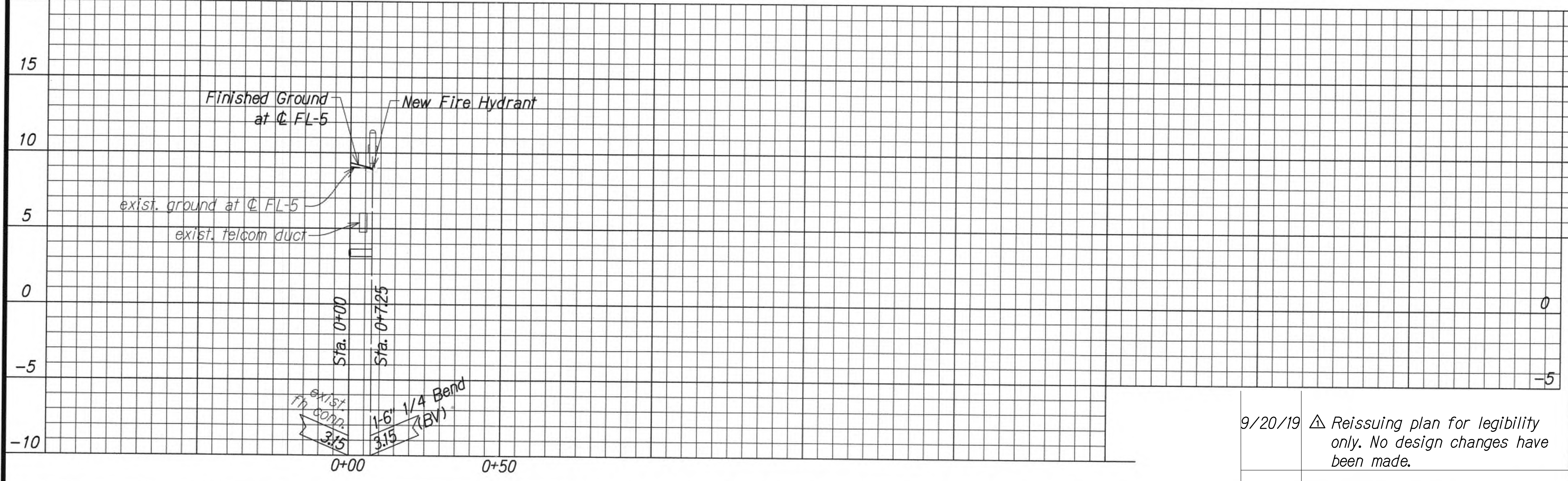
- Notes:
1. D.I. pipe and fittings shall be double wrapped with polyethylene.
  2. Contractor shall abandon pipe in place. All unused pipe shall be removed and disposed and trench shall be backfilled and restored.
  3. Contractor shall maintain water service at all times except for scheduled shutdowns for connections.
  4. Existing Fire Hydrants shall be removed, cleaned, and returned to Department of Water's baseyard in Lihue.
  4. The Fire Department shall be notified whenever a fire hydrant is placed out of and returned to service.
  5. Install "Megalug" retainer glands at all MJ end fittings.
  6. The Right-of-Way and all relevant property corners at the service lateral and fire hydrant locations shall be surveyed and marked by a licensed surveyor prior to construction. Incidental to Section 624.



APPROVED

*[Signature]* 7/22/19  
Date

Manager and Chief Engineer  
Department of Water,  
County of Kauai



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



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*[Signature]* APRIL 30, 2020  
WILSON OKAMOTO CORPORATION L.C. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**UTILITY PLAN**

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

SHEET No. UP8 OF 11 SHEETS

9/20/19	Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.63	244

- Notes:**
- Gaskets for flanged joints shall be 1/8" duck-inserted rubber packing garlock no. 19.
  - Bolts shall be break-off type, 5/8" dia. x 3" long machine bolts with cut threads, American Standard coarse hexagon heads, hot dipped galvanized steel or silicon bronze. Install bolt with threads facing up.
  - Nuts shall be American Standard heavy cold punched hexagon nuts, hot dipped galvanized steel or silicon bronze.
  - Concrete shall be DWS 2500.
  - Refer to plate FH11 for fire hydrant installation with curb guard. (Oahu and Kauai only). For Maui, refer to plate FH9 where no street curbing.
  - Flanged outlet for the tee is optional for Oahu; mandatory for Kauai and Maui.
  - Tapping sleeve with tapping valve assembly may be used for connection to exist main.
  - Lubricate hydrant nozzle threads with non-toxic grease.
  - Provide slotted flanged riser for hydrant as needed to align 4-1/2" nozzle perpendicular to curb. (For Maui only)
  - Install hydrant markers. (See plates FH12 and FH13)

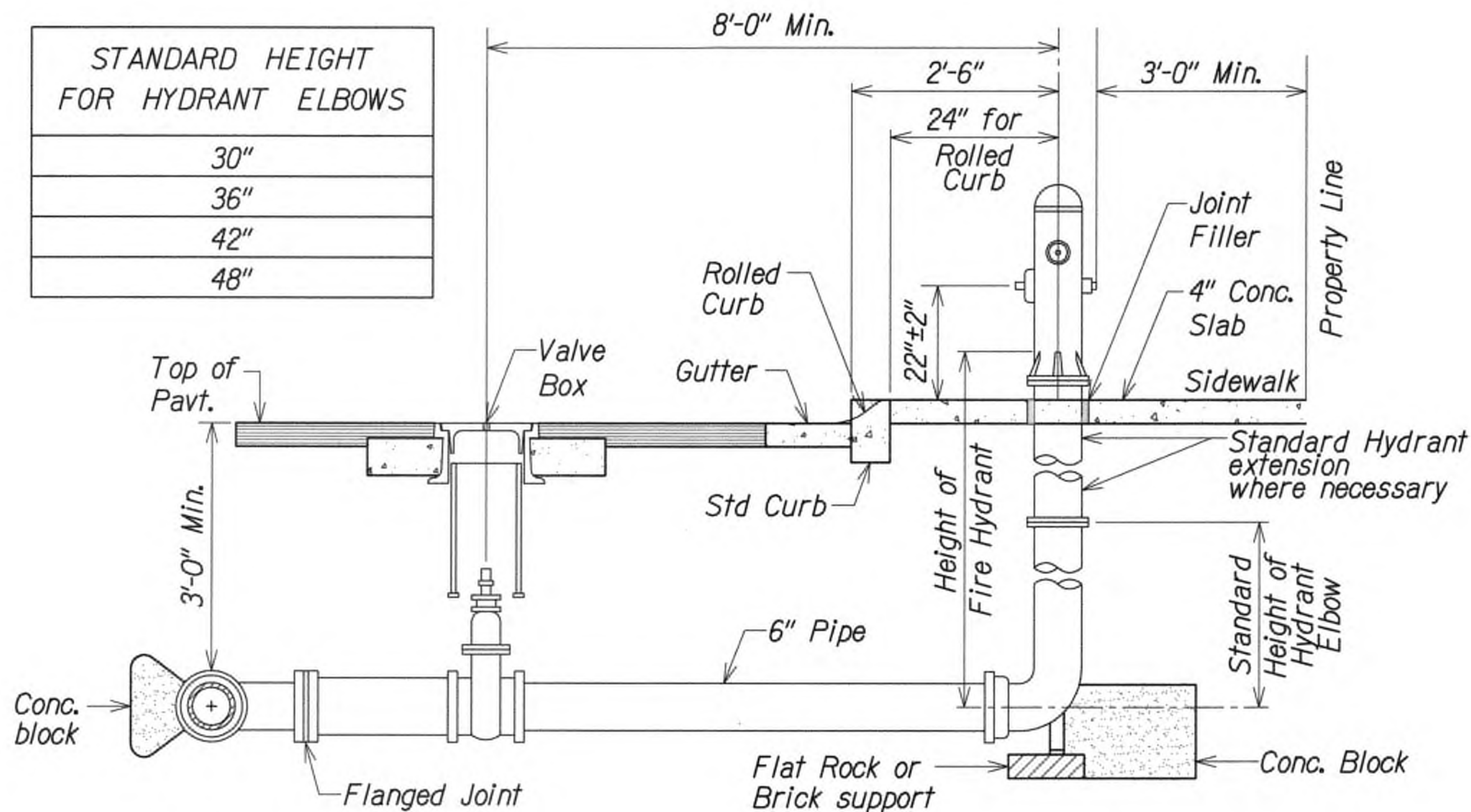


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*Wilson Okamoto*  
 WILSON OKAMOTO CORPORATION L.C. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

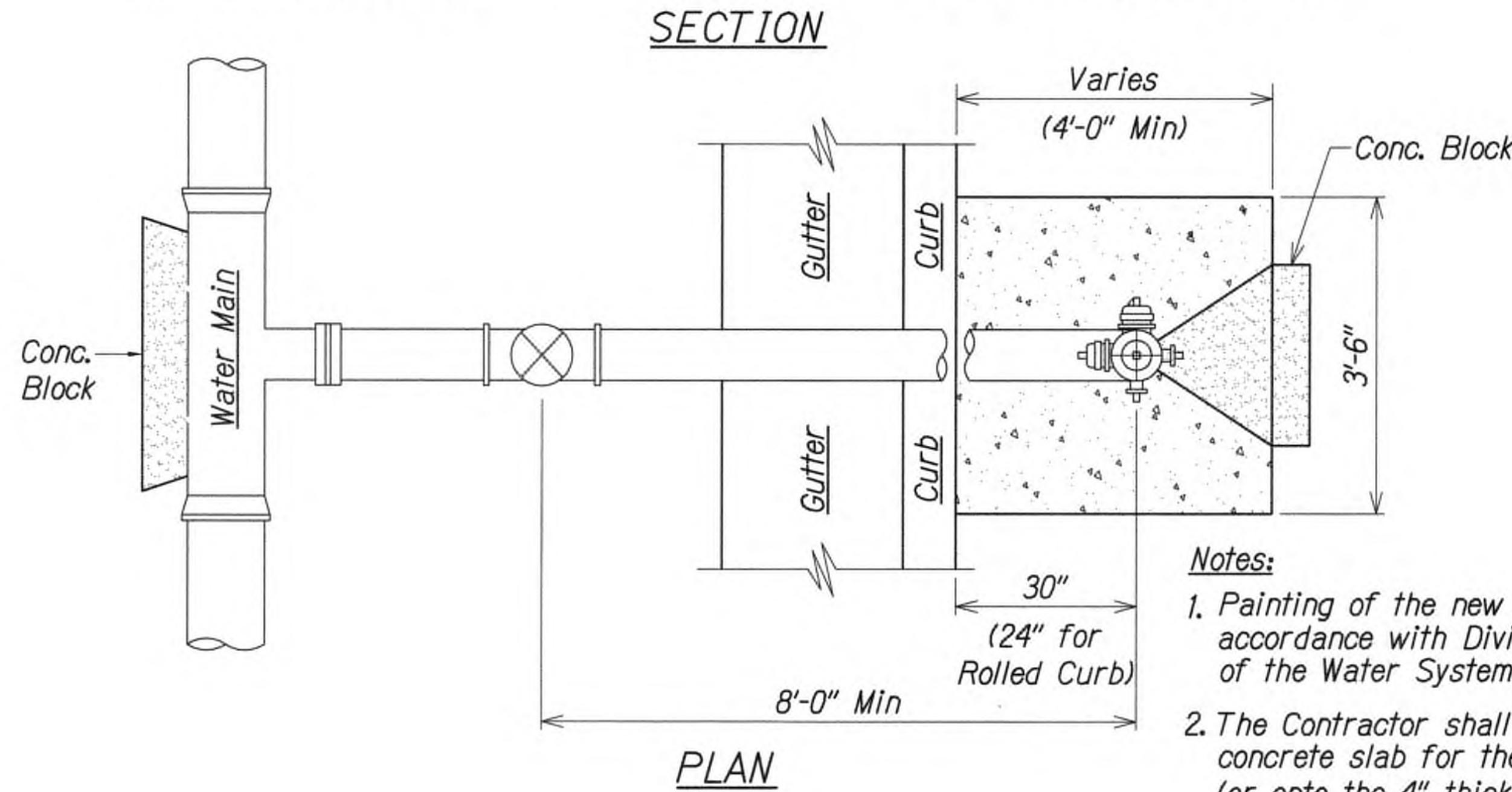
**FIRE HYDRANT DETAILS**  
  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

SHEET No. **UP9** OF **11** SHEETS



If multiple hydrant extensions are used, a minimum of the top 3 flange joints shall use break-off bolts.

Standard Hydrant extensions are available in the following lengths: 6 to 30 inches long in increments of 6 inches



- Notes:**
- Painting of the new fire hydrants shall be in accordance with Division 200, Section 206.01 of the Water System Standards.
  - The Contractor shall etch onto the 4" thick concrete slab for the hydrant curb guard (or onto the 4" thick concrete slab between the curb and gutter and sidewalk) the measured distance from the fire hydrant to the 6" hydrant gate valve. The etched numbers shall be 2-inches tall.

APPROVED

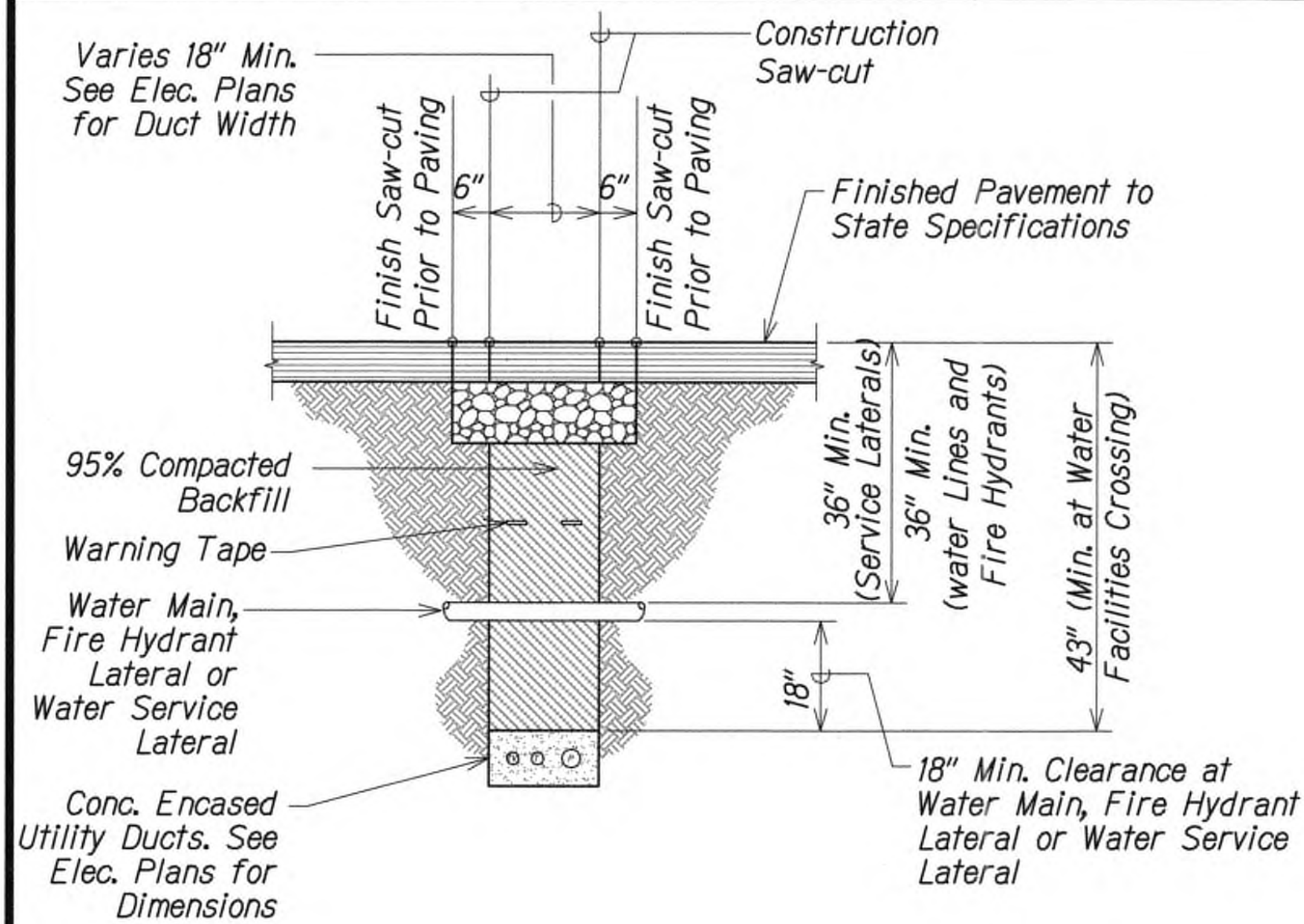
*Manager and Chief Engineer*  
 Department of Water,  
 County of Kauai

7/22/19  
 Date

9/20/19  
 DATE

△ Reissuing plan for legibility only. No design changes have been made.

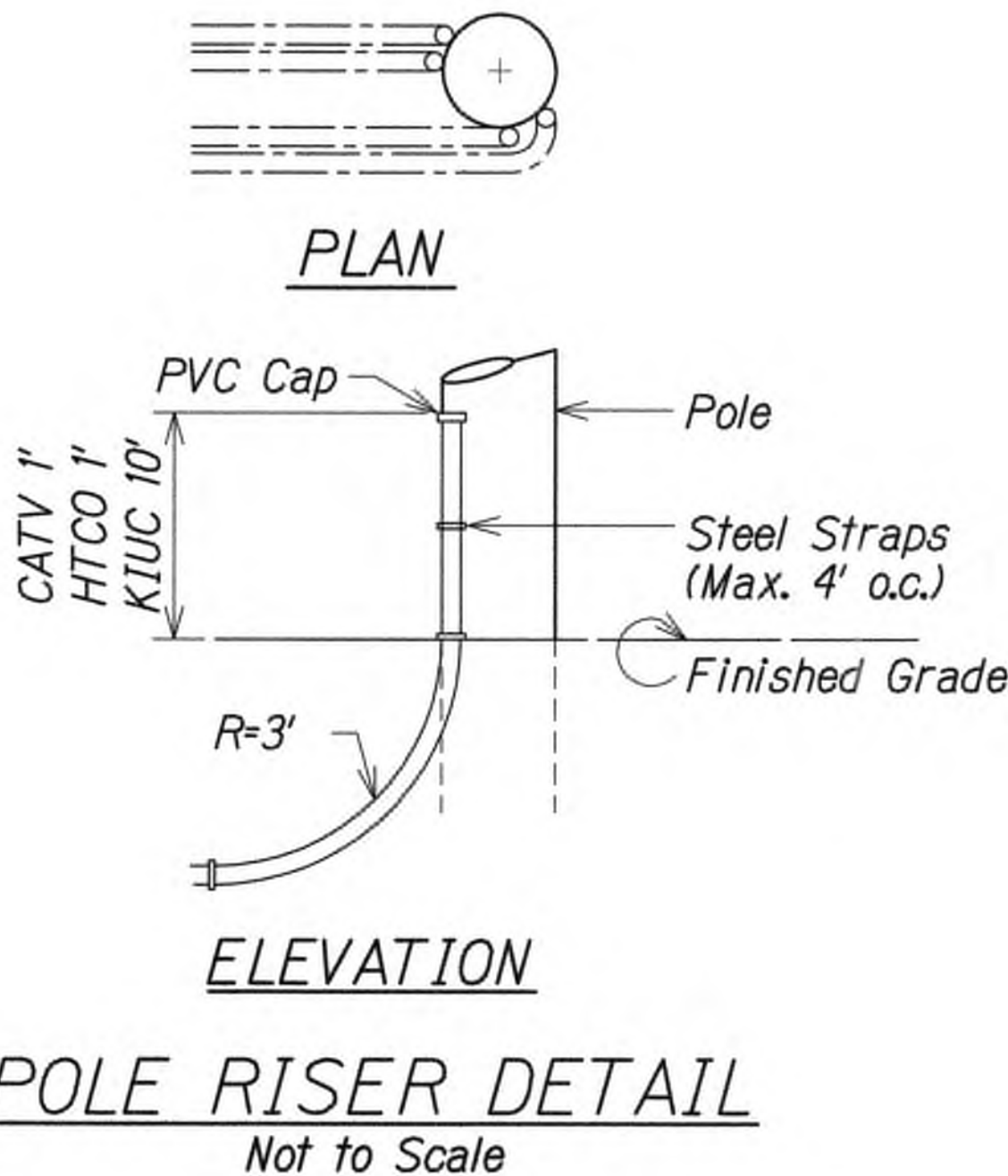
REVISION



- Water Notes:**
- The contractor shall verify in the field the location of the existing water facilities prior to trenching. Excavation around existing water facilities shall be done by hand.
  - Material used for back filling at the water facilities crossings shall not contain any stones, rocks, or other similar material and shall not contain vegetable matter or debris of any kind. No "Adobe" or similar material shall be used.
  - Provide concrete encasement for the conduits at all waterline, service lateral and fire hydrant crossings. The contractor shall notify the Department of Water at least 24-hours prior to scheduling back filling operations at the water facilities crossings.

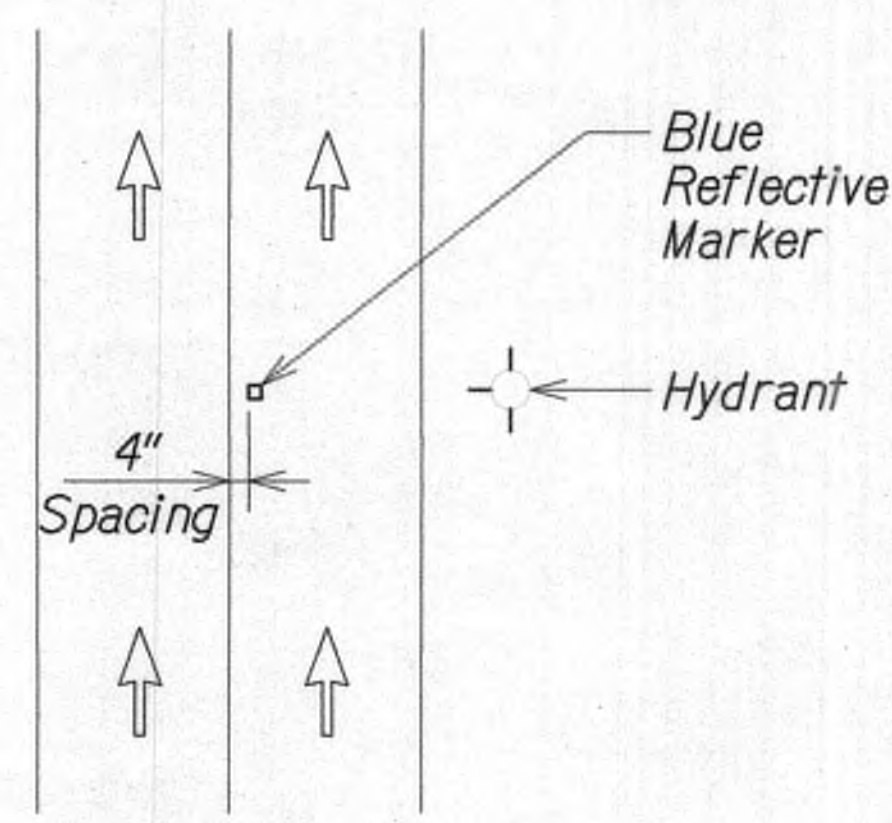
### DETAIL AT WATER FACILITIES CROSSINGS

Not to Scale

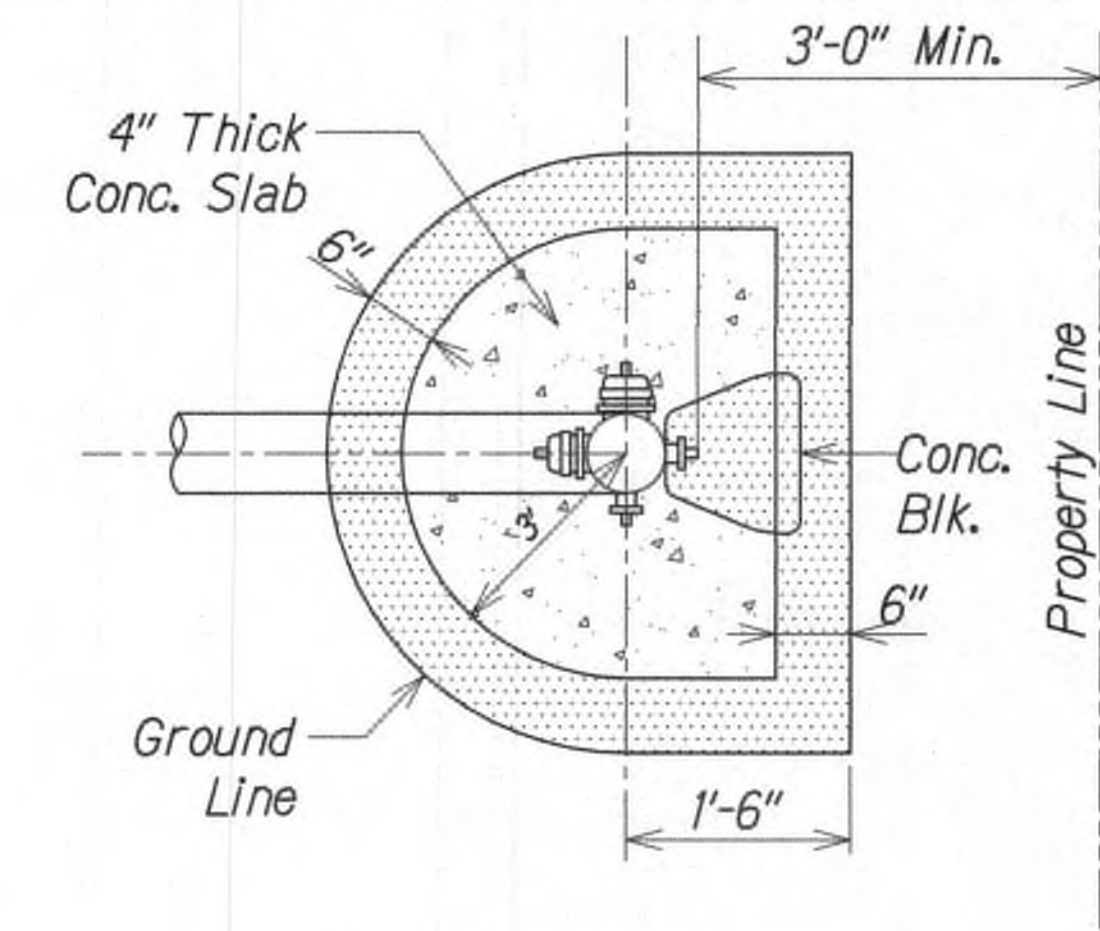


DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
NO.	

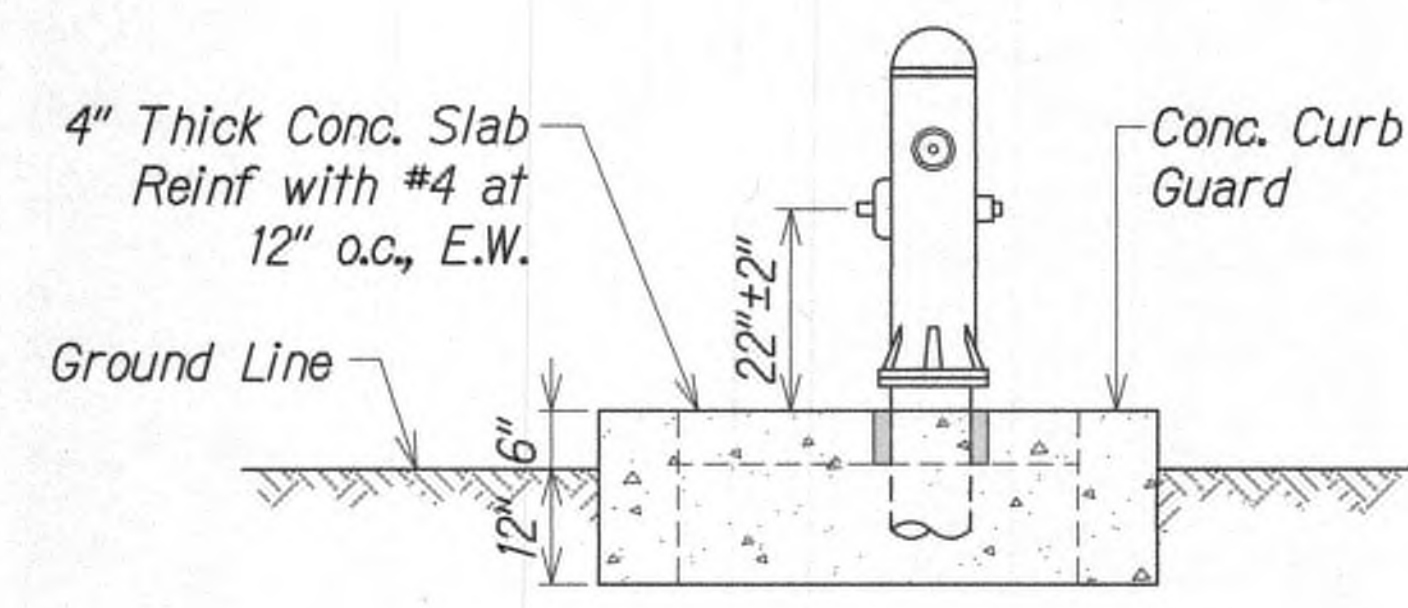




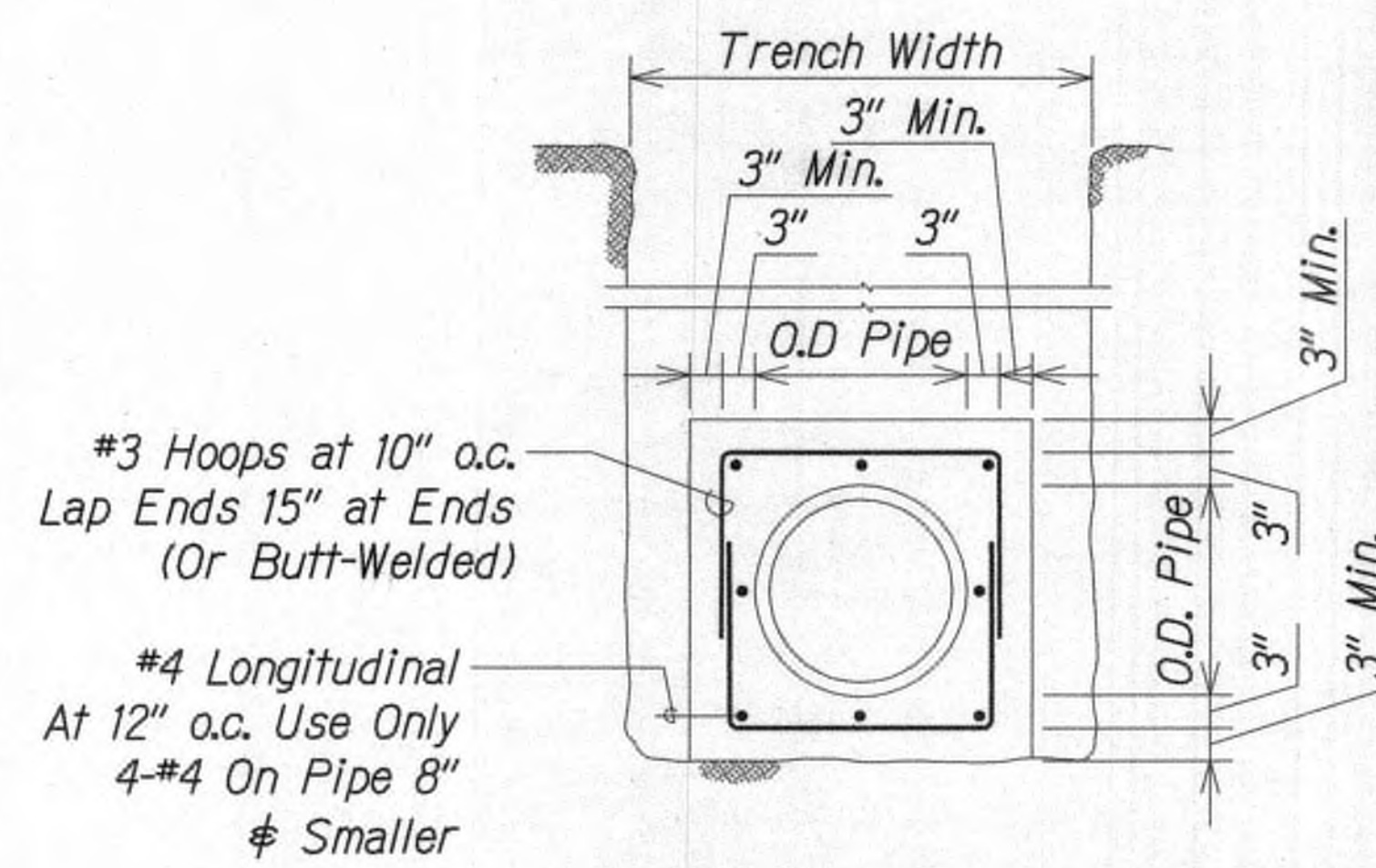
**HYDRANT MARKER LOCATION**  
Not to Scale



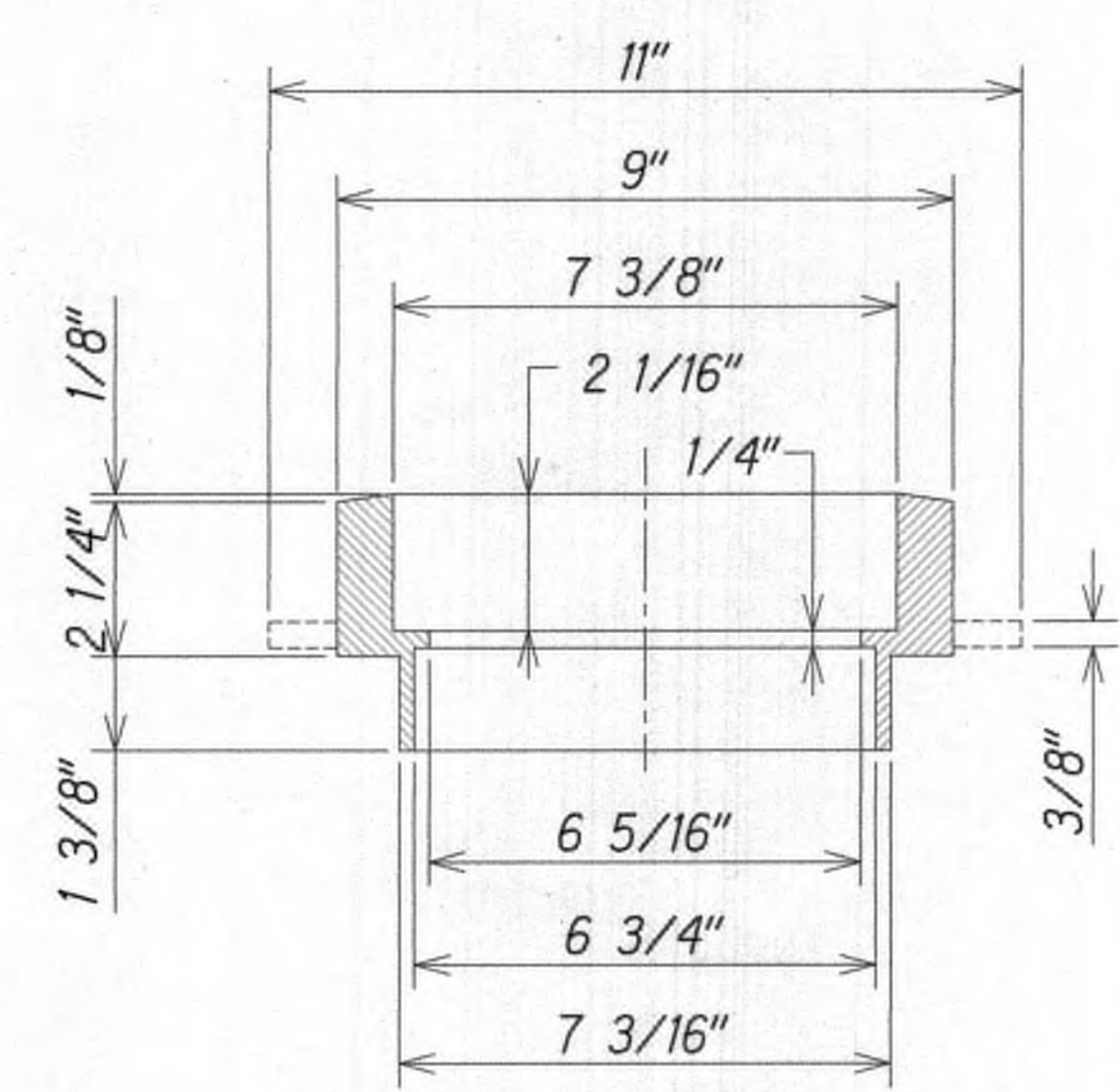
- Notes:
- Concrete shall be DWS 2500.
  - Slope slab 1/4" per foot away from hydrant.



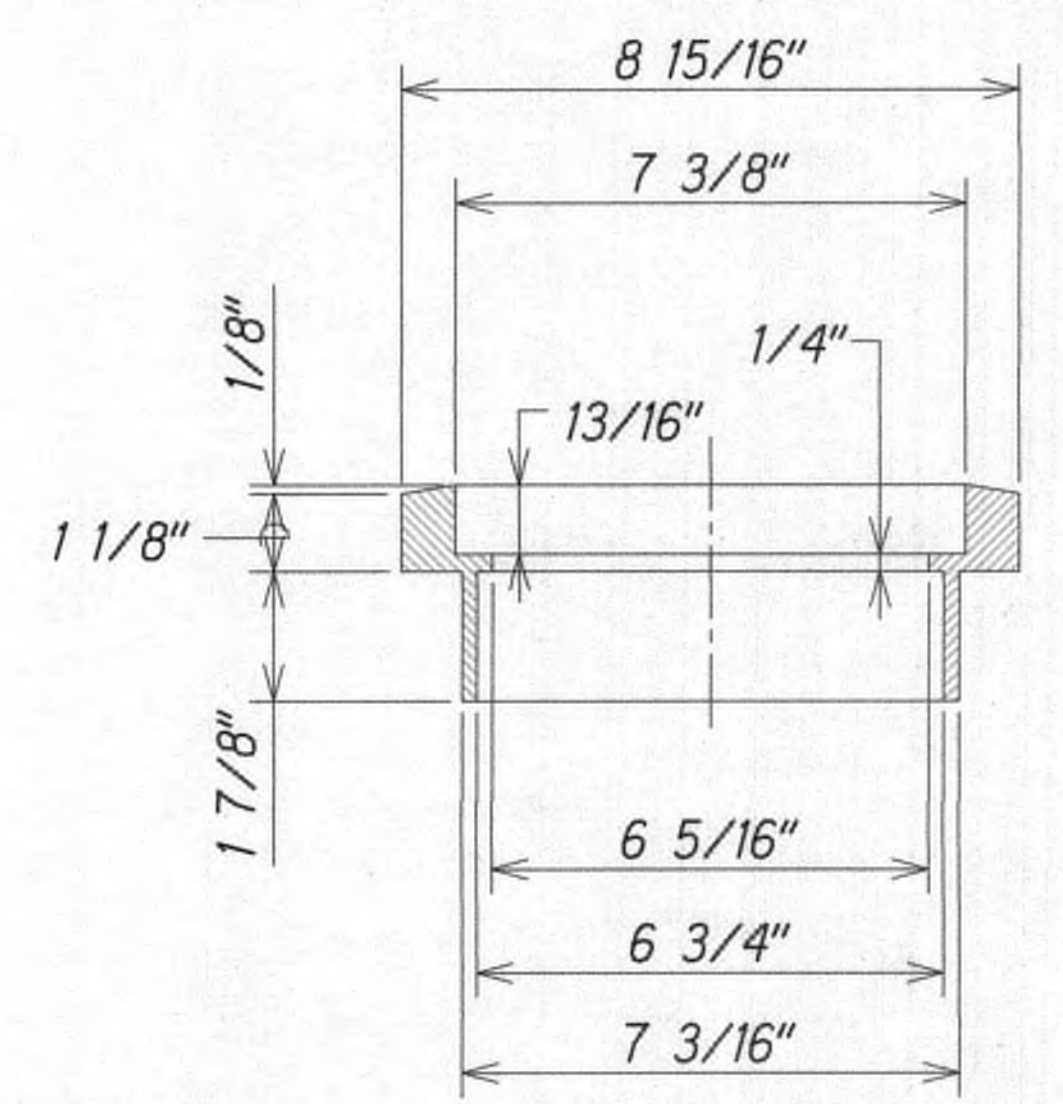
**HYDRANT CURB GUARD (NON-SIDEWALK AREA)**  
Not to Scale



**CONCRETE JACKET DETAIL**  
Not to Scale



**5 1/4" x 2 1/4" RISER**  
USES STANDARD 5 1/4" DROP LID  
Not to Scale



**5 1/4" x 1 1/8" RISER**  
REQUIRES 1 1/8" RISER LID  
Not to Scale

**TYLER/UNION RISERS**

Item/Description	UPCode	Height Increase	Weight
5 1/4 x 1 1/8 Slip-In*	145554	1 1/8"	8
5 1/4 x 2 1/4 Slip-In	145547	2 1/4"	14
*Use with 1 1/8" Lid Only			

**Notes:**

- Tack weld cast iron riser to existing cast iron valve box.
- Valve boxes shall be adjusted to match finish grade by physically raising or lowering the existing valve box frame and cover and reconstructing the concrete settlement slab and valve box riser (if necessary). For road resurfacing projects, the top of three piece valve boxes with 5 1/4" shafts may be adjusted to match the new finish grade by installing fixed cast iron risers tack welded to the existing cast iron valve box.

**FIXED CAST IRON RISER FOR ALL 5-1/4" SHAFT VALVE BOX**  
Not to Scale



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

**APPROVED**

*[Signature]* 7/22/19  
Date  
for Manager and Chief Engineer  
Department of Water,  
County of Kauai  
*[Signature]* 8/1/19  
Date  
Chief, Division of Wastewater Management

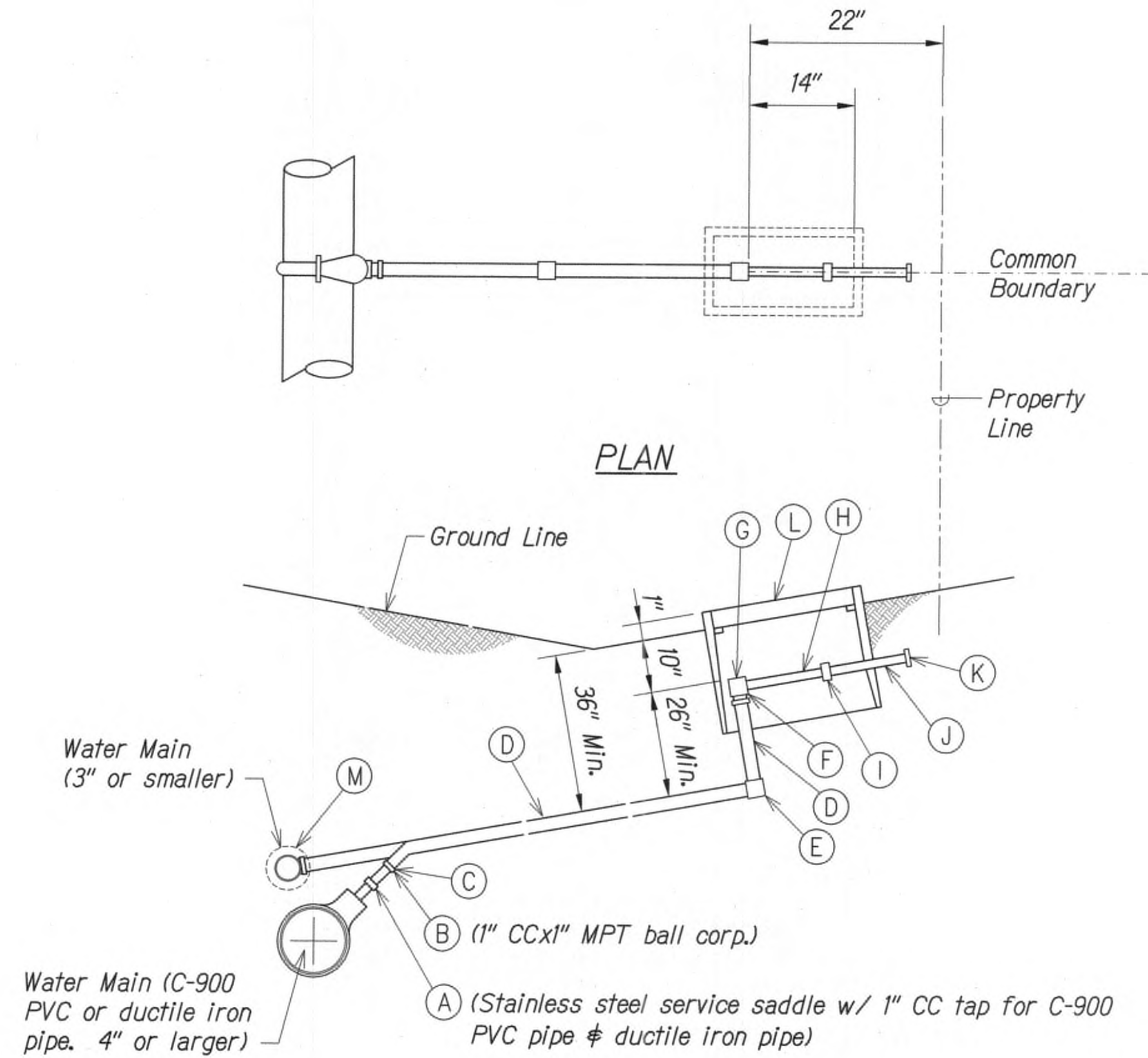
9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**FIRE HYDRANT & WASTEWATER DETAILS**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. UP10 OF 11 SHEETS

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





Schedule of Fittings		
Item	Description	Single Service
A	Stainless steel service saddle w/ 1" CC tap for C-900 PVC pipe & D.I. pipe	1
B	1" CC x 1" MPT ball corporation	1
C	Pack joint couplings (Ford C14-44 or approved equal)	1
D	1" copper tube, Type "K" soft	1
E	1" 90° copper elbow, S x S	1
F	1" copper male adapter, SXT	1
G	Angle ball valve, 1" female IPT inlet x 3/4" meter coupling nut outlet (Ford BA13-342W or approved equal)	1
H	Meter spacing, supplied by Dept. of Water & installed by contractor	1
I	Ball valve w/ handle, 3/4" meter coupling but inlet x 1" female IPT outlet (Ford B13-342 w/ HT-34 handle or approved equal)	1
J	Linesetter, 1" copper tube, Type "K" soft, 12" long (see Std. Det. L3)	1
K	1" plastic thread protector	1
L	Type "B" concrete meter box w/ cast iron cover	1
M	Tee w/ 1" bushing (when connecting to 3" or smaller pipe)	1

**Note:**  
Install Type "X" conc. meter box w/ cast iron cover in sidewalk or paved areas. Top of meter box to be flushed with finished grade.

**General Note:**  
All laterals in State ROW will need a minimum 36" cover to finish grade.

**PROFILE**  
**SINGLE SERVICE DETAIL**  
Not to Scale

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
DATE	

**APPROVED**  
  
Manager and Chief Engineer  
Department of Water,  
County of Kauai  
7/22/19  
Date

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DATE REVISION

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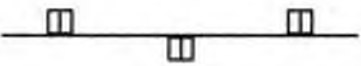
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**FIRE HYDRANT & WASTEWATER DETAILS**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. UP11 OF 11 SHEETS



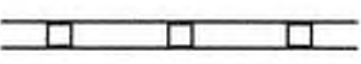
PAVEMENT MARKING LEGEND



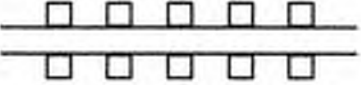
4" White Profiled Thermoplastic Stripe 10 LF at 40'-0" o.c. with Type "C" RPM at 40'-0" o.c. See Profiled Thermoplastic Striping Details, Sheet No. T7, Typ.




8" White Stripe with Type C Raised Pavement Markers (RPM) at 20'-0" o.c. (Thermoplastic Extrusion)



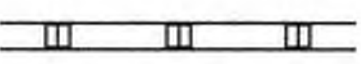
4" Double Solid Yellow with Type D Raised Pavement Markers (RPM) at 20'-0" o.c. (Thermoplastic Extrusion)




4" Double Solid Yellow with Type D Raised Pavement Markers (RPM) at 10'-0" o.c. (Thermoplastic Extrusion)




4" Double Solid Yellow Stripe with Type H Raised Pavement Markers (RPM) at 20'-0" o.c. (Thermoplastic Extrusion)



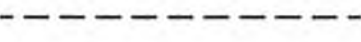
4" Double Solid White Stripes with Type C Raised Pavement Markers (RPM) at 20'-0" o.c. (Thermoplastic Extrusion)




4" Yellow Edge Stripe with Type H Raised Pavement Markers (RPM) at 40'-0" o.c., unless otherwise noted (Thermoplastic Extrusion)



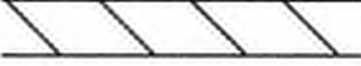
4" or 8" White Edge Stripe with Type C Raised Pavement Markers (RPM) at 40'-0" o.c. (Thermoplastic Extrusion)



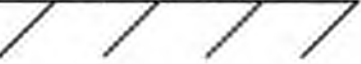
4" White Guide Lines (Thermoplastic Extrusion), 2'-0" at 6' o.c.



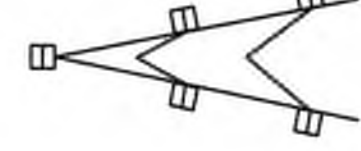
4" Yellow Guide Lines (Thermoplastic Extrusion), 2'-0" at 6' o.c.



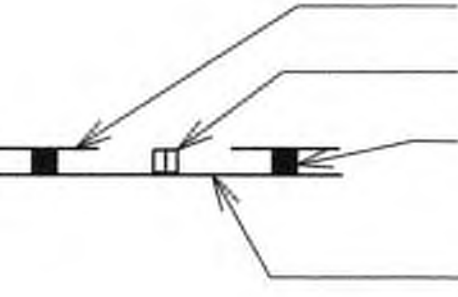
Transverse Median Marking (Thermoplastic Extrusion)



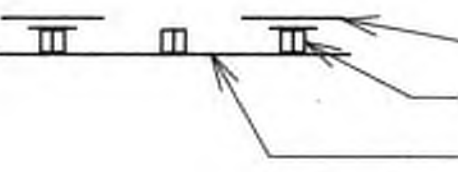
Transverse Shoulder Marking (Thermoplastic Extrusion)



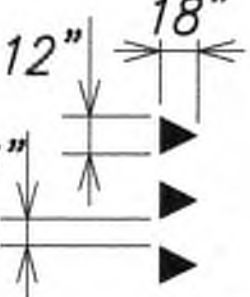
Channelizing Island or Deceleration Lane Gore (Thermoplastic Extrusion)



4" White Stripe 10 LF at 20'-0" o.c.  
Type D Raised Pavement Markers at 20'-0" o.c.  
Type H Raised Pavement Markings at 20'-0" o.c. (Reflective Surface Facing No-Passing Direction)  
4" Single Solid White Stripe (Thermoplastic Extrusion)



Lane Change Restriction Marking  
4" White Stripe 10 LF at 40'-0" o.c.  
Type C Raised Pavement Markings at 20'-0" o.c.  
4" Single Solid White Stripe (Thermoplastic Extrusion)



Yield Line White Triangle

ORIGINAL PLAN	SURVEY PLATTED BY	DATE
	DRAWN BY	
	TRACED BY	
	CHECKED BY	
NOTE BOOK	No.	

SIGNING AND PAVEMENT MARKING NOTES

- Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
- Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. The removal of existing pavement markings shall not be paid for separately but shall be considered incidental to the various pavement marking items.
- Raised pavement markers shall not be installed within crosswalks.
- Final locations of all signs shall be approved by the Engineer prior to any installation work.
- Existing signs not shown on these plans shall remain as posted unless othrewise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
- Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
- All pavement striping shall be as noted on the legend or plans.
- All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
- Removal of Existing Delineators and Posts as directed by the Engineer shall be considered incidental to the various signing items.
- Existing signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary. Removal of existing signs and posts to be replaced shall be considered incidental to the various sign items.
- Backing for all new regulatory and warning signs shall not be spliced.
- All sign panels shall conform to Section 630 of Special Provisions and the latest editions and amendments of the following FHWA publications:
  - "Manual on Uniform Traffic Control Devices for Street and Highways" (MUTCD)
  - "Standard Highway Signs"
  - "Standard Alphabets for Highways Signs"
- All new and relocated signs and markers installed on pipe post or light standard are to be mounted with stainless steel band brackets and stainless steel braces. Stainless steel fastener shall be Type 316.
- The Contractor shall erect at the beginning of the project and at the end of the project advance construction warning signs as indicated on the plans or as directed by the Engineer for the duration of the highway project and shall be maintained by the Contractor. These signs shall be replaced in addition to the required traffic control signs called for in Section 645-Traffic Control. The advance construction warning signs shall be new and become the property of the State. The Contractor shall remove, clean and deliver the signs and posts to the Kauai District Baseyard or as directed by the Engineer at the end of the project.

- The Contractor shall install new Type II Object Markers on all utility poles that are within the State Highway Right-of-way as directed by the Engineer. This shall be considered incidental to the various sign items.
- All traffic control devices including: signs, barricades, vertical panels, warning lights, arrow boards, changeable message signs, cones and tubular markers that meet the requirements of American Traffic Safety Services Association (ATSSA), "Quality Standard for Work Zone Traffic Control Devices, 1992" shall be used on this project. Compliance with this requirement will be considered incidental to the contract and no extra compensation will be allowed.
- The Contractor shall install new mile post markers (bi-directional) at one-half mile increment alternating along the Northbound and Southbound lanes. Mile post marker shall begin at mile post 5.5 and end at mile post 6.5 Final location of all mile post markers shall be approved by the Engineer.
- Install state route marker signs (M1-6) according to standard plan TE-11.

9/20/19    Reissuing plan for legibility only. No design changes have been made.

DATE                      REVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.66	244

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*hml*  
WILSON OKAMOTO CORPORATION    APRIL 30, 2020    LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING LEGEND**  
**DETAILS AND NOTES**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale:                      Date: July 2019  
SHEET No. **PM1** OF **9** SHEETS

ADD.66

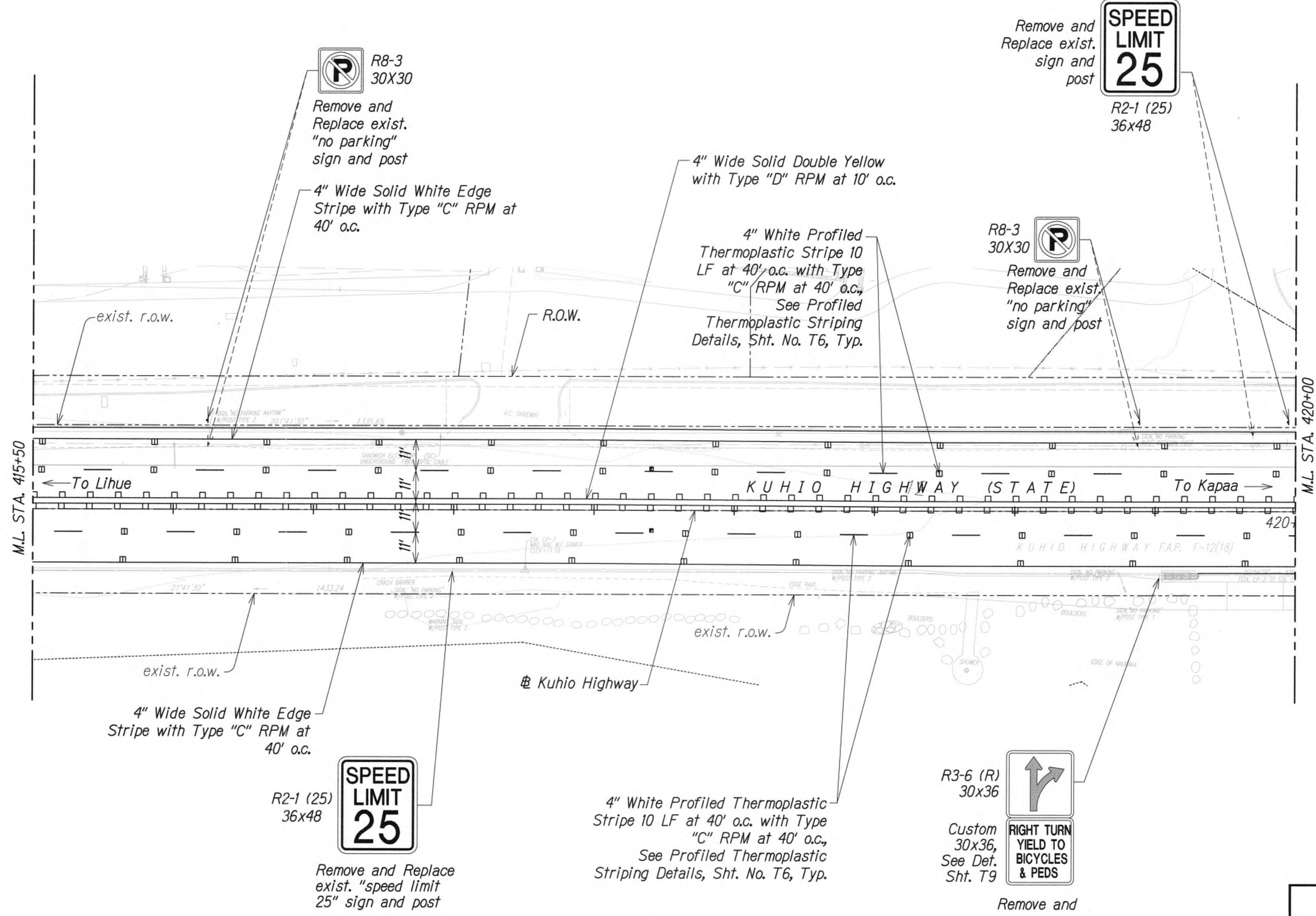
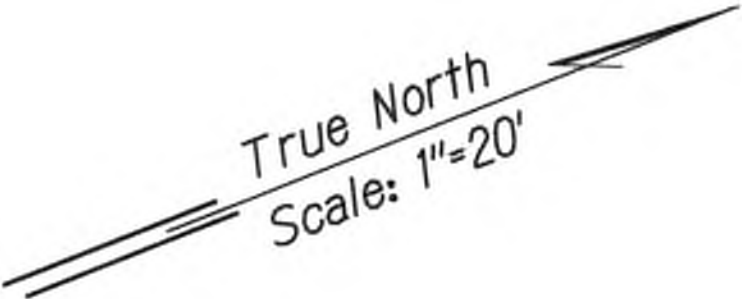




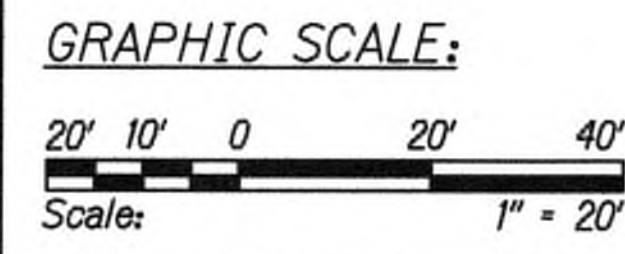








DATE	_____
SURVEY PLATTED BY	_____
DESIGNED BY	_____
TRACED BY	_____
NOTED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____



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DATE	REVISION

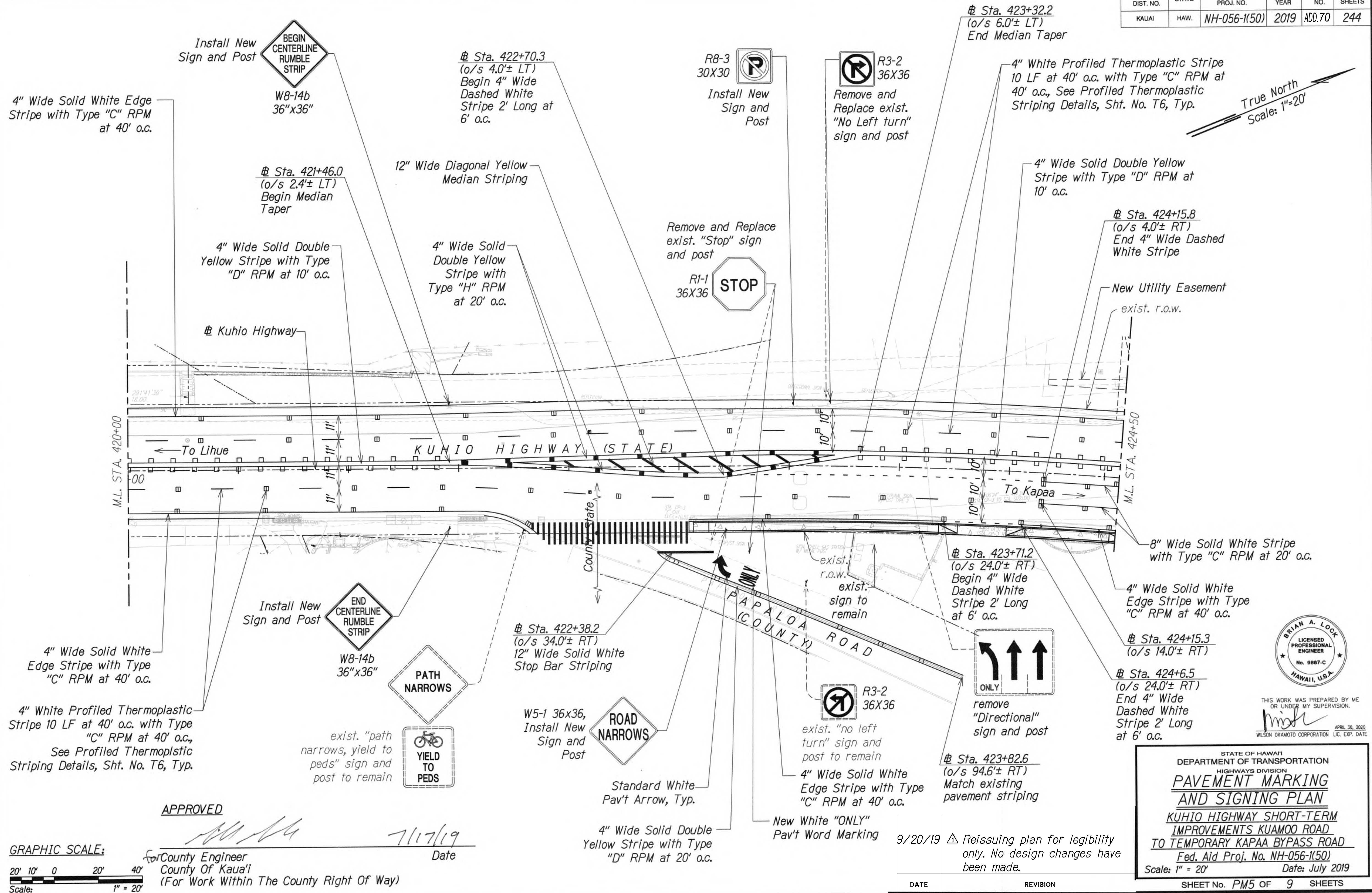


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APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING  
AND SIGNING PLAN**  
**KUHIIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019  
SHEET No. PM4 OF 9 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.70	244



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

GRAPHIC SCALE:  
20' 10' 0 20' 40'  
Scale: 1" = 20'

APPROVED  
*[Signature]*  
County Engineer  
County Of Kaua'i  
(For Work Within The County Right Of Way)

7/17/19  
Date

BRIAN A. LOCK  
LICENSED PROFESSIONAL ENGINEER  
No. 9867-C  
HAWAII, U.S.A.

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*[Signature]*  
WILSON OKAMOTO CORPORATION  
APRIL 30, 2020  
LIC. EXP. DATE

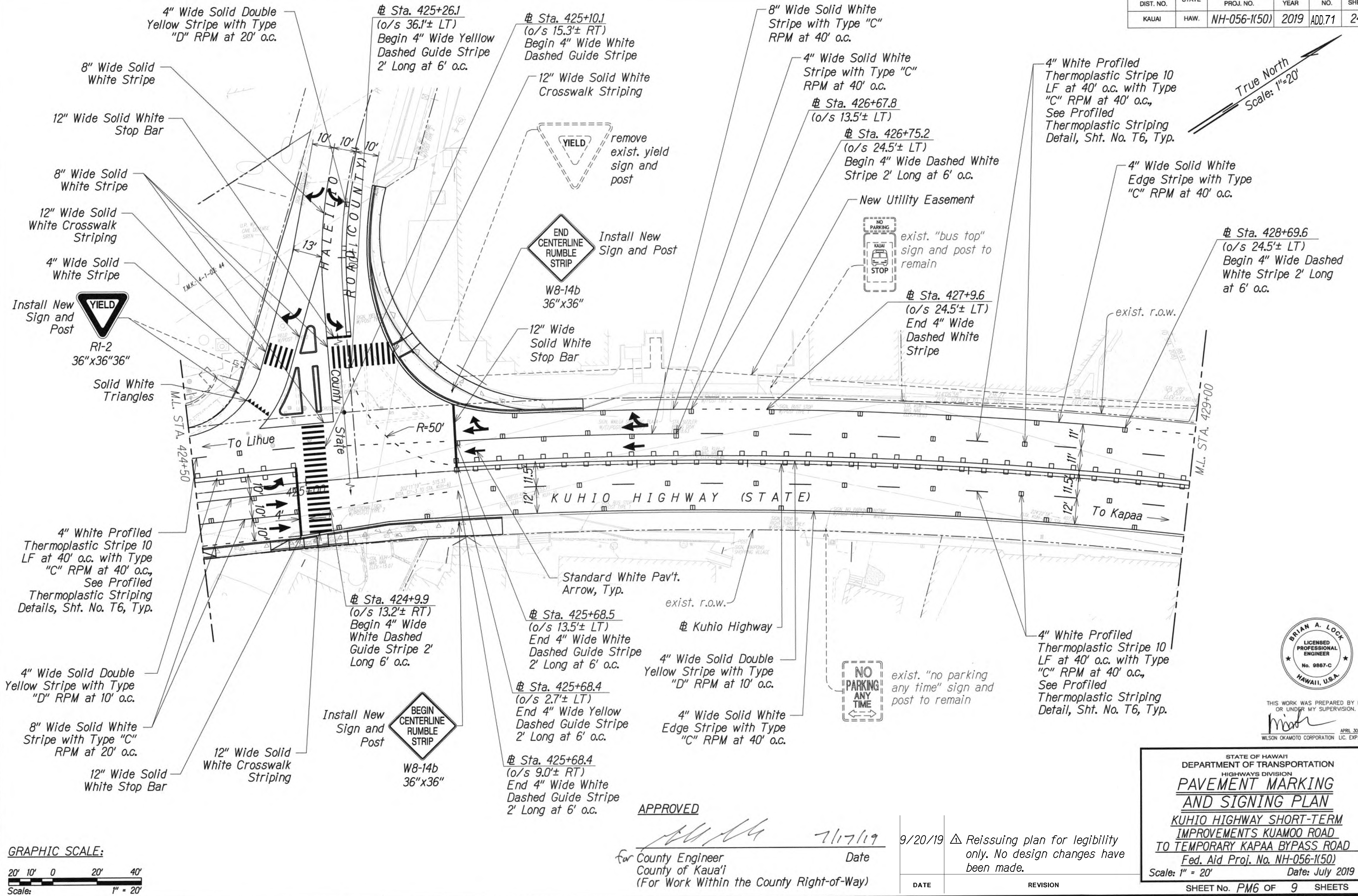
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING  
AND SIGNING PLAN**  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. PM5 OF 9 SHEETS

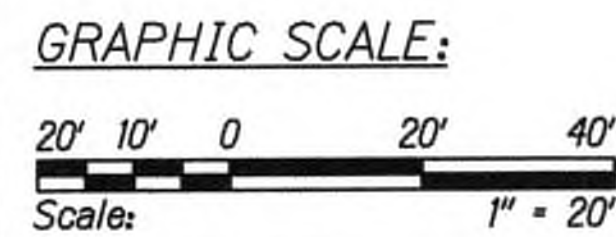
DATE	REVISION
9/20/19	Reissuing plan for legibility only. No design changes have been made.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.71	244



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



APPROVED

*[Signature]* 7/17/19

For County Engineer  
County of Kaua'i  
(For Work Within the County Right-of-Way)

Date

DATE	9/20/19	REVISION	△ Reissuing plan for legibility only. No design changes have been made.
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**PAVEMENT MARKING  
AND SIGNING PLAN**

**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**

Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

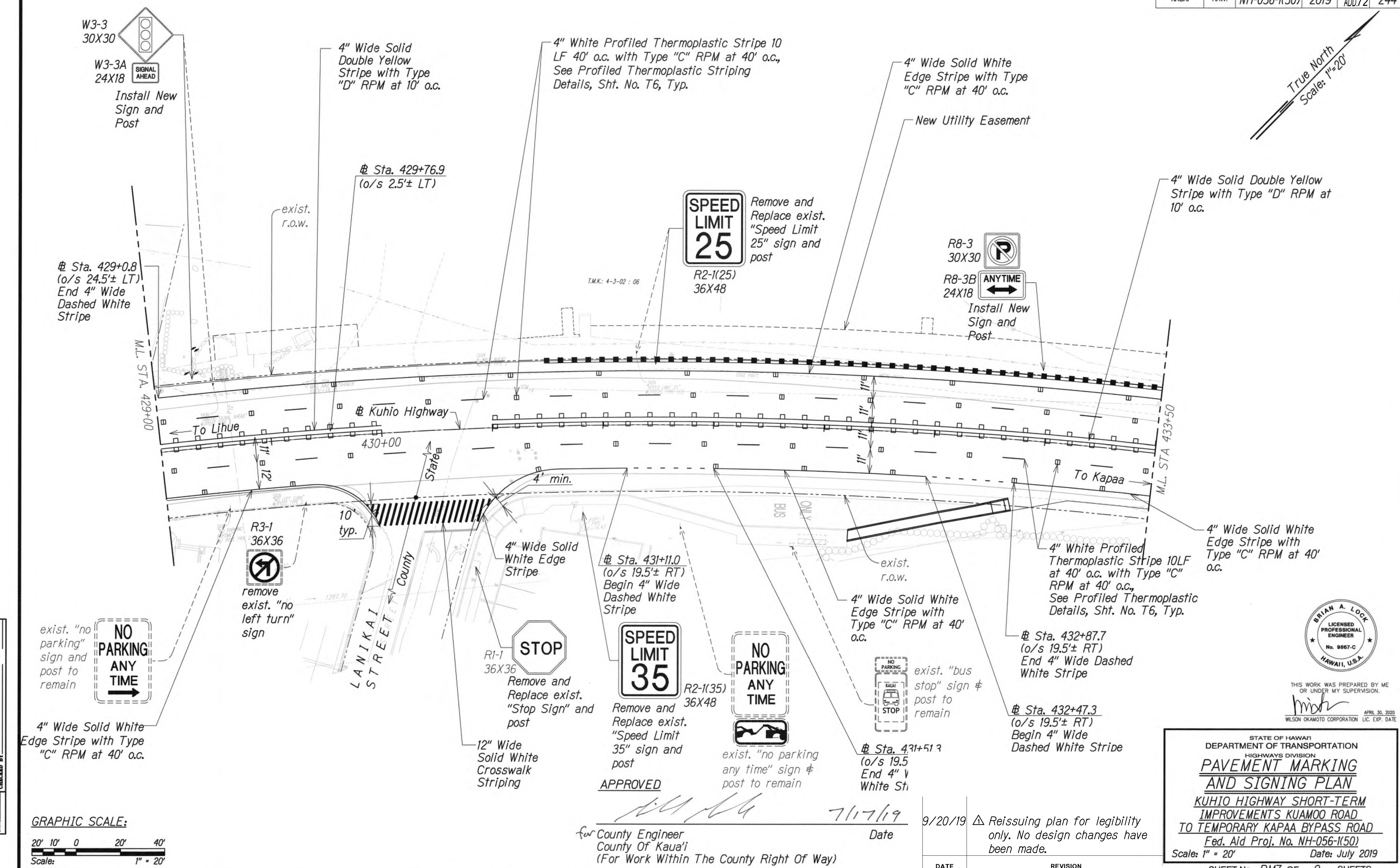
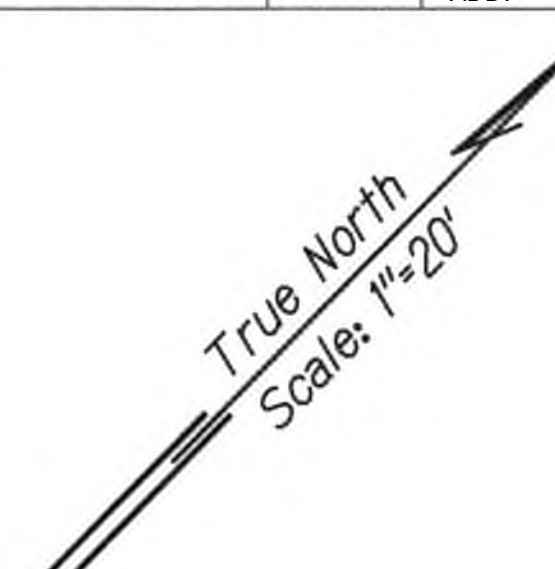
SHEET No. PM6 OF 9 SHEETS



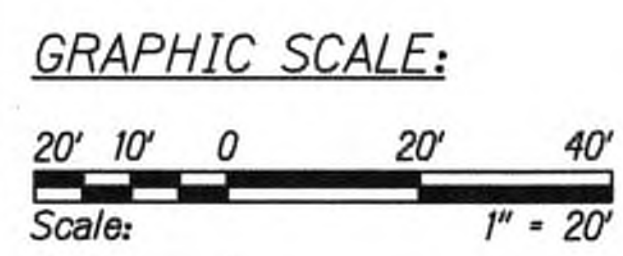
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*[Signature]* APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE





DATE	DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY



APPROVED

*[Signature]* 7/17/19

County Engineer  
County Of Kauai  
(For Work Within The County Right Of Way)

Date

9/20/19

Reissuing plan for legibility only. No design changes have been made.

DATE

REVISION

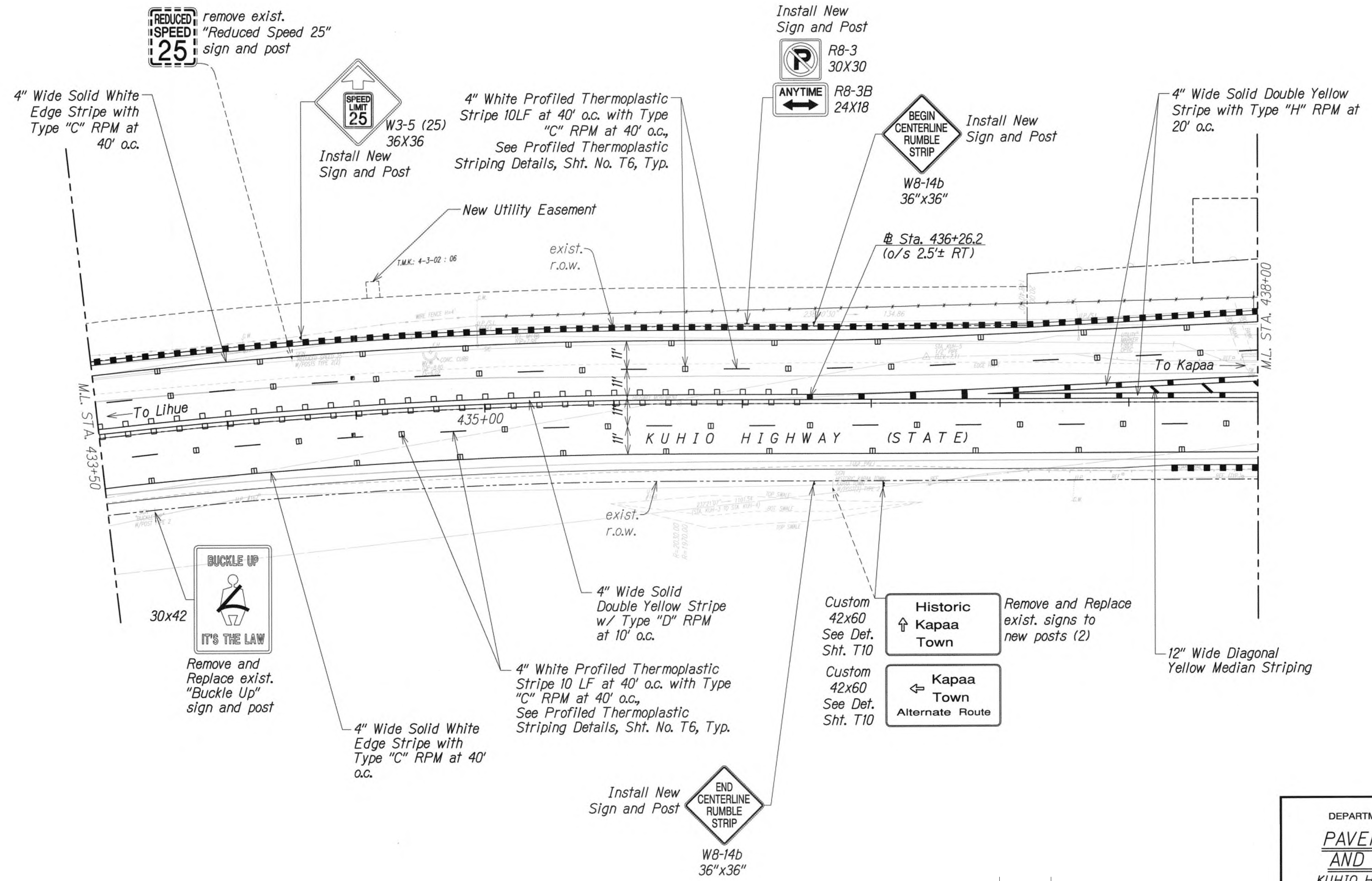
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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

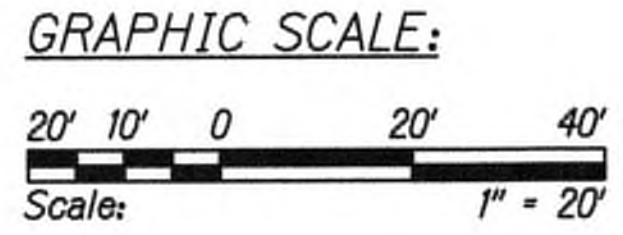
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING  
AND SIGNING PLAN**  
**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. PM7 OF 9 SHEETS





SURVEY PLOTTED BY	DATE
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DESIGNED BY	
CHECKED BY	
NOTE BOOK	
No.	



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DATE	REVISION
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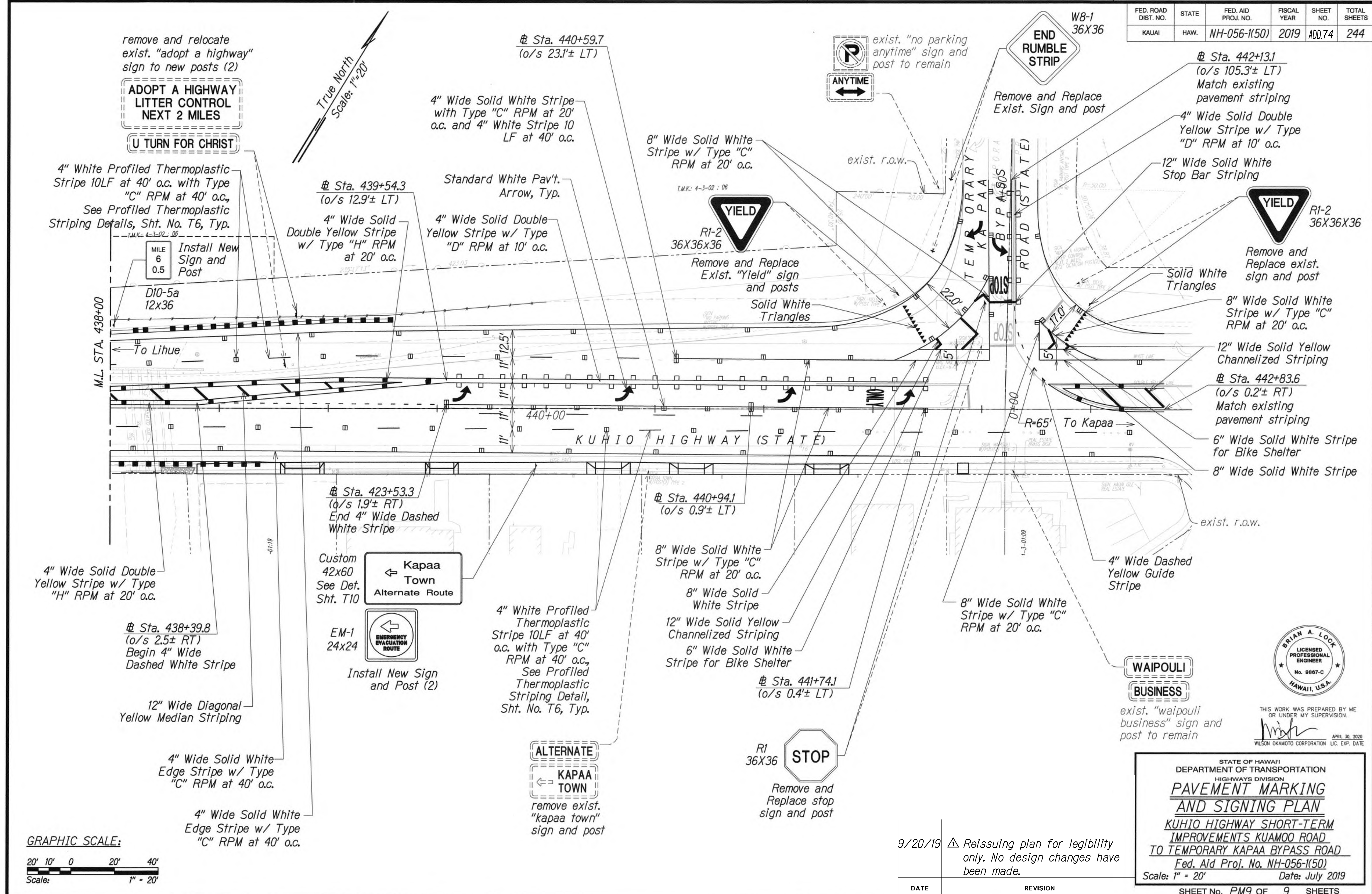
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING  
AND SIGNING PLAN**  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019  
SHEET No. PM8 OF 9 SHEETS



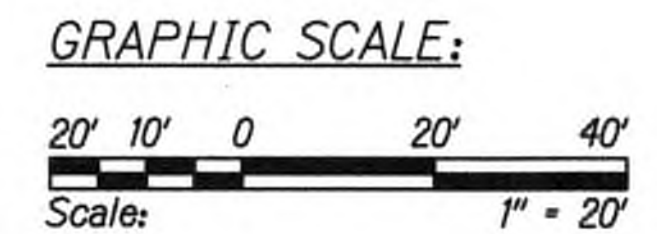
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APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.74	244



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING  
AND SIGNING PLAN**  
**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019  
SHEET No. PM9 OF 9 SHEETS

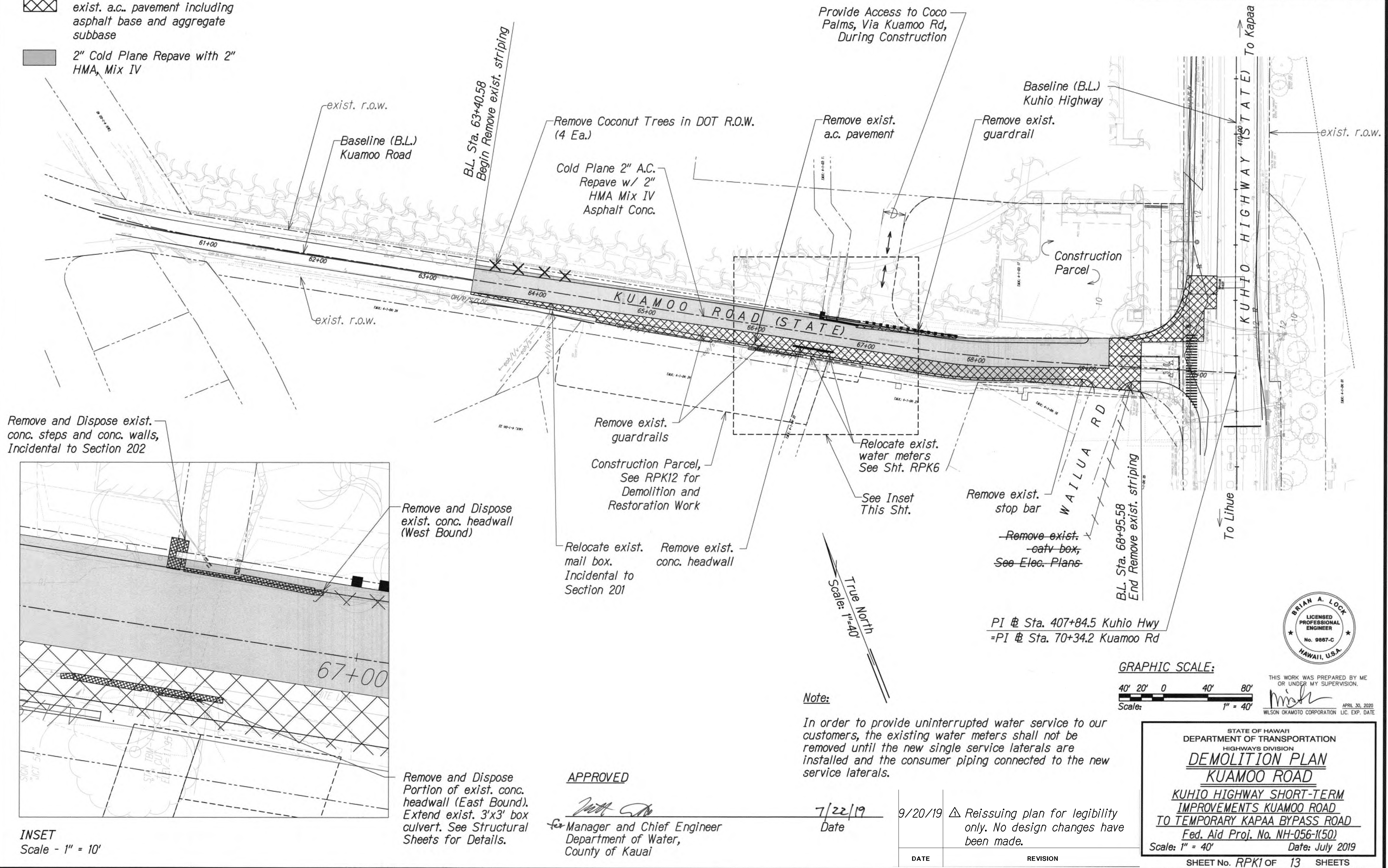


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WILSON OKAMOTO CORPORATION L.C. EXP. DATE

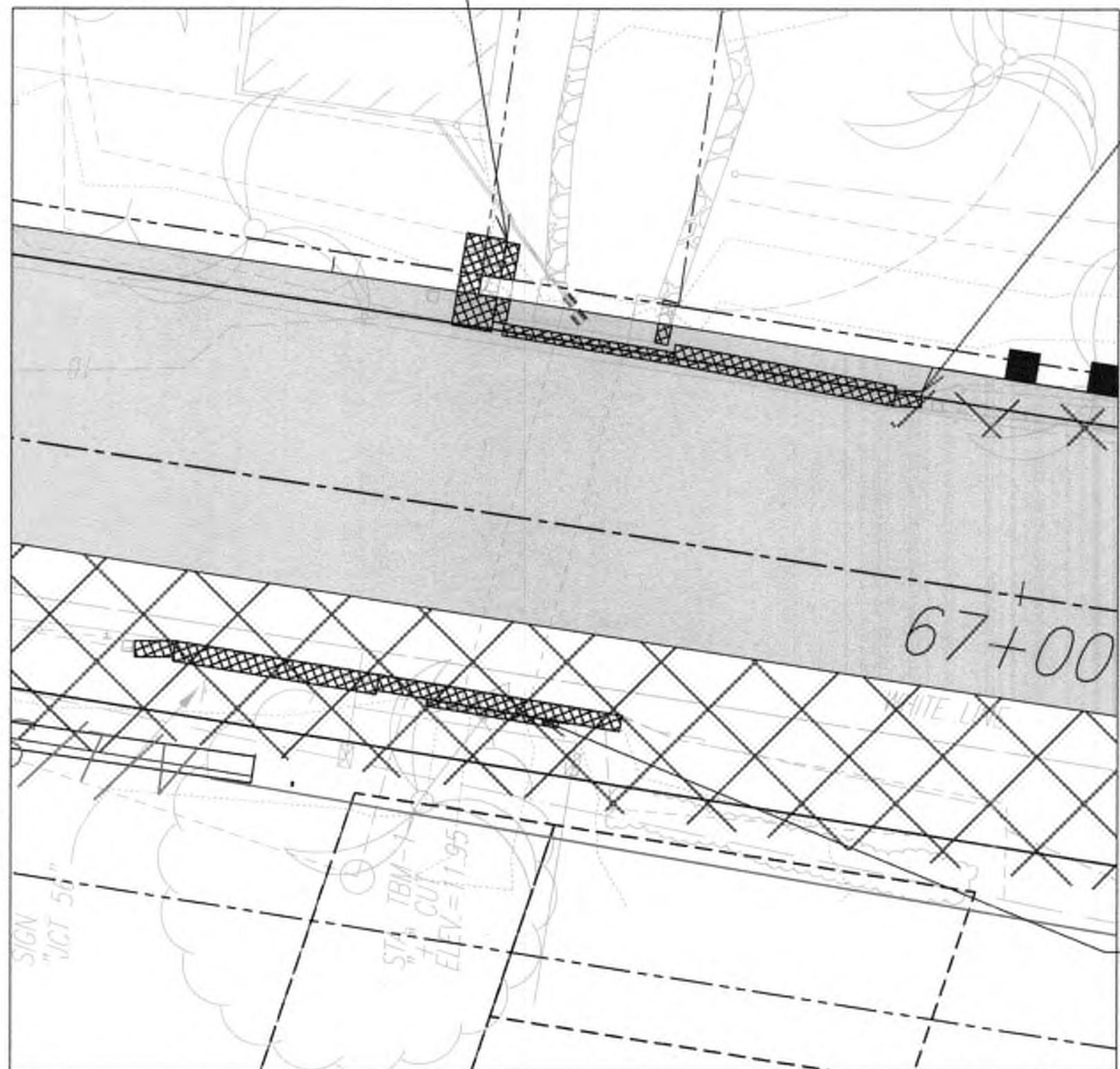


Legend:

- Remove exist. concrete and/or exist. a.c. pavement including asphalt base and aggregate subbase
- 2" Cold Plane Repave with 2" HMA, Mix IV



Remove and Dispose exist. conc. steps and conc. walls, Incidental to Section 202



INSET  
Scale - 1" = 10'

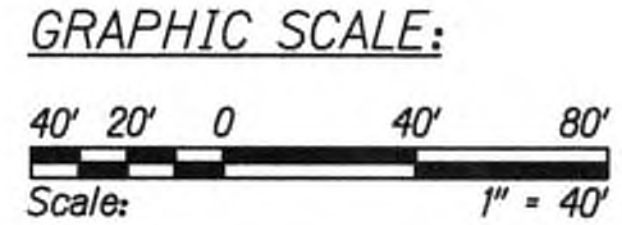
DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	

APPROVED

Manager and Chief Engineer  
Department of Water,  
County of Kauai

7/22/19  
Date

9/20/19	Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



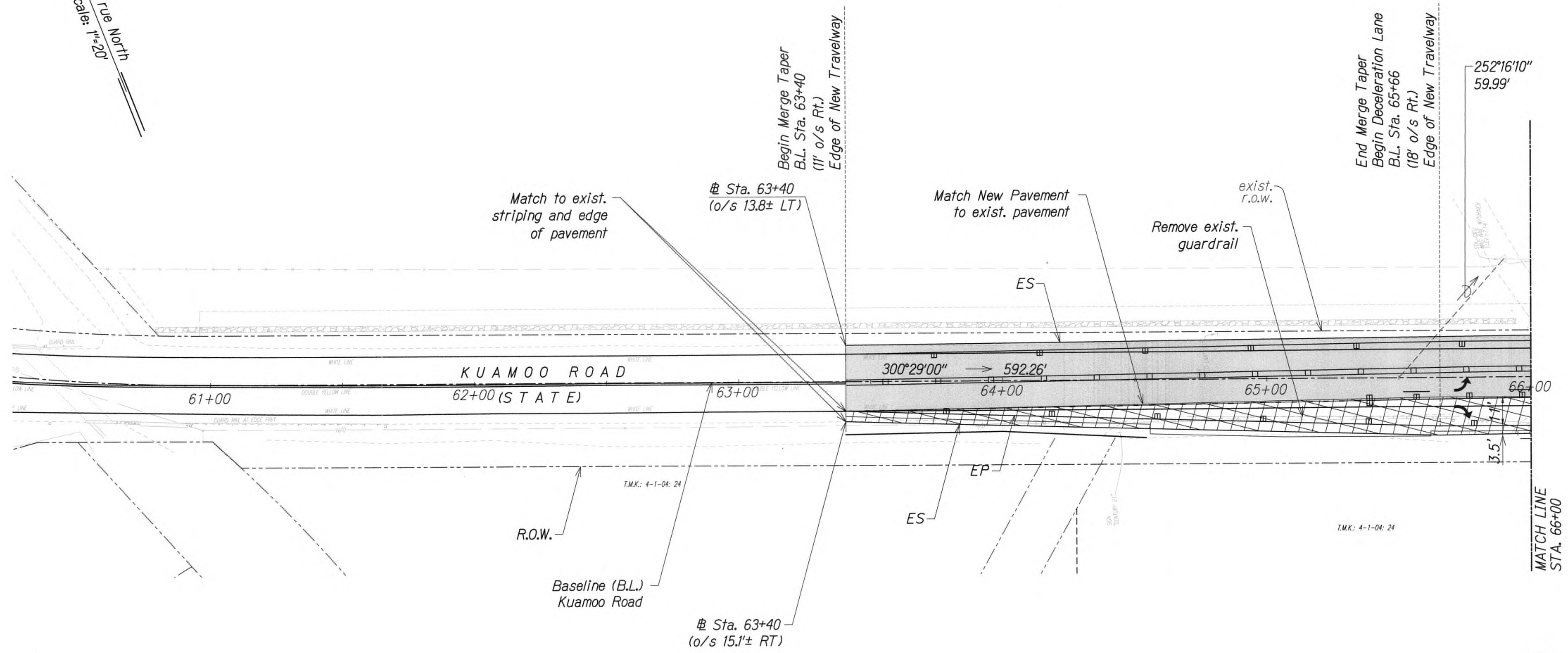
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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**DEMOLITION PLAN**  
**KUAMOO ROAD**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: July 2019  
SHEET No. RPK1 OF 13 SHEETS



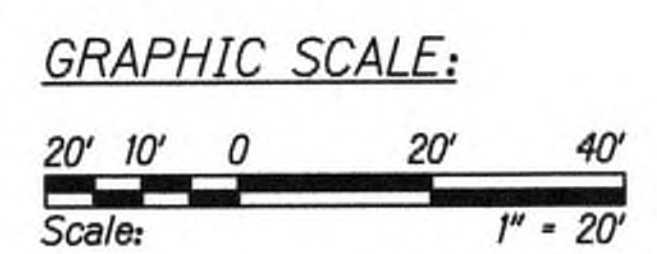
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.76	244

True North  
Scale: 1"=20'



Legend:

- New Pavement Structure
- Cold Plane



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY	DRAWN BY	
CHECKED BY	NOTED BY	

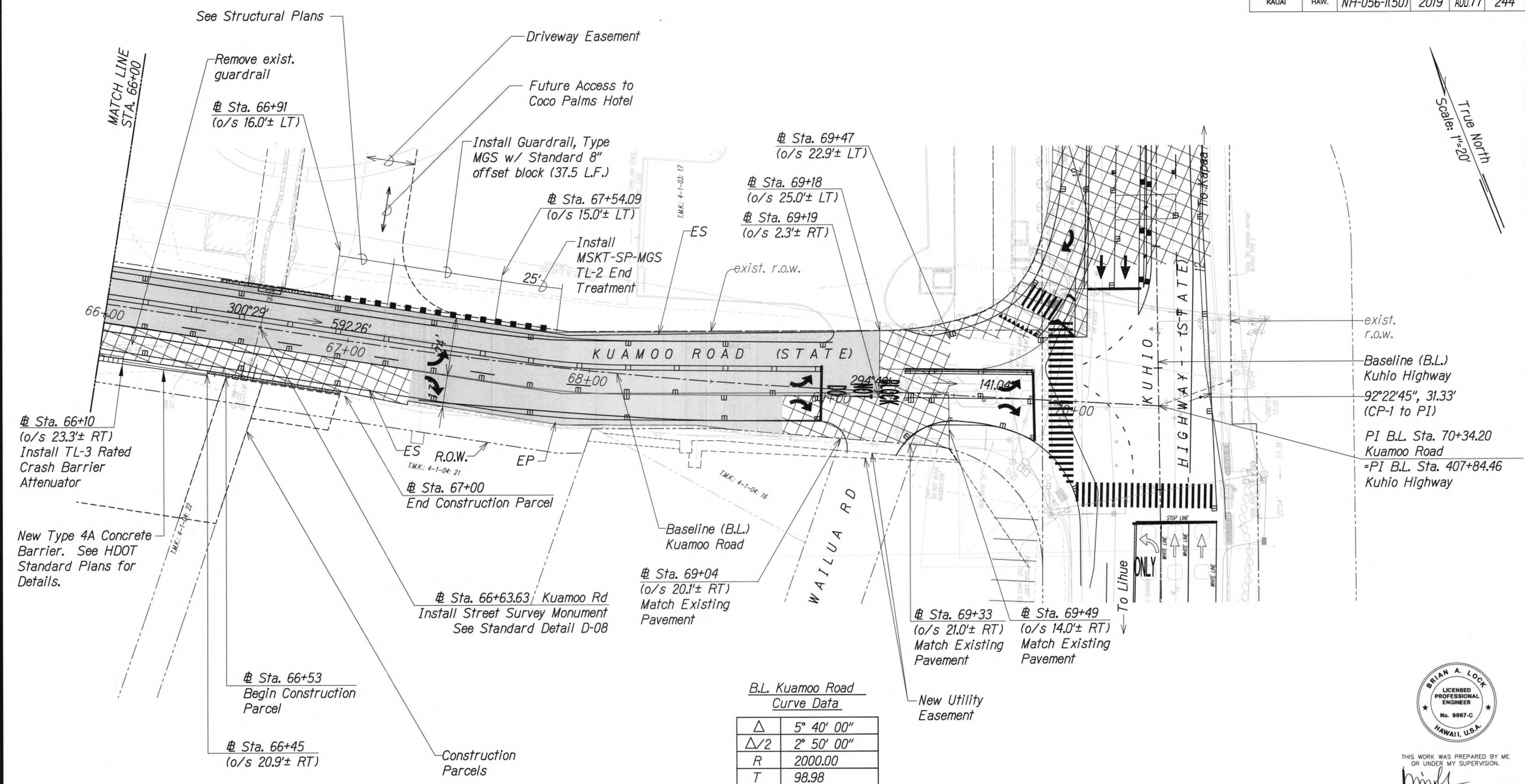


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*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ROADWAY PLAN**  
**KUAMOO ROAD**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019  
SHEET No. RPK2 OF 13 SHEETS

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION





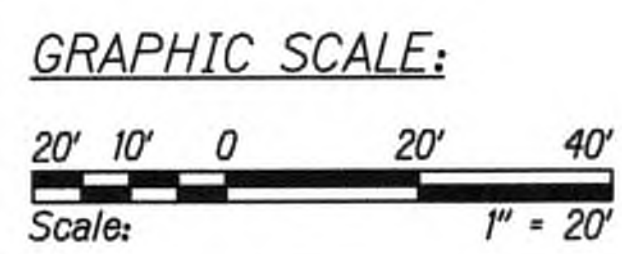
True North  
Scale: 1"=20'

exist. r.o.w.  
Baseline (B.L.)  
Kuhio Highway  
92°22'45", 31.33'  
(CP-1 to PI)  
PI B.L. Sta. 70+34.20  
Kuamoo Road  
=PI B.L. Sta. 407+84.46  
Kuhio Highway

B.L. Kuamoo Road  
Curve Data

Δ	5° 40' 00"
Δ/2	2° 50' 00"
R	2000.00
T	98.98
Ch	197.72
Lc	197.80

Legend:  
 New Pavement Structure  
 Cold Plane



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTED BY	
NO.	



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*hml*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ROADWAY PLAN**  
**KUAMOO ROAD**  
**KUHIO HIGHWAY SHORT-TERM**  
**IMPROVEMENTS KUAMOO ROAD**  
**TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019  
SHEET No. RPK3 OF 13 SHEETS

9/20/19 Δ Reissuing plan for legibility  
only. No design changes have  
been made.

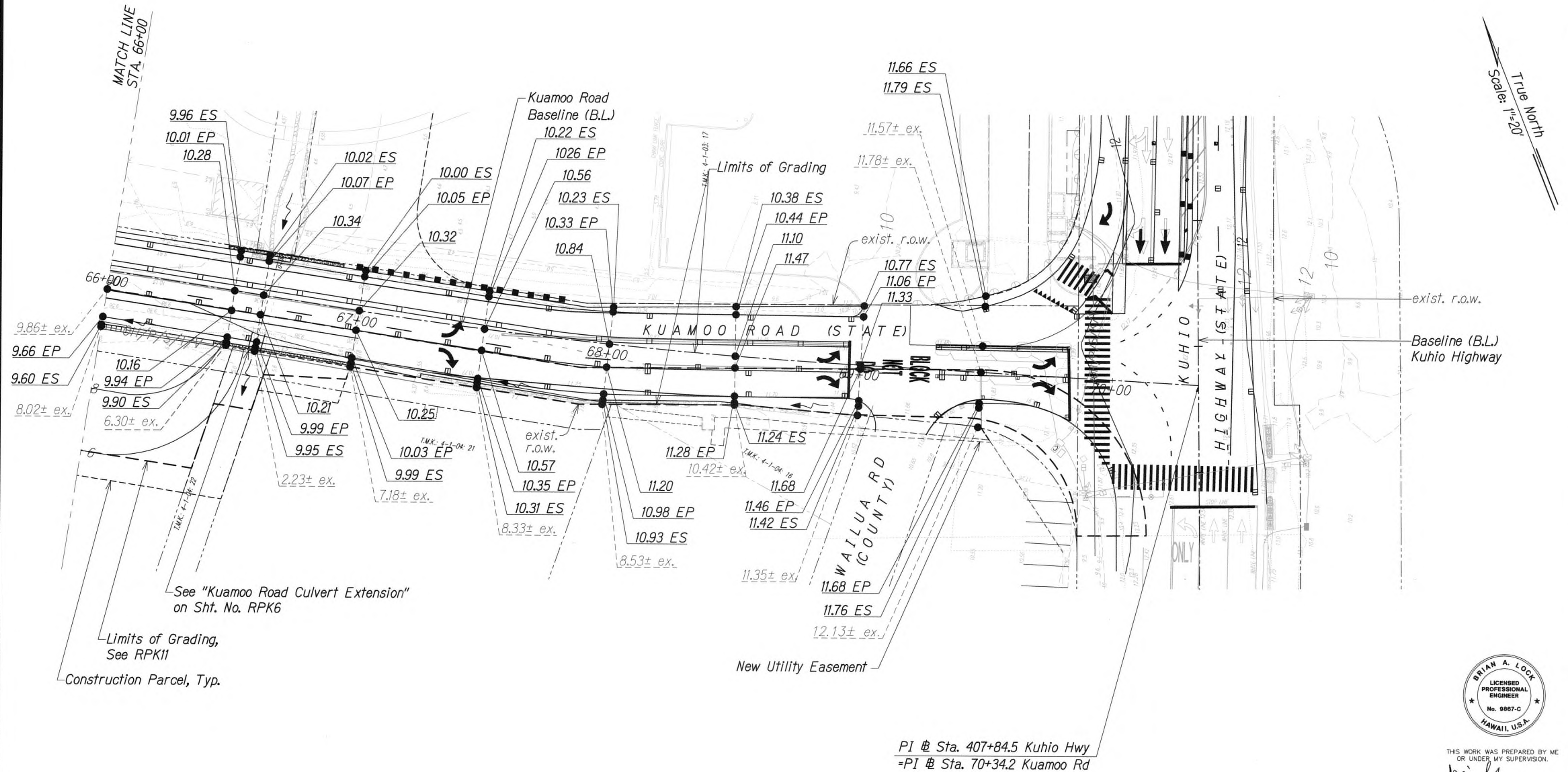
DATE	REVISION



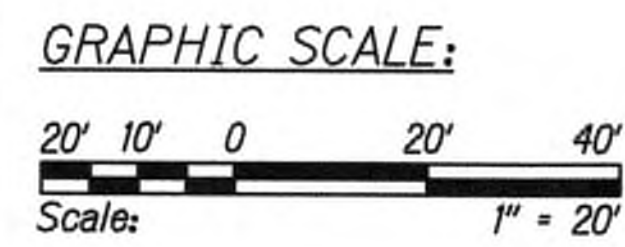




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.79	244



DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTES BOOK	_____
NO.	_____



9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

BRIAN A. LOCK

LICENSED PROFESSIONAL ENGINEER

No. 9867-C

HAWAII, U.S.A.

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APRIL 30, 2020

WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

GRADING PLAN

KUAMOO ROAD

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD

TO TEMPORARY KAPAA BYPASS ROAD

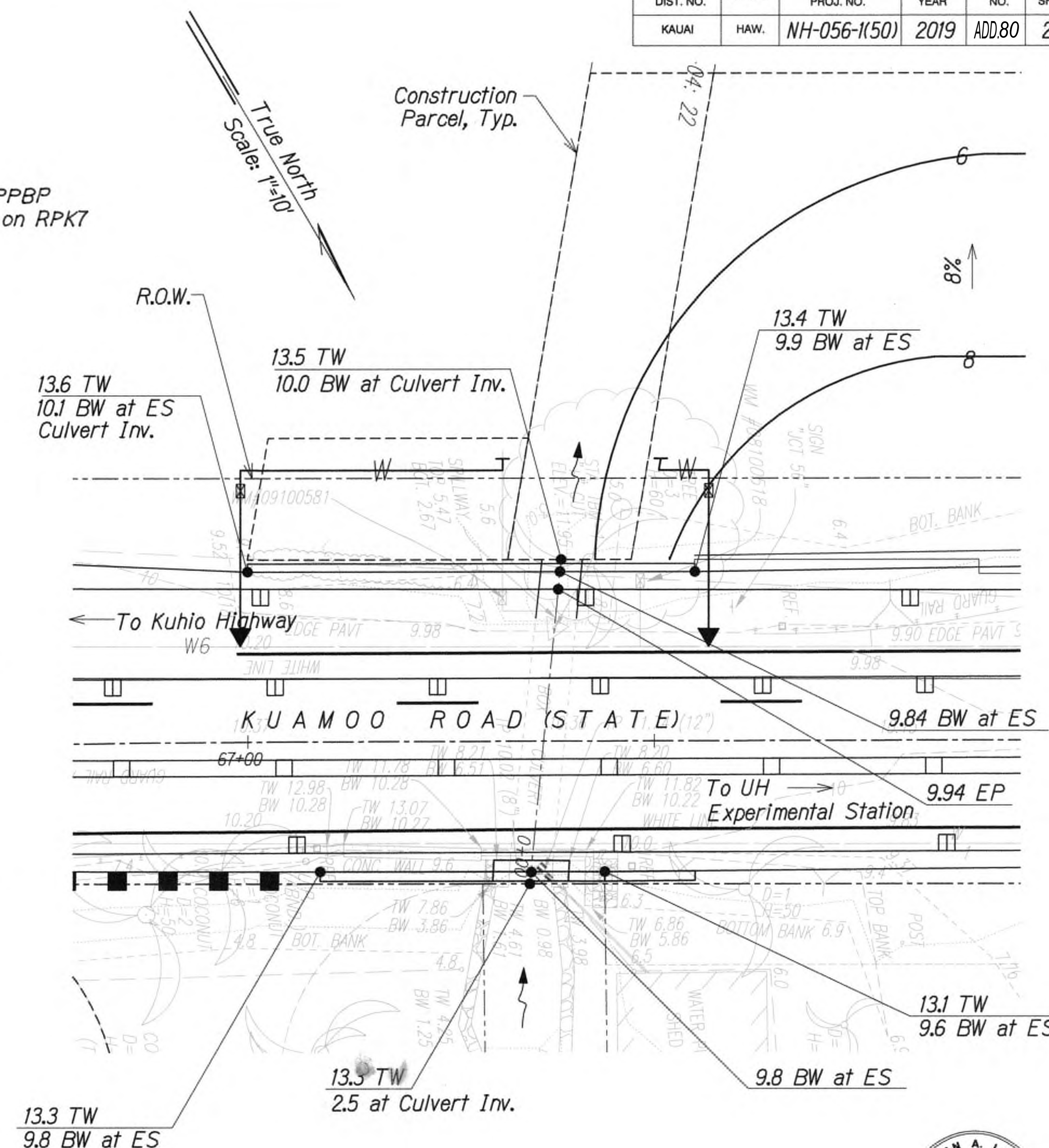
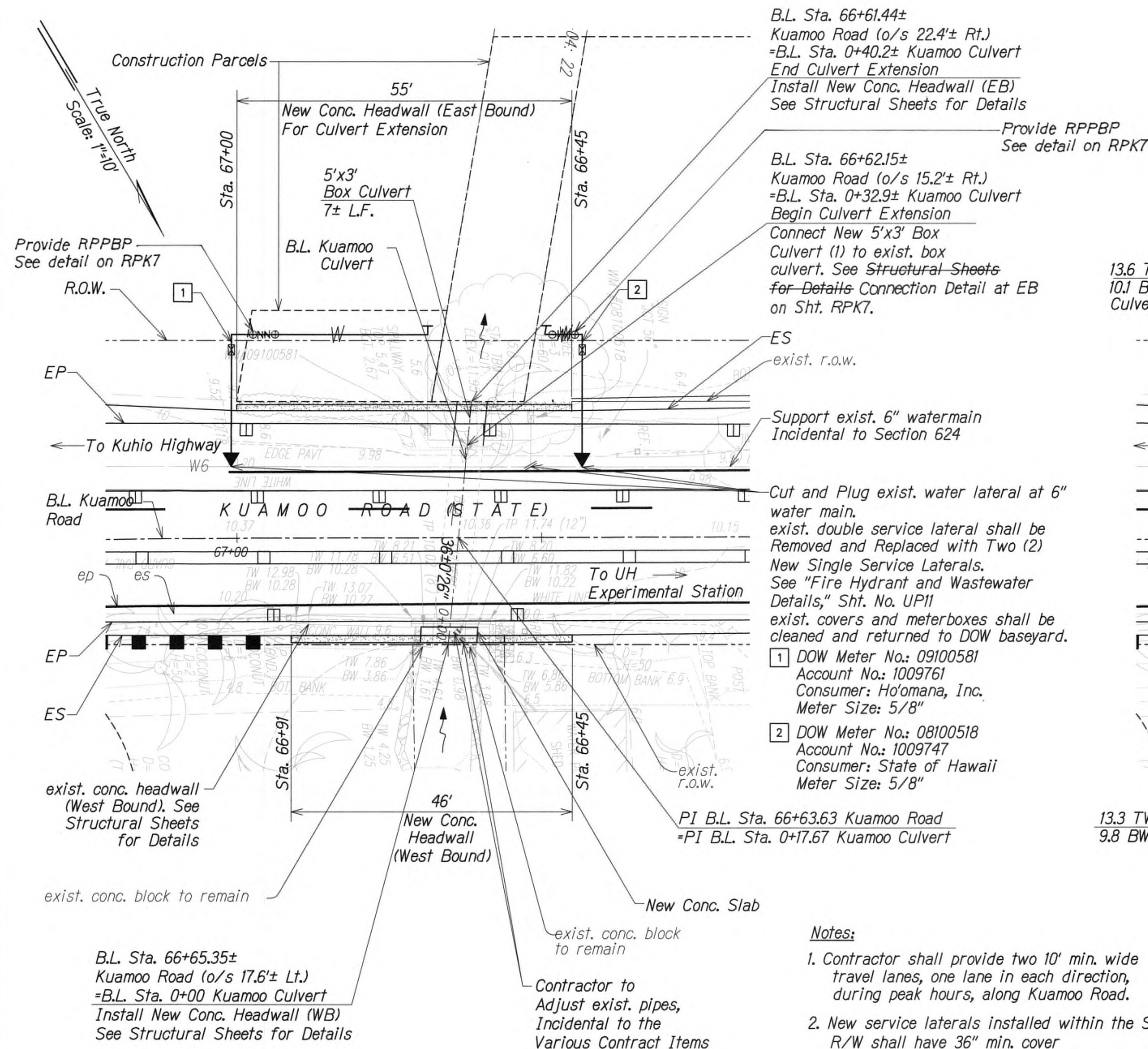
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20'

Date: July 2019

SHEET No. RPK5 OF 13 SHEETS





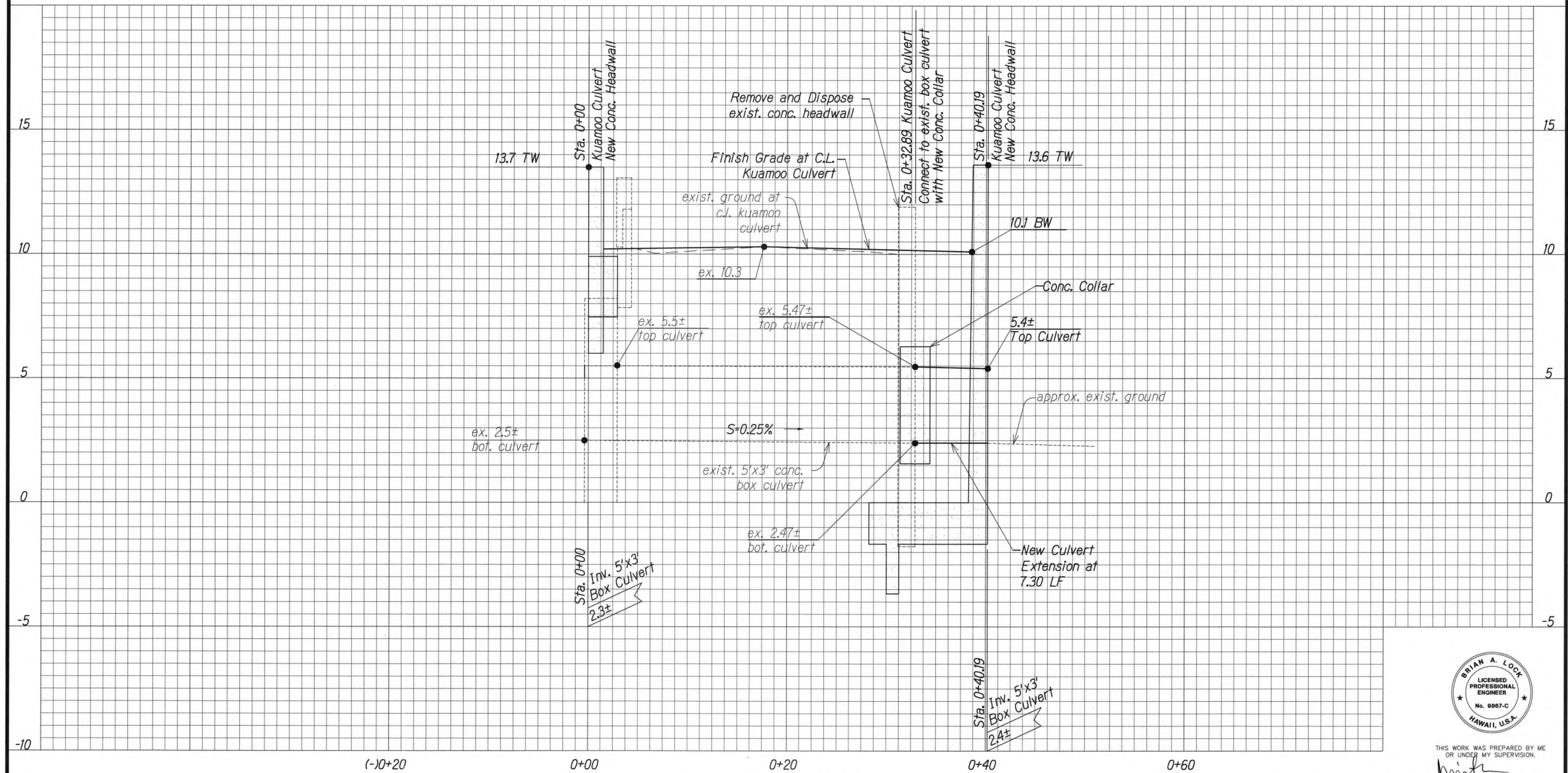
THIS WORK WAS PREPARED BY ME  
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*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KUAMOO ROAD  
CULVERT EXTENSION  
KUHIU HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019  
SHEET No. RPK60F 13 SHEETS

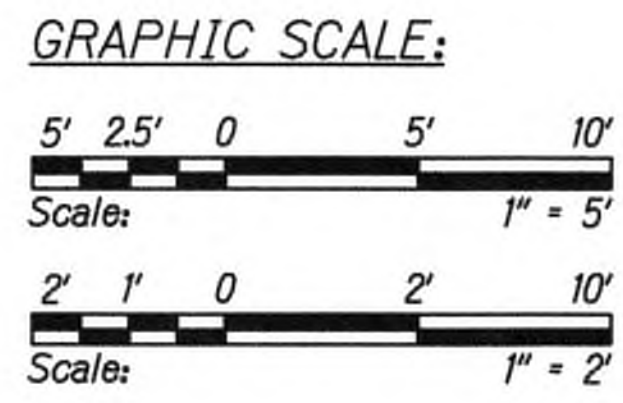








PROFILE - 5'x3' BOX CULVERT  
Scale : Horiz. 1" = 5'  
Vert. 1" = 2'



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



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APRIL 30, 2020  
LIC. EXP. DATE

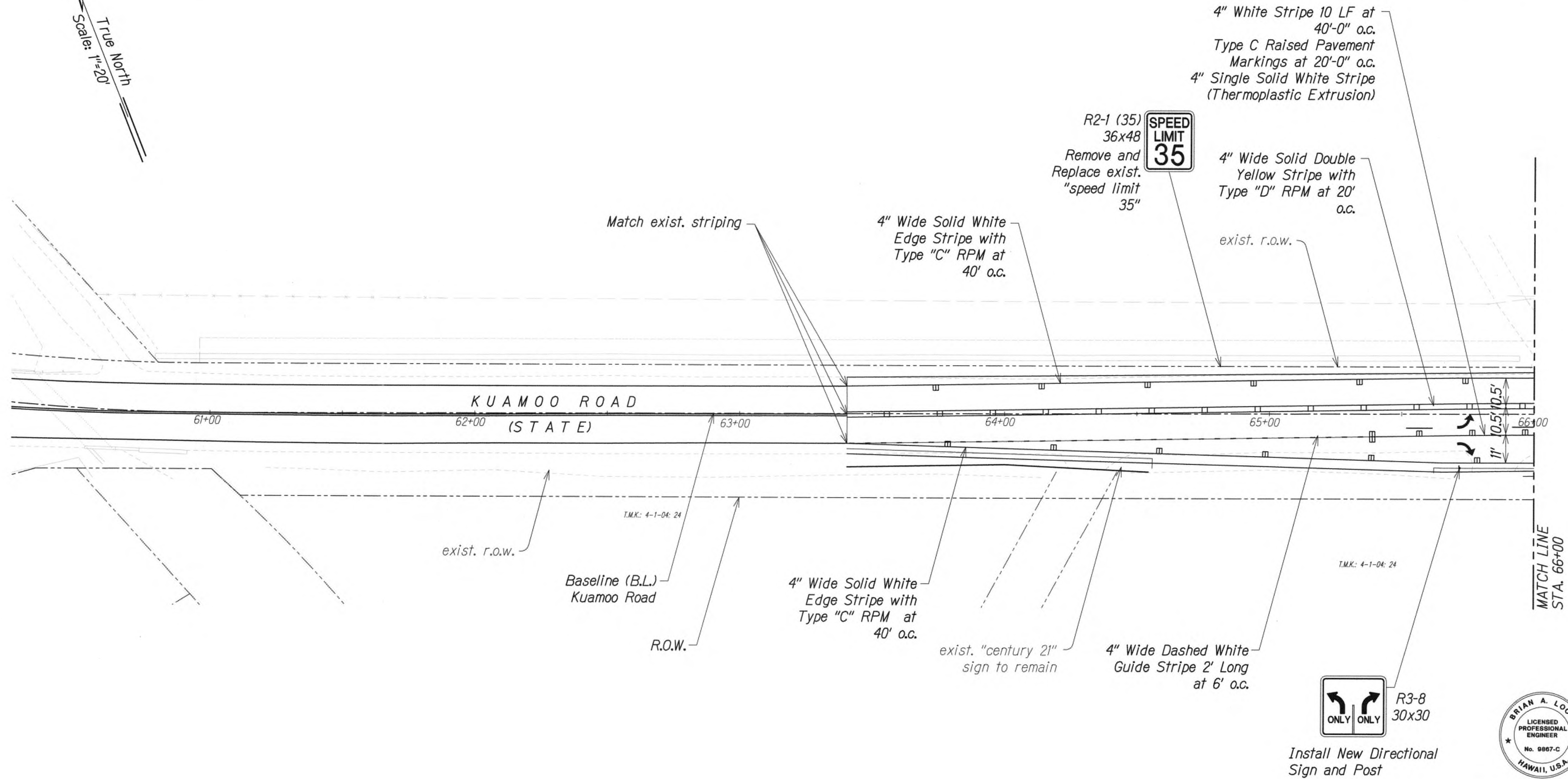
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PROFILE - KUAMOO ROAD  
CULVERT EXTENSION**  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. RPK8 OF 13 SHEETS

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

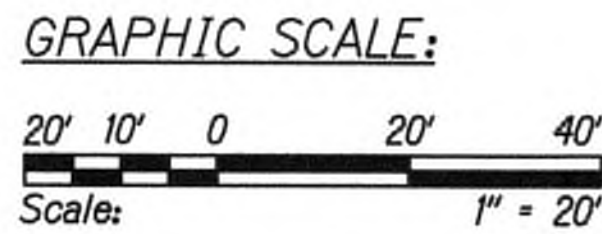


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.83	244

True North  
Scale: 1"=20'



Note:  
All pavement markings shall be thermoplastic extrusion/markings or pavement marking tape. Painting is not acceptable.



DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTED BY	_____
NO.	_____

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

Install New Directional Sign and Post



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

PAVEMENT MARKING  
AND SIGNING PLAN  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. RPK9 OF 13 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.84	244

4" White Stripe 10 LF at 40'-0" o.c.  
Type "C" Raised Pavement Markings at 20'-0" o.c.  
4" Single Solid White Stripe (Thermoplastic Extrusion)

Baseline (B.L.) Kuamoo Road

OM3-1(L)  
Object Marking and Post

OM3-1(R)  
Object Marking and Post

8" Wide Solid White Lane Stripe w/ Alternating Type "C" RPM at 20' o.c.

4" Wide Solid Double Yellow Stripe w/ Type "D" RPM at 20' o.c.

Type "C" RPM at 40' o.c.

4" Wide Solid Double Yellow Stripe w/ Type "D" RPM at 20' o.c.

12" Wide Solid White Stop Bar

4" Wide Dashed White Guide Stripe 2' Long at 6' o.c.

4" Wide Solid White Edge Stripe w/ Type "C" RPM at 40' o.c.

Standard Pavement Arrows

exist. r.o.w.

66+00

67+00

KUAMOO ROAD (STATE)

68+00

69+00

70+00

KUHIO HIGHWAY (STATE)

exist. r.o.w.

Baseline (B.L.) Kuhio Highway

12" Wide Solid White Stop Bar

MATCH LINE STA. 66+00

T.M.K.: 4-1-04-22

OM3-1(L)  
Object Marking and Post

New Utility Easement

T.M.K.: 4-1-04-21  
R.O.W.  
exist. r.o.w.

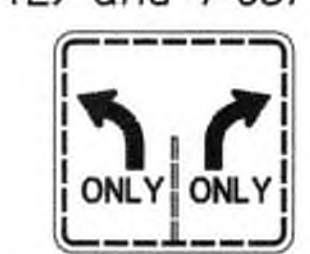


Install New Directional Sign and Post

T.M.K.: 4-1-04-16

WAILUA ROAD

Install New Directional Sign (2) and Post (1)



R3-8 30x30



R10-9 18x24

Standard Pavement Arrow

4" Wide Solid White Edge Stripe w/ Type "C" RPM at 40' o.c.



M2-1 21x15

M1-6 (56) 24x24

Remove and Replace exist. "jct 56" sign

OM3-1(R)  
Object Marking and Post

8" Wide Solid White Lane Stripe w/ Alternating Type "C" RPM at 20' o.c.

4" Wide Solid White Edge Stripe w/ Type "C" RPM at 40' o.c.

exist. sign to remain

Match exist. striping

Note:

All pavement markings shall be thermoplastic extrusion/markings or pavement marking tape. Painting is not acceptable.

GRAPHIC SCALE:



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



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

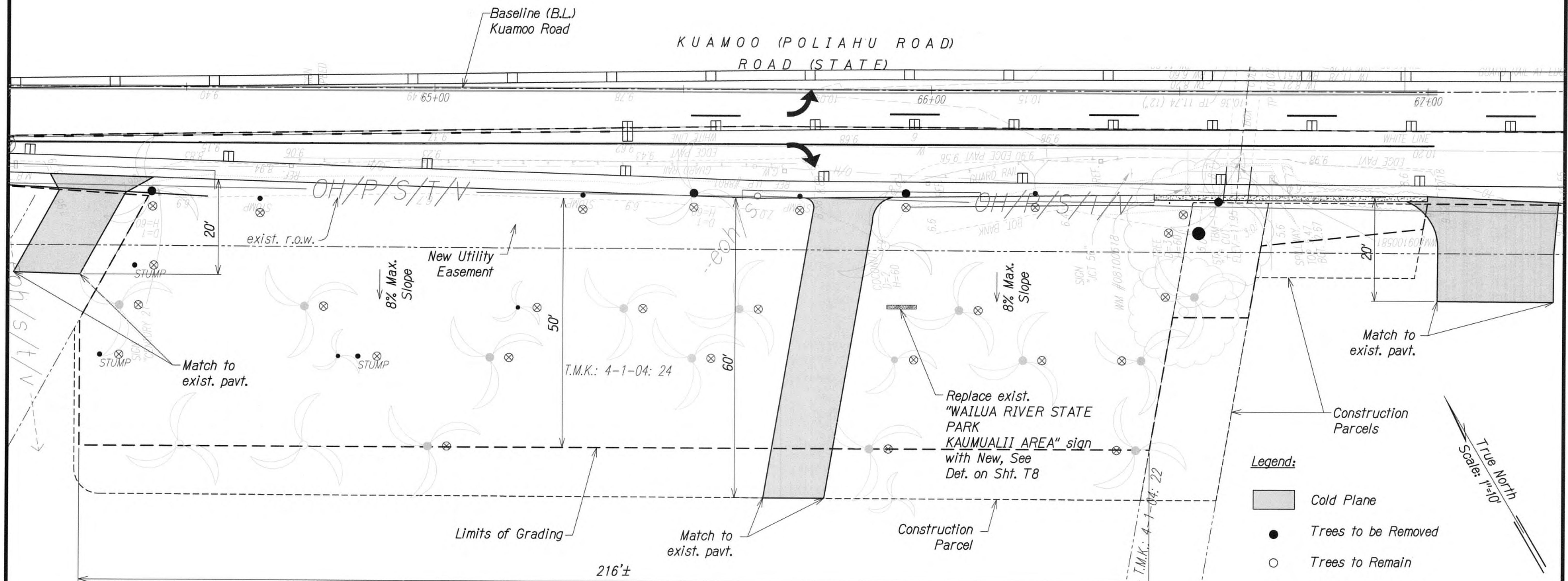
PAVEMENT MARKING  
AND SIGNING PLAN  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20'  
Date: July 2019

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
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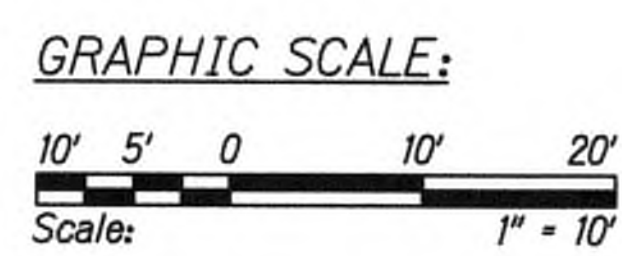
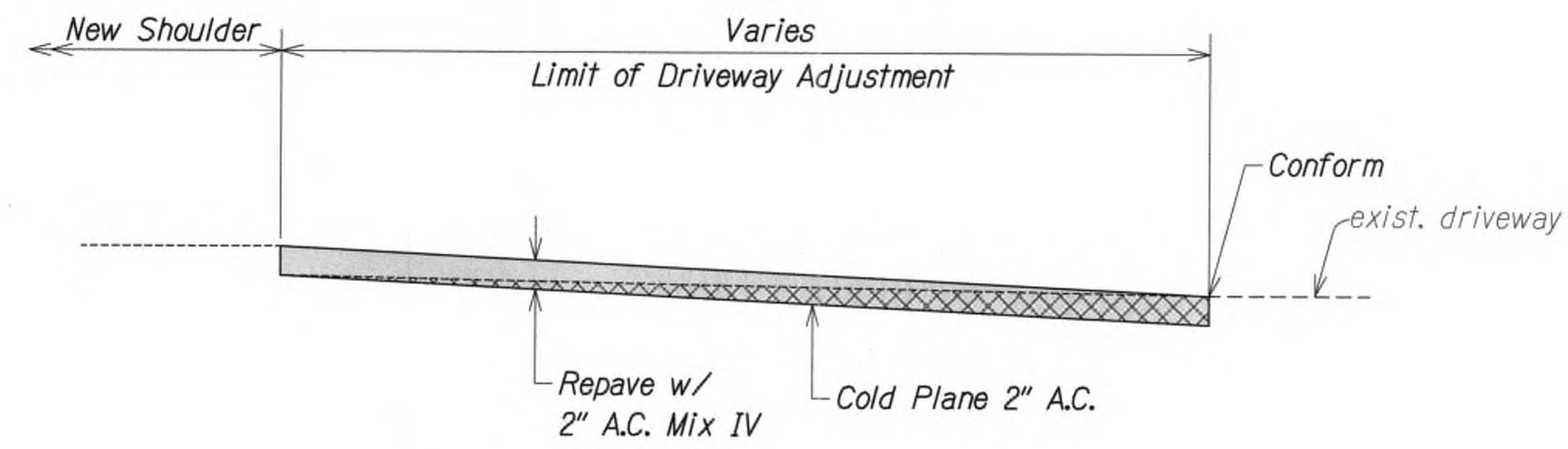
SHEET No. RPK100F 13 SHEETS





- Legend:
- Cold Plane
  - Trees to be Removed
  - Trees to Remain
  - New Tree Location

- Notes:
- Trees to be removed within Wailua River State Park or along Kuamoo Road right-of-way shall be cut at the base and ground down flush to surface level to minimize soil disturbance. Removed trees shall be replaced near the same location.
  - Use of the Wailua River State Park cannot exceed 180 days. The Contractor shall notify State Parks at (808) 587-0287, at least seven day prior to start of work in the State Park. The Contractor shall provide the start and end dates of the 180 day period prior to start of work in the State Park. Any use of the park property for construction beyond 180 days will be considered a conversion of that property and will be subject to appropriate actions by the state.



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



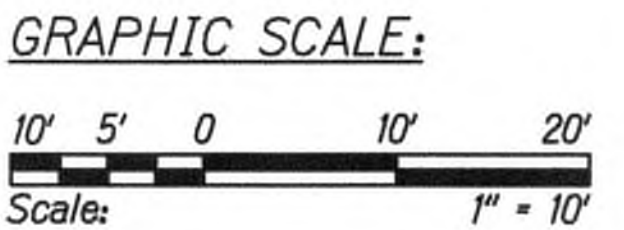
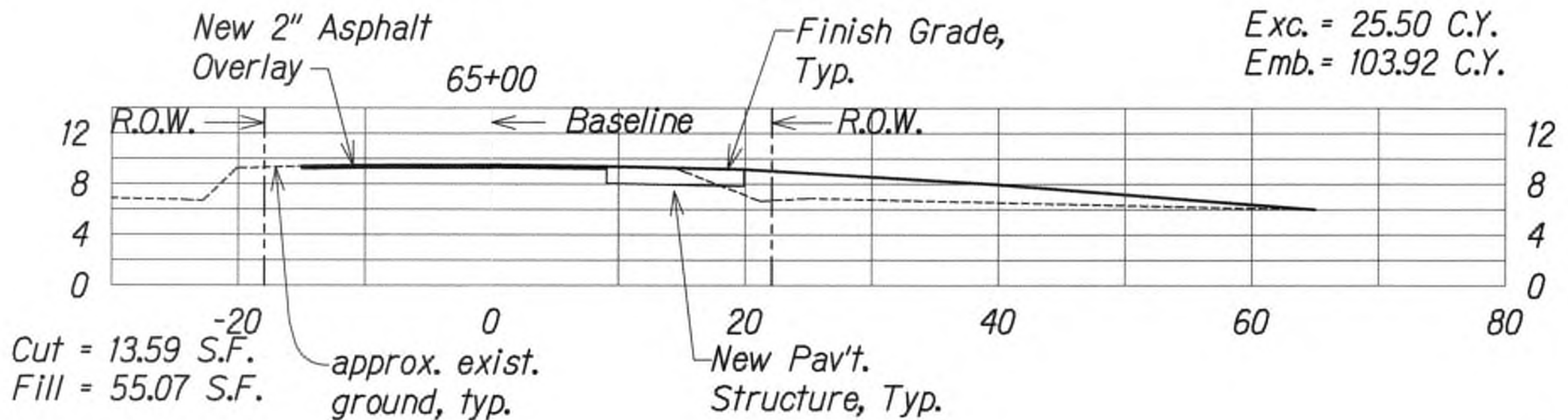
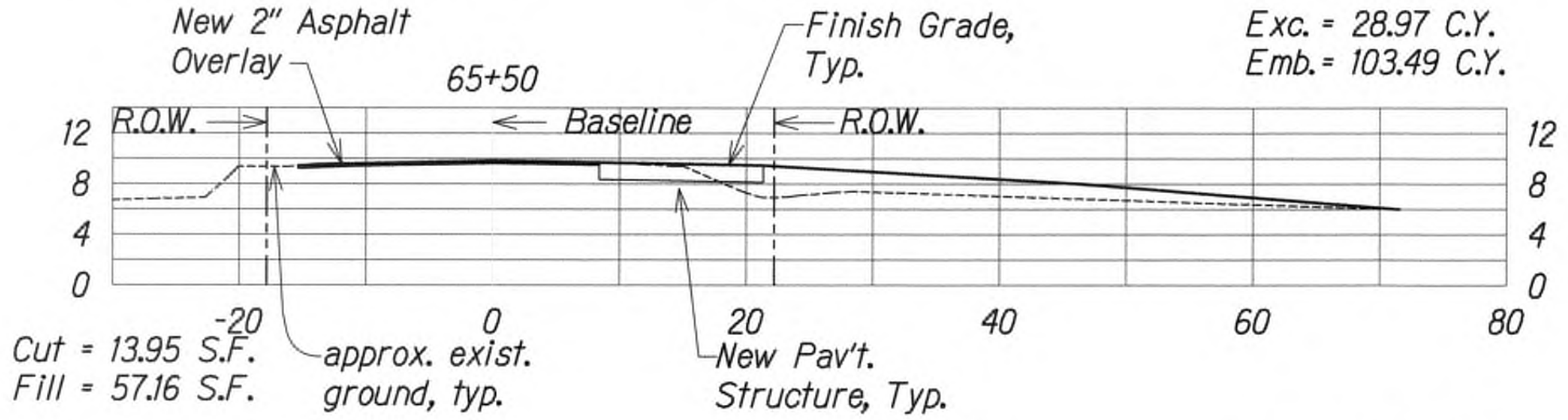
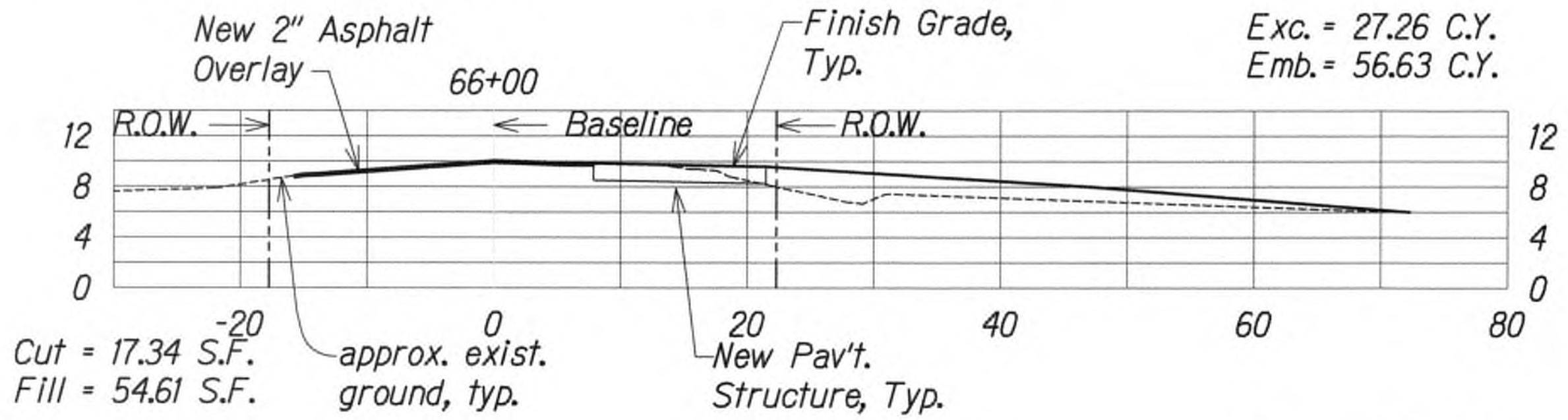
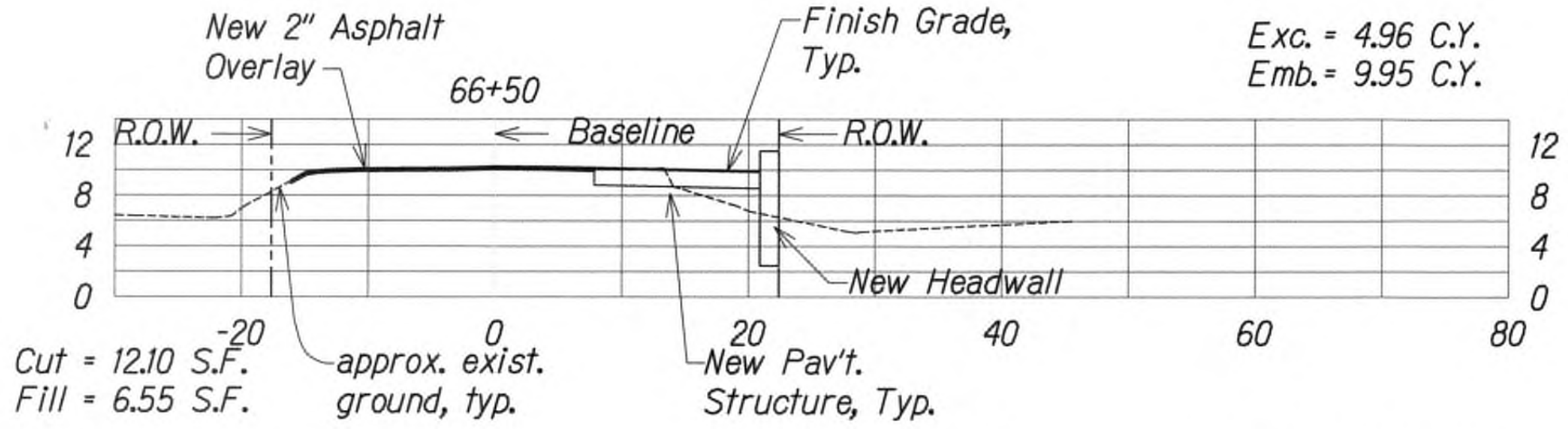
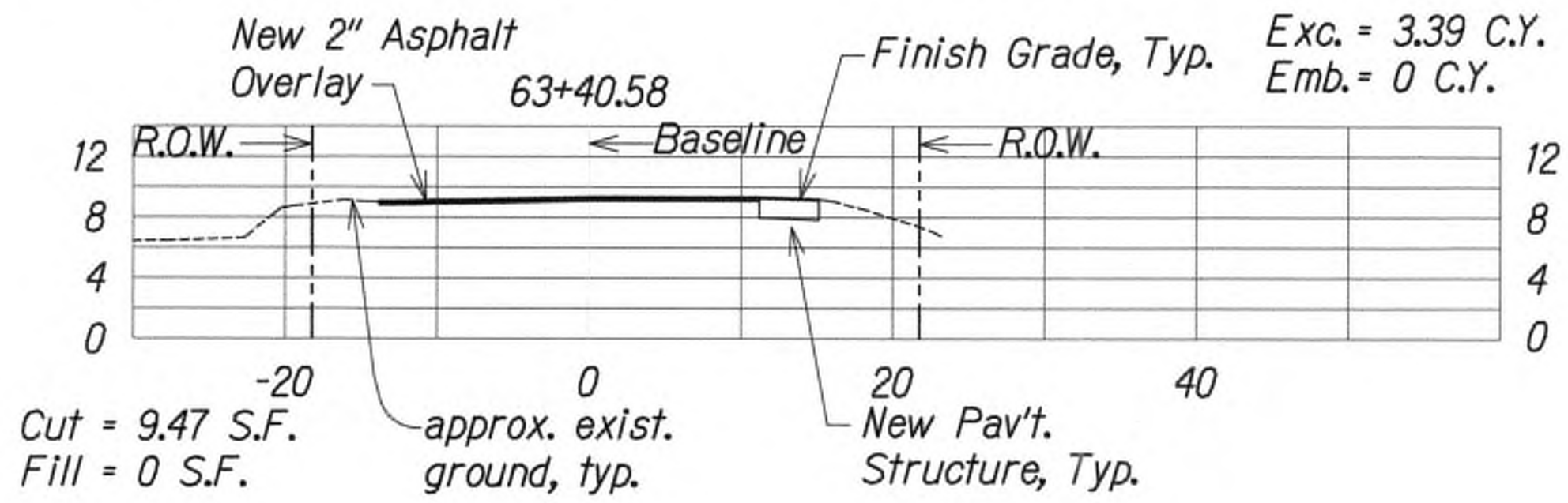
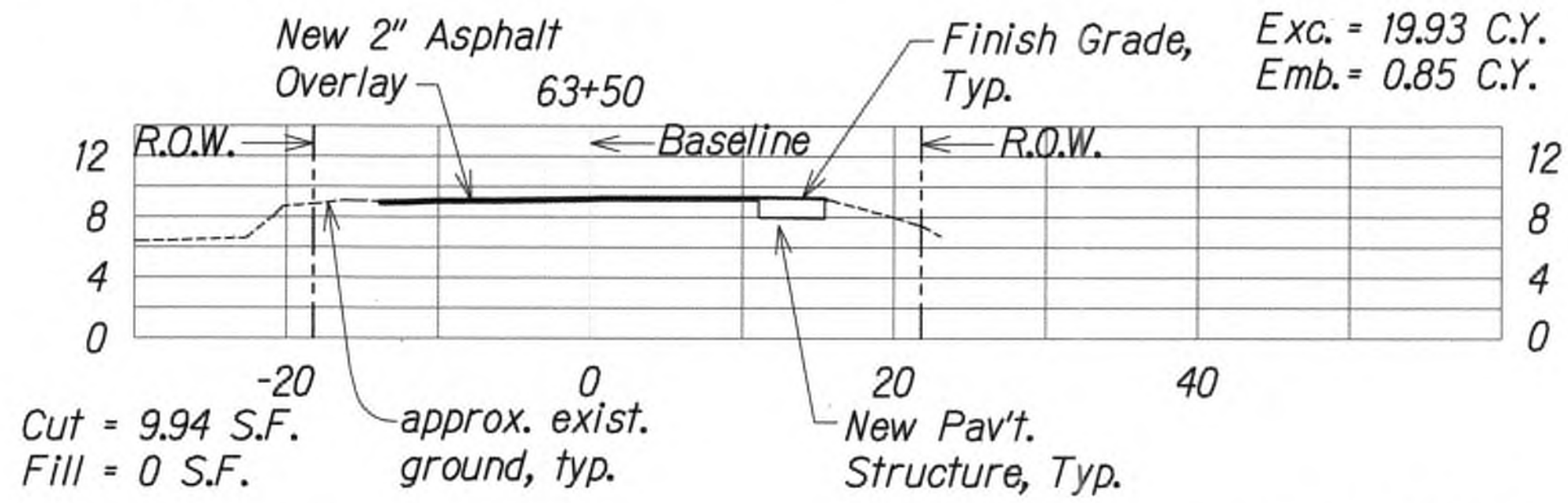
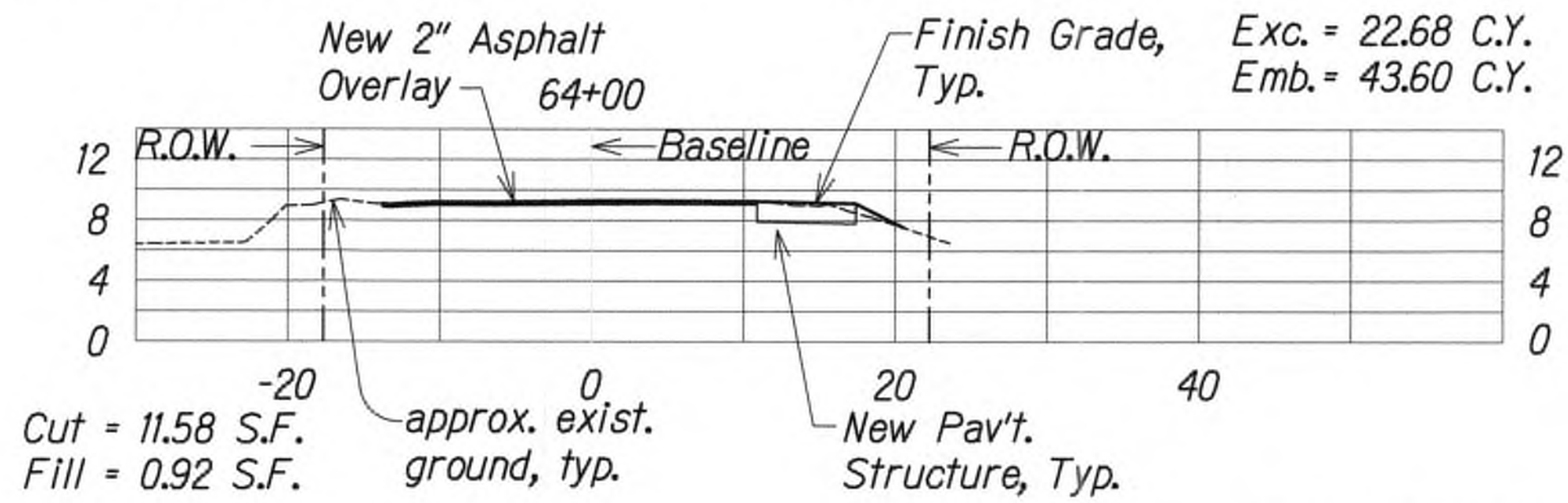
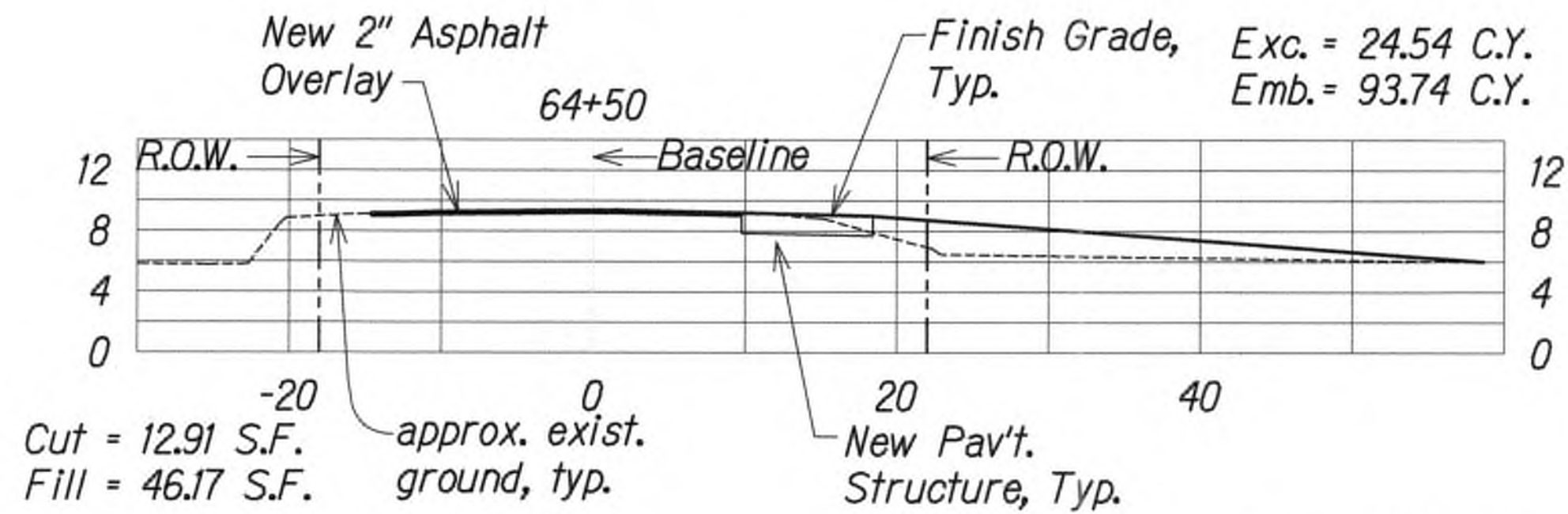
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
WILSON OKAMOTO CORPORATION  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KAUMUALII - WAILUA RIVER STATE PARK**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. RPK11 OF 13 SHEETS

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



Sheet Total  
Exc. = 157.22 C.Y.  
Emb. = 412.18 C.Y.



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APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY CROSS SECTIONS**

**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

SHEET No. RPK12 OF 13 SHEETS

Kuamoo Road Improvements  
**ROADWAY CROSS SECTIONS**  
Scale: 1" = 10'

9/20/19 Δ Reissuing plan for legibility  
only. No design changes have  
been made.

DATE REVISION

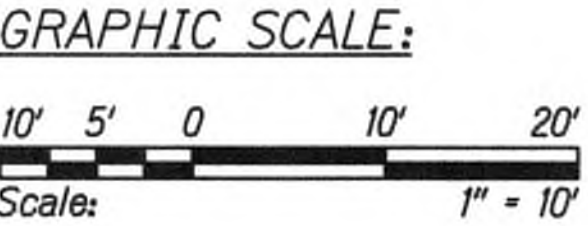
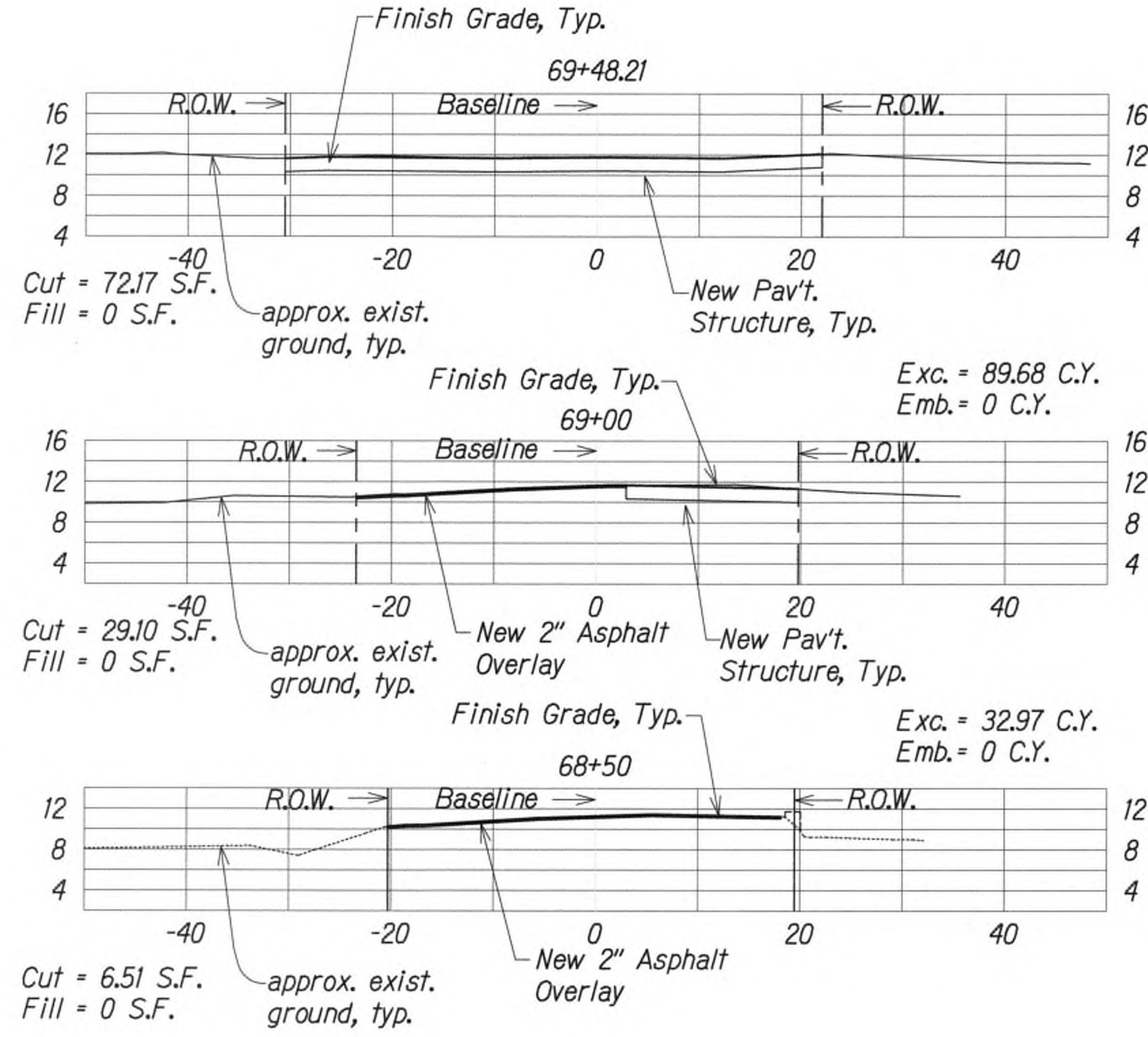
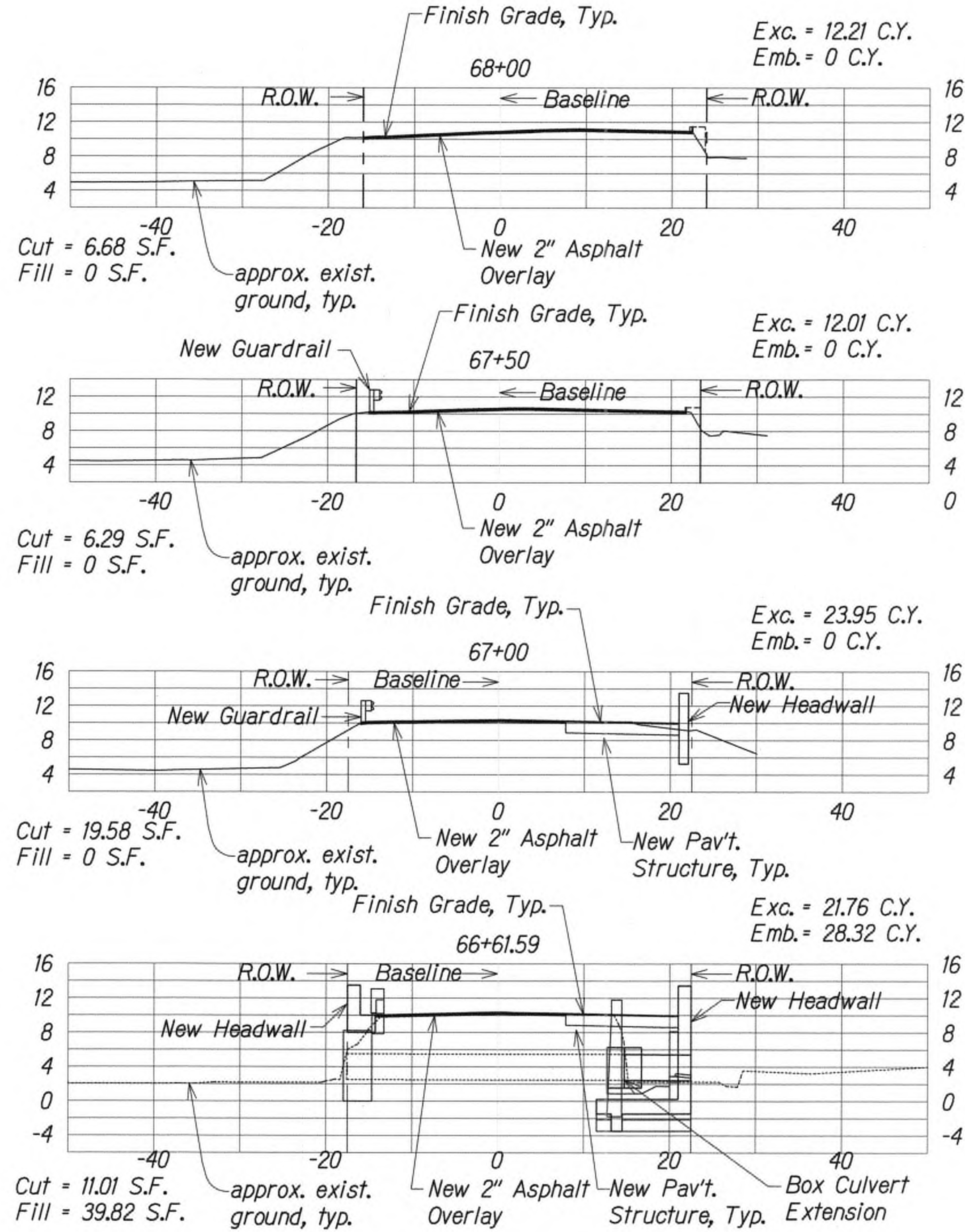
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.87	244

Sheet Total  
Exc. = 192.59 C.Y.  
Emb. = 28.32 C.Y.

Roadway Total  
Total Exc. = 349.80 C.Y.  
Total Emb. = 440.51 C.Y.



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*WILSON OKAMOTO CORPORATION*  
APR 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ROADWAY CROSS SECTIONS  
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019  
SHEET No. RPK130F 13 SHEETS

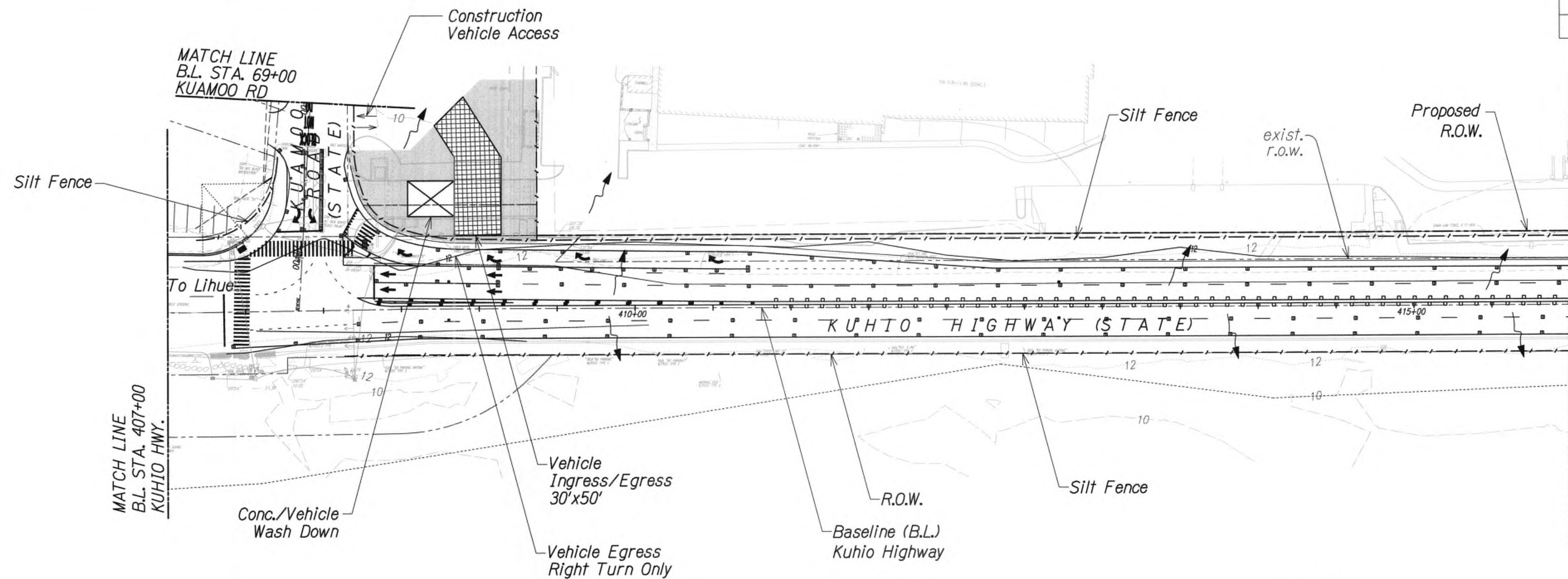
Kuamoo Road Improvements  
ROADWAY CROSS SECTIONS  
Scale: 1" = 10'

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	

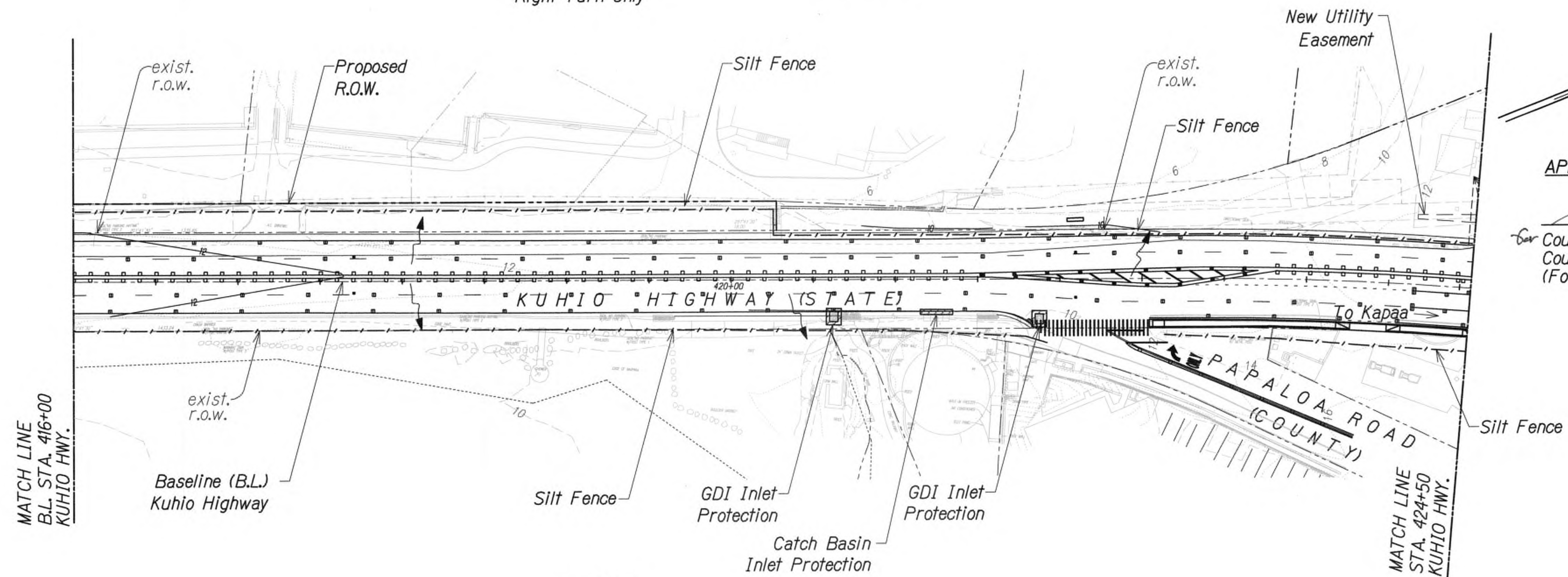


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.88	244



**NOTE:**

Contractor may substitute compost filter berm or aggregate filter pouch for silt fence in paved areas only.



**APPROVED**

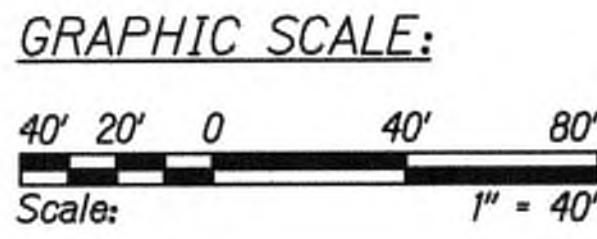
*[Signature]* 7/17/19  
County Engineer  
County of Kauai  
(For Work Within the County Right-of-Way)



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*[Signature]* APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

**LEGEND:**

- |                            |                               |                |
|----------------------------|-------------------------------|----------------|
| --- Silt Fence/Filter Sock | ⊗ Vehicle Washdown            | ■ Staging Area |
| --- Silt Curtain           | ⊠ Construction Ingress/Egress |                |
| ▨ Inlet Protection         |                               |                |



9/20/19	Δ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

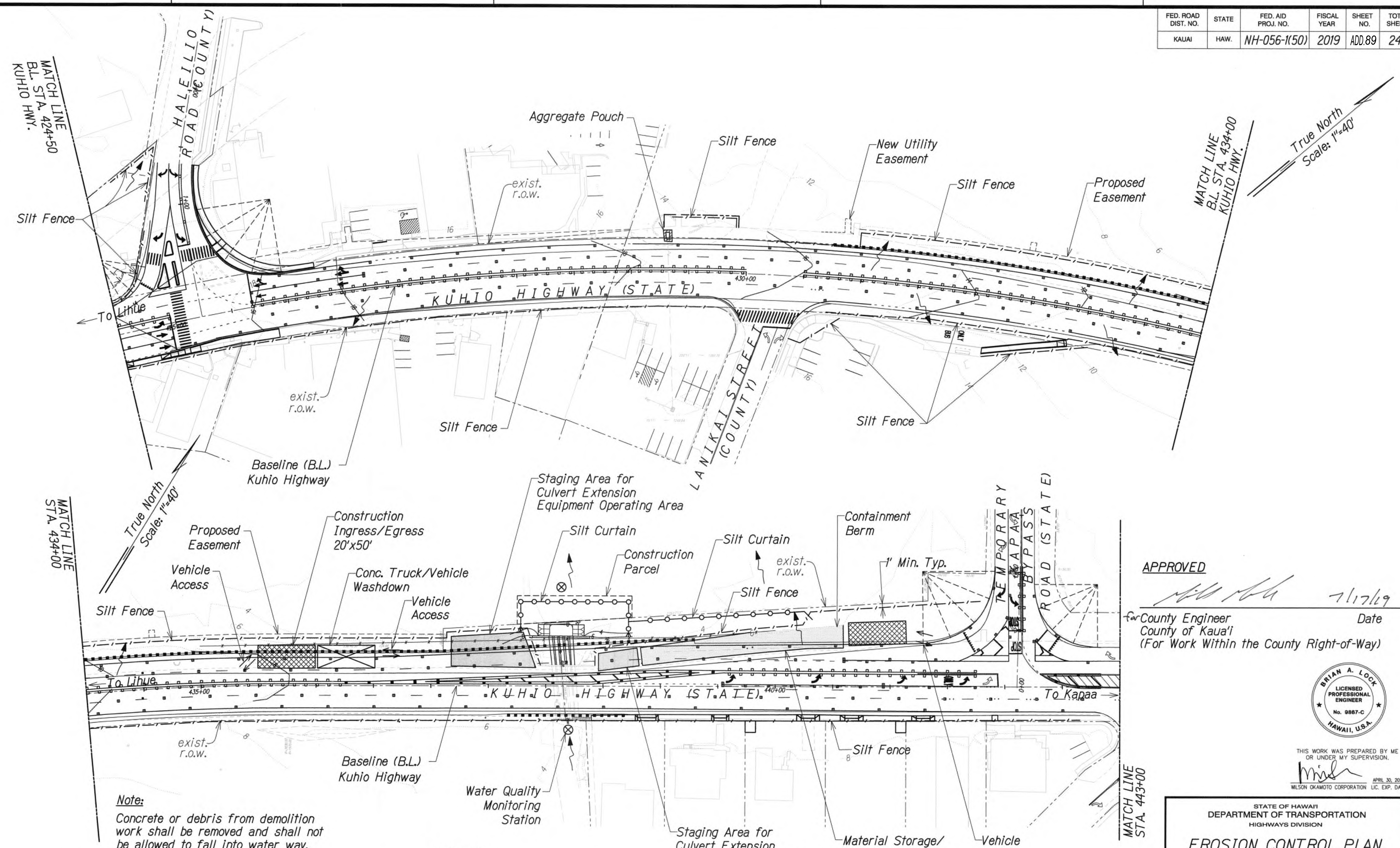
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**EROSION CONTROL PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: July 2019

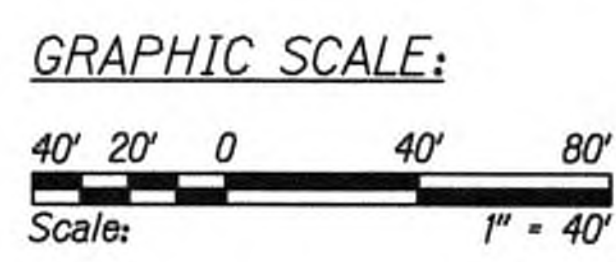
SHEET No. ECP1 OF 5 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.89	244



**Note:**  
Concrete or debris from demolition work shall be removed and shall not be allowed to fall into water way.



- LEGEND:**
- Silt Fence/Filter Sock
  - o-o- Silt Curtain
  - ▨ Inlet Protection

- ⊗ Vehicle Washdown
- ▨ Construction Ingress/Egress

- ▨ Staging Area
- ⊗ Water Quality Monitoring Station

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

**APPROVED**  
*[Signature]* 7/17/19  
County Engineer  
County of Kaua'i  
(For Work Within the County Right-of-Way)



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*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

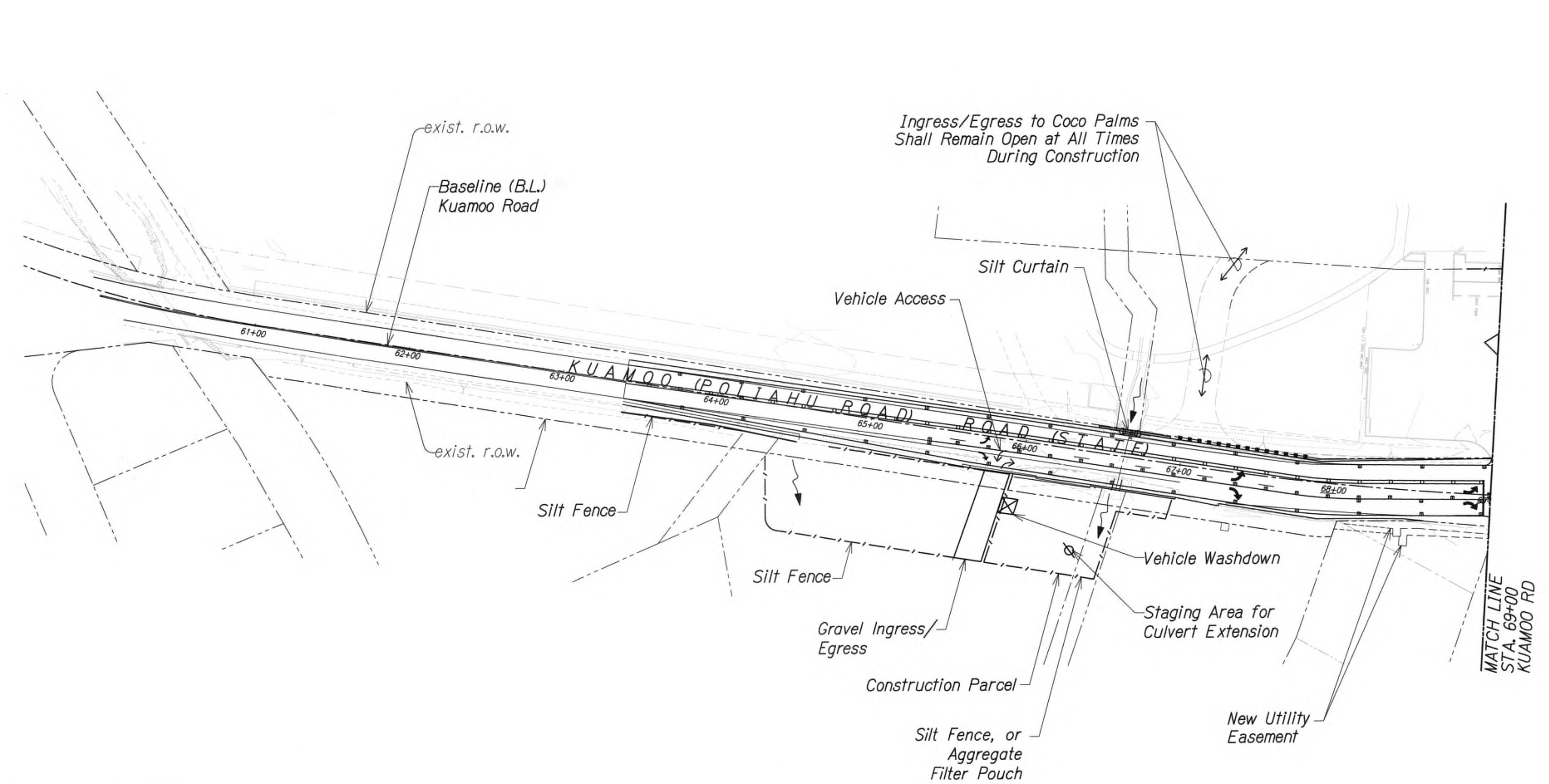
**EROSION CONTROL PLAN**

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: July 2019

SHEET No. ECP2 OF 5 SHEETS

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

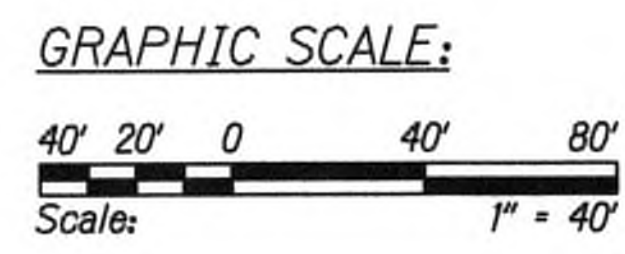




Notes:

1. Contractor may substitute compost filter berm or aggregate filter pouch for silt fence in paved areas only.
2. Concrete or debris from demolition work shall be removed and shall not be allowed to fall into water way.

LEGEND:



- |                    |                               |
|--------------------|-------------------------------|
| --- Silt Fence     | ⊗ Vehicle Washdown            |
| --- Silt Curtain   | ▨ Construction Ingress/Egress |
| ▨ Inlet Protection |                               |

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



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*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

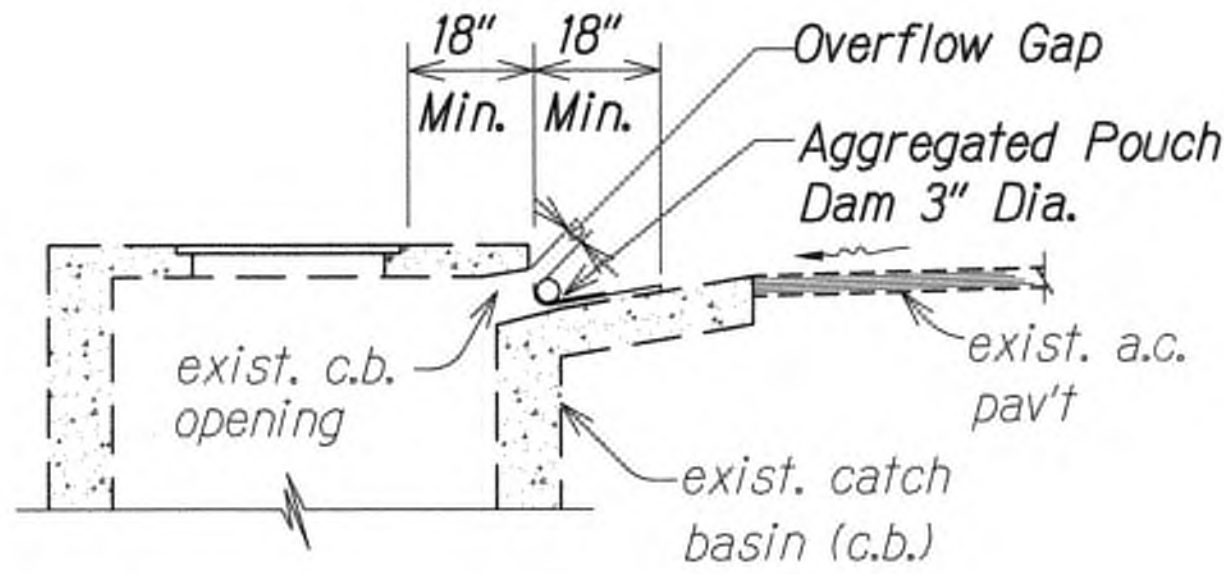
**EROSION CONTROL PLAN**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)

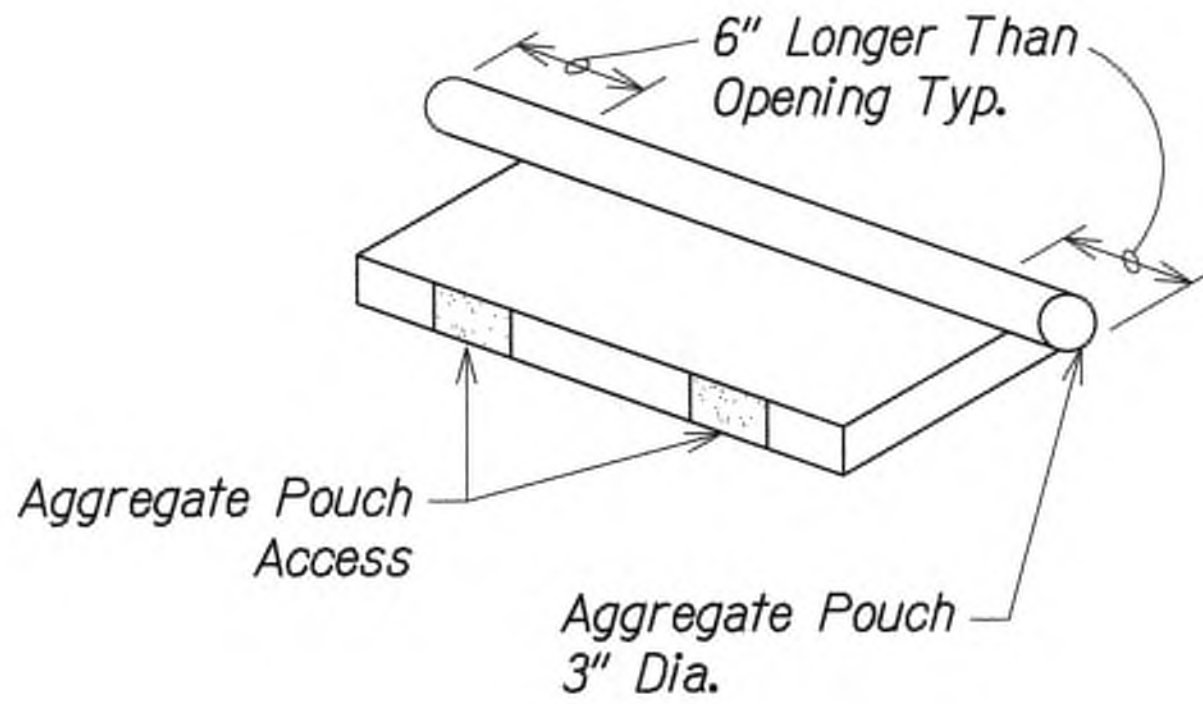
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SHEET No. ECP3 OF 5 SHEETS

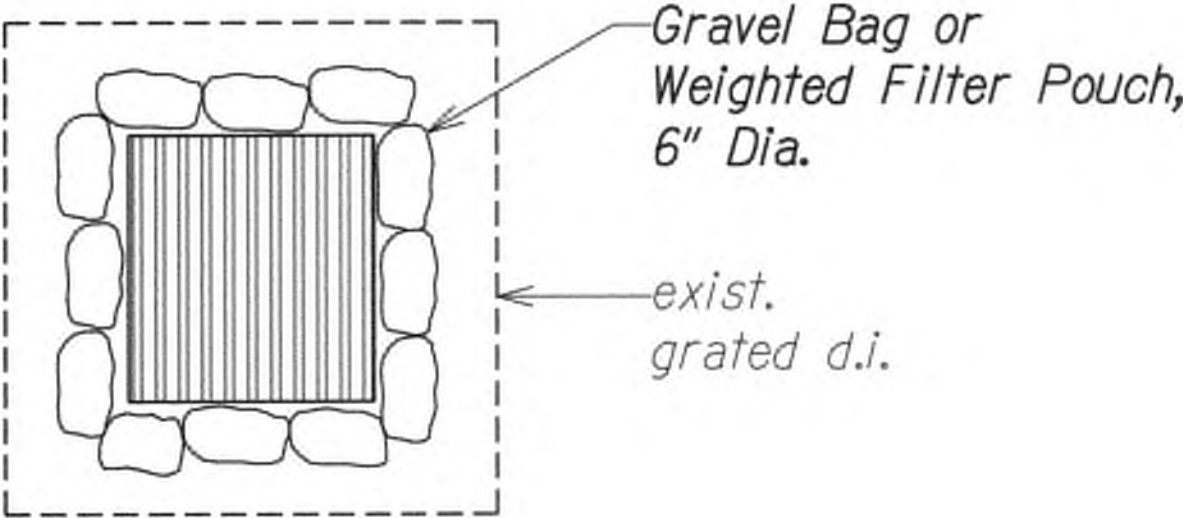




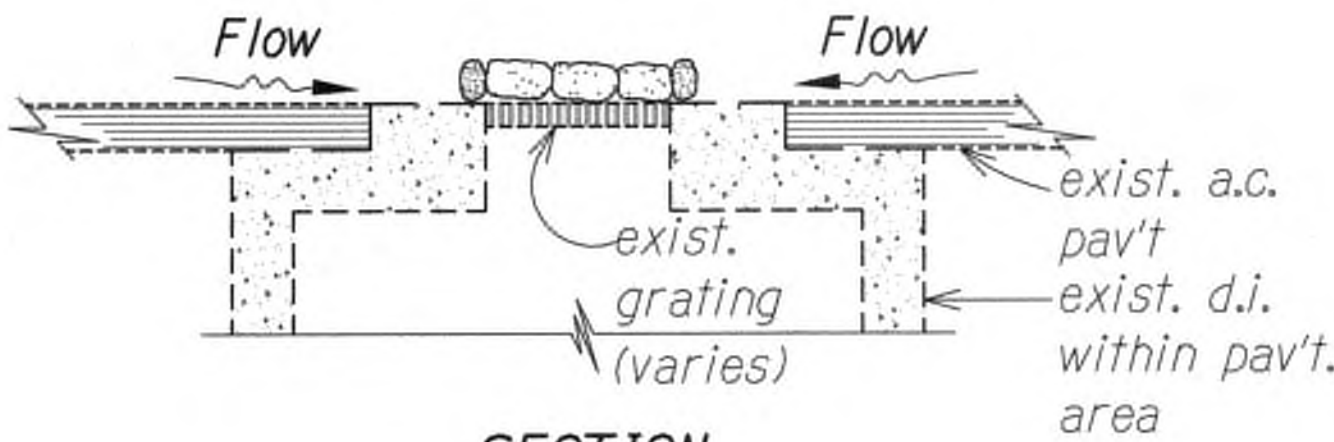
**ELEVATION**  
**AGGREGATE POUCH**  
Not to Scale



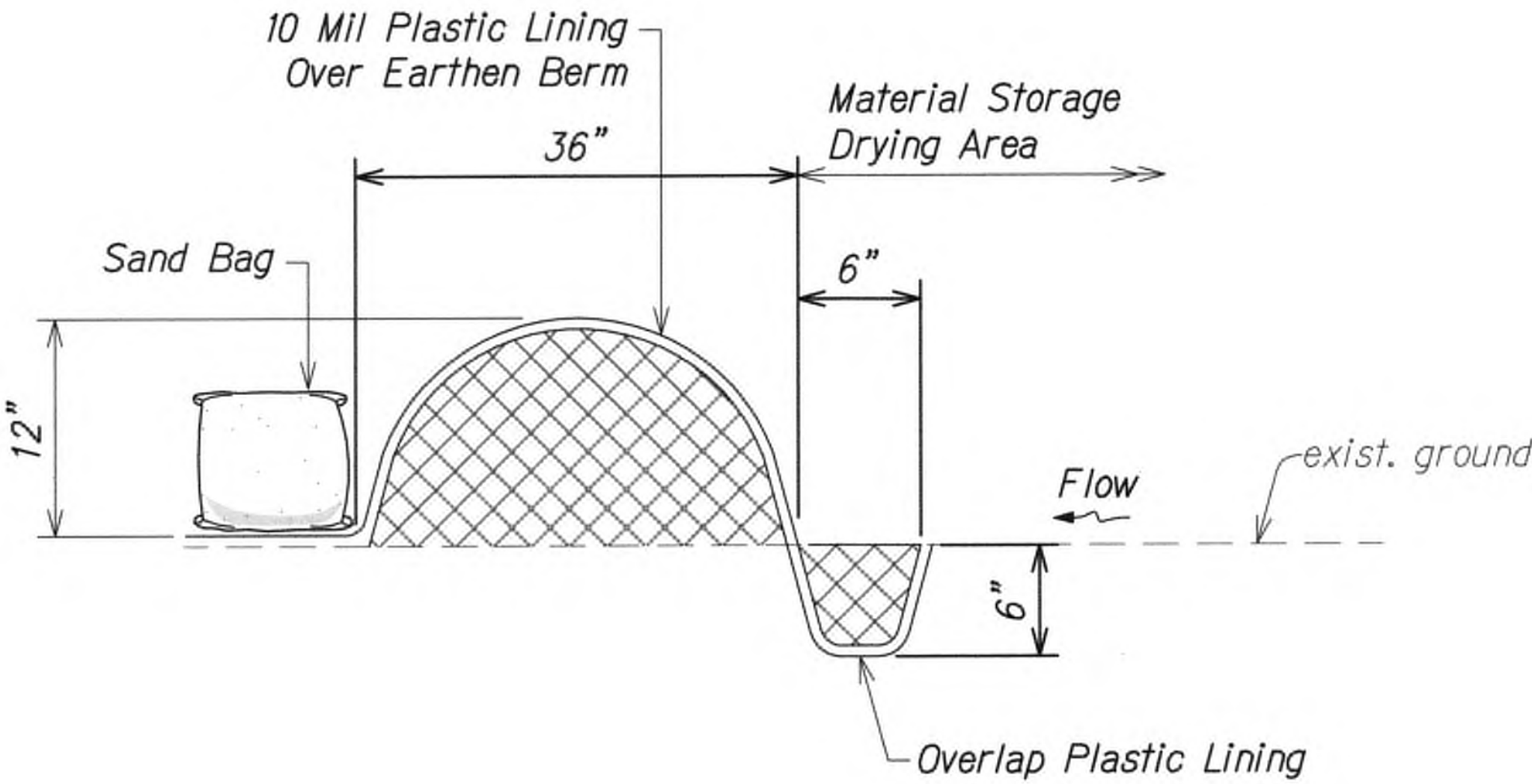
**AGGREGATE POUCH AT CATCH BASIN OPENING**  
Not to Scale



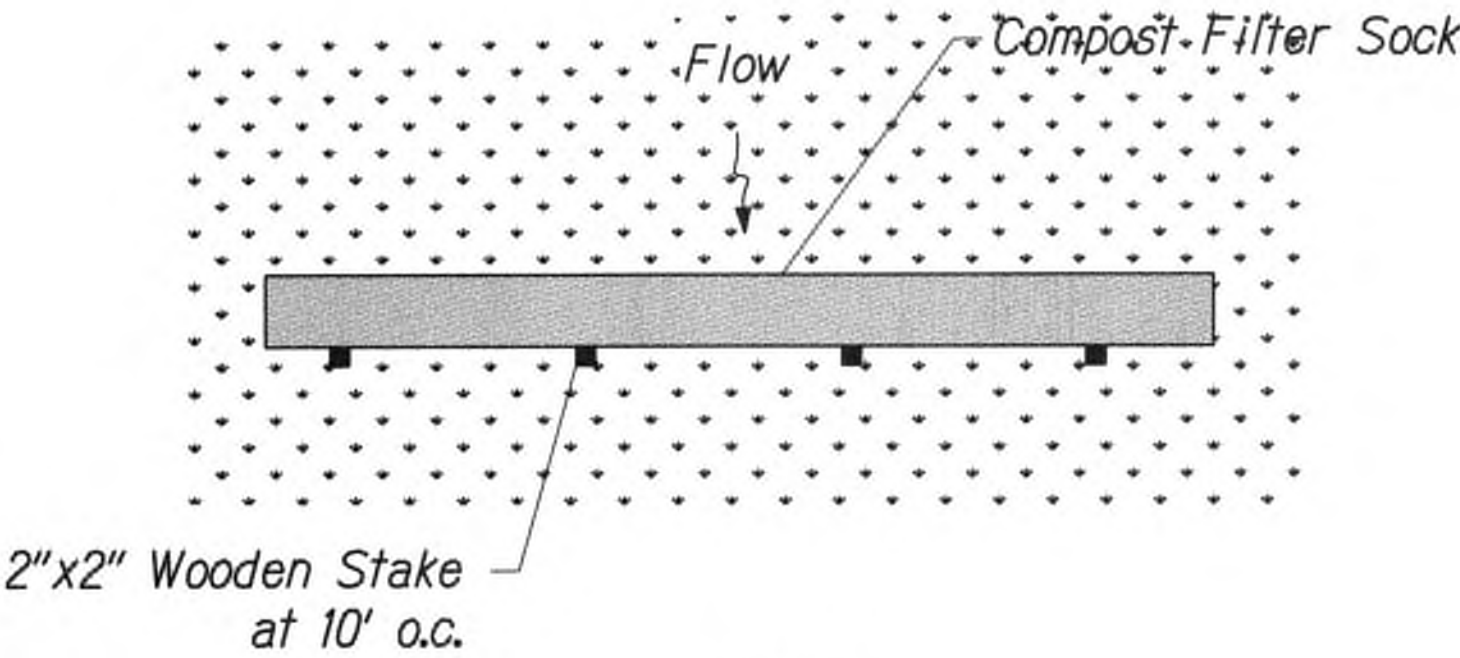
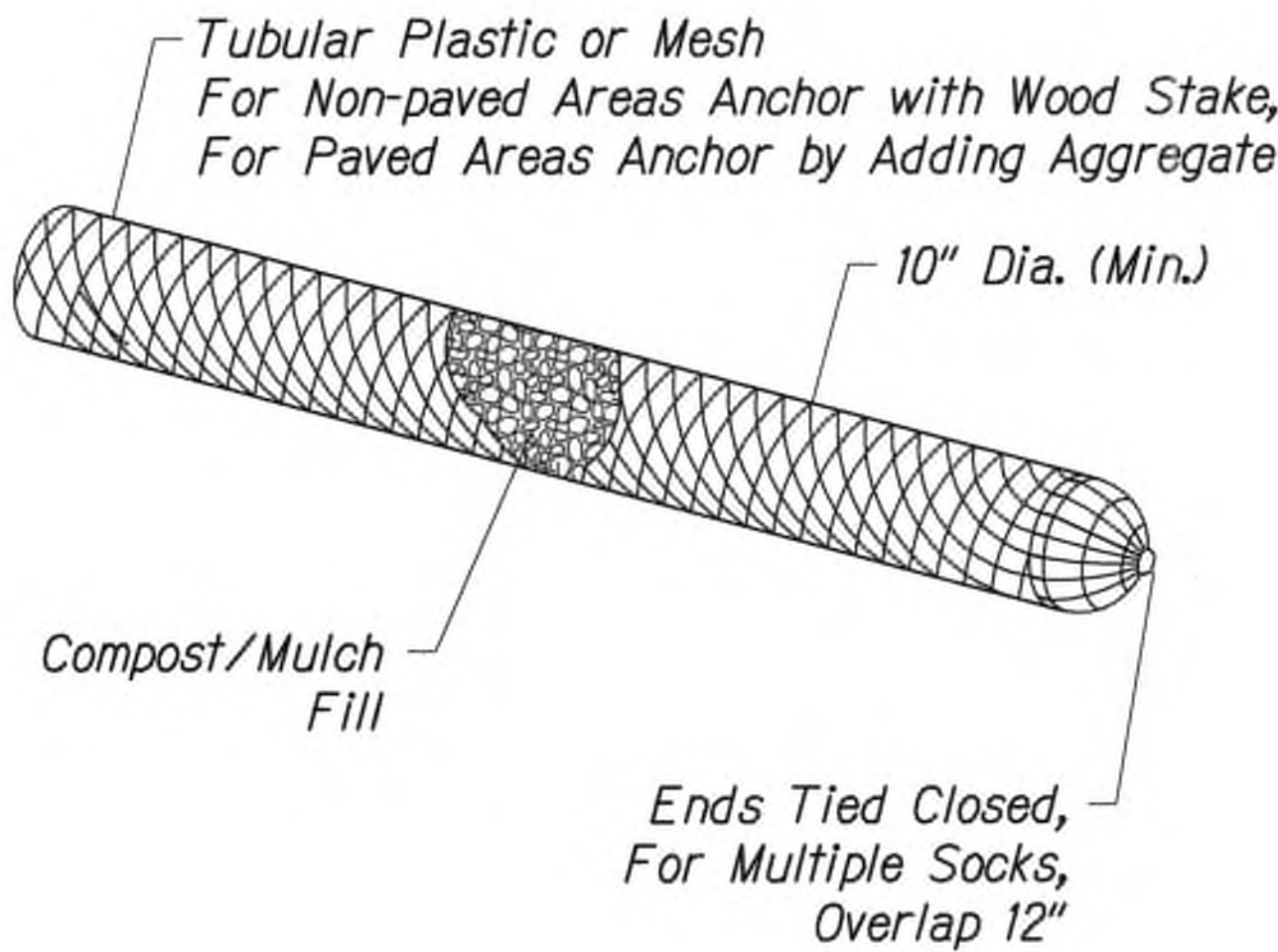
**PLAN VIEW**



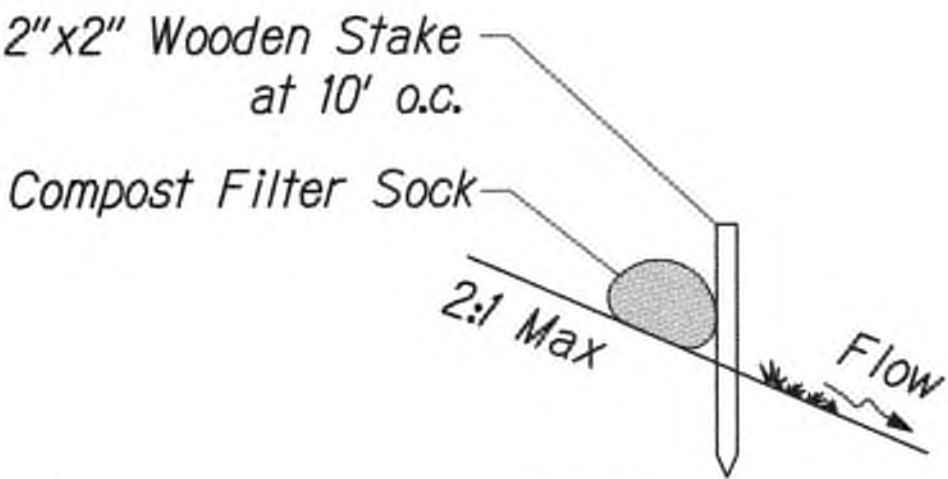
**SECTION**  
**SAND OR GRAVEL BAGS AT GRATED DRAIN INLET**  
Not to Scale



**CONTAINMENT BERM**  
Not to Scale



**PLAN**



**SECTION**

**COMPOST FILTER SOCK**  
Not to Scale



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*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**EROSION CONTROL DETAILS**

**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)

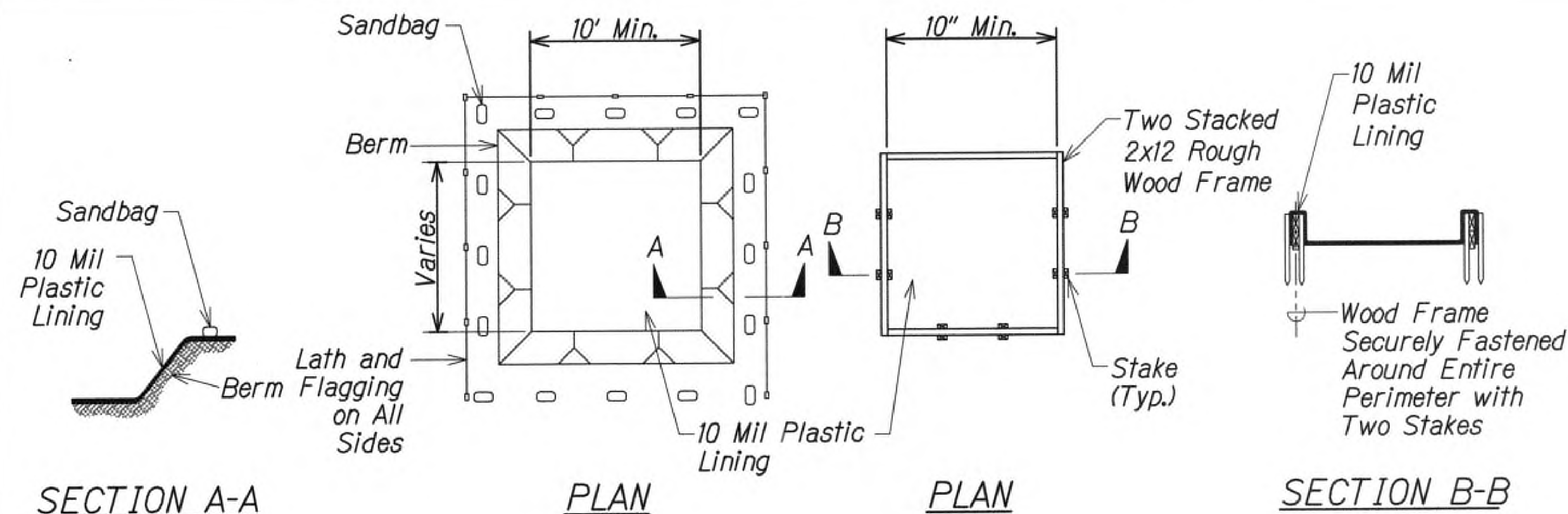
Scale: As Noted Date: July 2019

SHEET No. ECP4 OF 5 SHEETS

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

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION





**Notes:**

1. Actual layout determined in field.
2. The concrete washout sign shall be installed within 30 feet of the temporary concrete washout facility.

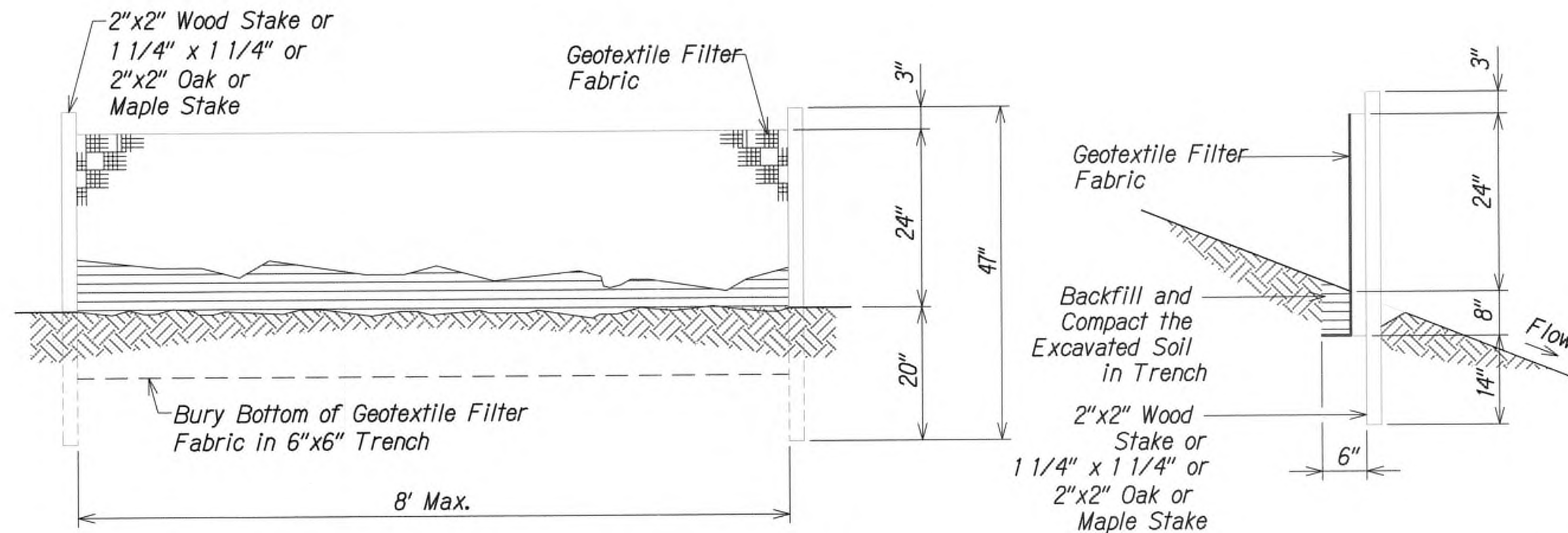
**CONCRETE VEHICLE WASH AREA  
(BELOW GRADE)**

**Notes:**

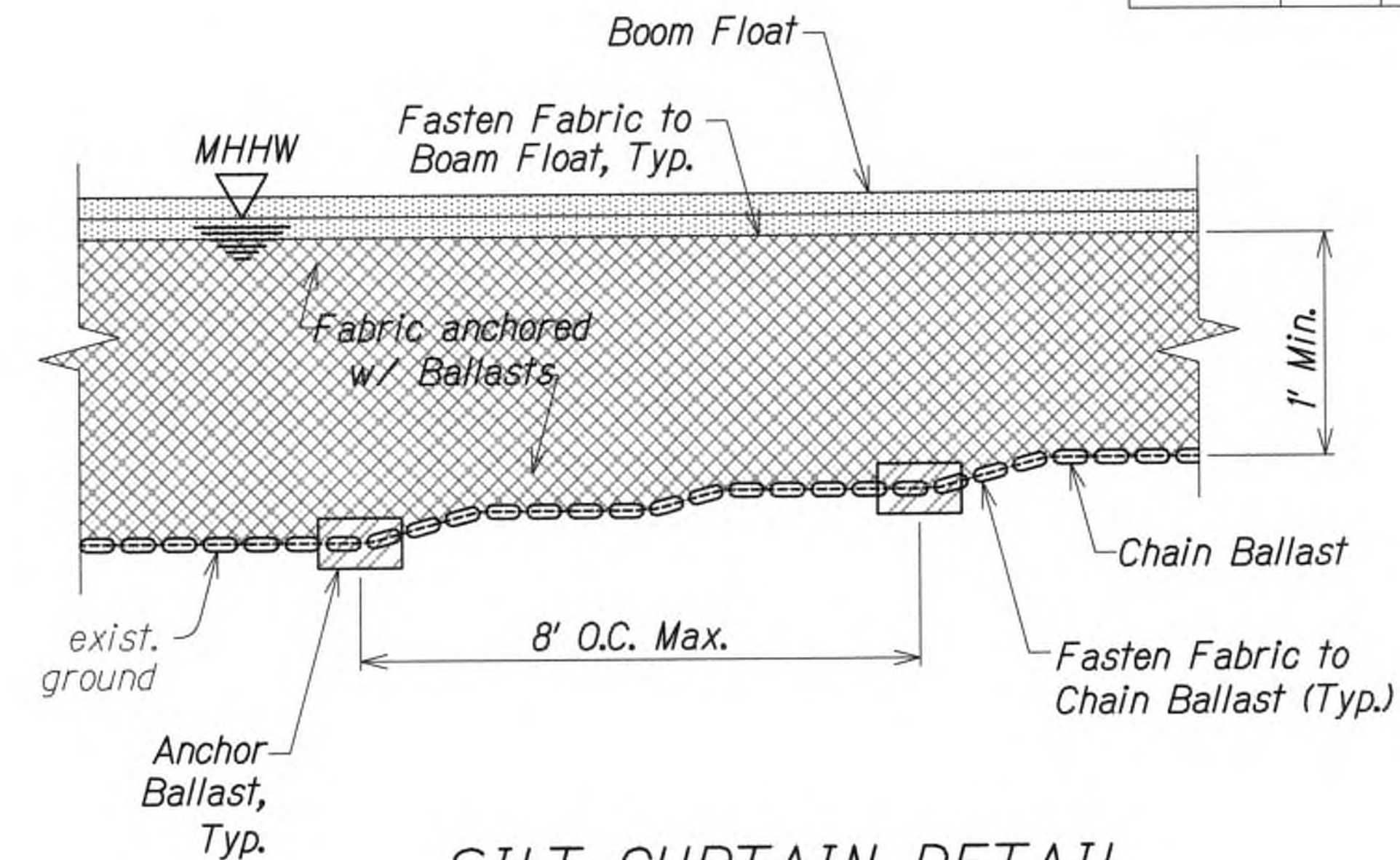
1. Actual layout determined in field.
2. The concrete washout sign shall be installed within 30 feet of the temporary concrete washout facility.

**CONCRETE VEHICLE WASH AREA  
(ABOVE GRADE)**

**WASHDOWN BASIN DETAIL  
Not to Scale**



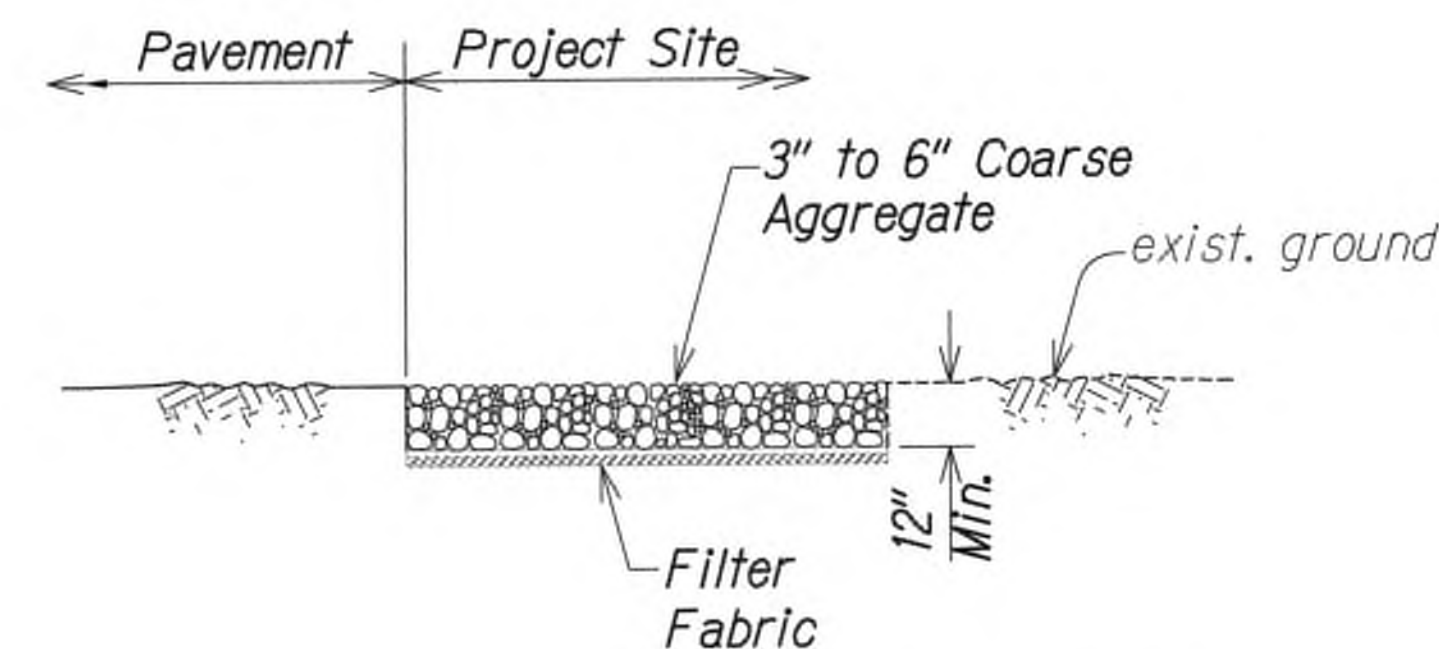
**Not to Scale**



**Not to Scale**

**NOTES:**

1. Fabric shall be high strength<sup>2</sup> nylon reinforced vinyl high visibility yellow, 22 oz/yd weight.
2. Chain ballast shall 5/16" galvanized chain (min. 1.1 lbs/ft)
3. Anchor ballast shall be minimum 50 lbs at 8' o.c.
4. Silt curtain shall be installed prior to start of construction in water which might result in discharges to state waters.
5. The Contractor shall notify the Engineer and water quality monitor two weeks prior to installation of silt curtain.



**Not to Scale**



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**EROSION CONTROL DETAILS**

**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**

Fed. Aid Proj. No. NH-056-1(50)

Scale: As Noted Date: July 2019

SHEET No. ECP5 OF 5 SHEETS

**APPROVED**

*[Signature]* 7/17/19  
County Engineer  
County of Kaua'i  
(For Work Within the County Right-of-Way)

DATE	REVISION
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.



# GENERAL NOTES

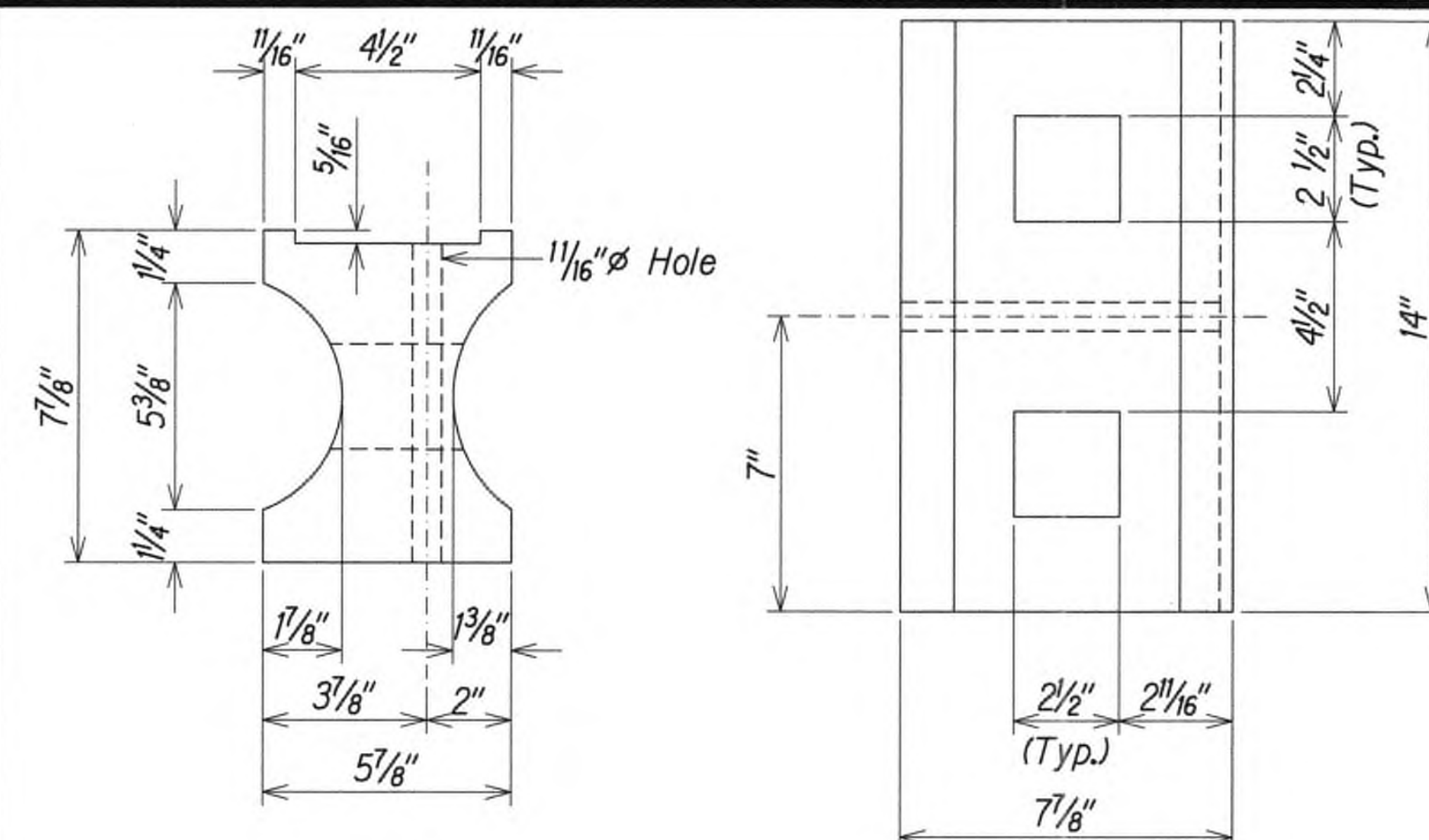
- All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
- Where conditions require, special post lengths in increments of 6 inches may be specified.
- All fasteners, posts, and rail elements (i.e. FBB03, PWE01, RWM04b, etc.) shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware", a report prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Subcommittee On New Highway Materials, Task Force 13 Report. Dimensions of fastners, posts and rail elements have been converted from metric units into their present form.
- The Blockout or Offset Block shall be approved by the State.
- All new guardrail systems (system consists of total length of guardrail including both end treatments) shall include the Additional Paved Area.
- After the guardrail posts are installed in the paved area, the Contractor shall fill/seal around each guardrail post and all cracks in the paved area caused during the guardrail post installation. If required by the inspector/engineer, the Contractor shall tamper the paved area around the guardrail post prior to filling/sealing. All costs associated with this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
- When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.
- Minimum working width (clear distance) between back of MGS post to any fixed object is 4'-1" (49").
- New Hot Mix Asphalt (HMA) pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
- Reflector Markers (RM-5) mounted on guardrails shall be spaced every 25 feet. RM-5's shall not be installed on Terminal Sections. Furnishing and installing of each RM-5 shall be considered incidental to the guardrail system.

GUARDRAIL TYPE	DIMENSION	
	H	A
MGS w/ Standard 8" Offset Block	2'-1"	1'-6"
MGS w/ No Blockout	2'-7/8"	9 1/4"

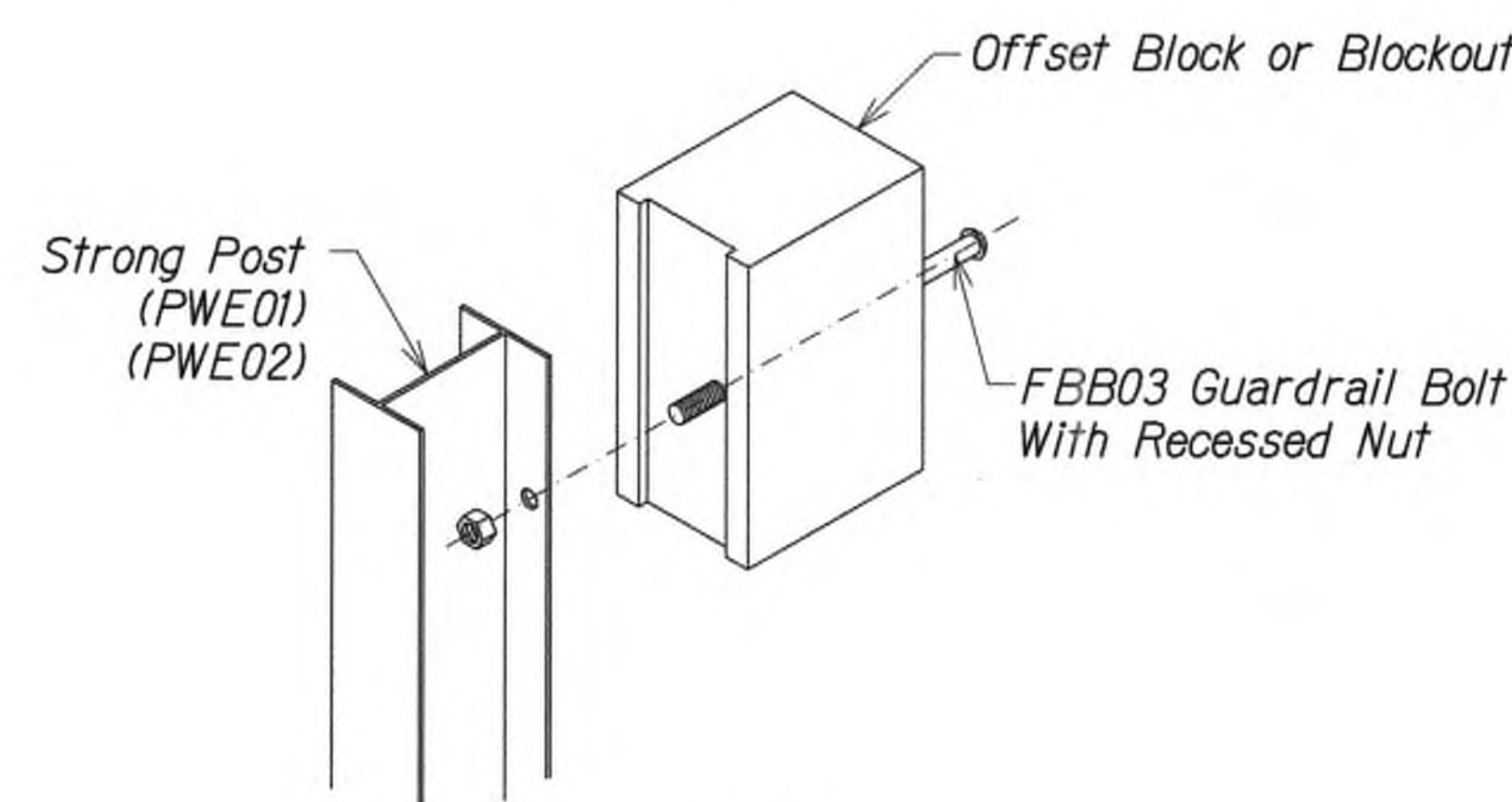


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*Wilson Okamoto*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE  
APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**GUARDRAIL DETAILS AND NOTES**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. **GRDI** OF 8 SHEETS



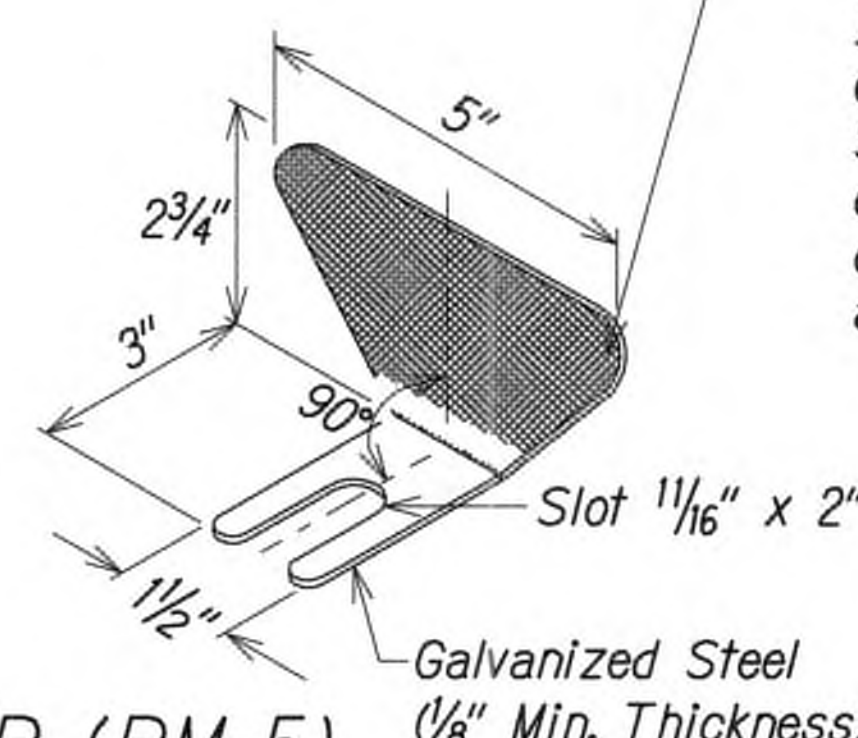
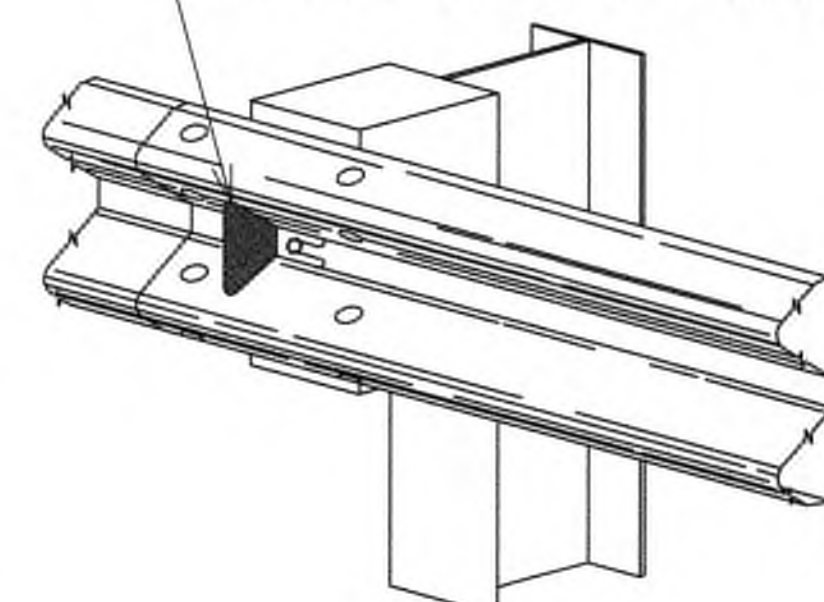
RECYCLED PLASTIC BLOCKOUT (TYPE I)



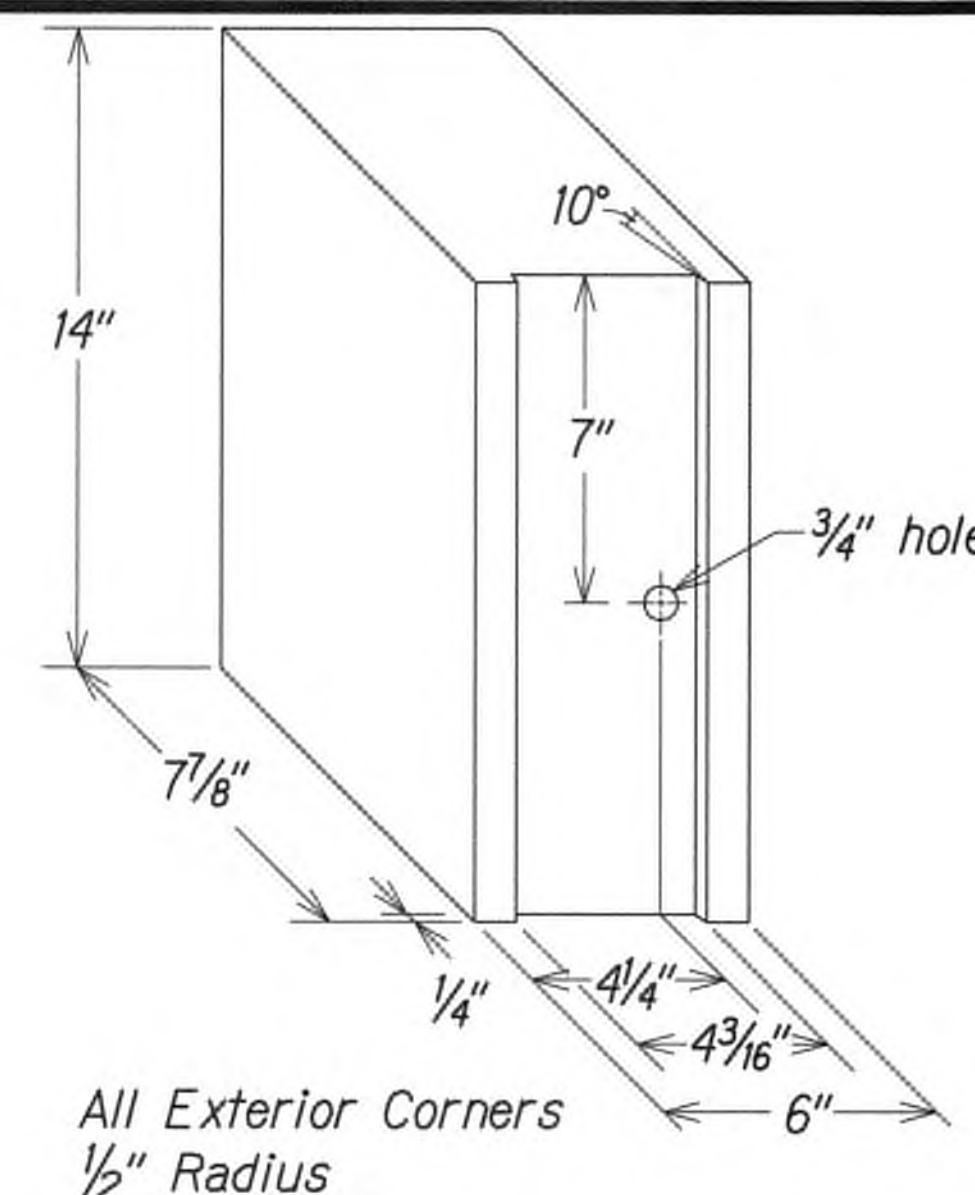
Exploded View  
(Rail and Washer Not Shown)

## STEEL POST AND BLOCK DETAIL

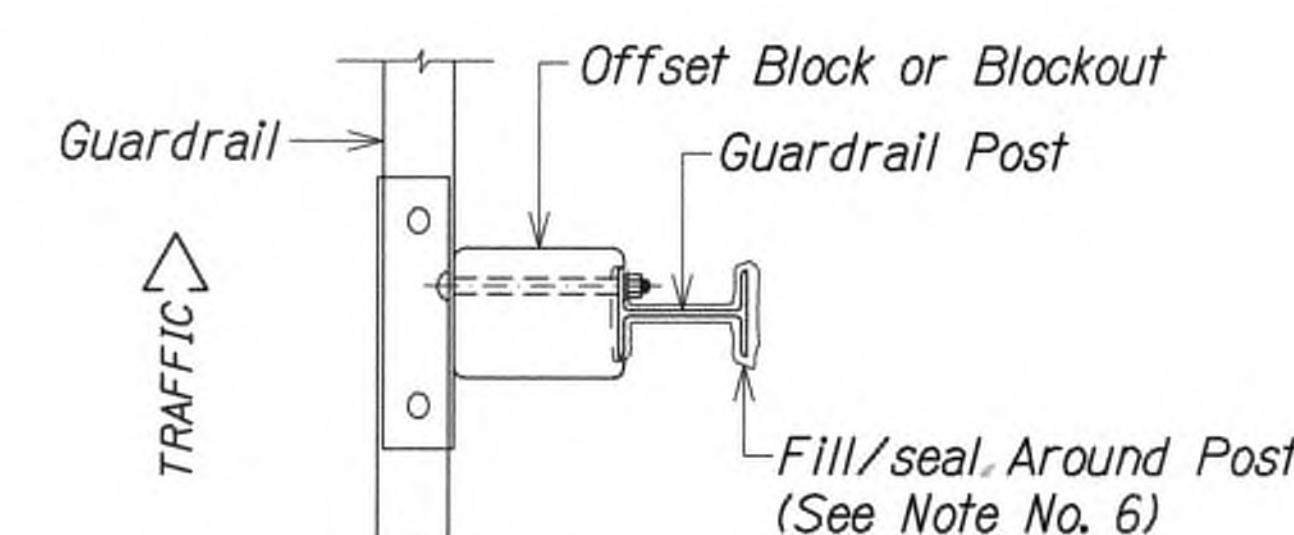
Reflector Marker (RM-5) - Reflector Facing Traffic (Mounted on Guardrail Between Posts with FBB01)



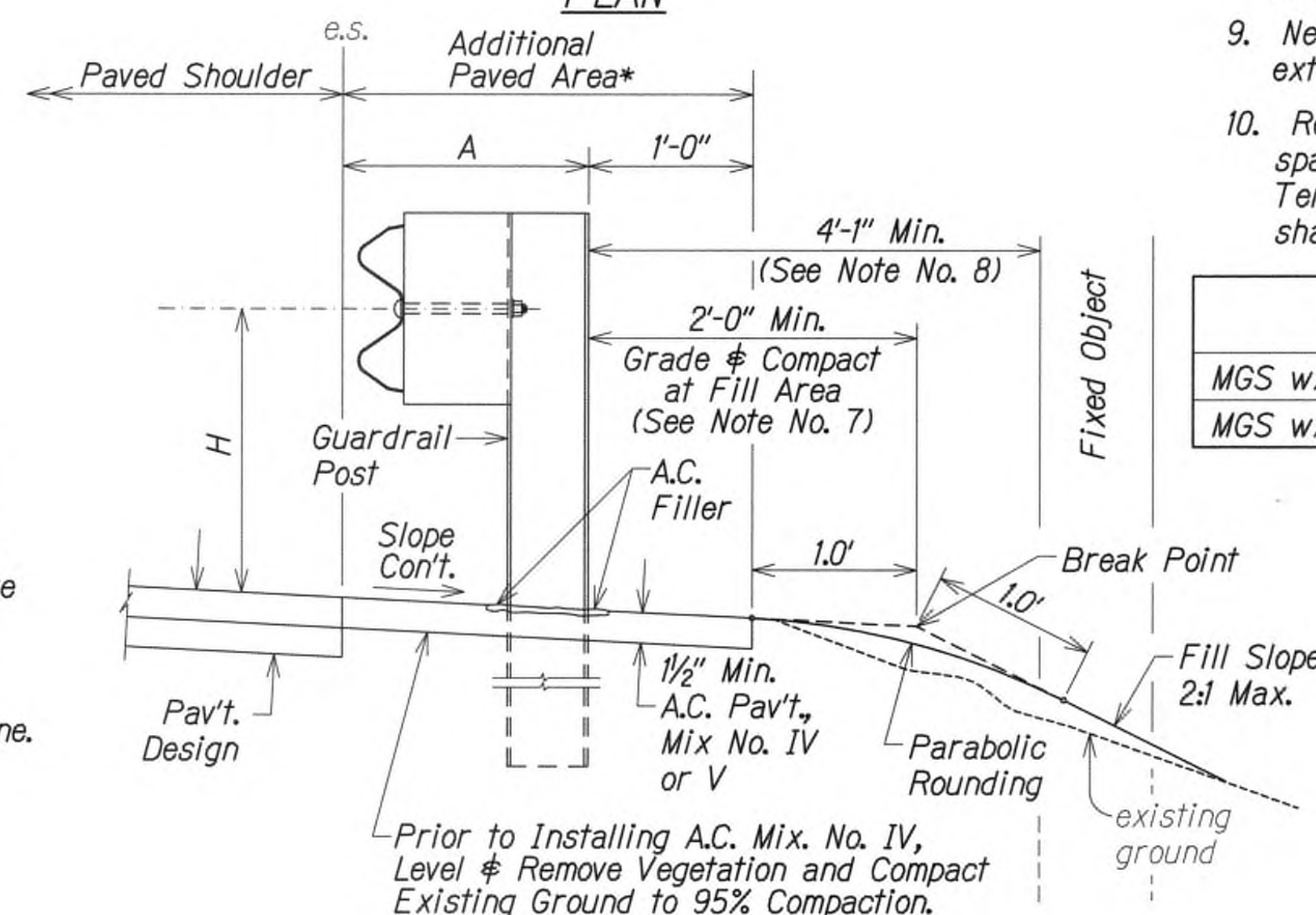
REFLECTOR MARKER (RM-5)  
DETAIL AND TYPICAL INSTALLATION



RECYCLED POLYETHYLENE  
OFFSET BLOCK (TYPE II)



## PLAN



## ELEVATION

TYPICAL GUARDRAIL INSTALLATION

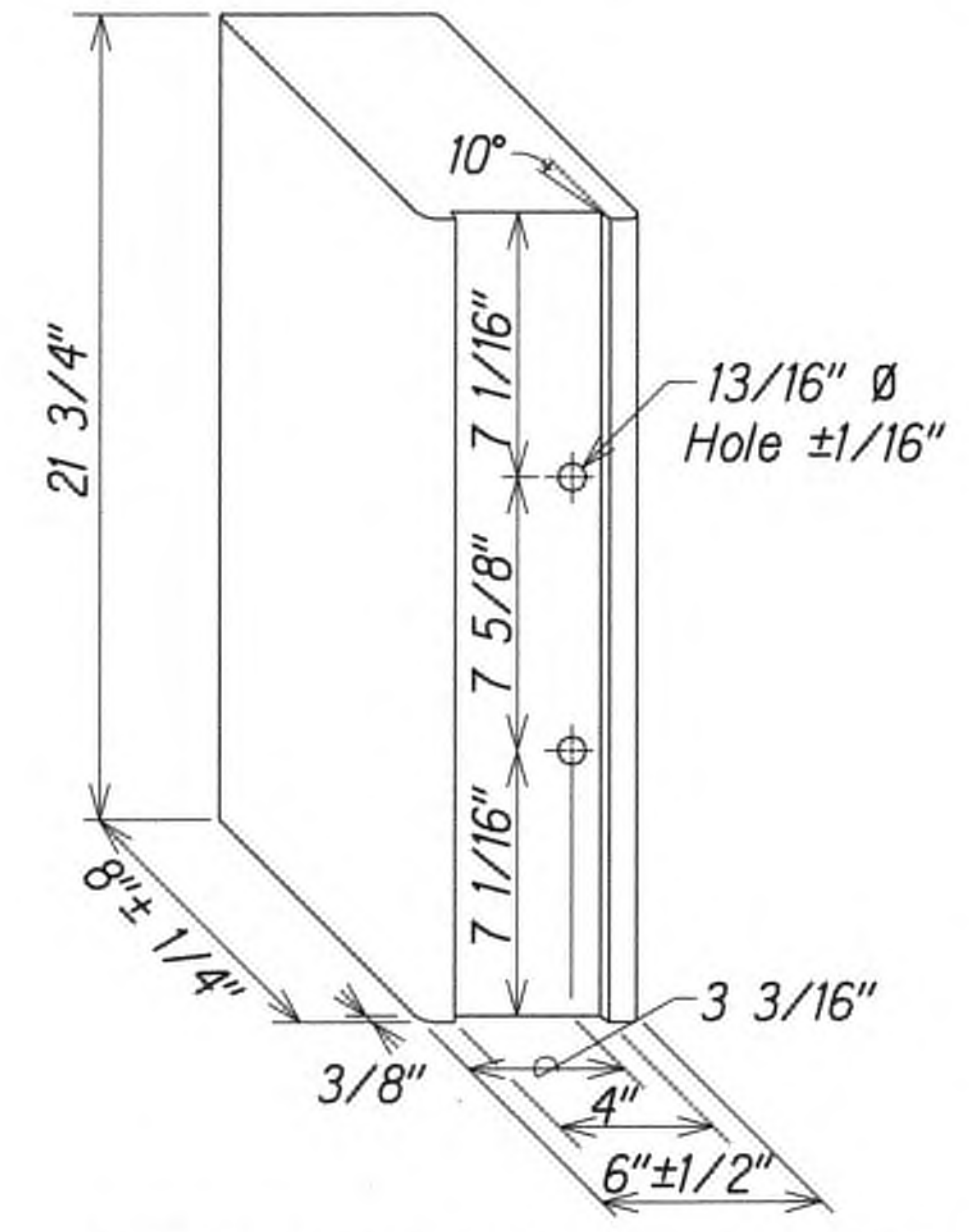
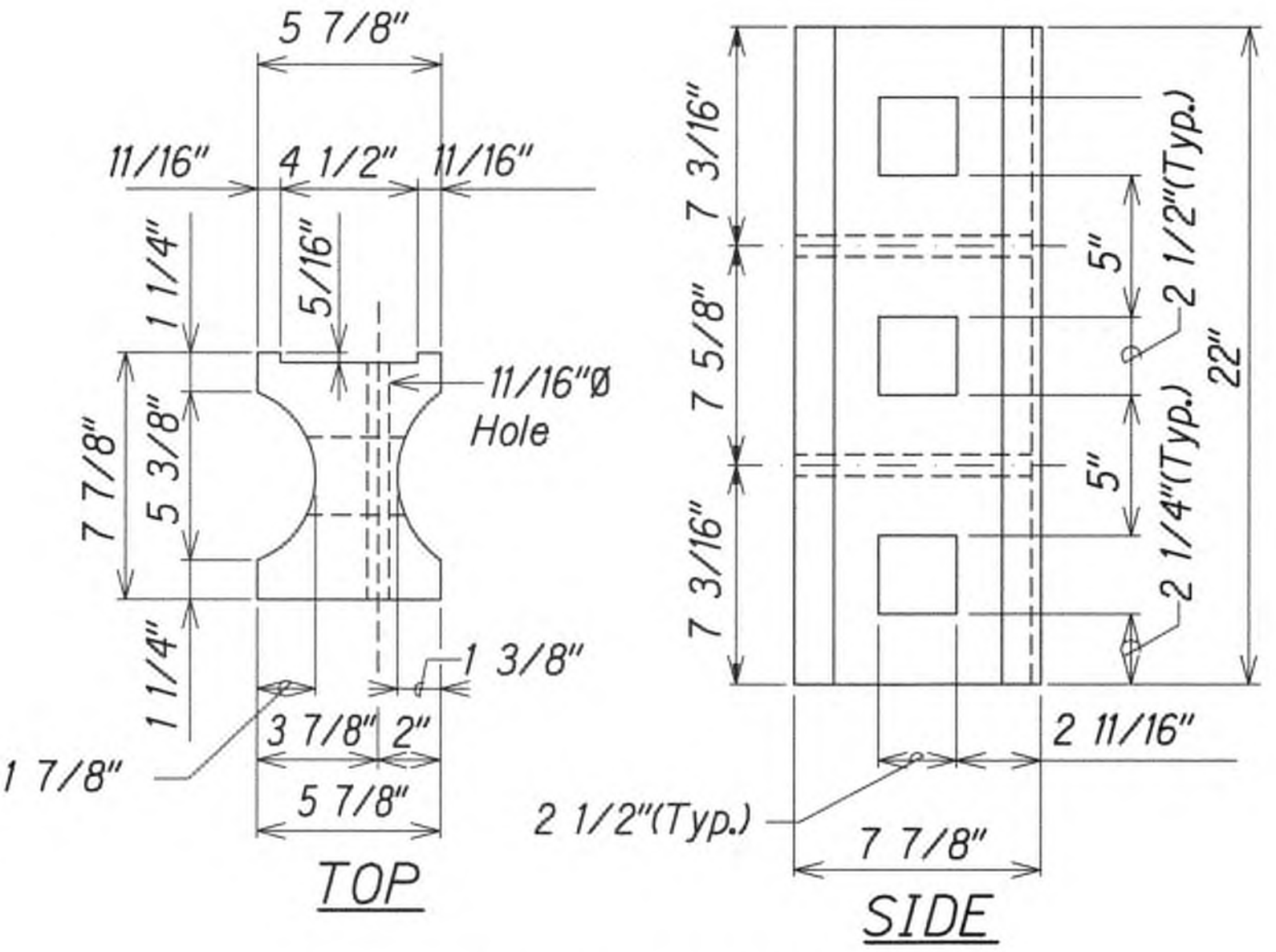
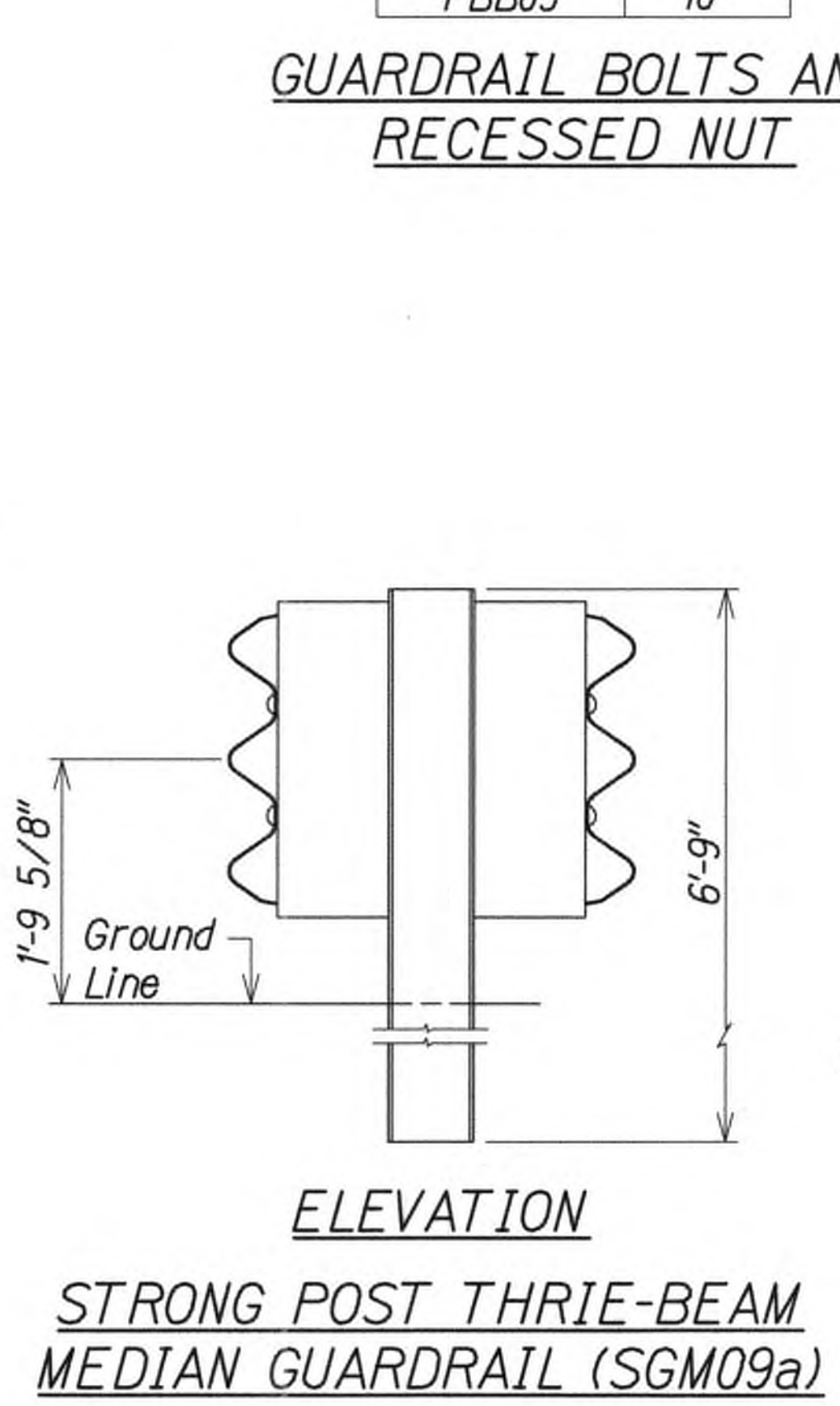
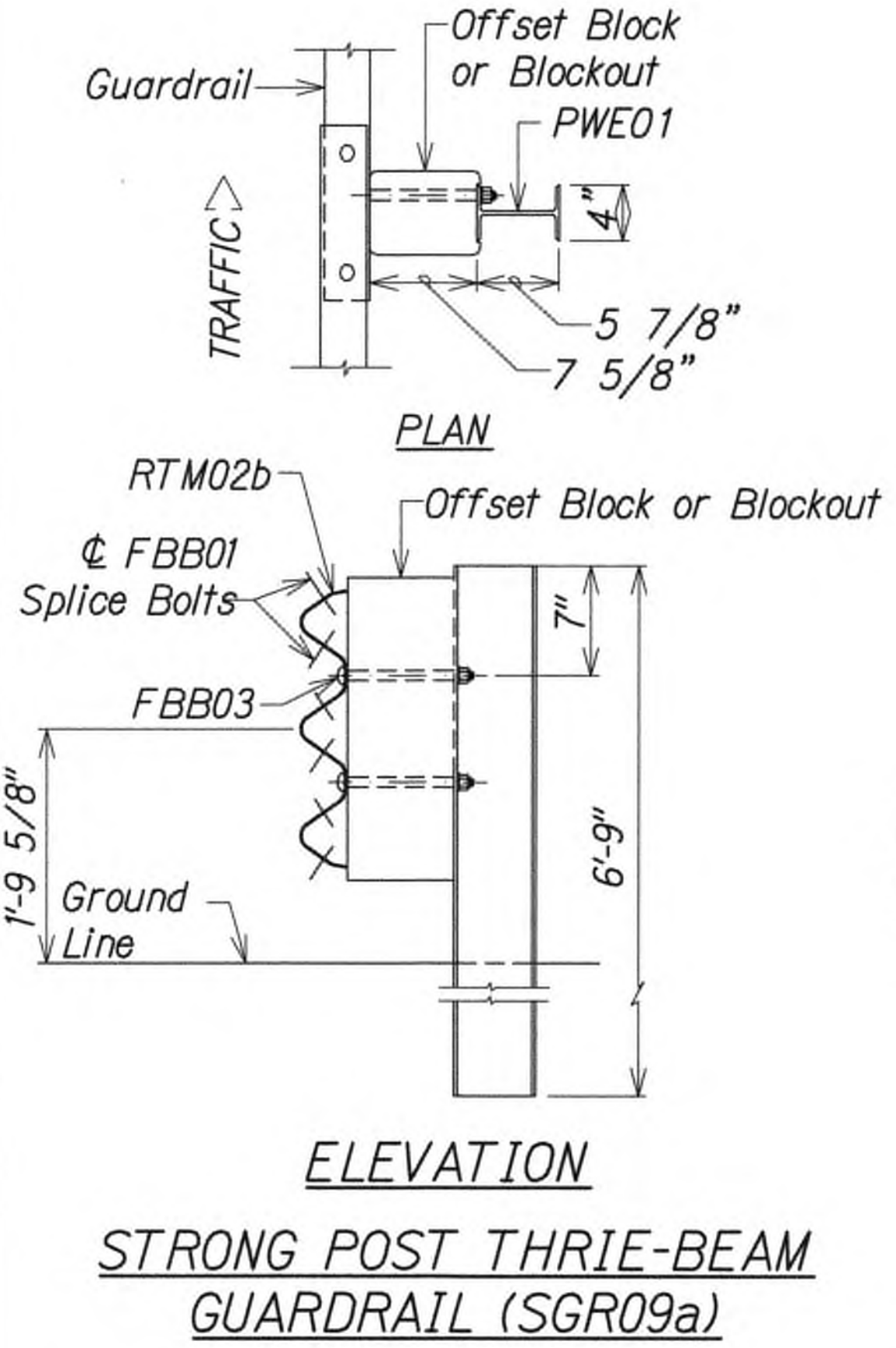
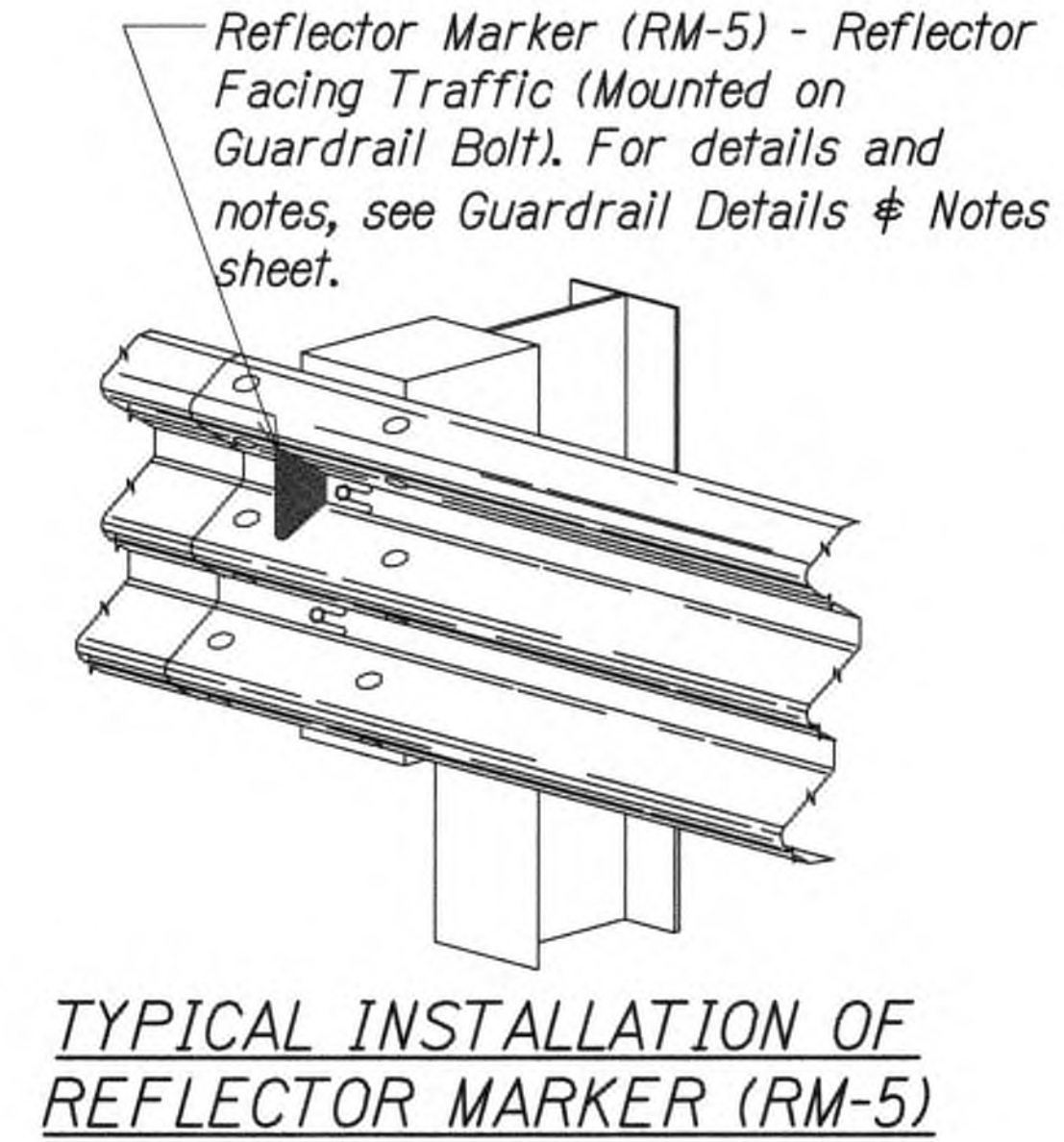
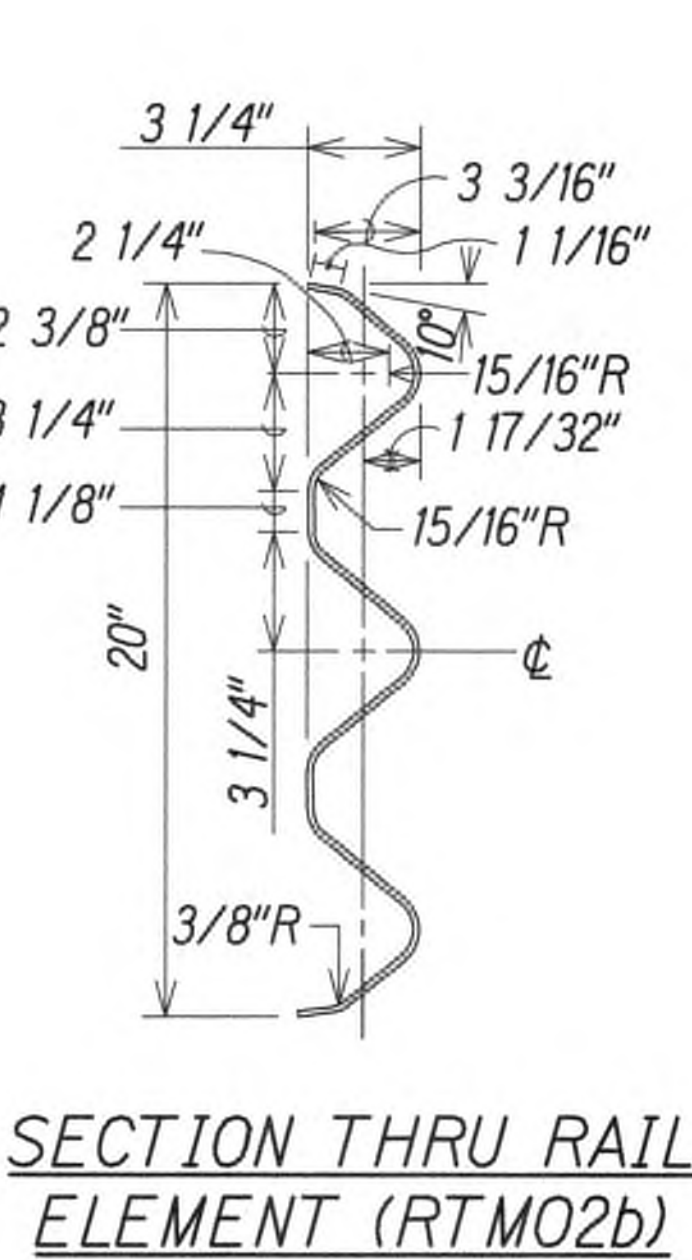
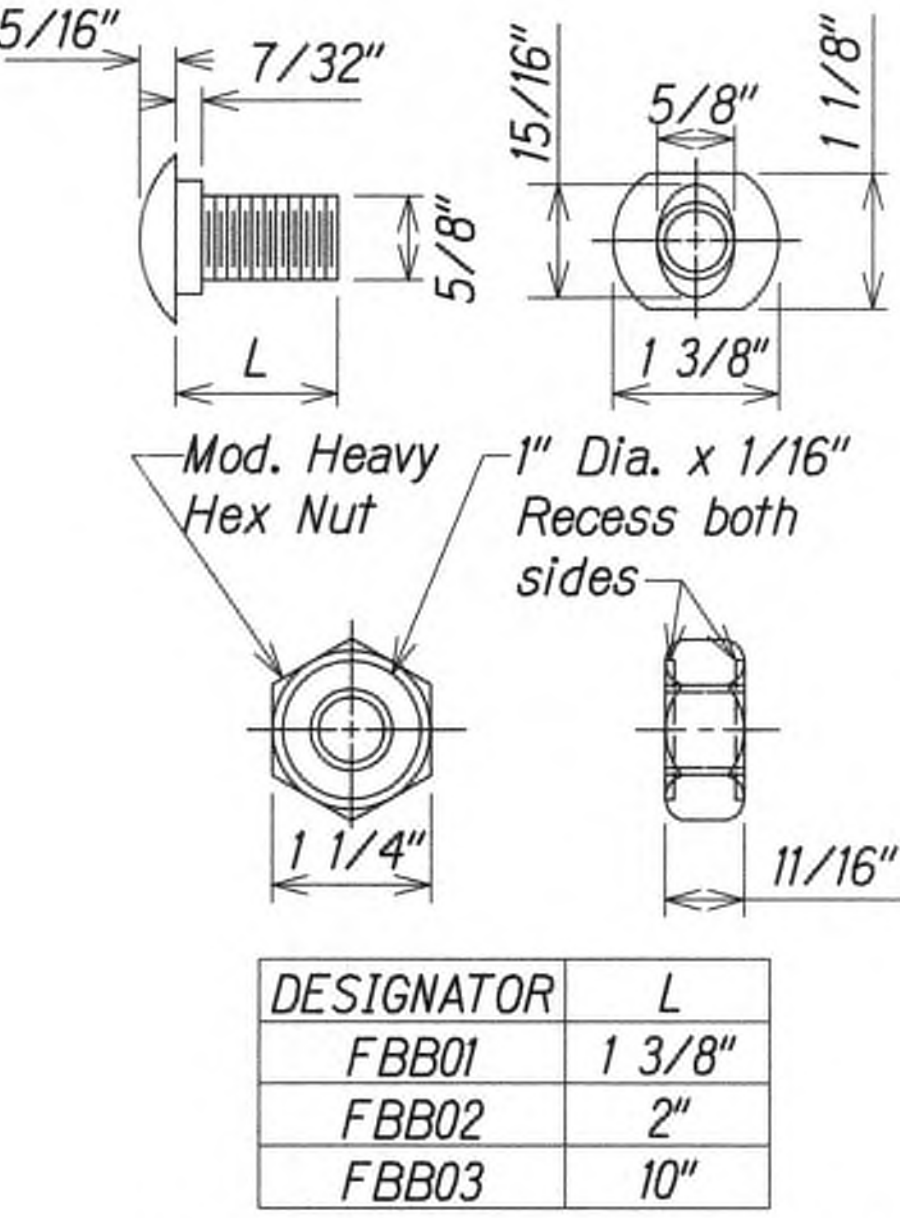
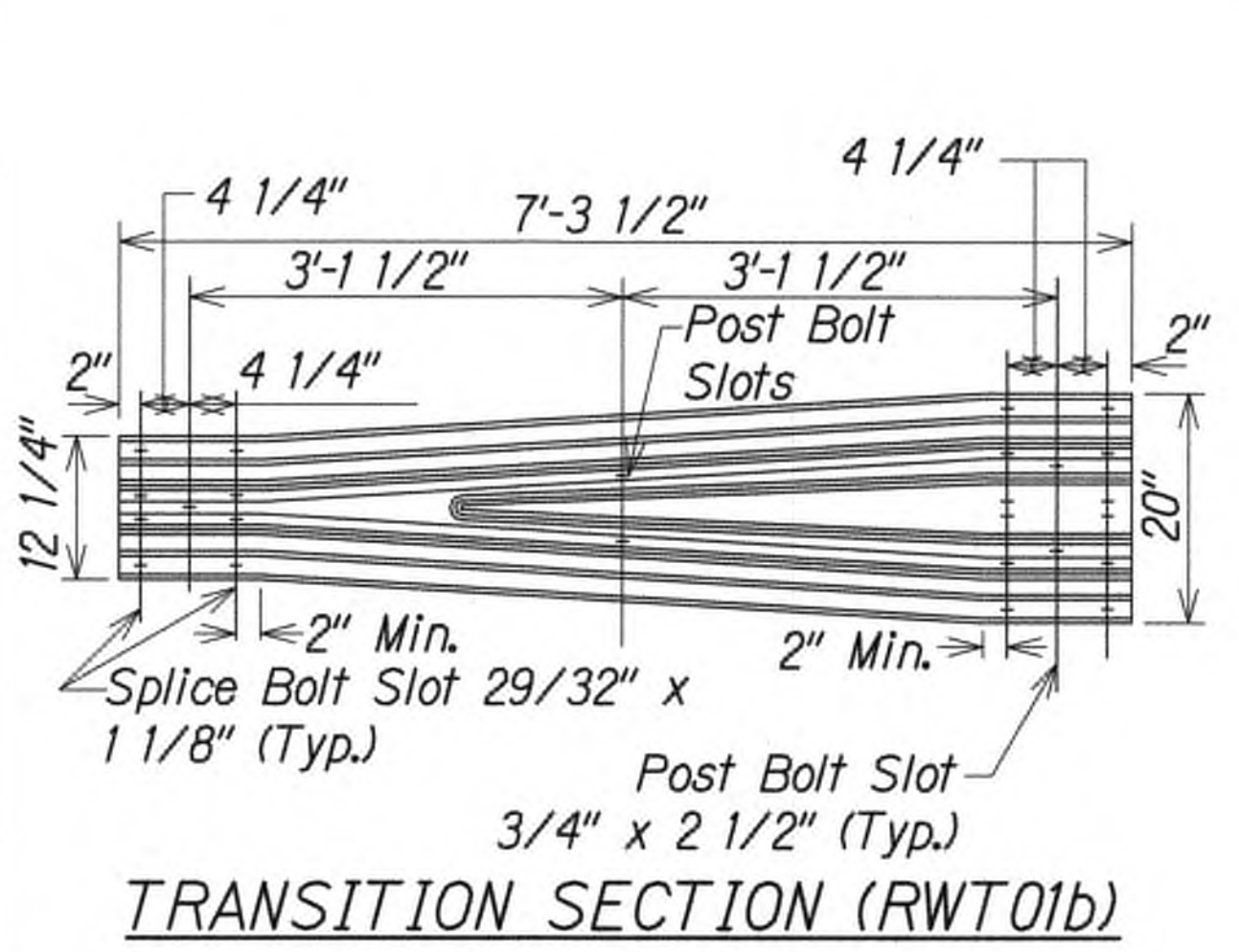
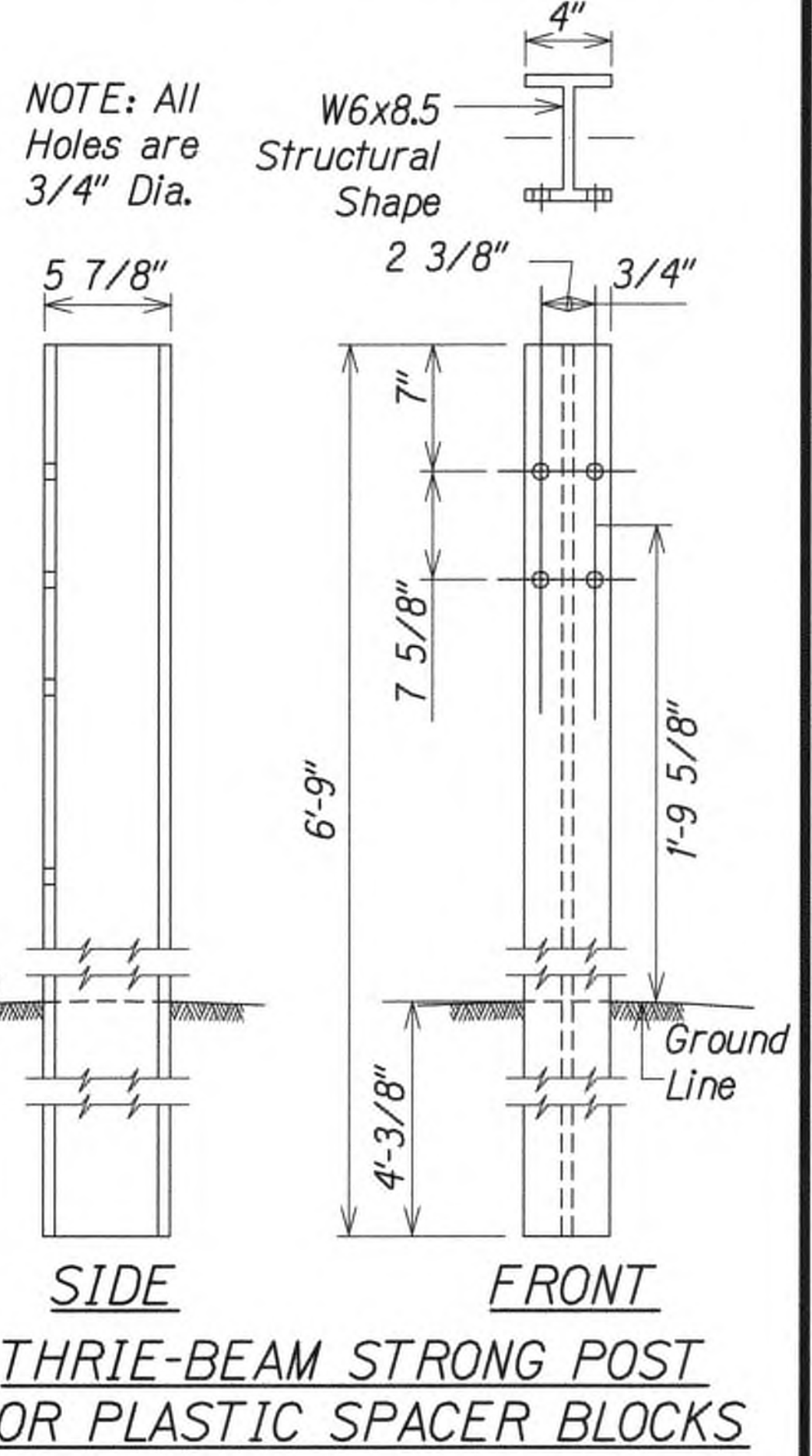
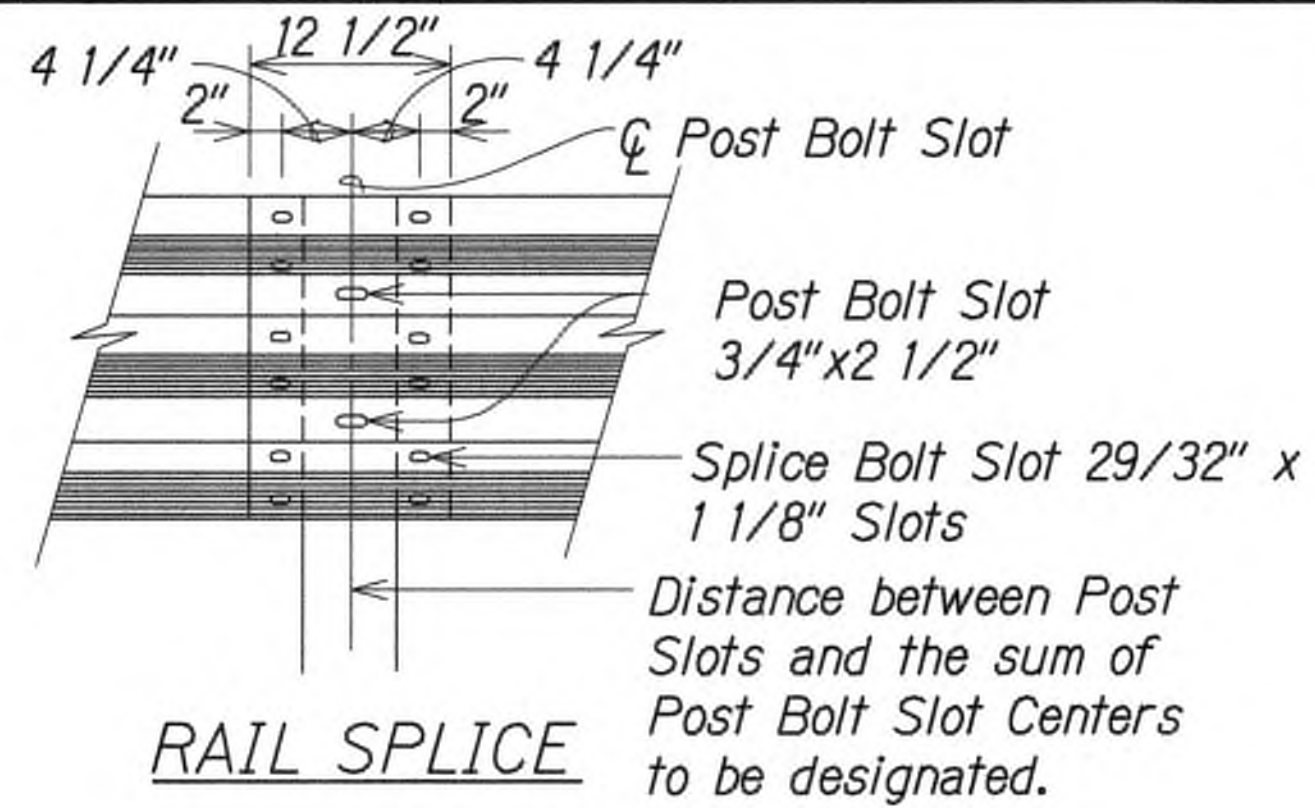
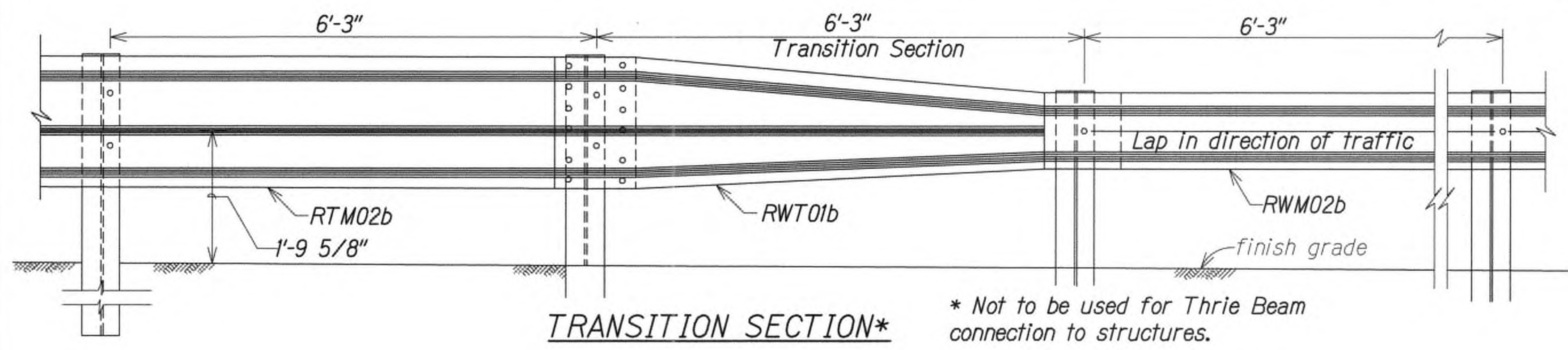
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

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ORIGINAL PLAN	NOTE BOOK	

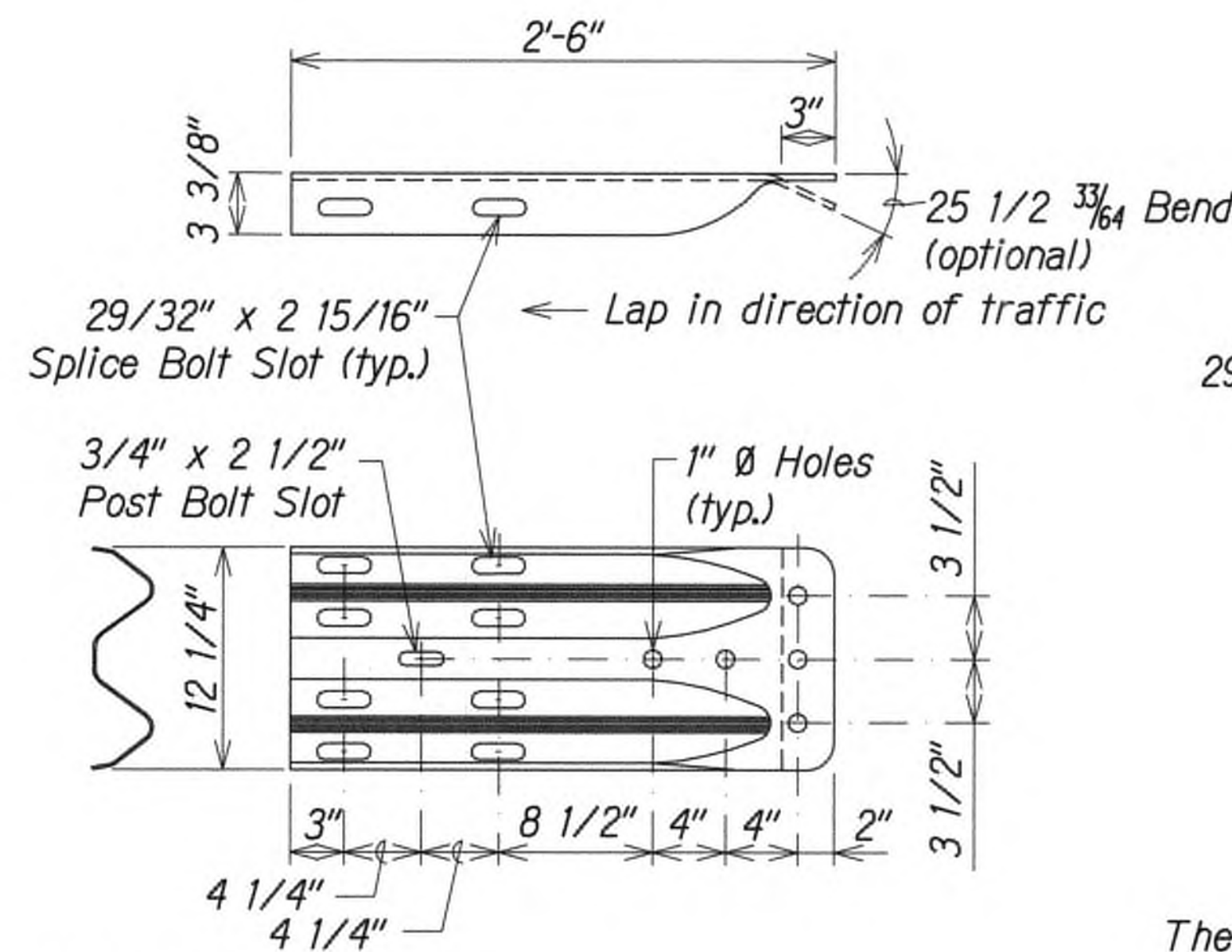
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STRONG POST  
THRIE-BEAM GUARDRAIL**  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. GRD3 OF 8 SHEETS



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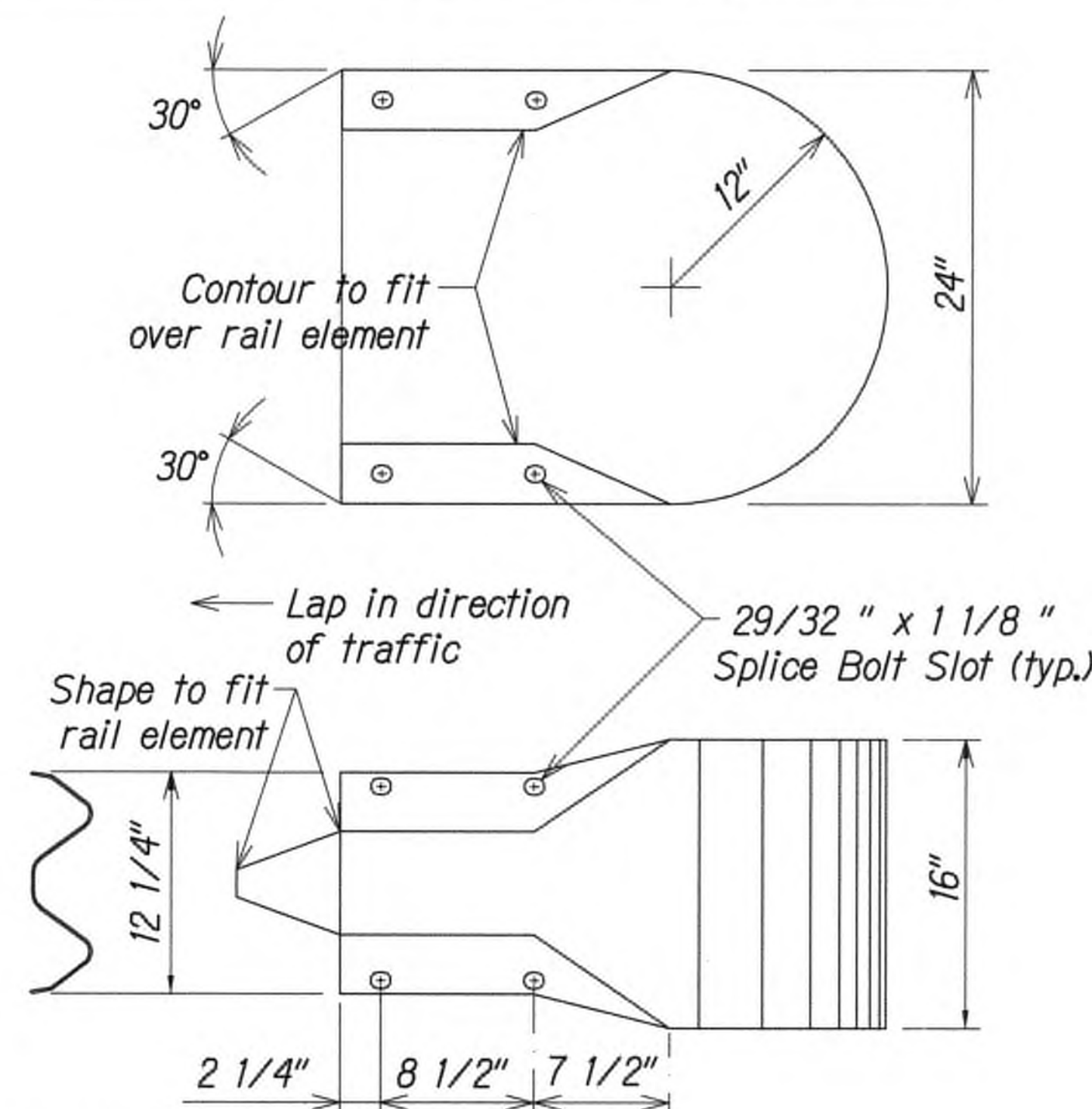




The cross-sectional dimensions for this part are to fit over part RWM02a on the approach end and under part RWM02a on the trailing end.

DESIGNATOR	BASE METAL THICKNESS
RWE02b	10 Gauge

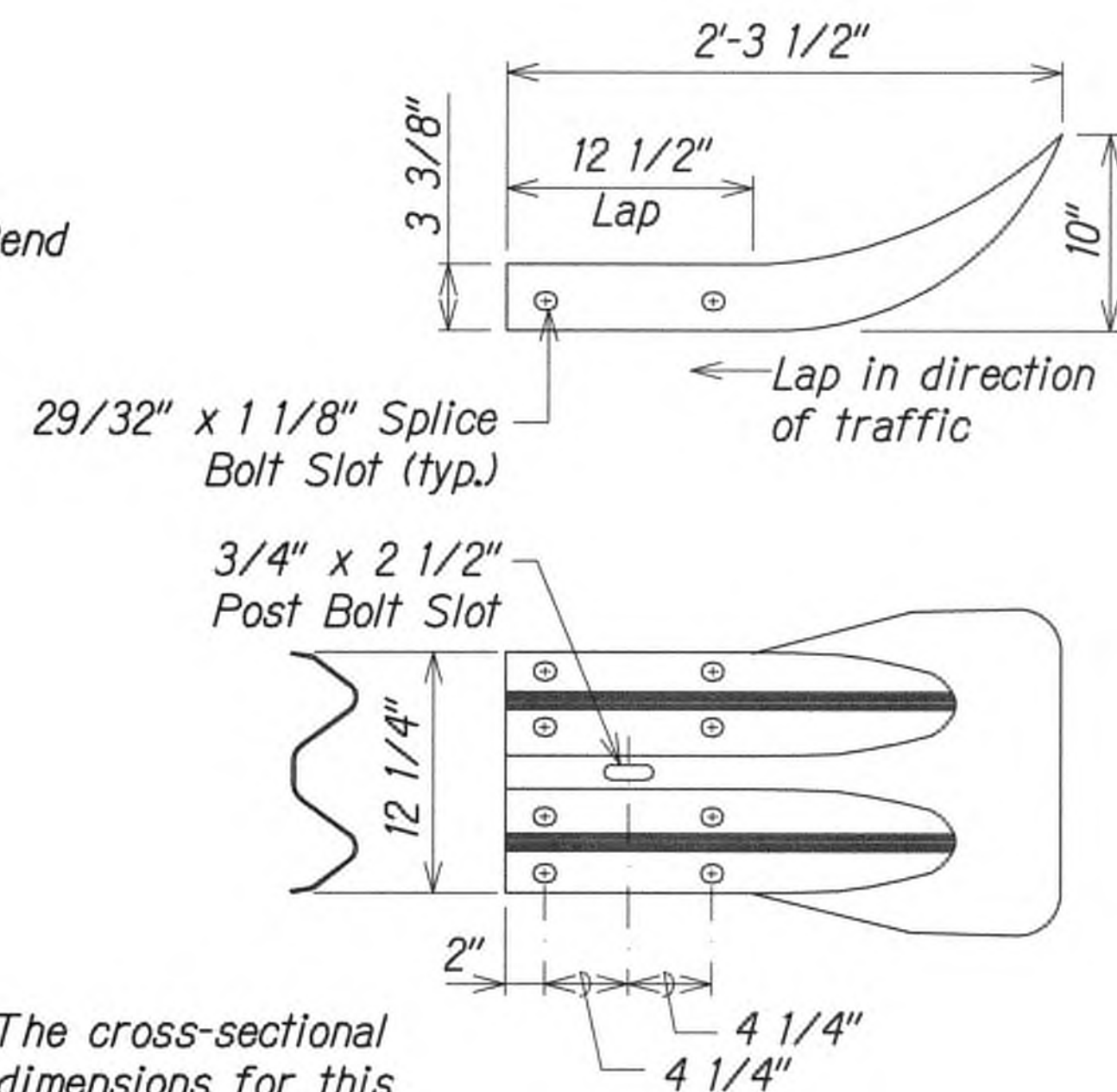
W-BEAM TERMINAL CONNECTOR (RWE02b)



The cross-sectional dimensions for this part are to fit over part RWM02a

DESIGNATOR	BASE METAL THICKNESS
RWE06a	12 Gauge

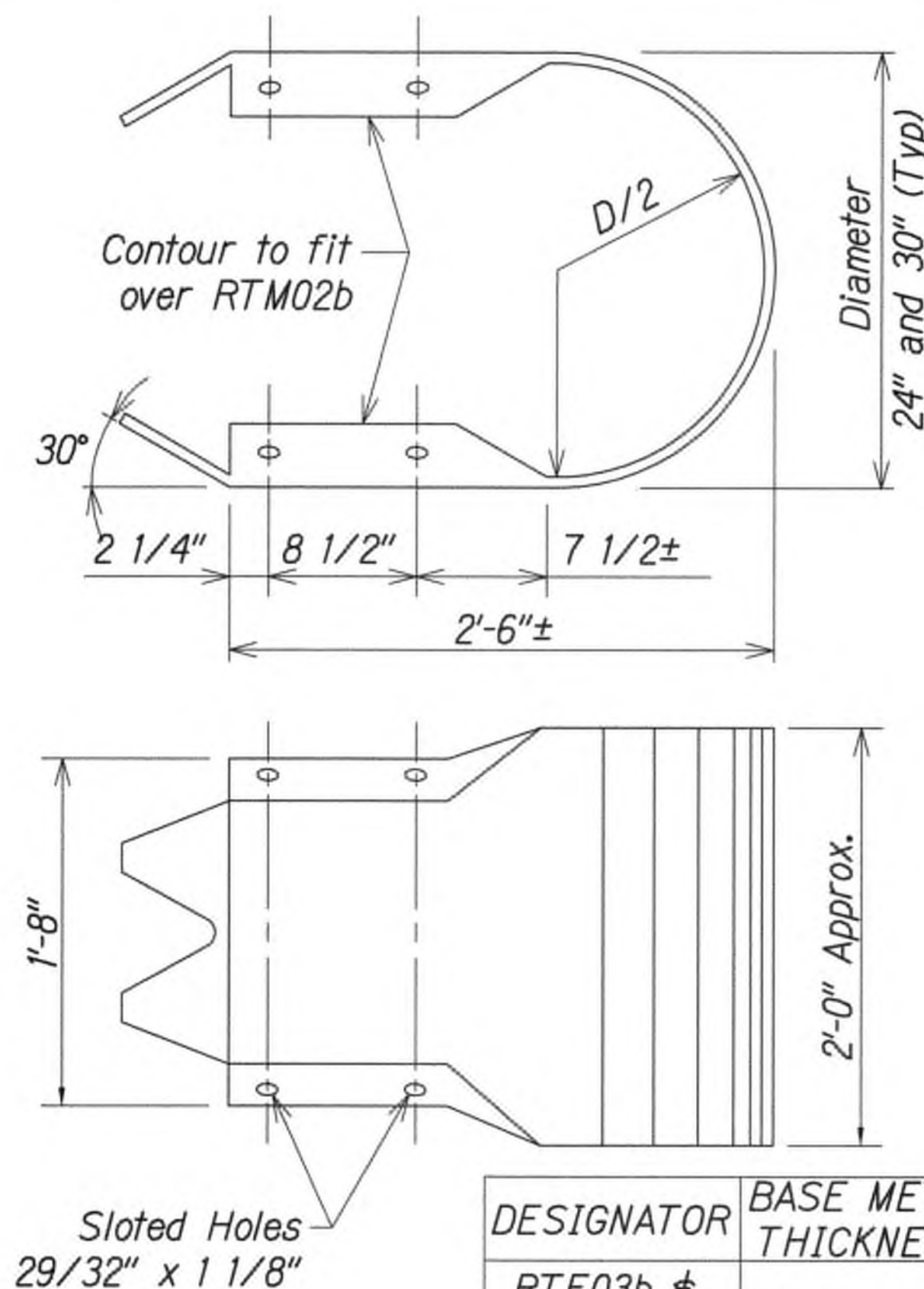
W-BEAM END SECTION (BUFFER RWE06a)



The cross-sectional dimensions for this part are to fit over part RWM02a on the approach end and under part RWM02a on the trailing end.

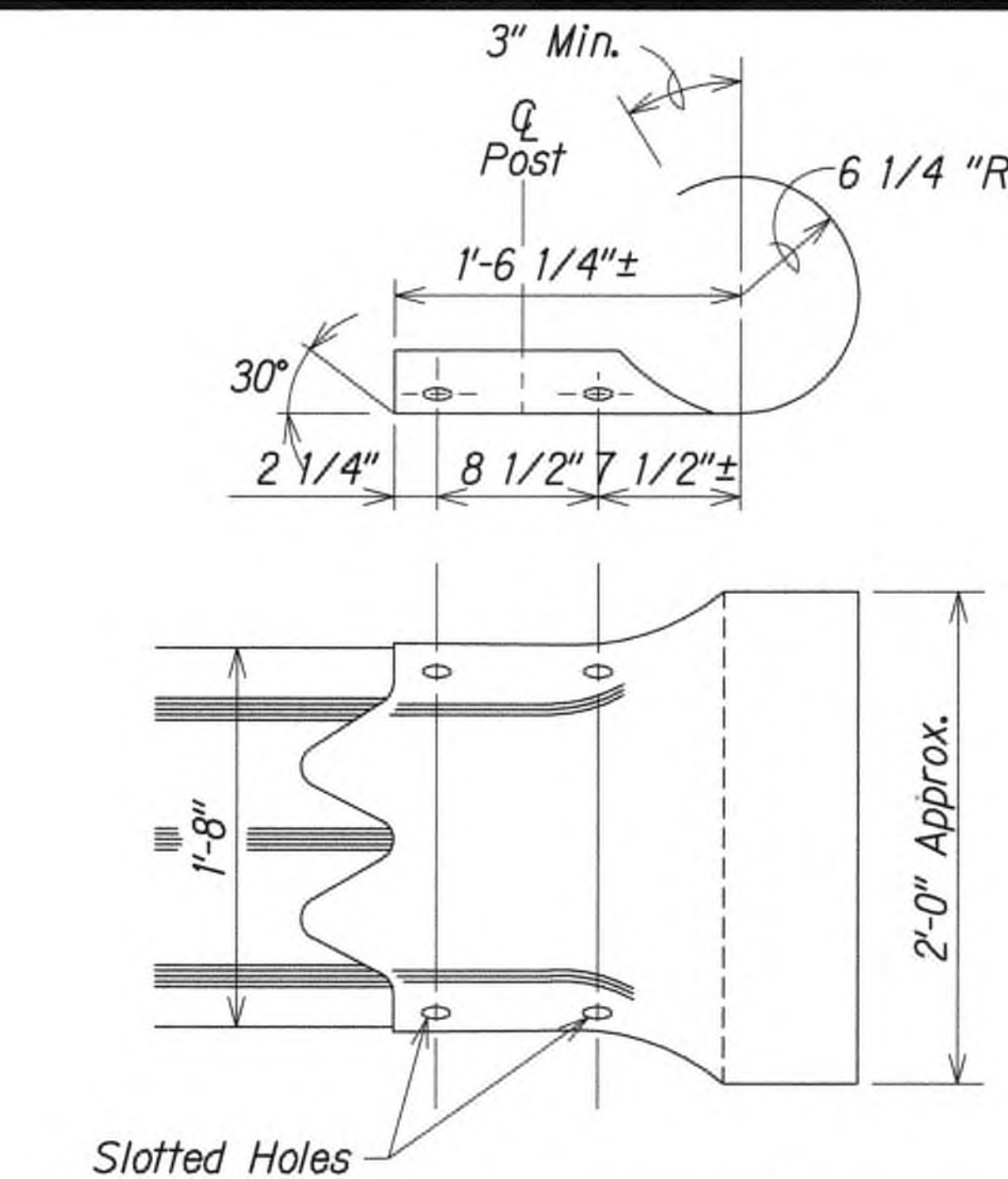
DESIGNATOR	BASE METAL THICKNESS
RWE01a	12 Gauge

W-BEAM END SECTION (FLARED RWE01a)



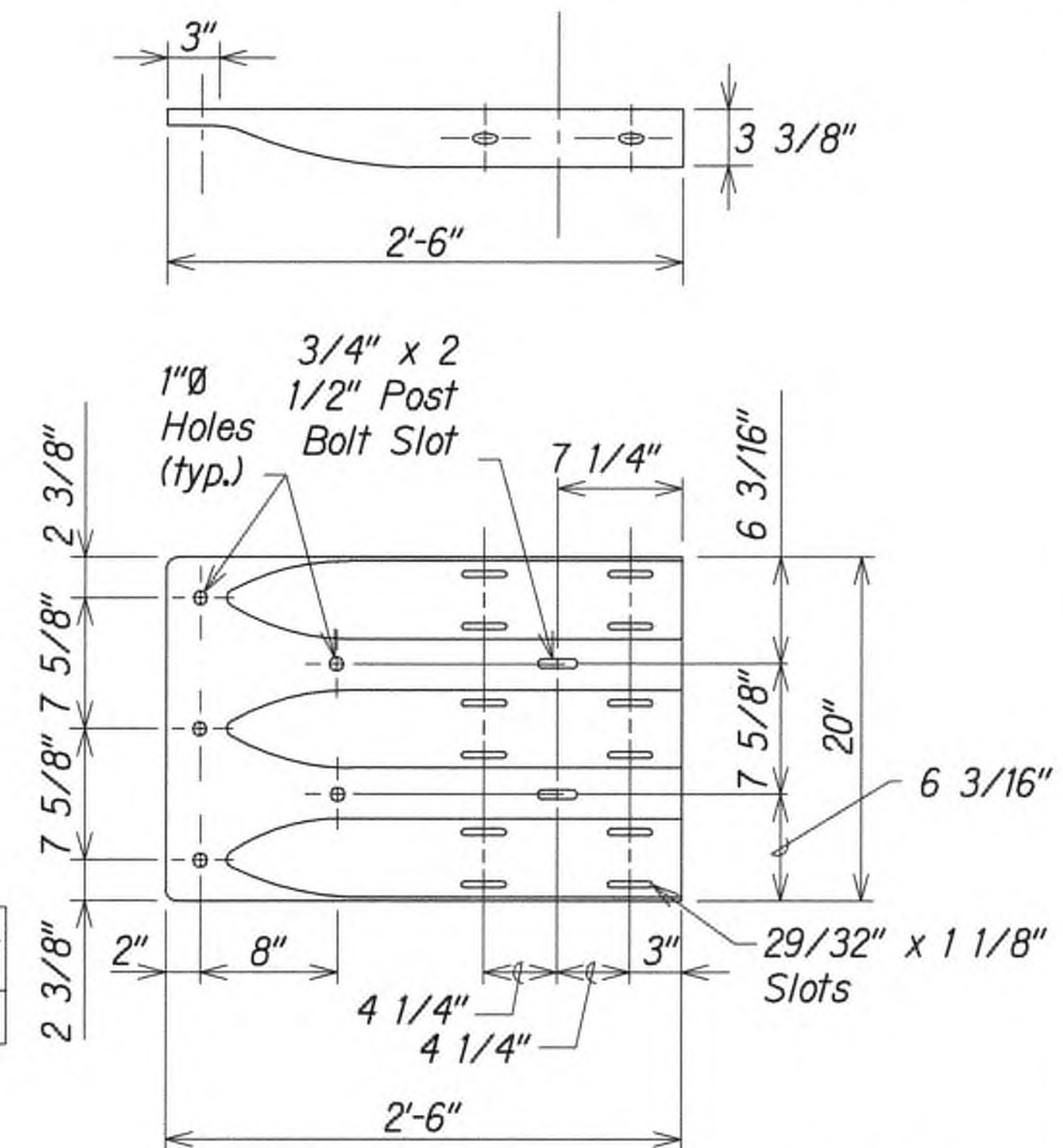
DESIGNATOR	BASE METAL THICKNESS
RTE03b & RTE04b	10 Gauge

THRIE-BEAM END SECTION (BUFFER RTE03b or RTE04b)



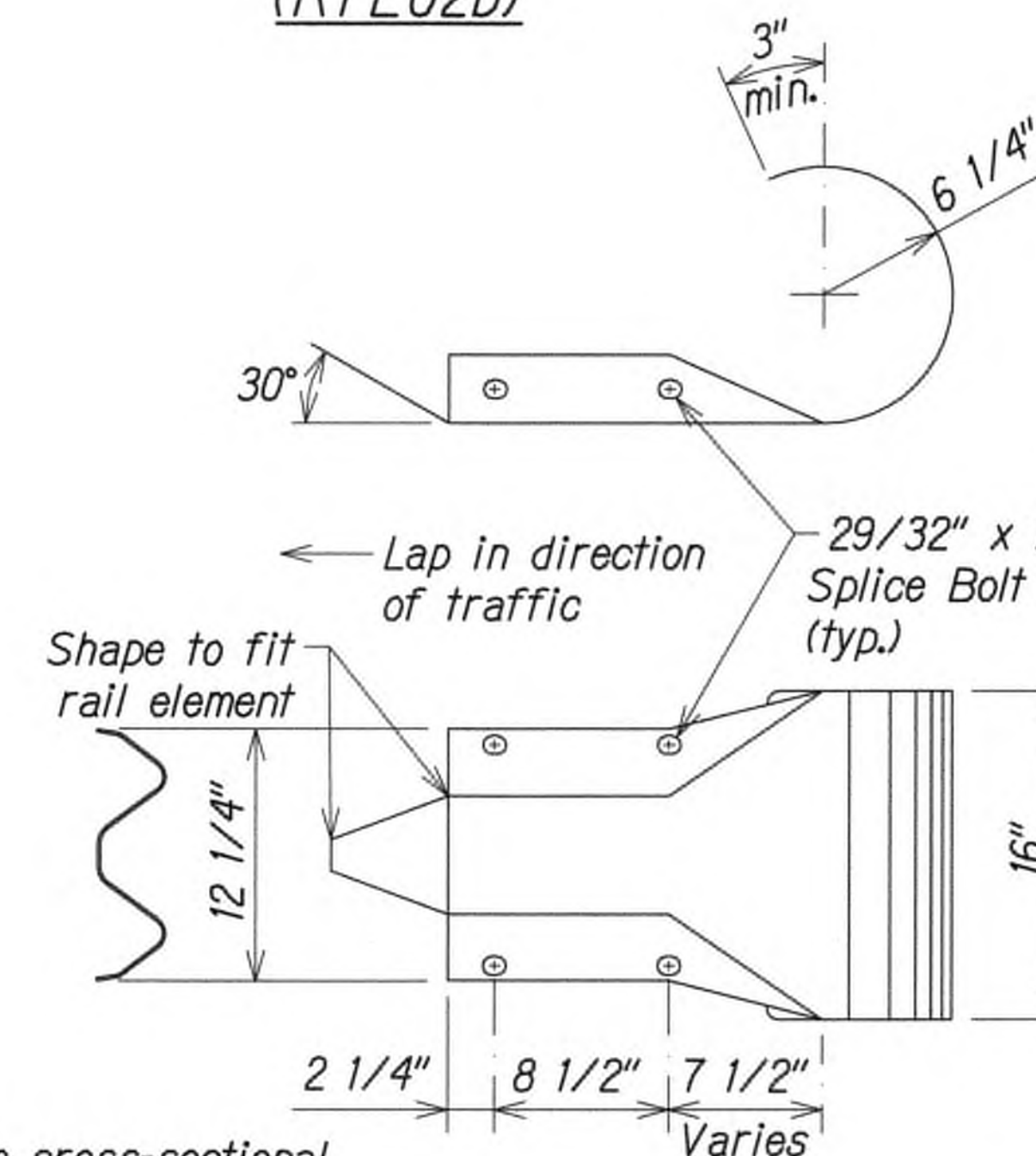
DESIGNATOR	BASE METAL THICKNESS
RWE02b	10 Gauge

THRIE-BEAM SECTION (ROUNDED) (RTE02b)



DESIGNATOR	BASE METAL THICKNESS
RTE01b	10 Gauge

THRIE-BEAM TERMINAL CONNECTOR (RTE01b)



The cross-sectional dimensions for this part are to fit over part RWM02a

DESIGNATOR	BASE METAL THICKNESS
RWE03a	12 Gauge

W-BEAM END SECTION (ROUNDED RWE03a)

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DATE REVISION

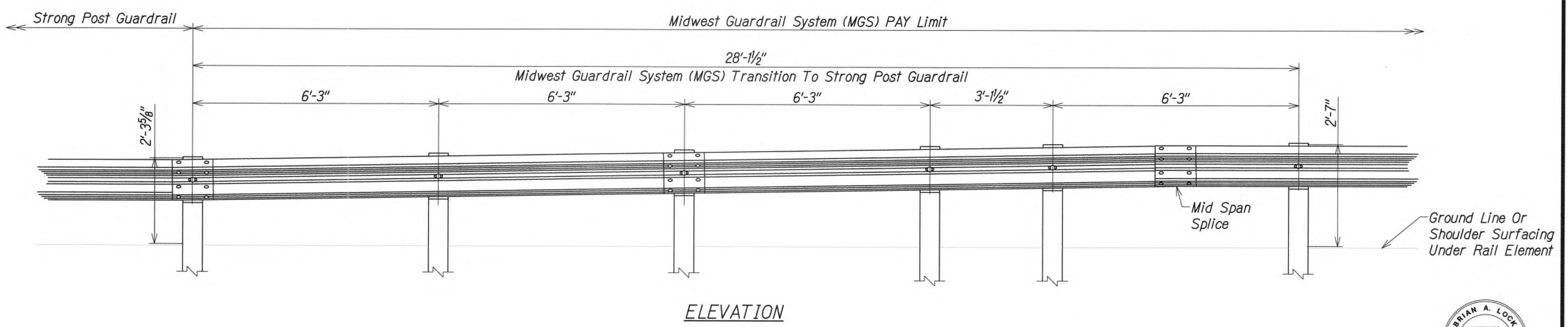
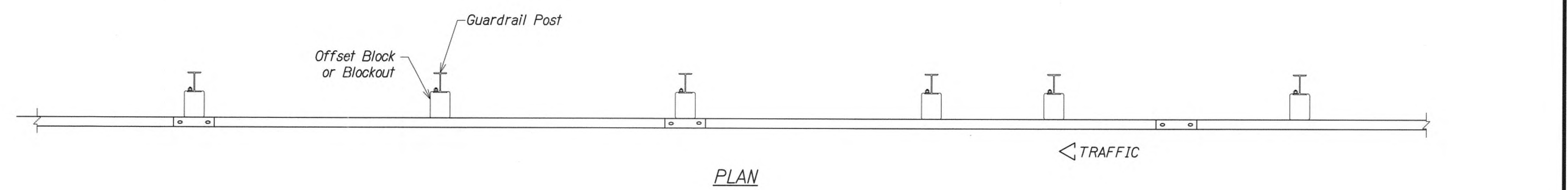


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LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**GUARDRAIL TERMINAL CONNECTORS AND END SECTIONS**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. GRD4 OF 8 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.97	244



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

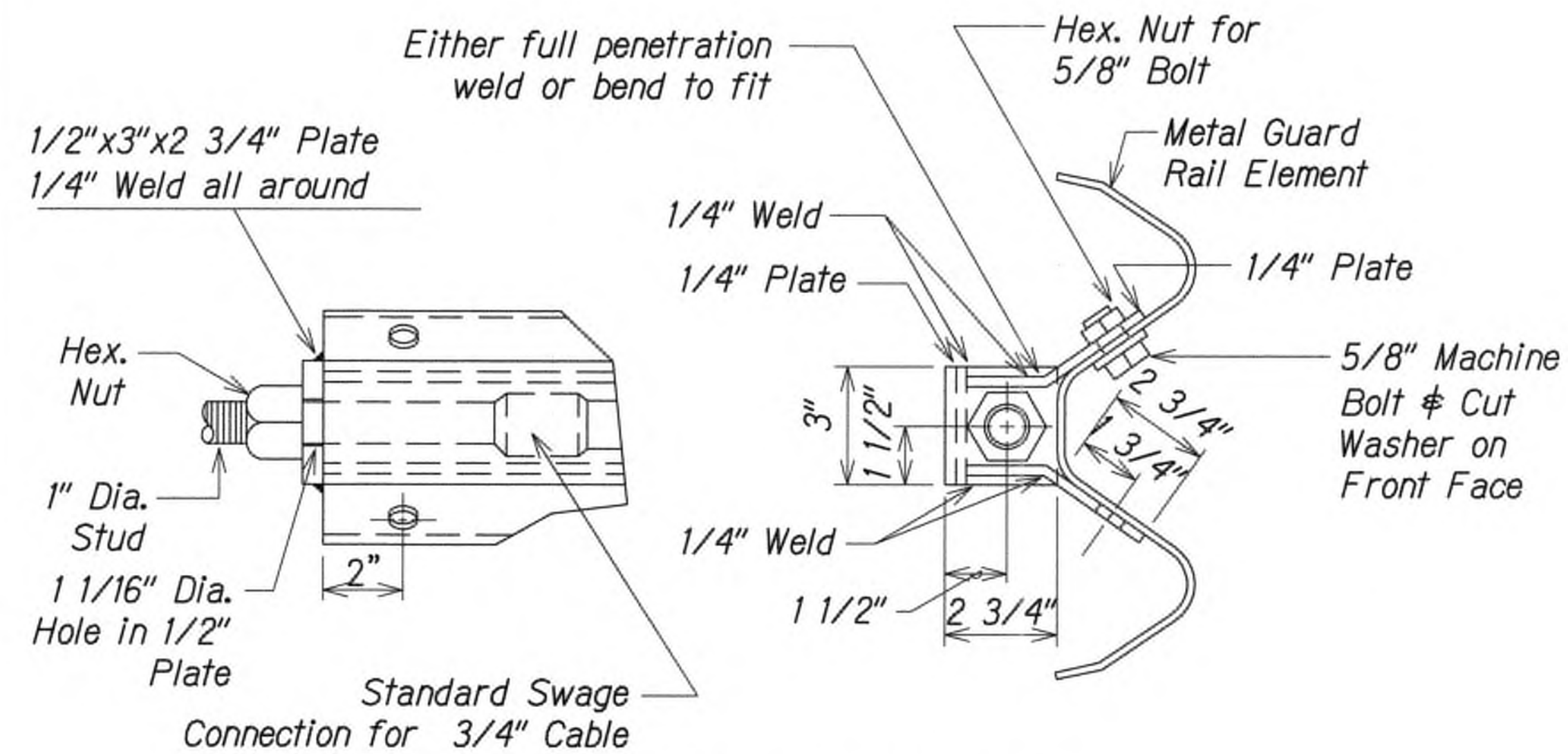


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APRIL 30, 2020  
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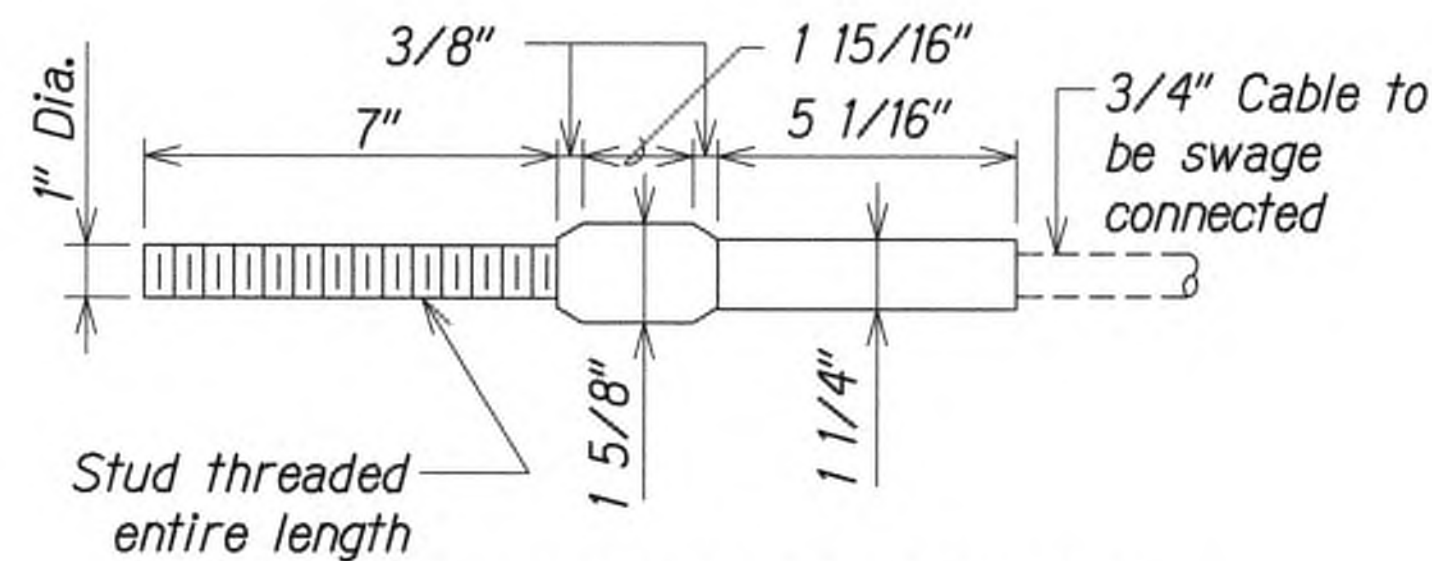
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**MGS TRANSITION TO  
STRONG POST GUARDRAIL**  
**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. GRD5 OF 8 SHEETS

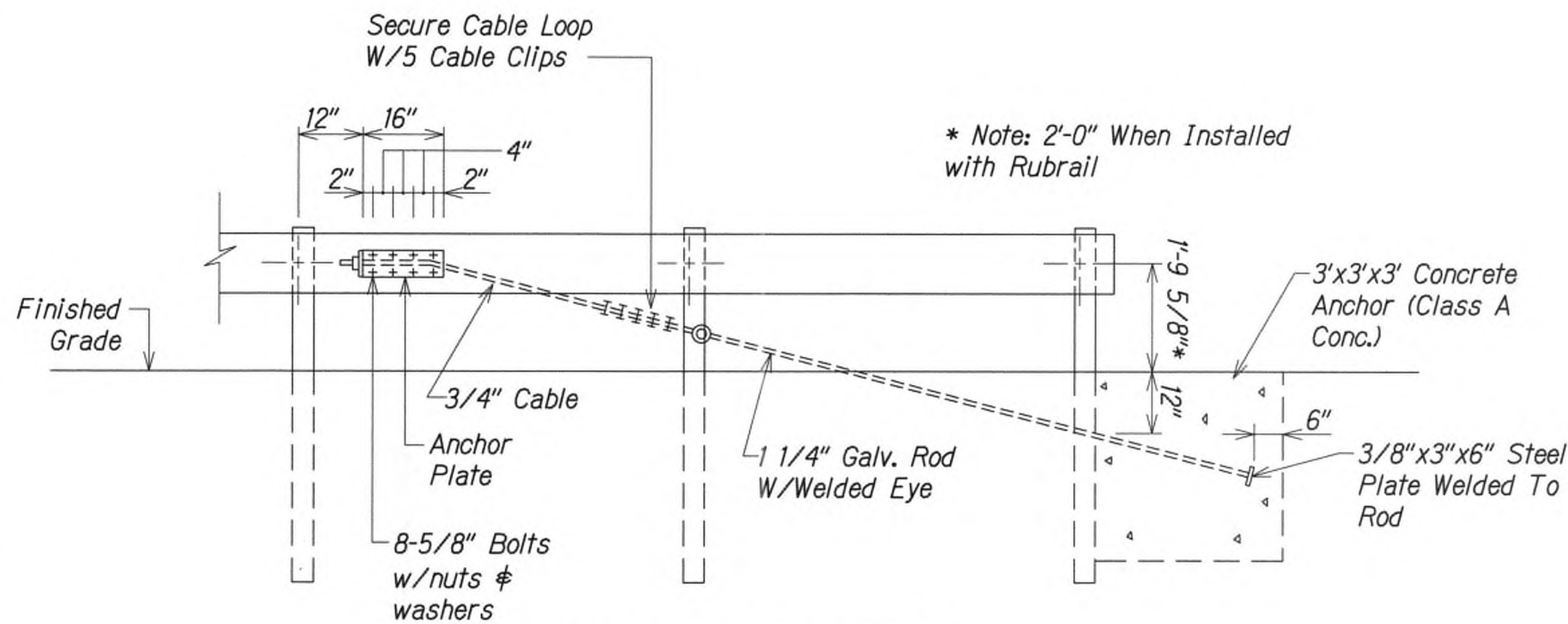




ANCHOR PLATE DETAILS

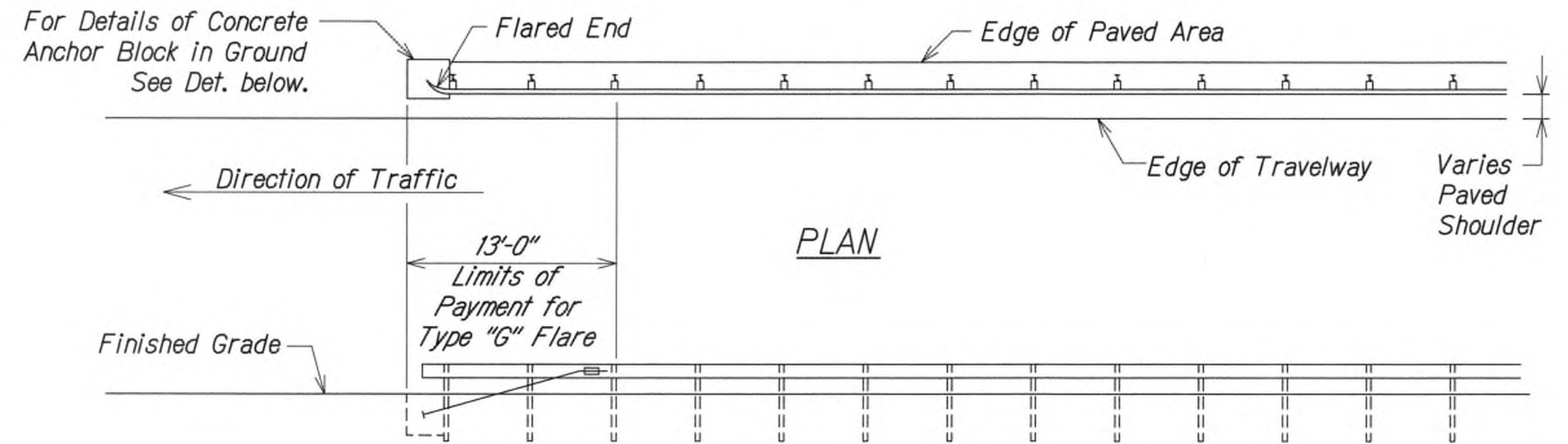


STANDARD SWAGED FITTING AND STUD



ANCHOR BLOCK DETAIL

1. Concrete, G.R.P., excavation, anchor rod and miscellaneous appurtenances necessary to anchor the guardrail ends shall be incidental to metal guardrail.



ELEVATION

TYPE "G" FLARE END TERMINAL

NOTES:

Type "G" Modified End Terminal is a site specific end terminal with a taper and radial termini. A site specific detailed drawing is required for all Type "G" Modified End Terminal and must receive Engineer's approval.

The taper (flare rate) of the guardrail shall follow the latest edition of AASHTO'S Roadside Design Guide (currently, Table 5.6 - Suggested Flare Rate for Barrier Design, page 5-21, Jan. 1996).

The radius of the radial termini is an Engineer's judgement based on the site evaluation. The Engineer shall consider safety (minimize the spearing & blunt end situation); degree and potential seriousness of the hazard; bicycle and pedestrian accessibility; maintenance equipment accessibility; Right-of-Way availability; the smallest radii the metal w-beam/thrie-beam railing can be constructed (check with supplier/contractor); posted speed limit; angle of vehicle impact; and aesthetics when designing the Type "G" Modified End Terminal.

During construction, the Contractor shall layout the proposed Type "G" Modified End Terminal and receive approval from the Construction Engineer prior to installation.



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**GUARDRAIL DETAILS**

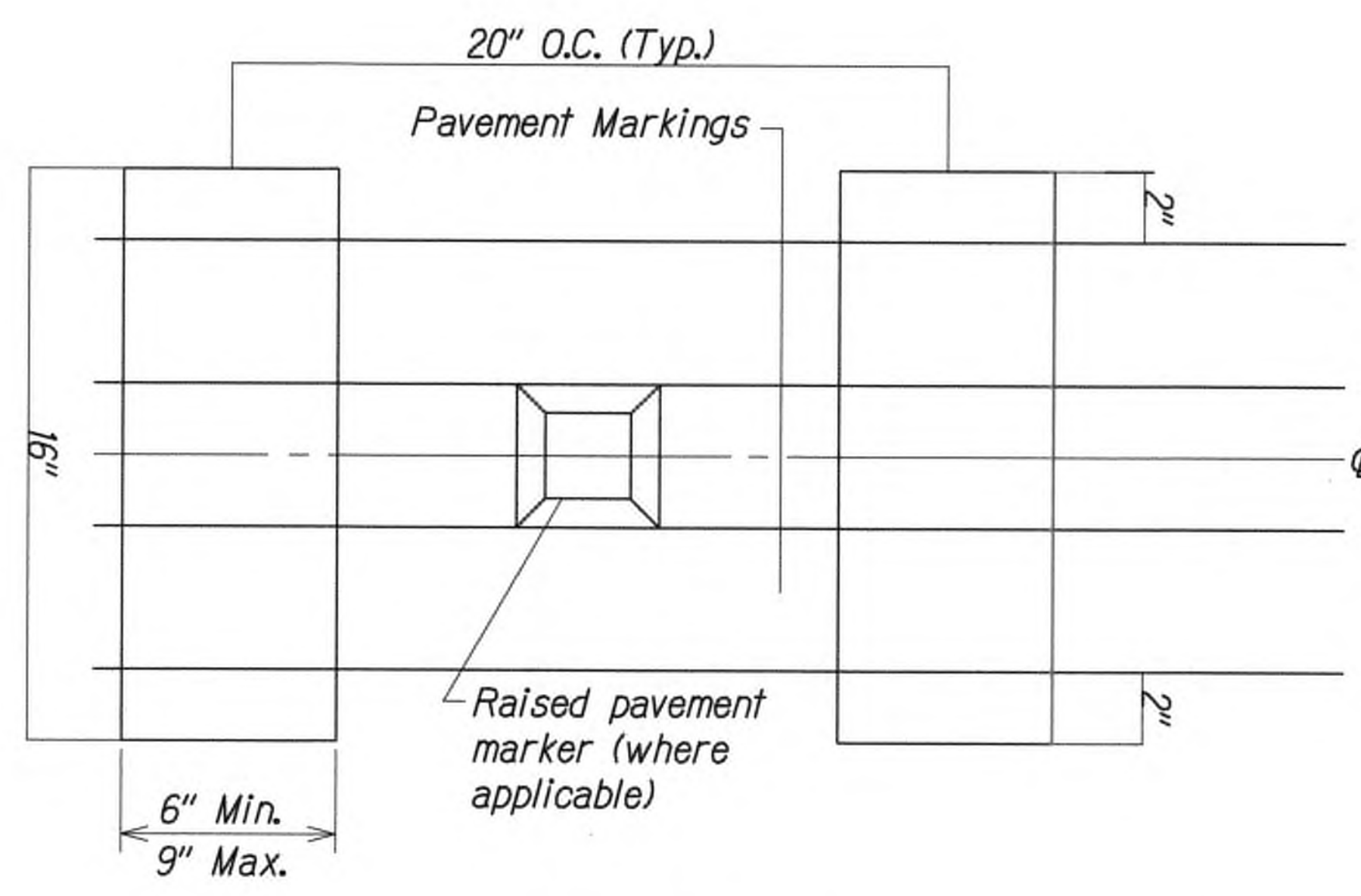
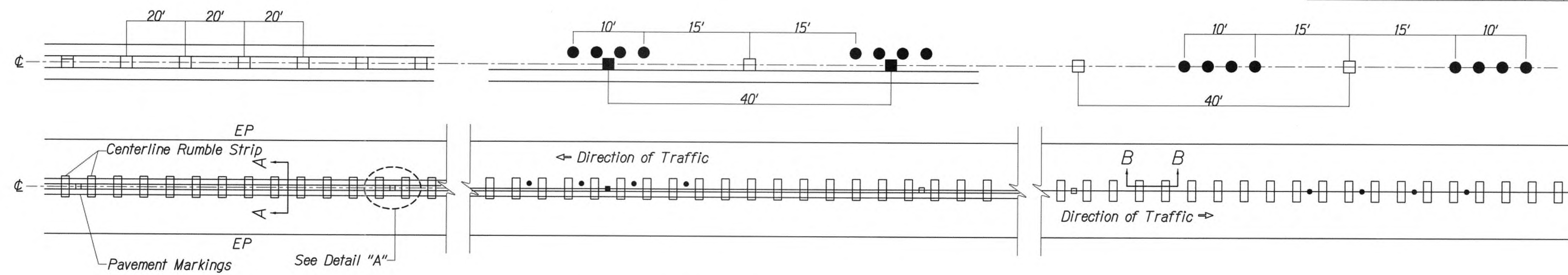
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

SHEET No. GRD6 OF 8 SHEETS

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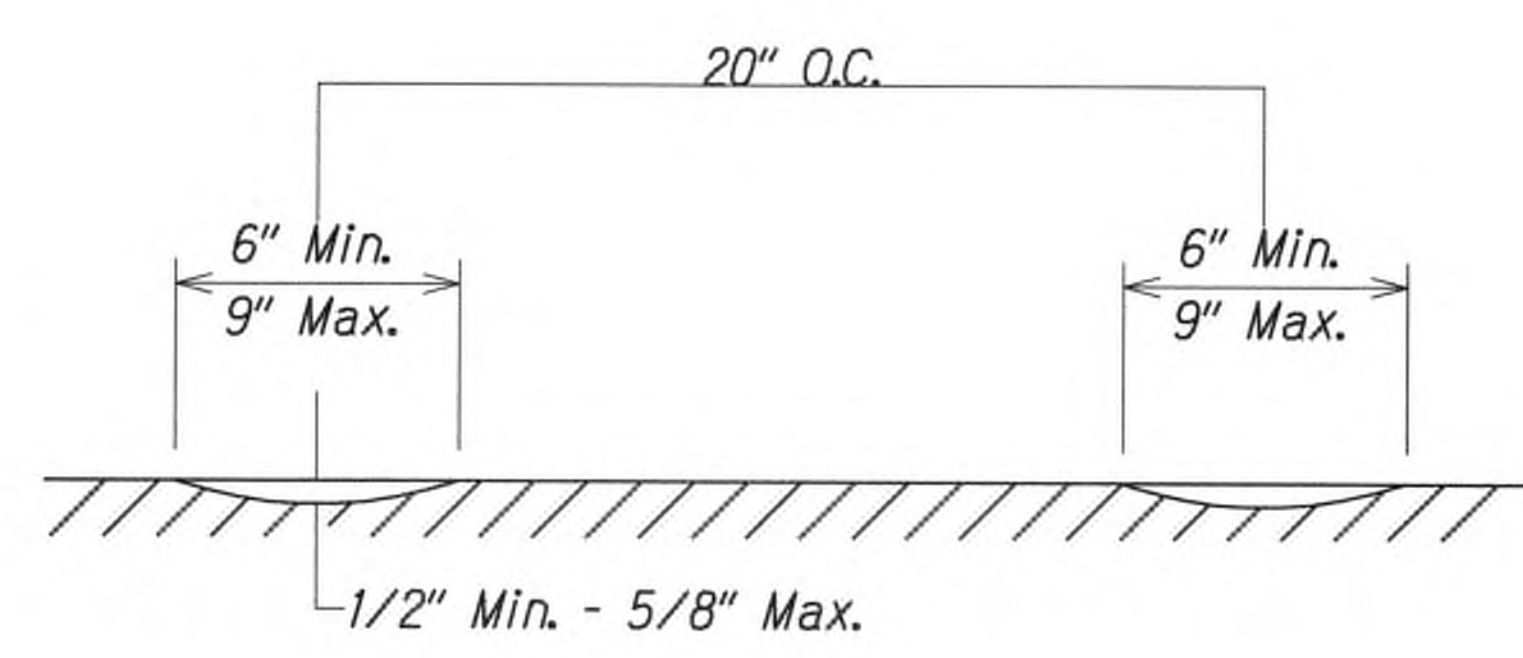
DATE REVISION





DETAIL "A"

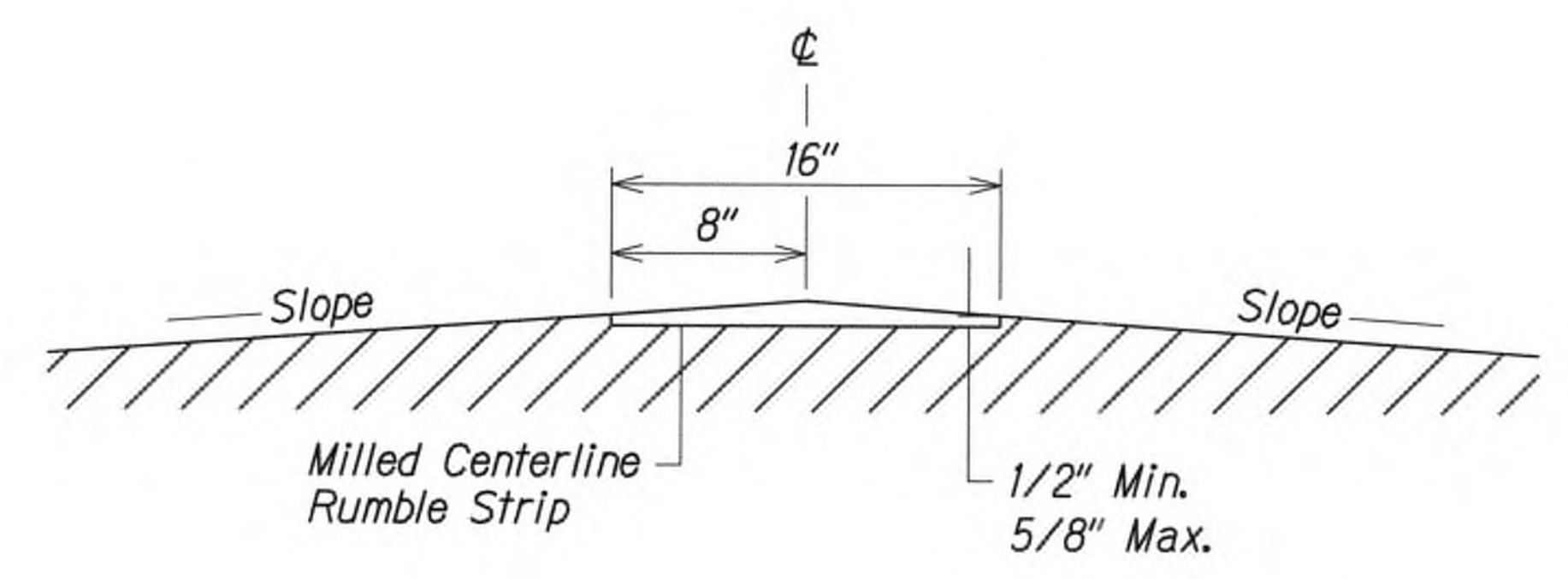
PLAN - CENTERLINE MILLED RUMBLE STRIP



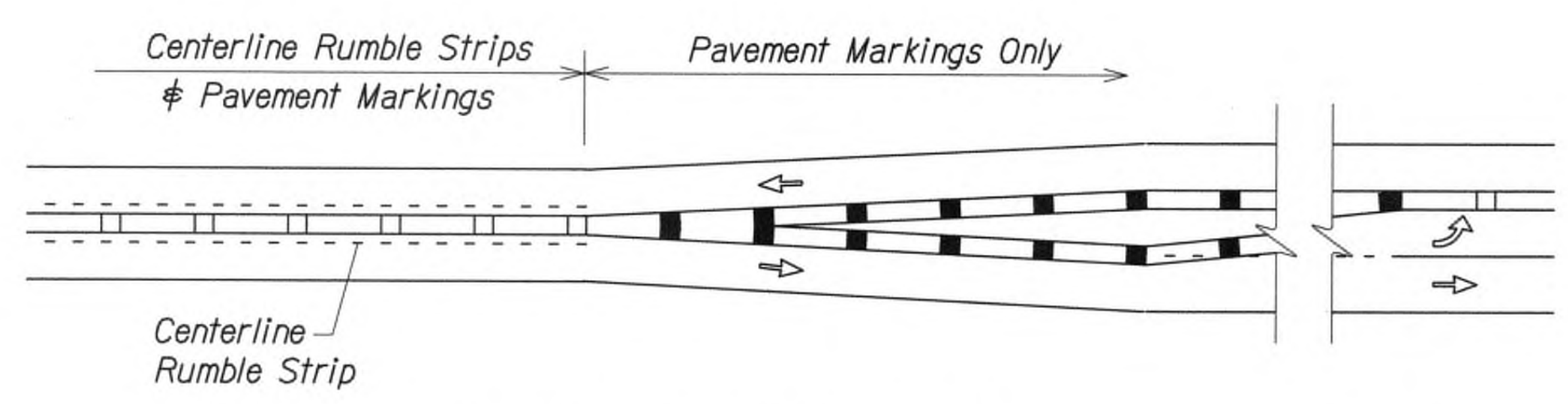
SECTION B-B - CENTERLINE MILLED RUMBLE STRIP

NOTES:

1. The method of constructing the centerline milled rumble strip shall be submitted to the Engineer for acceptance prior to the actual work.
2. Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement markings prior to installation.
3. Raised pavement markers shall be installed on level surface between the rumble strips. Do not install raised pavement markers inside the milled area.
4. The construction of the centerline milled rumble strip shall be paid for under Item No. 615.1000 - Milled Rumble Strip, Centerline. The milling apparatus and removal of existing pavement markings will not be paid for separately and shall be considered incidental to Item 615.1000.
5. Do not install centerline rumble strips on bridge decks.
6. Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
7. Pre-formed pavement striping tape shall be used for solid line markings within the milled centerline rumble strip area.



SECTION A-A - CENTERLINE MILLED RUMBLE STRIP



CENTERLINE MILLED RUMBLE STRIP INSTALLATION LIMIT



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

MILLED RUMBLE STRIP  
DETAILS AND NOTES  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

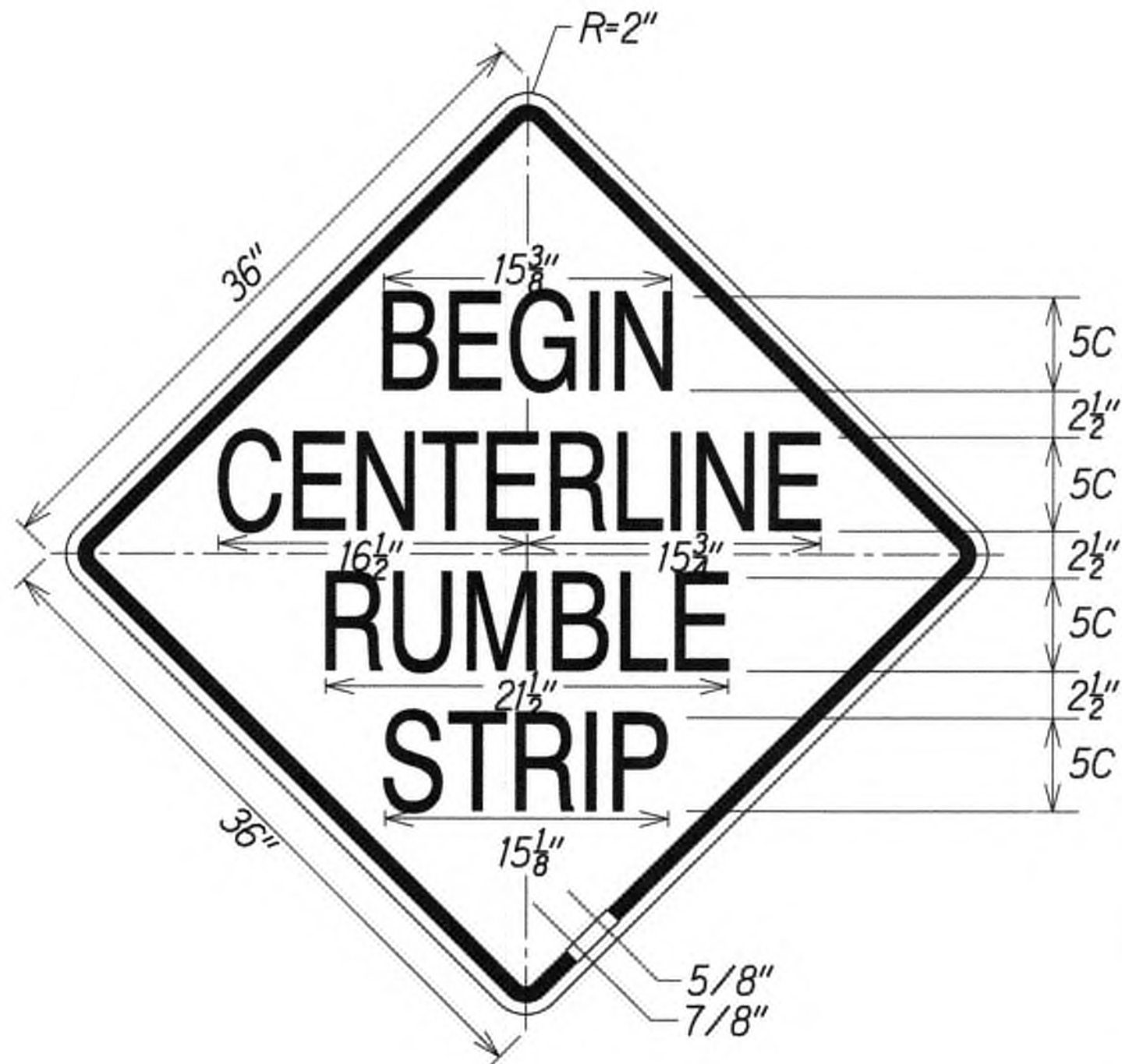
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SHEET No. MDI OF 2 SHEETS

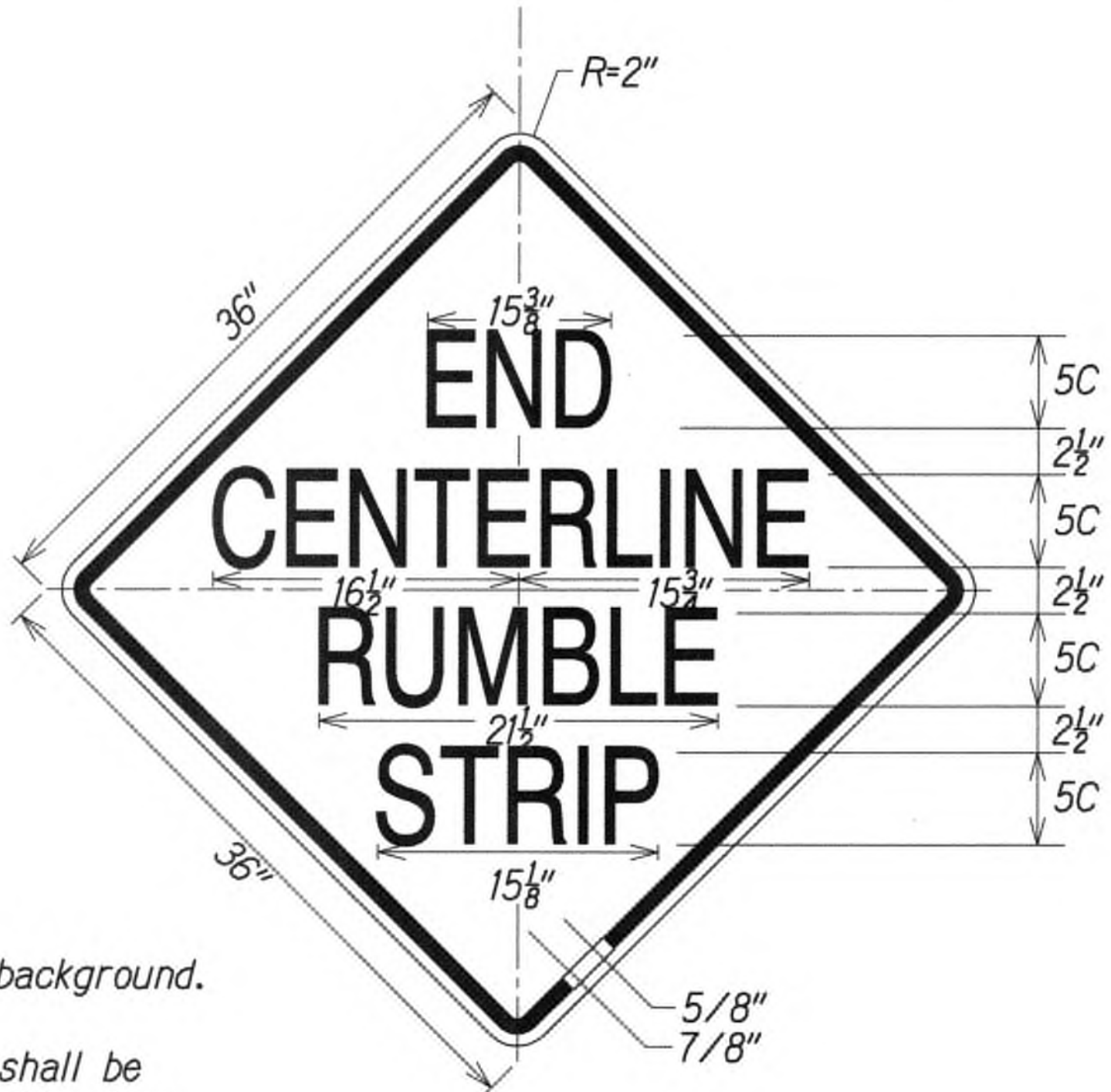
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION





W8-14a



W8-14b

NOTES:

1. Black legend on reflectorized yellow background.
2. Begin Centerline Rumble Strip signs shall be installed 50 feet before the first rumble strip depression. End Centerline Rumble Strip signs shall be installed 50 feet beyond the last rumble strip depression.

SIGN NOTES

1. All signs shall conform to Section 621 of the Special Provisions and the latest editions and amendments of the following FHWA publications:
  - a. "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD)
  - b. "Standard Highway Signs"
  - c. "Standard Alphabets for Highway Signs"
2. Borders, messages, arrows, symbols and shield shall conform to details as shown on the plans and as specified in the MUTCD.
3. Sign messages shall be as indicated on the plan, or as directed by the Engineer.
4. Backing for all new Regulatory and Warning Signs shall not be spliced.
5. Final locations of all signs shall be accepted by the Engineer prior to any installation work.
6. Existing signs that are to be replaced, shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
7. Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
8. All signs shall be installed on square tube posts, unless otherwise noted.
9. Sign posts shall be painted with yellow reflective paint, except where located behind guardrails. Such paint work shall be considered incidental to sign items.
10. Contractor shall mark the back of all signs using labels and equipment provided by the State. Payment to be incidental to various contract items.

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



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OR UNDER MY SUPERVISION.  
*[Signature]*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**MILLED RUMBLE STRIP**  
**DETAILS AND NOTES**  
**KUHIO HIGHWAY SHORT-TERM**  
**IMPROVEMENTS KUAMOO ROAD**  
**TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: NOT TO SCALE Date: July 2019  
SHEET No. MD2 OF 2 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.101	244

Note:  
See "Detectable Warning Details" on Sheet T5

True North  
Scale: 1"=5'

CURVE DATA

	9	10	11
$\Delta$	14° 48' 00"	159° 59' 29"	125° 28' 56"
$\Delta/2$	7° 24' 00"	79° 59' 40"	62° 44' 30"
R	57.50'	1.50'	1.50'
T	7.47'	8.50'	2.91'
Ch	14.81'	2.95'	2.67'
Lc	14.85'	4.19'	3.29'

APPROVED

for County Engineer  
County Of Kaua'i  
(For Work Within the County Right of Way)

7/17/19  
Date



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC ISLAND DETAILS

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

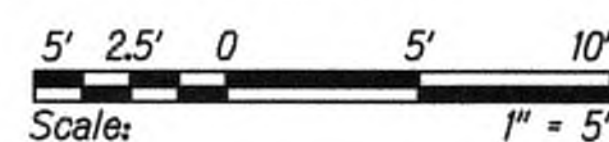
9/20/19  $\Delta$  Reissuing plan for legibility  
only. No design changes have  
been made.

DATE REVISION

SHEET No. T1 OF 11 SHEETS

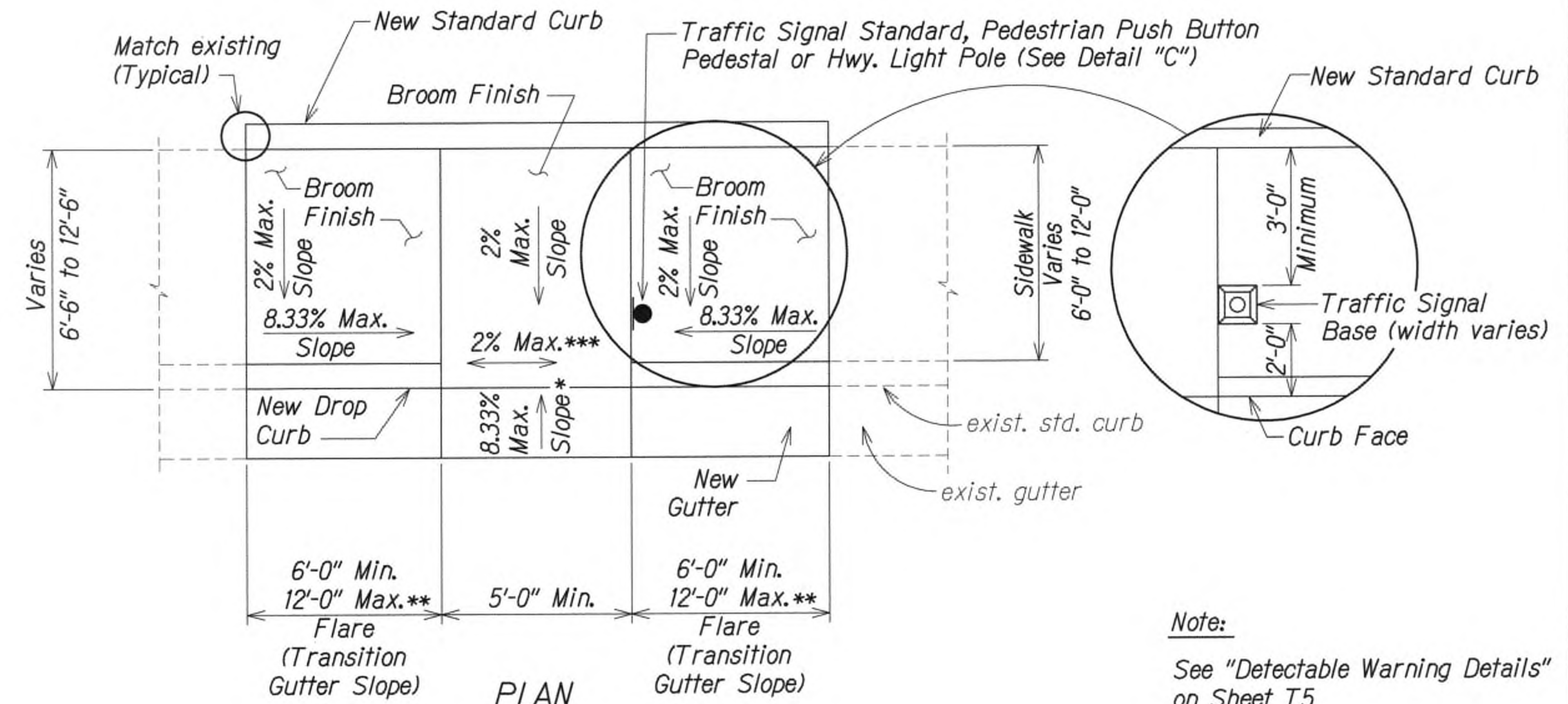
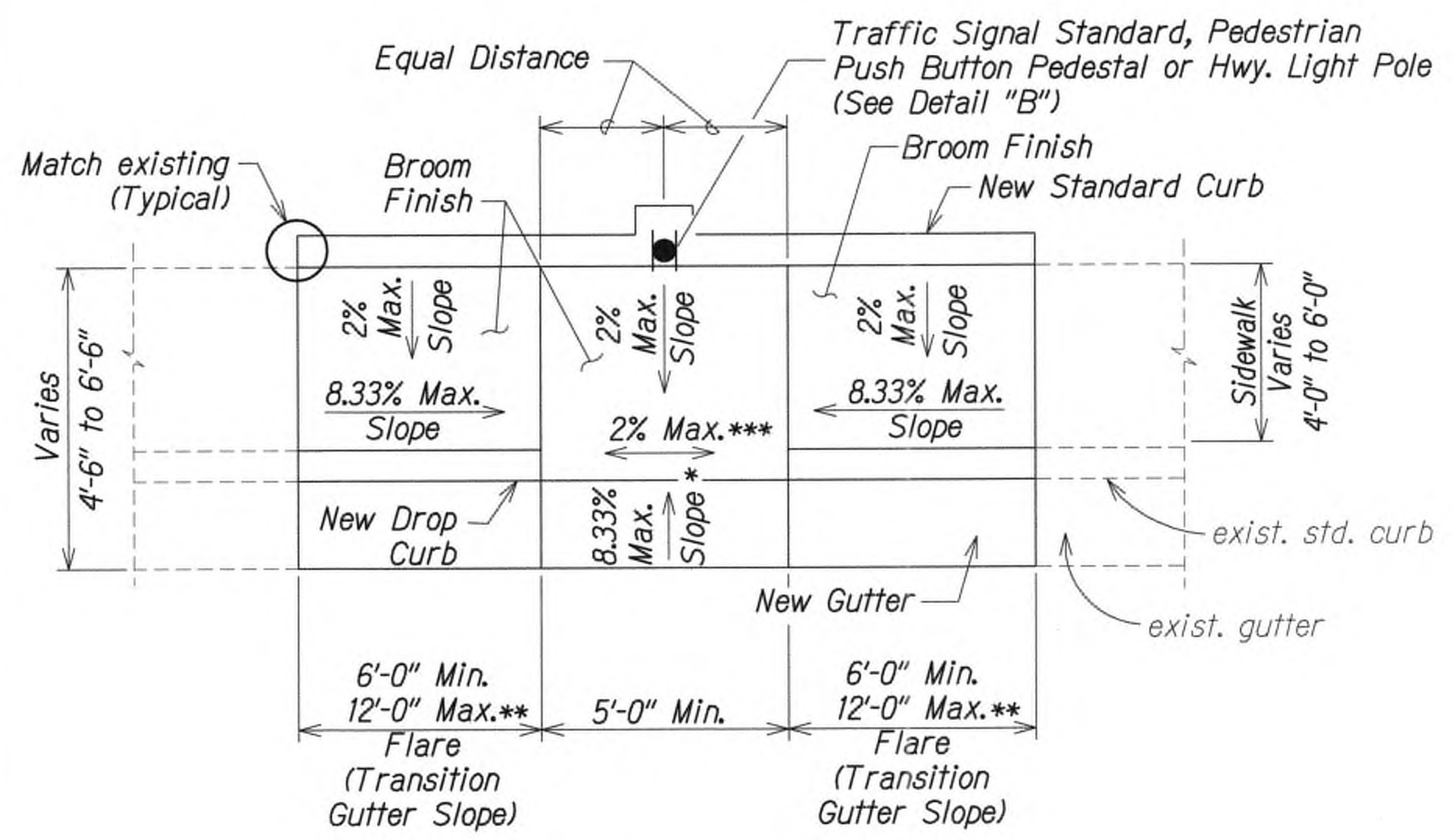
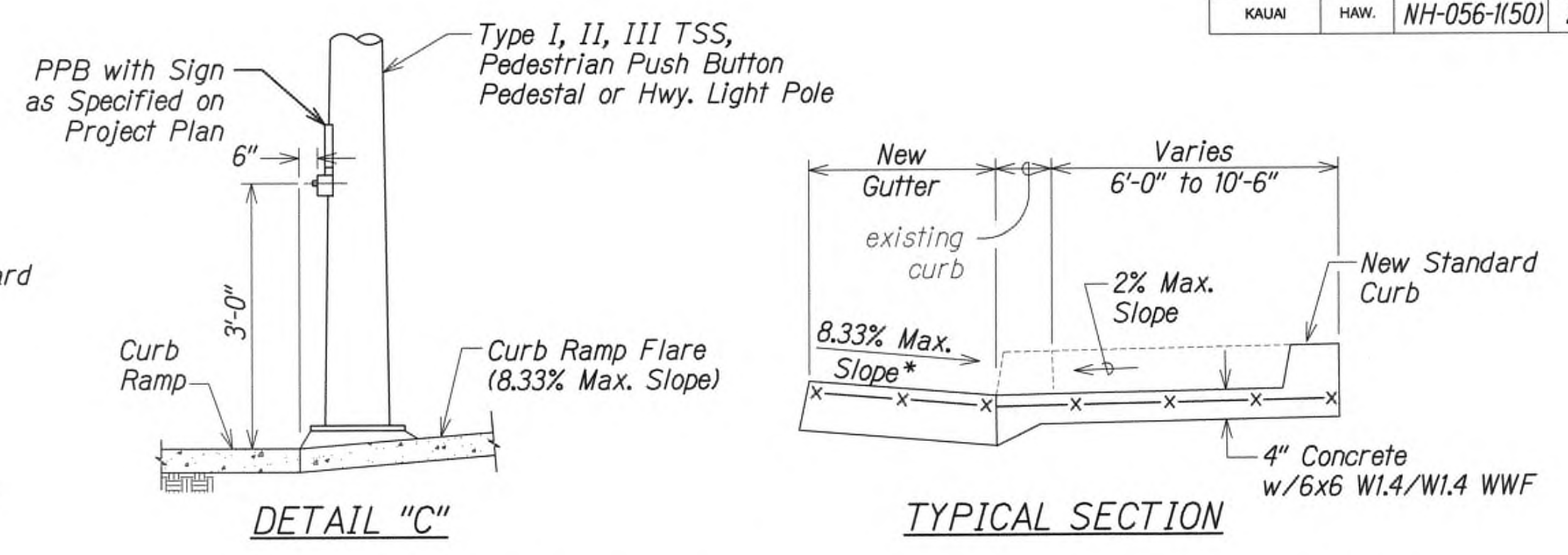
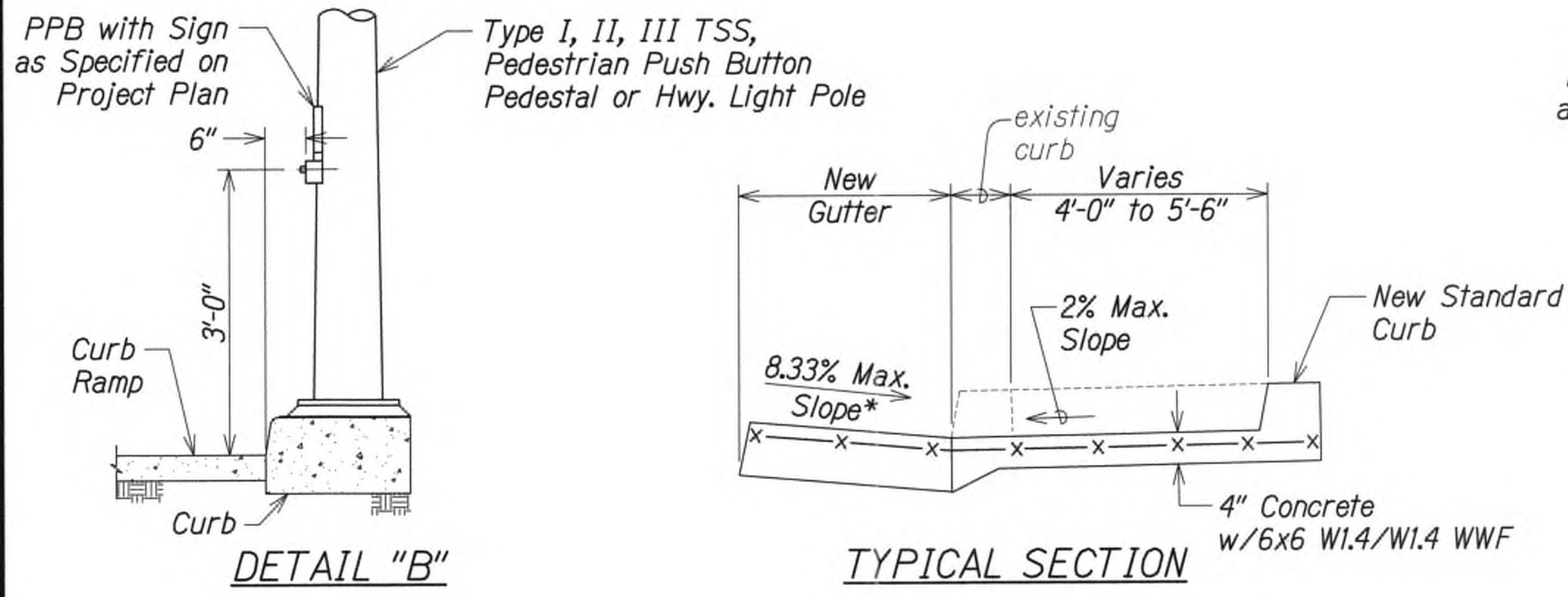
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GRAPHIC SCALE:

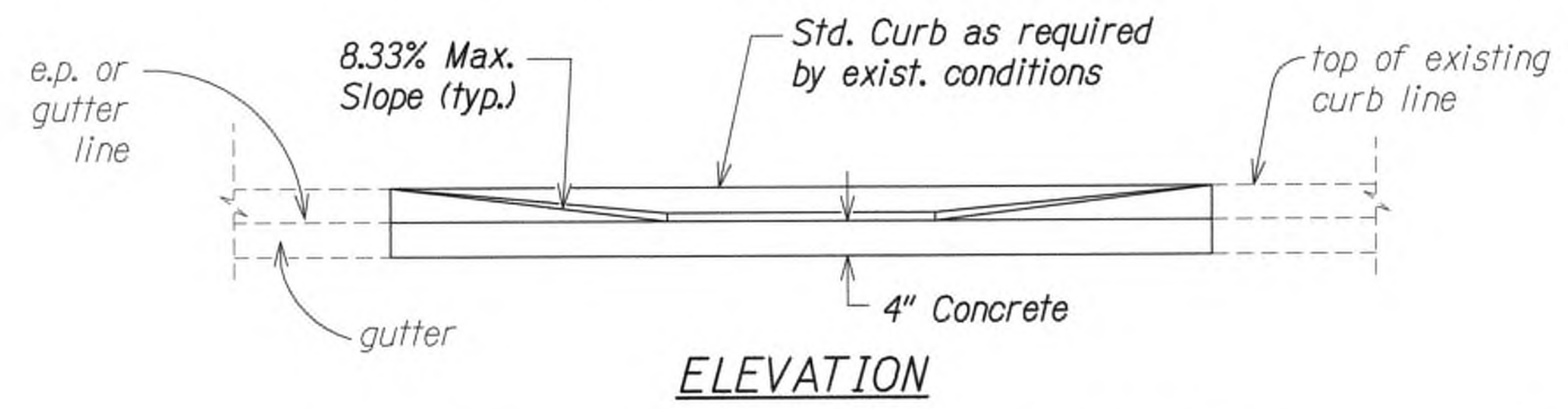
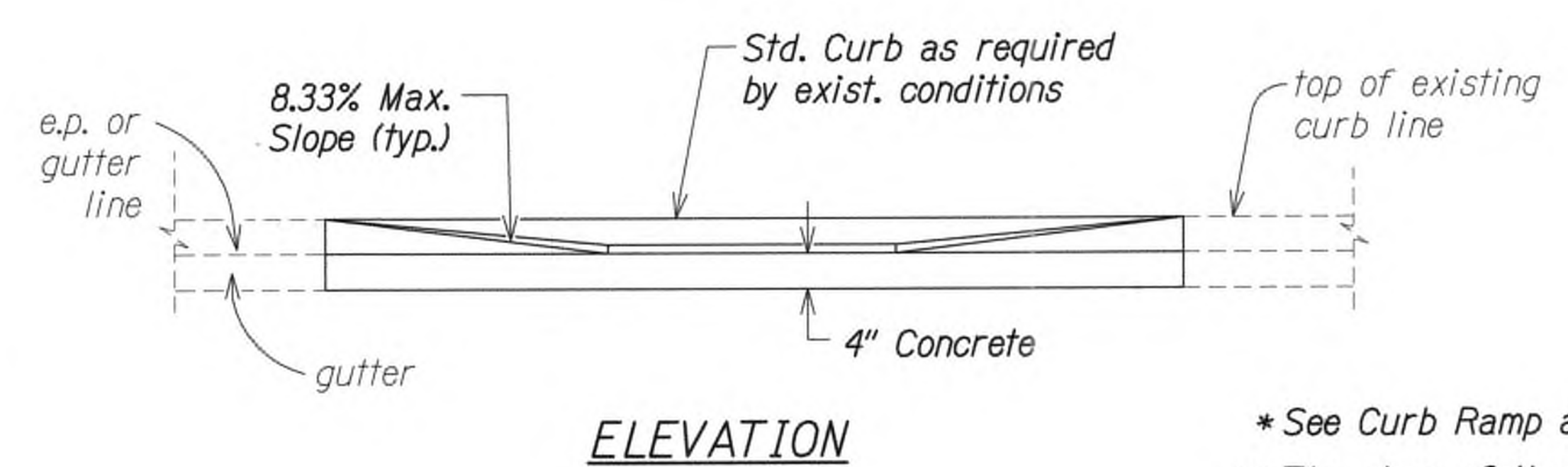


DATE	_____
SURVEY PLATTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____





Note:  
See "Detectable Warning Details" on Sheet T5



**CURB RAMP - TYPE "B" MODIFIED**  
SIDEWALK WIDTH 6'-0" OR GREATER  
BUT LESS THAN 12'-0" WIDTH

**CURB RAMP - TYPE "B"**  
SIDEWALK WIDTH 4'-0" OR GREATER  
BUT LESS THAN 6'-0" WIDTH

- \* See Curb Ramp and Sidewalk Note No. 9
- \*\* The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.
- \*\*\* If Roadway Slope >2% Conform to Roadway Slope and File Technical Infeasibility (TI) Statement

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



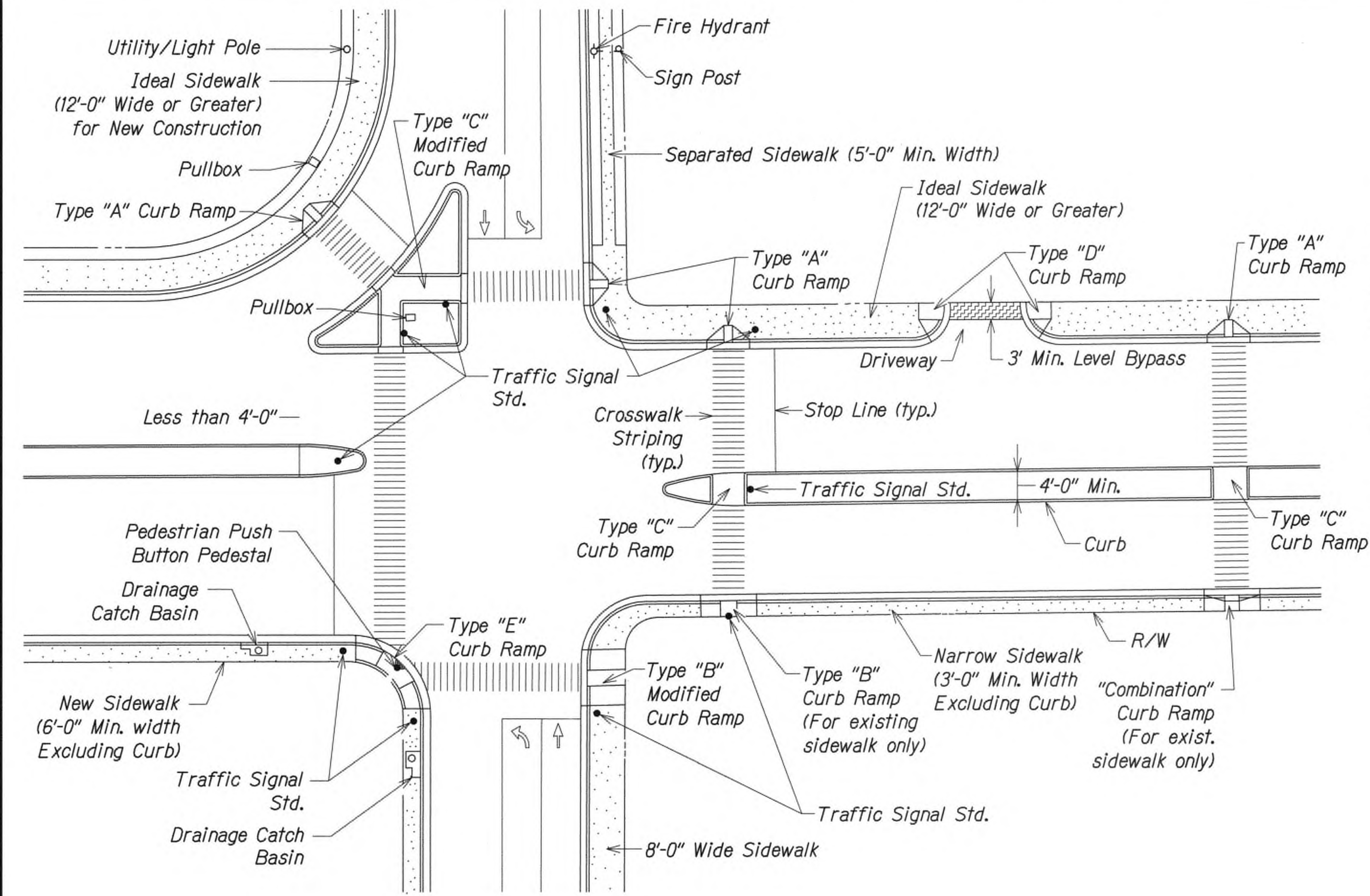
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
mide  
WILSON OKAMOTO CORPORATION APRIL 30, 2020 LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

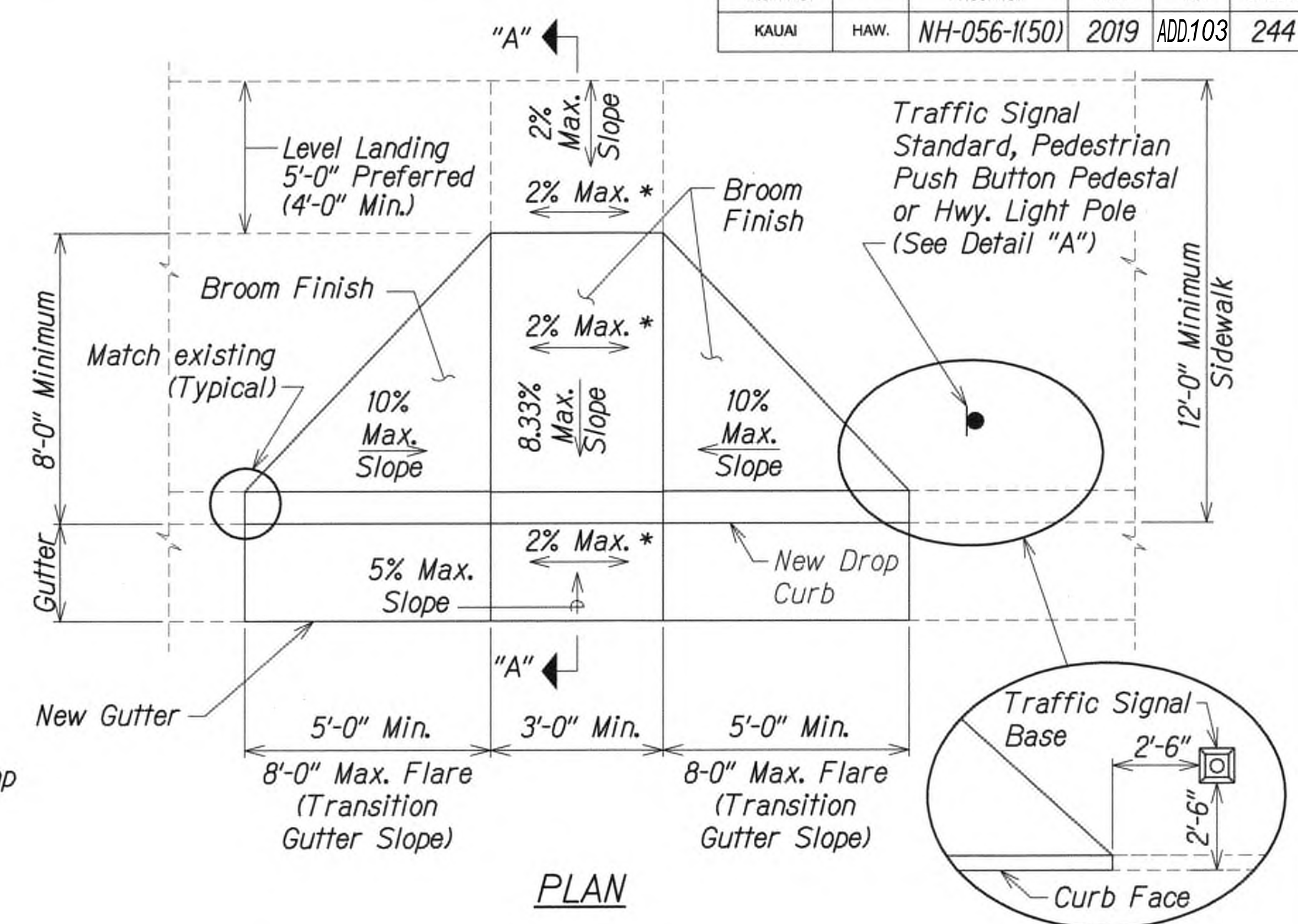
**CURB RAMP DETAILS**

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. T2 OF 11 SHEETS

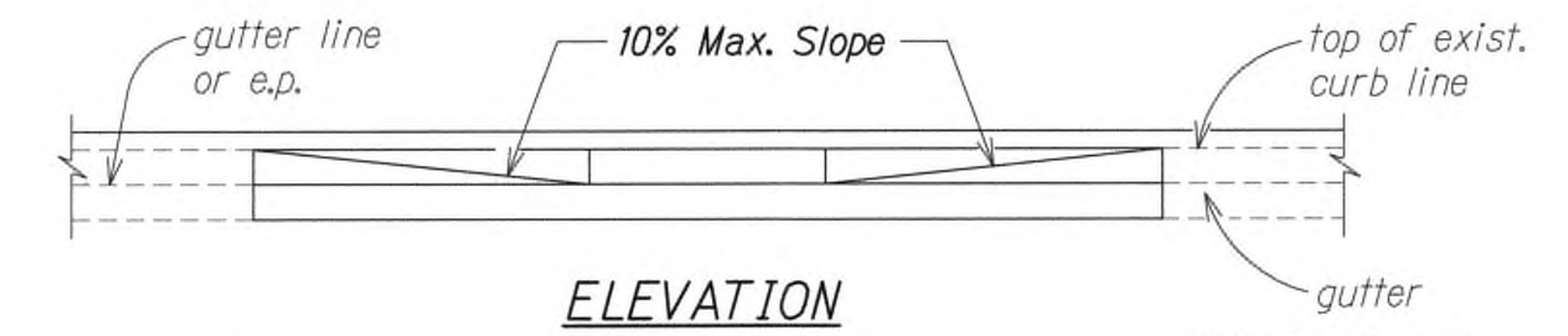




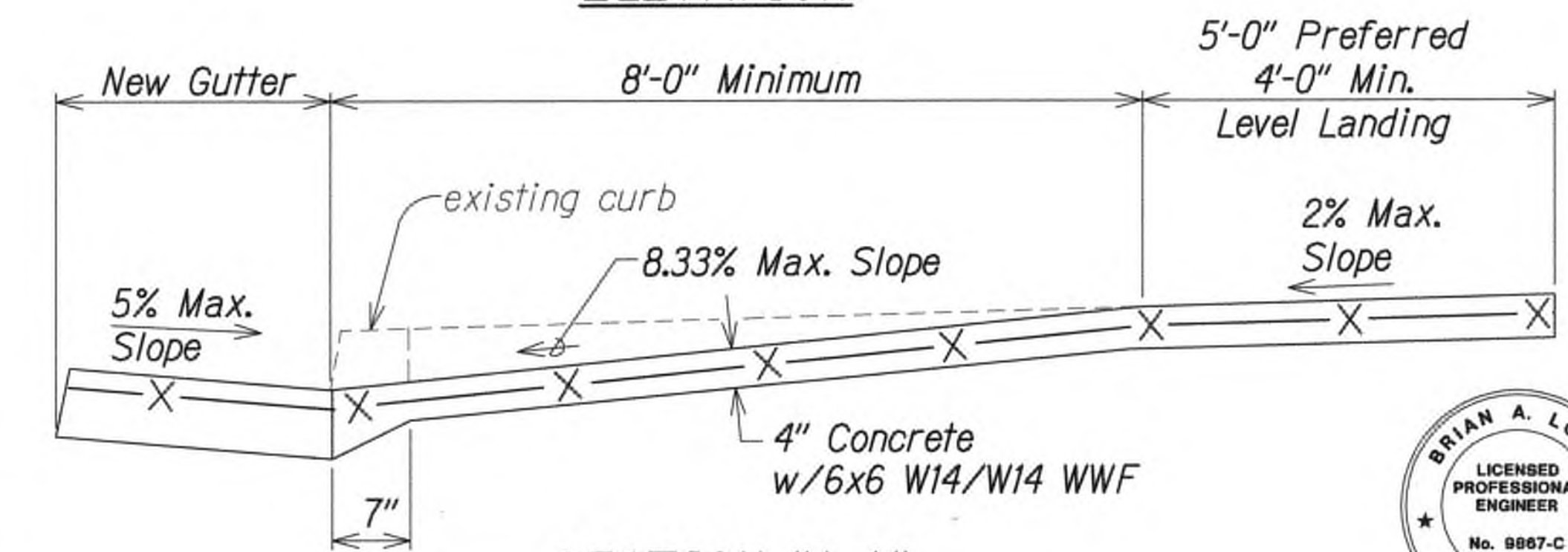
**TYPICAL CURB RAMPS**



**PLAN**

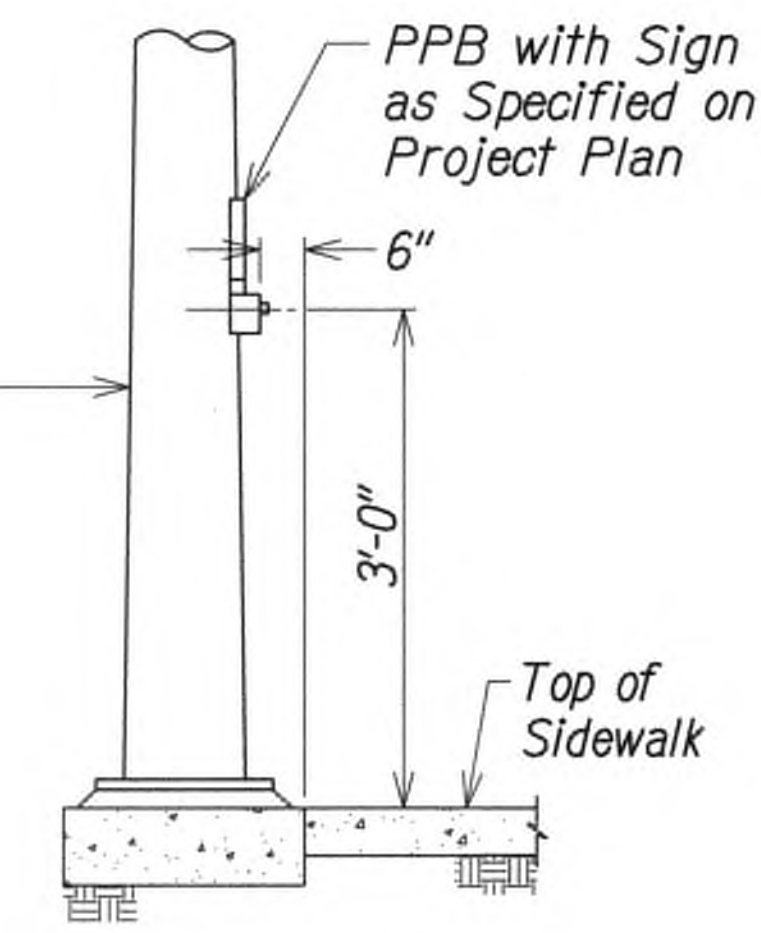


**ELEVATION**



**SECTION "A-A"**

**CURB RAMP - TYPE "A"**  
SIDEWALK WIDTH 12'-0" OR GREATER



**DETAIL "A"**

**Note:**  
See "Detectable Warning Details" on Sheet T5

\* If Roadway Slope >2% Conform to Roadway Slope and File Technical Infeasibility (T1) Statement

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**CURB RAMP A DETAILS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

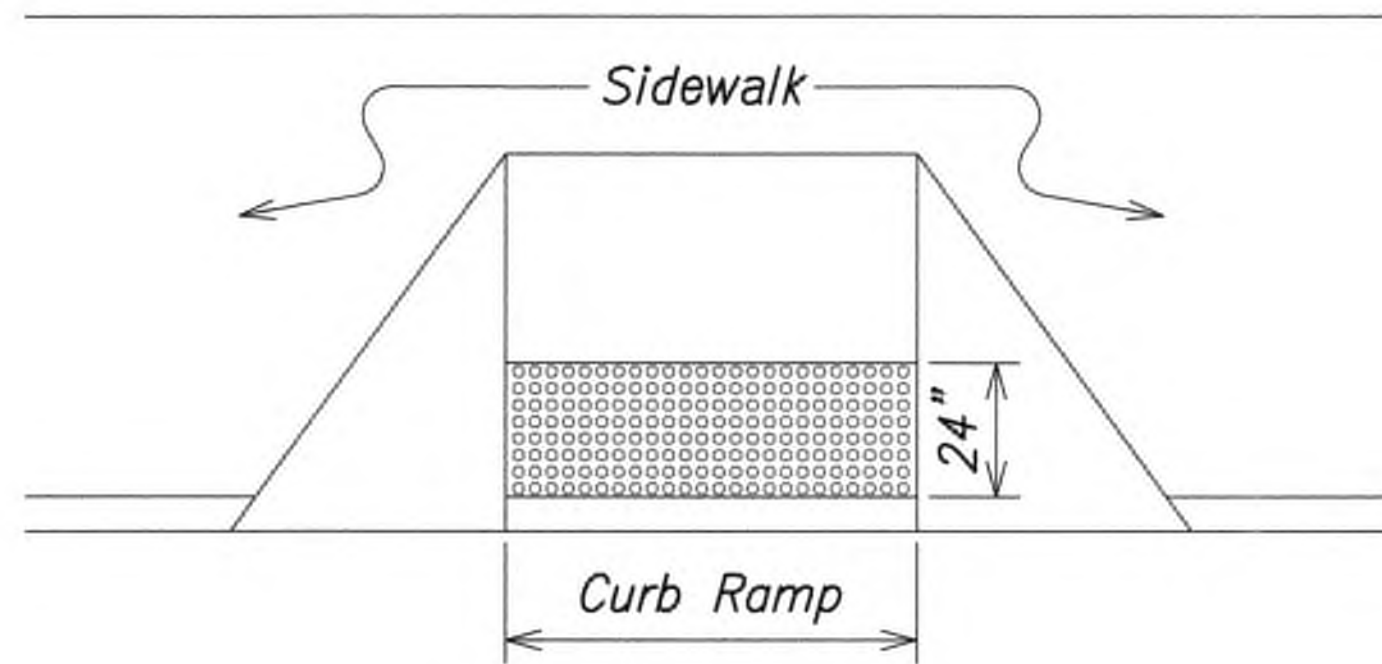
SHEET No. **T3** OF **11** SHEETS

SURVEY PLANNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

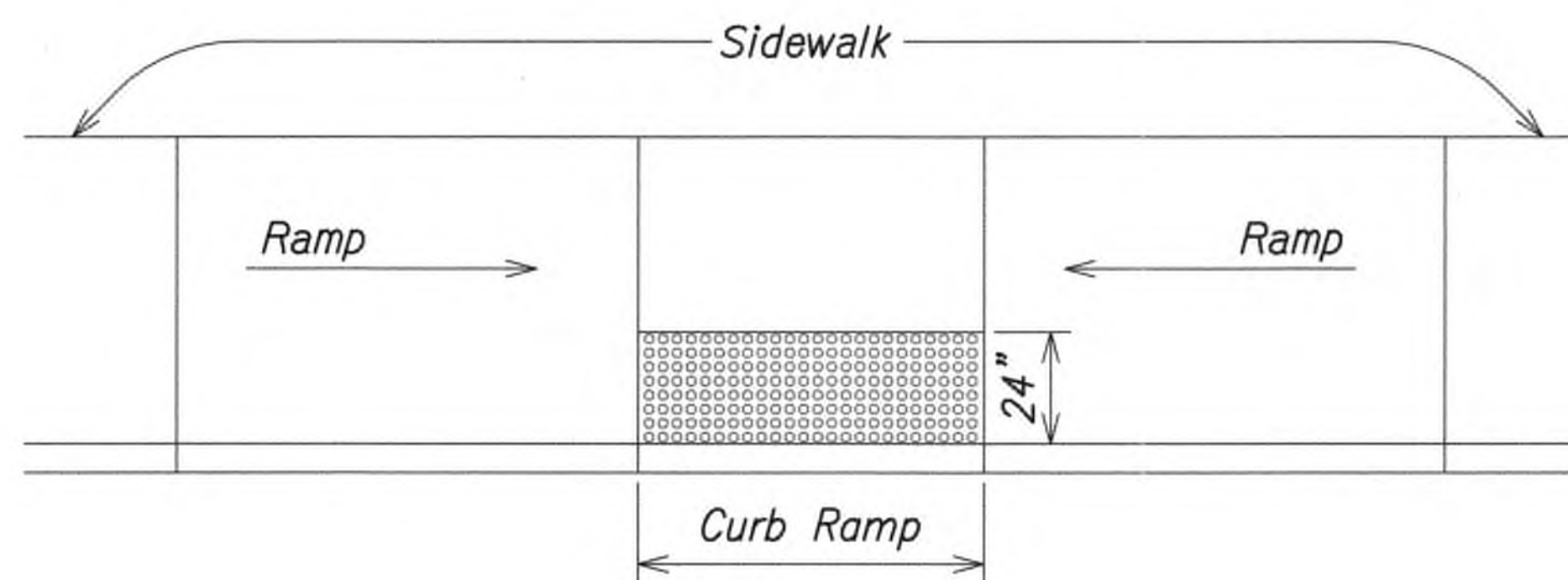




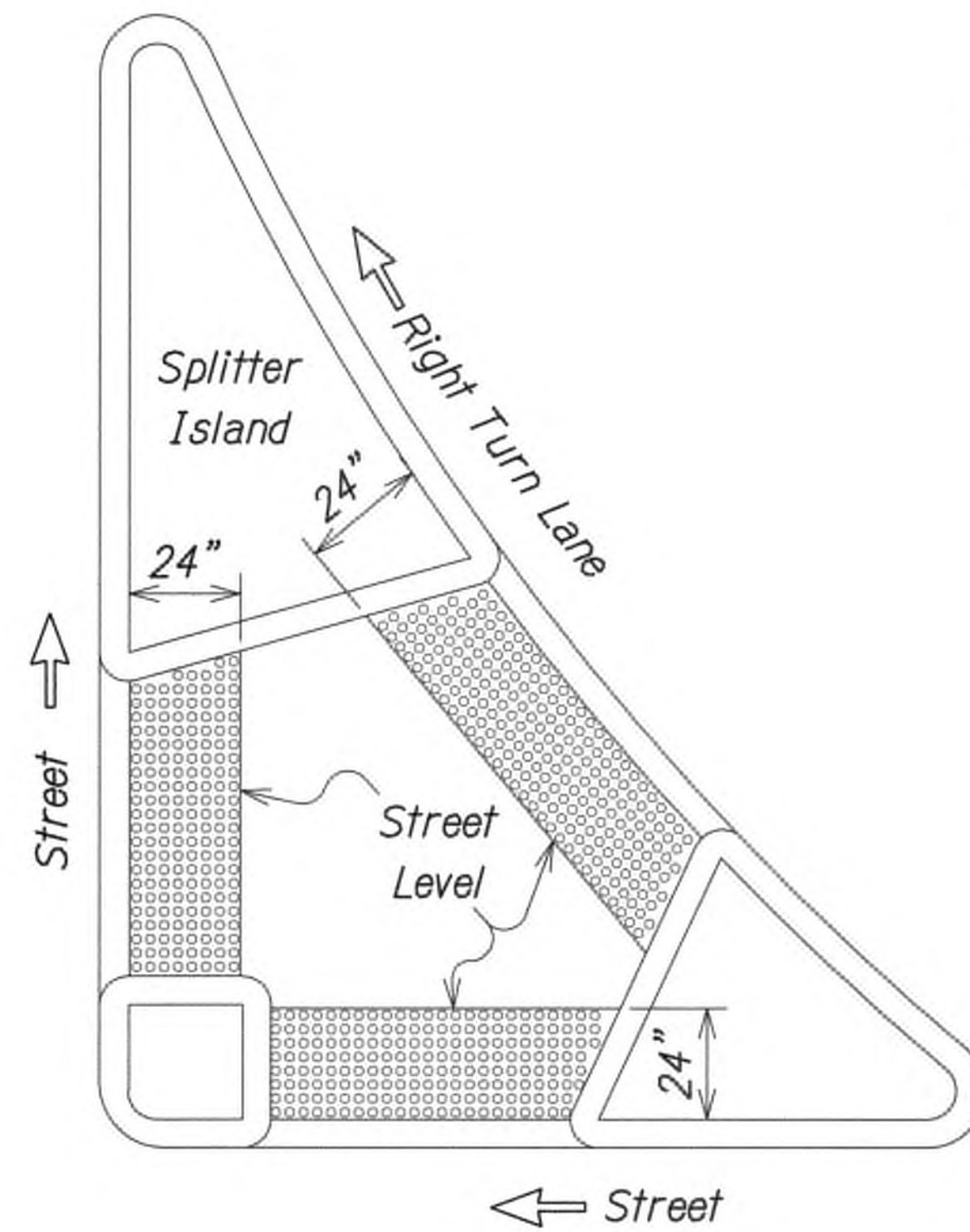




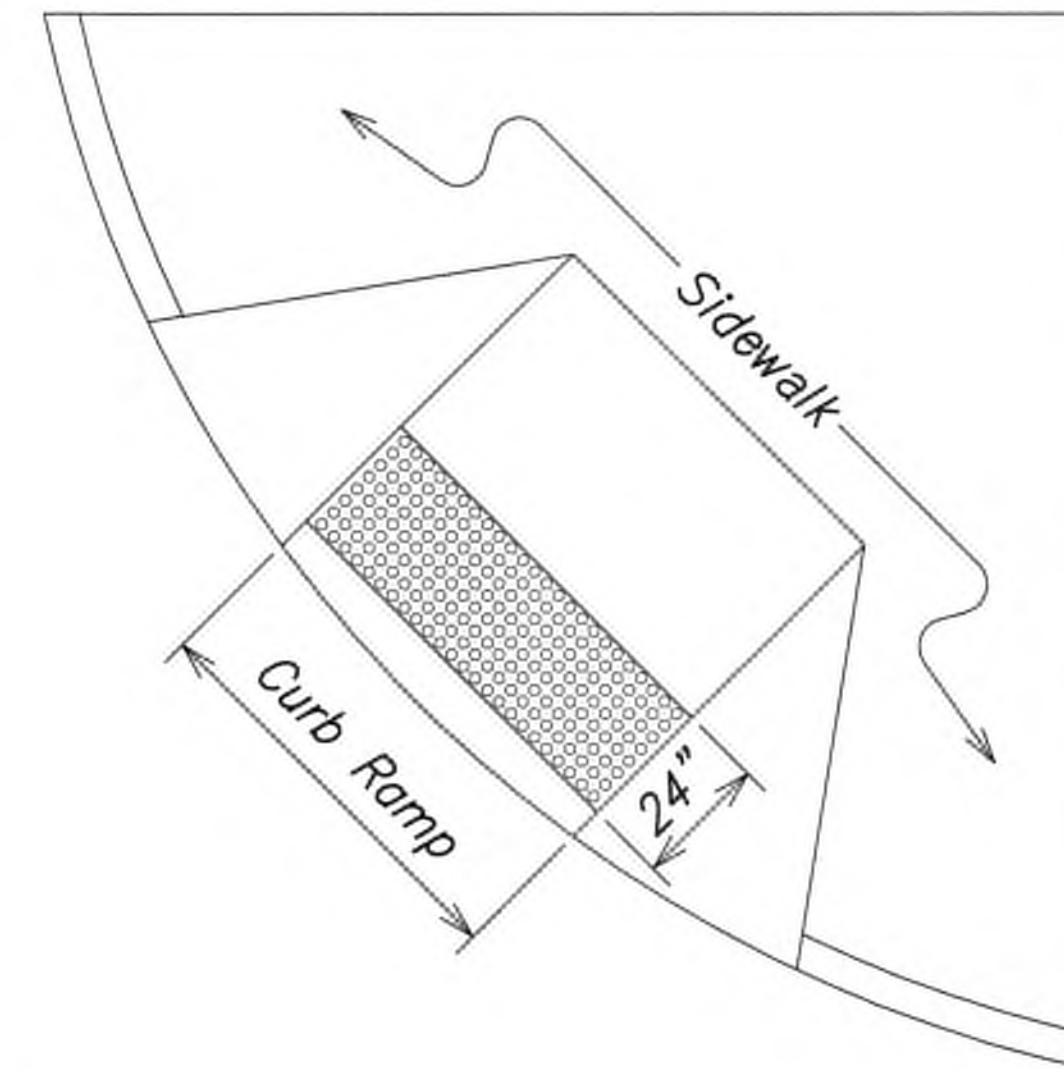
DETECTABLE WARNING AT CURB RAMP



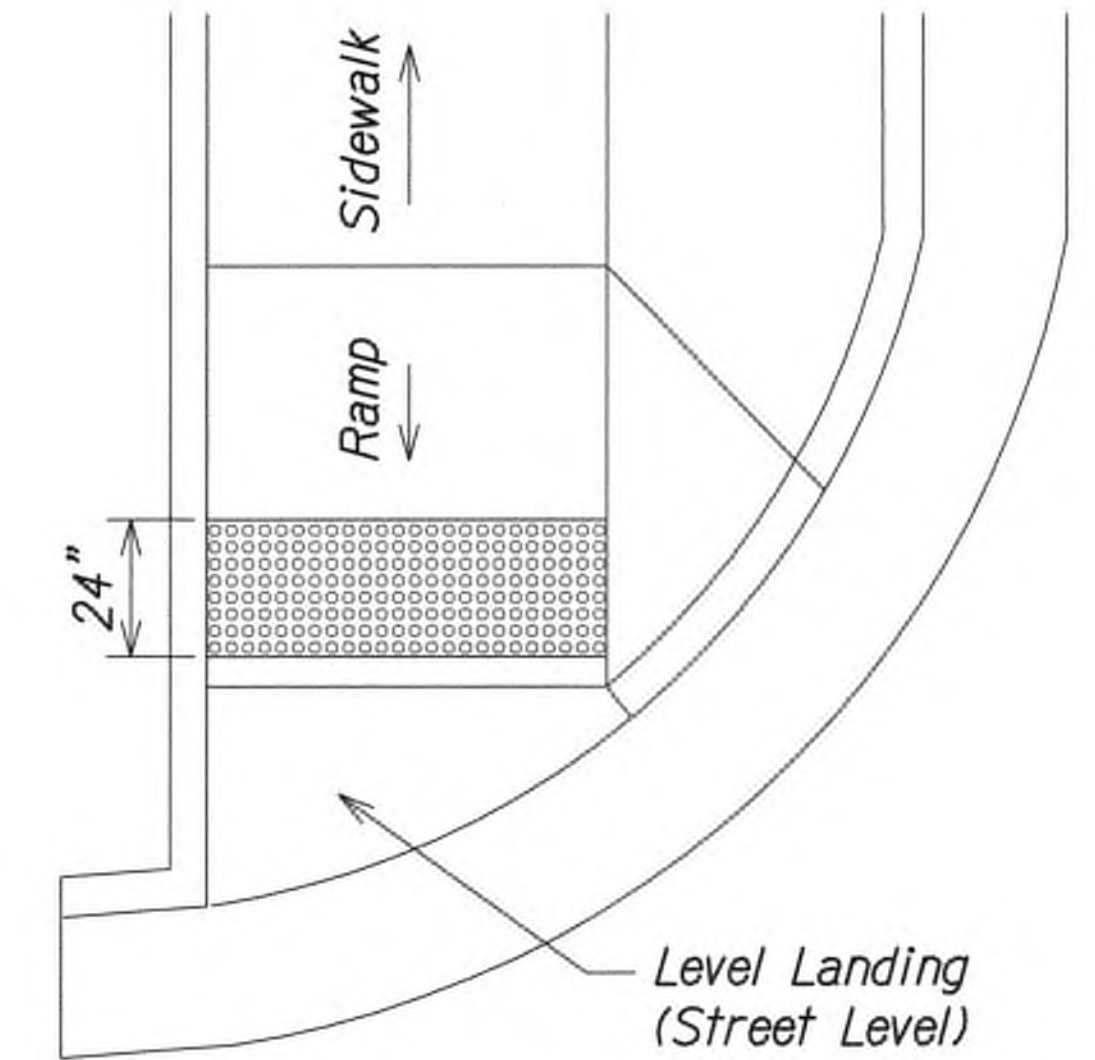
TRANSITION RAMP WITH DETECTABLE WARNING



REFUGE ISLAND WITH DETECTABLE WARNING



SHARED CURB RAMP WITH DETECTABLE WARNING



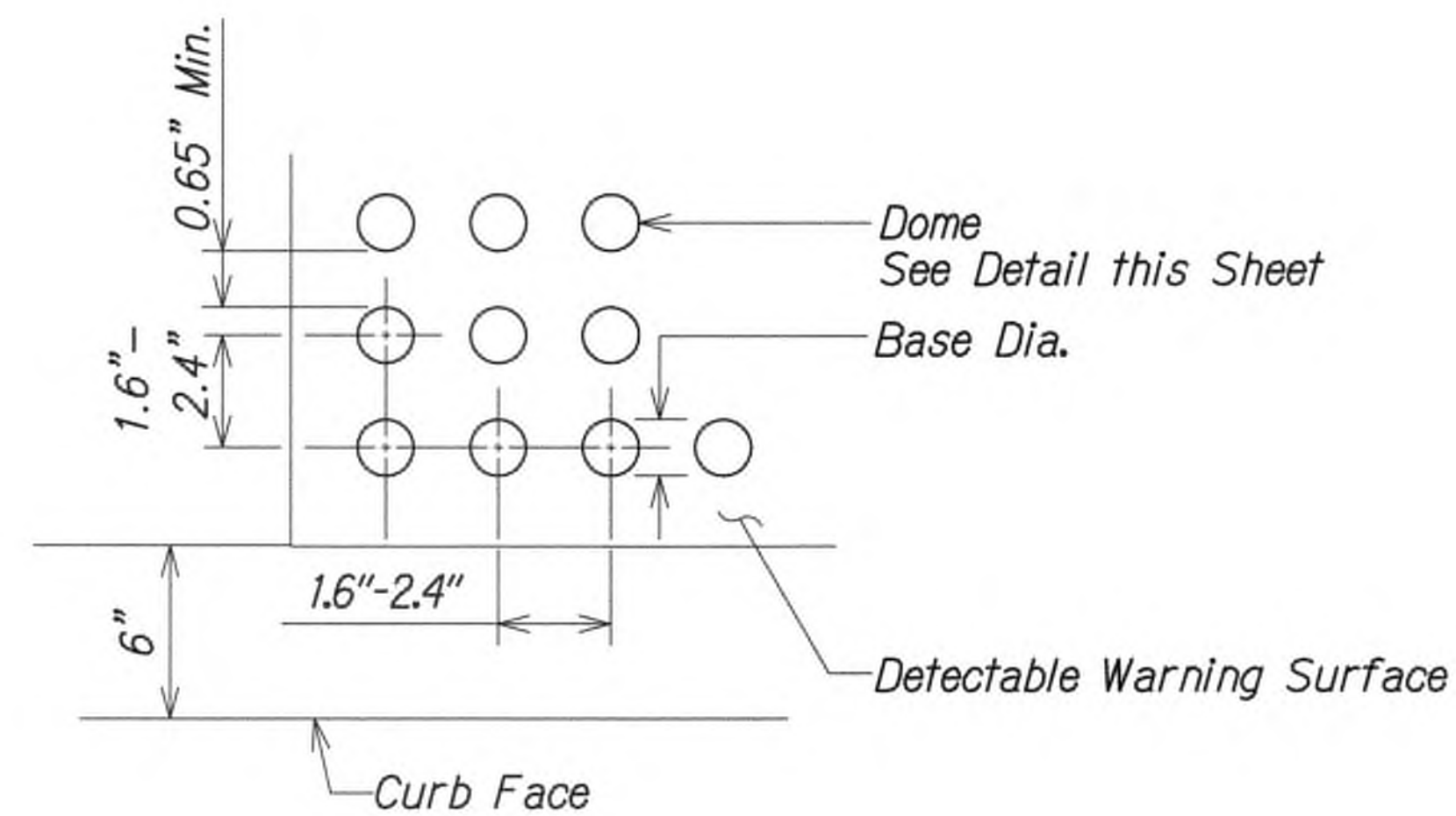
END OF SIDEWALK CURB RAMP WITH DETECTABLE WARNING

TYPICAL INSTALLATION OF DETECTABLE WARNINGS

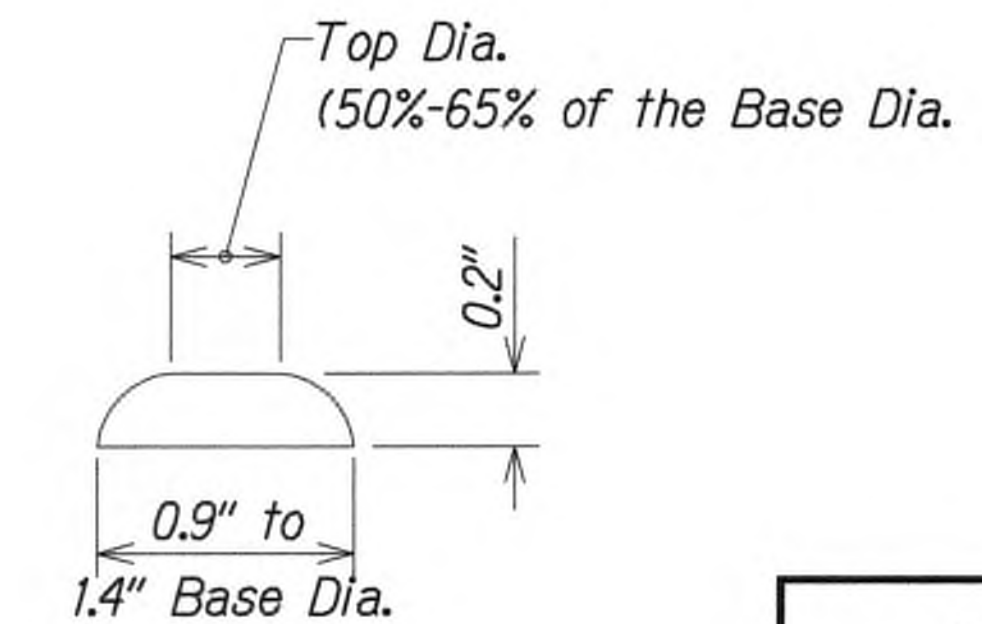
Not to Scale

NOTES:

1. Detectable warnings shall be 24 inches in the direction of travel and extend the full width of the curb ramp or flush surface (does not include flares).
2. Truncated domes shall have a diameter of 0.9 to 1.4 inch at the bottom, a diameter of 50%-65% of the base diameter at the top, a height of 0.2 inch and a center-to-center spacing of 1.6 to 2.4 inches measured along one side of a square arrangement.
3. Domes shall be aligned on a square grid in the predominant direction of travel to permit wheels to roll between the domes.
4. There shall be a minimum of 70% contrast in light reflectance between the detectable warning and an adjoining surface, or the detectable warning shall be "safety yellow".
5. The material used to provide visual contrast shall be an integral part of the detectable warning surface.
6. The detectable warning shall be located so that the edge nearest the curb line or other potential hazard is 6 to 8 inches from the curb line.
7. "Cast and Tack" or equal material shall be used for the truncated dome where the ties are cast in place with the concrete ramp.



ENLARGEMENT



DOMES SECTION



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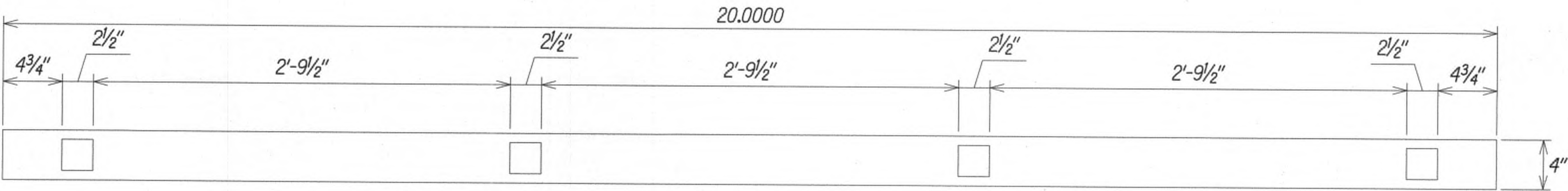
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**DETECTABLE WARNING DETAILS**  
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

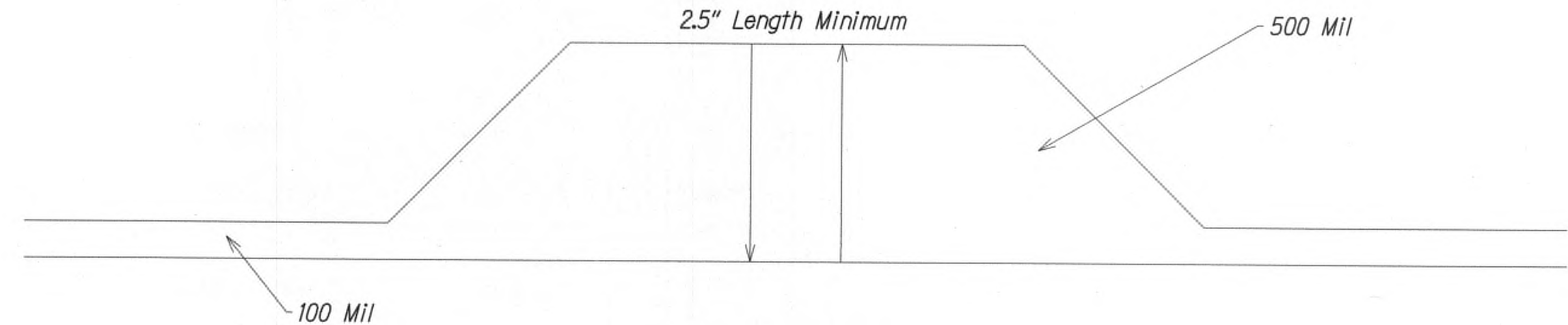
SHEET No. 75 OF 11 SHEETS



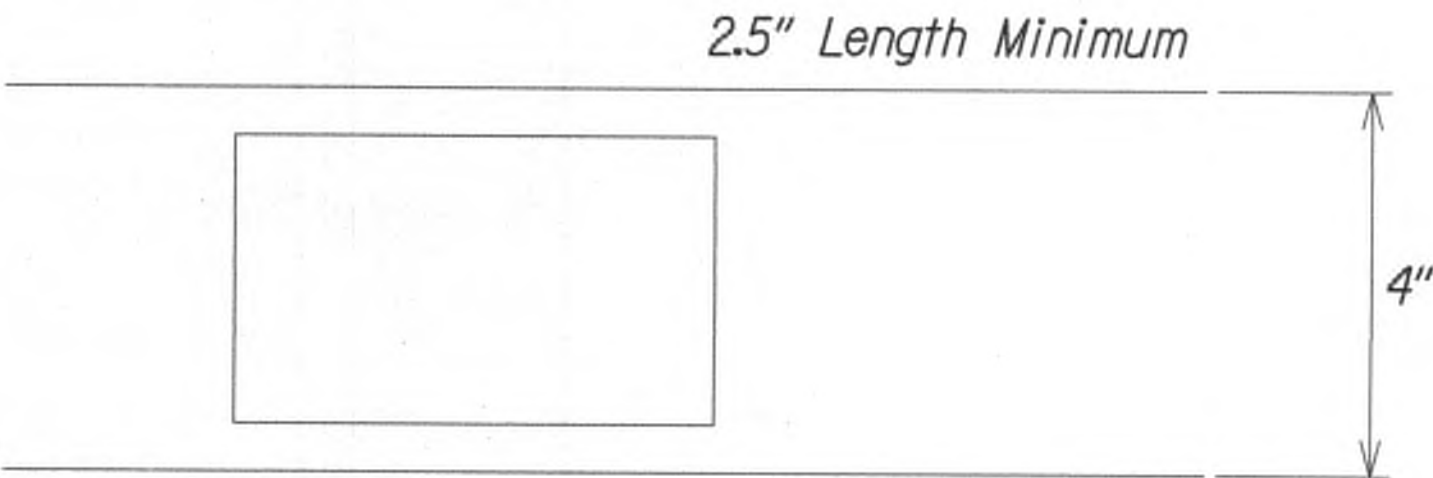


TOP VIEW  
LANE LINE

- Notes:
1. Profiles placed on 36" o.c.
  2. 500 mil height, including 100 mil baseline.
  3. Width equal to approximately baseline width.

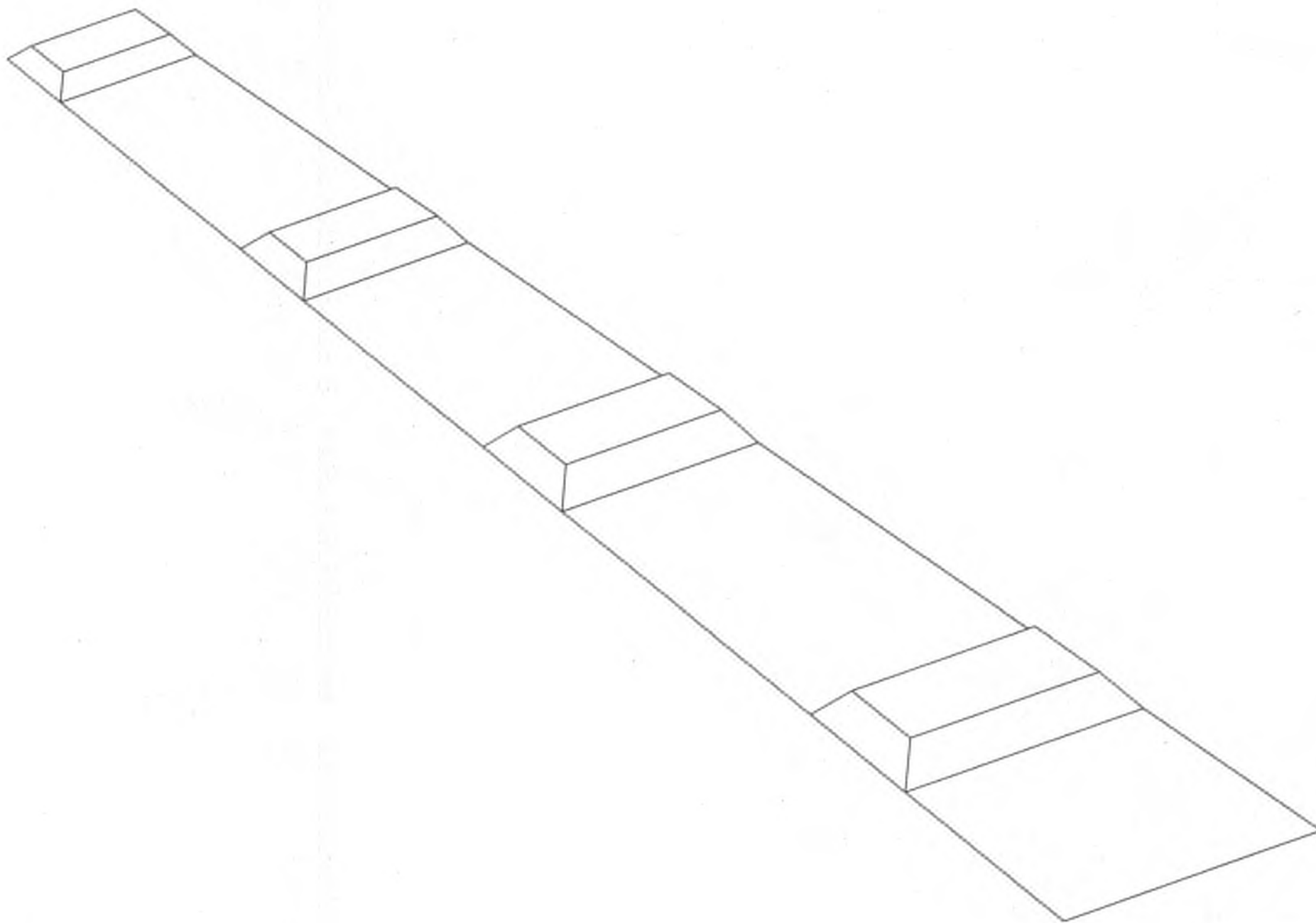


SIDE VIEW



TOP VIEW

PROFIED THERMOPLASTIC STRIPING DETAILS  
Not to Scale



PERSPECTIVE VIEW

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

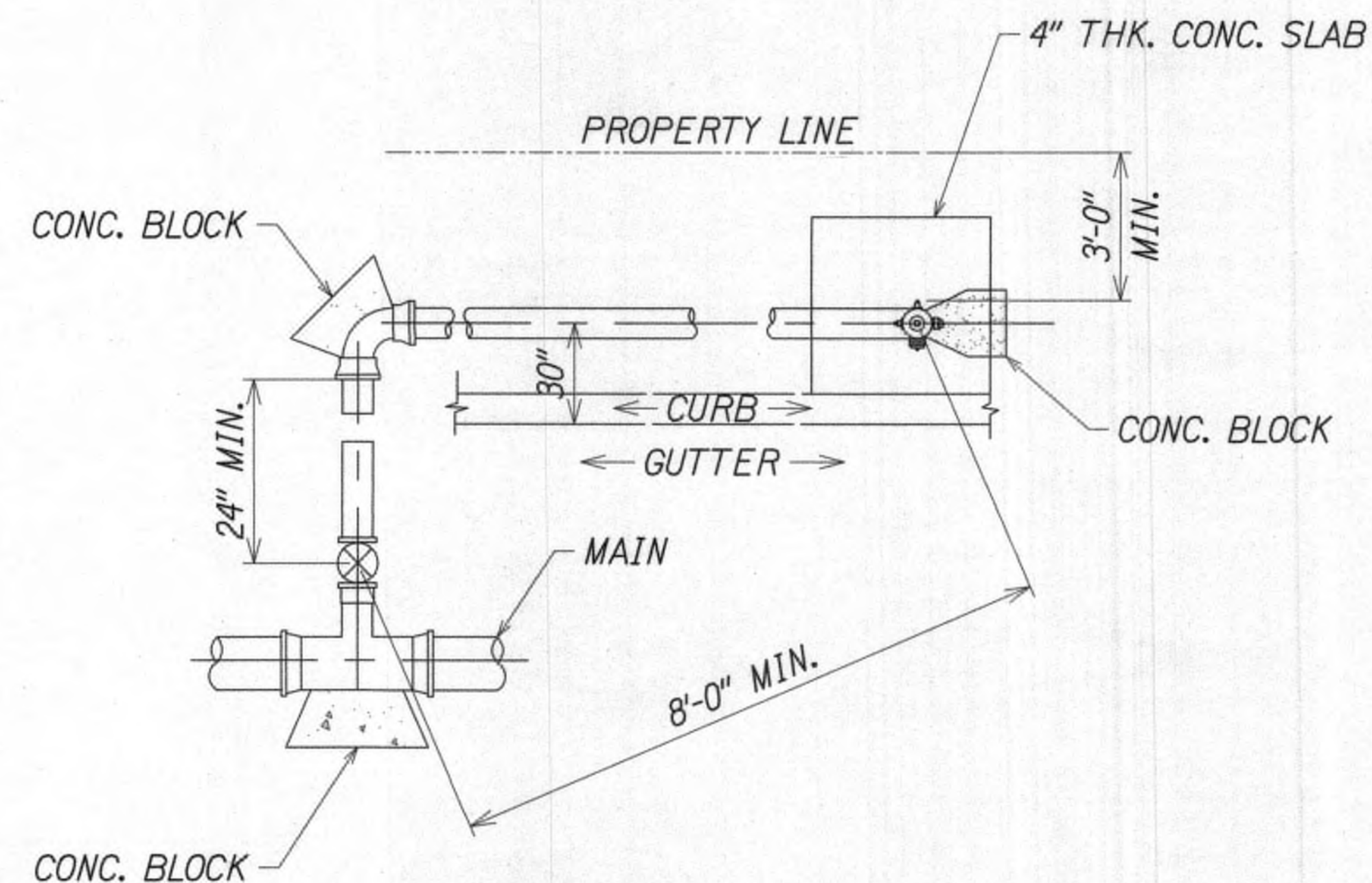


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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MISCELLANEOUS DETAILS  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. T6 OF 11 SHEETS

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



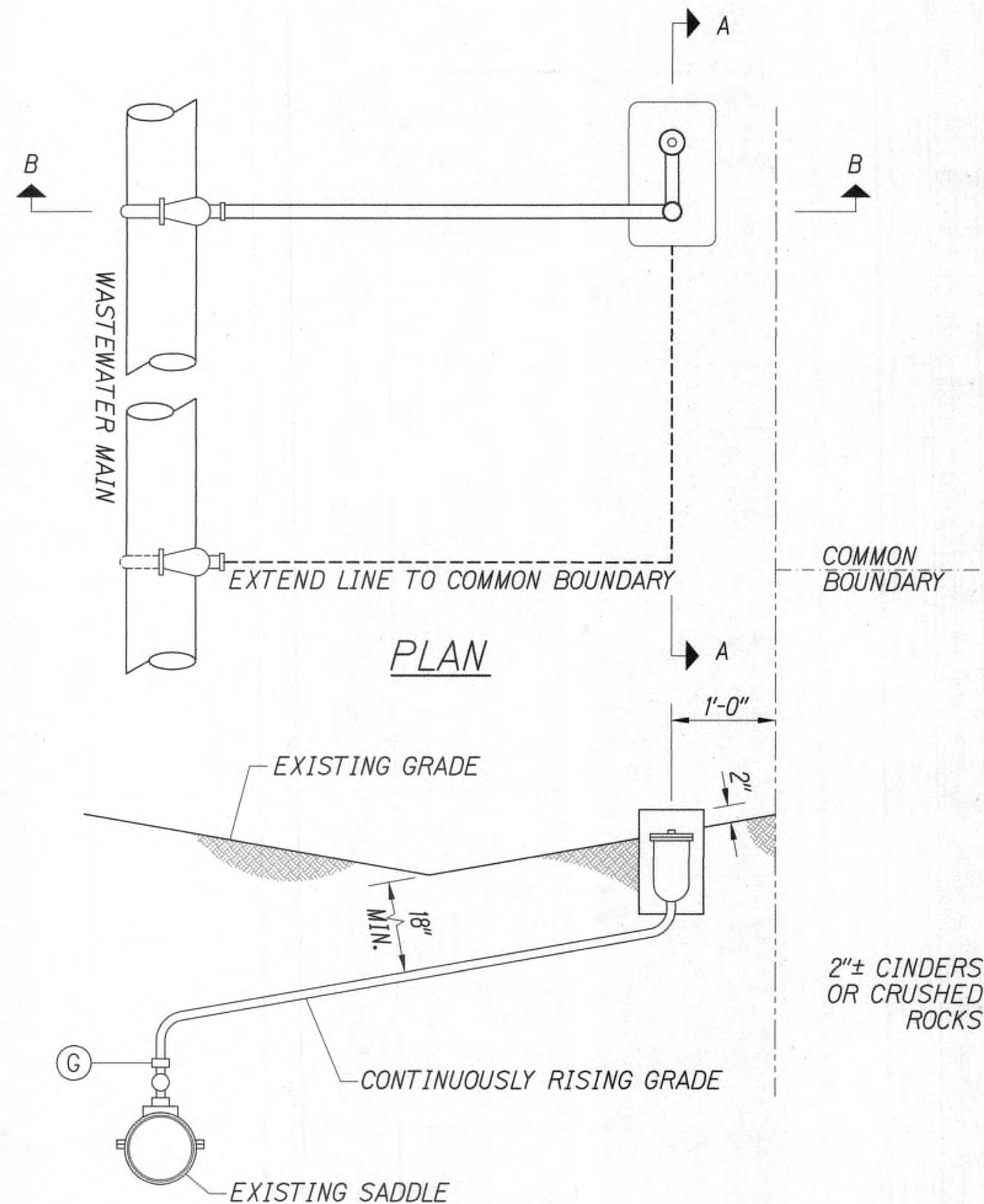


Notes:

1. Minimum direct distance from fire hydrant to gate valve shall be 8'-0".
2. Concrete shall be DWS 2500.
3. Flanged Outlet for the tee is optional for Oahu; mandatory for Kauai.
4. Refer to Plate FH4 for dimensions of 4" concrete sbal around fire hydrant.
5. Tapping sleeve with valve may be used. (See note on Plate FH8)
6. Lubricate hydrant nozzle threads with non-toxic grease.
7. Install FH markers (See Plates FH12 and FH13)
8. The 4-1/2" nozzle should face perpendicular to the curb/road.
9. If multiple hydrant extensions are used, a minimum of the top 3 flange joints shall use break-off bolts.

HYDRANT CONNETION WITH ELBOW

NOT TO SCALE



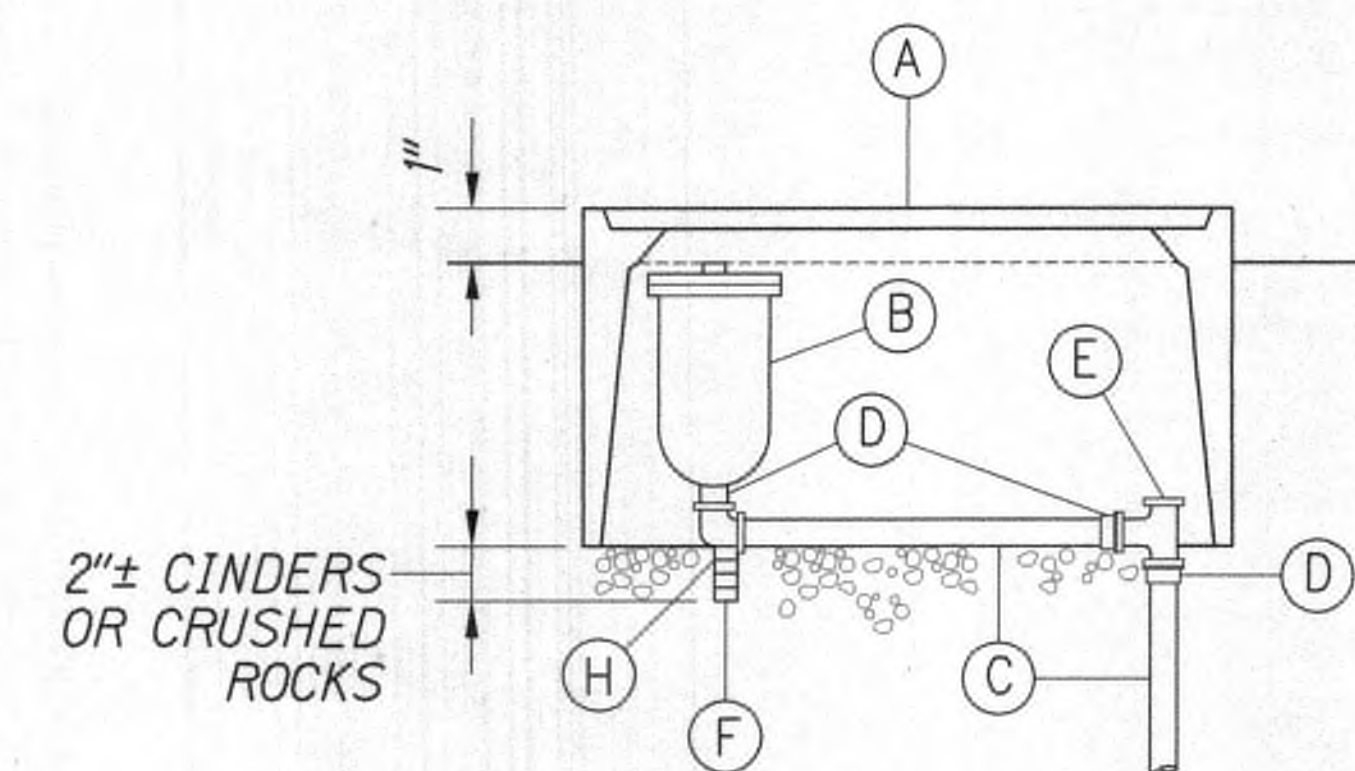
SECTION B-B

AIR PRESSURE RELIEF VALVE

NOT TO SCALE

MATERIAL LIST

- (A) TYPE "X" METER BOX W/ CAST IRON COVER
- (B) 2" COMBINATION AIR & VACUUM VALVE FOR WASTEWATER, 250 PSI WP
- (C) 2" PVC (TYPE 'K', SOFT)
- (D) 2" PVC MALE ADAPTER
- (E) ANGLE BALL VALVE
- (F) 2" X 4" X 8" BRICK SADDLE
- (G) CONNECT TO EXISTING JOINT COUPLING
- (H) ELBOWS AND SCREEN



SECTION A-A



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APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
QUANTITIES BY	
ORIGINAL PLAN	

APPROVED

*[Signature]*  
Manager and Chief Engineer  
Department of Water,  
County of Kauai

7/22/19  
Date

*[Signature]*  
Chief, Division of Wastewater Management

8/12/19  
Date

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only. No design changes have  
been made.

DATE REVISION

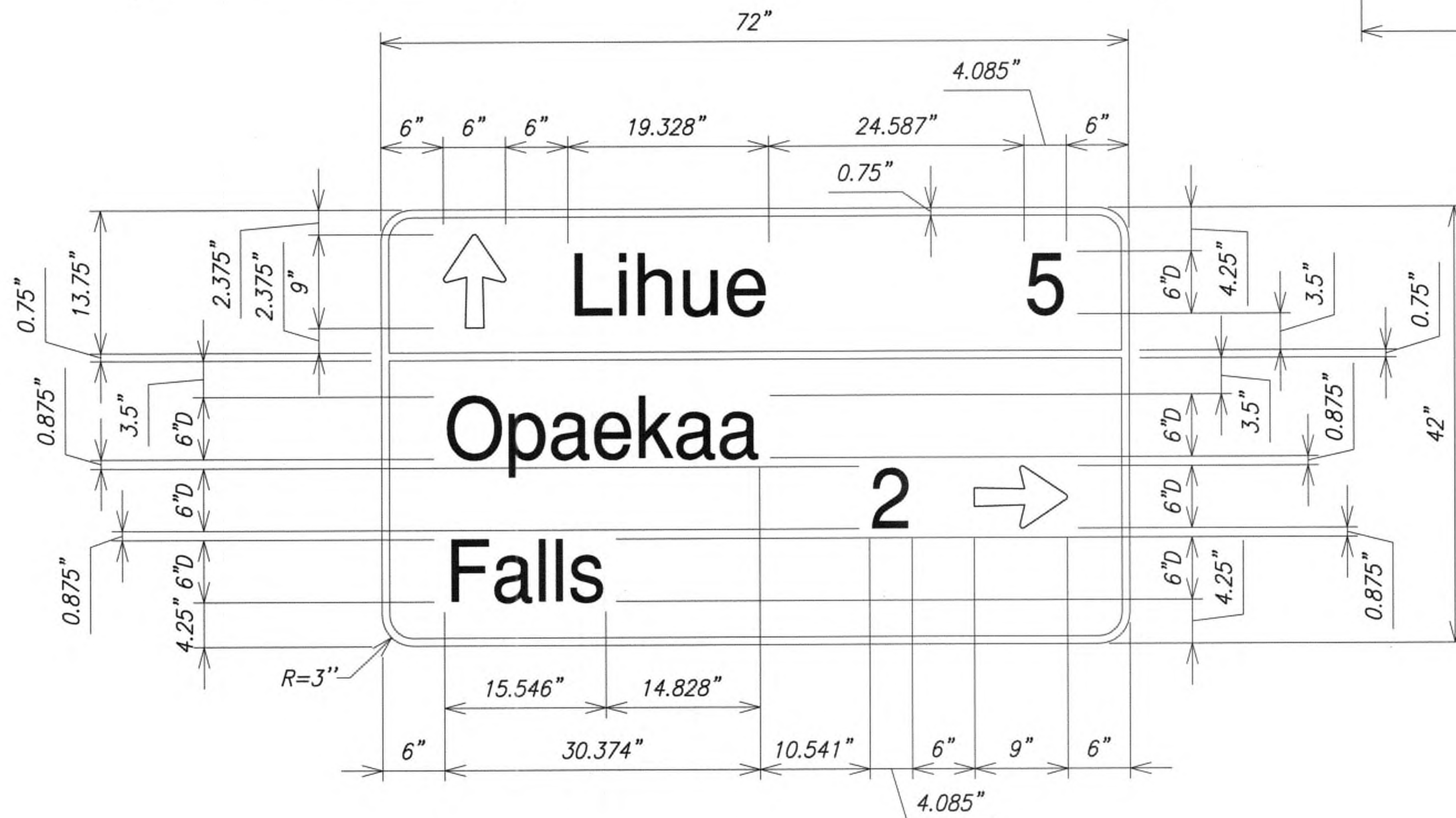
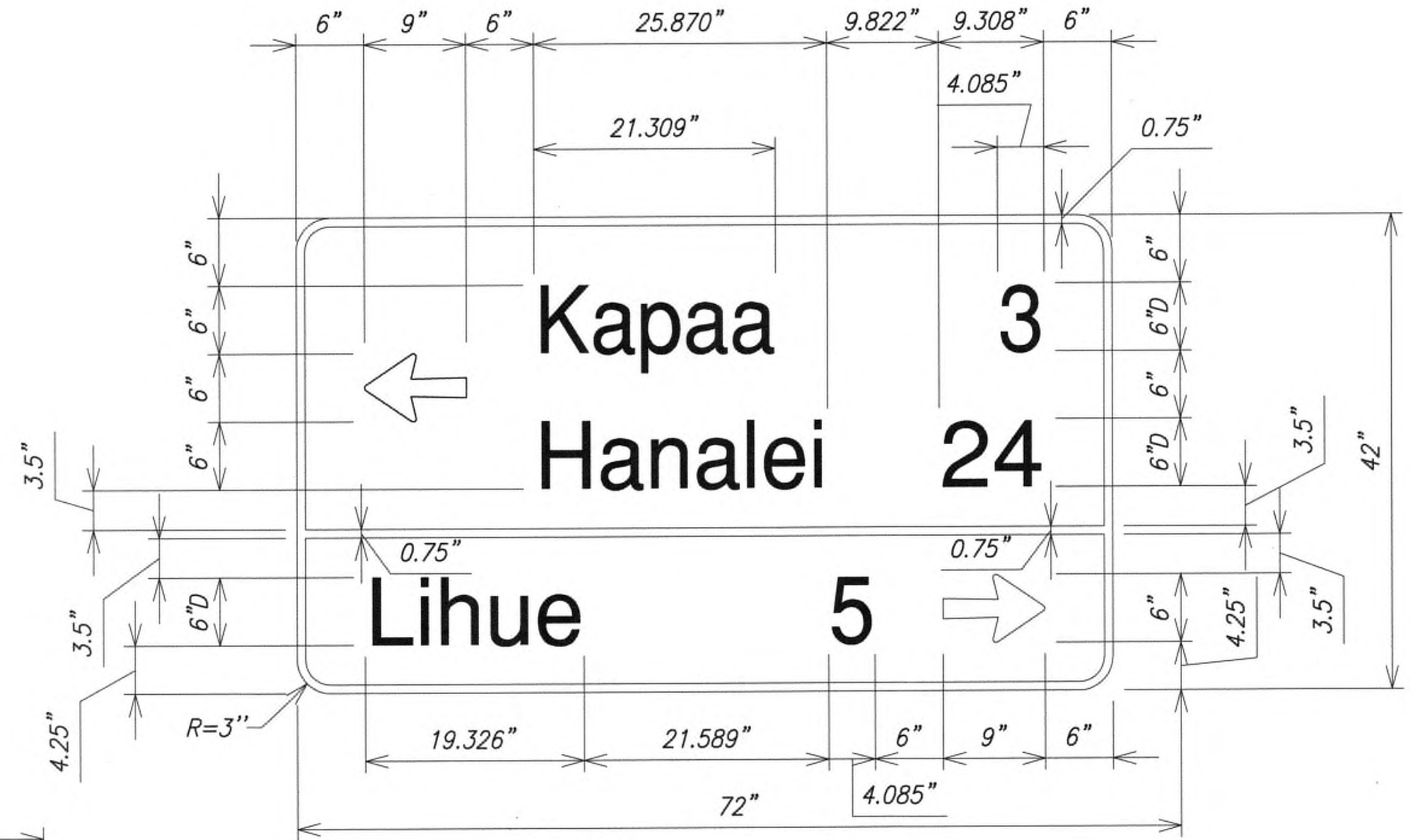
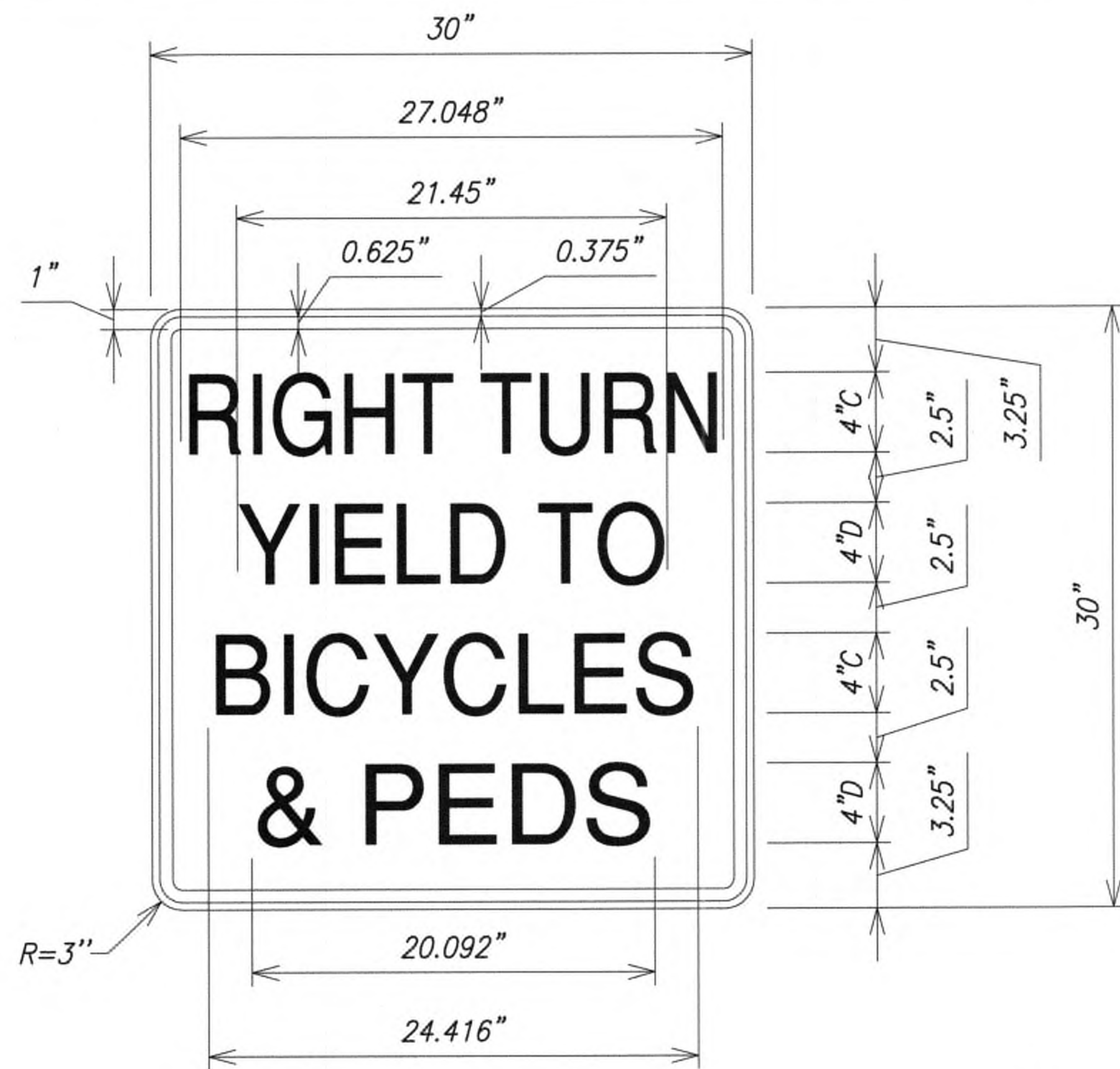
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MISCELLANEOUS DETAILS  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. 77 OF 11 SHEETS

ADD.107









- NOTES:
1. Street Name Signs Shall be in Accordance with State Standard Plan TE-13.
  2. All Sign Faces Shall be Completely Reflecterized with Type "B" Reflective Sheeting.



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mml  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC SIGN DETAILS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: NOT TO SCALE Date: July 2019

SHEET No. T9 OF 11 SHEETS

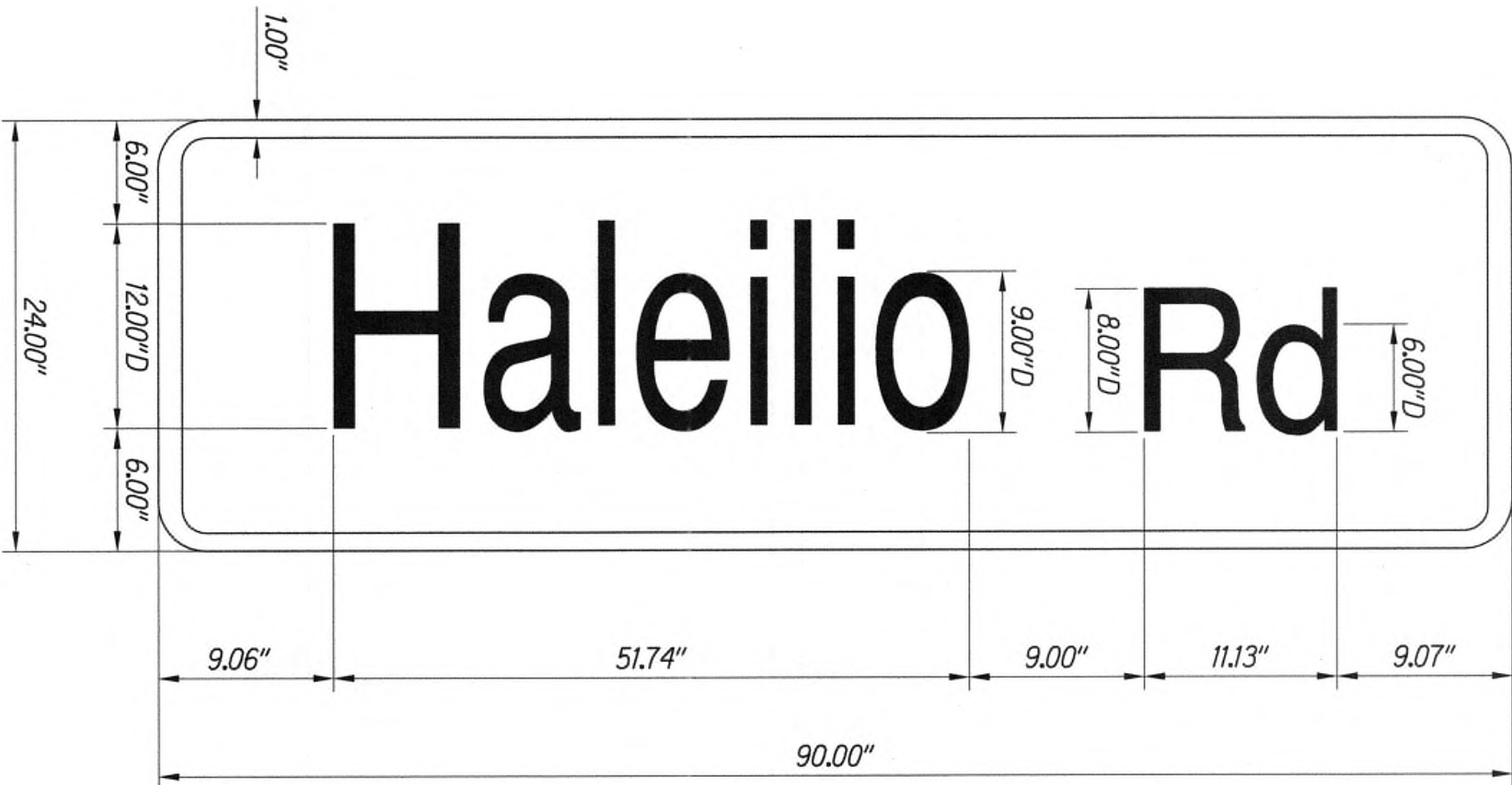
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION







FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD111	244



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

- NOTES:
1. Street Name Signs Shall be in Accordance with State Standard Plan TE-13.
  2. All Sign Faces Shall be Completely Reflecterized with Type "B" Reflective Sheeting.



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*Cathy A. Leong* APRIL 30, 2020  
WILSON, OKAMOTO CORP. LIC. EXP. DATE

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC SIGN DETAILS

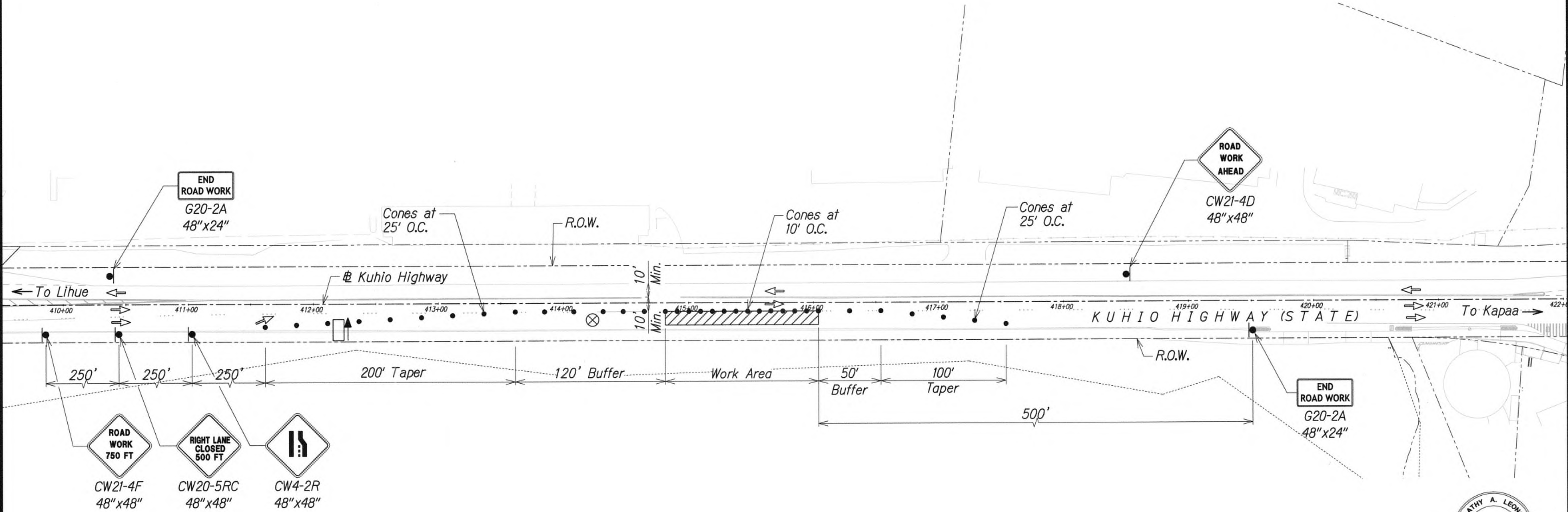
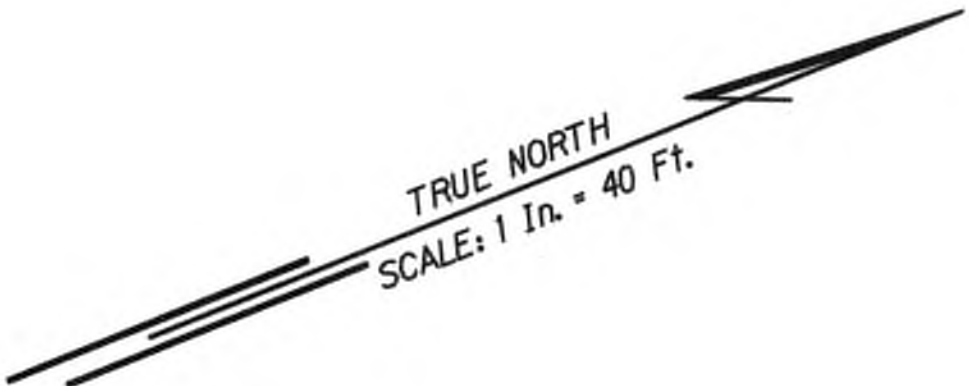
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: NOT TO SCALE Date: JULY 2019

SHEET No. 11 OF 11 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.112	244



Legend:

- ⊗ Special Duty Officer
- Cones or Delineators
- Sign
- ➡ Direction of Traffic
- ➡ Arrowboard Assembly

GRAPHIC SCALE:



TRAFFIC CONTROL PLAN - TYPICAL 1  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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*Cathy A. Leong* APRIL 30, 2020  
WILSON KAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
TRAFFIC CONTROL PLAN 01

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

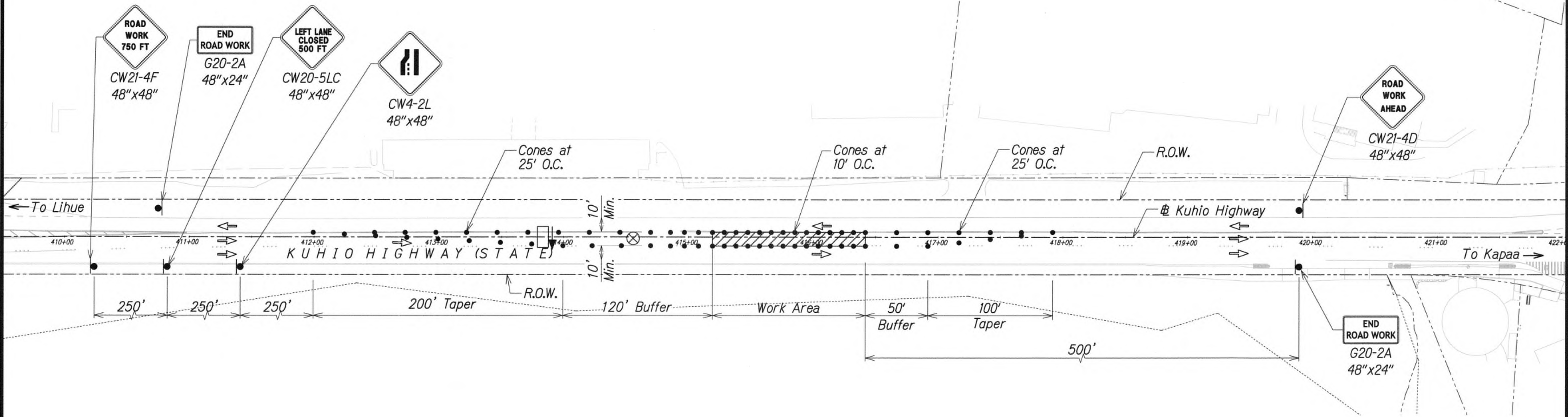
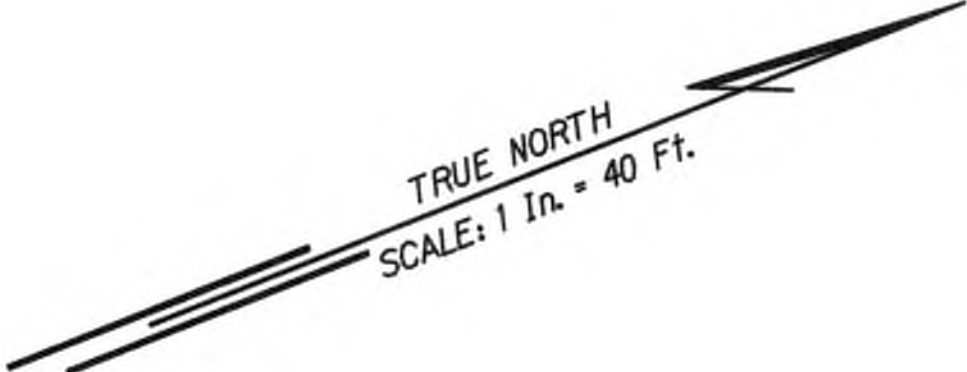
SHEET No. TC01 OF 63 SHEETS

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

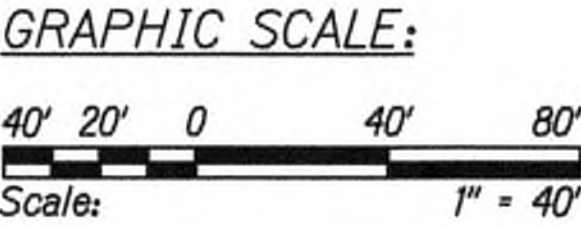
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD113	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▢ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - TYPICAL 2**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'



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*Cathy A. Leong*  
 WILSON KAMOTO CORP. APRIL 30, 2020 LIC. EXP. DATE

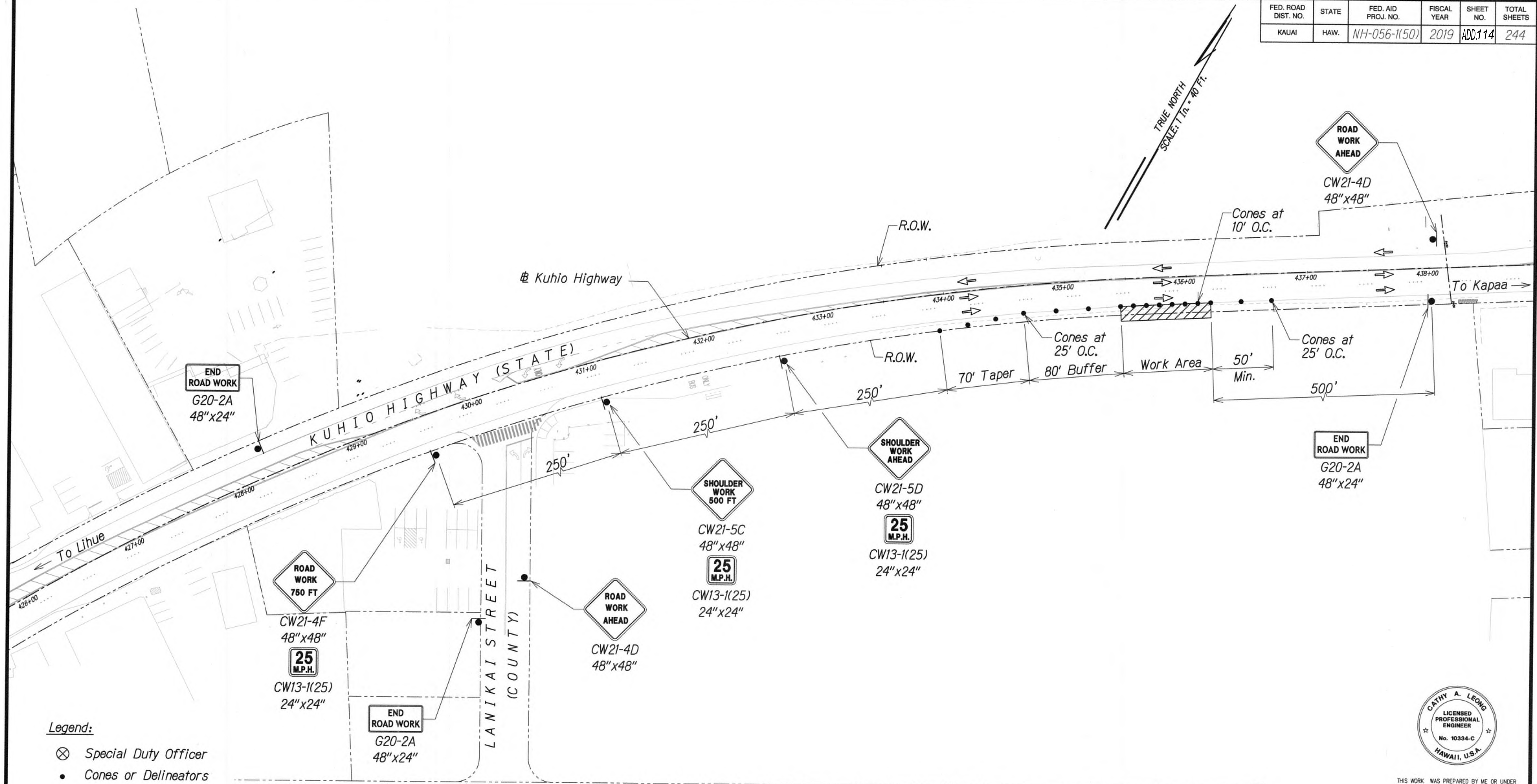
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 02**  
  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40'      Date: JULY 2019

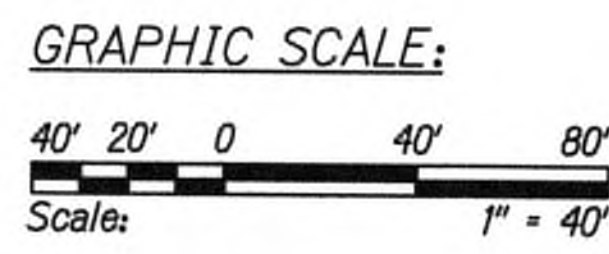
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.114	244



- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➡ Arrowboard Assembly



TRAFFIC CONTROL PLAN -TYPICAL 3  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

*[Signature]*  
County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
------	----------



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*[Signature]*  
WILSON KAMOTO CORP. LIC. EXP. DATE

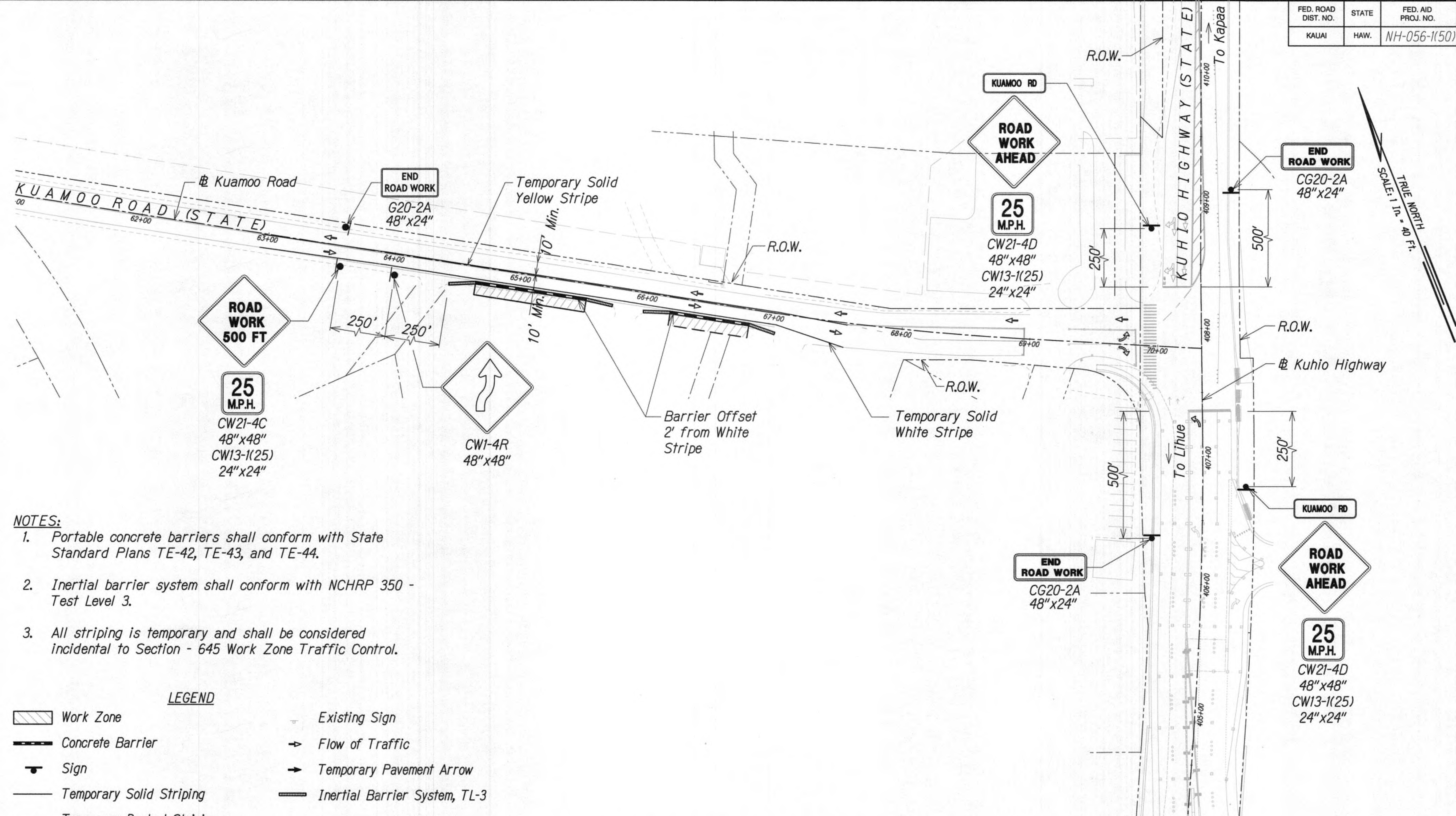
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN 03

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC03 OF 63 SHEETS



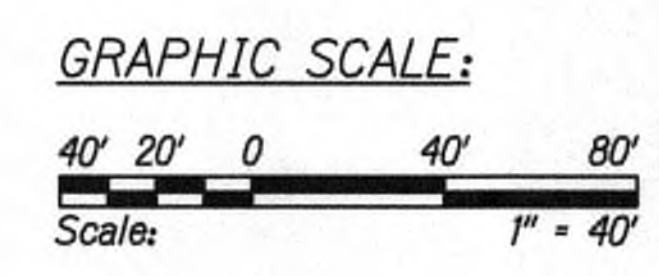


- NOTES:
1. Portable concrete barriers shall conform with State Standard Plans TE-42, TE-43, and TE-44.
  2. Inertial barrier system shall conform with NCHRP 350 - Test Level 3.
  3. All striping is temporary and shall be considered incidental to Section - 645 Work Zone Traffic Control.

LEGEND

Work Zone	Existing Sign
Concrete Barrier	Flow of Traffic
Sign	Temporary Pavement Arrow
Temporary Solid Striping	Inertial Barrier System, TL-3
Temporary Dashed Striping	
Temporary White Guideline	

TRAFFIC CONTROL PLAN - PHASE 1  
24-HOUR CLOSURE  
SCALE: 1" = 40'



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



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*Cathy A. Leong*  
WILSON KAWATO CORP. LIC. EXP. DATE

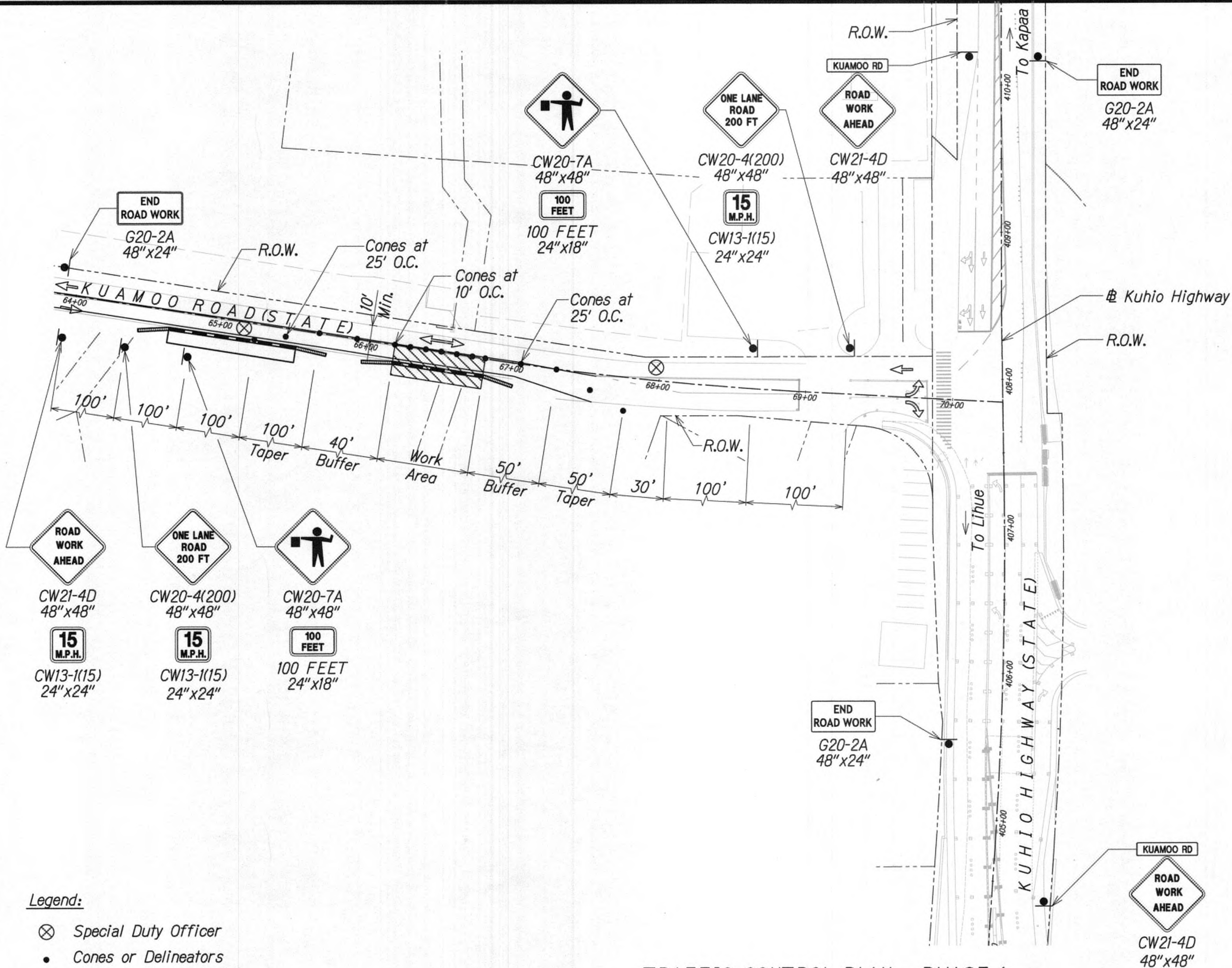
9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
------	----------

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN**  
**KUAMOO ROAD**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD**  
**TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019  
SHEET No. TC04 OF 63 SHEETS

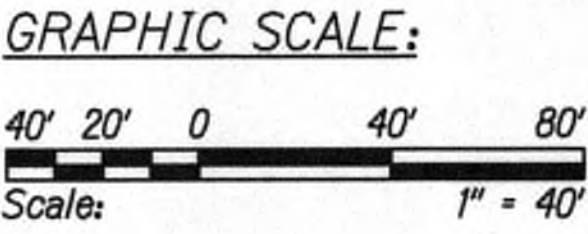


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD116	244



SCALE: 1" = 40' F.T.  
TRUE NORTH

- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▢ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 1**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'



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*Cathy A. Leong* APRIL 30, 2020  
 WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 04**

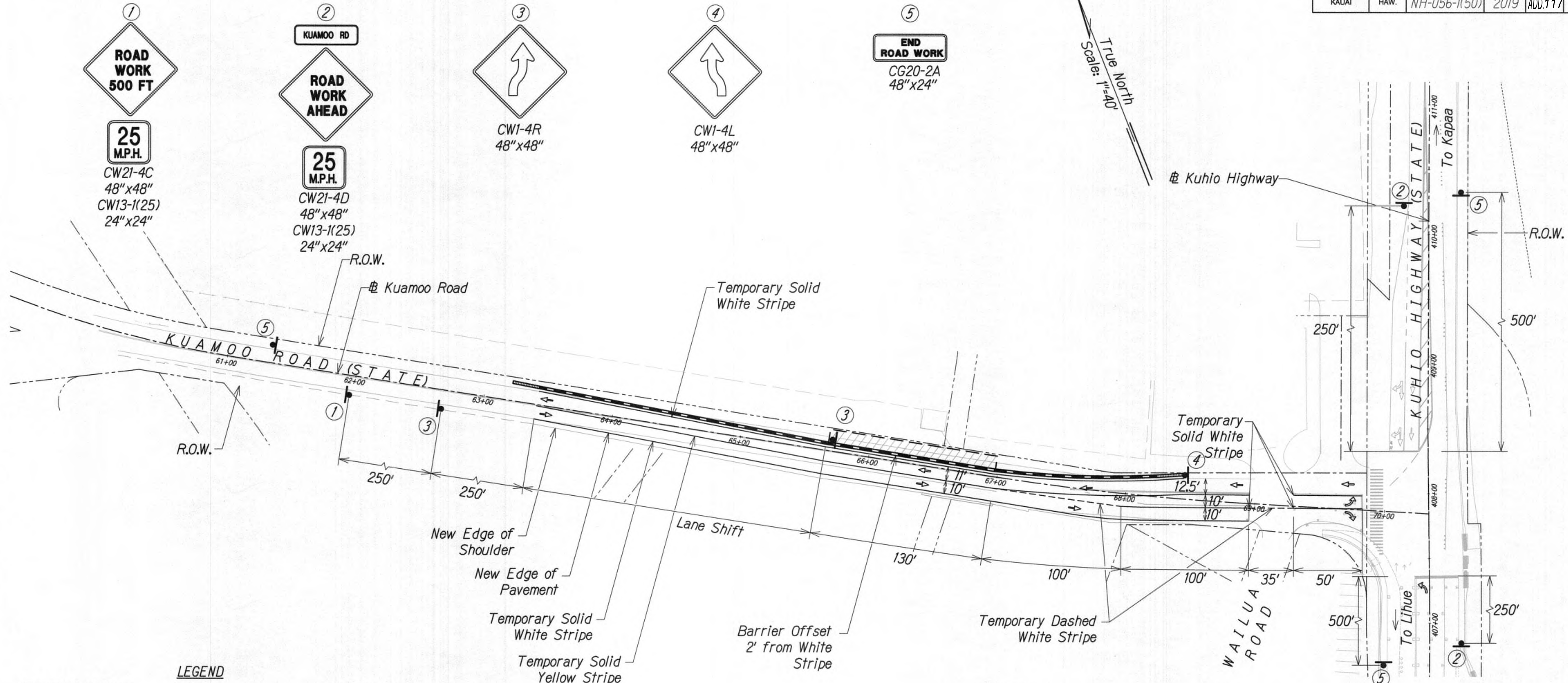
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

SHEET No. TC05 OF 63 SHEETS

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
------	----------





- LEGEND**
- |                           |                               |
|---------------------------|-------------------------------|
| Work Zone                 | Existing Sign                 |
| Concrete Barrier          | Flow of Traffic               |
| Sign                      | Temporary Pavement Arrow      |
| Temporary Solid Striping  | Inertial Barrier System, TL-3 |
| Temporary Dashed Striping |                               |
| Temporary White Guideline |                               |

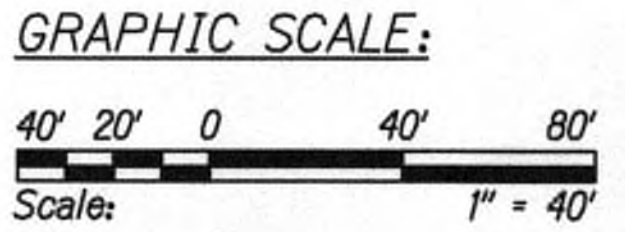
**TRAFFIC CONTROL PLAN - PHASE 2**  
24-HOUR CLOSURE  
SCALE: 1" = 40'

- NOTES:**
1. Portable concrete barriers shall conform with State Standard Plans TE-42, TE-43, and TE-44.
  2. Inertial barrier system shall conform with NCHRP 350 - Test Level 3.
  3. All striping is temporary and shall be considered incidental to Section - 645 Work Zone Traffic Control.



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*Cathy A. Leong*  
WILSON OKAMOTO CORP. LIC. EXP. DATE

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



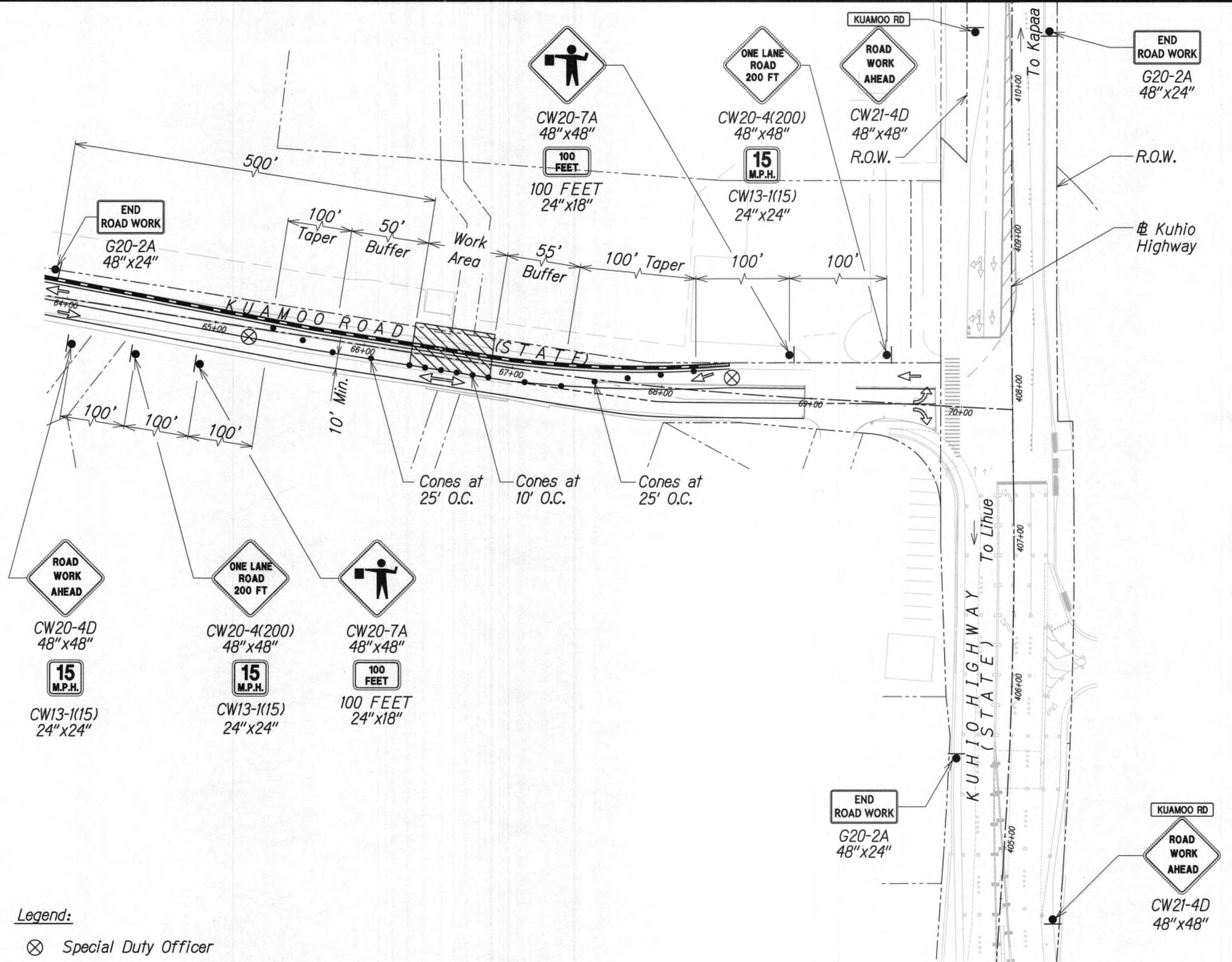
9/20/19 Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
------	----------

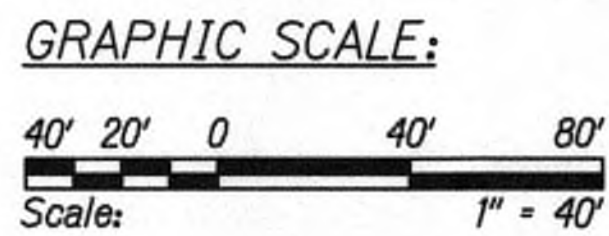
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN**  
**KUAMOO ROAD**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019  
SHEET No. TC06 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD118	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 2**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

DATE	_____
SURVEY PLOTTED BY	_____
DESIGNED BY	_____
NOTED BY	_____
CHECKED BY	_____
NO.	_____



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*Cathy A. Leong*  
 WILSON QUAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN 05**

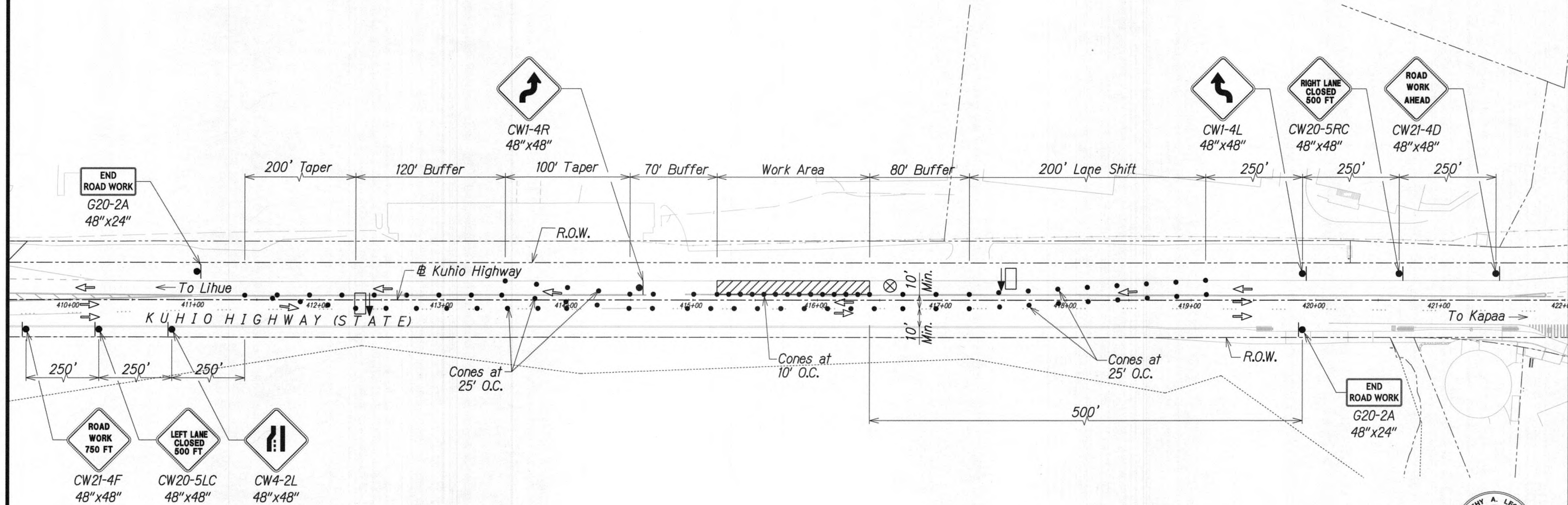
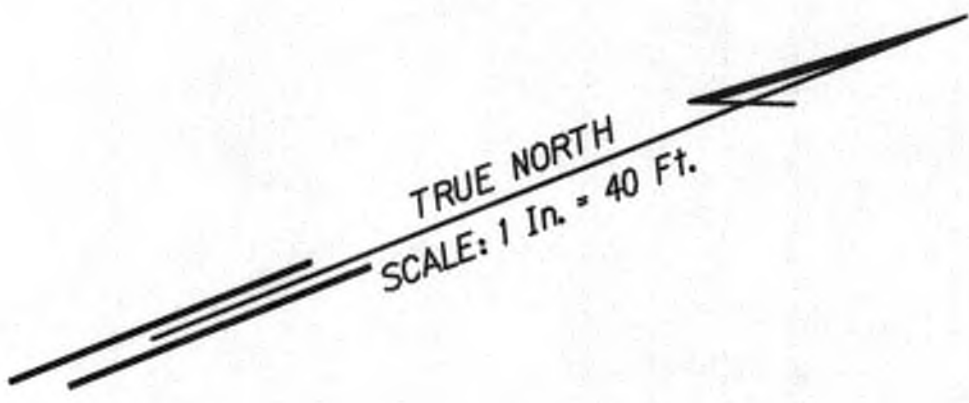
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

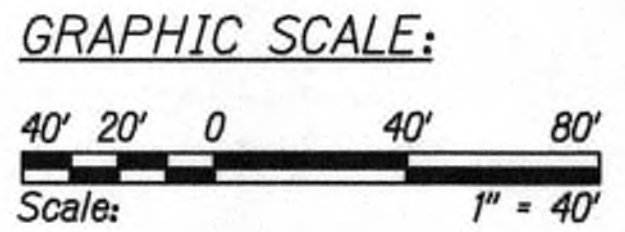
DATE REVISION

SHEET No. TC07 OF 63 SHEETS





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



TRAFFIC CONTROL PLAN -PHASE 3  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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*Cathy A. Leong* APRIL 30, 2020  
WILSON KUAMOTO CORP., LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 06**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

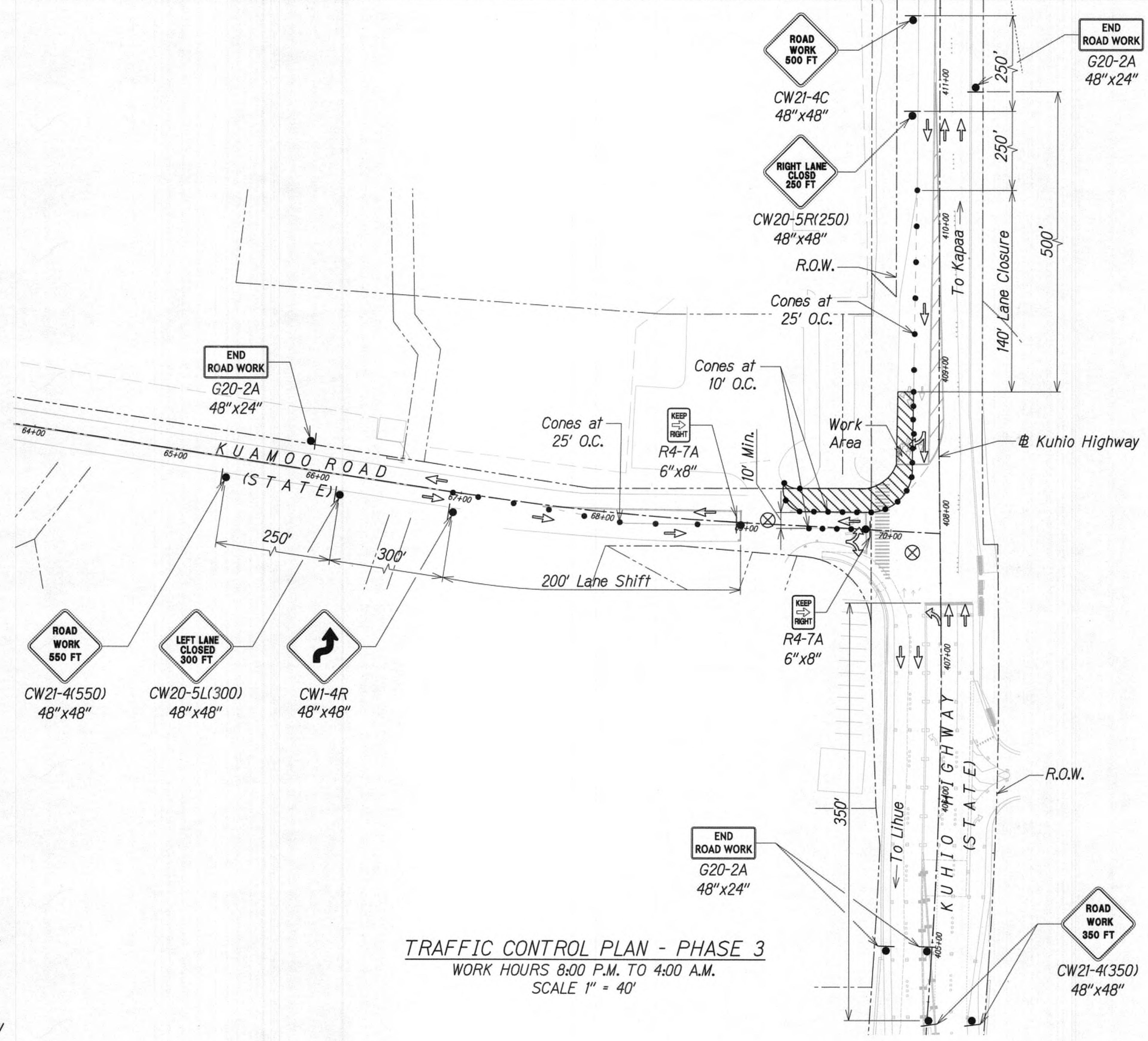
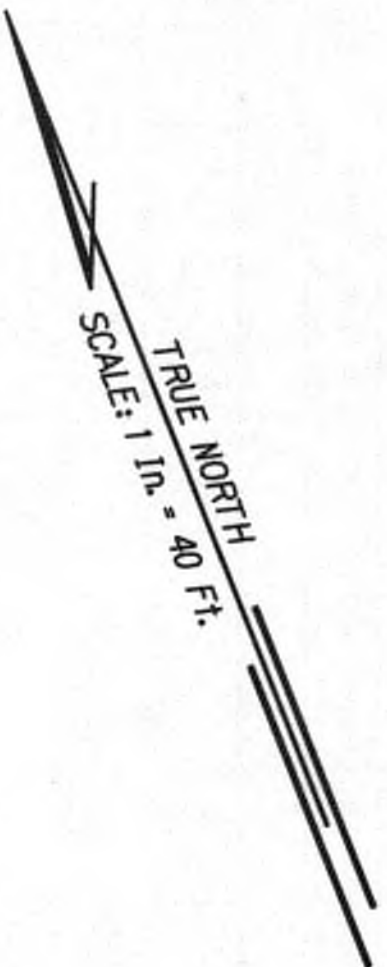
SHEET No. TC08 OF 63 SHEETS

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

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



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.120	244



**TRAFFIC CONTROL PLAN - PHASE 3**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

**Legend:**

- ⊗ Special Duty Officer
- Cones or Delineators
- Sign
- ⇒ Direction of Traffic
- ▢ Arrowboard Assembly

**GRAPHIC SCALE:**  
 40' 20' 0 40' 80'  
 Scale: 1" = 40'

DATE	_____
SURVEY PLANNED BY	_____
DESIGNED BY	_____
NOTED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____



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 WILSON-KAMOTO CORP. LIC. EXP. DATE  
 APRIL 30, 2020

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 07**

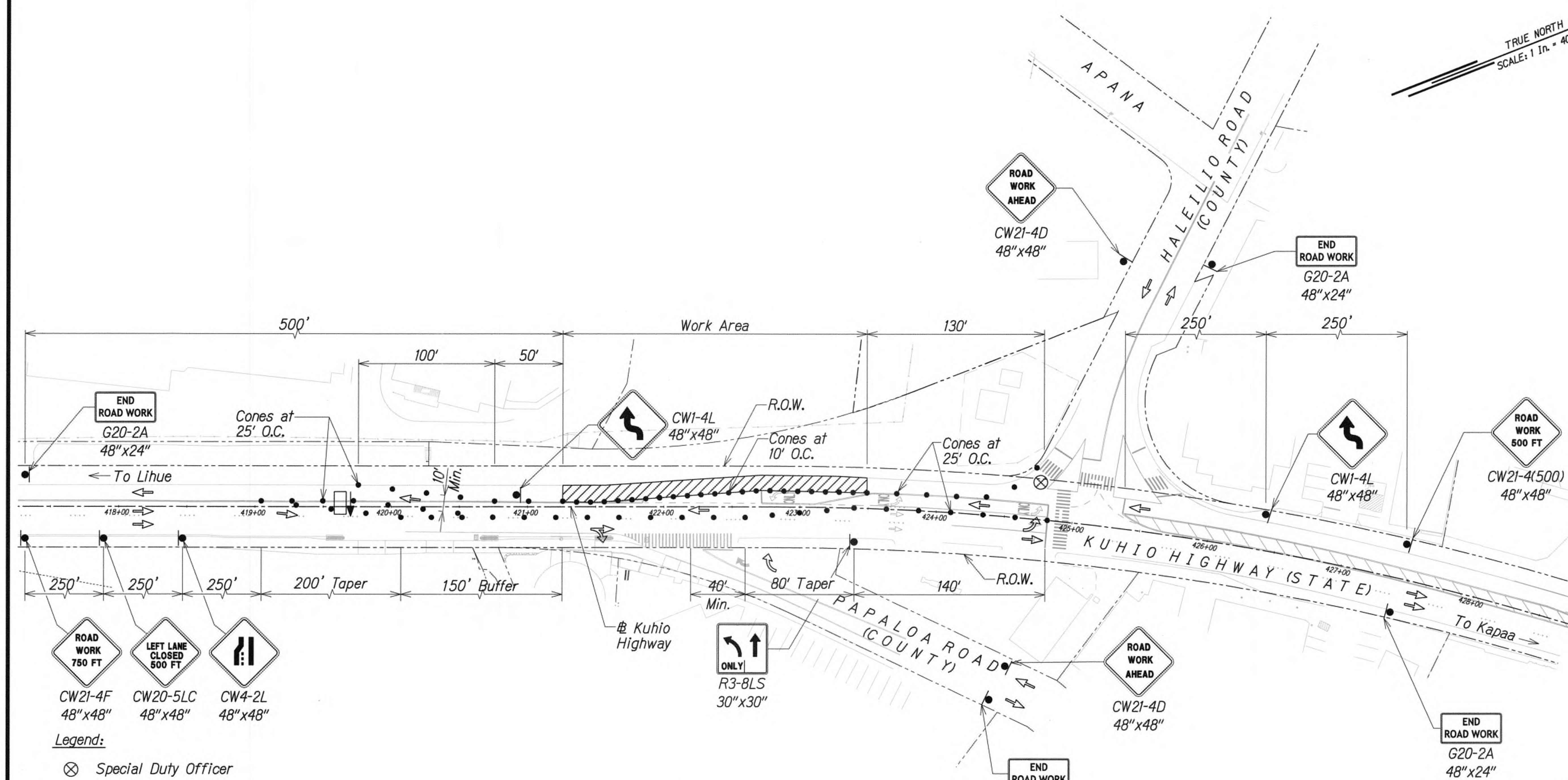
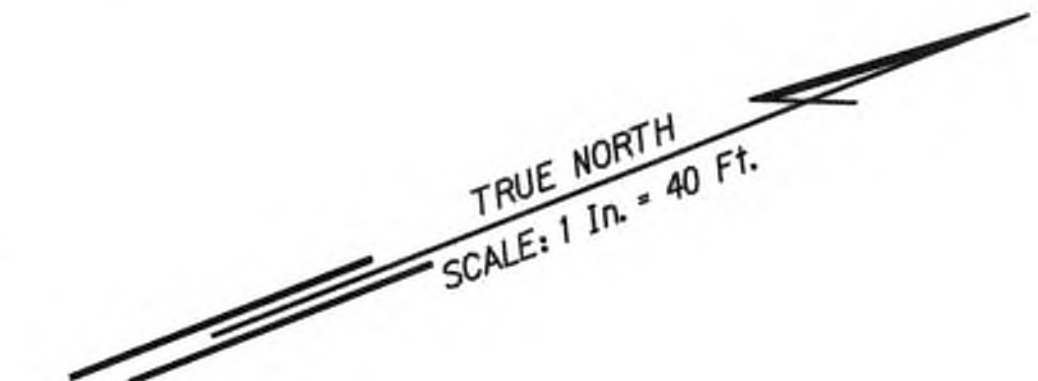
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

DATE \_\_\_\_\_ REVISION \_\_\_\_\_

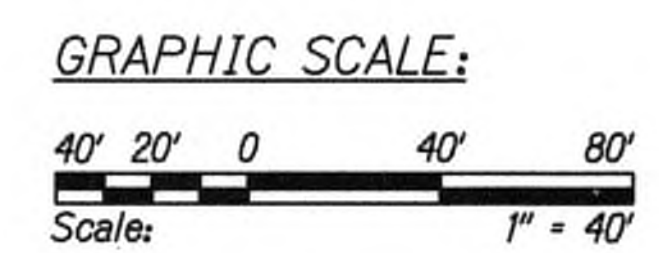
SHEET No. TC09 OF 63 SHEETS

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 3**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

*Approved*  
 \_\_\_\_\_  
 County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 \_\_\_\_\_  
 Date

9/20/19    Δ Reissuing plan for legibility only. No design changes have been made.



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*Cathy A. Leong*  
 WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 08**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 40'                      Date: JULY 2019

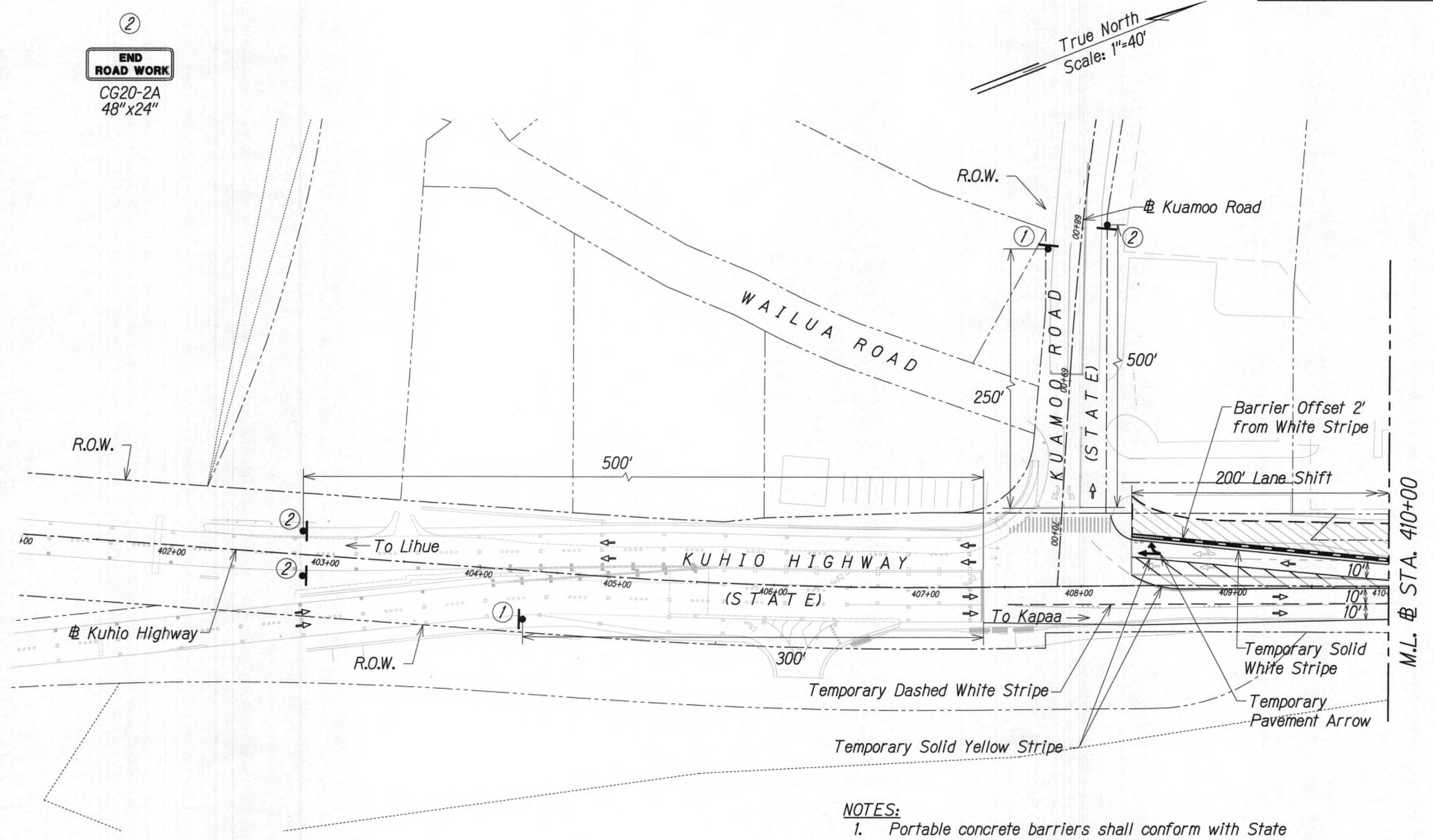
SHEET No. TC10 OF 63 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	NOTED BY	
	CHECKED BY	



1  
**ROAD WORK AHEAD**  
25  
M.P.H.  
CW21-4D  
48"x48"  
CW13-1(25)  
24"x24"

2  
**END ROAD WORK**  
CG20-2A  
48"x24"



**LEGEND**

- |                           |                               |
|---------------------------|-------------------------------|
| Work Zone                 | Existing Sign                 |
| Concrete Barrier          | Flow of Traffic               |
| Sign                      | Temporary Pavement Arrow      |
| Temporary Solid Striping  | Inertial Barrier System, TL-3 |
| Temporary Dashed Striping |                               |
| Temporary White Guideline |                               |

**TRAFFIC CONTROL PLAN - PHASE 4**  
24-HOUR CLOSURE  
SCALE: 1" = 40'

**NOTES:**

1. Portable concrete barriers shall conform with State Standard Plans TE-42, TE-43, and TE-44.
2. Inertial barrier system shall conform with NCHRP 350 - Test Level 3.
3. All striping is temporary and shall be considered incidental to Section - 645 Work Zone Traffic Control.



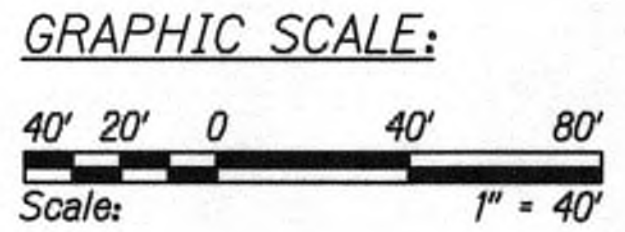
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*Cathy A. Leong*  
WILSON & KIMOTO CORP., LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN**  
**KUHIO HIGHWAY WIDENING**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40'      Date: JULY 2019  
SHEET No. TC11 OF 63 SHEETS

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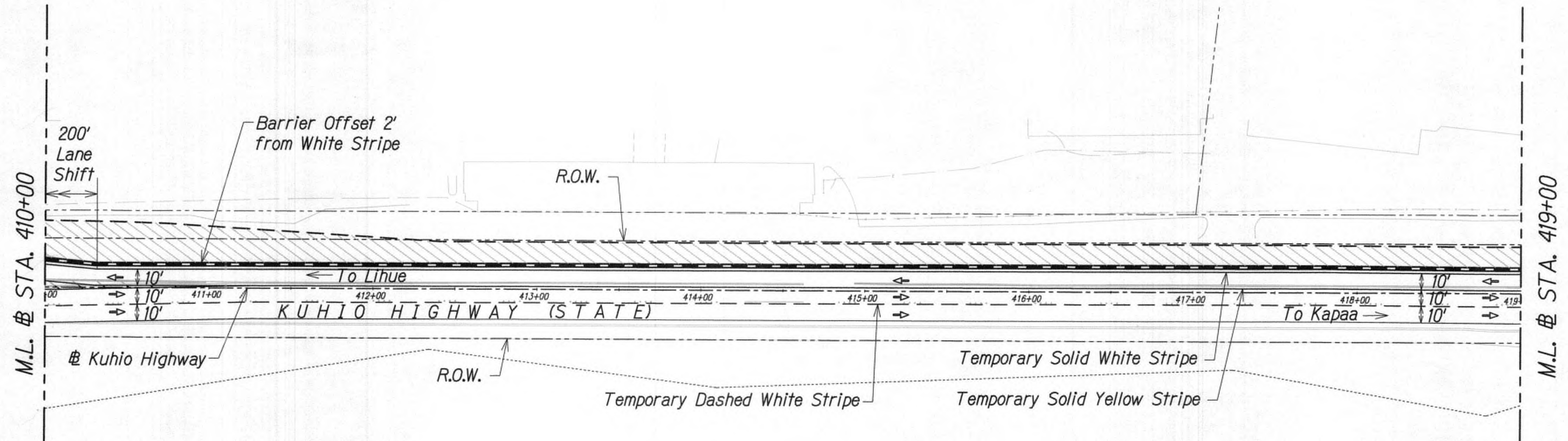
DATE      REVISION



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



True North  
Scale: 1"=40'



LEGEND

- |                           |                               |
|---------------------------|-------------------------------|
| Work Zone                 | Existing Sign                 |
| Concrete Barrier          | Flow of Traffic               |
| Sign                      | Temporary Pavement Arrow      |
| Temporary Solid Striping  | Inertial Barrier System, TL-3 |
| Temporary Dashed Striping |                               |
| Temporary White Guideline |                               |

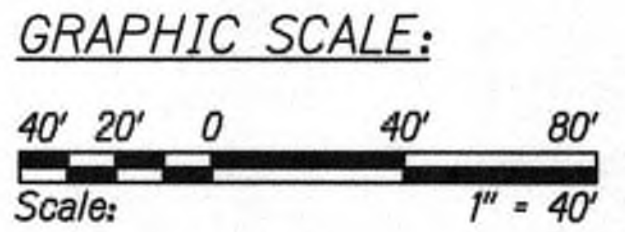
TRAFFIC CONTROL PLAN - PHASE 4  
24-HOUR CLOSURE  
SCALE: 1" = 40'

NOTES:

1. Portable concrete barriers shall conform with State Standard Plans TE-42, TE-43, and TE-44.
2. Inertial barrier system shall conform with NCHRP 350 - Test Level 3.
3. All striping is temporary and shall be considered incidental to Section - 645 Work Zone Traffic Control.



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Cathy A. Leong  
WILSON OKAMOTO CORP., LIC. EXP. DATE

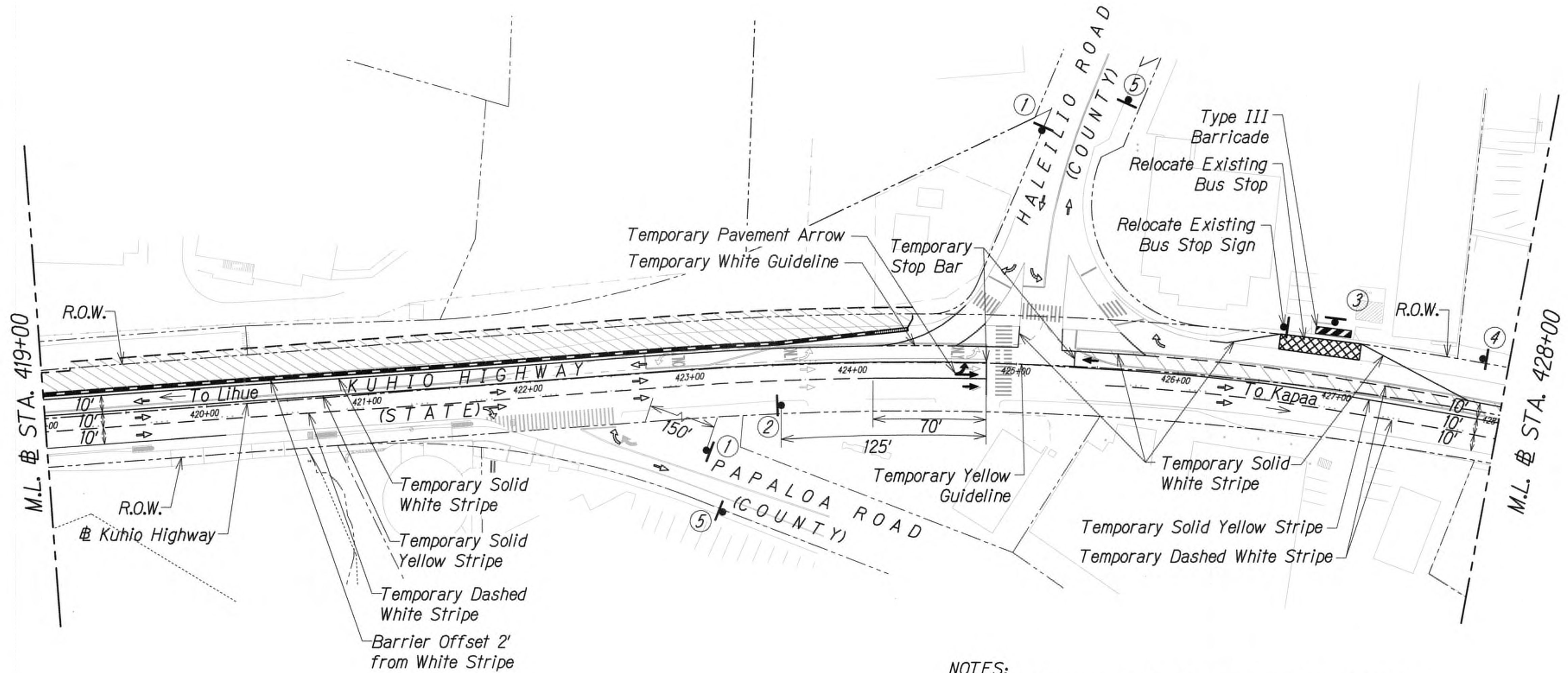
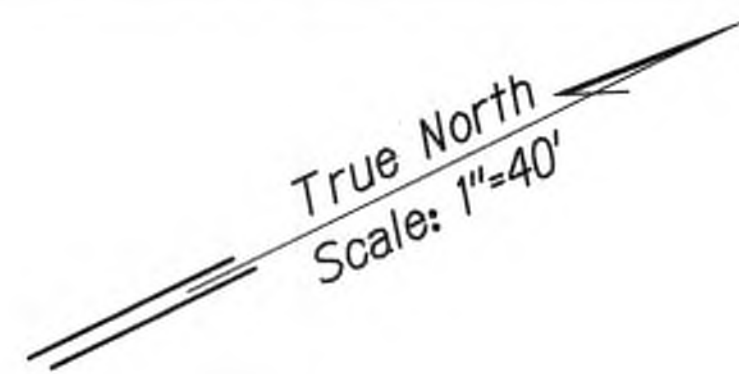
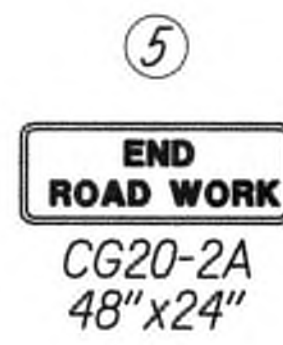


SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	No.

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN**  
**KUHIO HIGHWAY WIDENING**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019  
SHEET No. TC12 OF 63 SHEETS





LEGEND

- |                           |                               |
|---------------------------|-------------------------------|
| Work Zone                 | Existing Sign                 |
| Concrete Barrier          | Flow of Traffic               |
| Sign                      | Temporary Pavement Arrow      |
| Temporary Solid Striping  | Inertial Barrier System, TL-3 |
| Temporary Dashed Striping | Type III Barricade            |
| Temporary White Guideline |                               |

GRAPHIC SCALE:

40' 20' 0 40' 80'

Scale: 1" = 40'

TRAFFIC CONTROL PLAN - PHASE 4

24-HOUR CLOSURE

SCALE: 1" = 40'

APPROVED

for County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

NOTES:

1. Portable concrete barriers shall conform with State Standard Plans TE-42, TE-43, and TE-44.
2. Inertial barrier system shall conform with NCHRP 350 - Test Level 3.
3. All striping is temporary and shall be considered incidental to Section - 645 Work Zone Traffic Control.



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WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

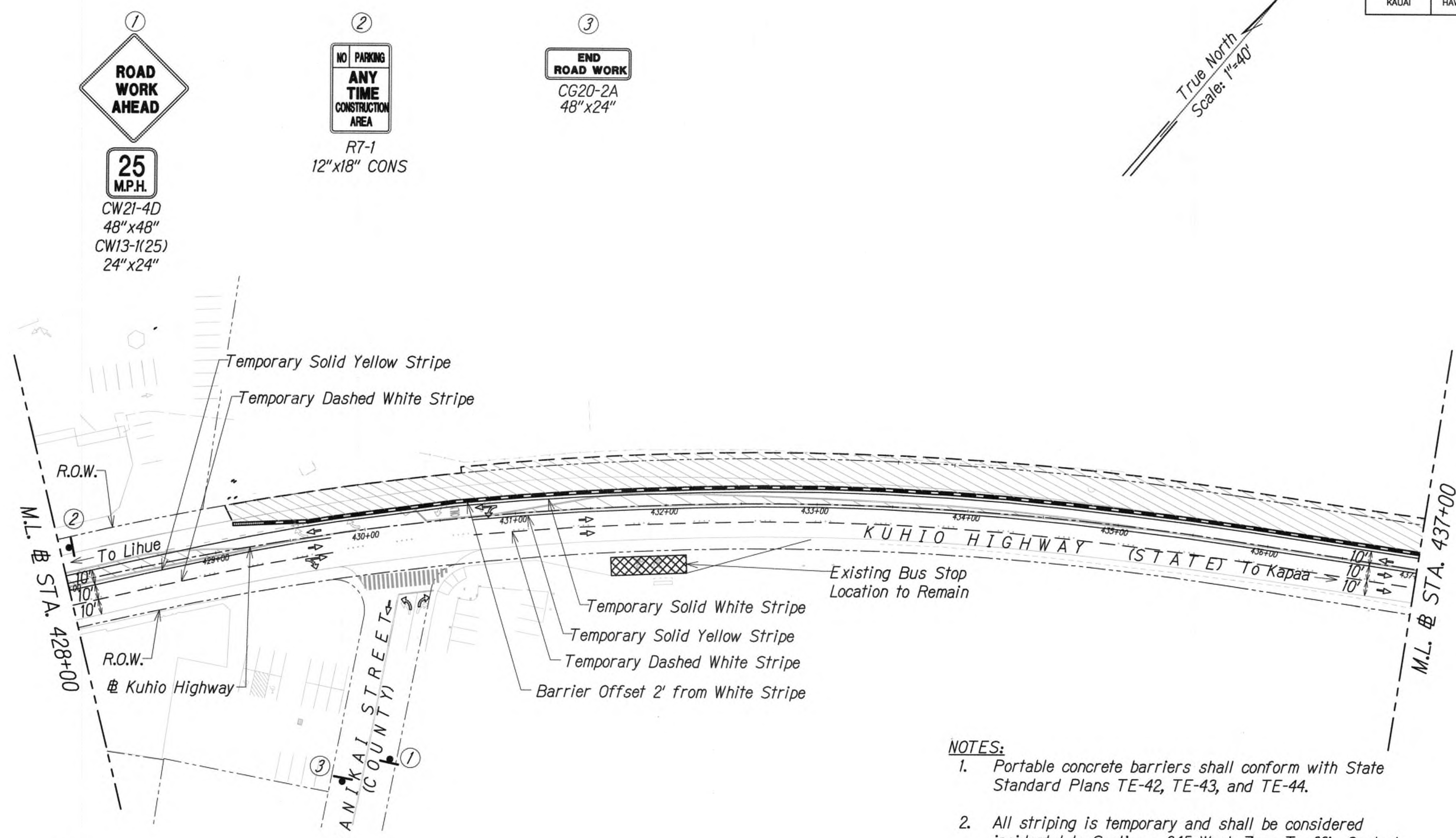
**TRAFFIC CONTROL PLAN**  
**KUHIO HIGHWAY WIDENING**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 40' Date: JULY 2019

SHEET No. TC13 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.125	244



- NOTES:
1. Portable concrete barriers shall conform with State Standard Plans TE-42, TE-43, and TE-44.
  2. All striping is temporary and shall be considered incidental to Section - 645 Work Zone Traffic Control.

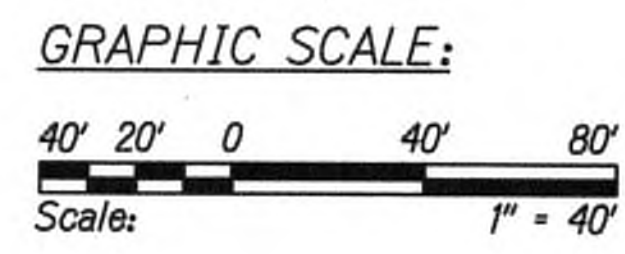


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*Cathy A. Leong*  
WILSON KRAMOTO CORP. L.C. EXP. DATE APRIL 30, 2020

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

- LEGEND**
- Work Zone
  - Concrete Barrier
  - Sign
  - Temporary Solid Striping
  - Temporary Dashed Striping
  - Temporary White Guideline
  - Existing Sign
  - Flow of Traffic
  - Temporary Pavement Arrow
  - Inertial Barrier System, TL-3



TRAFFIC CONTROL PLAN - PHASE 4  
24-HOUR CLOSURE  
SCALE: 1" = 40'

APPROVED

*[Signature]* 7/17/19

County Engineer  
County of Kauai  
(For work within the County right-of-way)

Date

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN**  
**KUHIO HIGHWAY WIDENING**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**

Scale: 1" = 40' Date: JULY 2019

SHEET No. TC14 OF 63 SHEETS

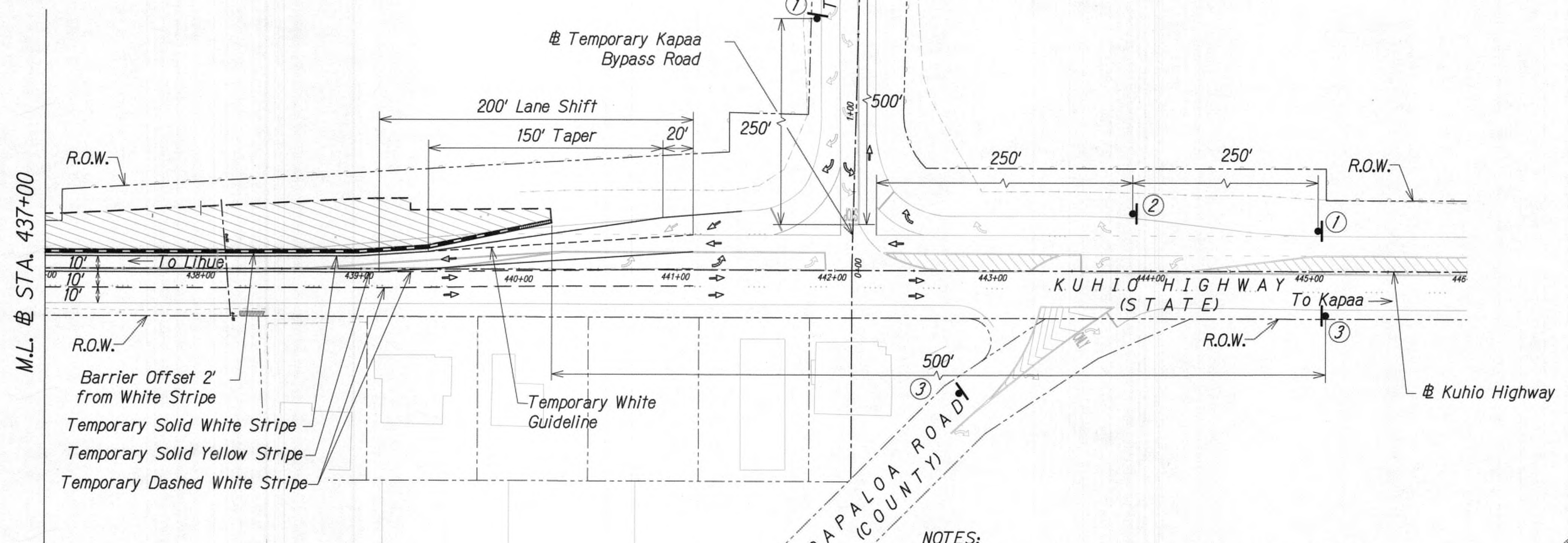


①  
ROAD WORK  
500 FT  
25 M.P.H.  
CW21-4C  
48"x48"  
CW13-1(25)  
24"x24"

②  
25 M.P.H.  
CW1-4L  
48"x48"  
CW13-1(25)  
24"x24"

③  
END ROAD WORK  
CG20-2A  
48"x24"

True North  
Scale: 1"=40'



LEGEND

- |                           |                               |
|---------------------------|-------------------------------|
| Work Zone                 | Existing Sign                 |
| Concrete Barrier          | Flow of Traffic               |
| Sign                      | Temporary Pavement Arrow      |
| Temporary Solid Striping  | Inertial Barrier System, TL-3 |
| Temporary Dashed Striping |                               |
| Temporary White Guideline |                               |

GRAPHIC SCALE:  
40' 20' 0 40' 80'  
Scale: 1" = 40'

TRAFFIC CONTROL PLAN - PHASE 4  
24-HOUR CLOSURE  
SCALE: 1" = 40'

NOTES:

1. Portable concrete barriers shall conform with State Standard Plans TE-42, TE-43, and TE-44.
2. Inertial barrier system shall conform with NCHRP 350 - Test Level 3.
3. All striping is temporary and shall be considered incidental to Section - 645 Work Zone Traffic Control.



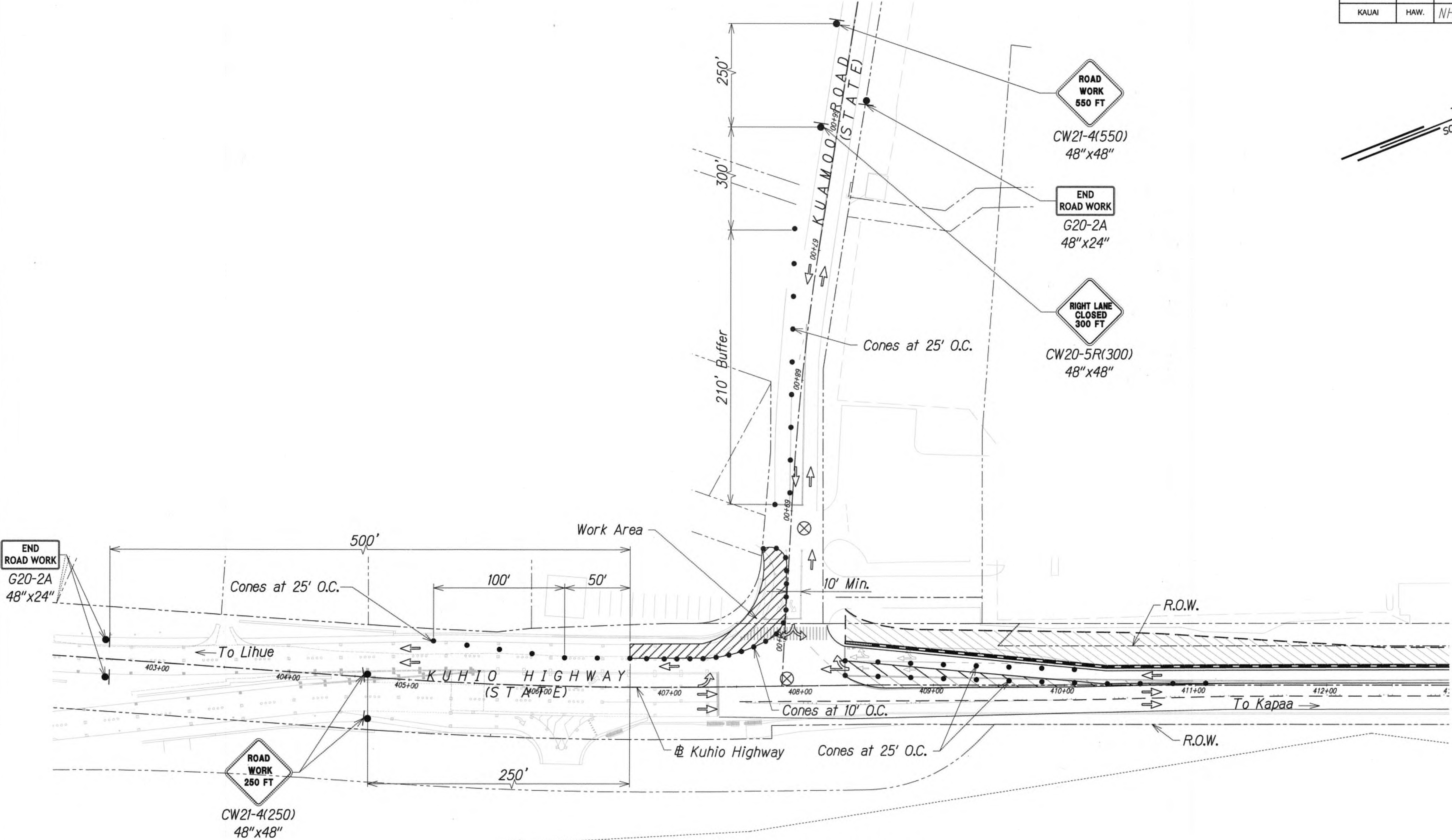
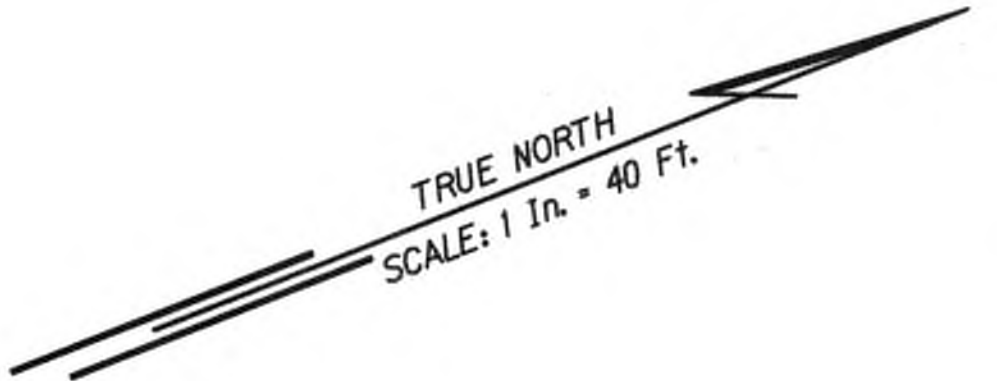
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.  
WILSON KAMOTO CORP. APRIL 30, 2020 LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN**  
**KUHIO HIGHWAY WIDENING**  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019  
SHEET No. TC15 OF 63 SHEETS

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

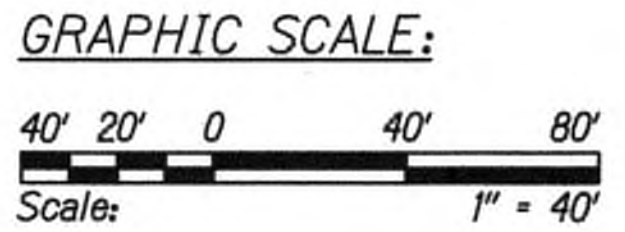
DATE REVISION





**TRAFFIC CONTROL PLAN - PHASE 4**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▢ Arrowboard Assembly



SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	No.



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*Cathy A. Leong*  
 WILSON GKAMOTO CORP. LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 09**

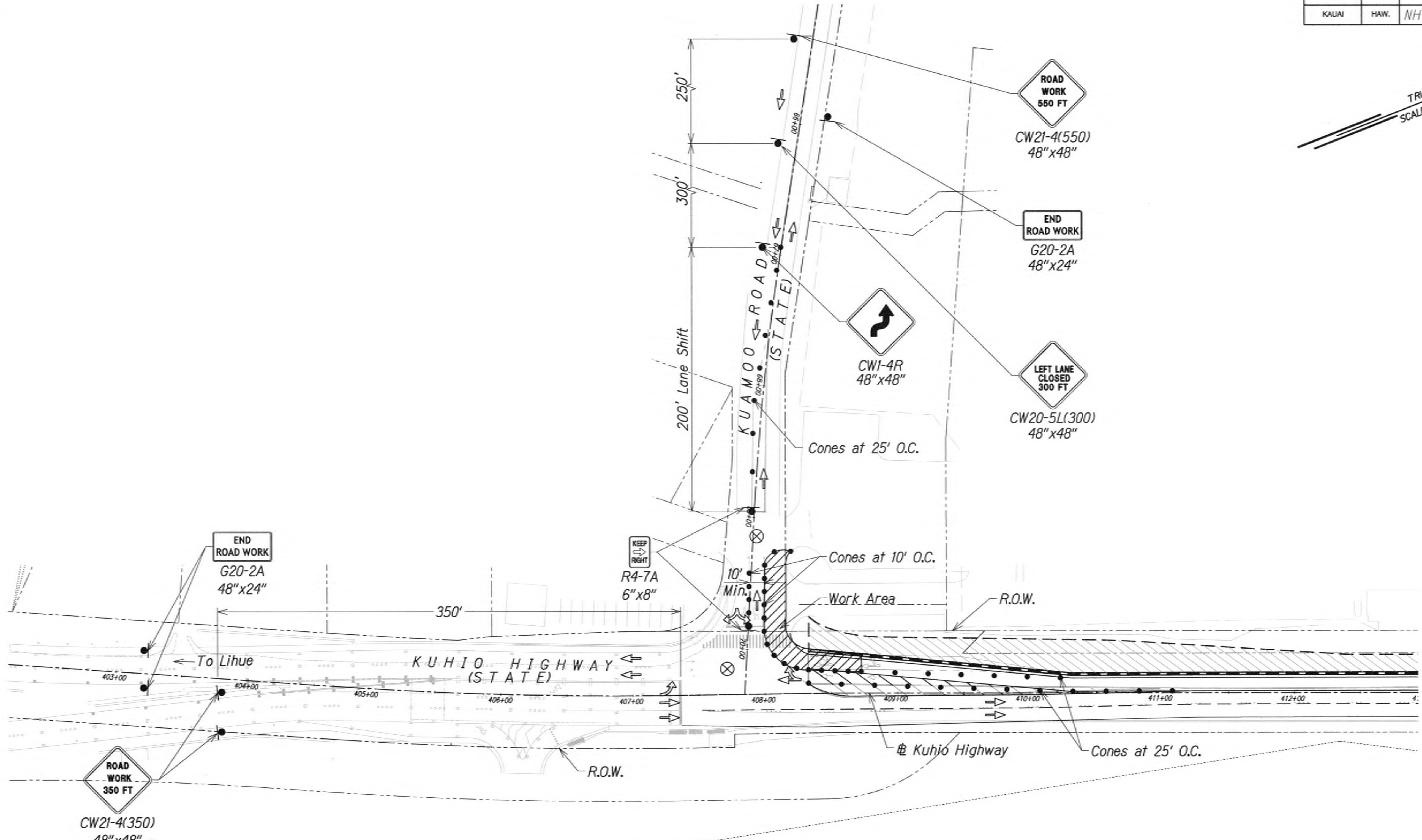
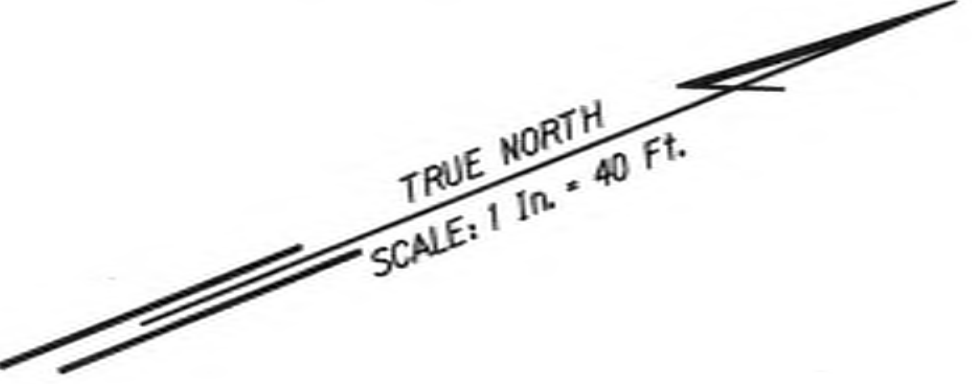
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

SHEET No. TC16 OF 63 SHEETS

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

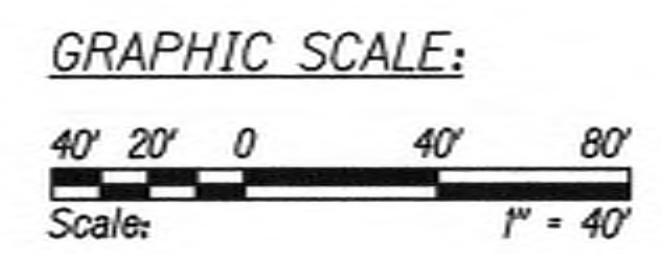


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.128	244



TRAFFIC CONTROL PLAN - PHASE 4  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - ◐ Sign
  - ⇒ Direction of Traffic
  - ▭ Arrowboard Assembly



DESIGNED BY	DATE
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
No.	



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*Cathy A. Leong* APRIL 30, 2020  
 WILSON KAMOTO CORP. L.C. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 10**

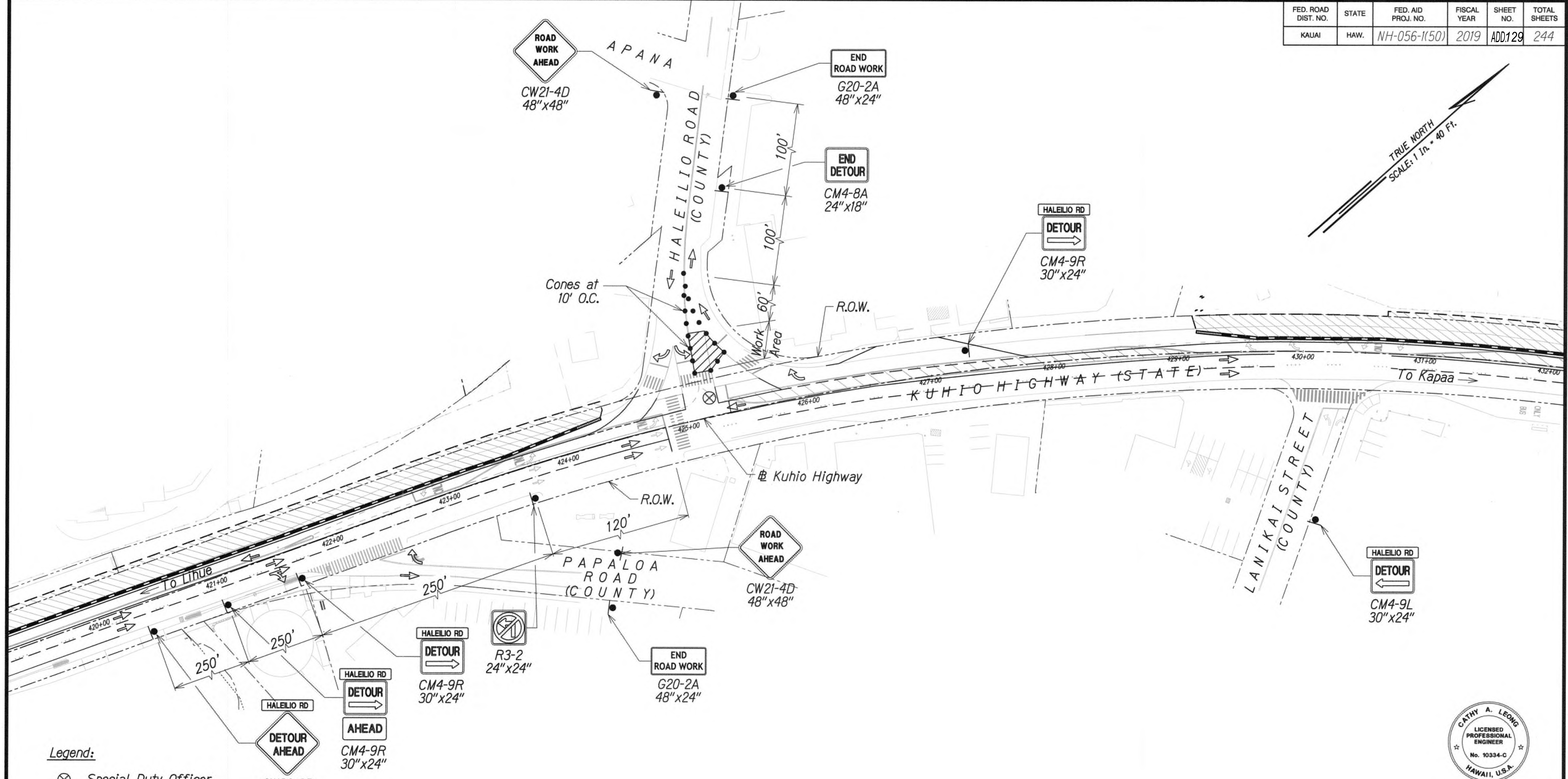
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

SHEET No. TC17 OF 63 SHEETS

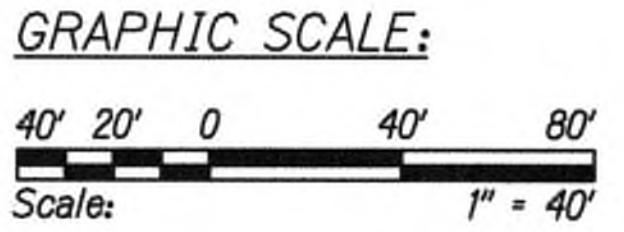
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD129	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 4**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'  
SEE TD4 FOR DETOUR ROUTE

Approved

County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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APRIL 30, 2020  
WILSON OKAMOTO CORP., LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

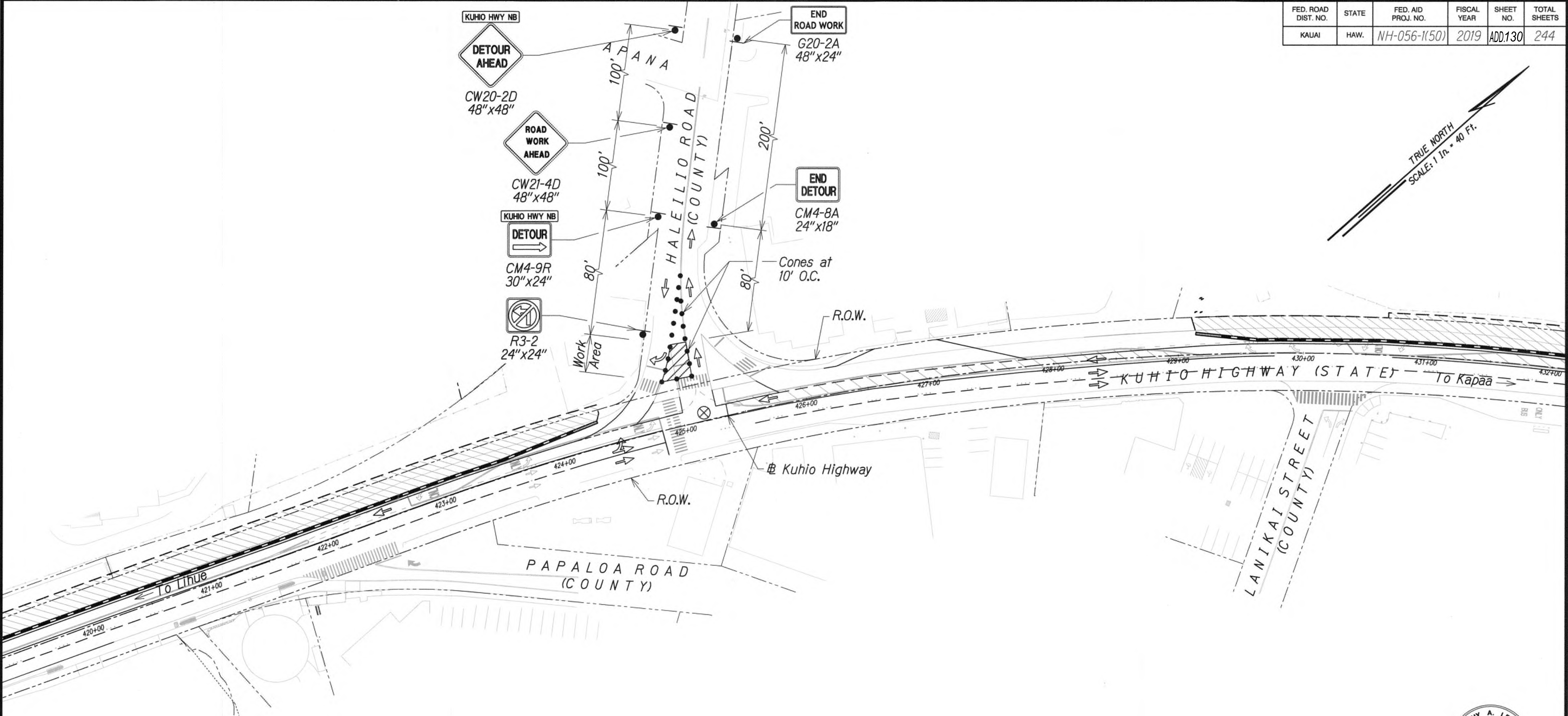
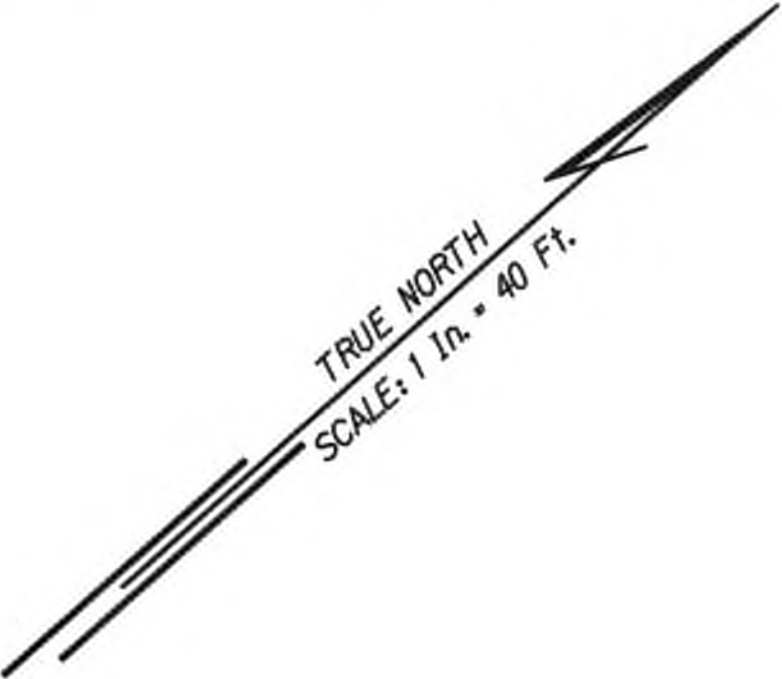
**TRAFFIC CONTROL PLAN 11**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

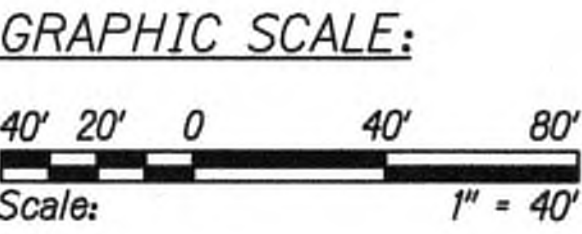
SHEET No. TC18 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.130	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 4**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'  
 SEE TD3 FOR DETOUR ROUTE

Approved

*[Signature]*  
 County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
------	----------



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*[Signature]*  
 WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

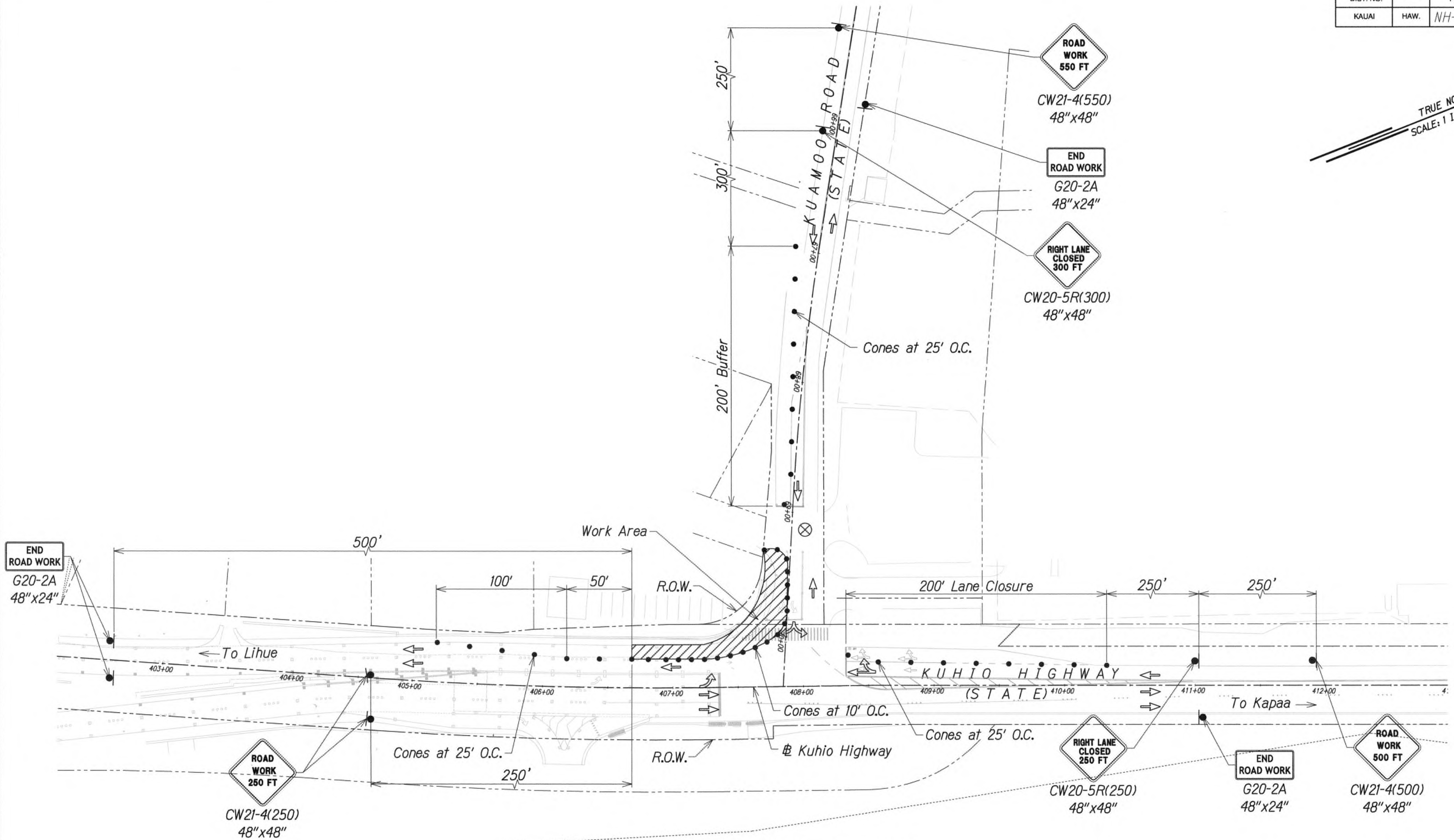
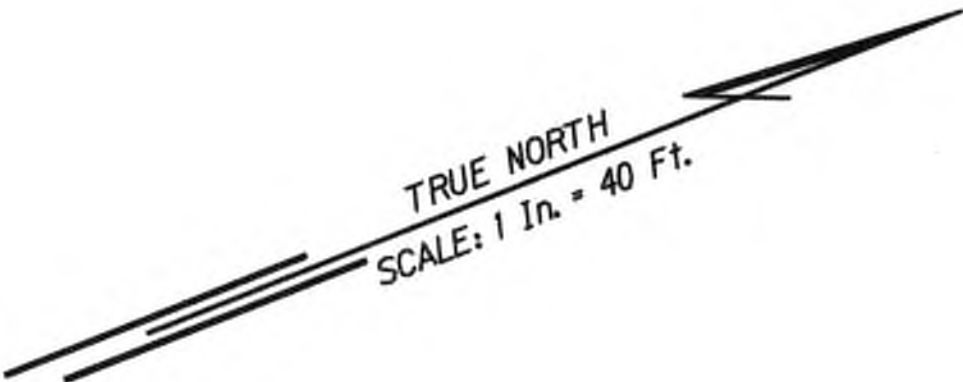
**TRAFFIC CONTROL PLAN 12**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

SHEET No. TC19 OF 63 SHEETS

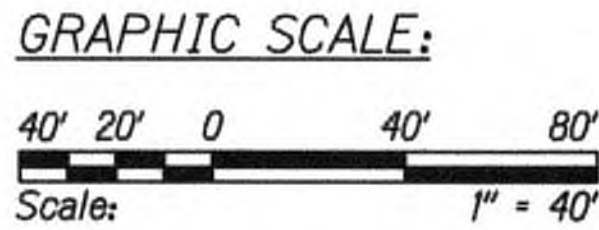


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.131	244



TRAFFIC CONTROL PLAN - PHASE 5  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



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



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*Cathy A. Leong*  
 WILSON-KAMOTO CORP., LIC. EXP. DATE APRIL 30, 2020

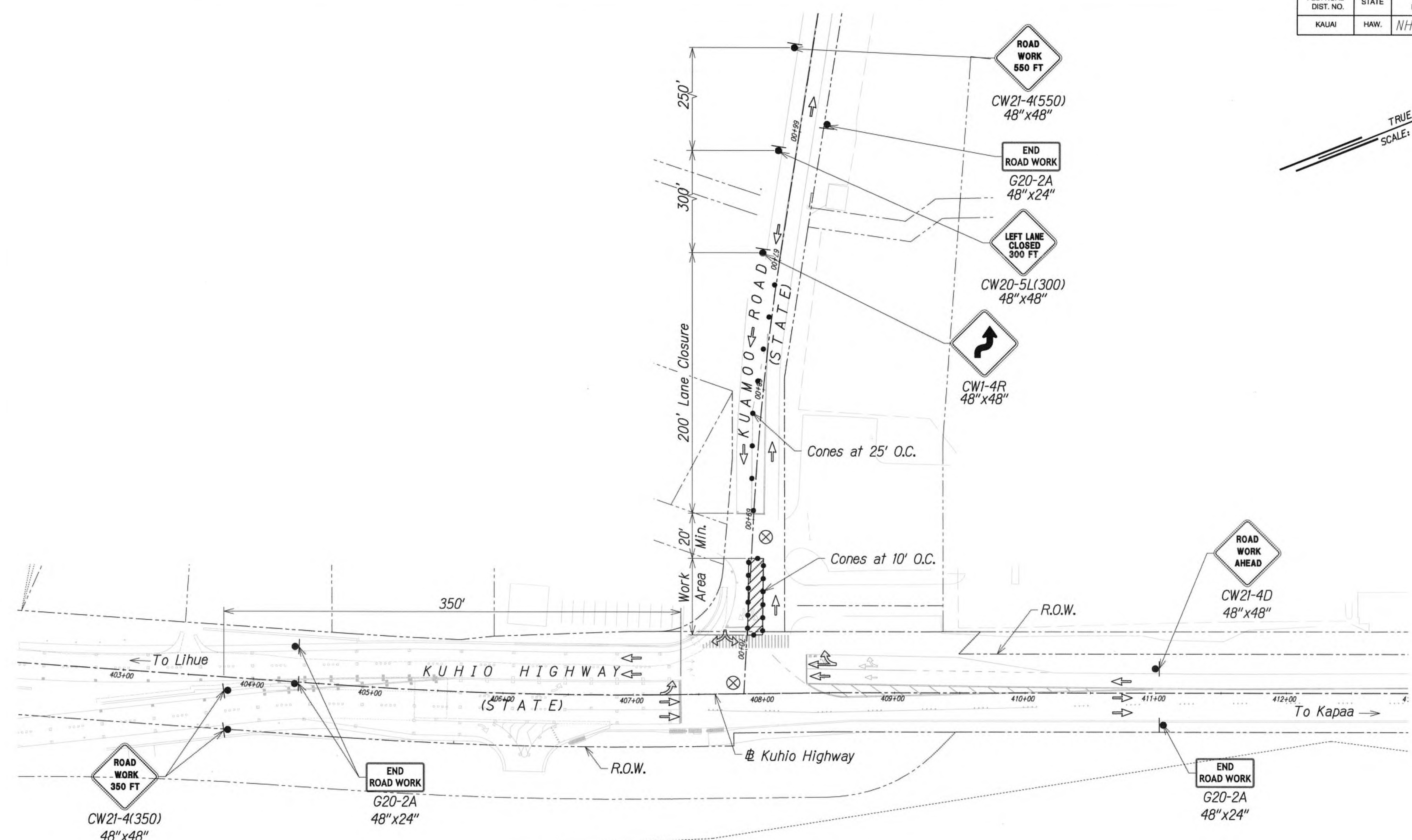
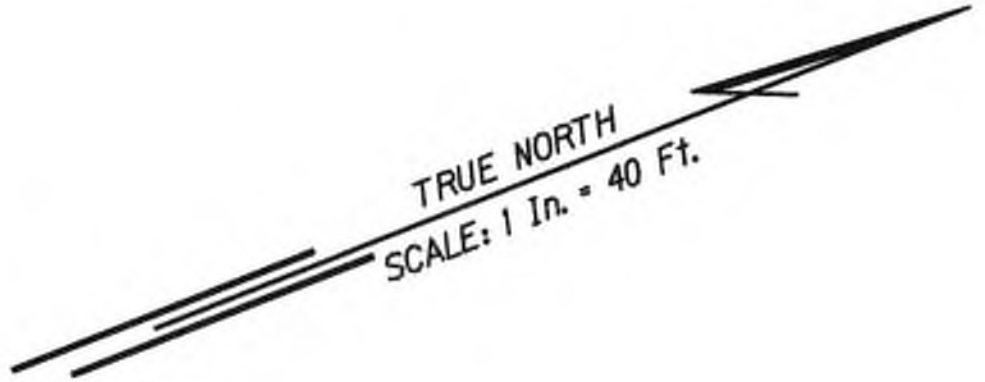
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN 13  
  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

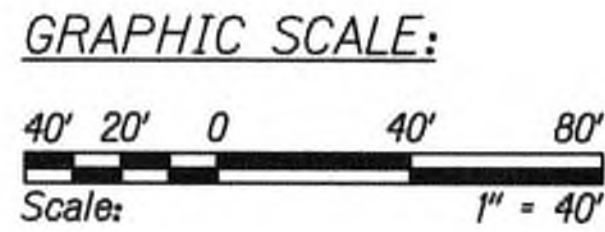


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD132	244



**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



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



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 WILSON KAMOTO CORP. LIC. EXP. DATE

9/20/19 Reissuing plan for legibility only. No design changes have been made.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

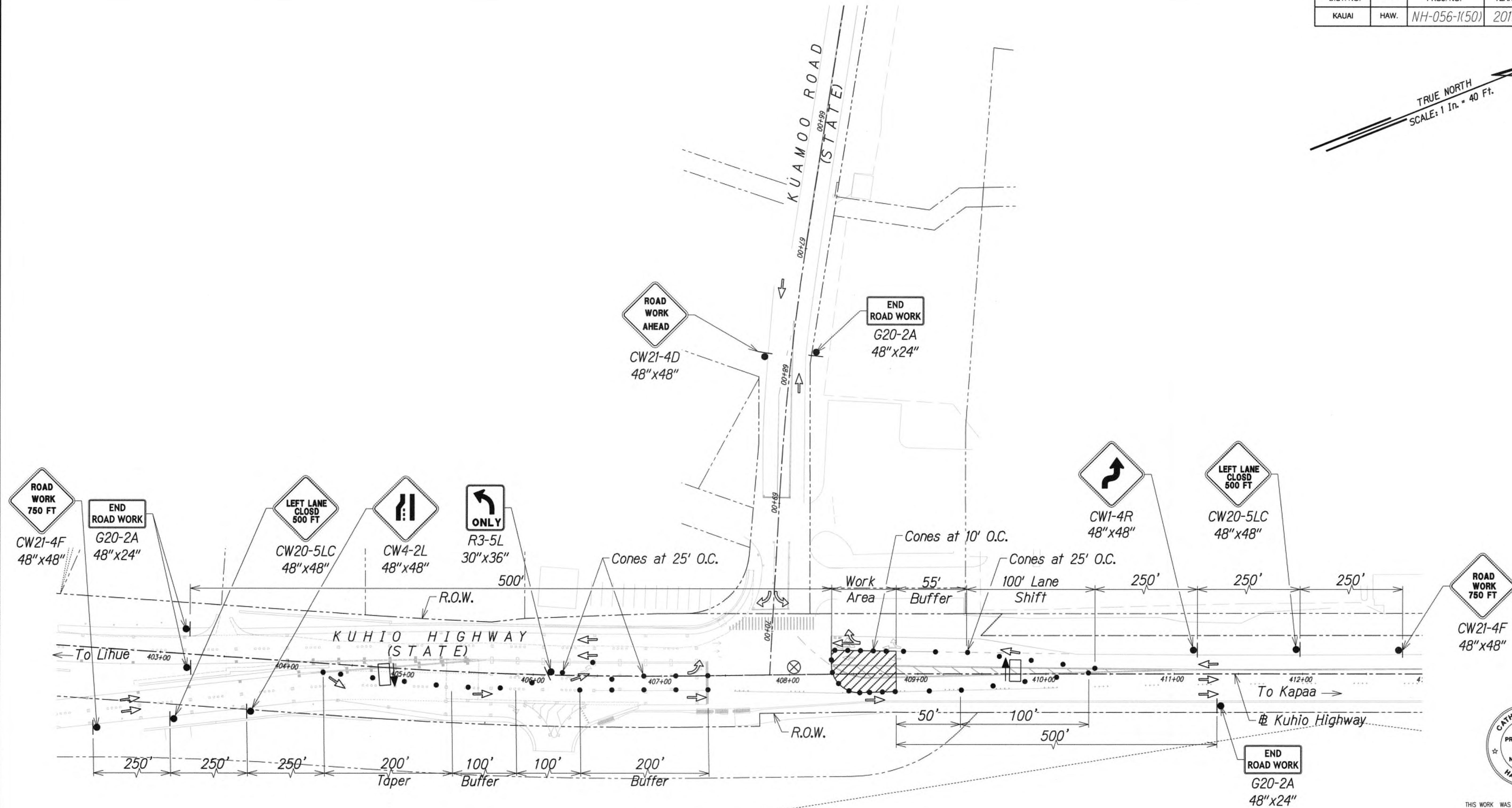
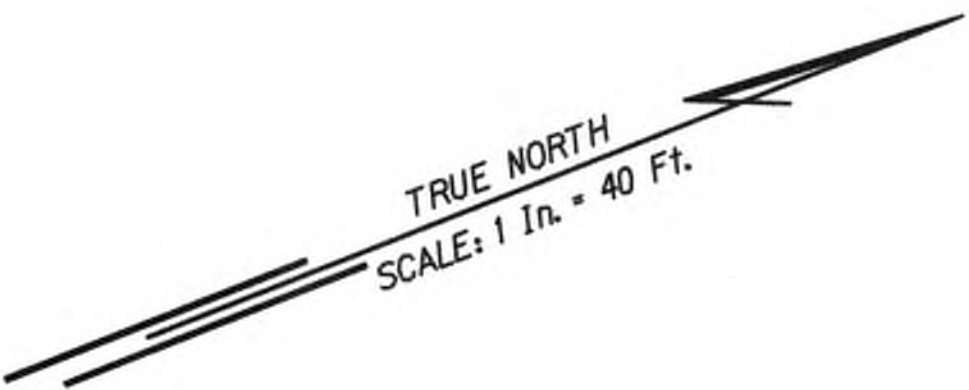
**TRAFFIC CONTROL PLAN 14**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

SHEET No. TC21 OF 63 SHEETS

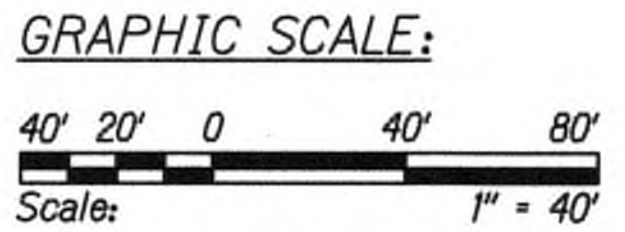


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD133	244



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ➡ Arrowboard Assembly



SURVEY PLOTTED BY	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



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*Cathy A. Leong*  
WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 15**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

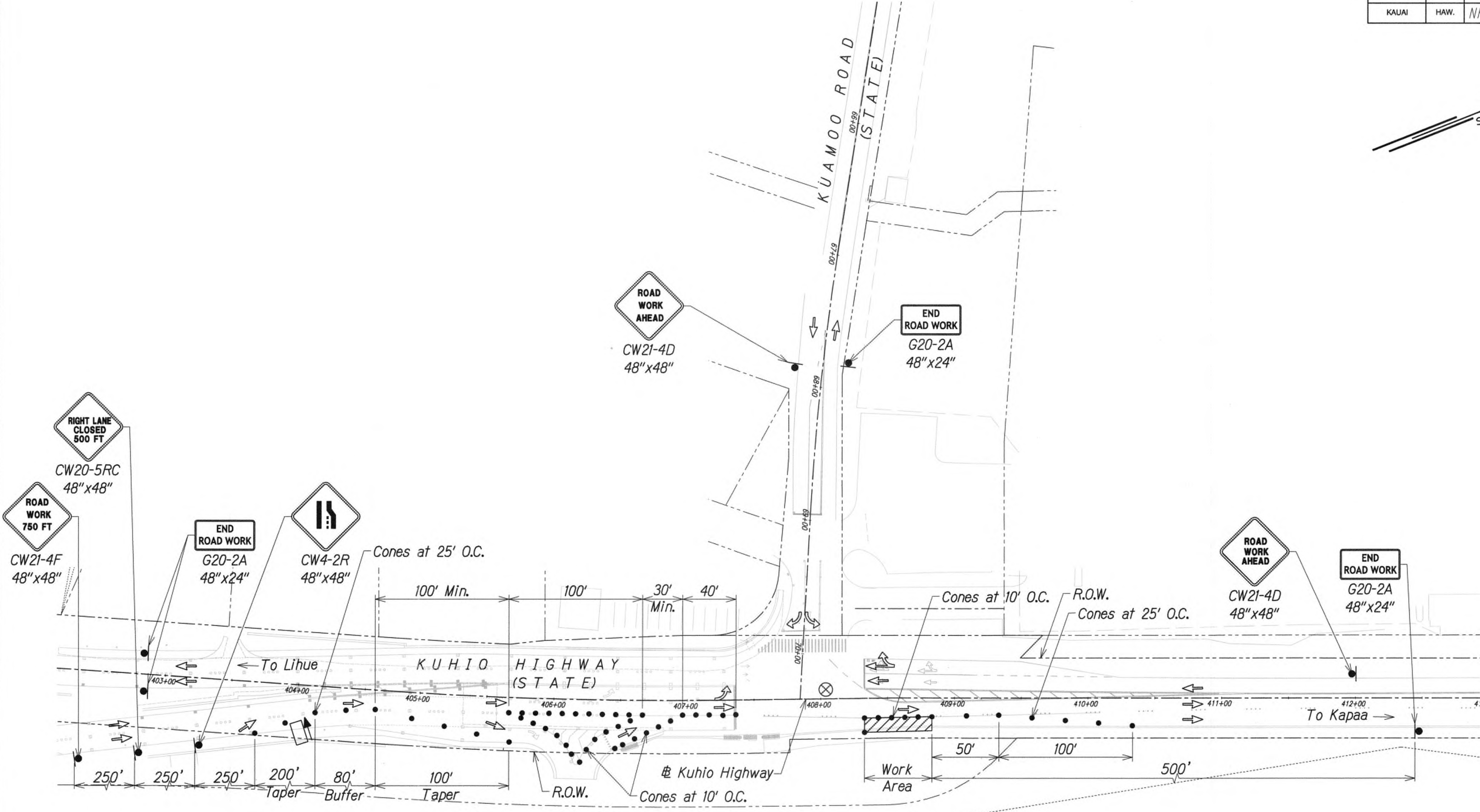
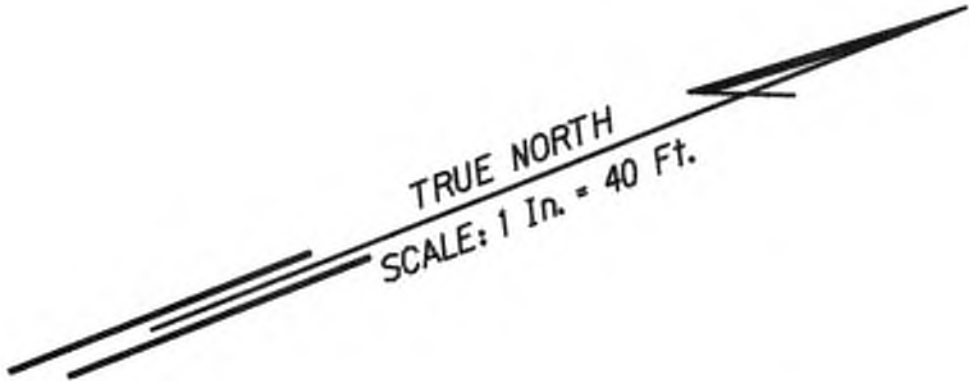
SHEET No. TC22 OF 63 SHEETS

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

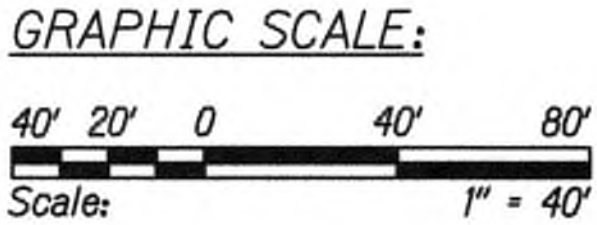
DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.134	244



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



- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly

**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

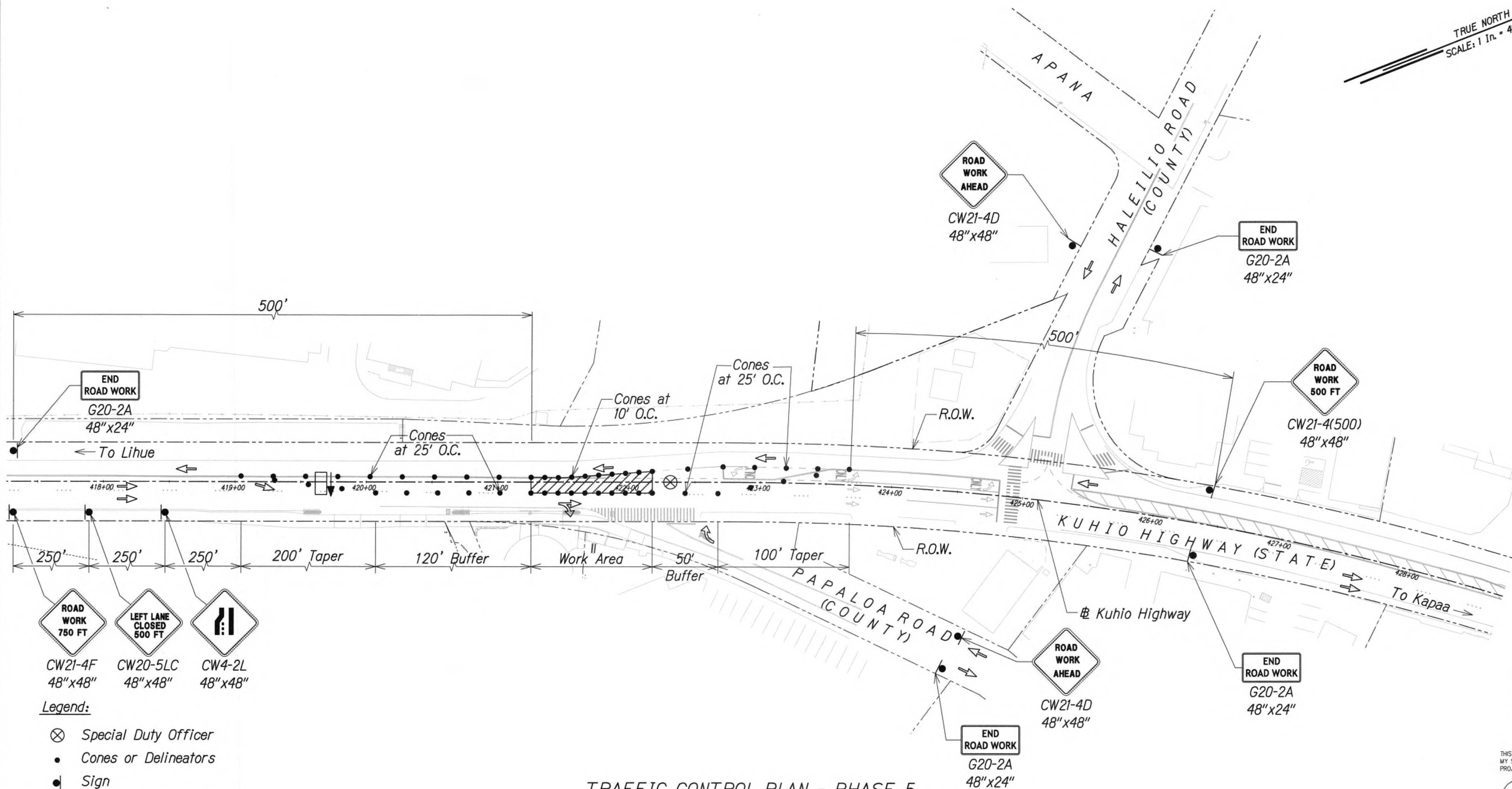
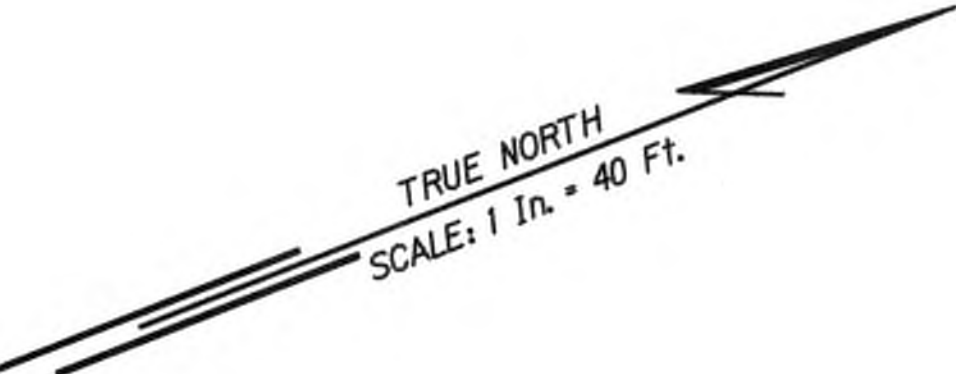


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*Cathy A. Leong* APRIL 30, 2020  
 WILSON OKAMOTO CORP., L.C. EXP. DATE

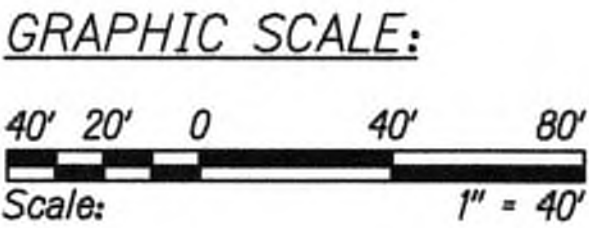
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN 16**  
  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019  
SHEET No. TC23 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.135	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

For County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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WILSON OKAMOTO CORP. L.C. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

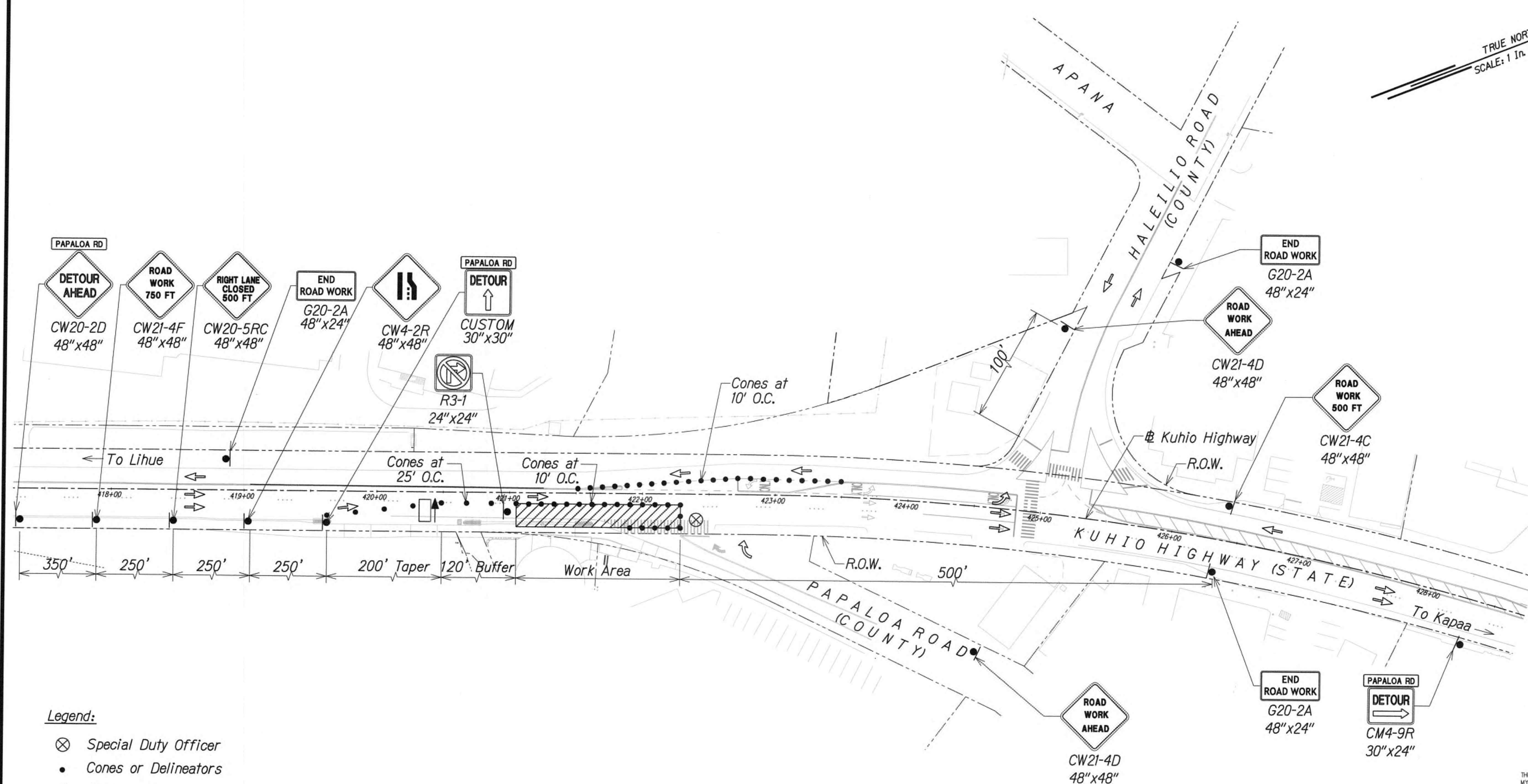
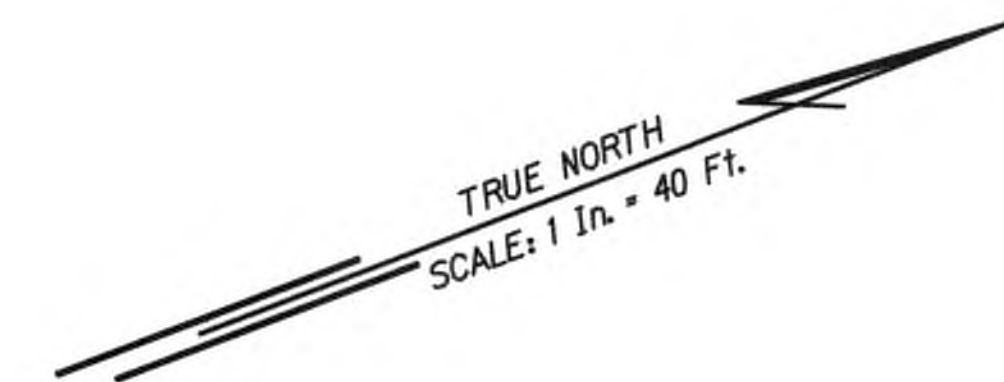
**TRAFFIC CONTROL PLAN 17**

**KUHIU HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

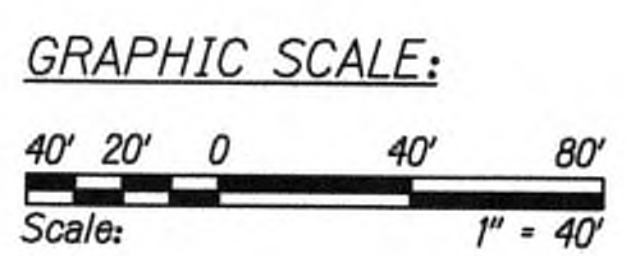
SHEET No. TC24 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD136	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'  
 SEE TDI FOR DETOUR ROUTE

Approved

*[Signature]*  
 County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 Date

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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*Cathy A. Leong*  
 WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 18**

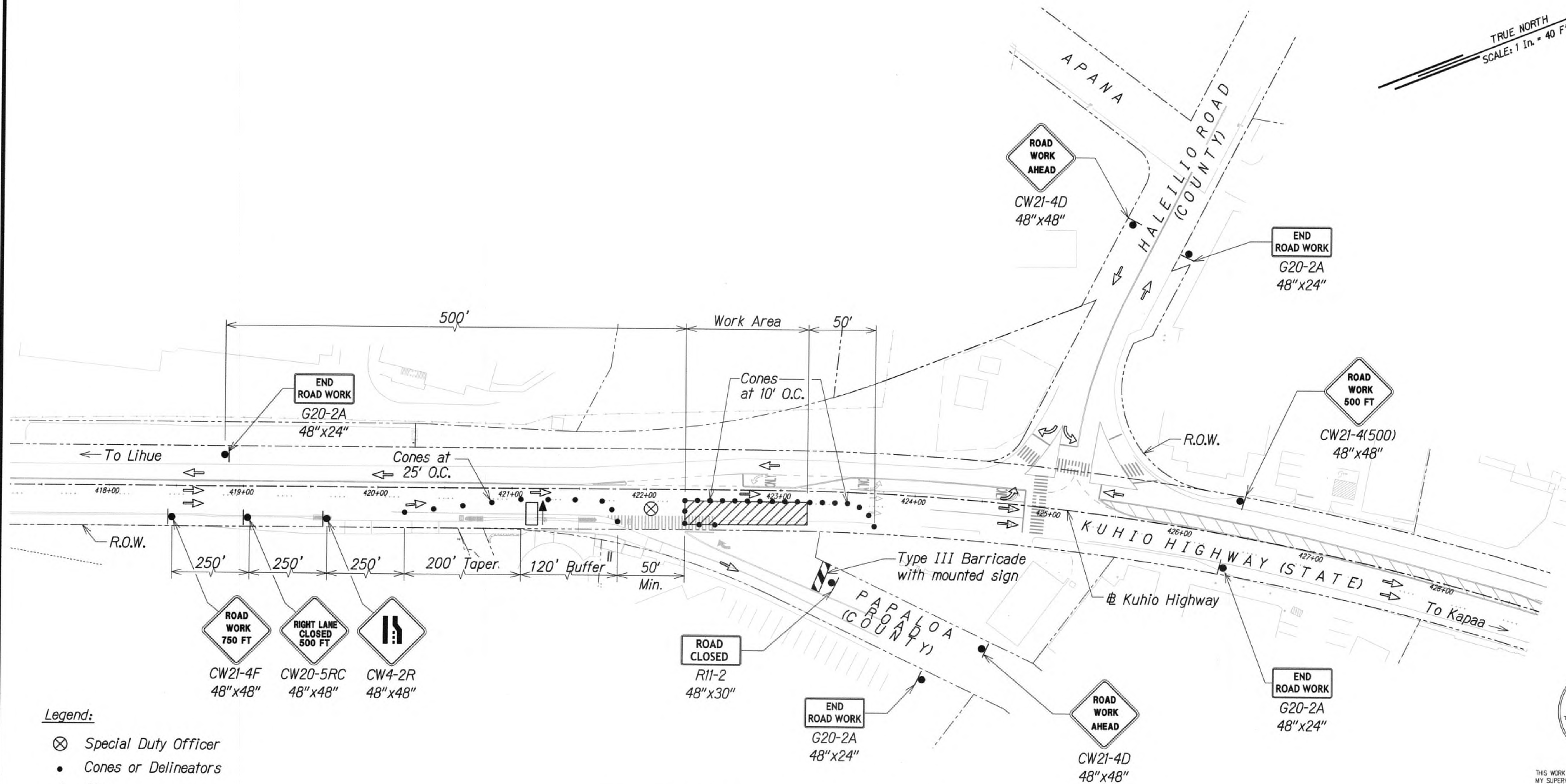
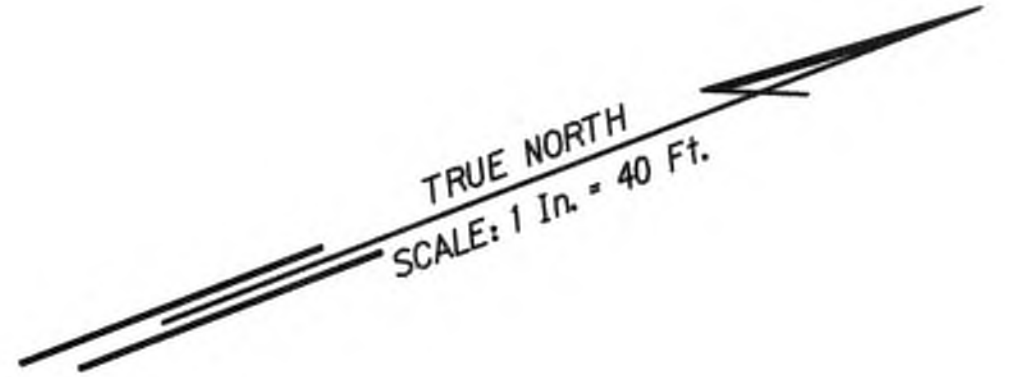
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

SHEET No. TC25 OF 63 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.137	244



**Legend:**

- ⊗ Special Duty Officer
- Cones or Delineators
- Sign
- ➔ Direction of Traffic
- ➔ Arrowboard Assembly
- ▨ Barricade

**GRAPHIC SCALE:**



**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'  
 SEE TD2 FOR DETOUR ROUTE

Approved

*[Signature]*  
 County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

*7/17/19*  
 Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]*  
 WILSON GRAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

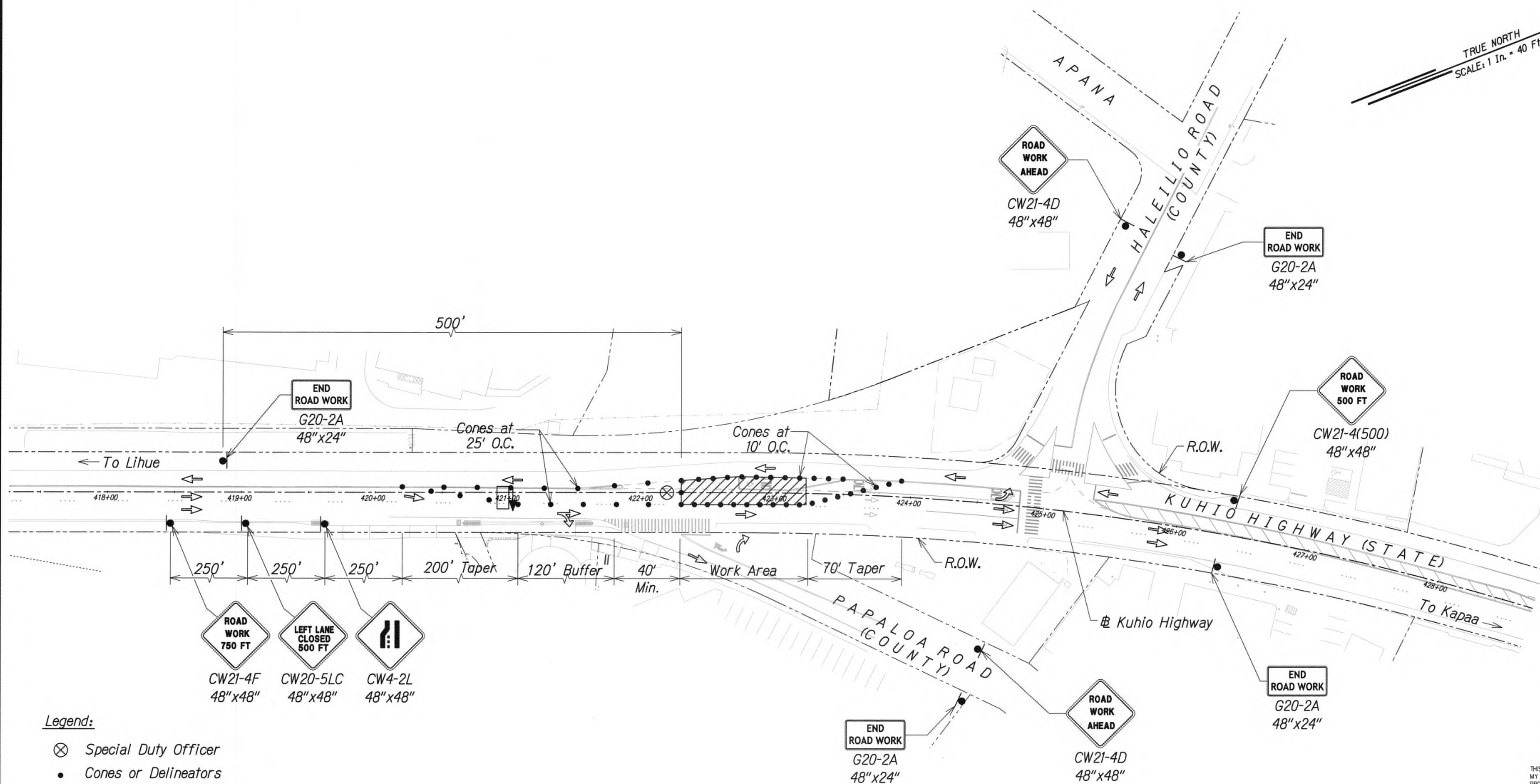
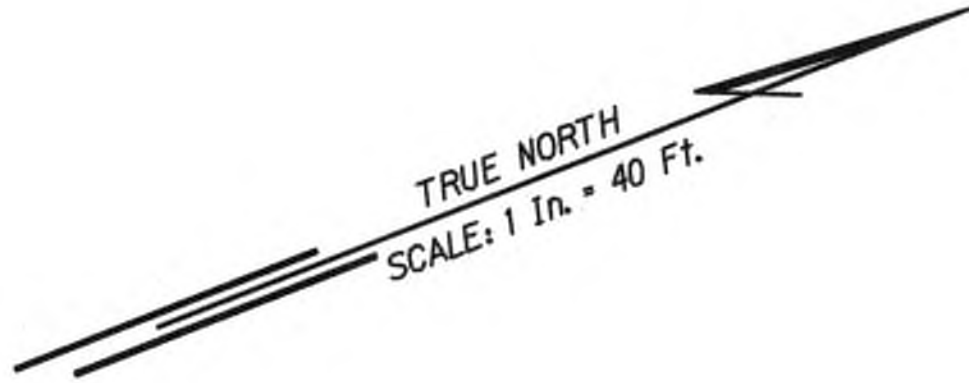
**TRAFFIC CONTROL PLAN 19**

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

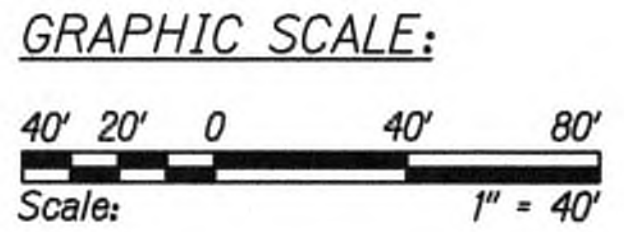
SHEET No. TC26 OF 63 SHEETS

ADD.137





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▢ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

*[Signature]*  
County Engineer  
County of Kauai  
(For work within the County right-of-way)

*7/17/19*  
Date

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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*[Signature]*  
WILSON OKAMOTO CORP., LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

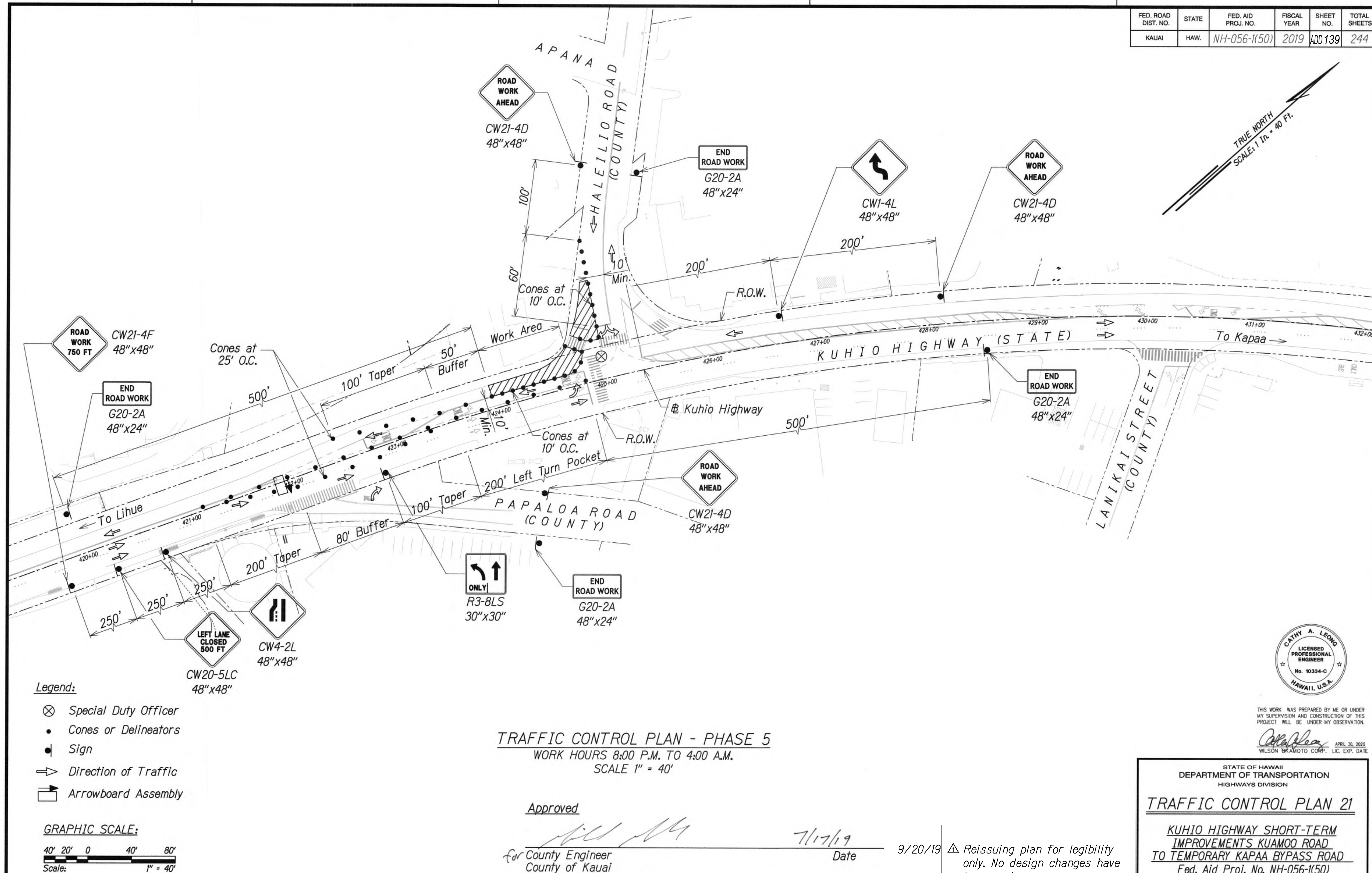
**TRAFFIC CONTROL PLAN 20**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC27 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.139	244



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



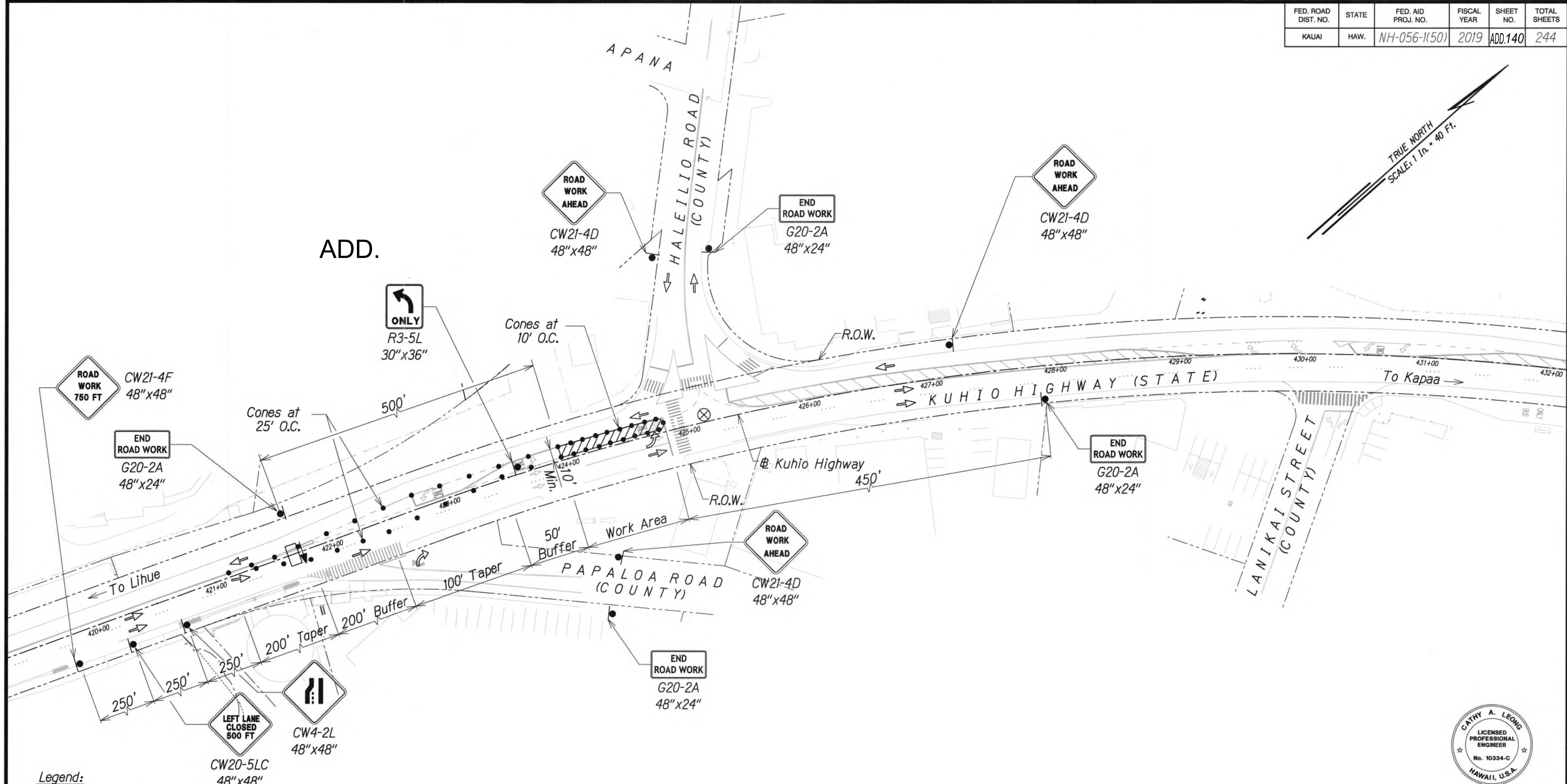
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

*Cathy A. Leong* APRIL 30, 2020  
WILSON KRAMOTO CORP. LIC. EXP. DATE

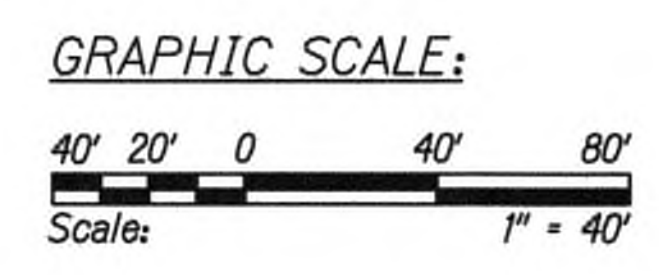
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN 21**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: 1" = 40'      Date: JULY 2019  
SHEET No. TC28 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.140	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➔ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

*Approved*  
 \_\_\_\_\_  
 for County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 \_\_\_\_\_  
 Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 22**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

SHEET No. TC29 OF 63 SHEETS

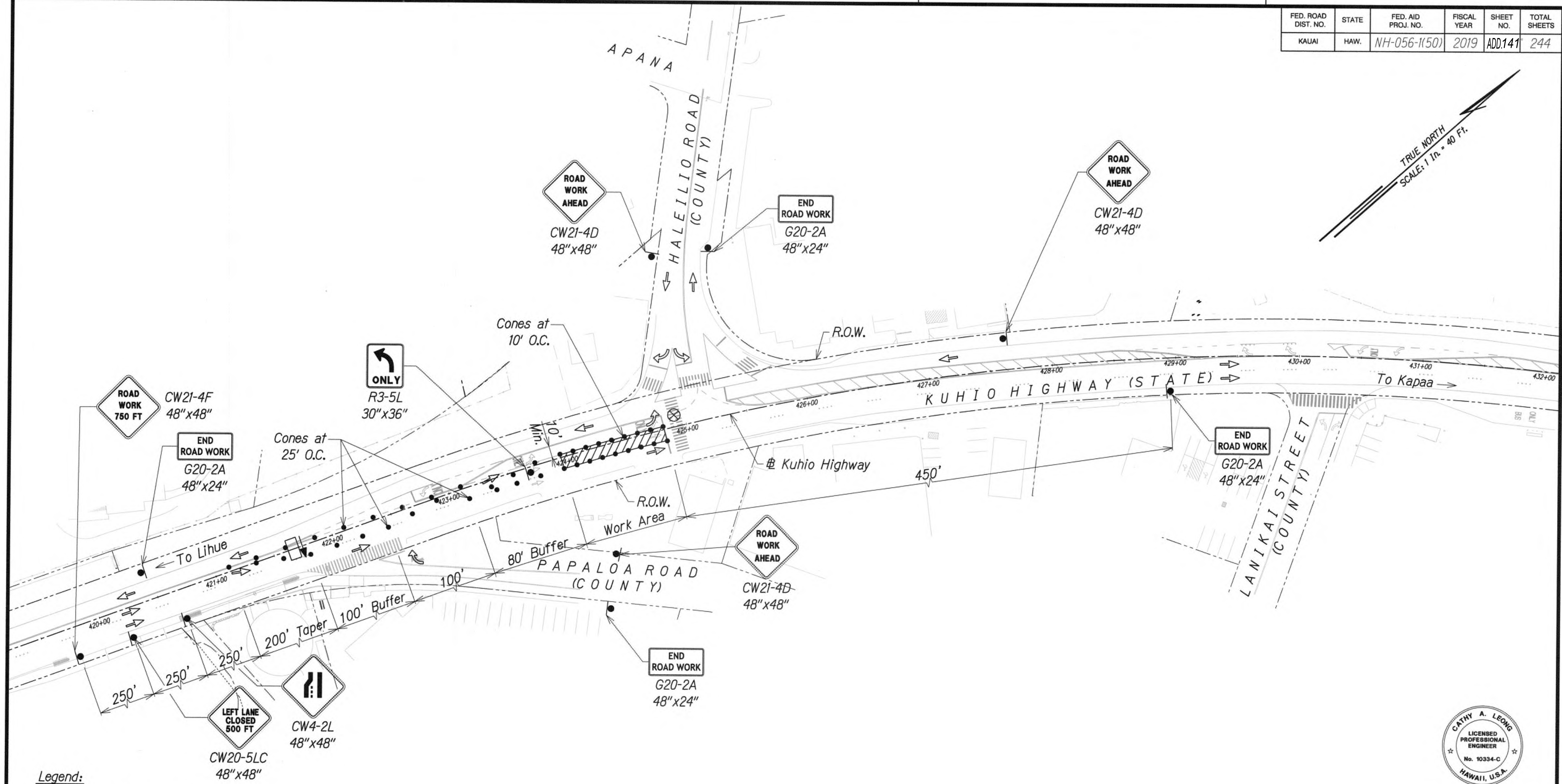


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 \_\_\_\_\_  
 WILSON OKAMOTO CORP. LIC. EXP. DATE

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



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.141	244



#### Legend:

- ⊗ Special Duty Officer
- Cones or Delineators
- Sign
- ➔ Direction of Traffic
- ➡ Arrowboard Assembly

#### GRAPHIC SCALE:



#### TRAFFIC CONTROL PLAN - PHASE 5

WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

*[Signature]*  
for County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]*  
WILSON KAMOTO CORP. LIC. EXP. DATE APRIL 30, 2020

#### STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION TRAFFIC CONTROL PLAN 23

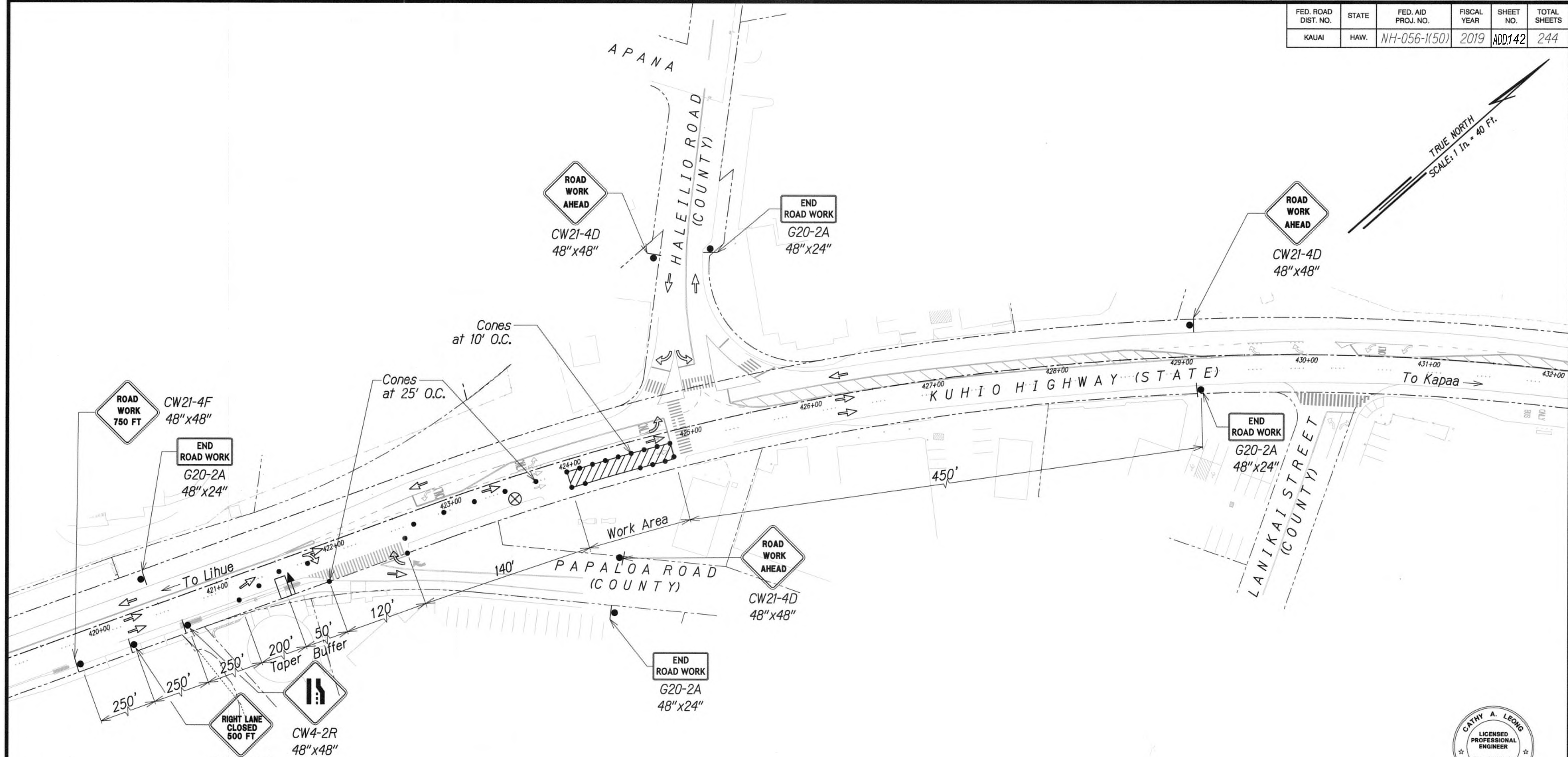
KUHI HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC30 OF 63 SHEETS

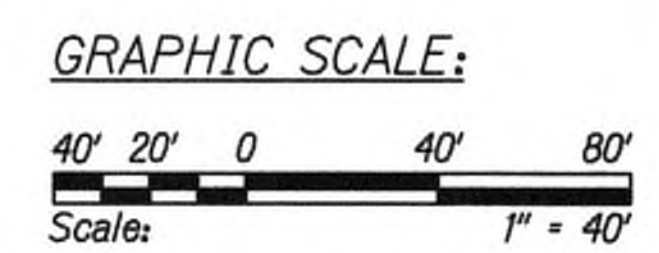
ADD.141



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD142	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

Approved

*[Signature]*  
 County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.



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*[Signature]*  
 WILSON KAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

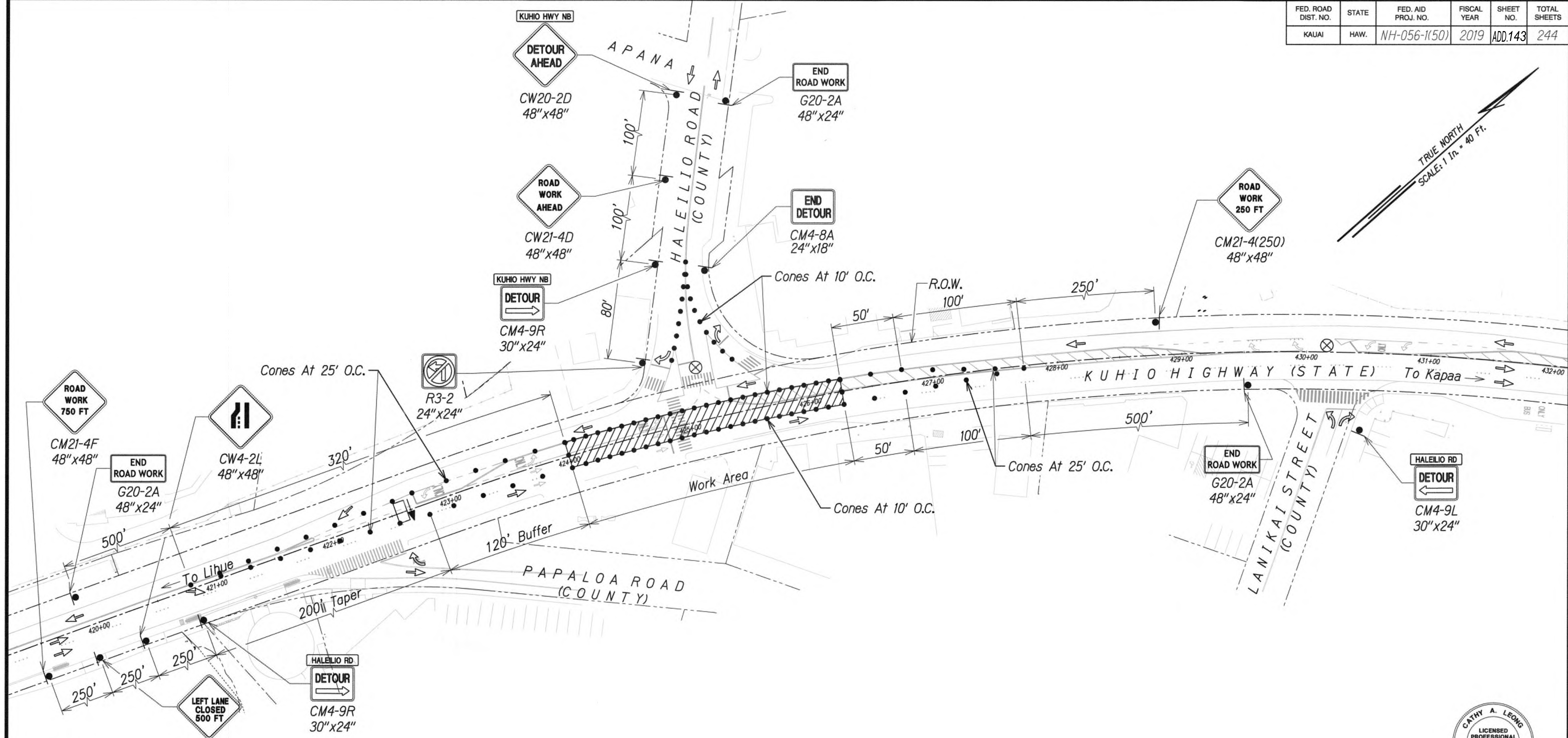
**TRAFFIC CONTROL PLAN 24**

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40' Date: JULY 2019

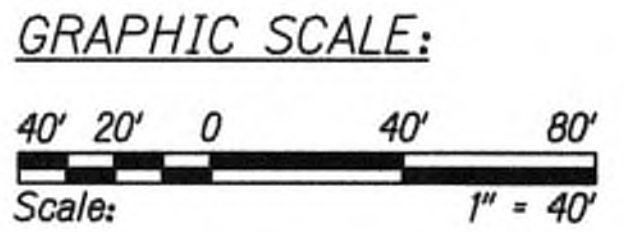
SHEET No. TC31 OF 63 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	No.





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'  
SEE TD6 FOR DETOUR ROUTE

Approved \_\_\_\_\_  
County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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Cathy A. Leong  
WILSON, KAMOTO CORP., LIC. EXP. DATE APRIL 30, 2020

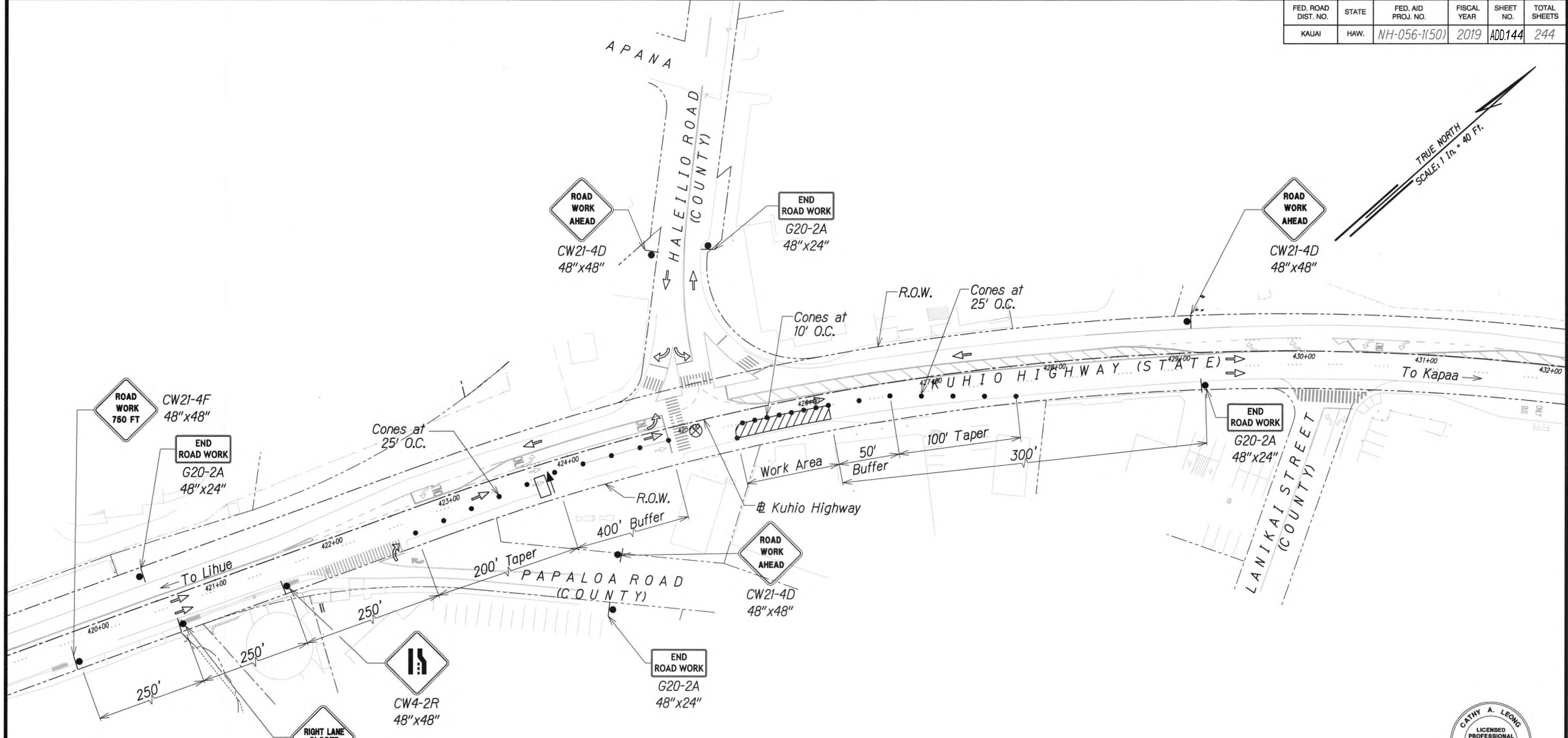
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 25**

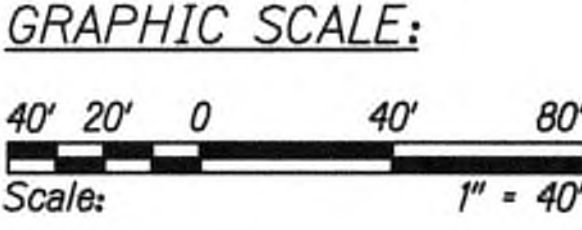
**KUHIU HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC32 OF 63 SHEETS





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▢ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

*[Signature]*  
for County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]*  
WILSON GIMOTO CORP. LIC. EXP. DATE APRIL 30, 2020

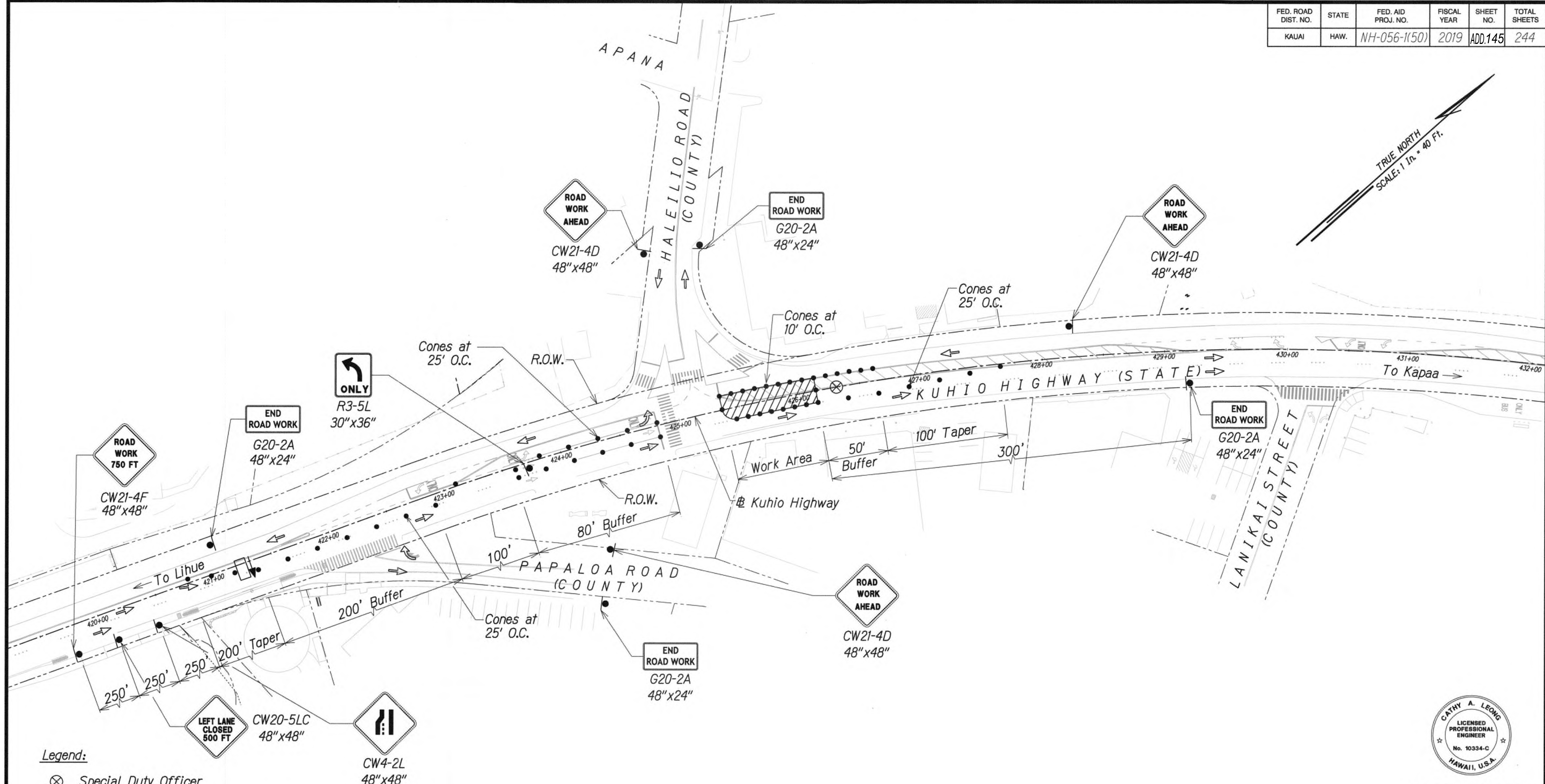
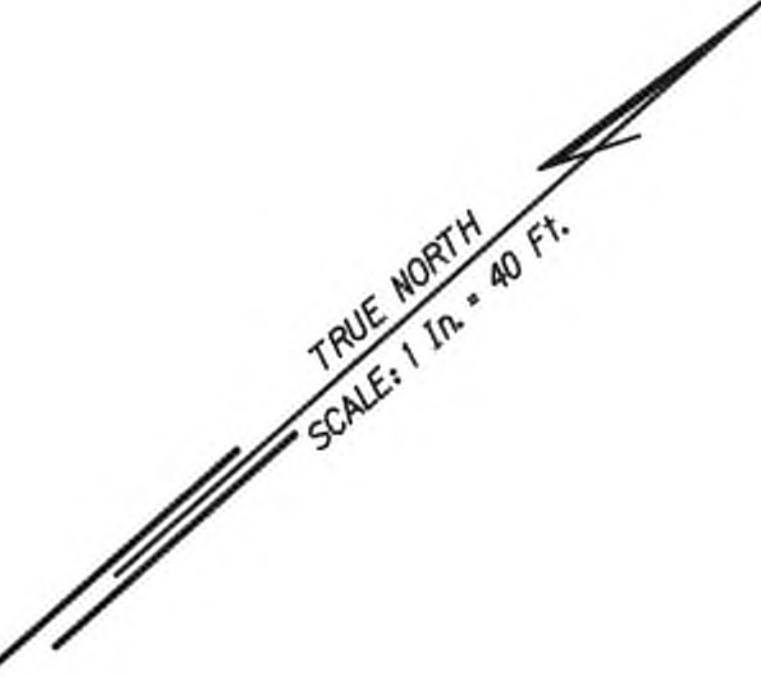
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 26**

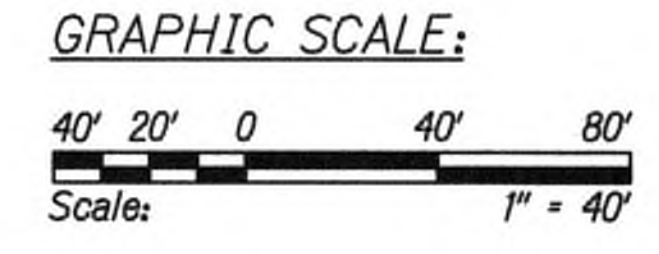
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC33 OF 63 SHEETS





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▭ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

*[Signature]*  
for County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
------	----------



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*[Signature]*  
WILSON OKAMOTO CORP. LIC. EXP. DATE

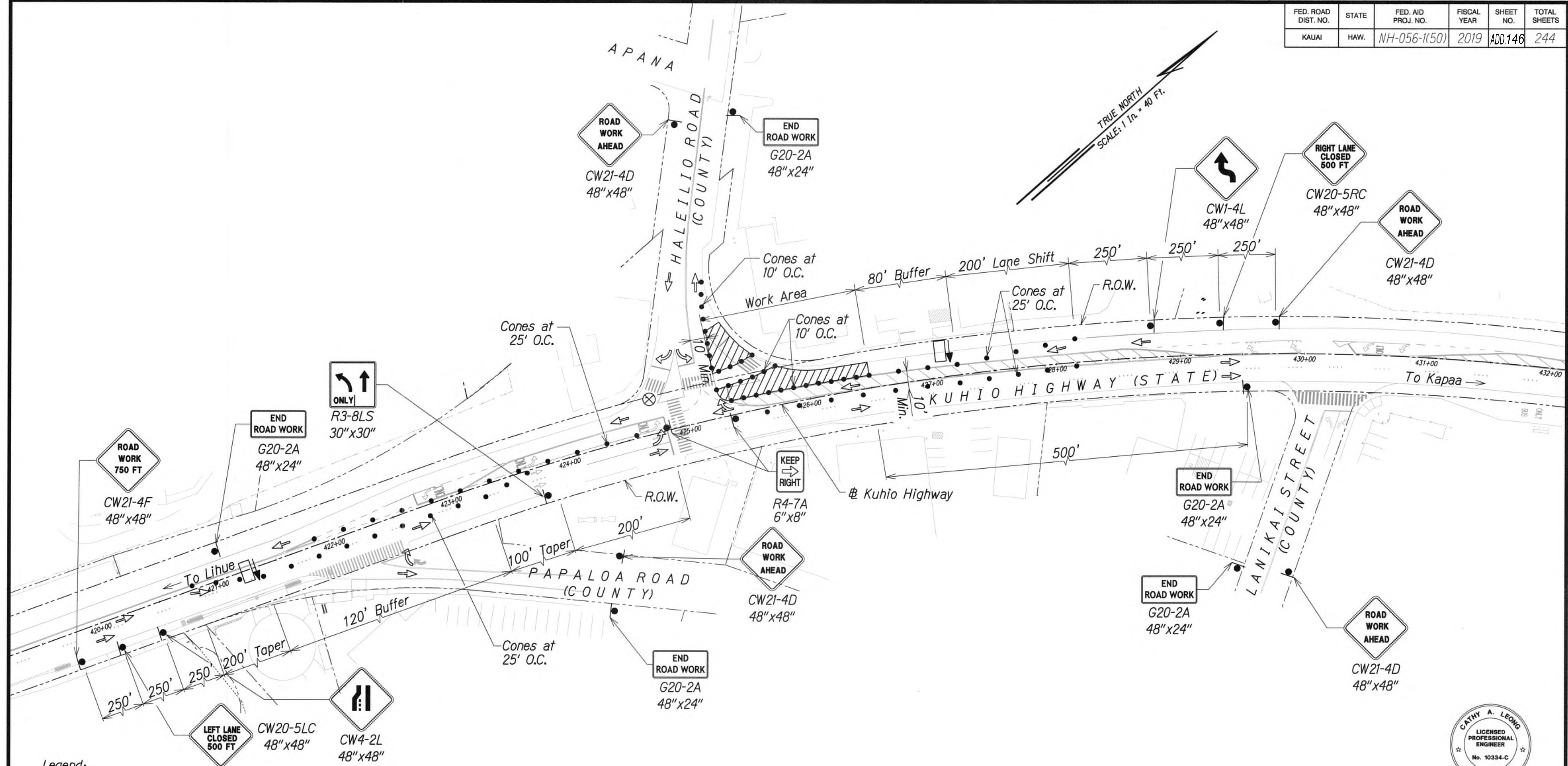
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 27**

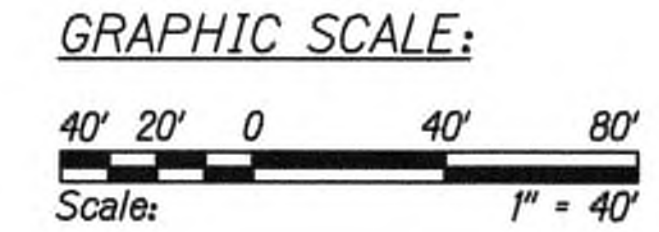
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC34 OF 63 SHEETS





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➔ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved \_\_\_\_\_  
for County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.



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Cathy A. Leong  
WILSON OKAMOTO CORP. APR 30, 2020 LIC. EXP. DATE

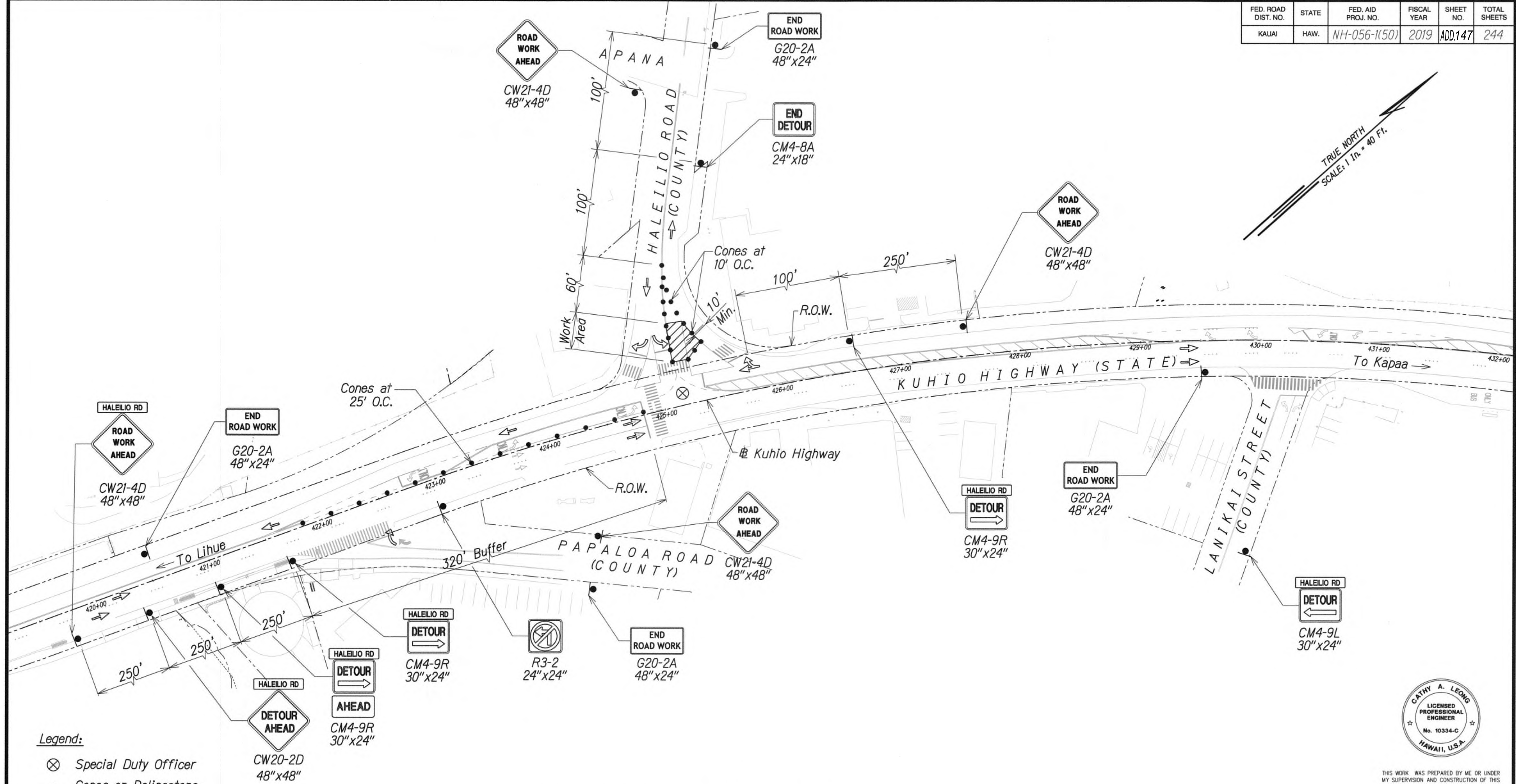
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 28**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC35 OF 63 SHEETS





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➔ Arrowboard Assembly

**GRAPHIC SCALE:**  
40' 20' 0 40' 80'  
Scale: 1" = 40'

**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'  
SEE TD4 FOR DETOUR ROUTE

Approved

*[Signature]*  
County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]*  
WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

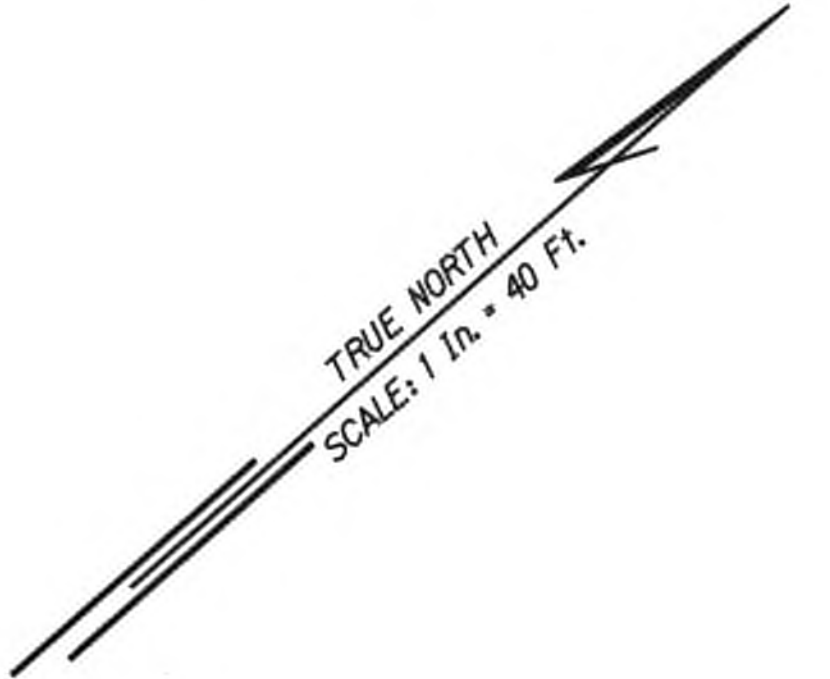
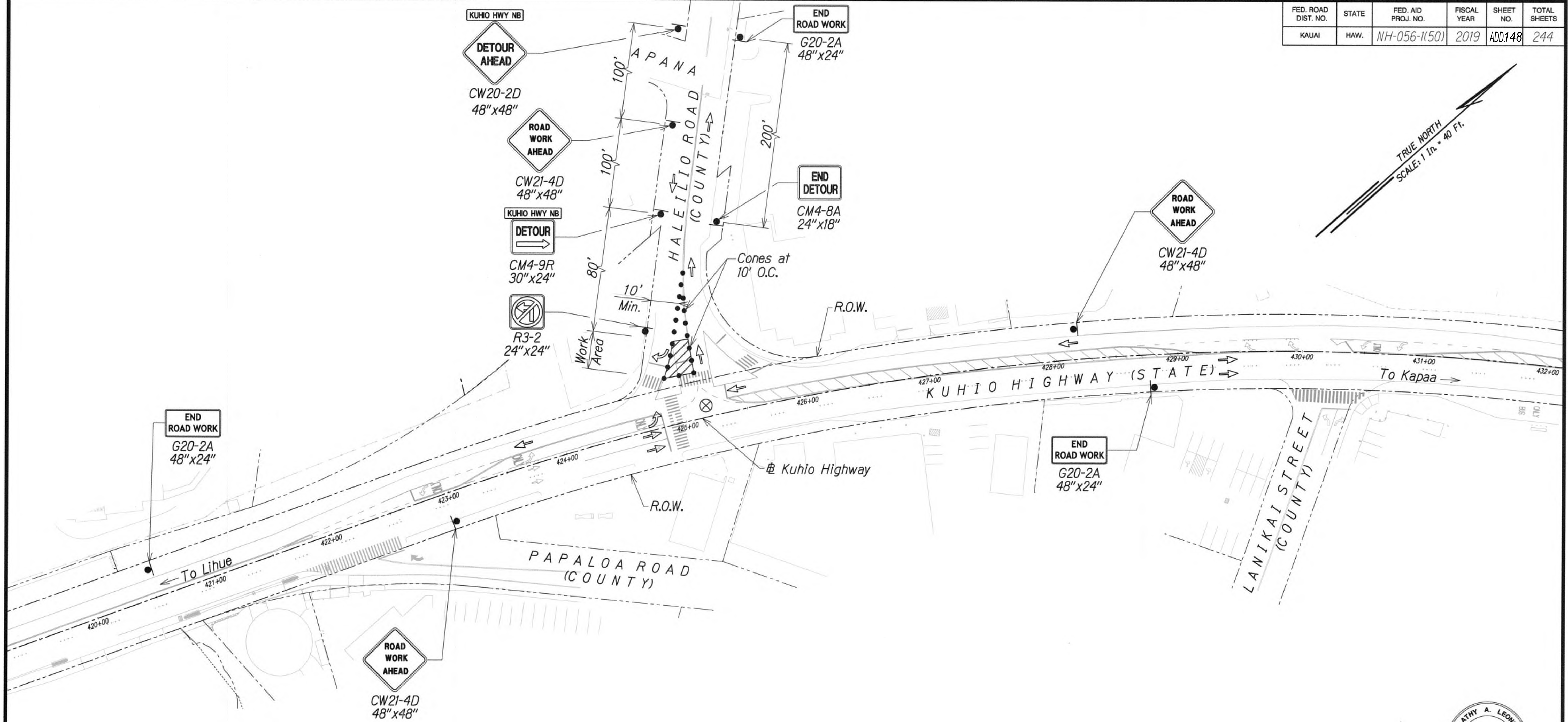
**TRAFFIC CONTROL PLAN 29**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

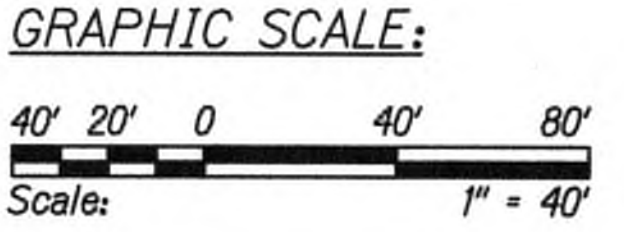
SHEET No. TC36 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(K50)	2019	ADD148	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'  
SEE TD3 FOR DETOUR ROUTE

Approved

*[Signature]*  
County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]*  
WILSON OKAMOTO CORP., LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 30**

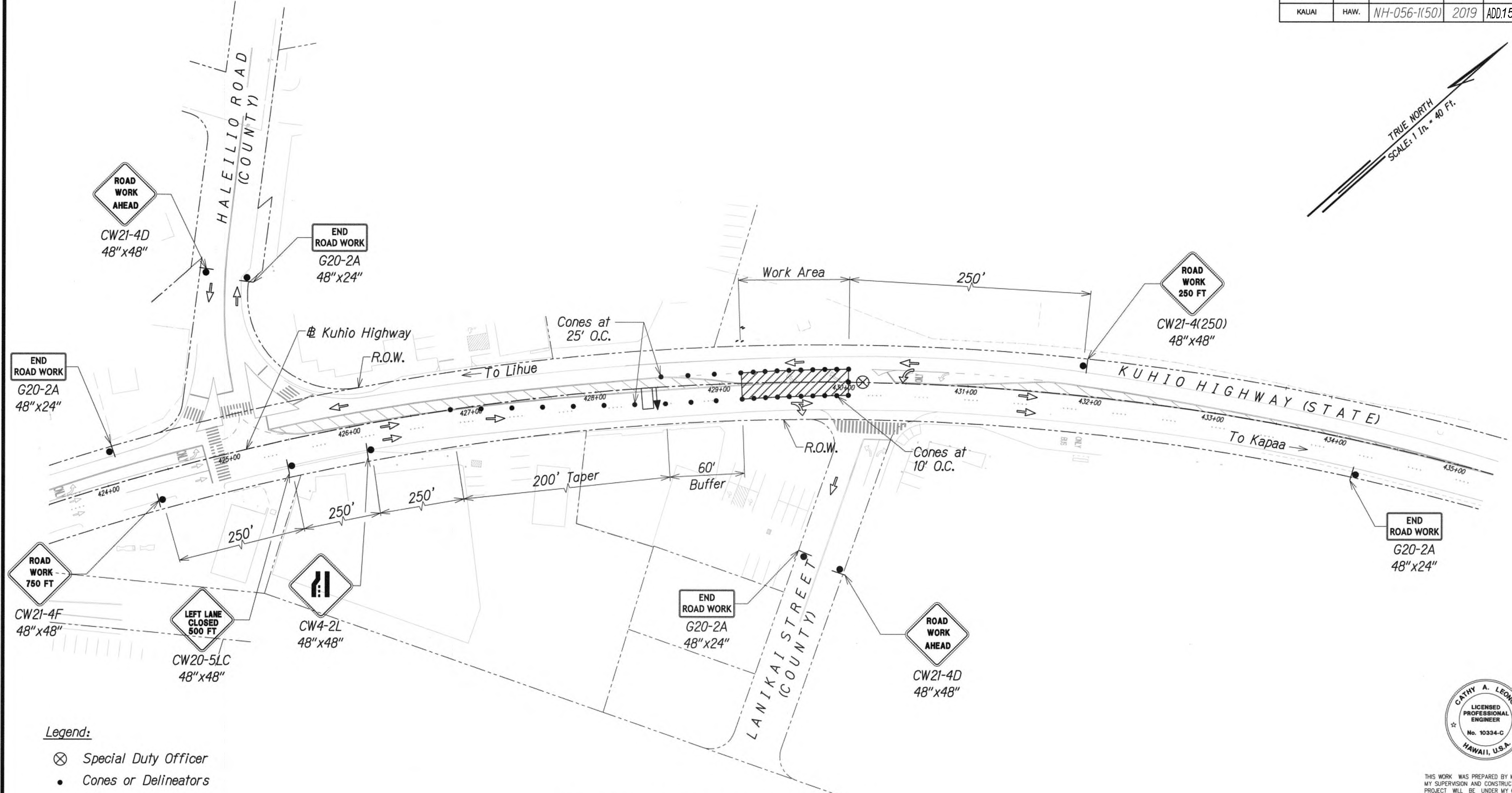
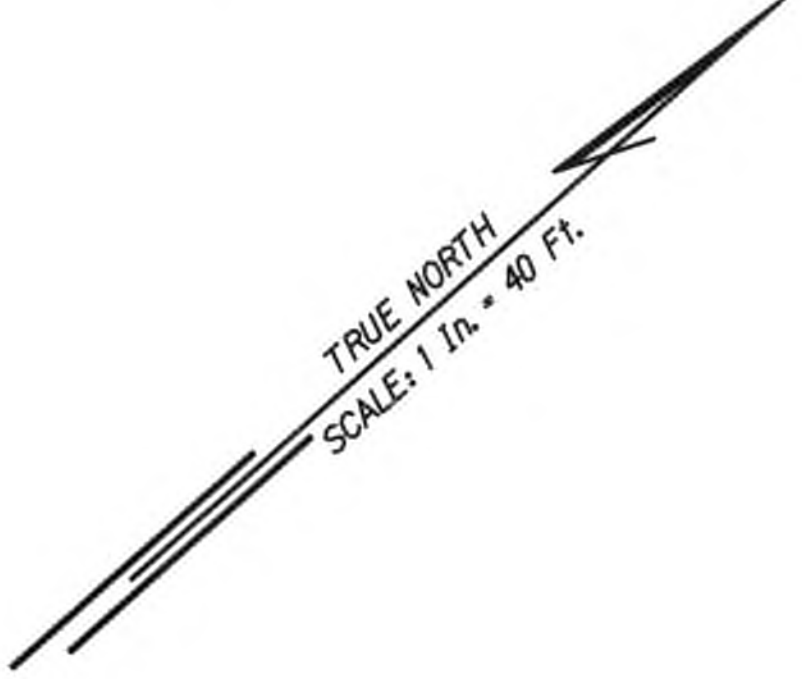
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(K50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC37 OF 63 SHEETS

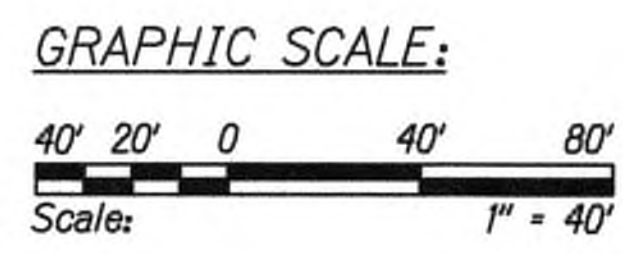








- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➡ Arrowboard Assembly



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19	Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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WILSON OKAMOTO CORP. U.C. EXP. DATE

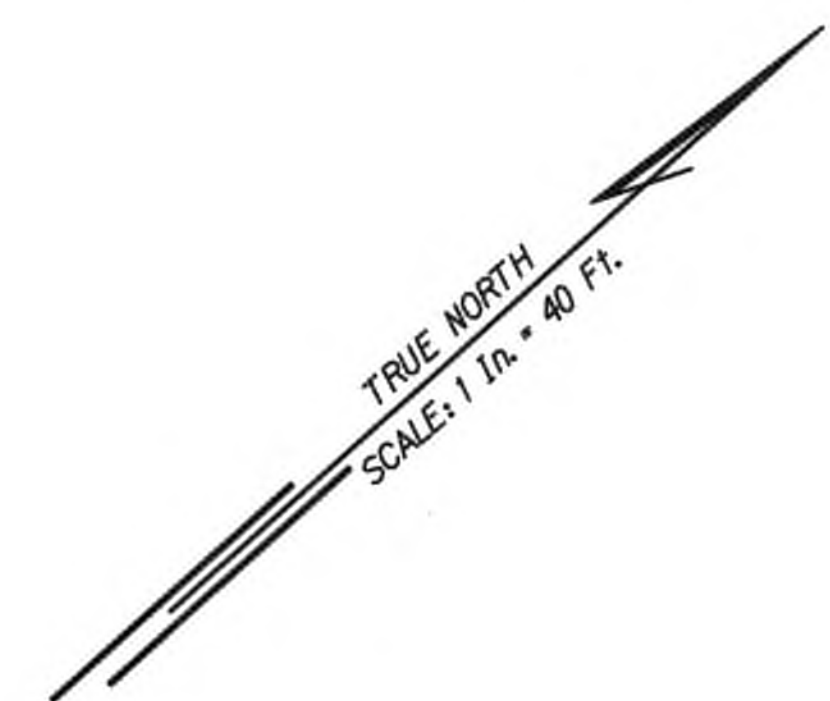
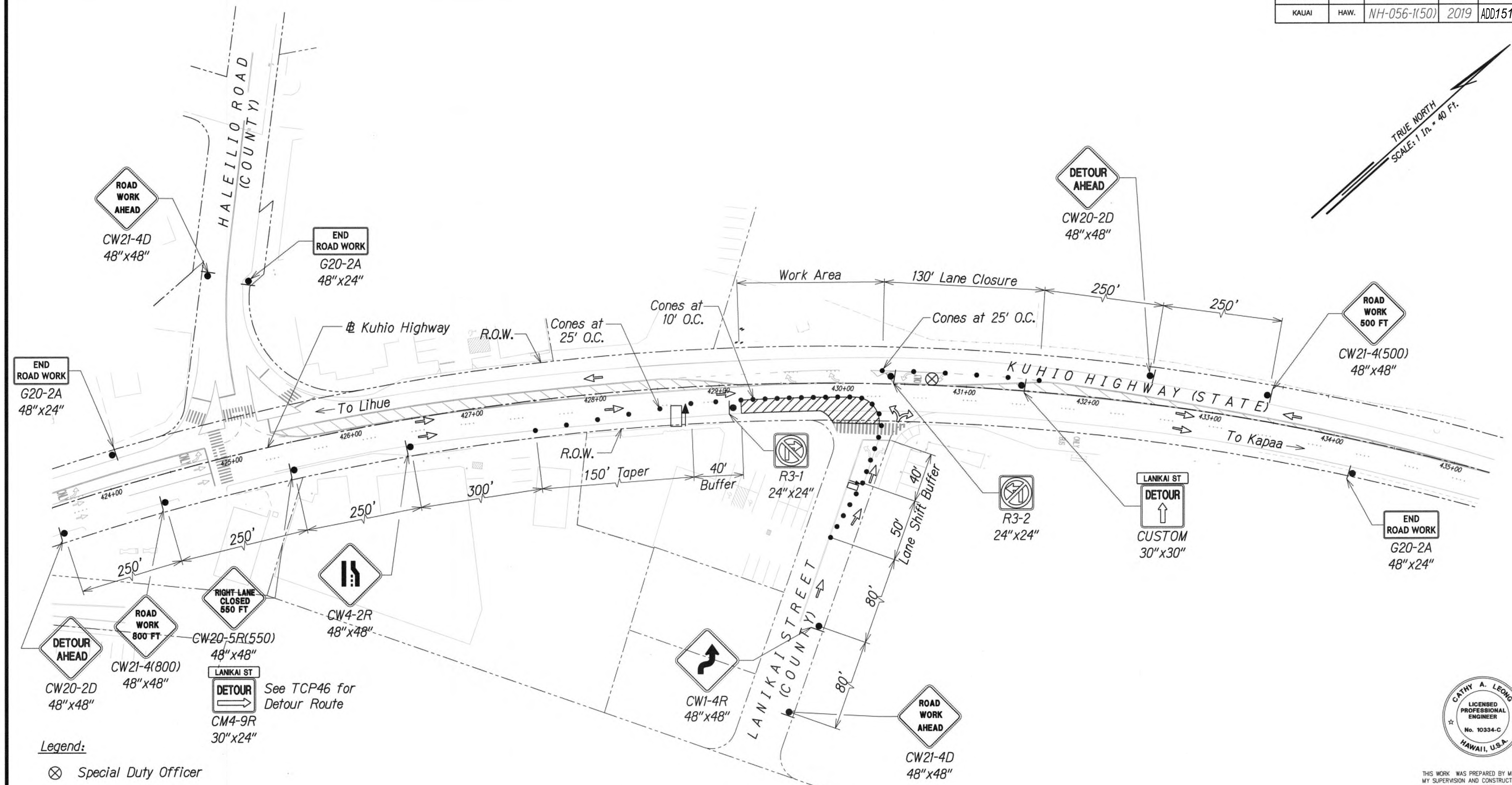
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN 32

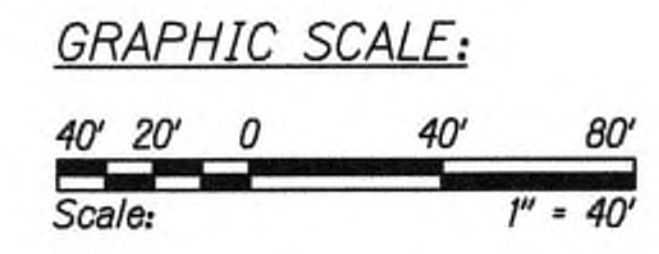
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC39 OF 63 SHEETS





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ▢ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'  
 SEE TD5 FOR DETOUR ROUTE

Approved  
  
 County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 Date

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 WILSON KAWATO CORP. APRIL 30, 2020 LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 33**

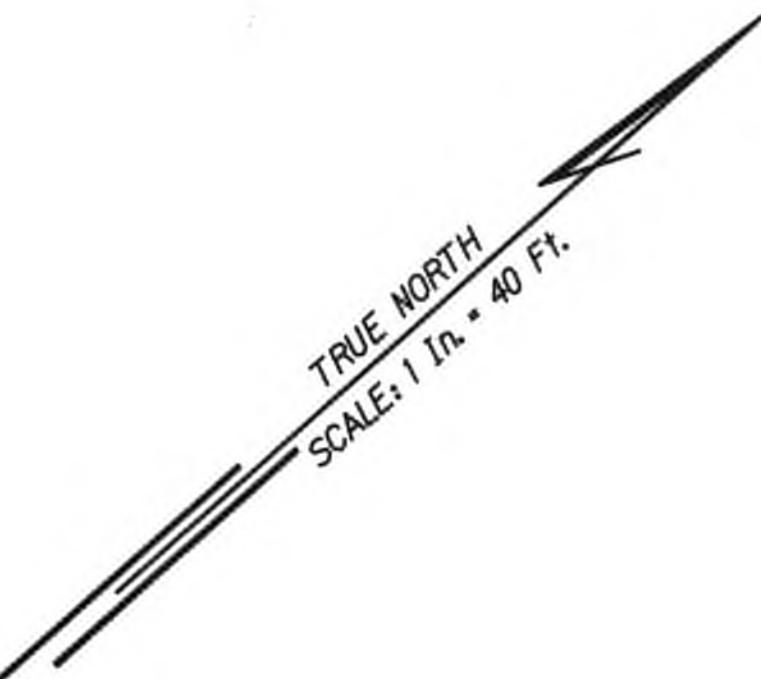
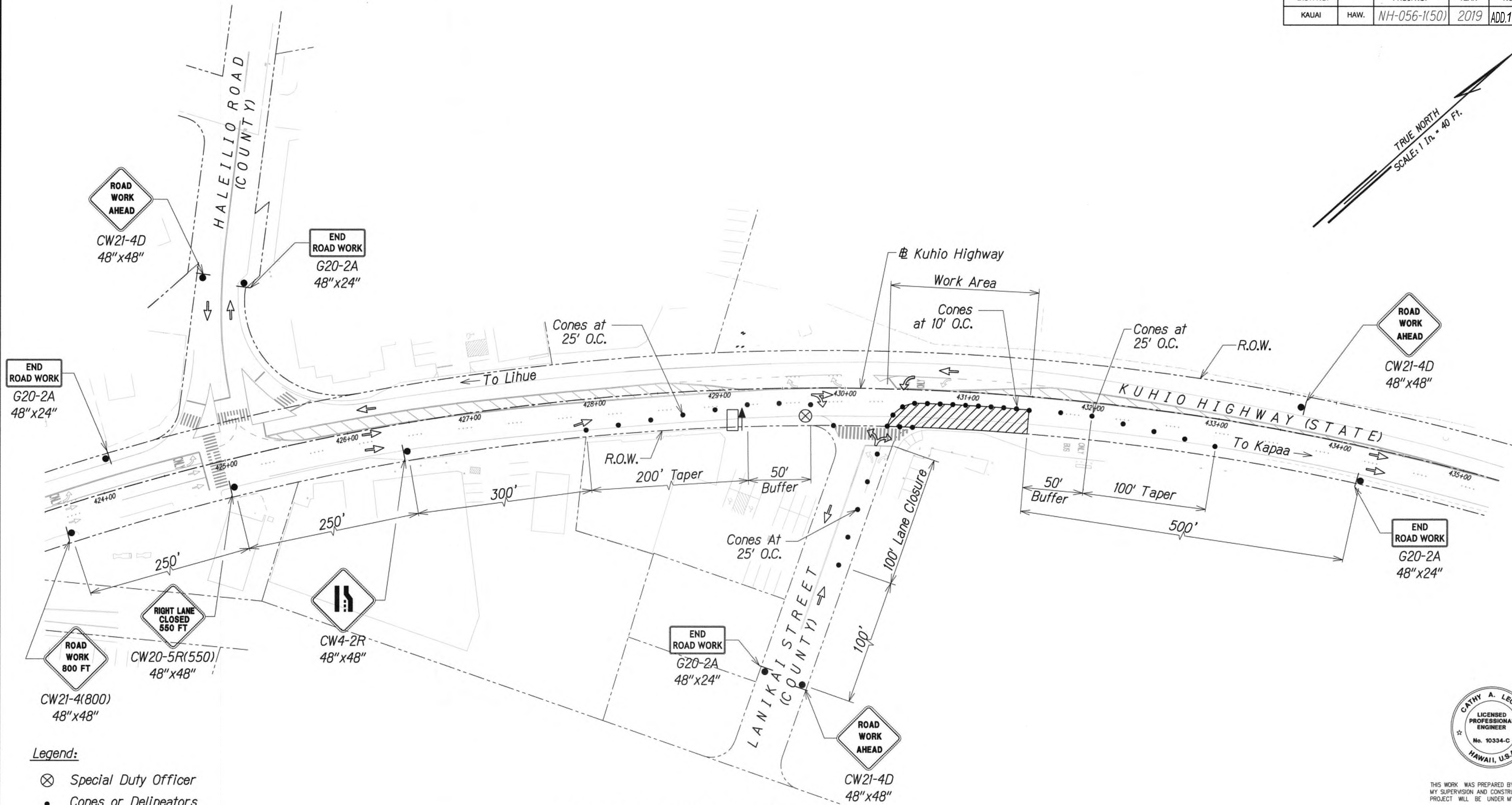
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 40'      Date: JULY 2019

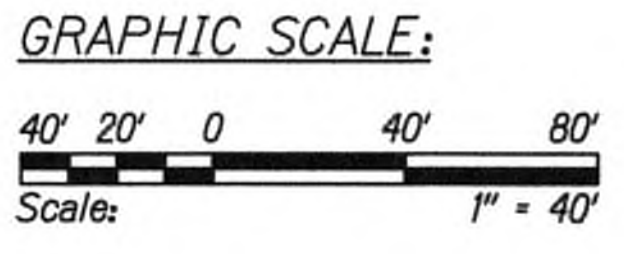
SHEET No. TC40 OF 63 SHEETS

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





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'

*Approved*  
 \_\_\_\_\_  
 County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 \_\_\_\_\_  
 Date

9/20/19	Δ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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 \_\_\_\_\_  
 WILSON KAMOTO CORP. LIC. EXP. DATE APRIL 30, 2020

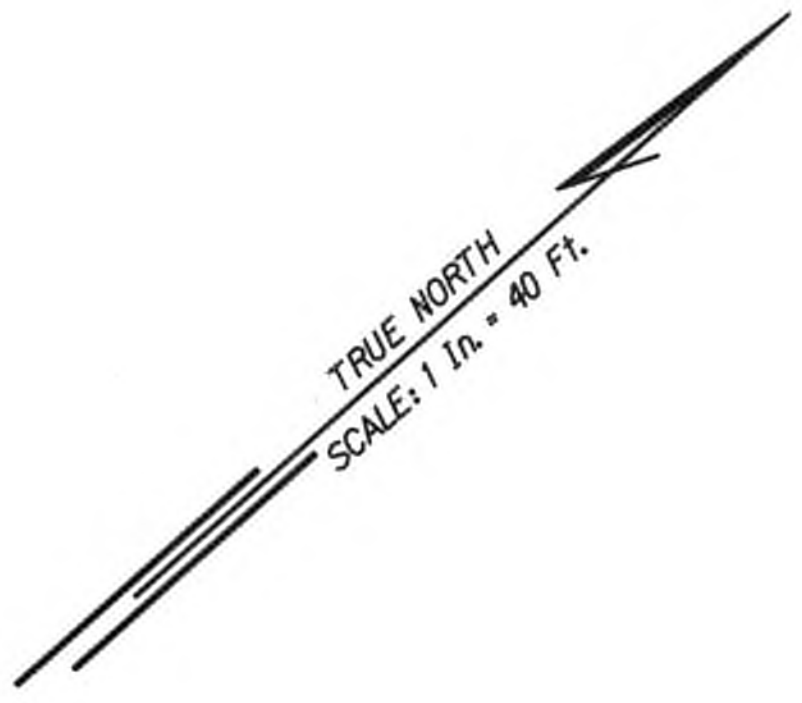
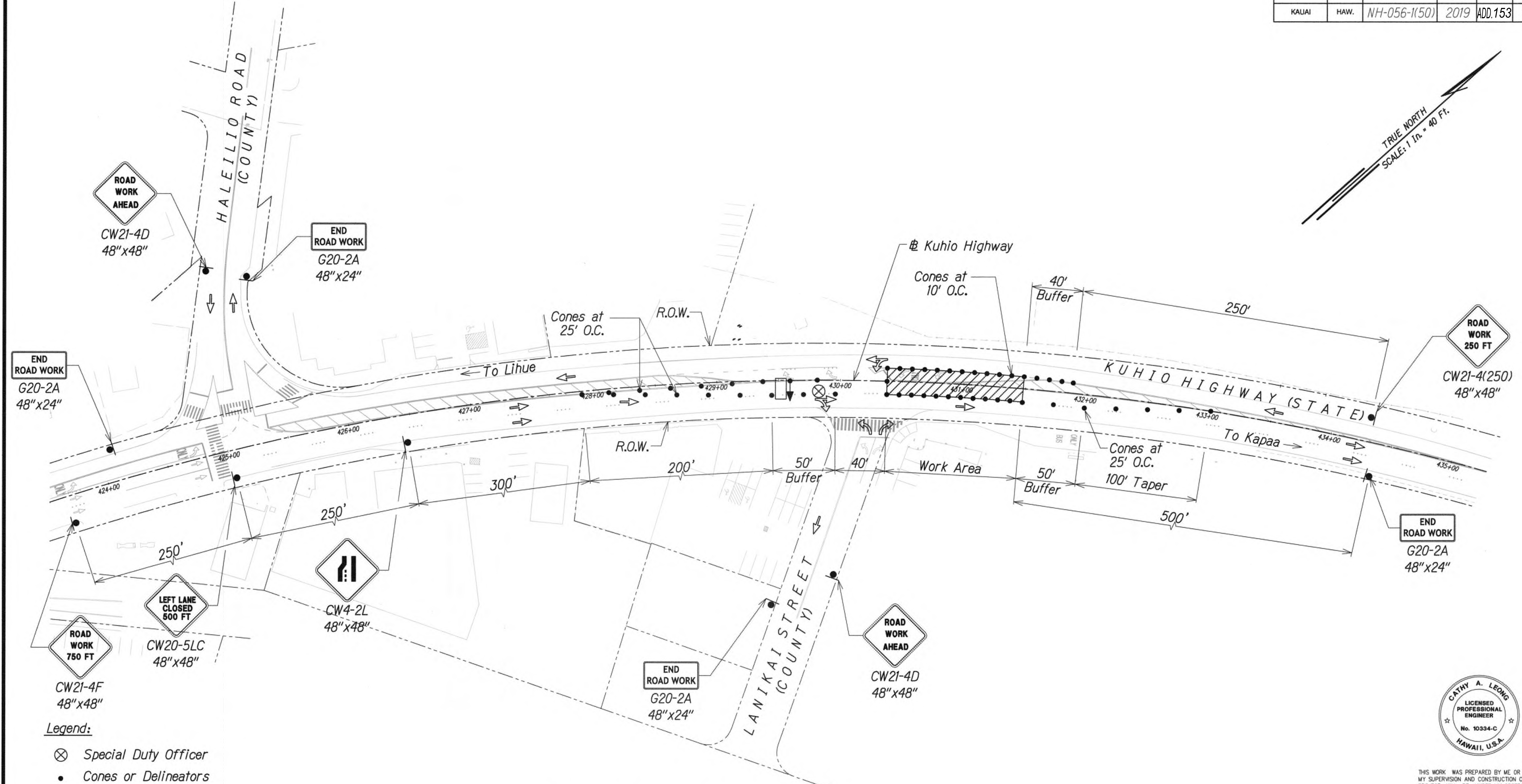
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 34**  
  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 40'      Date: JULY 2019

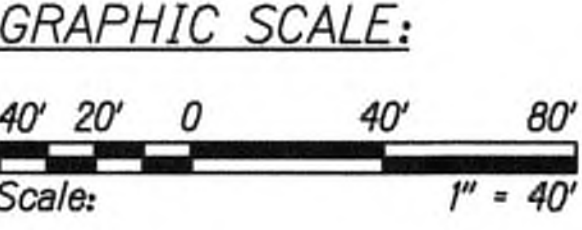
SHEET No. **TC41** OF **63** SHEETS  
**ADD.152**

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





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

*[Signature]*  
for County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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*[Signature]*  
WILSON KAMOTO CORP. LIC. EXP. DATE APRIL 30, 2020

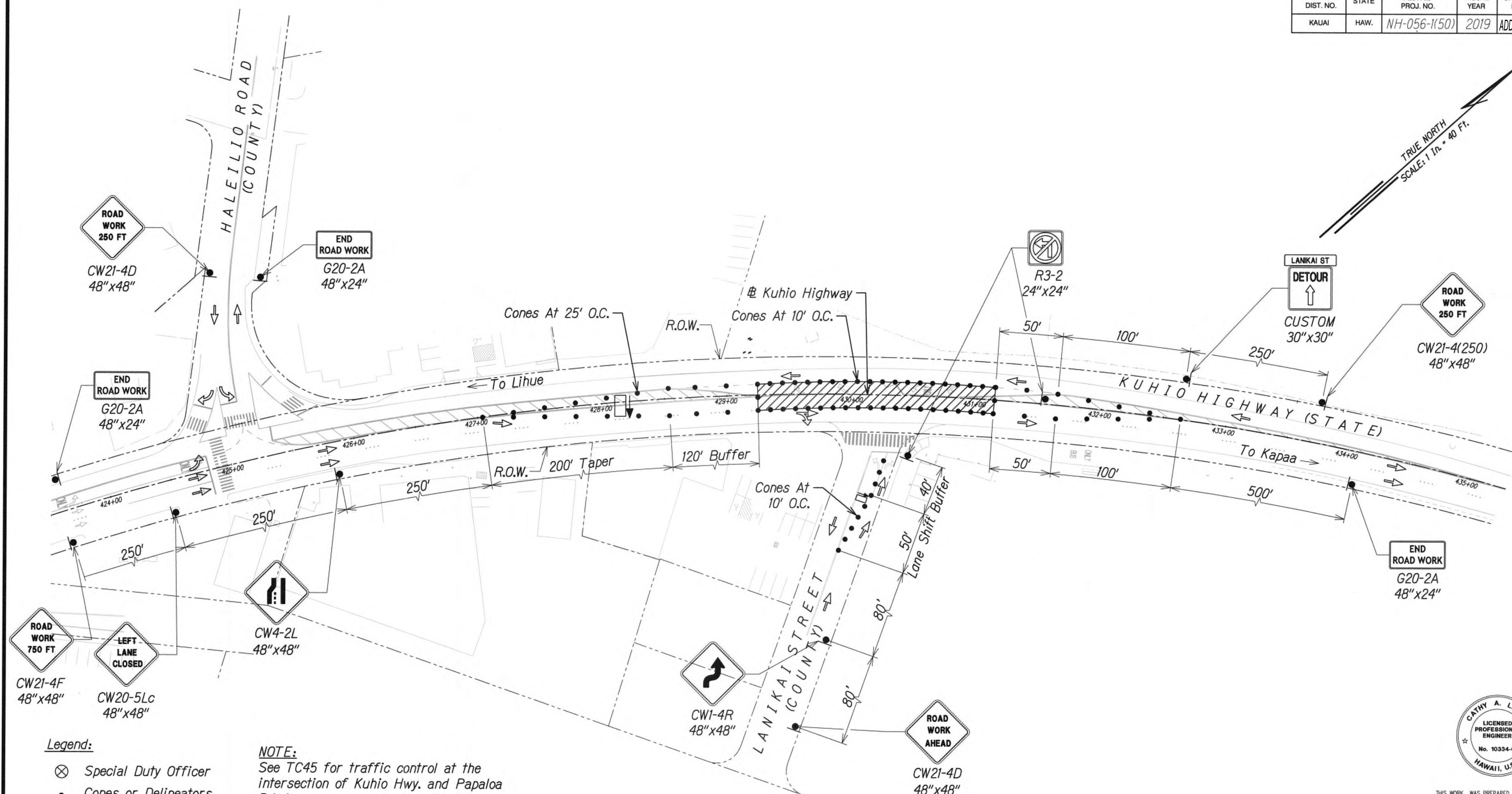
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 35**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

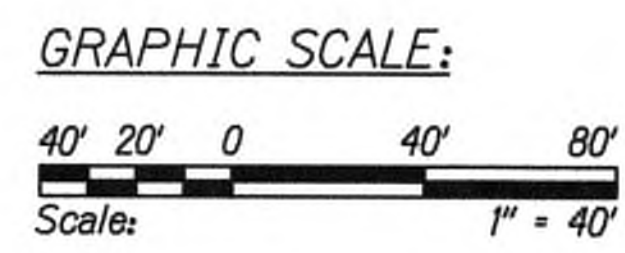
SHEET No. TC42 OF 63 SHEETS





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➡ Arrowboard Assembly

**NOTE:**  
See TC45 for traffic control at the intersection of Kuhio Hwy. and Papaloa Rd. to occur concurrently with this traffic control plan.



**TRAFFIC CONTROL PLAN - PHASE 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'  
SEE TD7 FOR DETOUR ROUTE

Approved  
  
\_\_\_\_\_  
County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.



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\_\_\_\_\_  
WILSON OKAMOTO CORP., LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

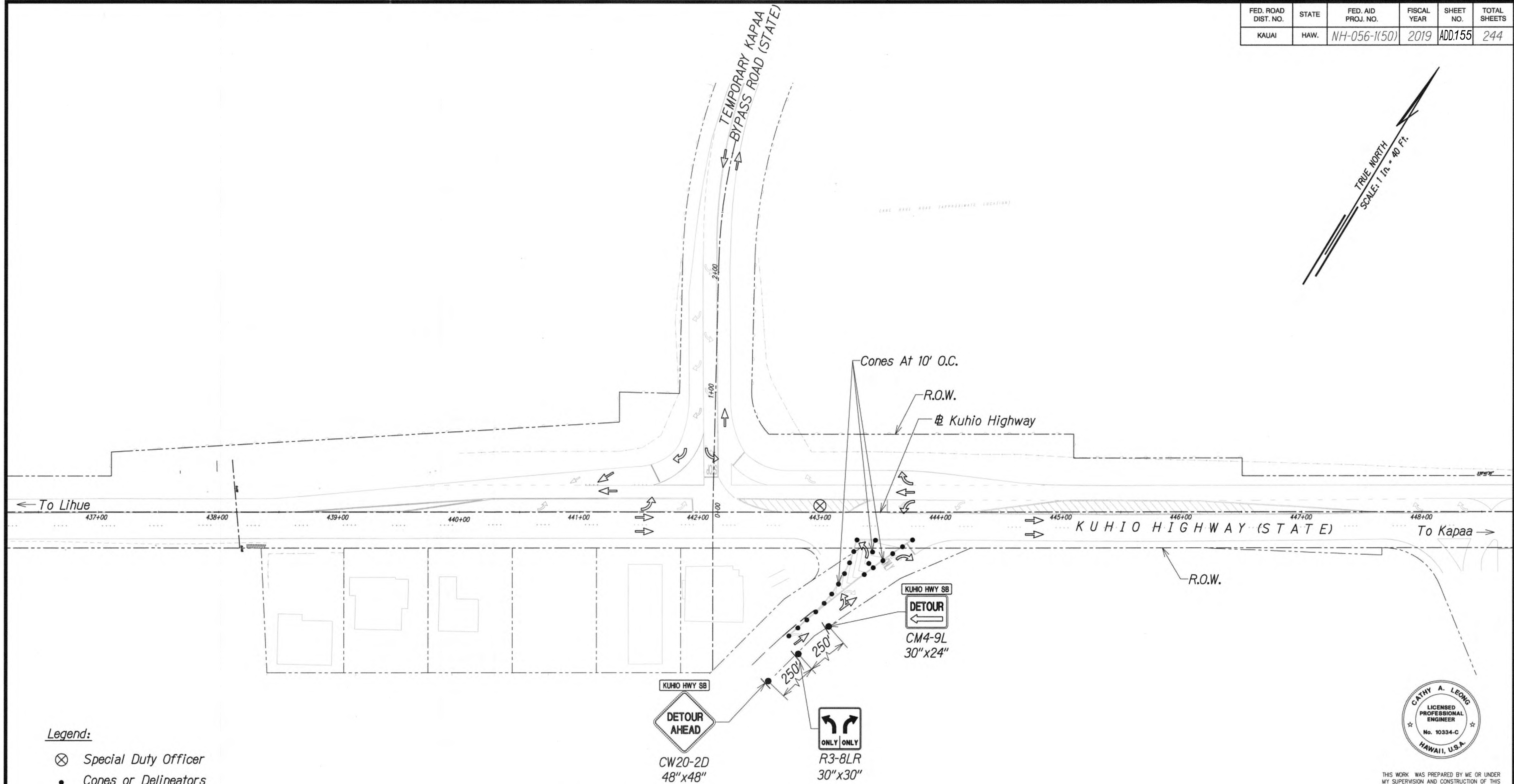
**TRAFFIC CONTROL PLAN 36**

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

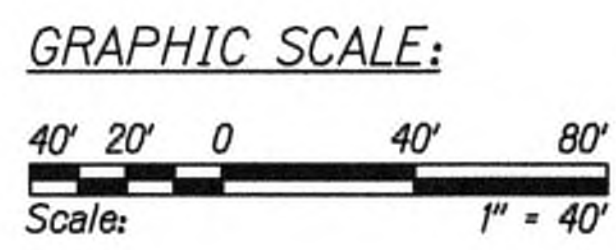
SHEET No. TC43 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.155	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



**TRAFFIC CONTROL PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 40'  
 SEE TD7 FOR DETOUR ROUTE

Approved

*[Signature]*  
 for County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
------	----------



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*[Signature]* APRIL 30, 2020  
 WILSON OKAMOTO CORP. LIC. EXP. DATE

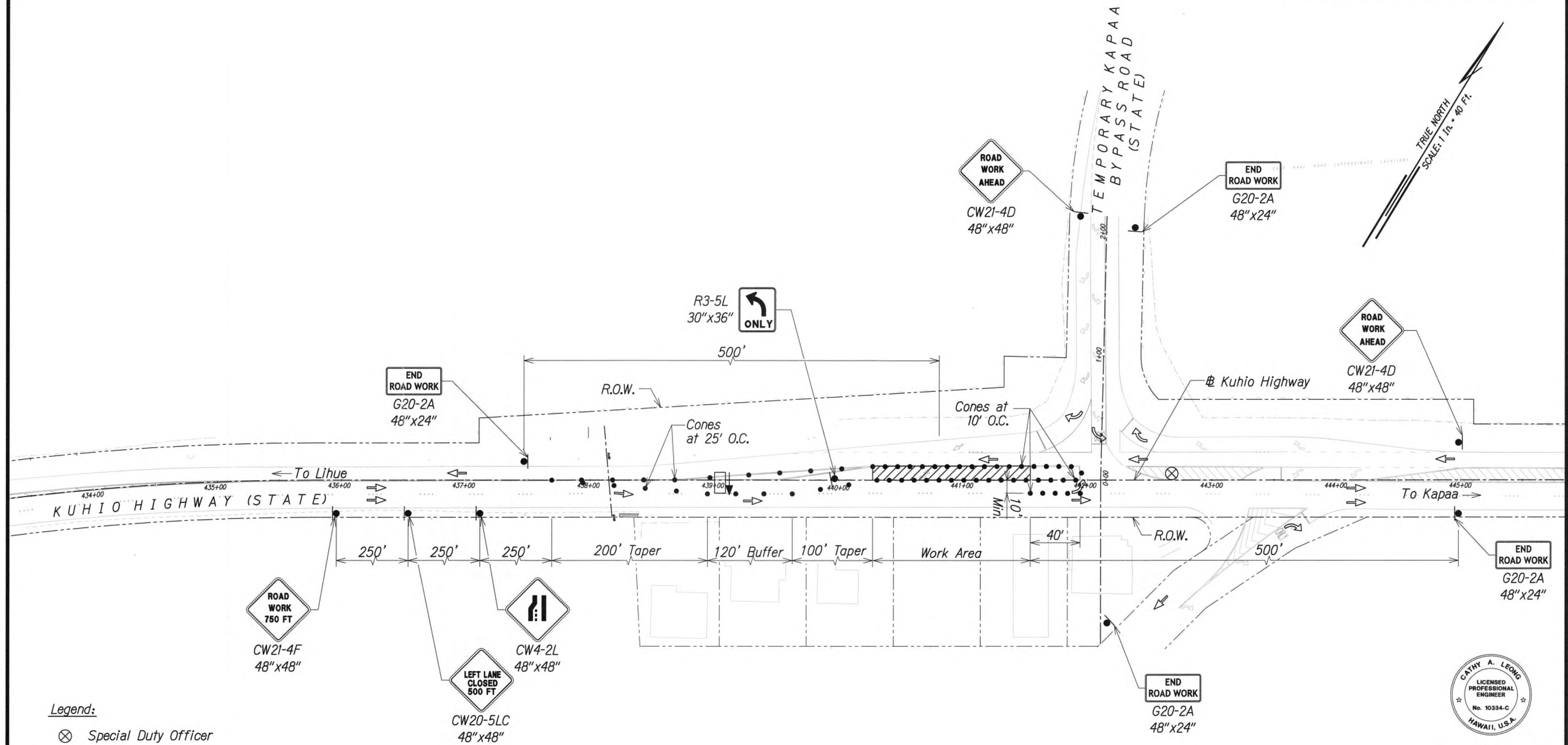
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 37**  
  
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40'      Date: JULY 2019  
SHEET No. **TC44** OF 63 SHEETS









- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▭ Arrowboard Assembly

GRAPHIC SCALE:  
40' 20' 0 40' 80'  
Scale: 1" = 40'

TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

County Engineer  
County of Kauai  
(For work within the County right-of-way)

Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



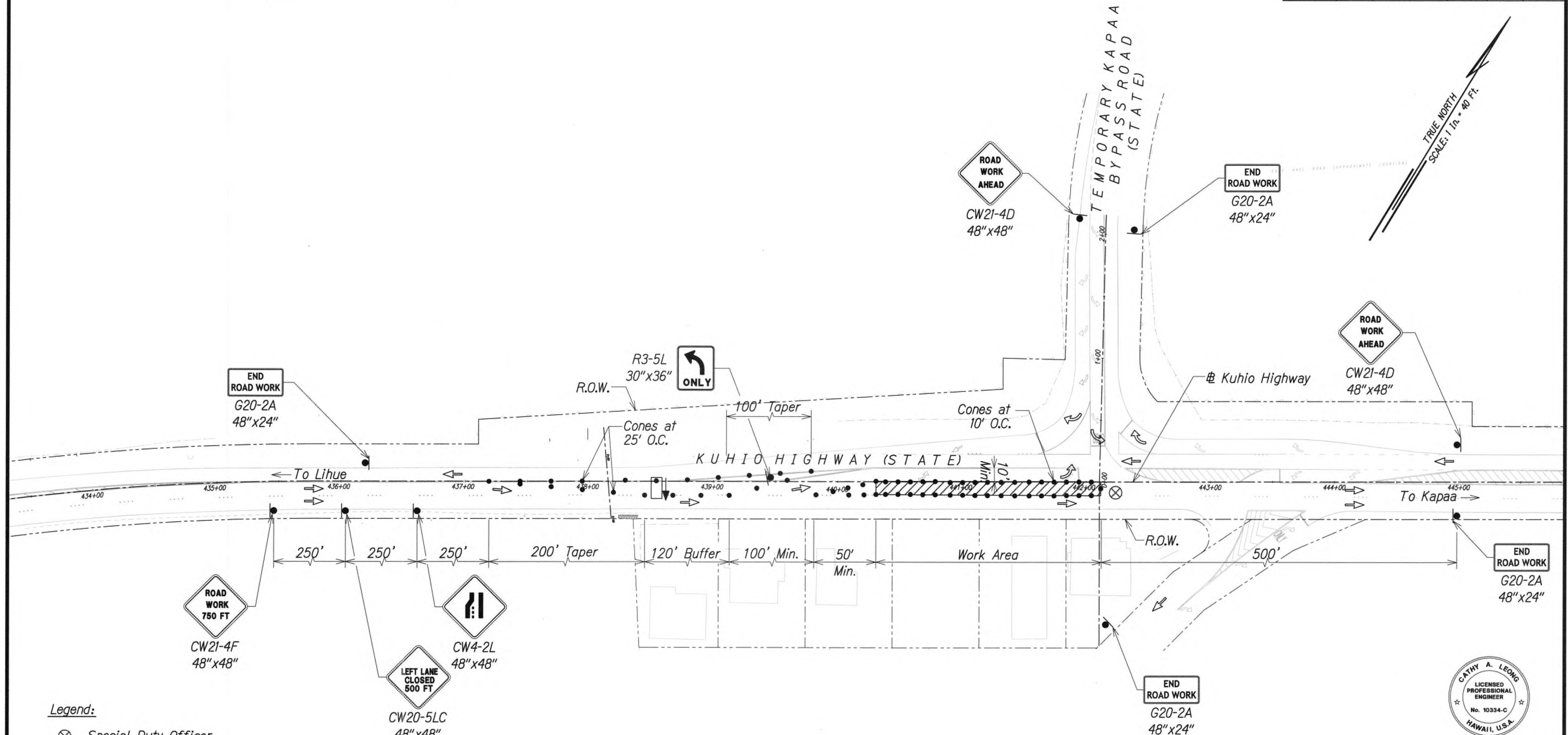
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.  
APR 30, 2020  
WILSON KAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

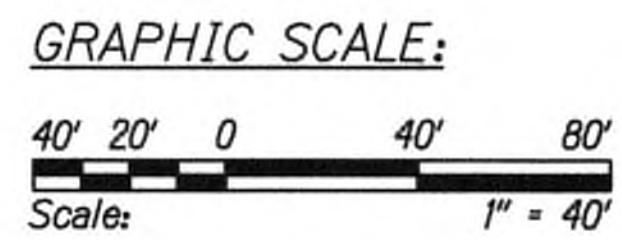
TRAFFIC CONTROL PLAN 39

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019  
SHEET No. TC46 OF 63 SHEETS





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'

Approved

for County Engineer  
County of Kauai  
(For work within the County right-of-way)

Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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APRIL 30, 2020  
WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN 40

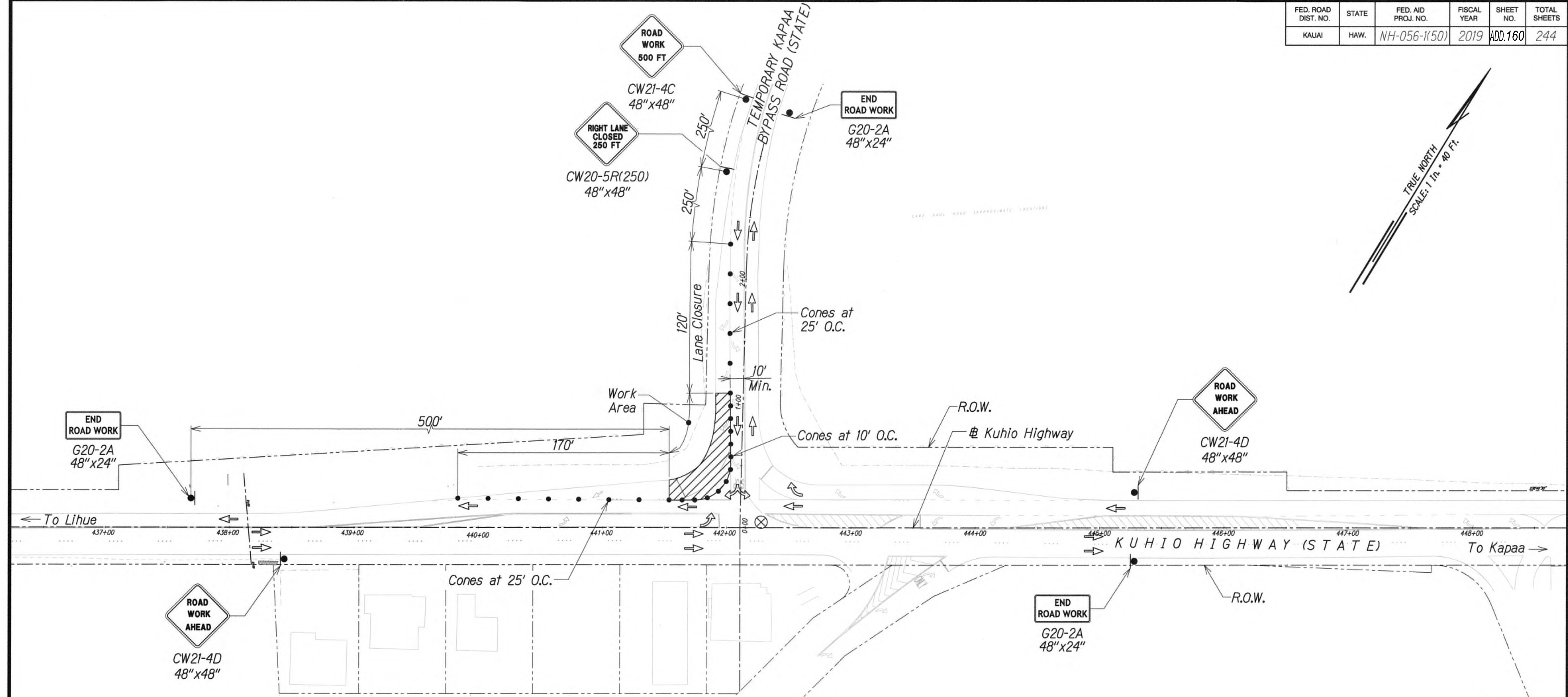
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC47 OF 63 SHEETS





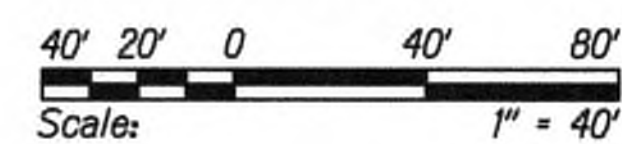




Legend:

- ⊗ Special Duty Officer
- Cones or Delineators
- Sign
- ⇒ Direction of Traffic
- ▢ Arrowboard Assembly

GRAPHIC SCALE:



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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WILSON YAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 42**

**KUHIU HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC49 OF 63 SHEETS

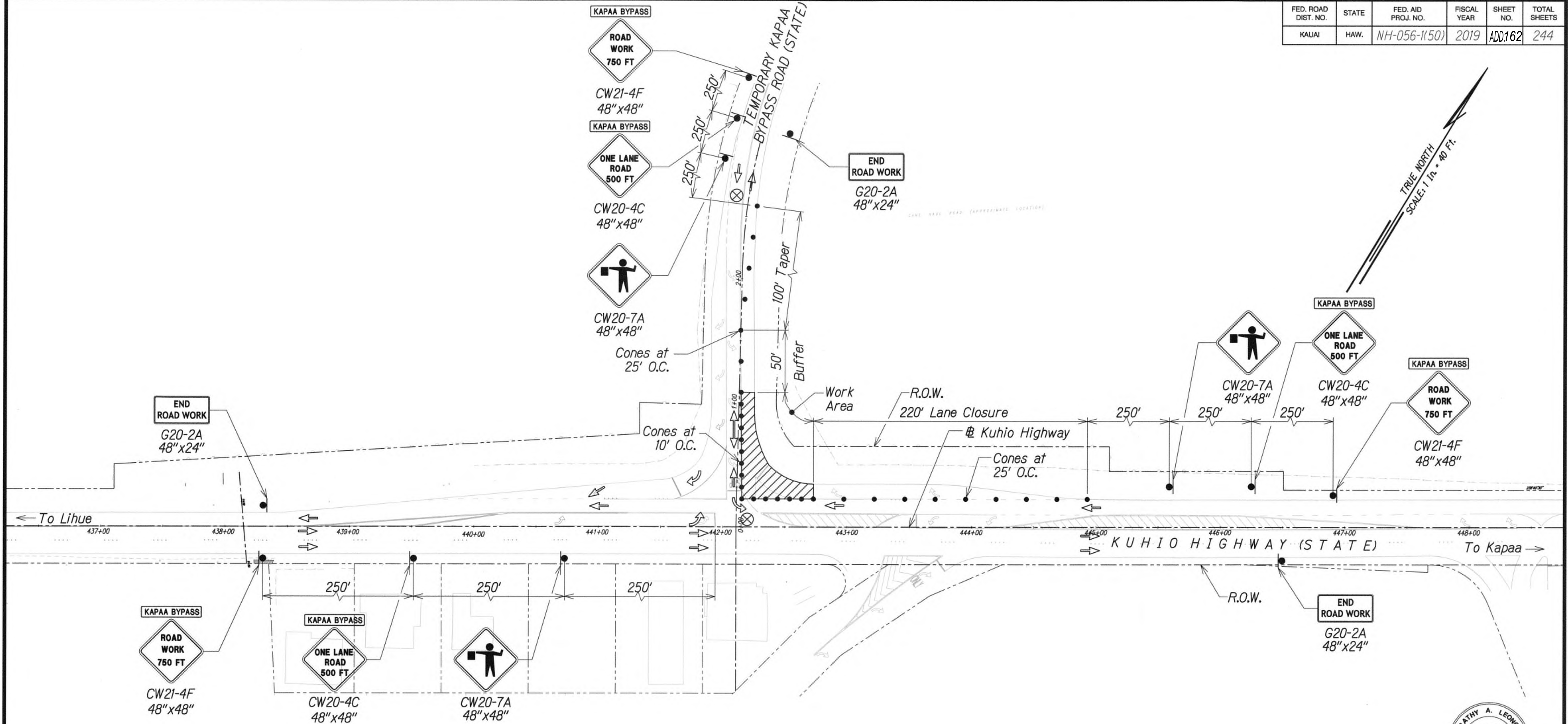
9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

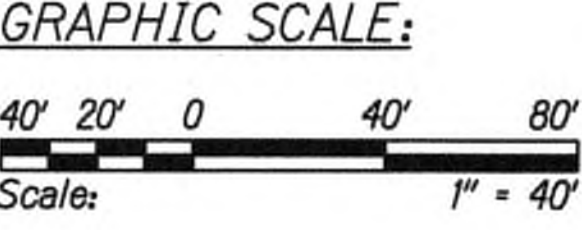








- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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Cathy A. Leong  
WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

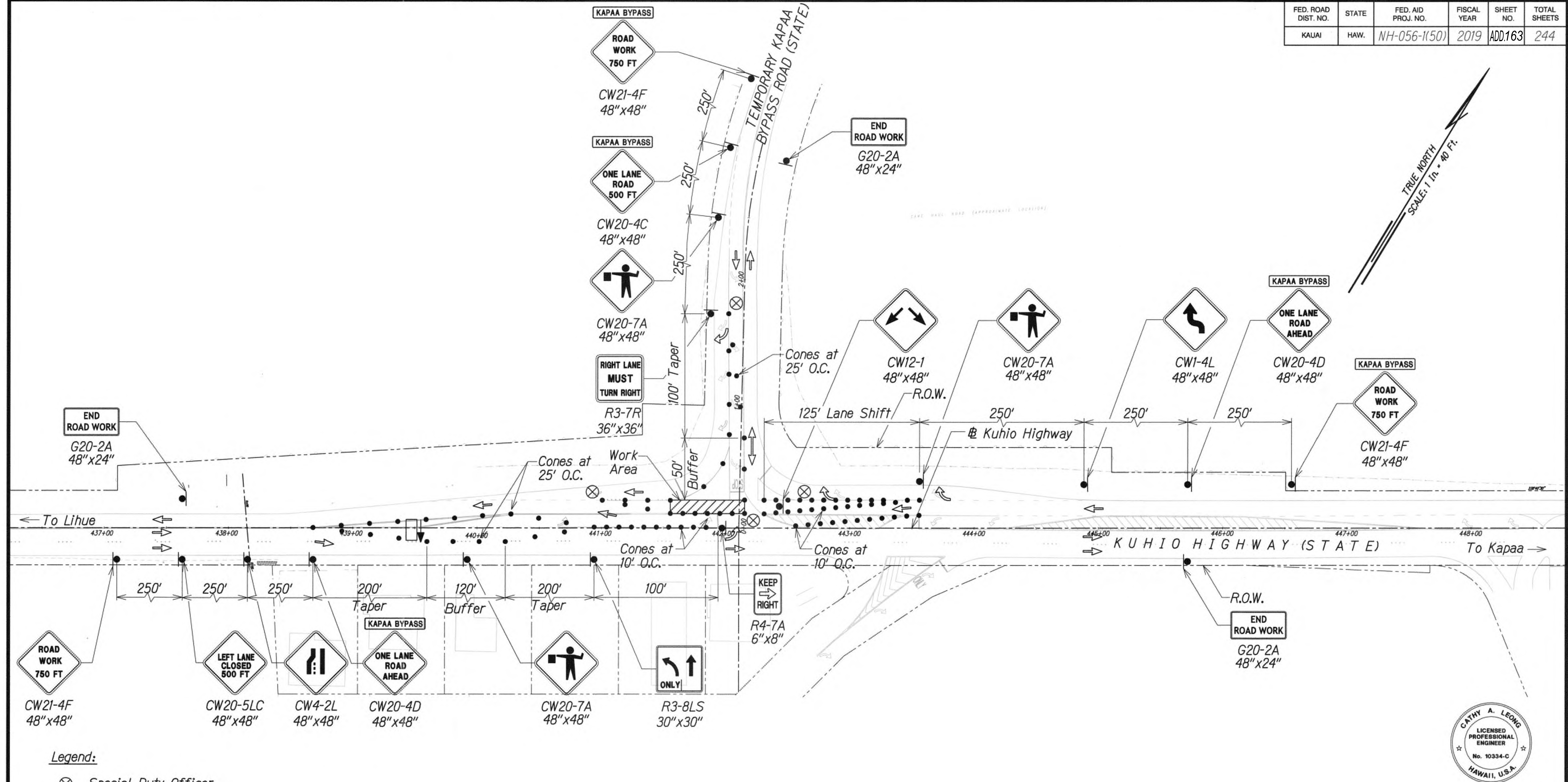
**TRAFFIC CONTROL PLAN 44**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

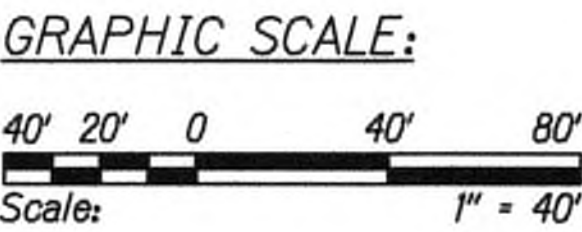
SHEET No. TC51 OF 63 SHEETS

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▭ Arrowboard Assembly



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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*Cathy A. Leong* APRIL 30, 2020  
WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN 45

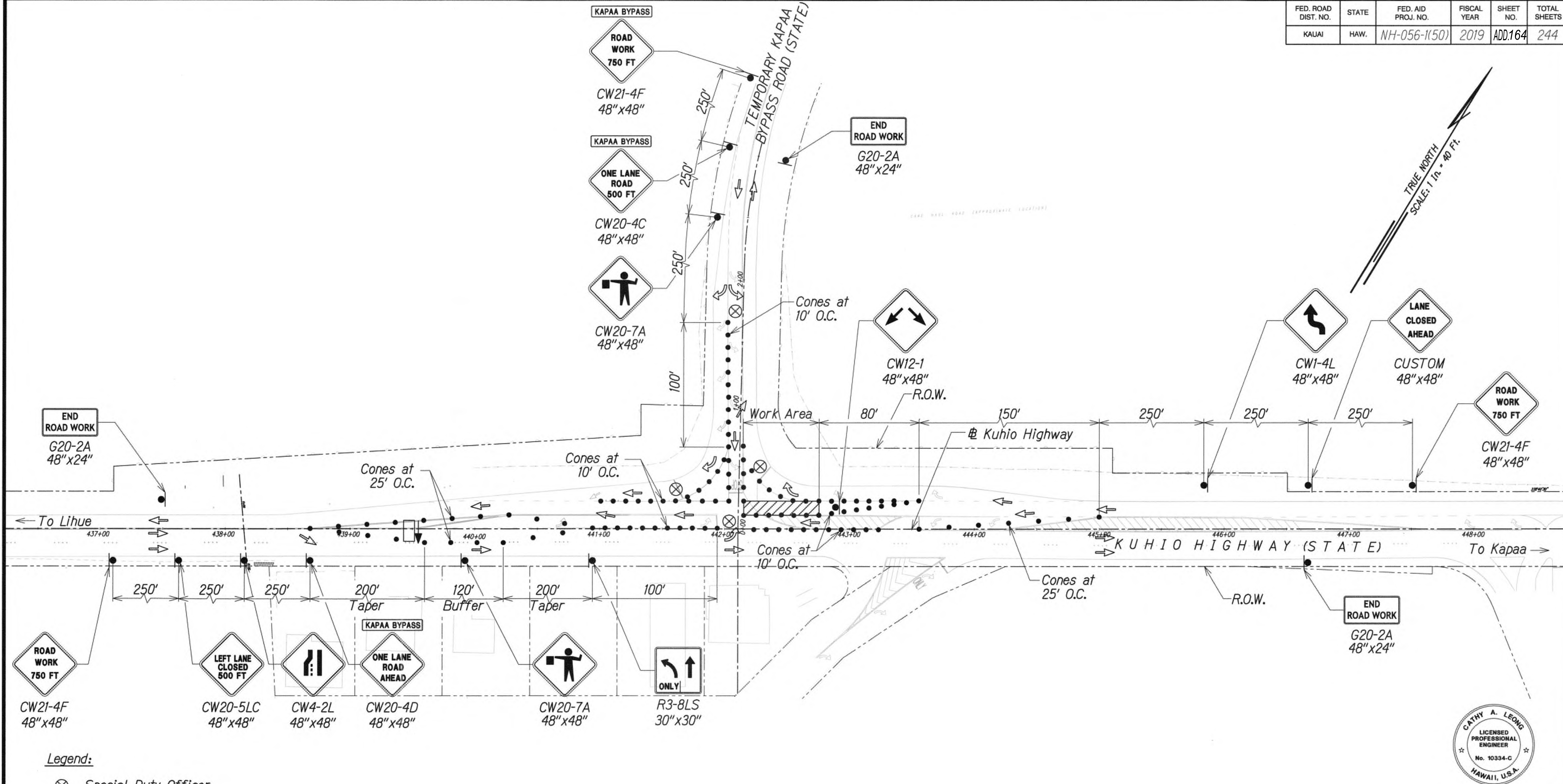
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC52 OF 63 SHEETS

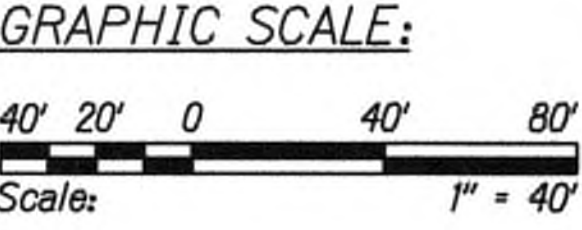
9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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*Cathy A. Leong*  
WILSON OKAMOTO CORP., LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN 46

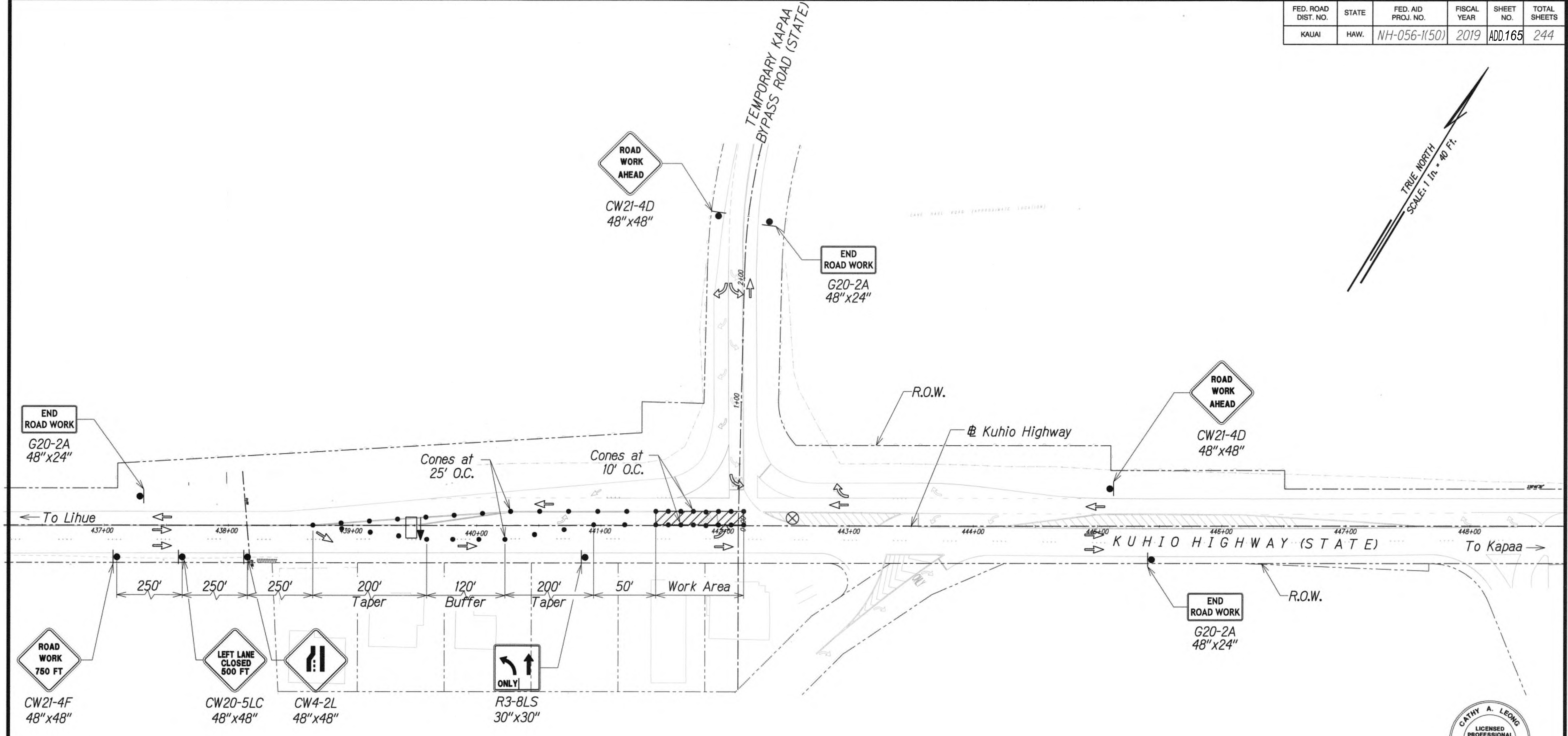
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC53 OF 63 SHEETS

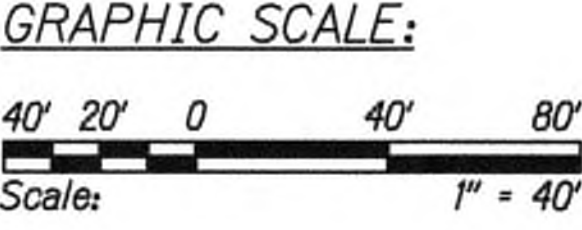
9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ▢ Arrowboard Assembly



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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*Cathy A. Leong*  
WILSON GRAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN 47**

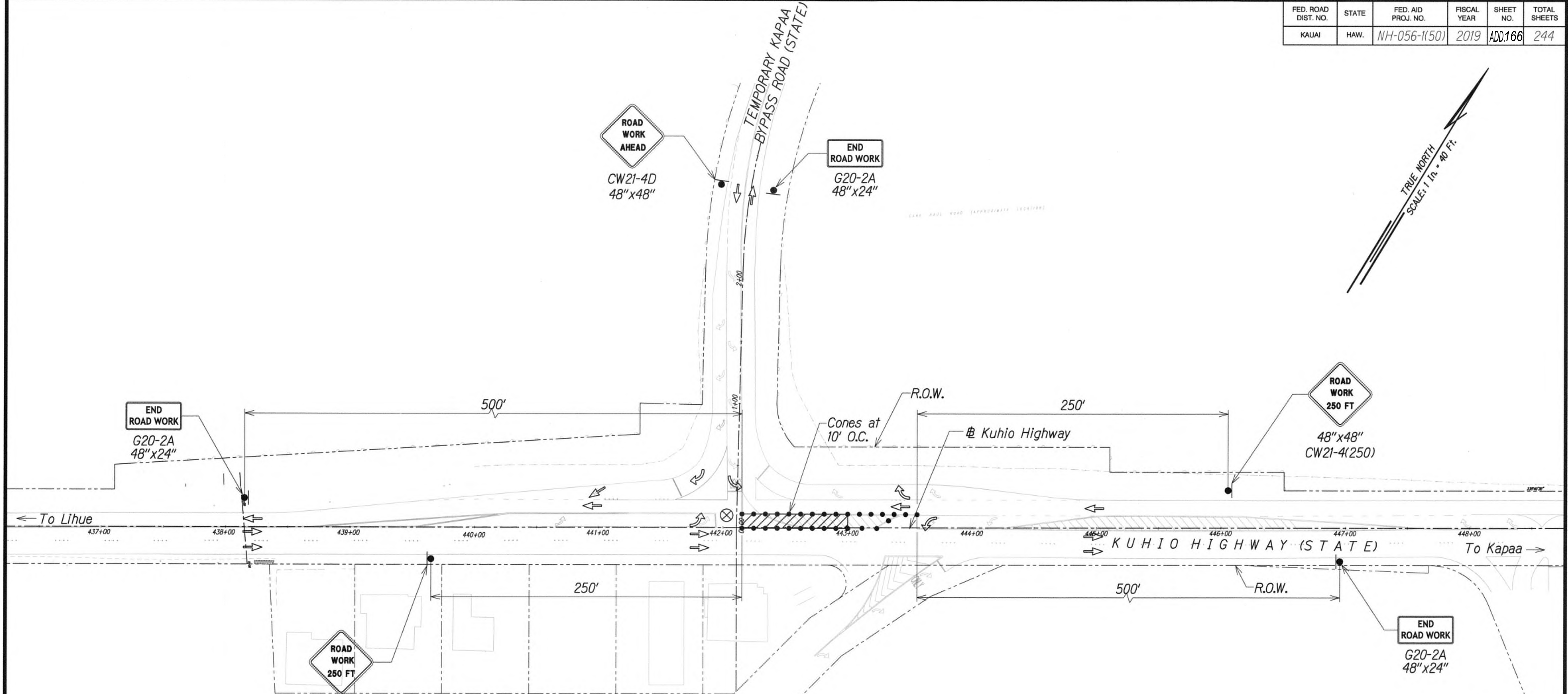
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

SHEET No. TC54 OF 63 SHEETS

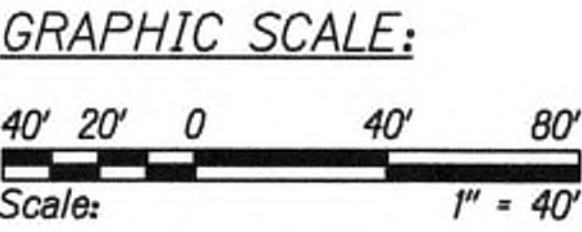
9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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*Cathy A. Leong*  
WILSON GRAMOTO CORP., LIC. EXP. DATE APRIL 30, 2020

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

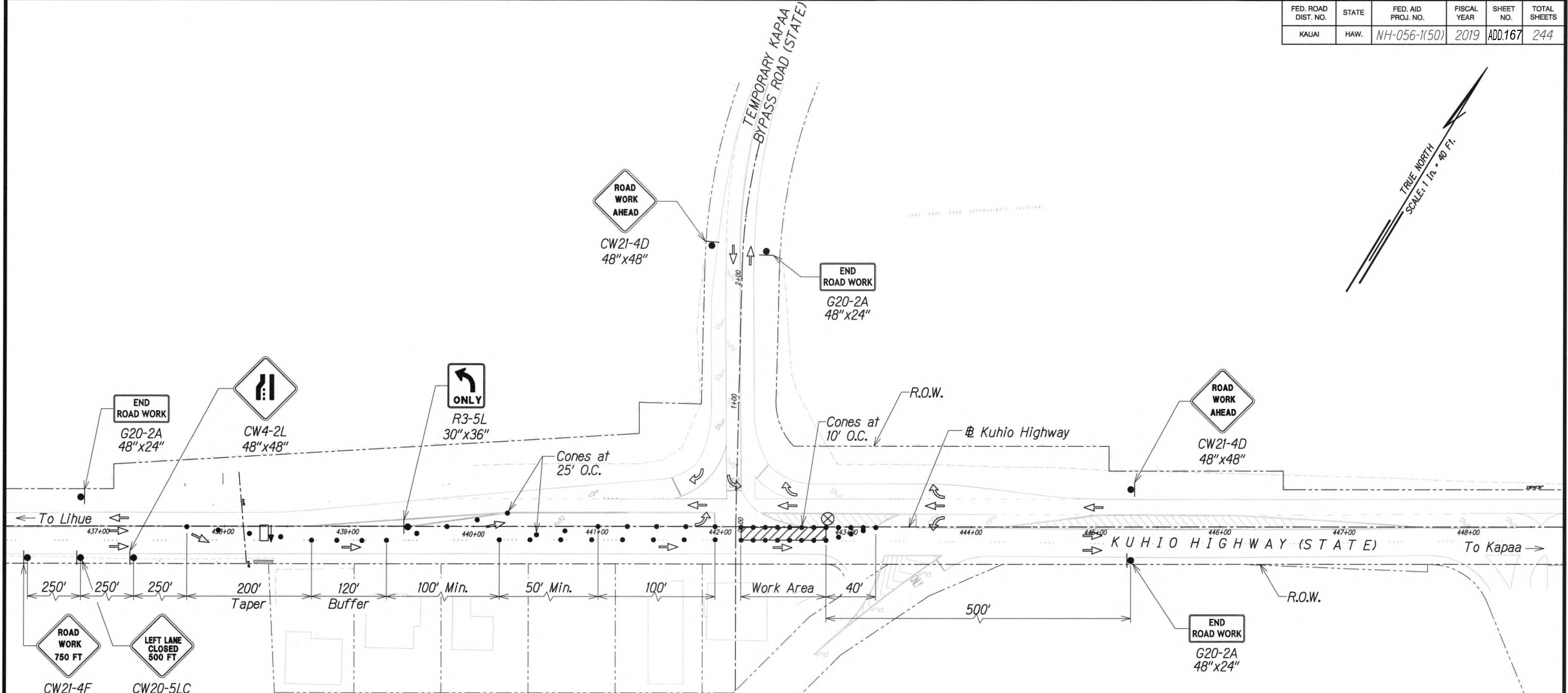
**TRAFFIC CONTROL PLAN 48**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

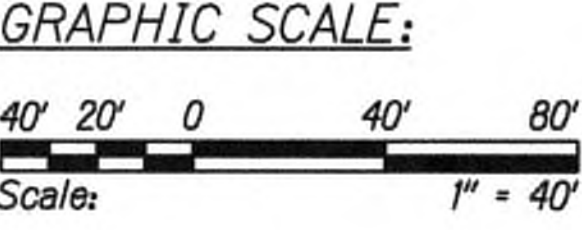
SHEET No. TC55 OF 63 SHEETS

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly



TRAFFIC CONTROL PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 40'



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*Cathy A. Leong*  
APR 30, 2020  
WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN 49

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 40' Date: JULY 2019

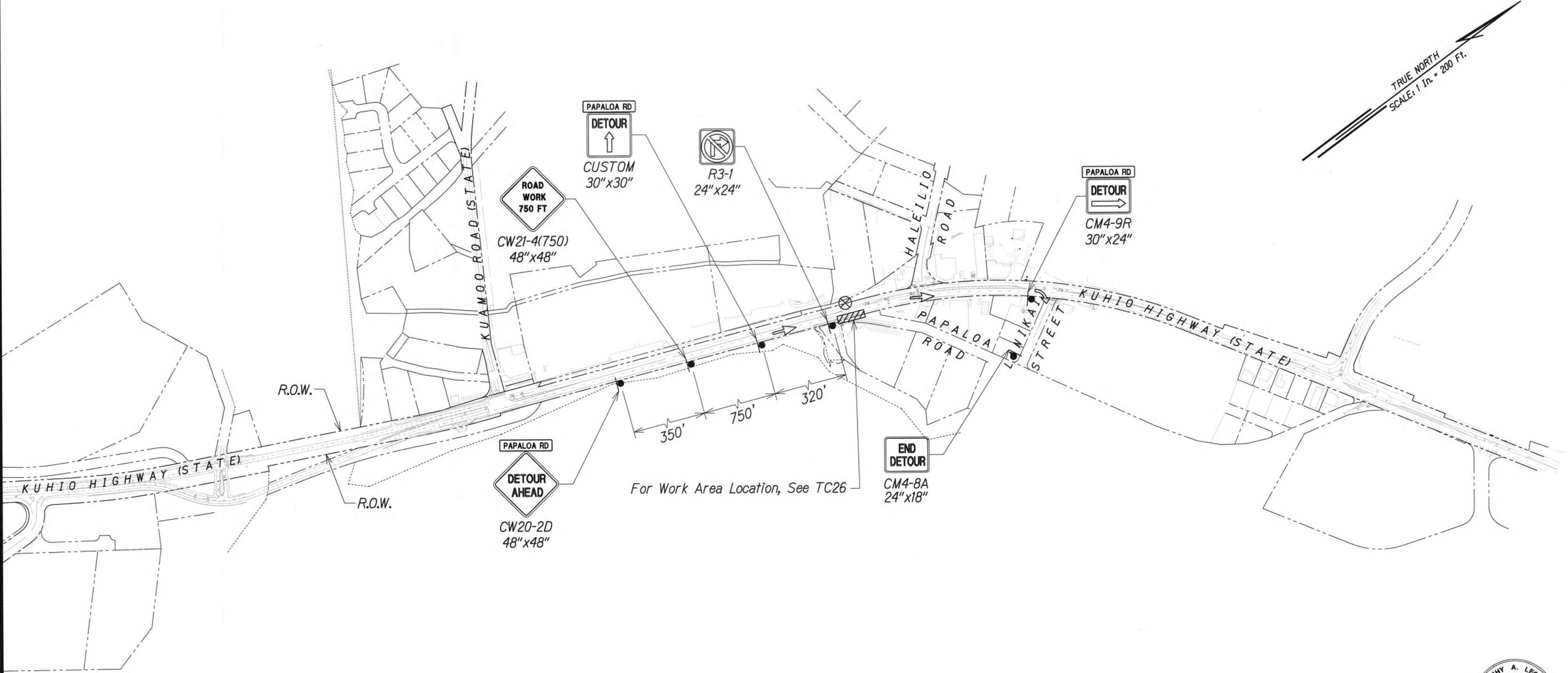
SHEET No. TC56 OF 63 SHEETS

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



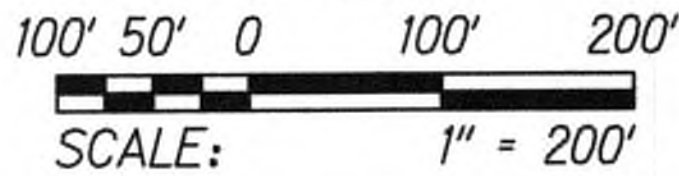
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD168	244



Legend:

- ⊗ Special Duty Officer
- Cones or Delineators
- Sign
- ➡ Direction of Traffic
- ➡ Arrowboard Assembly
- ▨ Work Area

GRAPHIC SCALE:



**DETOUR PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 200'  
 SEE TC25 FOR TRAFFIC CONTROL PLAN

Approved

*[Signature]*  
 for County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]* APRIL 30, 2020  
 WILSON-KAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

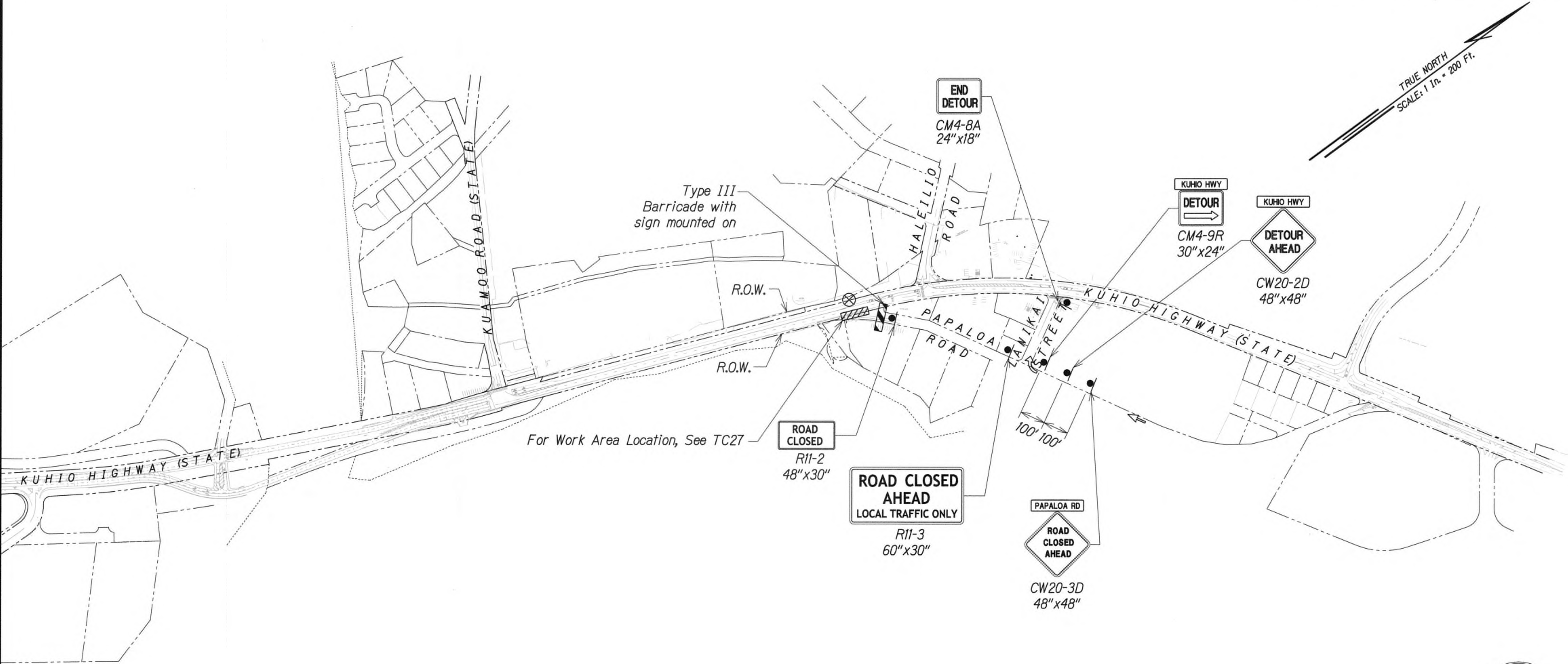
**DETOUR PLAN 01**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 200' Date: JULY 2019

SHEET No. *TD1* OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.169	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly
  - ▨ Type III Barricade
  - ▨ Work Area

GRAPHIC SCALE:  
 100' 50' 0 100' 200'  
 SCALE: 1" = 200'

**DETOUR PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 200'  
 SEE TC26 FOR TRAFFIC CONTROL PLAN

Approved

*[Signature]*  
 for County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 Date

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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*[Signature]*  
 WILSON-OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

DETOUR PLAN 02

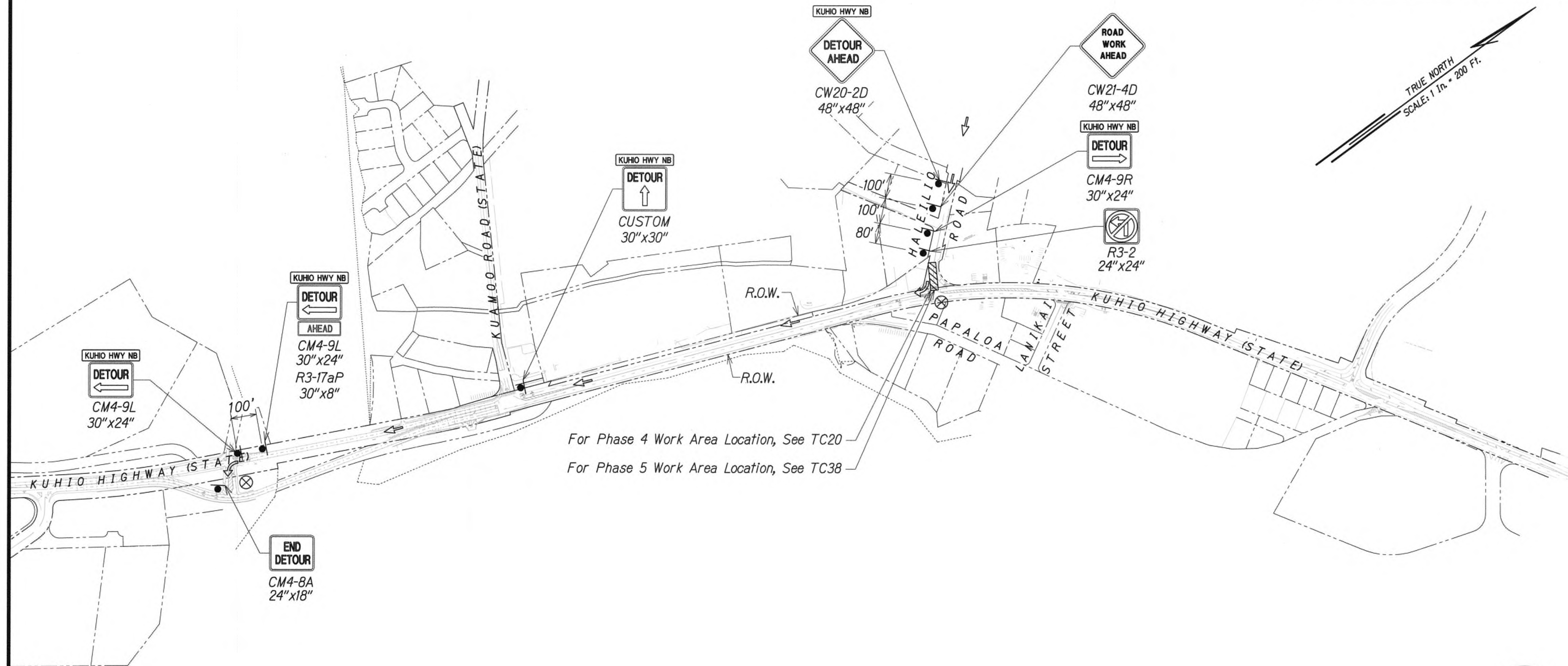
KUHIU HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 200' Date: JULY 2019

SHEET No. TD2 OF 63 SHEETS

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



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.170	244



For Phase 4 Work Area Location, See TC20  
For Phase 5 Work Area Location, See TC38

- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➔ Direction of Traffic
  - ➔ Arrowboard Assembly
  - ▨ Work Area

GRAPHIC SCALE:  
100' 50' 0 100' 200'  
SCALE: 1" = 200'

DETOUR PLAN - PHASE 4 AND 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 200'

SEE TC19 FOR PHASE 4 TRAFFIC CONTROL PLAN,  
AND TC37 FOR PHASE 5 TRAFFIC CONTROL PLAN

Approved

County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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WILSON OKAMOTO GDRP, LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

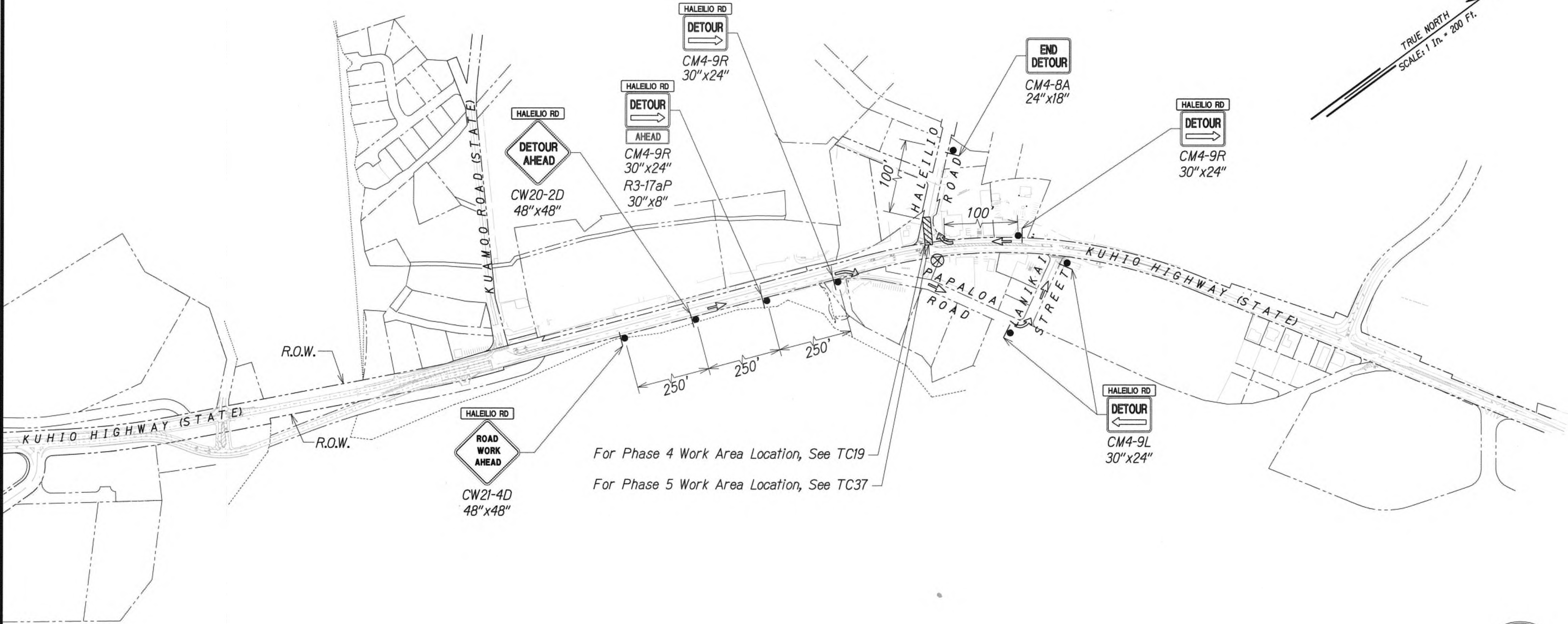
DETOUR PLAN 03

KUHIU HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 200' Date: JULY 2019

SHEET No. TD3 OF 63 SHEETS





- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ➡ Arrowboard Assembly
  - ▨ Work Area

**GRAPHIC SCALE:**  
100' 50' 0 100' 200'  
SCALE: 1" = 200'

**DETOUR PLAN - PHASE 4 AND 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 200'  
SEE TC18 FOR PHASE 4 TRAFFIC CONTROL PLAN,  
AND TC36 FOR PHASE 5 TRAFFIC CONTROL PLAN

Approved

County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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APRIL 30, 2020  
WILSON OKAMOTO CORP. LIC. EXP. DATE

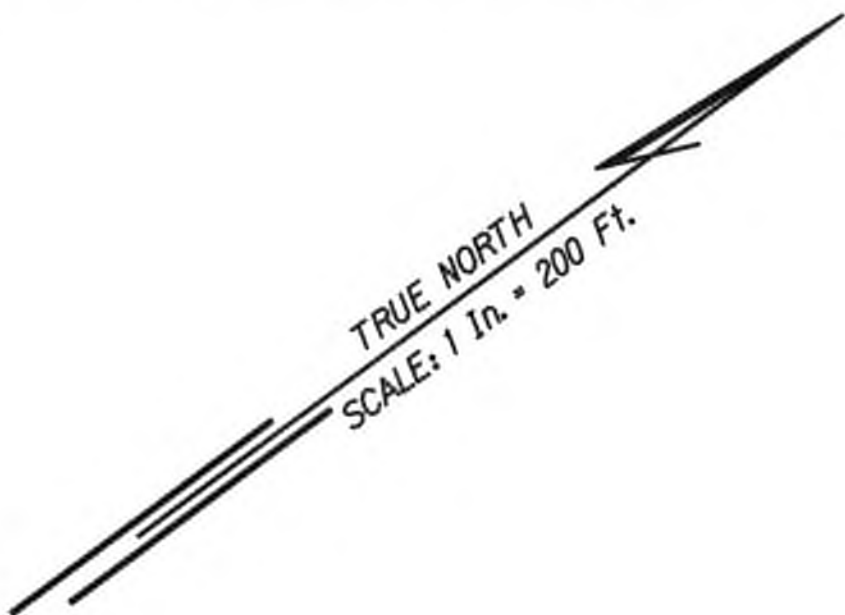
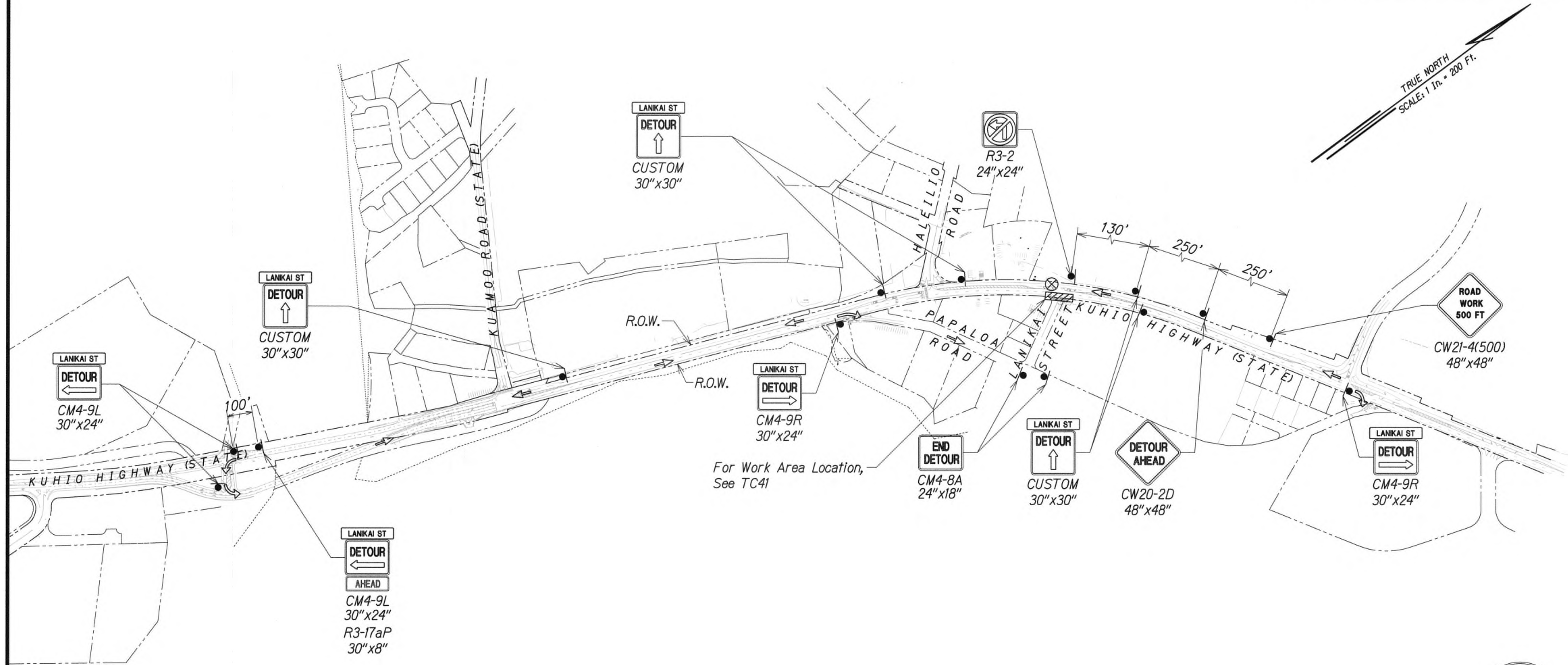
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DETOUR PLAN 04**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 200' Date: JULY 2019

SHEET No. TD4 OF 63 SHEETS





**Legend:**

- ⊗ Special Duty Officer
- Cones or Delineators
- Sign
- ⇒ Direction of Traffic
- ➡ Arrowboard Assembly
- ▨ Work Area

**GRAPHIC SCALE:**  
100' 50' 0 100' 200'  
SCALE: 1" = 200'

**DETOUR PLAN - PHASE 4 AND 5**  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 200'  
SEE TC40 FOR TRAFFIC CONTROL PLAN

Approved

For County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.  
WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DETOUR PLAN 05**

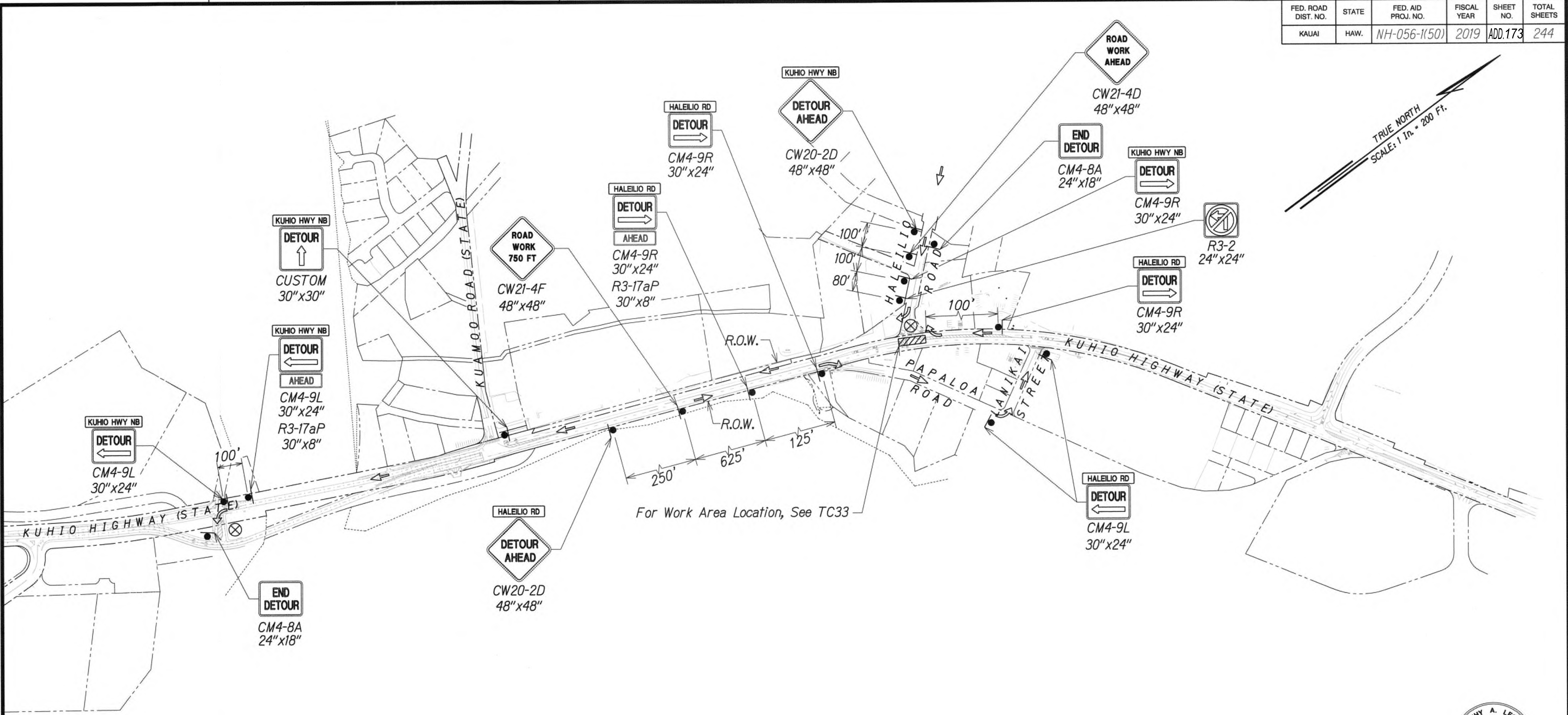
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 200' Date: JULY 2019

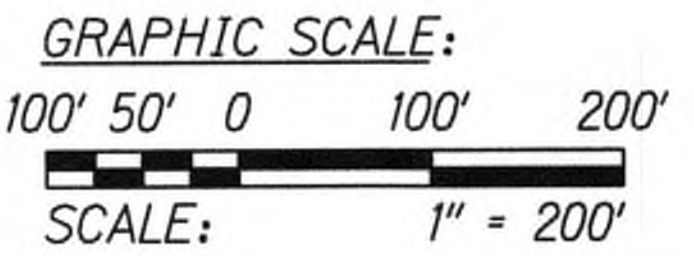
SHEET No. TD5 OF 63 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.173	244



- Legend:**
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ➡ Direction of Traffic
  - ➡ Arrowboard Assembly
  - ▨ Work Area



**DETOUR PLAN - PHASE 5**  
 WORK HOURS 8:00 P.M. TO 4:00 A.M.  
 SCALE 1" = 200'  
 SEE TC32 FOR TRAFFIC CONTROL PLAN

Approved  
 \_\_\_\_\_  
 For County Engineer  
 County of Kauai  
 (For work within the County right-of-way)

7/17/19  
 Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION



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 \_\_\_\_\_  
 WILSON KRAMOTO CORP. LIC. EXP. DATE

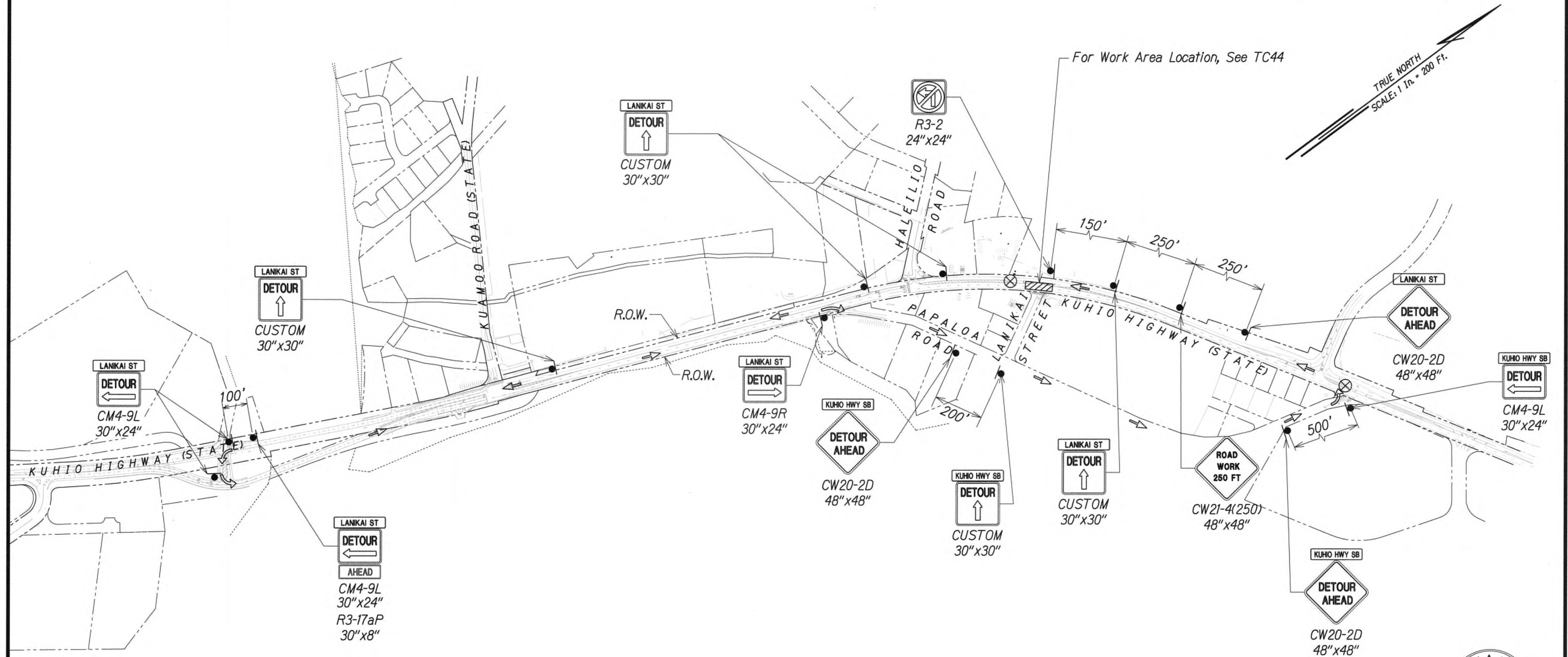
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**DETOUR PLAN 06**

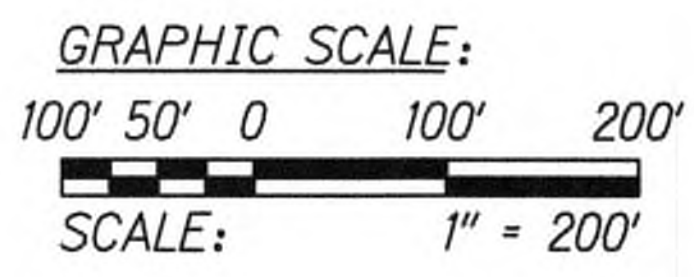
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUA MOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
 Fed. Aid Proj. No. NH-056-1(50)  
 Scale: 1" = 200' Date: JULY 2019

SHEET No. TD6 OF 63 SHEETS





- Legend:
- ⊗ Special Duty Officer
  - Cones or Delineators
  - Sign
  - ⇒ Direction of Traffic
  - ➡ Arrowboard Assembly
  - ▨ Work Area



DETOUR PLAN - PHASE 5  
WORK HOURS 8:00 P.M. TO 4:00 A.M.  
SCALE 1" = 200'  
SEE TC43 AND TC44 FOR TRAFFIC CONTROL PLANS

Approved  
  
\_\_\_\_\_  
County Engineer  
County of Kauai  
(For work within the County right-of-way)

7/17/19  
Date

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION



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\_\_\_\_\_  
WILSON OKAMOTO CORP., LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DETOUR PLAN 07**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 200' Date: JULY 2019

SHEET No. TD7 OF 63 SHEETS



CONSTRUCTION NOTES

1. Locations of existing underground structures and utilities such as pipelines, conduits, cables, etc., shown on plans are approximate only. It is not the intent of these plans to show the exact location of all underground utilities and structures. It is the responsibility of the contractor to verify the locations of all existing utilities with the respective owners. Existing utilities damaged by the contractor shall be repaired by the contractor at his own cost.
2. The contractor shall verify and check all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the engineer for clarification.
3. The contractor shall notify all agencies to verify the actual location of all utilities in the project area prior to excavating. The contractor shall coordinate all work.
4. The contractor shall tone and locate existing utilities along duct line prior to excavation.
5. The locations of the new traffic signal standards, traffic signal standards with mast-arm, pedestrian push buttons, traffic controller, pullboxes, conduits and loop detectors shall be staked out in the field by the contractor and approval of the locations shall be obtained from the engineer prior to construction and installation.
6. All traffic signal work shall conform to the requirements of the "Manual on Uniform Traffic Control Devices for Streets and Highways", Federal Highway Administration (2000) and amendments.
7. Locations of new pavement markings (pavement arrow, stop lines, crosswalk, etc.) that are done by others (as shown on plans) shall be verified with the engineer prior to the installation of the traffic signal system.
8. Provide arrow board at start of all tapers.

TRAFFIC SIGNAL LEGEND

- New Traffic Signal Standard
- Existing Traffic Signal Standard
- ↗ New Standard Traffic And Pedestrian Signal Heads Mounted On Type I Signal Standard, Height=10'
- ↗ Existing Standard Traffic And Pedestrian Signal Heads Mounted On Type I Signal Standard, Height=10'
- ↗ New Opticom Unit
- ↗ Existing Opticom Unit
- New Traffic Signal Pullbox (TSPB)
- Existing Traffic Signal Pullbox

- ↗ New Traffic Signal Heads Mounted On Type II Signal Standard, Arm Spread Shown is 30' And Distance Between Signal Heads is 12'
- ↗ Existing Traffic Signal Heads Mounted On Type II Signal Standard, Arm Spread Shown is 30' And Distance Between Signal Heads is 12'
- ↗ New 12" RY→ Traffic Signal Head (Programmable Visibility)
- ↗ New 12" RY→ Traffic Signal Head (LED)
- ↗ Existing 12" RY→ Traffic Signal Head
- □ □ New Loop Detectors
- □ □ Existing Loop Detectors

TRAFFIC SIGNAL NOTES

1. All traffic signal controller equipment shall be completely wired in the cabinet and shall control the traffic signals as called for in the plans.
2. Signal indications during clearance interval:
- A. If a signal is G or ←G and will remain G or ←G during the next phase, it shall be G or ←G during the clearance interval.
- B. If a signal is G or ←G and will become R or extinguished during the next phase, it shall be Y or ←Y during the clearance interval.
- C. If a signal is R and will remain R or becomes G during the next phase, it shall remain R during the clearance interval.
3. The loop amplifier units furnished for this project shall be capable of operating the loop detector configurations shown on the plans.
4. A solid #8 bare copper wire shall be pulled with the traffic control cable for equipment ground. Cost shall be incidental to the installation of the control cable.
5. Conduits and cabinet locations as shown on the plans are schematic. They may be modified by the contractor with the approval of the engineer.
6. The contractor shall splice all signal conductors in pullbox. No splices shall be permitted in detector lead-in cable.
7. All traffic signal removal and disposal work (i.e. pullboxes, standards, foundations, signal and pedestrian heads, loop detectors, etc.) shall be considered incidental to the various traffic signal items.

8. The contractor shall remove existing traffic signal equipment in usable condition as indicated on the plans and deliver to the Kauai District Baseyard or as directed by the Engineer. Cost shall be incidental to various traffic signal items.
9. All resulting holes from the removal of pedestrian push buttons on existing traffic signal standards shall be plugged as directed by the Engineer. Cost shall be incidental to the various traffic signal items.
10. The Department of Water requires 6" minimum vertical and 3' minimum horizontal clearance between utilities.
11. After installing all the traffic signal cables, seal all conduits in pullboxes, standards and controller cabinet with "duct seal". "Duct Seal" shall be acceptable to Engineer and State Inspector.
12. All mounting brackets for vehicle and pedestrian signal heads and all other equipment attached to signal standards shall be brass, bronze or stainless steel (Type 316), except as listed below, no steel parts shall be used including setscrews.
- A. Hub plates may be aluminum if not available in brass, bronze or stainless steel (Type 316).
- B. Mast arm mounting brackets may be aluminum alloy. All hardware shall be stainless steel (Type 316).
13. All luminated signals shall be LED.
14. Pedestrian signal housings shall be plastic style.
15. Internal parts for 3 section and 4 section signal heads shall be stainless steel (Type 316).

- New 12" RYG Traffic Signal Head (LED)
- Existing 12" RYG Traffic Signal Head
- New 12" RY↑ Traffic Signal Head (LED)
- Existing 12" RY↑ Traffic Signal Head
- New Pedestrian Signal Head
- Existing Pedestrian Signal Head
- New Controller And Cabinet
- Existing Controller And Cabinet
- New Temporary Microwave Vehicle Detector
- ↗ New Video Detector

9/20/19

△ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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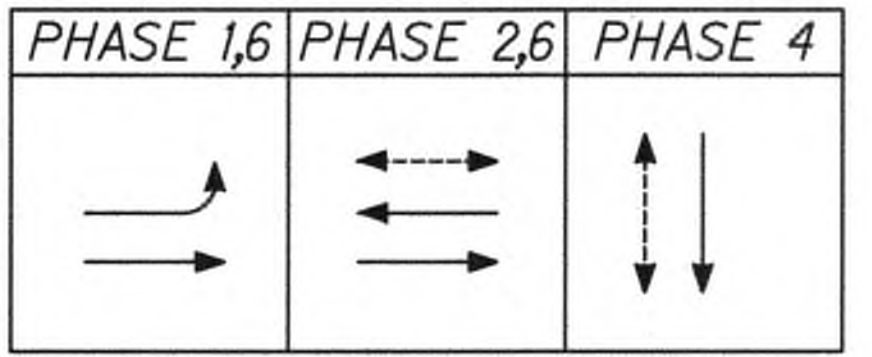
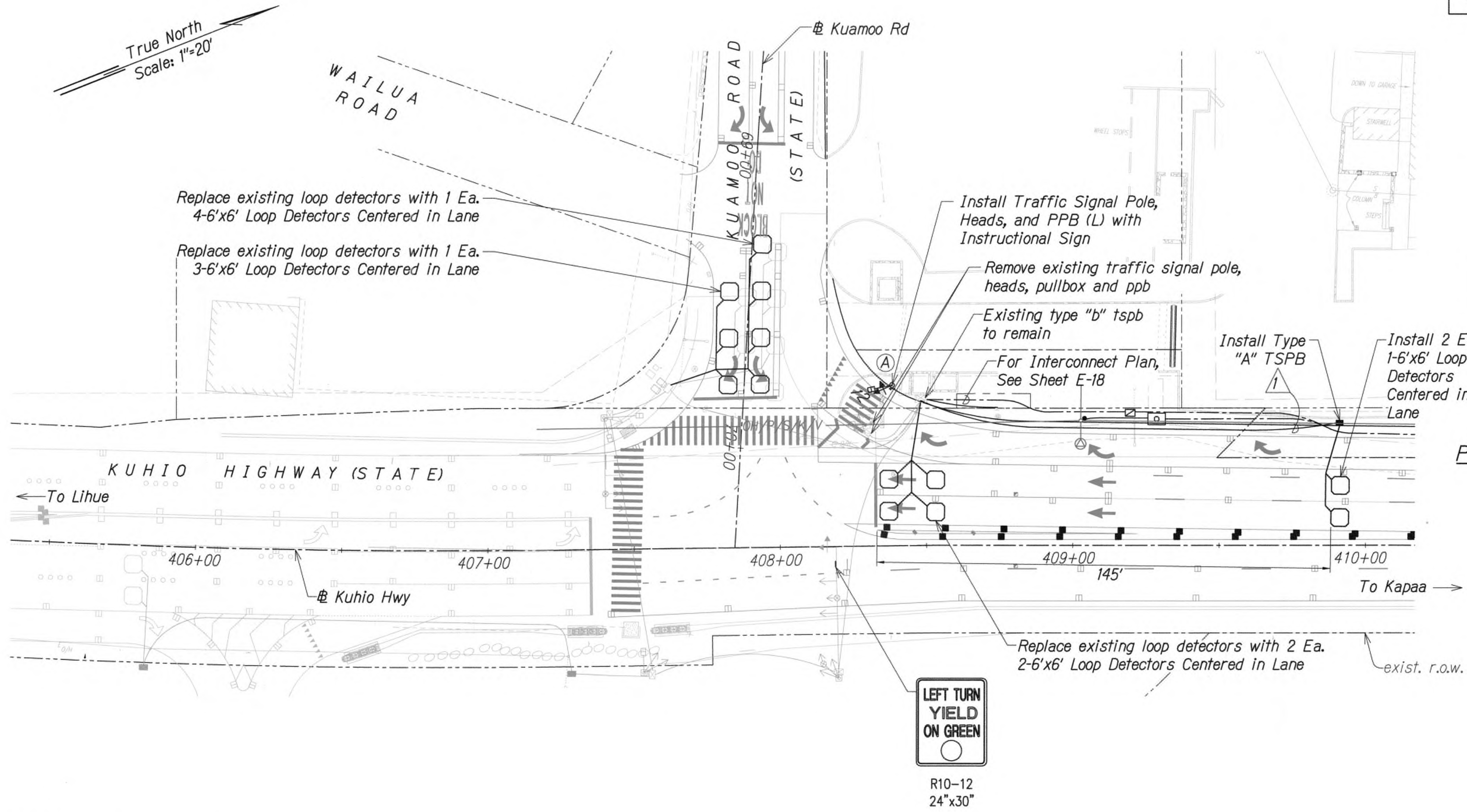
WILSON OKAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC SIGNAL NOTES  
AND LEGEND**  
**KUHIU HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: N/A Date: JULY 2019  
SHEET No. TSI OF 04 SHEETS

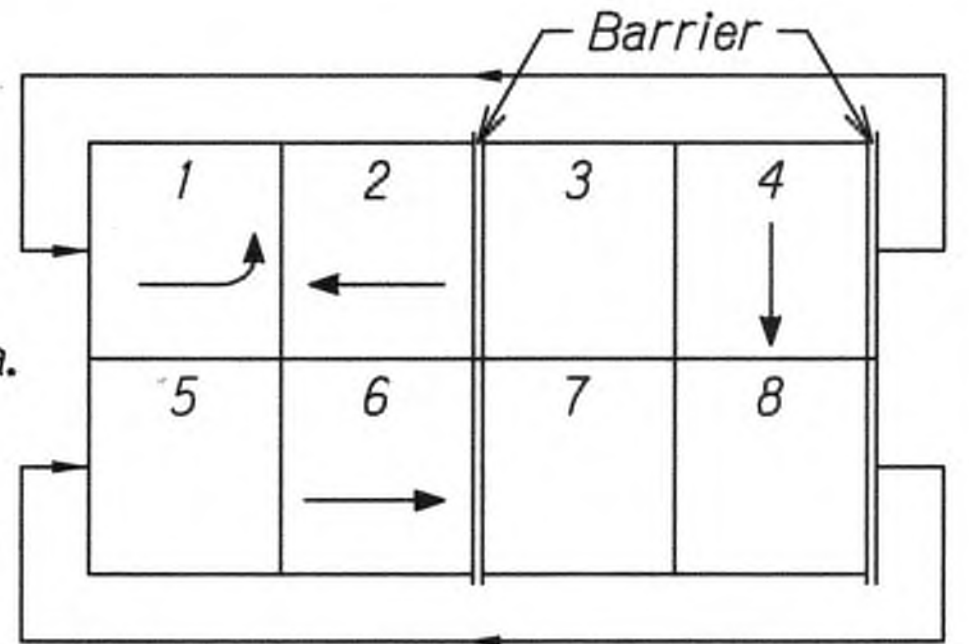




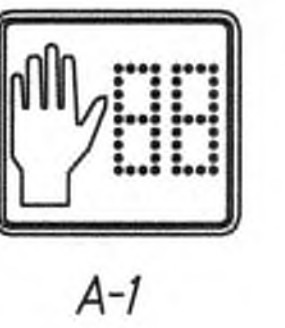




PHASE DIAGRAM



PHASE ASSIGNMENT DIAGRAM



SIGNAL INDICATIONS

NOTES:

1. Install Backplates on Existing Traffic Signal Heads Mounted on Horizontal Portion of Mast Arm Only. Backplates Shall be 5" with Slots to Reduce Wind Load with 1" Retro-Reflective Border.

CONDUIT & CABLE SCHEDULE		
Δ	CONDUIT	CABLE
1	1-2"	2-2C#14

GRAPHIC SCALE



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

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

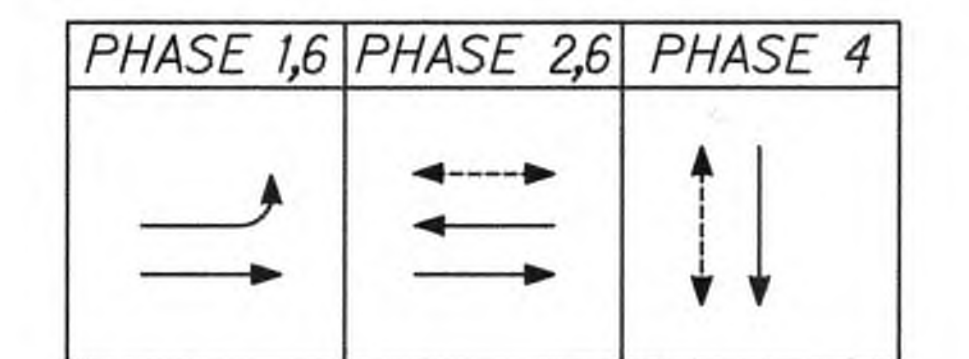
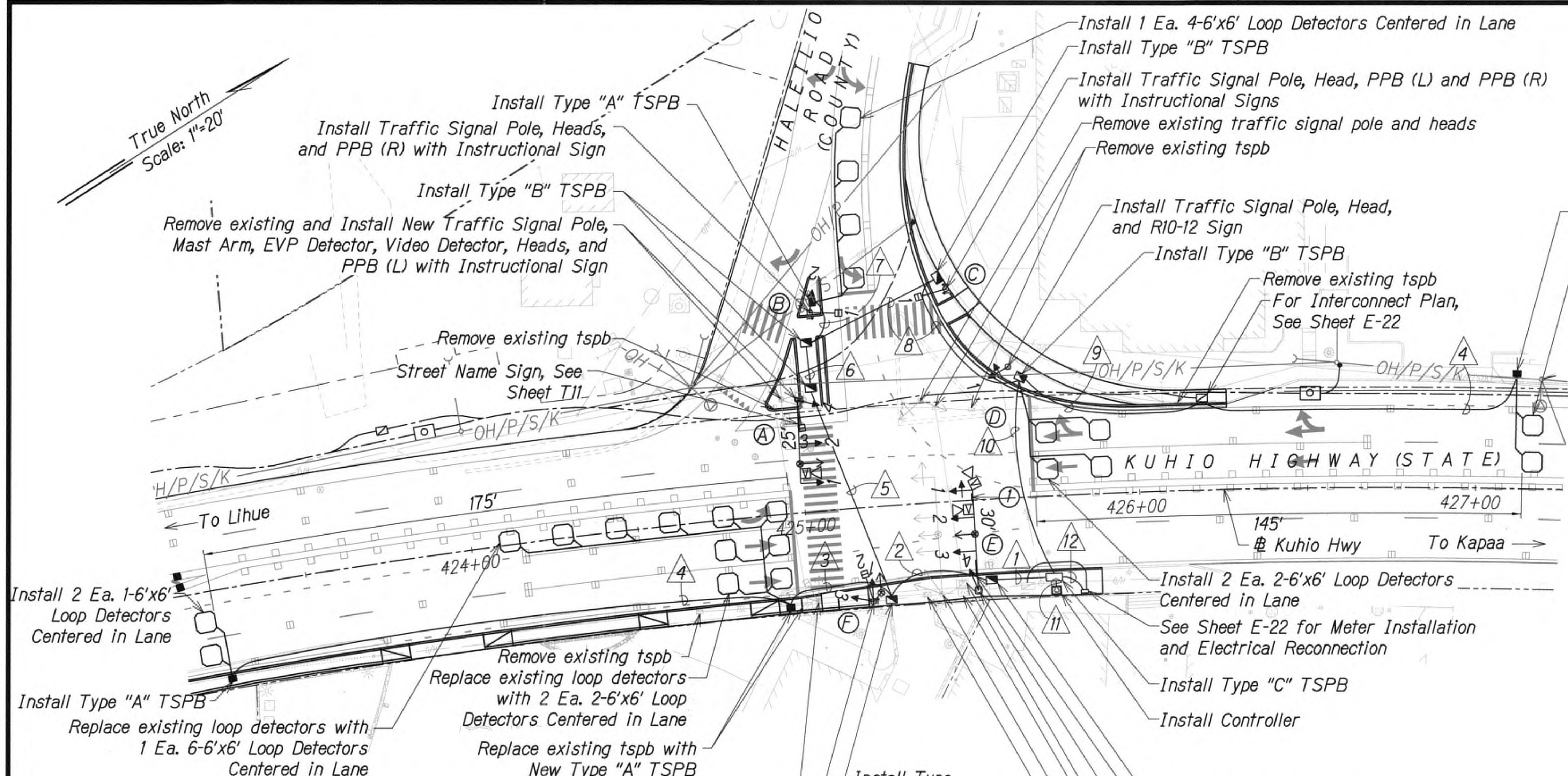


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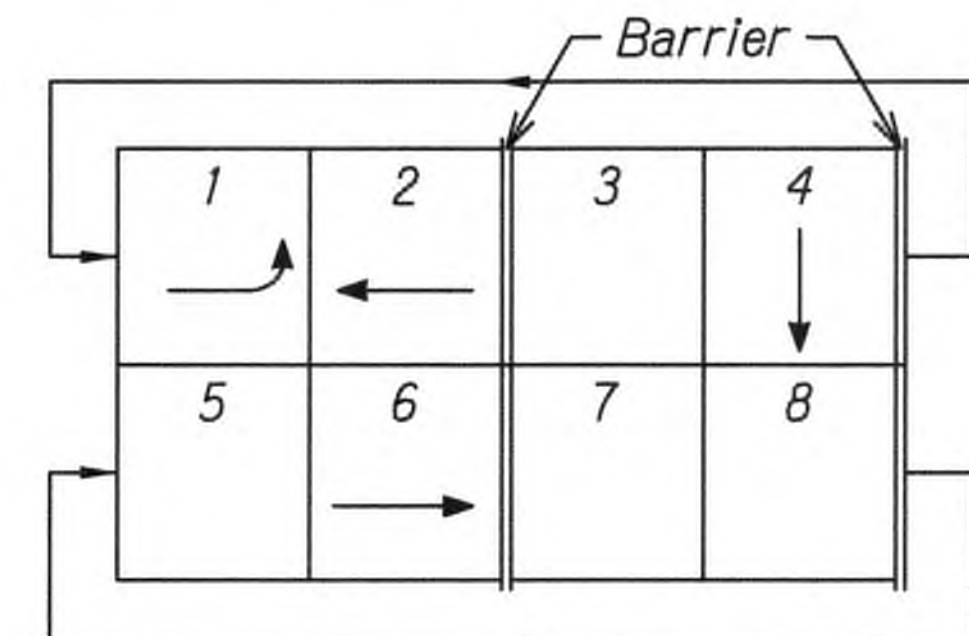
WILSON KAMOTO CORP. LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC SIGNAL PLAN**  
**KUAMOO RD. AT KUHIO HWY.**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: JULY 2019  
SHEET No. TS3 OF 04 SHEETS





PHASE DIAGRAM

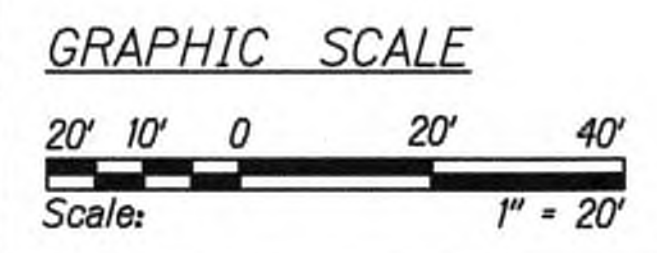


PHASE ASSIGNMENT DIAGRAM

(R)	(R)	(R)	(H)
(Y)	(Y)	(Y)	(H)
(G)	(G)	(G)	(H)
(G)	(G)	(G)	(H)
A-4	A-1	A-3	
D-1	B-2	A-2	B-1
E-1	E-4	E-2	C-1
	F-1	E-3	F-2
	F-3		

SIGNAL INDICATIONS

CONDUIT & CABLE SCHEDULE					
Δ	CONDUIT	CABLE	Δ	CONDUIT	CABLE
1	1-2"	1-26C#14	6	1-2"	1-26C#14
	1-2"	6-2C#14		3-2"	3-SPARE
	1-2"	3-OPTICOM	7	1-2"	1-2C#14
	1-2"	3-VIDEO	8	1-2"	1-26C#14
	2-2"	2-SPARE		1-2"	2-2C#14
2	1-2"	1-26C#14		2-2"	2-SPARE
	1-2"	6-2C#14	9	1-2"	2-2C#14
	1-2"	2-OPTICOM		1-2"	2-12PR#19
	1-2"	1-VIDEO	10	1-2"	1-26C#14
	2-2"	2-SPARE		1-2"	6-2C#14
3	1-2"	5-2C#14		1-2"	2-12PR#19
4	1-2"	2-2C#14	2-2"	2-SPARE	
5	1-2"	1-26C#14	11	2-2"	2-26C#14
	1-2"	1-2C#14		2-2"	12-2C#14
	1-2"	1-OPTICOM		1-2"	3-OPTICOM
	1-2"	1-VIDEO		1-2"	3-VIDEO
	2-2"	2-SPARE		1-2"	2-12PR#19
				2-2"	2-SPARE
				1-2"	1-3C#6
			12	1-2"	1-3C#6
GRAPHIC SCALE					



NOTES:

1. Install Backplates on Traffic Signal Heads Mounted on Horizontal Portion of Mast Arm Only. Backplates Shall be 5" with Slots to Reduce Wind Load with 1" Retro-Reflective Border.

APPROVED

*[Signature]*  
County Engineer  
County of Kauai  
(For Work Within the County Right-of-Way)

7/17/19  
Date

9/20/19	Δ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC SIGNAL PLAN**  
**HALEILIO RD. AT KUHIO HWY.**  
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: JULY 2019  
SHEET No. TS4 OF 04 SHEETS

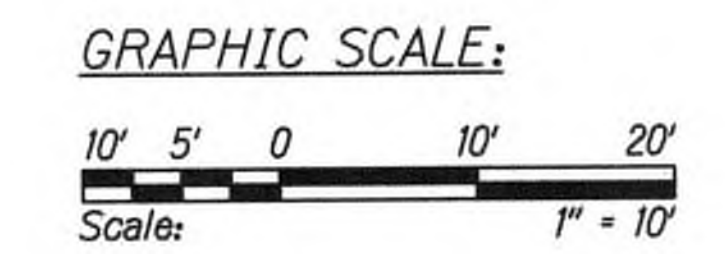
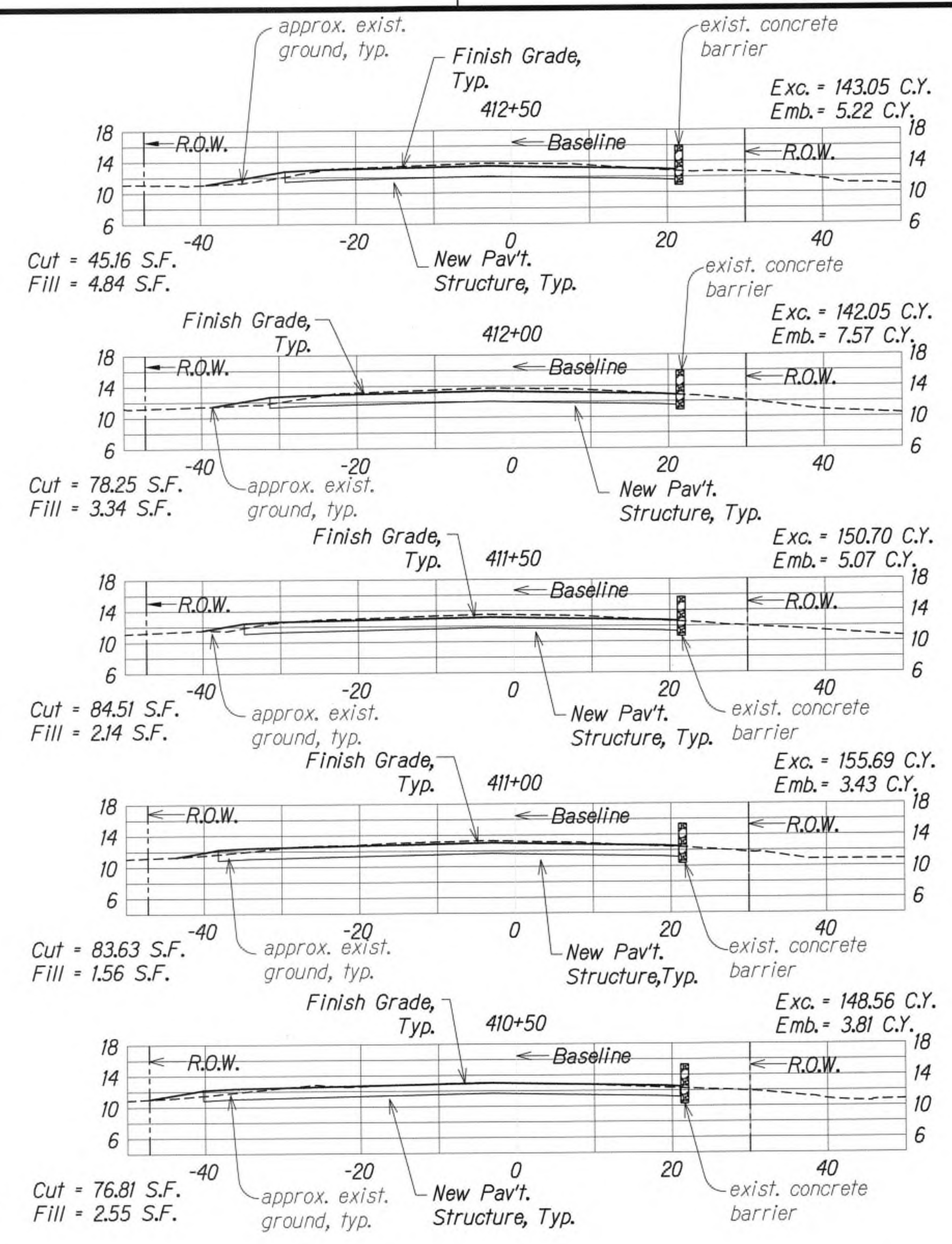
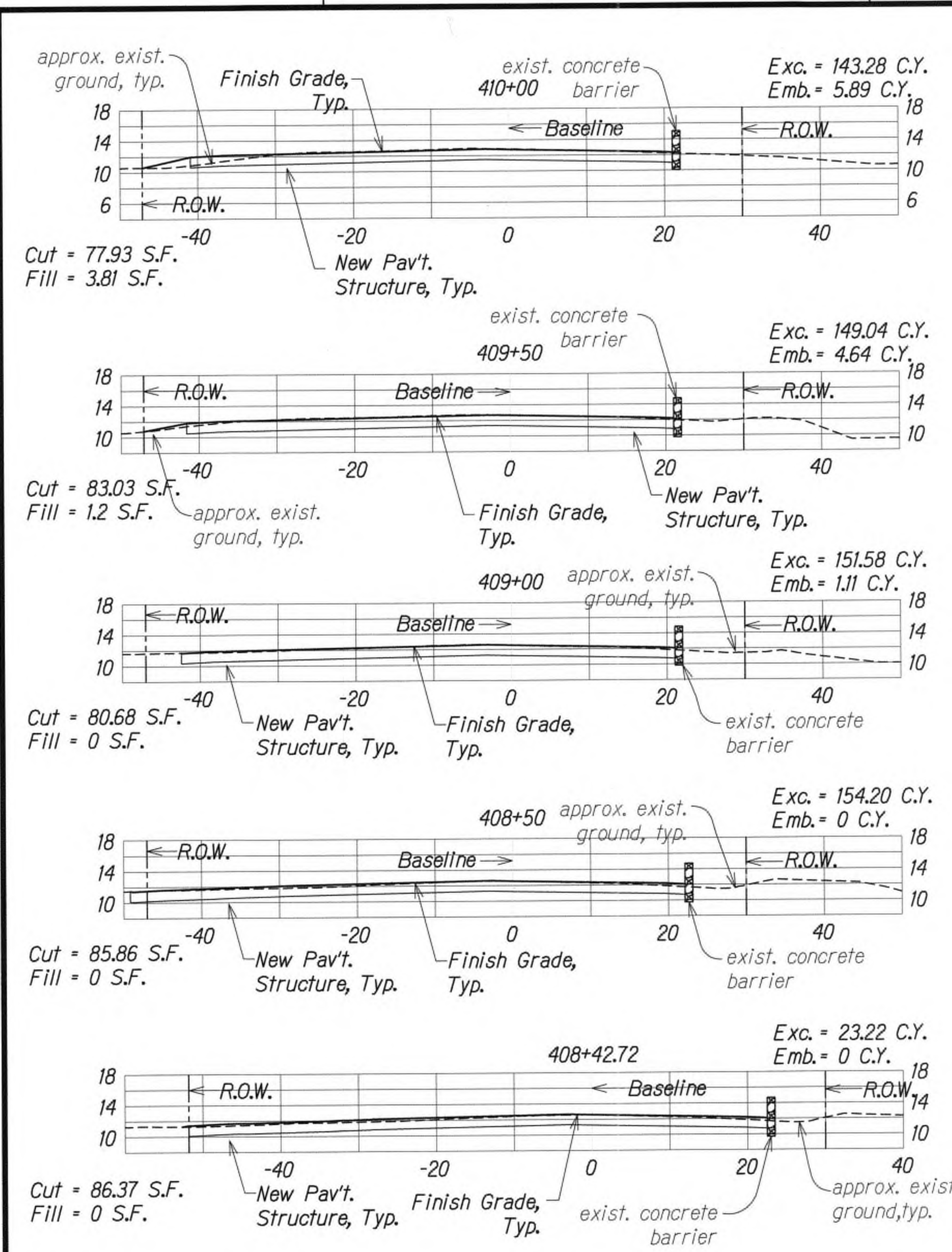


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*[Signature]*  
WILSON KAMATO CORP. LIC. EXP. DATE APRIL 30, 2020



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD179	244

Sheet Total  
Exc. = 1361.36 C.Y.  
Emb. = 36.74 C.Y.



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*hish*  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

DATE	.....
SURVEY PLOTTED BY	.....
DESIGNED BY	.....
TRACED BY	.....
NOTE BOOK	.....
QUANTITIES BY	.....
CHECKED BY	.....
NO.	.....

Kuhio Highway Improvements  
ROADWAY CROSS SECTIONS  
Scale: 1" = 10'

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

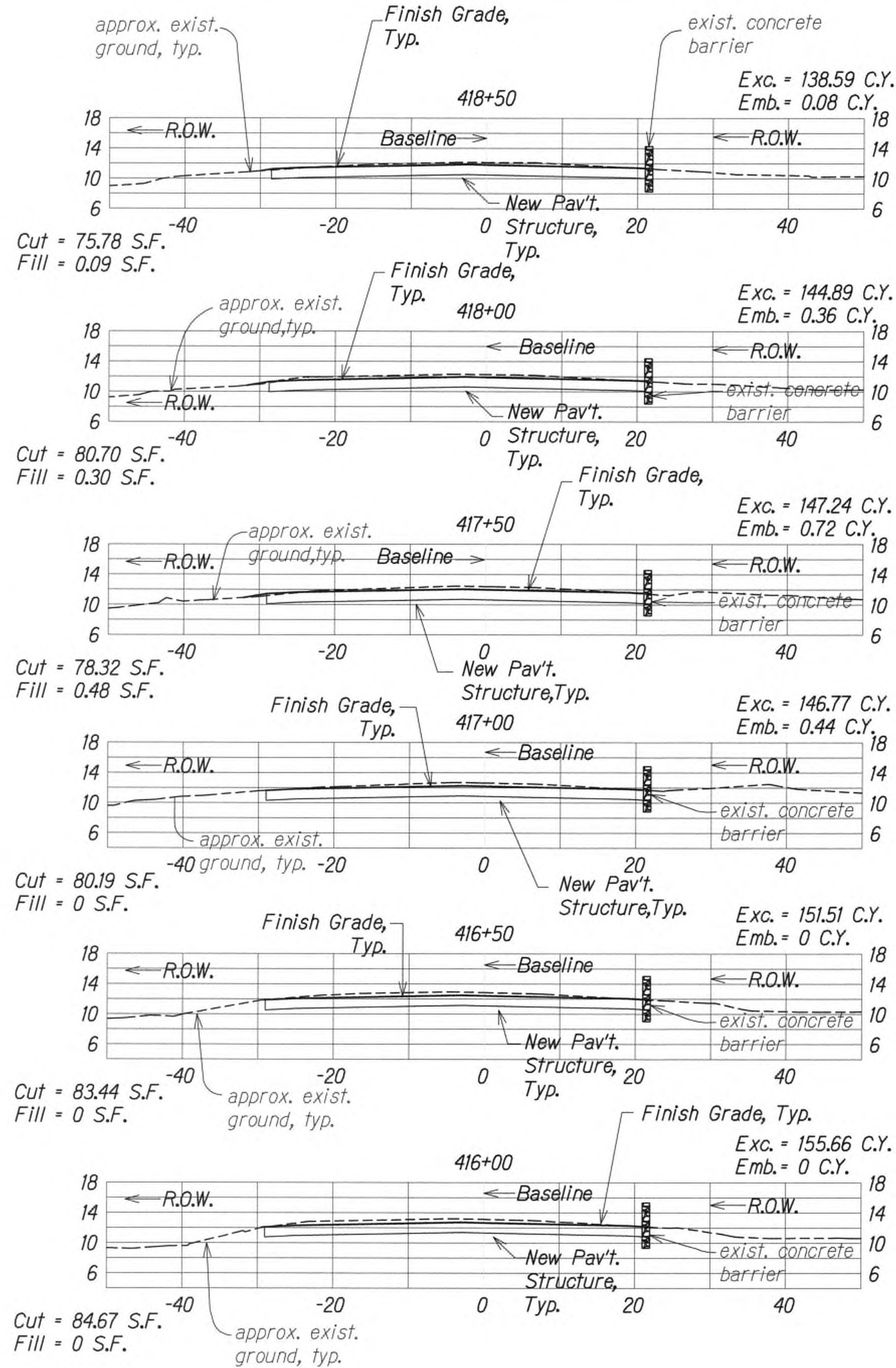
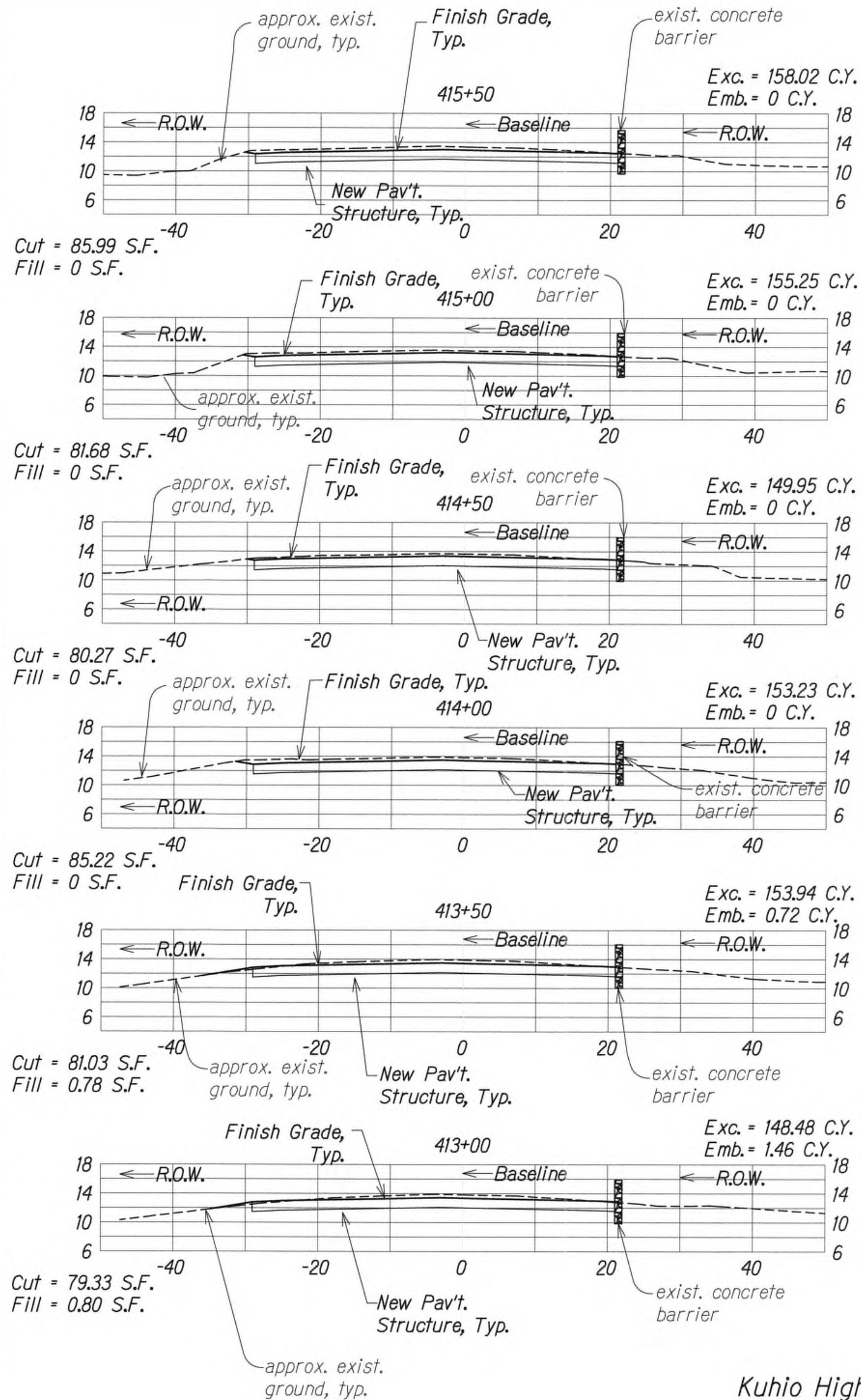
**ROADWAY CROSS SECTIONS**

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

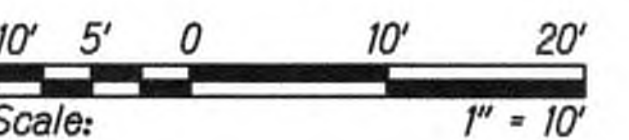
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Sheet Total  
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GRAPHIC SCALE:



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ROADWAY CROSS SECTIONS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

**Kuhio Highway Improvements ROADWAY CROSS SECTIONS**  
Scale: 1" = 10'

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

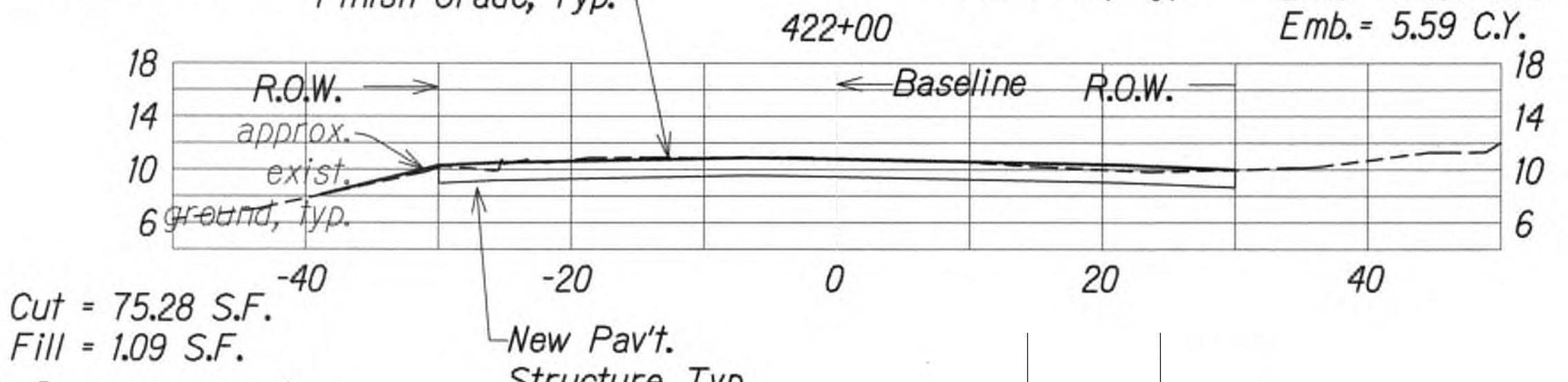
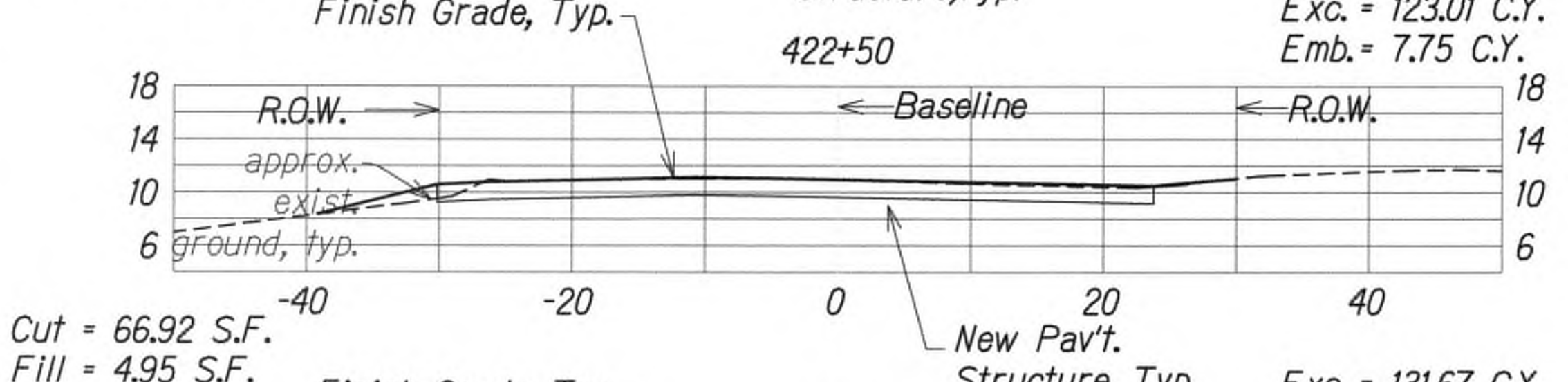
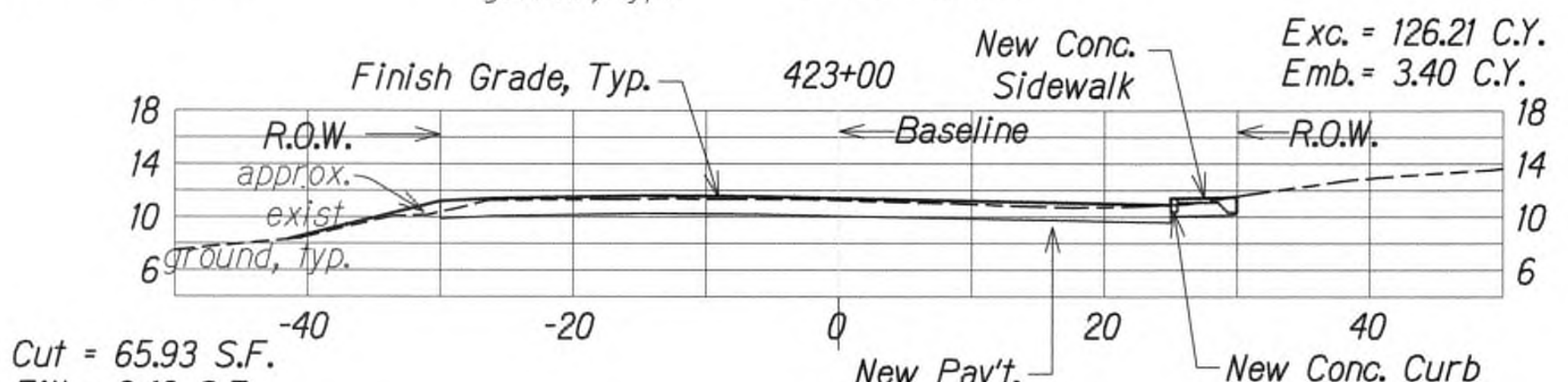
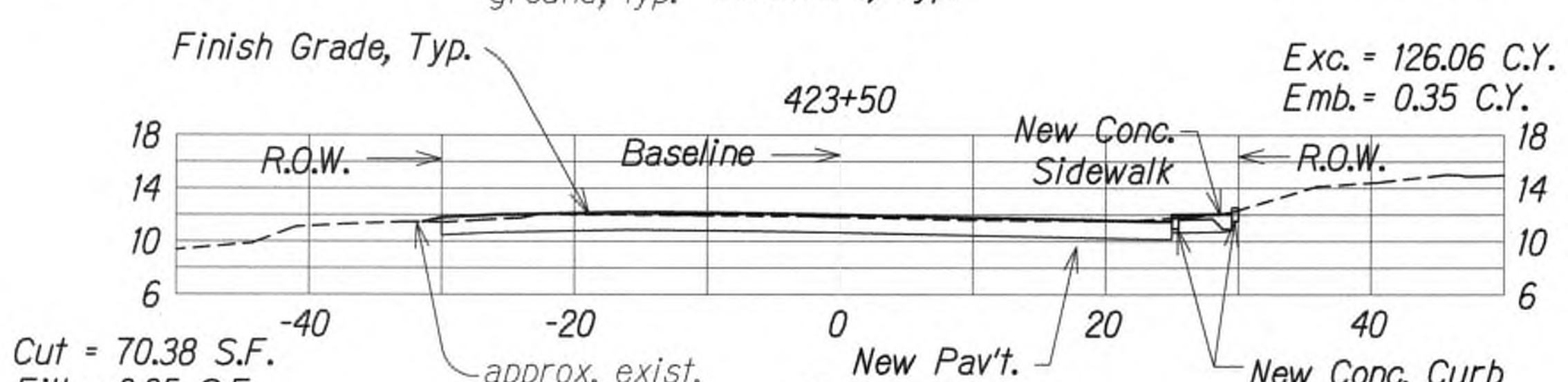
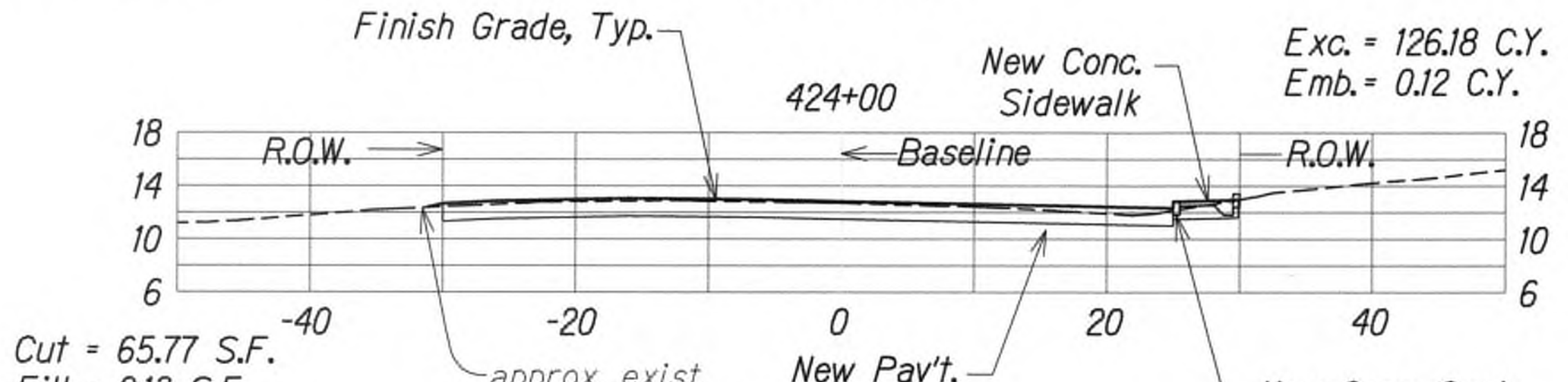
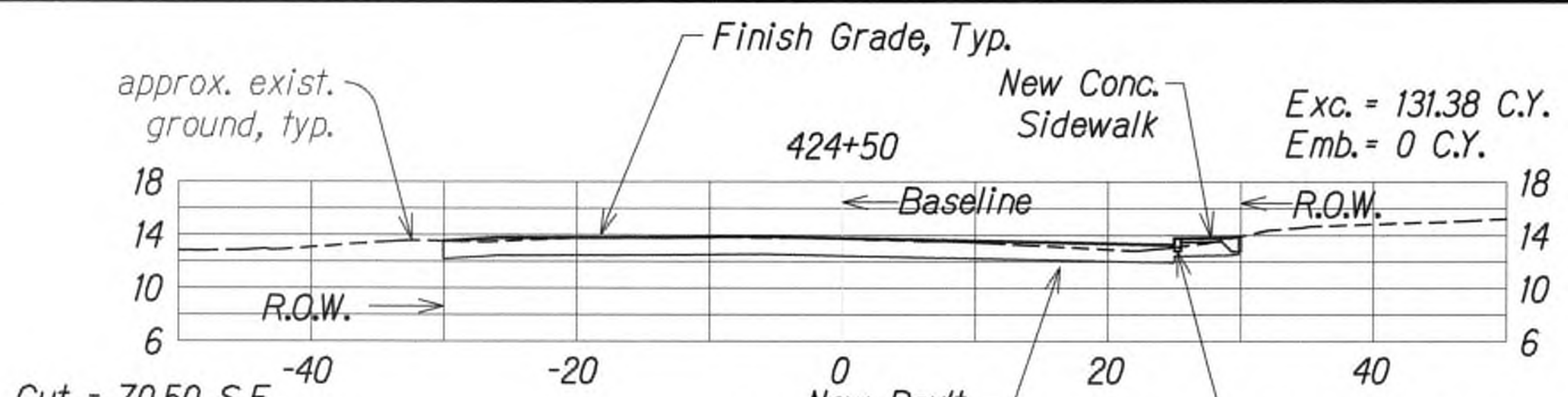
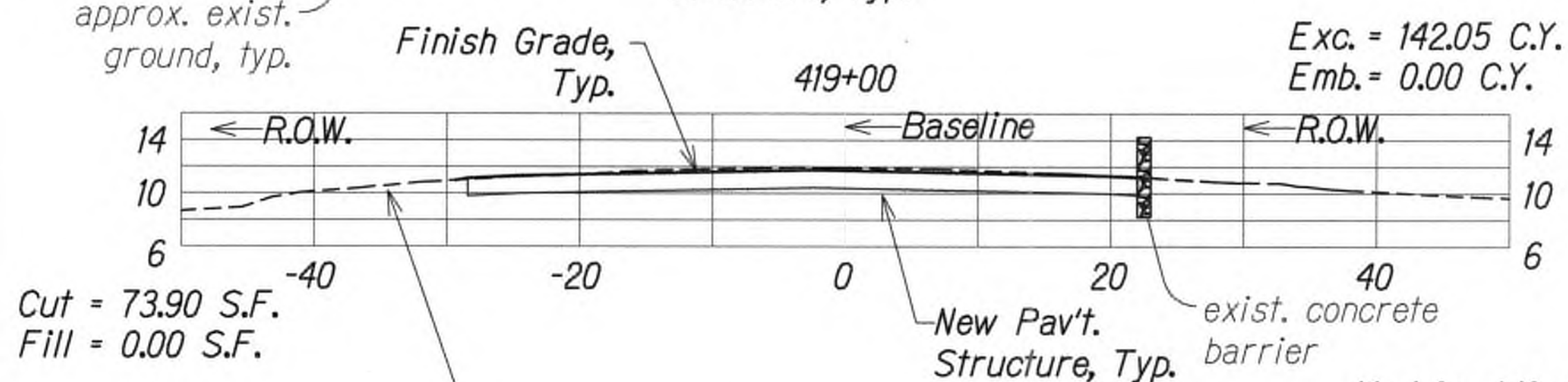
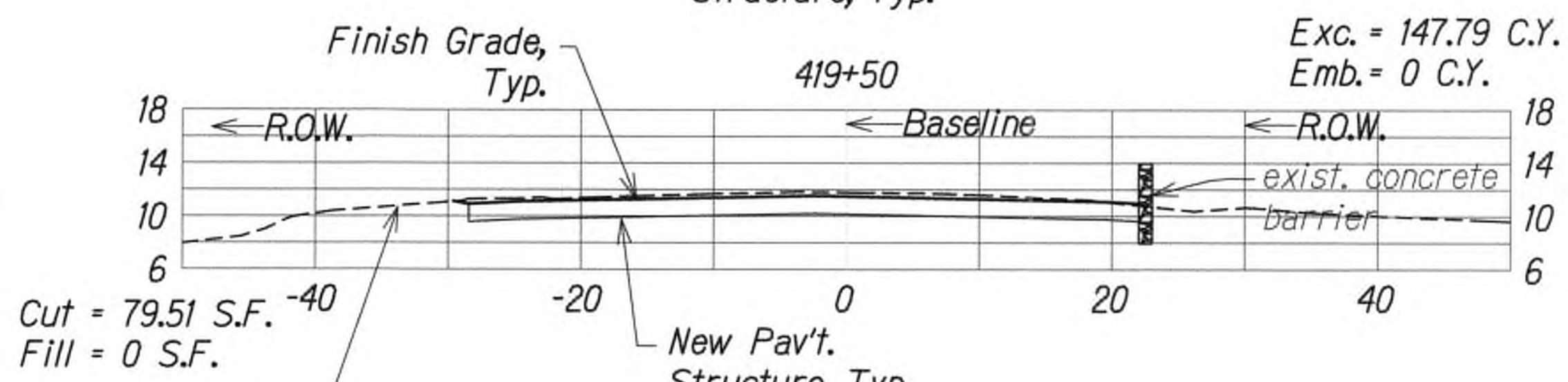
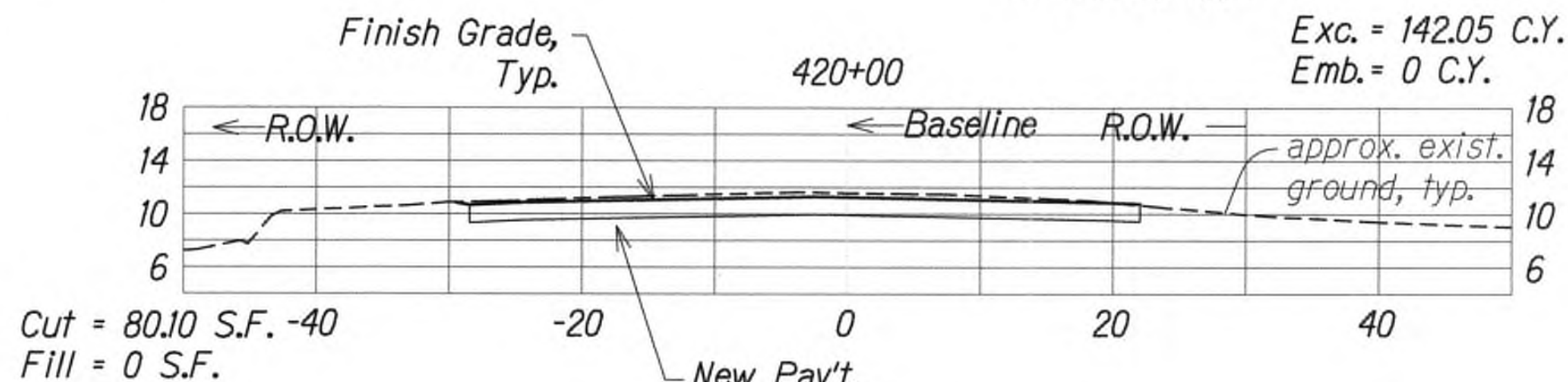
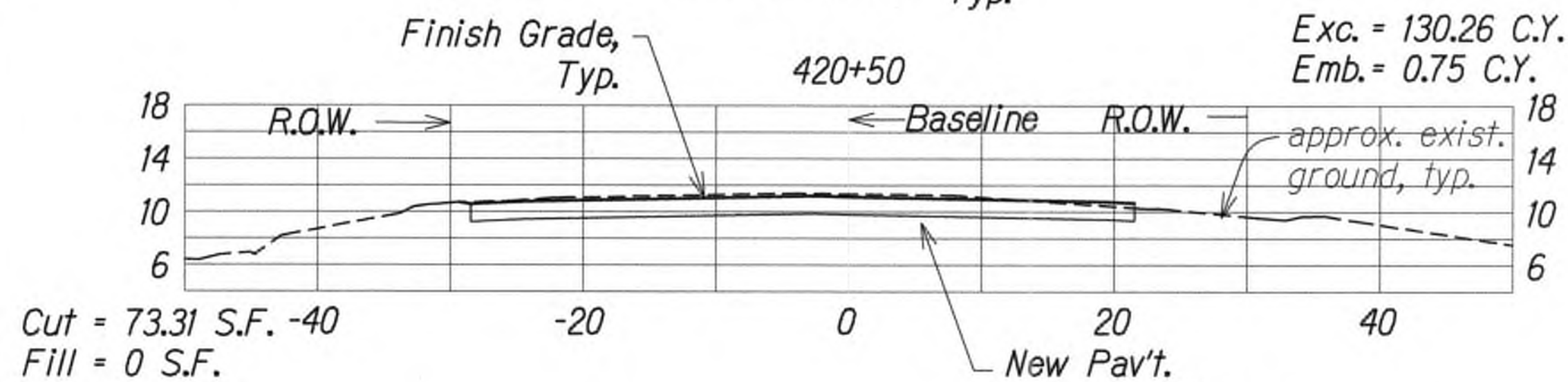
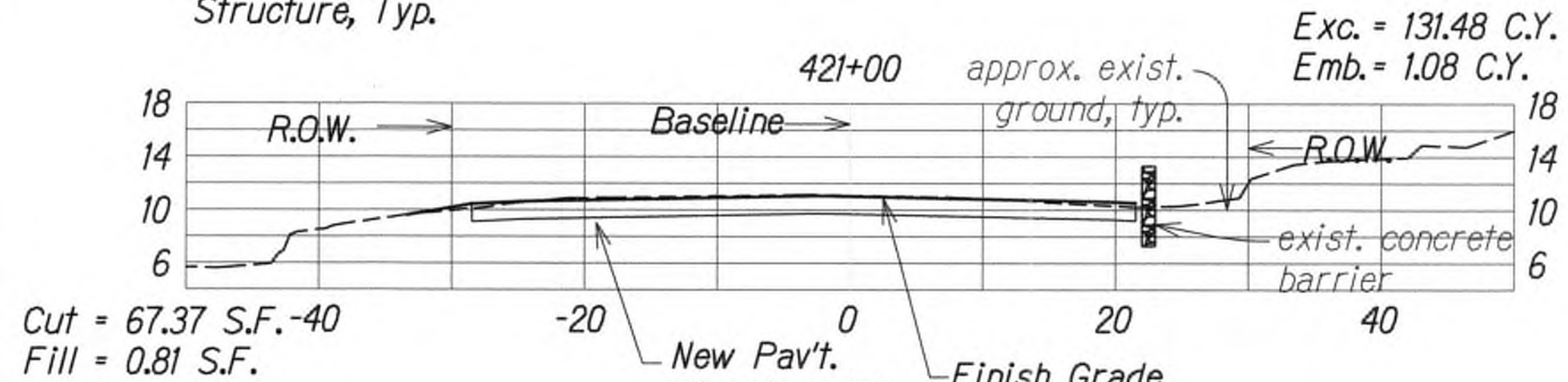
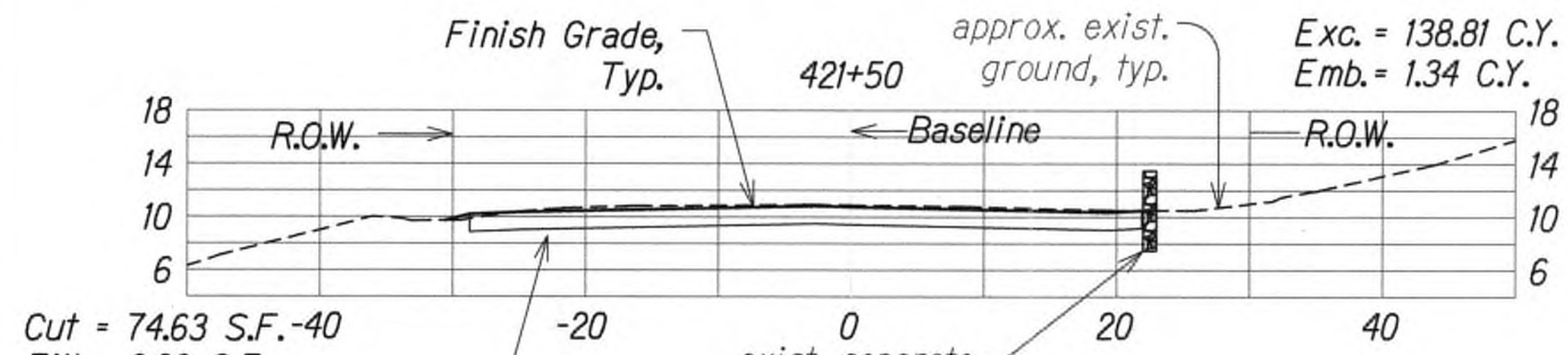
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SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.181	244

Sheet Total  
Exc. = 1596.94 C.Y.  
Emb. = 20.39 C.Y.



GRAPHIC SCALE:



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WILSON OKAMOTO CORPORATION  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY CROSS SECTIONS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

SHEET No. XS3 OF 8 SHEETS

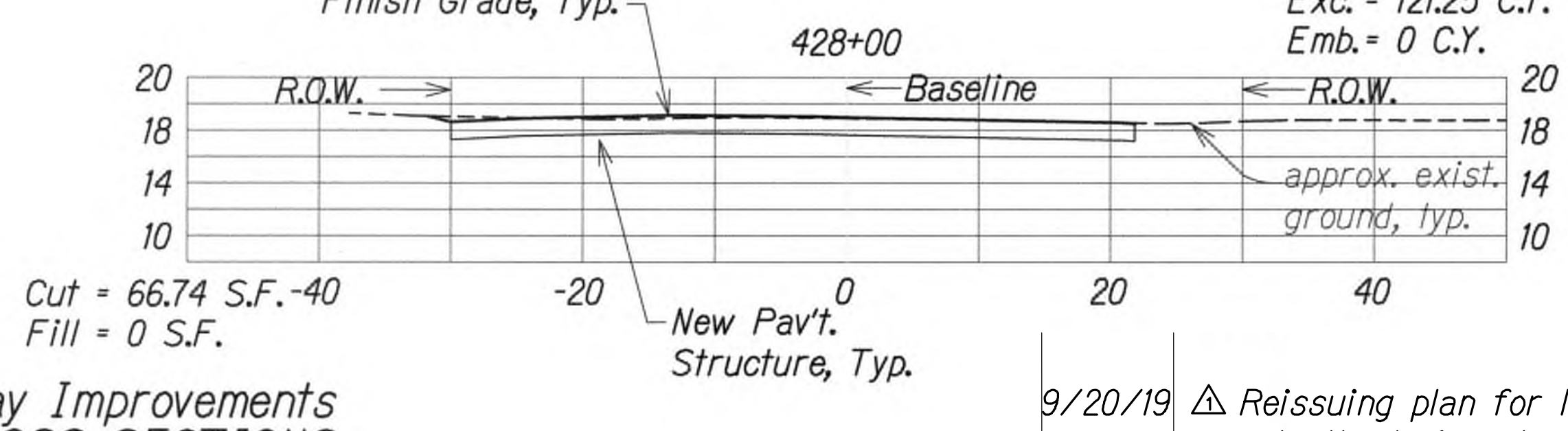
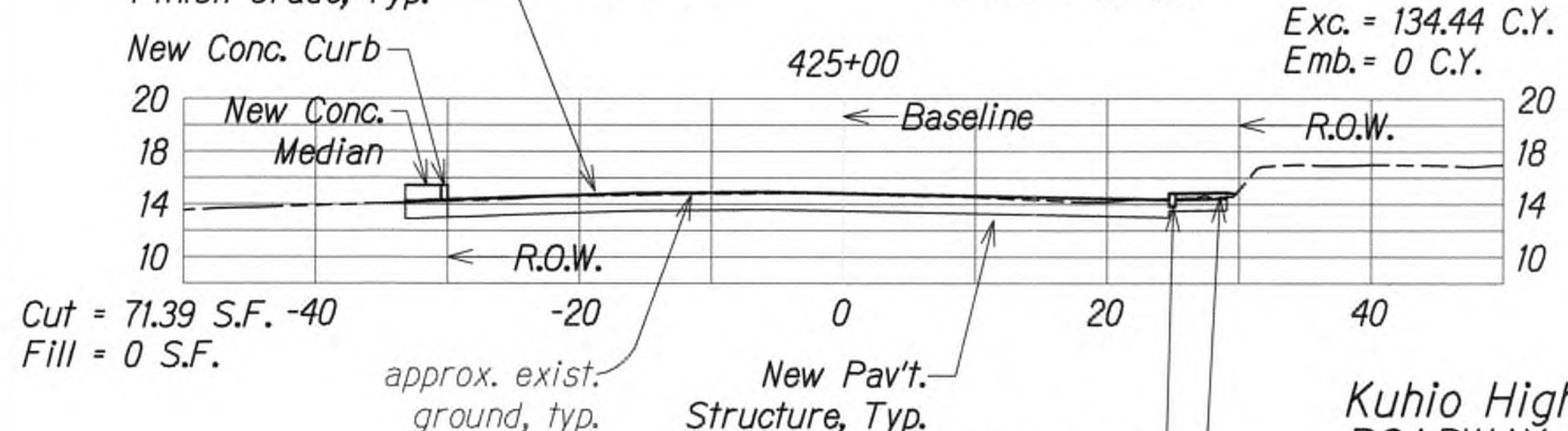
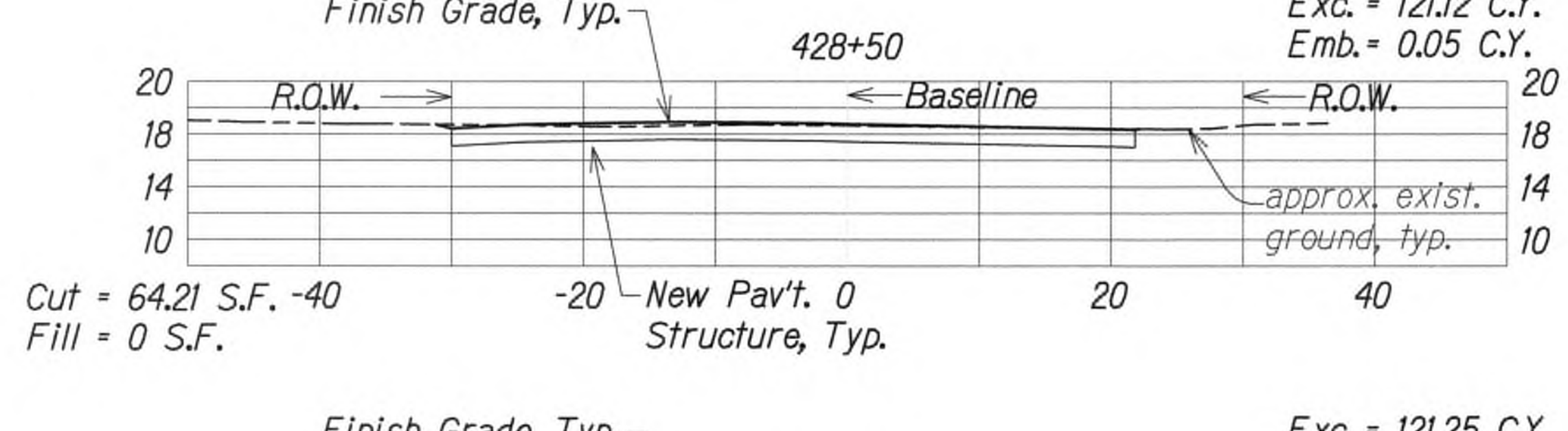
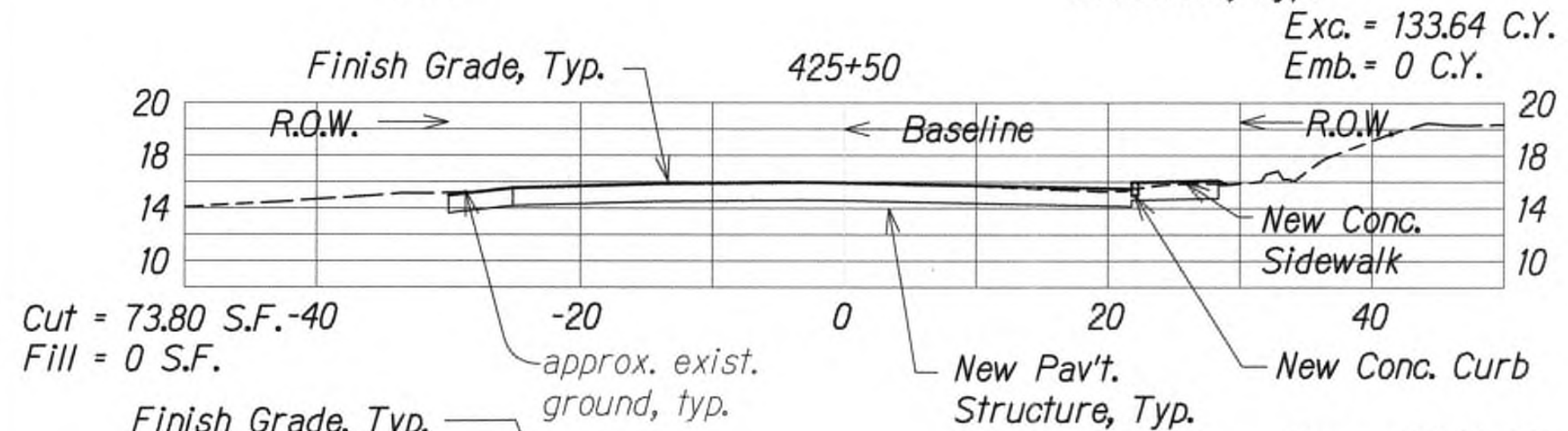
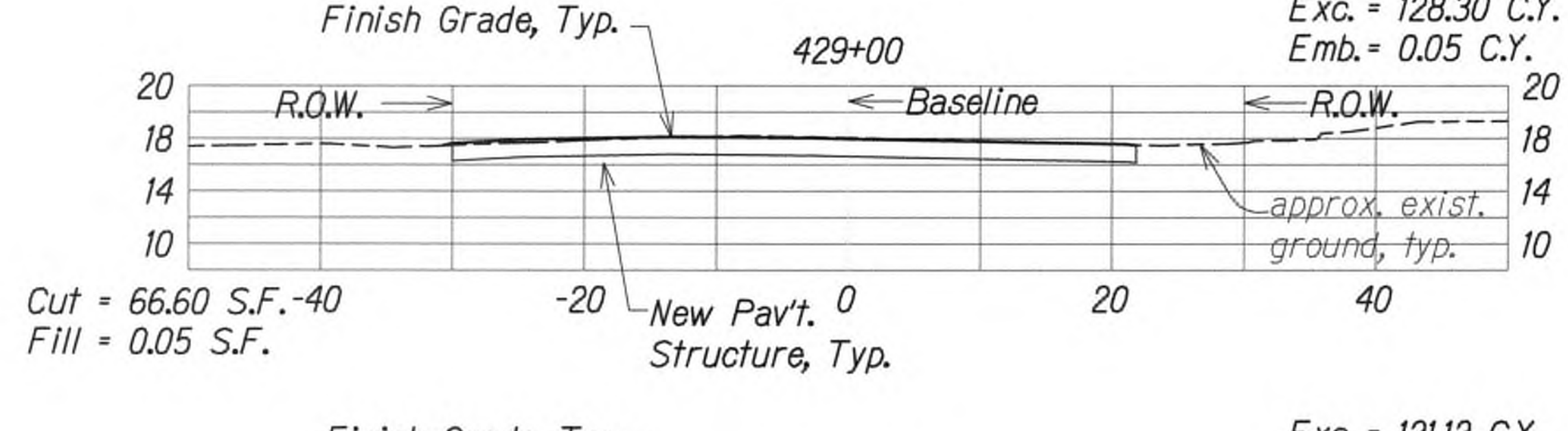
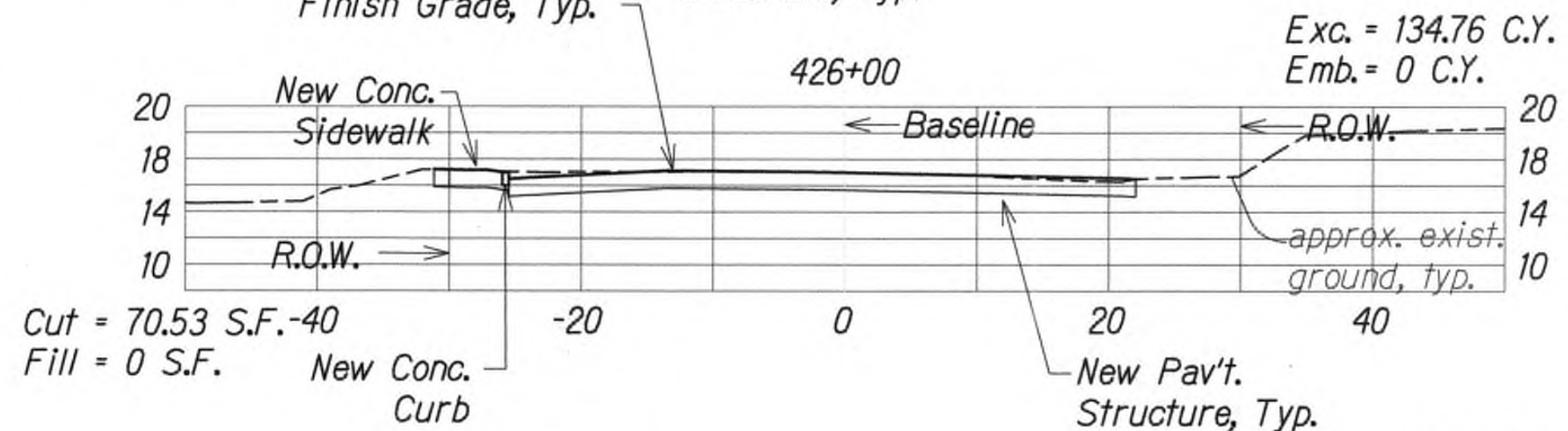
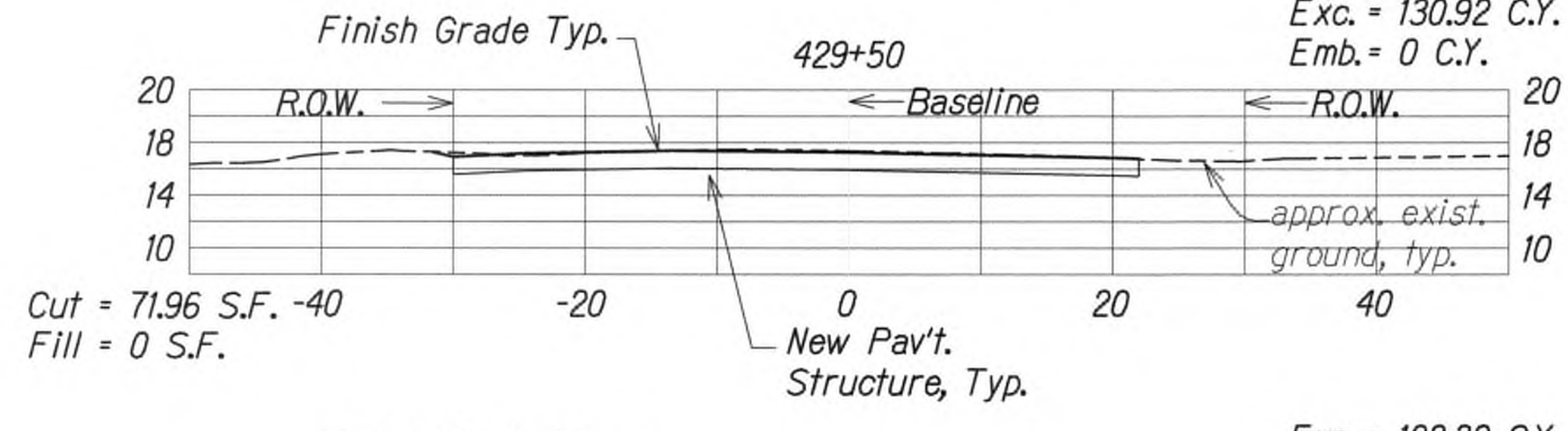
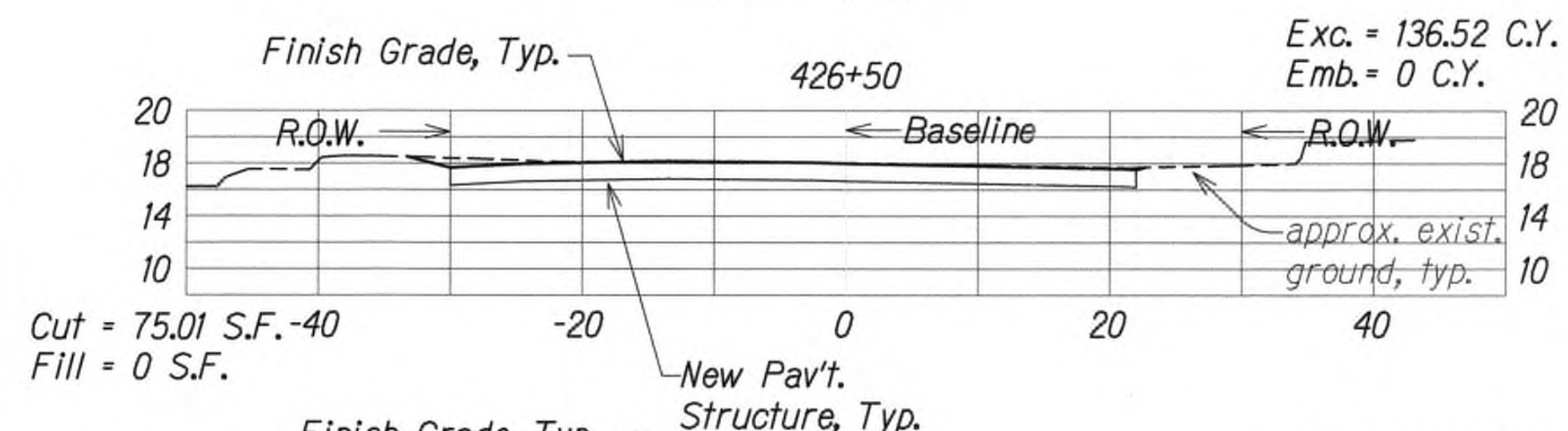
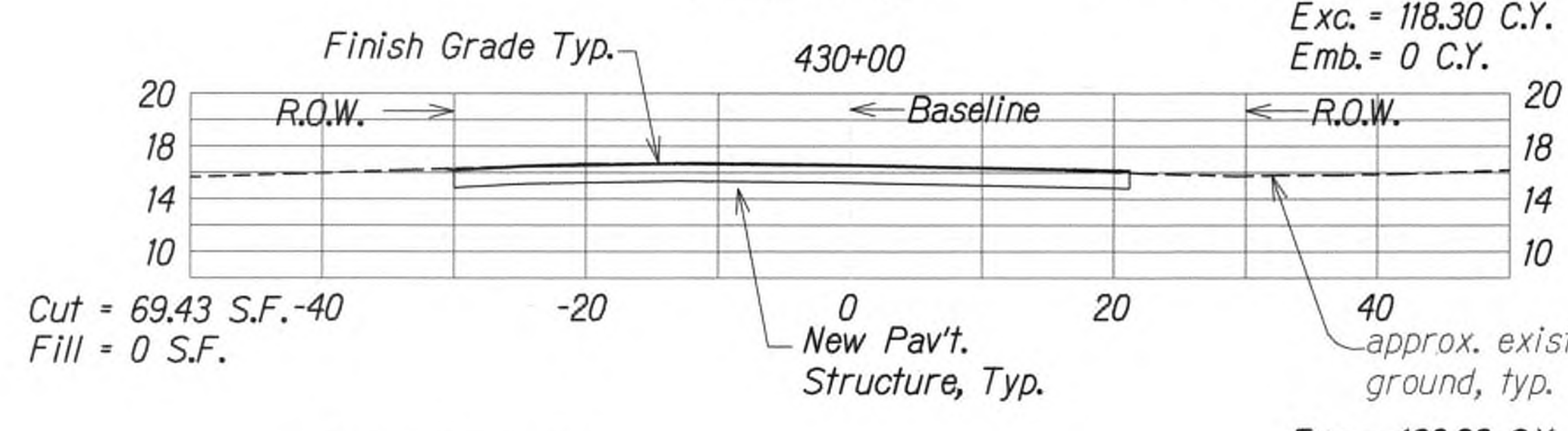
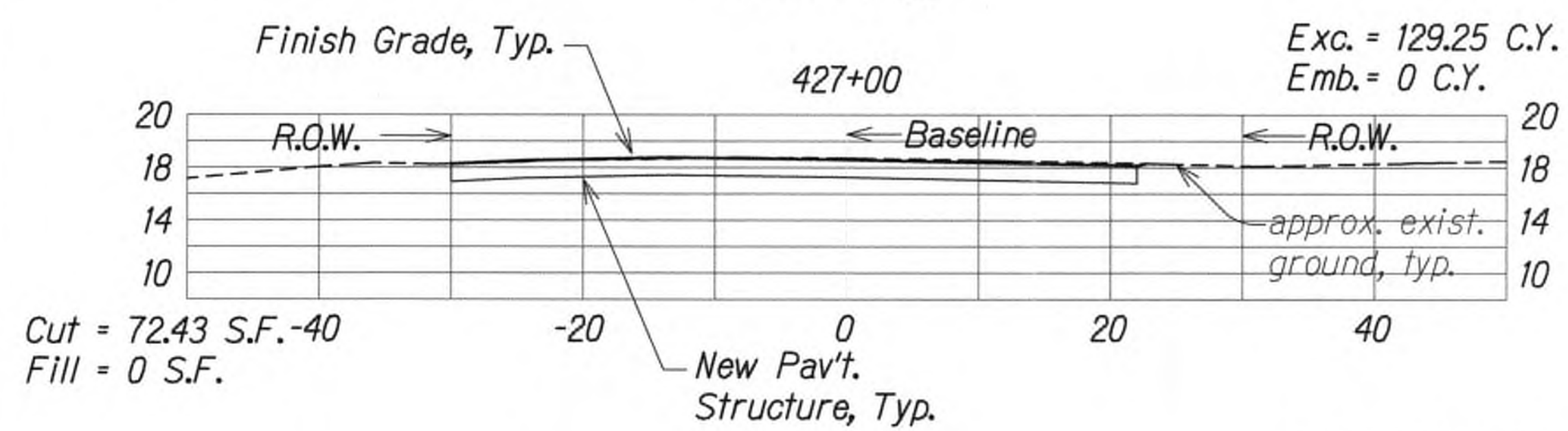
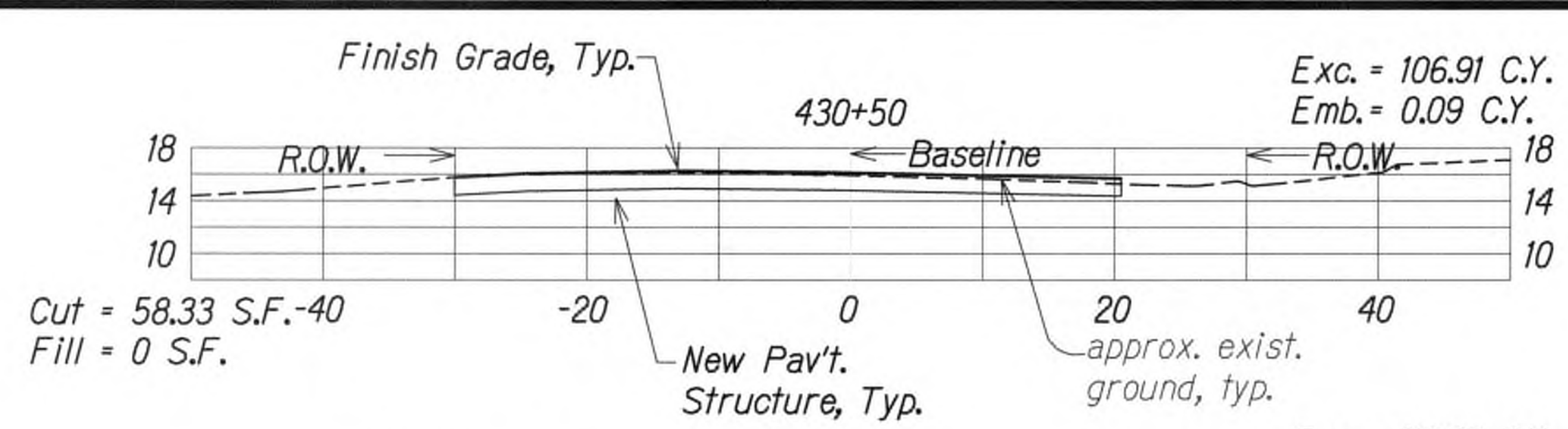
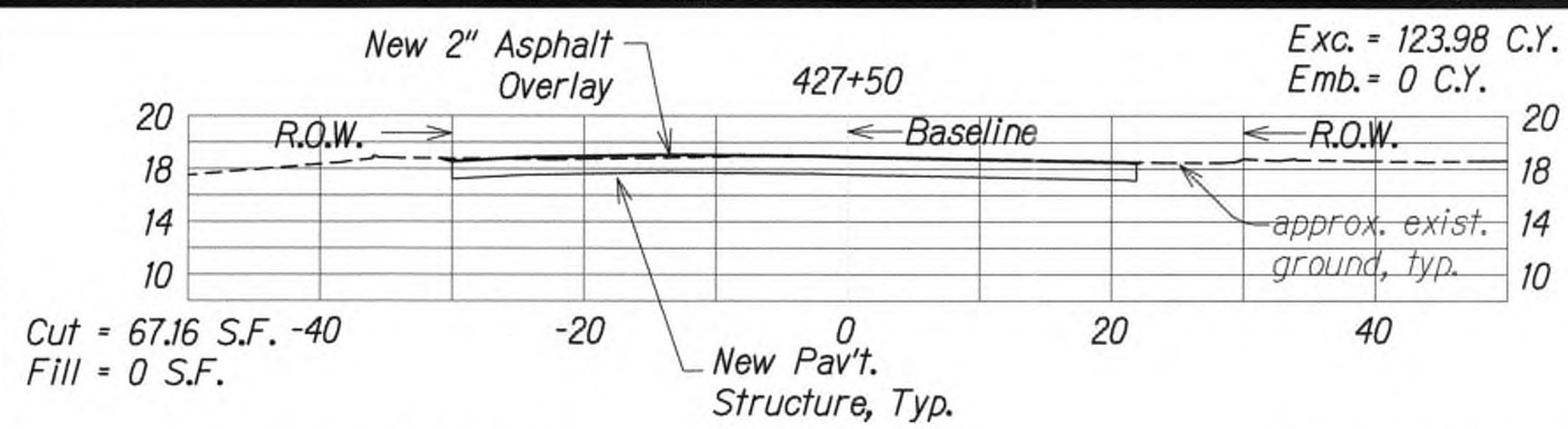
Kuhio Highway Improvements  
ROADWAY CROSS SECTIONS  
Scale: 1" = 10'

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

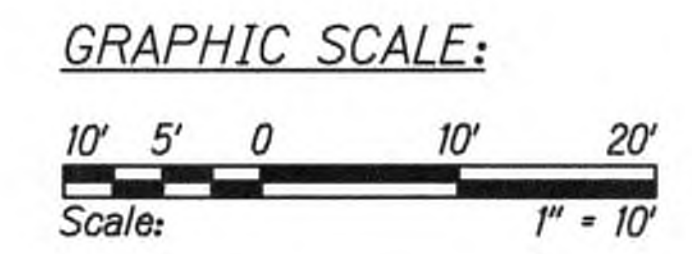
DATE REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(150)	2019	ADD.182	244



Sheet Total  
Exc. = 1519.37 C.Y.  
Emb. = 0.19 C.Y.



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ROADWAY CROSS SECTIONS

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(150)  
Scale: 1" = 10' Date: July 2019

SHEET No. XS4 OF 8 SHEETS

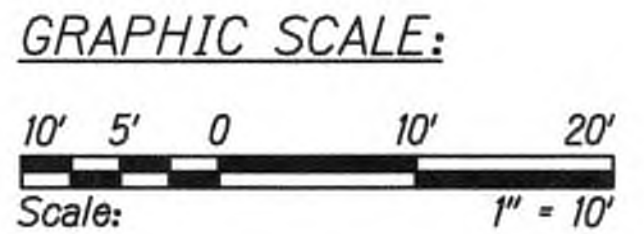
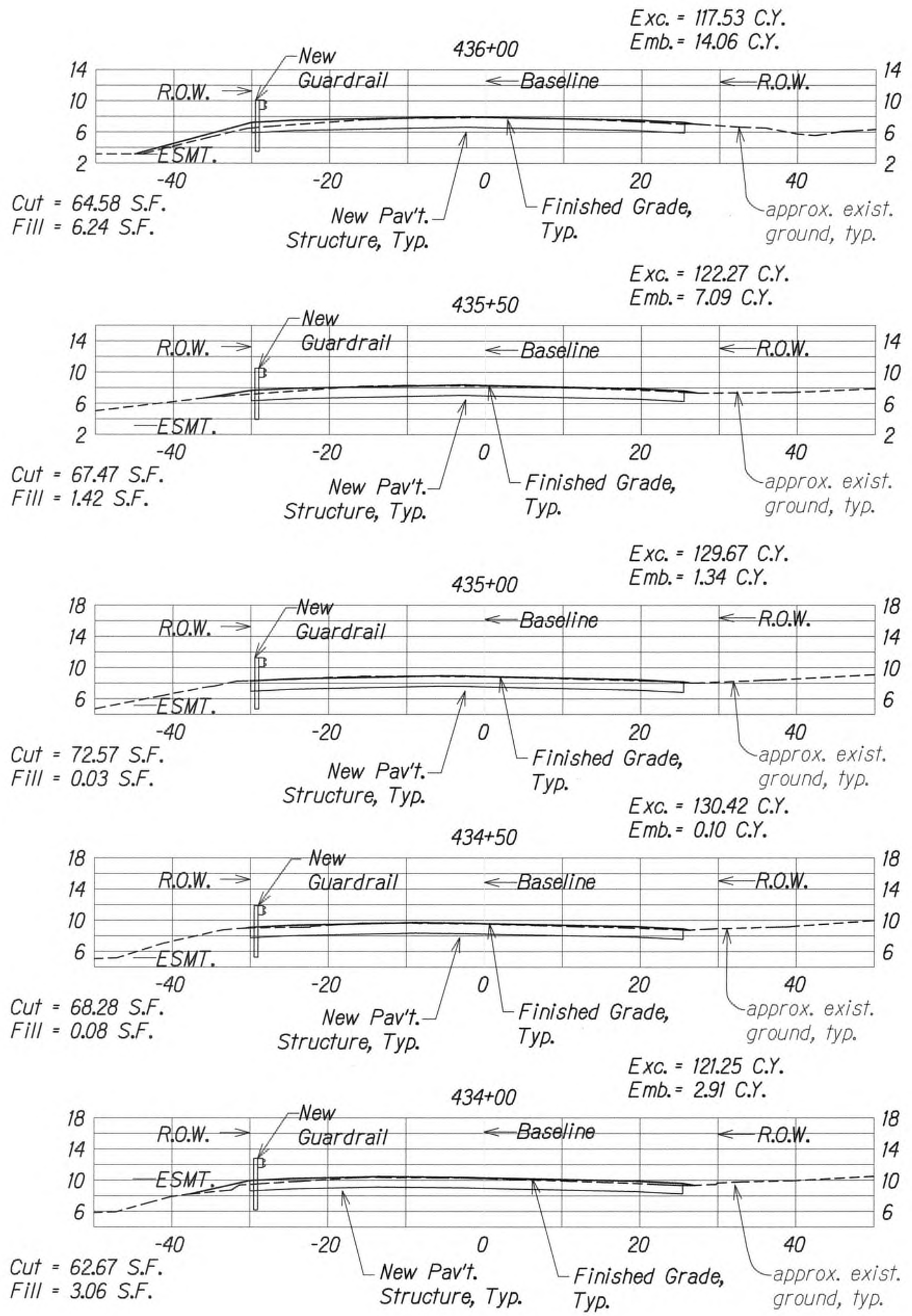
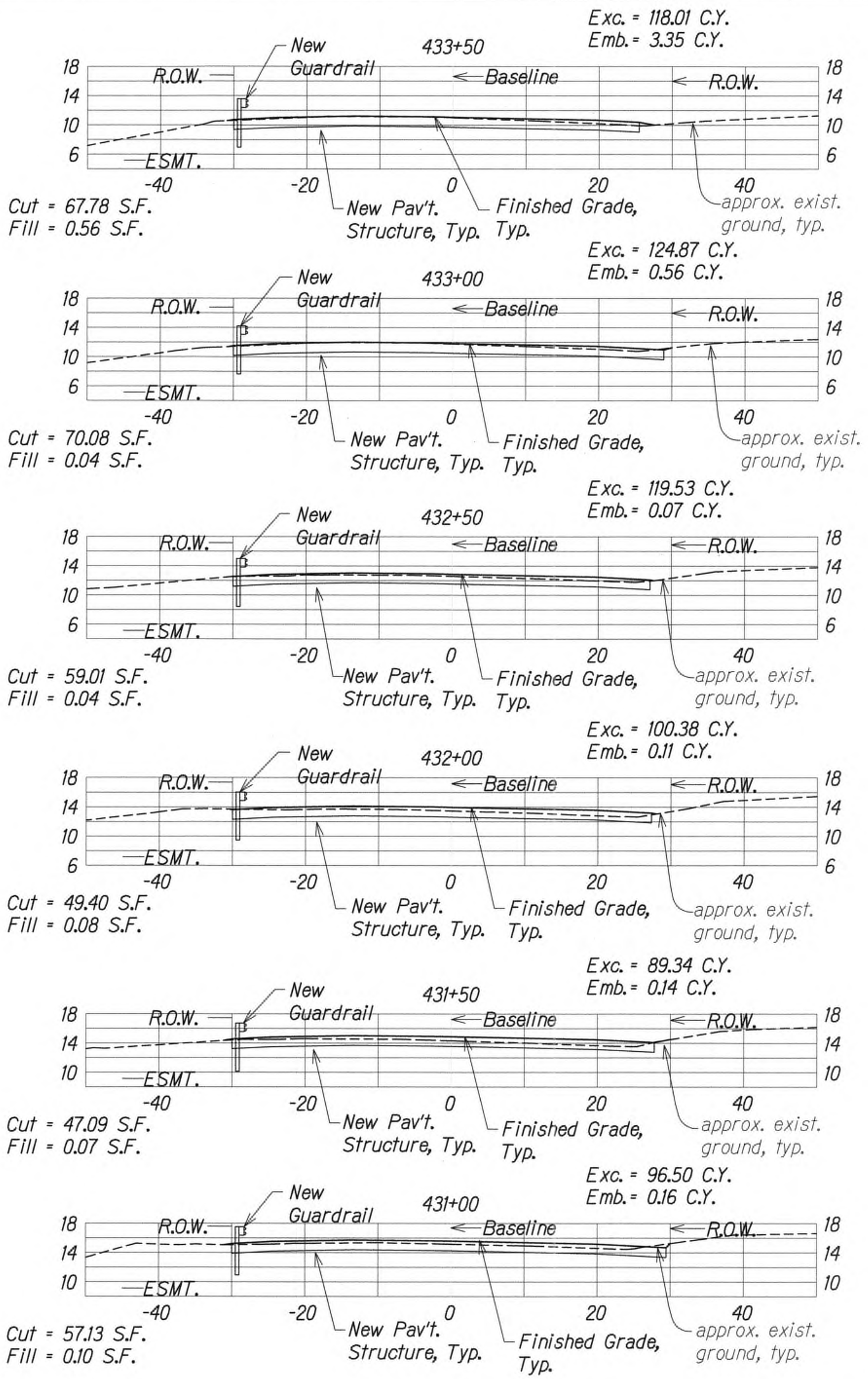
Kuhio Highway Improvements  
ROADWAY CROSS SECTIONS  
Scale: 1" = 10'

9/20/19 Δ Reissuing plan for legibility  
only. No design changes have  
been made.

DATE REVISION



Sheet Total  
Exc. = 1269.76 C.Y.  
Emb. = 29.90 C.Y.



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*Wilson*  
WILSON OKAMOTO CORPORATION APR. 30, 2020 LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY CROSS SECTIONS**

**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

SHEET No. XS5 OF 8 SHEETS

Kuhio Highway Improvements  
ROADWAY CROSS SECTIONS  
Scale: 1" = 10'

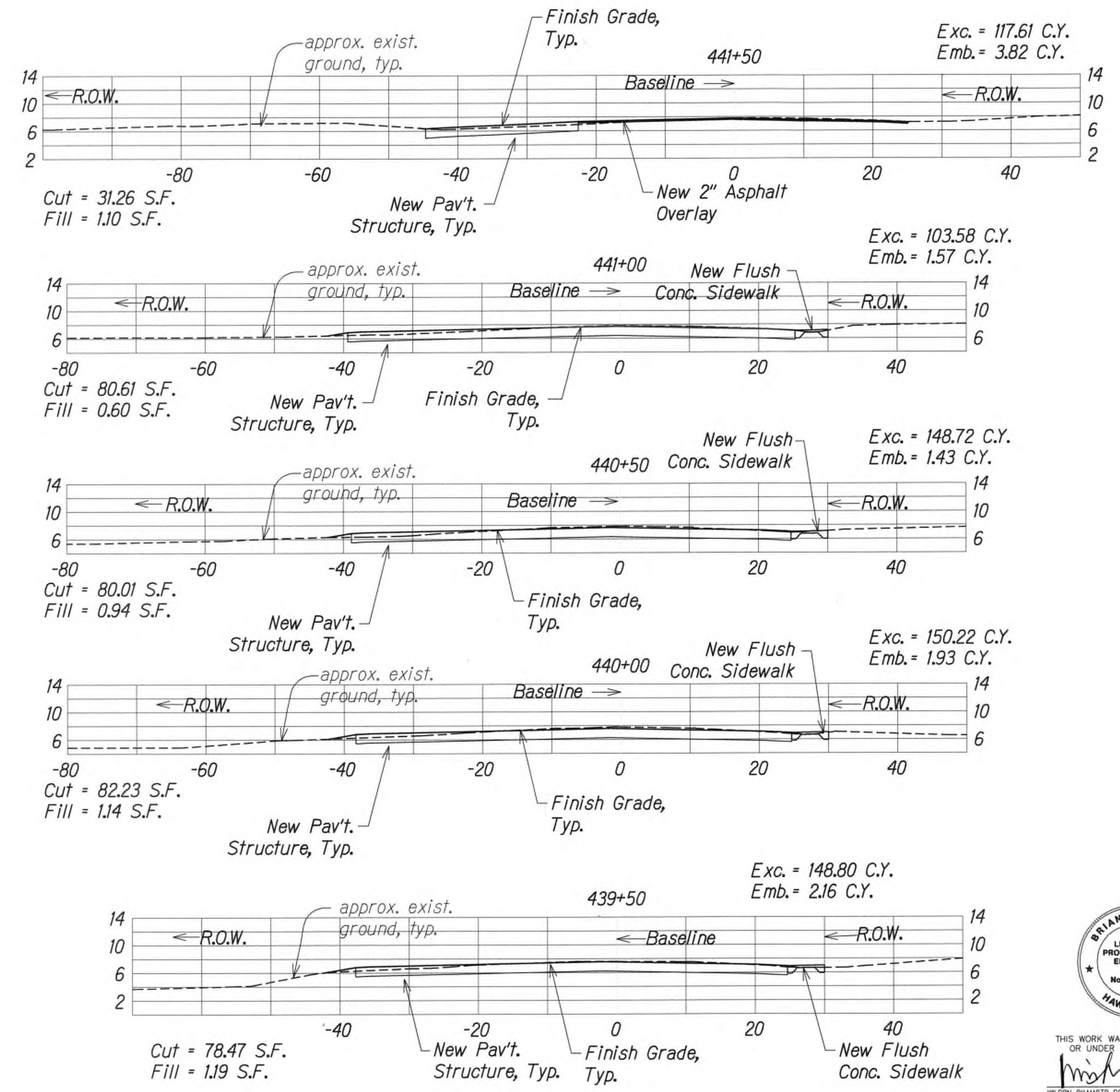
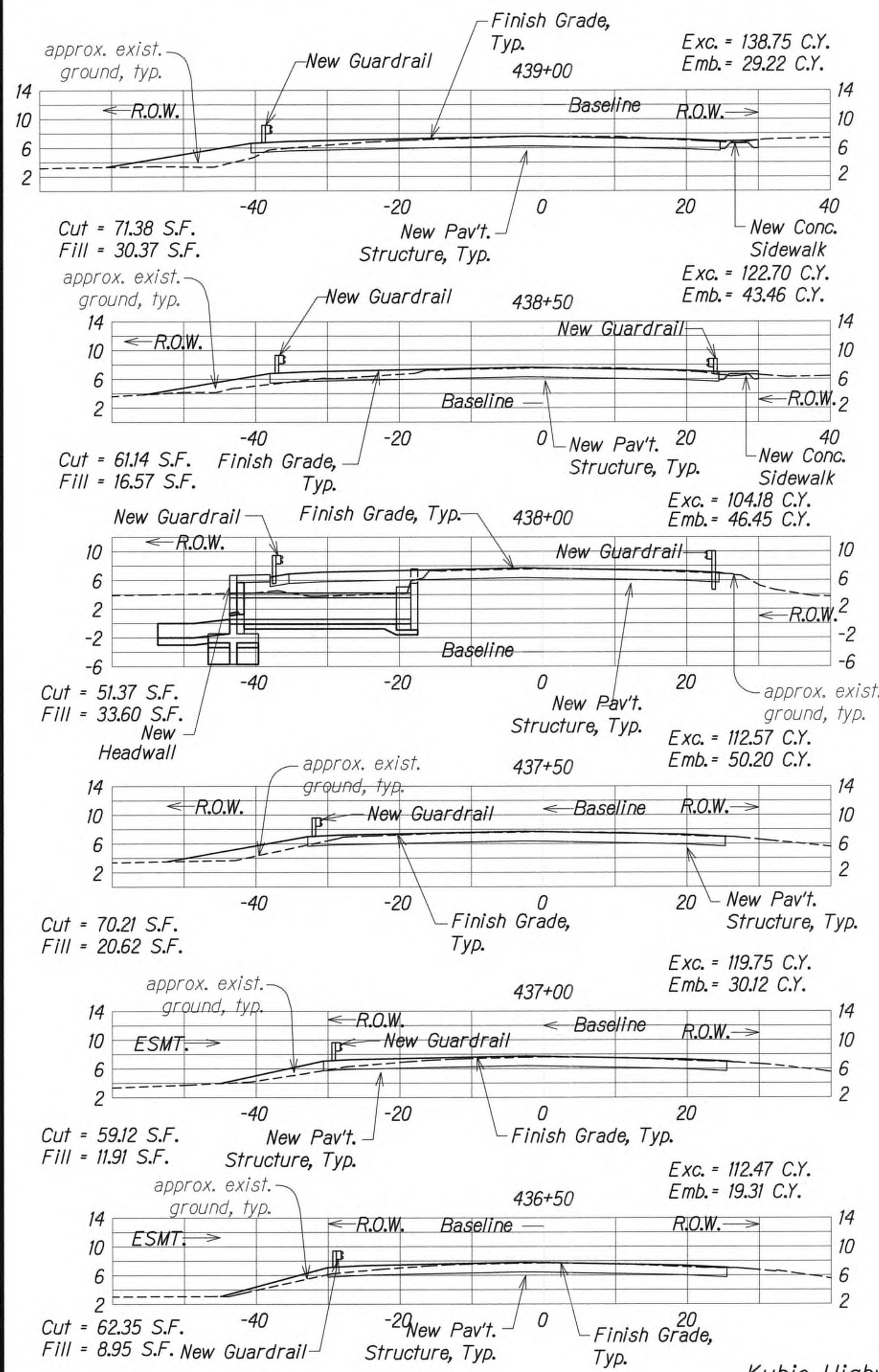
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

ORIGINAL PLAN	DATE
NOTE BOOK	DESIGNED BY
	QUANTITIES BY
	CHECKED BY



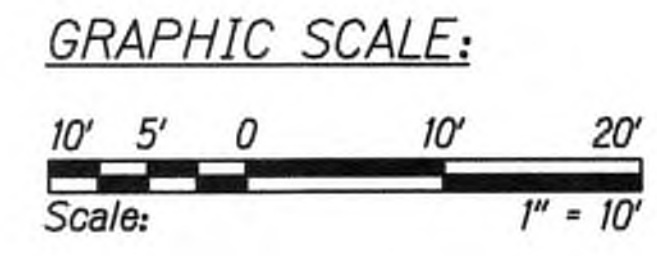
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KAUAI	HAW.	NH-056-1(50)	2019	ADD.184	244

Sheet Total  
Exc. = 1379.36 C.Y.  
Emb. = 229.69 C.Y.



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

Kuhio Highway Improvements  
ROADWAY CROSS SECTIONS  
Scale: 1" = 10'



9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

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*Signature* APRIL 30, 2020  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY CROSS SECTIONS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

SHEET No. XS6 OF 8 SHEETS



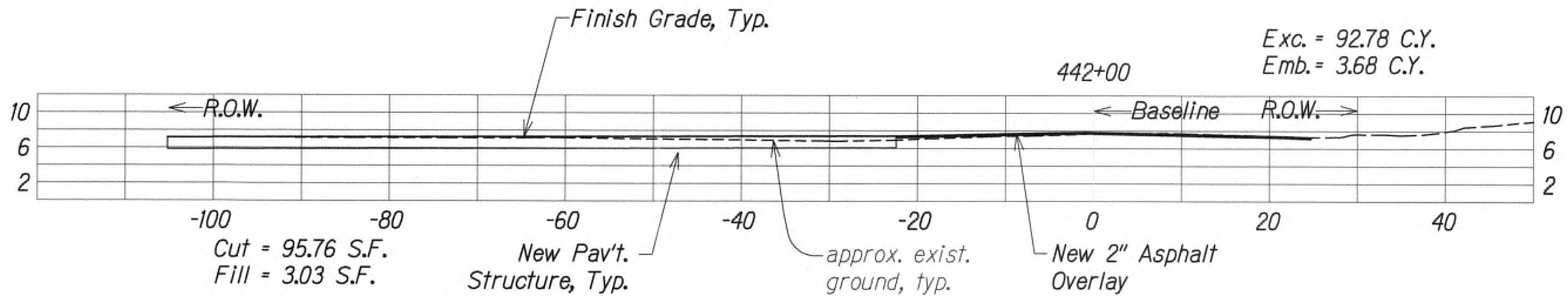
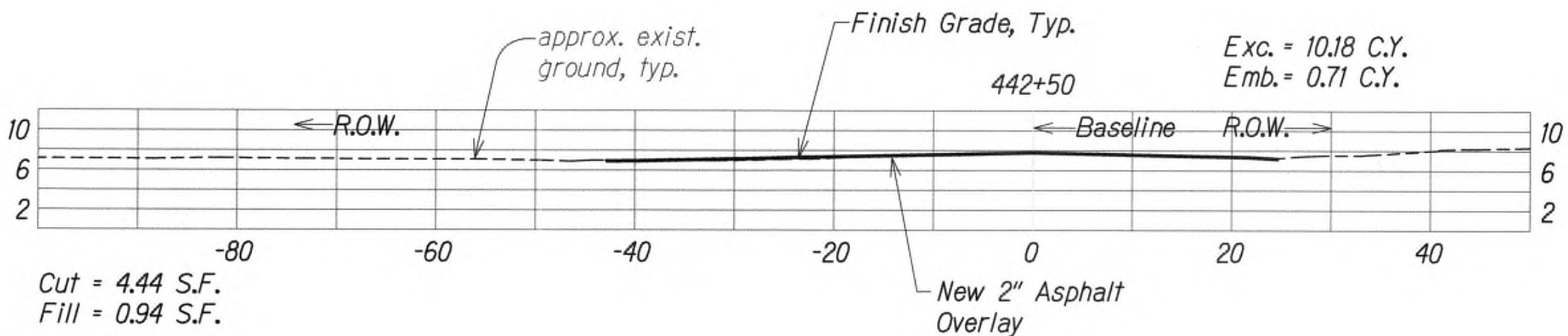
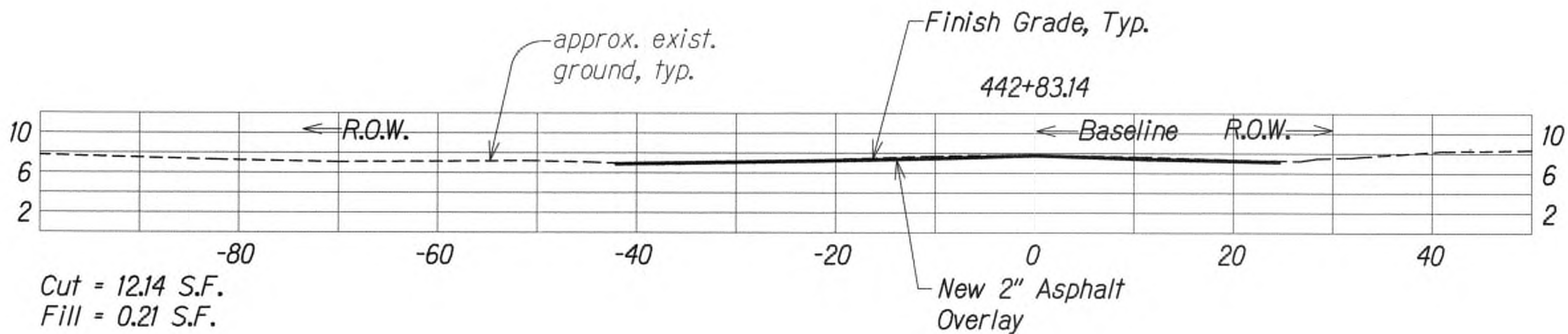
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KAUAI	HAW.	NH-056-1(50)	2019	ADD185	244

Sheet Total

Exc. = 102.95 C.Y.  
Emb. = 4.38 C.Y.

Roadway Total

Total Exc. = 9,033.26 C.Y.  
Total Emb. = 325.08 C.Y.



GRAPHIC SCALE:



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ROADWAY CROSS SECTIONS**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019  
SHEET No. XS7 OF 8 SHEETS

Kuhio Highway Improvements  
ROADWAY CROSS SECTIONS  
Scale: 1" = 10'

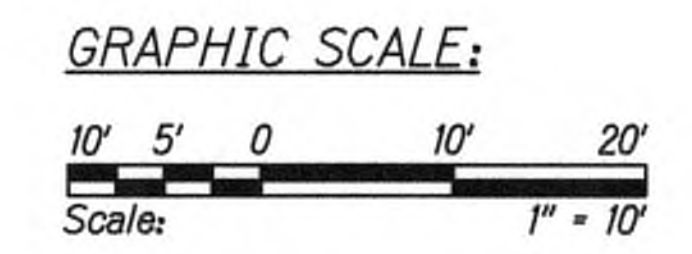
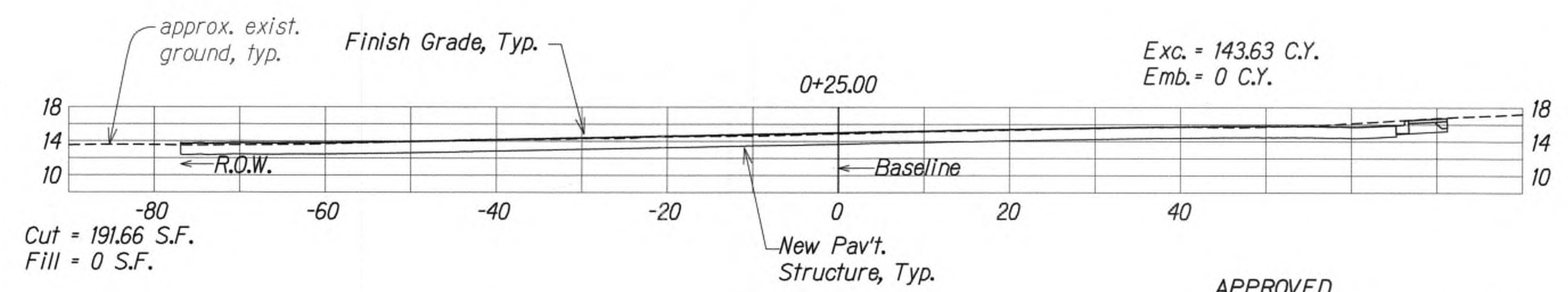
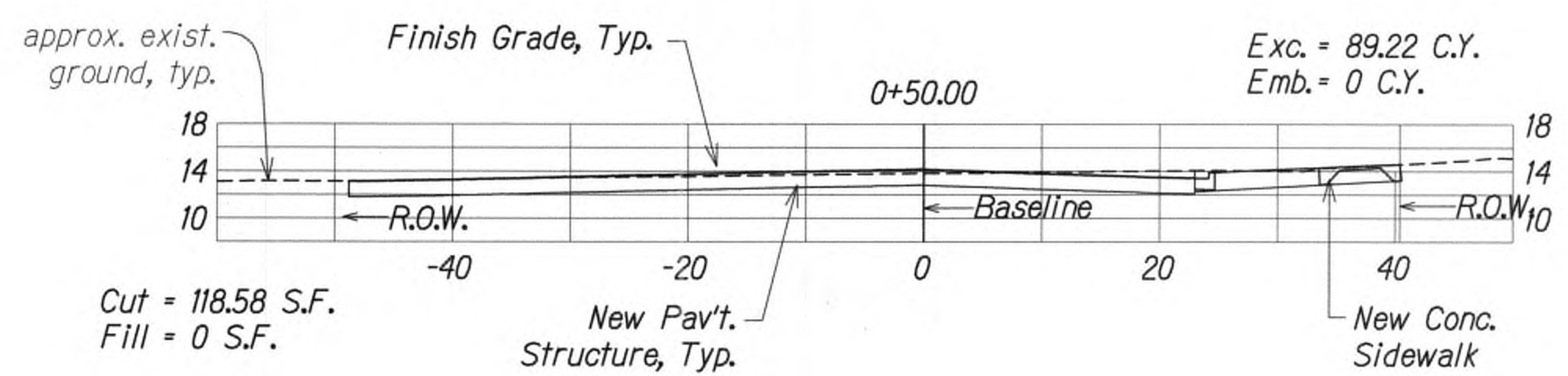
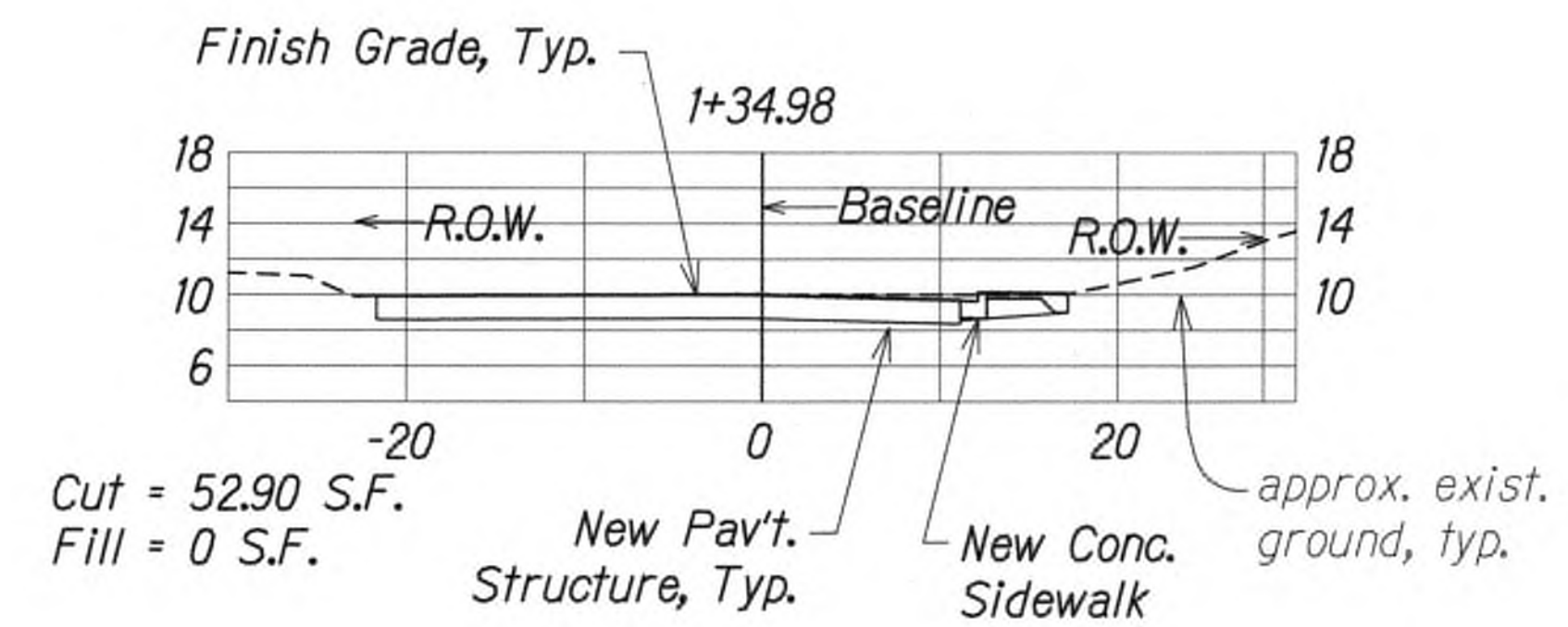
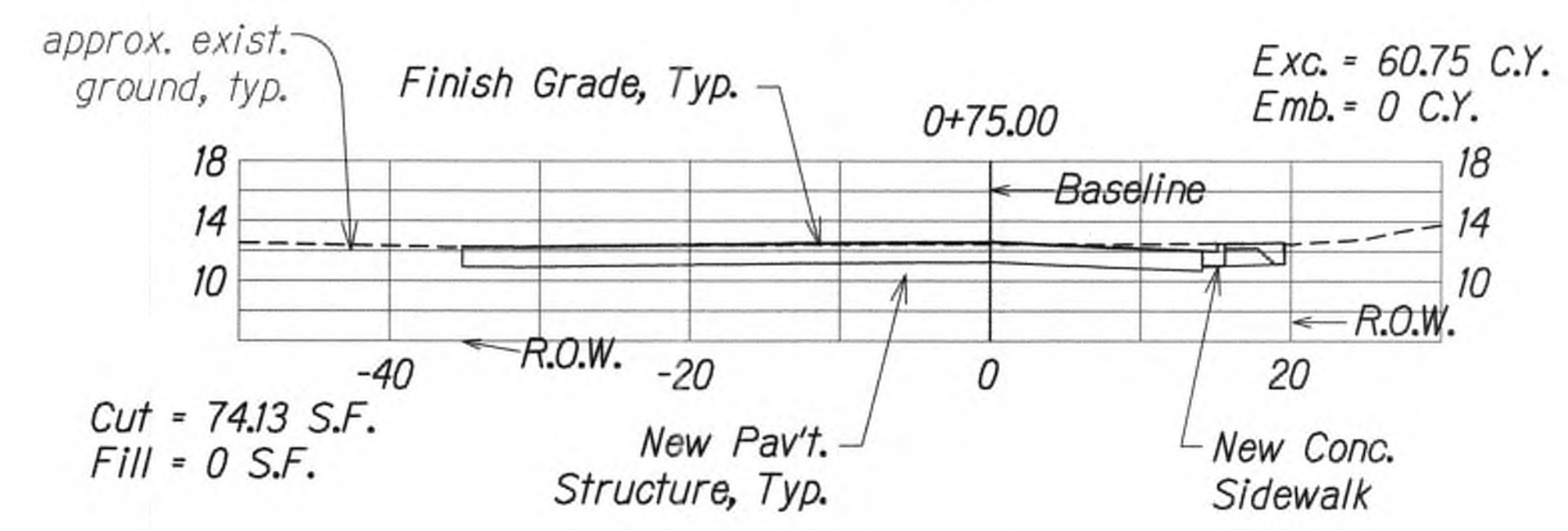
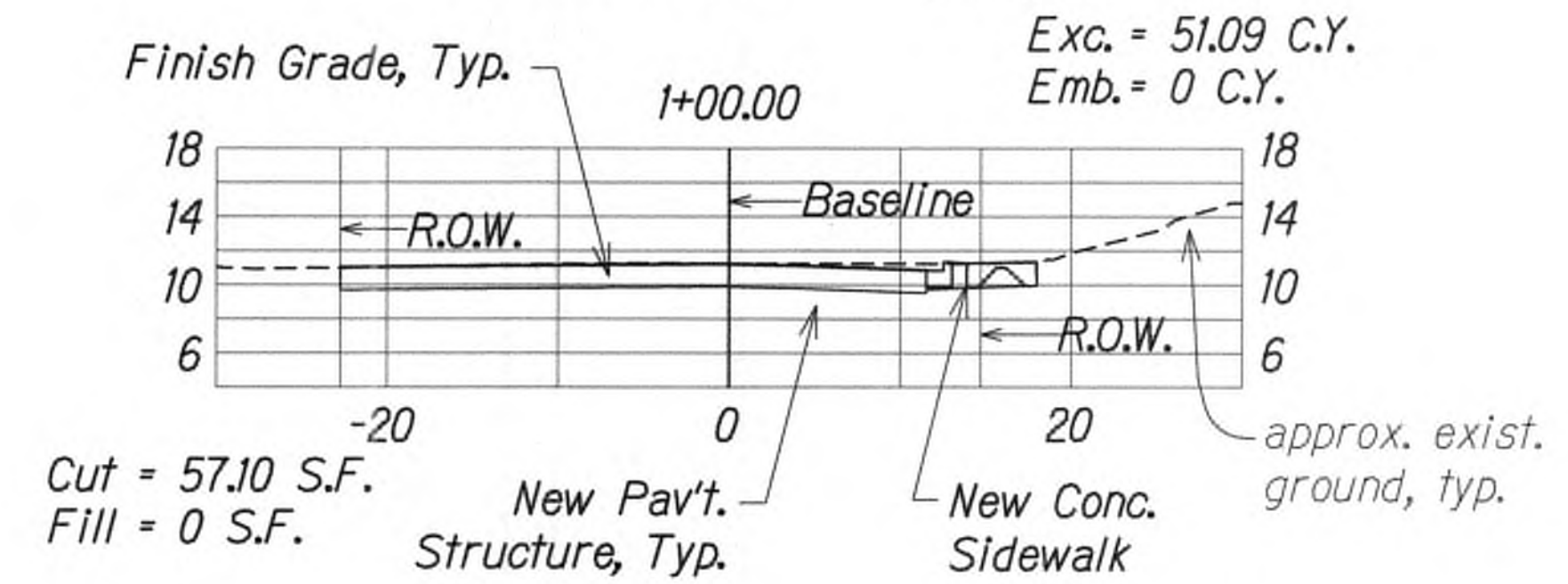
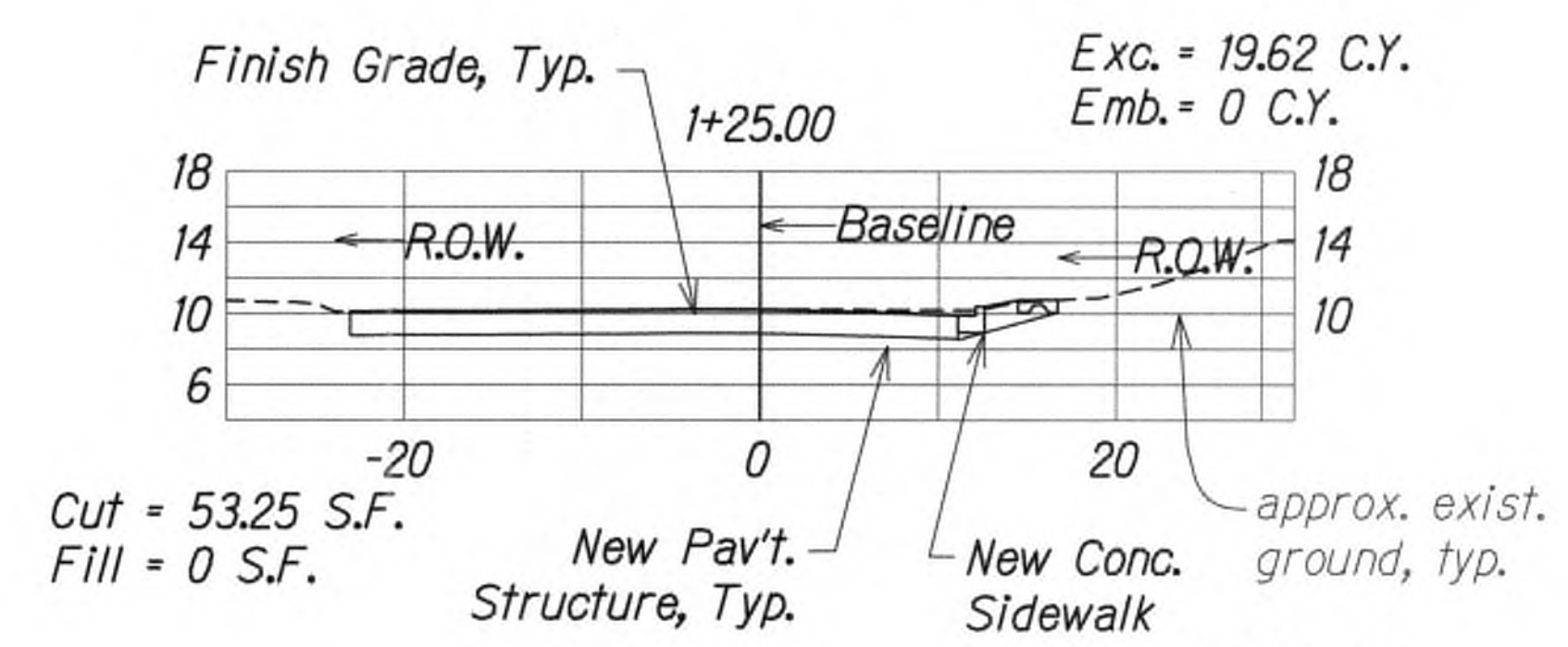
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD186	244

Total Exc.= 364.31 C.Y.  
Total Emb.= 0 C.Y.



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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY CROSS SECTIONS**

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019

SHEET No. XS8 OF 8 SHEETS

Haleilio Road Improvements  
ROADWAY CROSS SECTIONS  
Scale: 1" = 10'

APPROVED

County Engineer  
County of Kaua'i  
(For Work Within the County Right-of-Way)

9/20/19 Reissuing plan for legibility only. No design changes have been made.

DATE	
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
NOTED BY	
ORIGINAL PLAN	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.187	244

## INDEX OF STRUCTURAL DRAWINGS

[illegible]

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

DRAWING NAME: Z:\00 ONGOING\18-029-KUHIO HWY SHORT TERM IMPRVMTS-WOC\01 CAD\07-15-19 VELLUM\KSI-S001 INDEX.DWG PLOT TIME: 07-15-19, 9:13 AM)



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ME OR UNDER MY SUPERVISION.

 4-30-20  
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## INDEX OF STRUCTURAL DRAWINGS

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: None Date: July 2019

SHEET No. *S0.1* OF *6* SHEETS

ADD.187

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
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STRUCTURAL GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.188	244

1. General Specifications: Hawaii Department of Transportation (HDOT), Standard Specifications for Road and Bridge Construction, 2005, together with Special Provisions prepared for this contract.
2. Design Specifications:
- (A) AASHTO 2017 LRFD Bridge Design Specifications (Eighth Edition) and its subsequent interim specifications with interim supplements and modifications by the HDOT Highways Division.
- (B) State of Hawaii Department of Transportation Highways Division "Design Criteria for Bridges and Structures" dated August 8, 2014, with all interim supplements and modifications by the HDOT Highways Division.
- (C) Temporary shoring and falsework shall follow the AASHTO Guide Design Specification for Bridge Temporary Works.
3. Loads:
- (A) Live Load: HL93 Loading
- (B) Railing Test Level: TL-2

4. Materials:
- (A) All concrete strengths shall be as noted below:

Item No.	Structural Parts	Classes of Concrete	Compressive Strength, f'c (28 Days)
(1)	Box Culvert, Retaining Walls, and Headwalls	-	5,000 psi
(2)	Except as noted otherwise, all others	-	4,000 psi

All concrete shall have a maximum W/C Ratio of 0.45.

- (B) Concrete shall contain 15 lbs./yd<sup>3</sup> of Cemfil Anti-crack HP 67/36 Alkali Resistant Glass Fiber or equivalent.
- (C) The use of any calcium chloride in any concrete is prohibited.
- (D) A migrating corrosion inhibitor amine carboxylate water-based admixture shall be added to the concrete mix for concrete on bridge. The minimum dosage shall be 1.5 pints per cubic yard of concrete. The admixture shall not affect the set time of the concrete.
- (E) All reinforcing steel shall be ASTM A 615 deformed bars Grade 60 unless otherwise noted.
- (F) Reinforcing steel shall be ASTM A 706 where welded connections are required.
- (G) All structural steel shall be ASTM A 36, hot dip galvanized after fabrication, unless otherwise noted.
- (H) All anchor bolts, washers and nuts shall be ASTM A325 hot dip galvanized after fabrication, unless otherwise specified.

4. Materials (Cont.):
- (J) All welding shall conform to AWS D1.5 Bridge Welding Code. All welds shall be ground smooth. Unless noted otherwise, all welding shall be shielded arc welding done with E70 electrodes.
- (K) All stainless steel shall be duplex stainless steel Type 2205 with a minimum yield strength of 65 ksi and minimum tensile strength of 95 ksi.
5. Reinforcement:
- (A) The covering measured from the surface of the concrete to the face of any reinforcing bars shall be as follows, except as otherwise shown:
- (1) Concrete cast against and permanently exposed to earth = 3"
- (2) All others unless otherwise noted = 2".
- (B) Reinforcing bars shall be installed in accordance with the Concrete Reinforcing Steel Institute "Manual of Standard Practice" unless otherwise noted.
- (C) Minimum clear spacing between parallel bars shall be 1 1/2 times the diameter of bars (for non bundled bars). In no case shall the clear distance between the bars be less than 1 1/2 times the maximum size of the coarse aggregate or 1 1/2".
- (D) All dimensions relating to reinforcing bars are to centers of bars unless otherwise noted.
- (E) Reinforcing bars shall be securely tied at all intersections and lap splices except where the spacing of intersections is less than one foot in each direction, in which case alternate intersections shall be tied.

6. Construction Notes:
- (A) The Contractor shall verify all dimensions and site conditions and shall report any discrepancies in writing to the Engineer before commencing work or ordering materials.
- (B) The Contractor shall verify all site conditions and not rely upon these plans for existing, dimensions, elevations and azimuths, stream channel location, roads, roadway gutters, curbs and sidewalks, etc.. Conditions may differ from those shown.
- (C) The Contractor shall be solely responsible for the protection of adjacent properties, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- (D) The Contractor shall verify the location of all utility lines and notify the respective owners before commencing with excavation, and any temporary piling or sheeting.

6. Construction Notes (Cont.):
- (E) All shoring, temporary embankments, temporary structures, etc. shall be capable of supporting the design loads as stated in the Structural General Notes. The drawings and calculations shall be stamped by a licensed Structural Engineer and a licensed Civil Engineer specializing in Geotechnical engineering in the State of Hawai'i. The above work, including working drawings and calculations, shall be incidental to various contract items. The drawings and calculations shall be found acceptable by the Engineer before any construction work is to proceed.
- (F) Except as otherwise noted, all vertical dimensions are measured plumb.
- (G) For concrete finish see Standard Specifications and Special Provisions.
- (H) Construction joints may be relocated or additional ones added subject to the approval of the Engineer.
- (J) Unless otherwise noted, all exposed concrete edges shall be chamfered 3/4" x 3/4".
- (K) Contractor shall unplug, clean and maintain existing drains during construction of the project.
- (L) When only portions of concrete are to be demolished. The intersections between the demolished concrete and the concrete that is to remain shall have a 3/4 inch deep sawcut around the entire perimeter of the demolished area.
- (M) The concrete surfaces which new concrete is poured against shall be roughened to a full amplitude of 1/4 inch and cleaned, unless otherwise noted.
- (N) All existing reinforcing shall remain in place and shall not be damaged in any way unless otherwise noted.
- (P) All existing reinforcing that is to remain in place shall have a minimum concrete cover of 2".
- (Q) Pavement, concrete, riprap, etc. shall be restored to its original condition when it is removed to install new items of work.
- (R) New concrete surfaces shall match the finish of the existing structure. Any reveals, patterns, or decorative features shall also match the existing structure.
- (S) Existing weepholes shall be extended through new concrete where applicable. New weephole shall be coupled to the existing weephole and form a watertight connection.

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

DRAWING NAME: ZALO OONGONGA 14-029-HIGHWAY SHORT TERM IMPROVEMENTS-KUOIOI CDA01-15-19 VELLUVIS-VS-5002 GENNOTE.DWG PLOT TIME: 07-15-19, 9:17 AM

9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

KUOIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: None Date: July 2019

SHEET No. 50.2 OF 6 SHEETS



STRUCTURAL GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.189	244

7. Foundation:

(A) Retaining Walls and Headwalls

- (1) Active Earth Pressures
  - (a) Active Lateral Earth Pressure (Level Backfill) = 40 Pounds per Foot (PCF) Equivalent Fluid Pressure
- (2) Bearing Capacity
  - (a) Extreme Event Limit State = 9,000 Pounds per Square Foot (PSF)
  - (b) Strength Limit State = 4,500 PSF
  - (c) Service Limit State = 3,000 PSF
- (3) Friction Factor
  - (a) Extreme Event Limit State = 0.55
  - (b) Strength Limit State = 0.44
- (4) Passive Earth Resistance
  - (a) Extreme Event Limit State = 250 PCF (Level Backfill)
  - (b) Strength Limit State = 125 PCF (Level Backfill)

(B) Box Culvert

- (1) At-Rest Earth Pressures
  - (a) At-Rest Lateral Earth Pressure (Level Backfill) = 56 PSF
- (2) Bearing Capacity
  - (a) Extreme Event Limit State = 6,000 Pounds per Square Foot (PSF)
  - (b) Strength Limit State = 2,700 PSF
  - (c) Service Limit State = 2,000 PSF
- (3) Friction Factor
  - (a) Extreme Event Limit State = 0.55
  - (b) Strength Limit State = 0.44

7. Foundation (Cont.):

(4) Passive Earth Resistance

- (a) Extreme Event Limit State = 250 PCF (Level Backfill)
- (b) Strength Limit State = 125 PCF (Level Backfill)
- (C) For additional geotechnical information see geotechnical engineering exploration report by Geolabs dated 10/1/2009.

8. General:

- (A) All items noted incidental will not be paid for separately.
- (B) Standard Plans refer to all structures in general, except for modifications as may be required for special conditions. For such modifications refer to the corresponding detailed drawings.

ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
NO.	

DRAWING NAME: Z:\00 ONGOING\18-029-KUHIO HWY SHORT TERM IMPROVEMENTS-WDC\01 CAD\07-15-19 VELLUM\KSI-5002 GENNOTE.DWG PLOT TIME: 07-15-19, 9:17 AM

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: None Date: July 2019

SHEET No. 50.3 OF 6 SHEETS



SYMBOLS AND ABBREVIATIONS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.190	244

⌘ And  
@ At  
? Diameter  
≥ Greater Than or Equal to  
≤ Less Than or Equal to  
# Number

Abut. Abutment  
Abbr. Abbreviation  
Add. Additional  
Alt. Alternate  
AB Anchor Bolt  
AC Asphaltic Concrete  
Approx. Approximate  
Az. Azimuth

Bk. Back  
Bal. Balance  
B Baseline  
Bm. Beam  
Brg., Brgs. Bearing, Bearings  
BVC Beginning of Vertical Curve  
Bet. Between  
BF Both Faces  
BW Both Ways  
BFE Bottom of Footing Elevation  
Bot., Bott., B Bottom  
BOF Bottom of Footing  
Br. Bridge  
Blt. Bolt

Cant. Cantilever  
CIP Cast Iron Pipe  
C Center line  
CG Center of Gravity  
cc Center to Center  
CFCW Continuous Flashing Compound Waterproofing

Cl. Class  
Clr. Clearance  
CO Clean Out  
Col. Column  
Conc. Concrete  
CBW Concrete Barrier Wall  
CMU Concrete Masonry Unit  
Conn. Connection  
Const. Construction  
CJ Construction Joint  
Cntl. Jt. Control Joint  
CLSM Controlled Low Strength Material

Cont. Continuous  
CSL Crosshole Sonic Log  
CF Cubic Feet  
CY, Cu. Yd. Cubic Yard

Det. Detail

Dia. Diameter  
Diaph. Diaphragm  
Dim. Dimension  
Dist. Distance  
DO Ditto  
Dwls. Dowels  
Dn. Down  
Dbl. Double  
DI Drain Inlet, Ductile Iron  
Dwg., Dwgs. Drawing, Drawings  
DS Drilled Shaft

E East  
EB East Bound  
EA, Ea., ea. Each  
EF Each Face  
EFH Each Face Horizontal  
EFV Each Face Vertical  
EW Each Way  
EPE Existing Edge of Pavement  
EPS Expanded Polystyrene  
ES Edge of Shoulder  
Elec. Electrical  
EMH Electrical Manhole  
El., Elev. Elevation  
Emb. Embankment  
EVC End of Vertical Curve  
Eq. Equal  
Est. Estimated  
Exc. Excavation  
Excl. Excluding  
Exist., Ex. Existing  
Exp., (E) Expansion  
EJ Expansion Joint  
Ext. Exterior

(F) Fixed  
FA Force account  
FB Flat Bar  
FC Compression Stresses  
f'c Specified Compressive Strength of Concrete at 28 days  
f'ci Specified Compressive Strength of Concrete at Time of Initial Prestress  
FF Far Face, Front Face  
Fig. Figure  
Fin. Gr. Finish Grade  
FRP Fiberglass Reinforced Plastic  
FT Tensile Stresses  
Ftg. Footing  
Ft. Feet, Foot

Ga. Gage, Gauge  
Galv. Galvanized  
G, Gir. Girder  
GDI Grated Drain Inlet

GFRP Glass Fiber Reinforced Polymer Rebar  
Gr. Grade  
Grd. Ground  
GRP Grouted Rubble Pavement  
Ht. Height  
(H) Hinge  
Horiz., H Horizontal  
HDOT State of Hawaii Department of Transportation

HDPE High Density Polyethylene  
HS High strength  
HECO Hawaiian Electric Company

IB Inbound  
In. Inch  
ID Inside Diameter  
IF Inside Face  
Int. Interior  
Inv. Invert

Jt. Joint  
K Kips  
KF Kip Foot  
KSF Kips Per Square Foot  
KSI Kips Per Square Inch  
KLF Kips Per Linear Foot

L Length  
lb., lbs., LBS. Pound, Pounds  
Ltg. Std. Lighting Standard  
LF, Lin. Ft. Linear Feet/Foot  
LS Lump Sum  
Longit. Longitudinal

M Modified  
MH Manhole  
Max. Maximum  
Mech. Mechanical  
Min. Minimum  
Misc. Miscellaneous  
MPH Miles Per Hour

NF Near Face  
N North  
NIC Not in Contract  
No. Number  
NTS Not to Scale

O/S Offset  
oc On Center  
Opn'g Opening  
OB Outbound  
OD Outside Diameter

OG Outside Girder, Outbound Girder  
Perf. Perforated  
PL Plate  
PCC Portland Cement Concrete  
PC Point of Curvature  
PCF Pounds per Cubic Foot  
P(e) Effective Prestress Force After All Losses

PPM Parts Per Million  
PSF Pounds per Square Foot  
PSI, psi Pounds per Square Inch  
PLF Pounds per Linear Foot  
PI Point of Intersection of Tangents

PIVC Point of Intersection of Vertical Curve  
PT Point of Tangency  
Pt., Pts. Point, Points  
PRC Point of Reverse Curvature  
PVC Polyvinyl Chloride  
Prestr. Prestressed  
P/S Prestressed Strands  
PB Pull Box

Rad., R Radius  
RF Rear Face  
Rebar Reinforcing Bar  
Ref. Reference  
Reinf. Reinforced, Reinforcing, Reinforcement  
Req'd. Required  
Ret. Retaining  
ROW Right of Way  
Rdwy. Roadway

Sect. Section  
SRW Segmental Retaining Wall  
Sht. Sheet  
Sim. Similar  
Sl. Slope  
S South  
Spc., Spg. Spaces, Spacing  
Sprd. Spread  
Spec. Specification  
SF Square Feet  
SY Square Yard  
SS Stainless Steel  
Std. Standard  
Sta. Station  
Stiff. Stiffener  
Stirr. Stirrup  
Stl. Steel

9/20/19 Reissuing plan for legibility only. No design changes have been made.

Struct. Structure  
SE Super Elevation  
Symm. Symmetrical  
Str. Straight  
Tan. Tangent  
TC Continuity Tendons  
Temp. Temporary  
TD Deck Tendon  
Thk. Thick  
T Top  
T&B Top and Bottom  
TCE Top of Column (and Bent Cap Soffit) Elevation  
TOD Top of Deck  
TOP Top of Pier  
TFE Top of Footing Elevation  
Tot. Total  
Transv. Transverse  
TS Structural Tubing  
TSS Tendon For Girder in Simply Supported Condition  
Typ. Typical  
Undergrd. Underground  
Var. Varies  
Vert., V Vertical  
VC Vertical Curve  
VESLMC Very Early Strength Latex Modified Concrete

W/C Water/Cement  
w/ With  
W West  
WB West Bound  
WWF Welded Wire Fabric  
WW Wingwall  
WP Work Point, Working Point  
WS Water Surface

Yr. Year



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4-30-20  
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

SYMBOLS AND ABBREVIATIONS

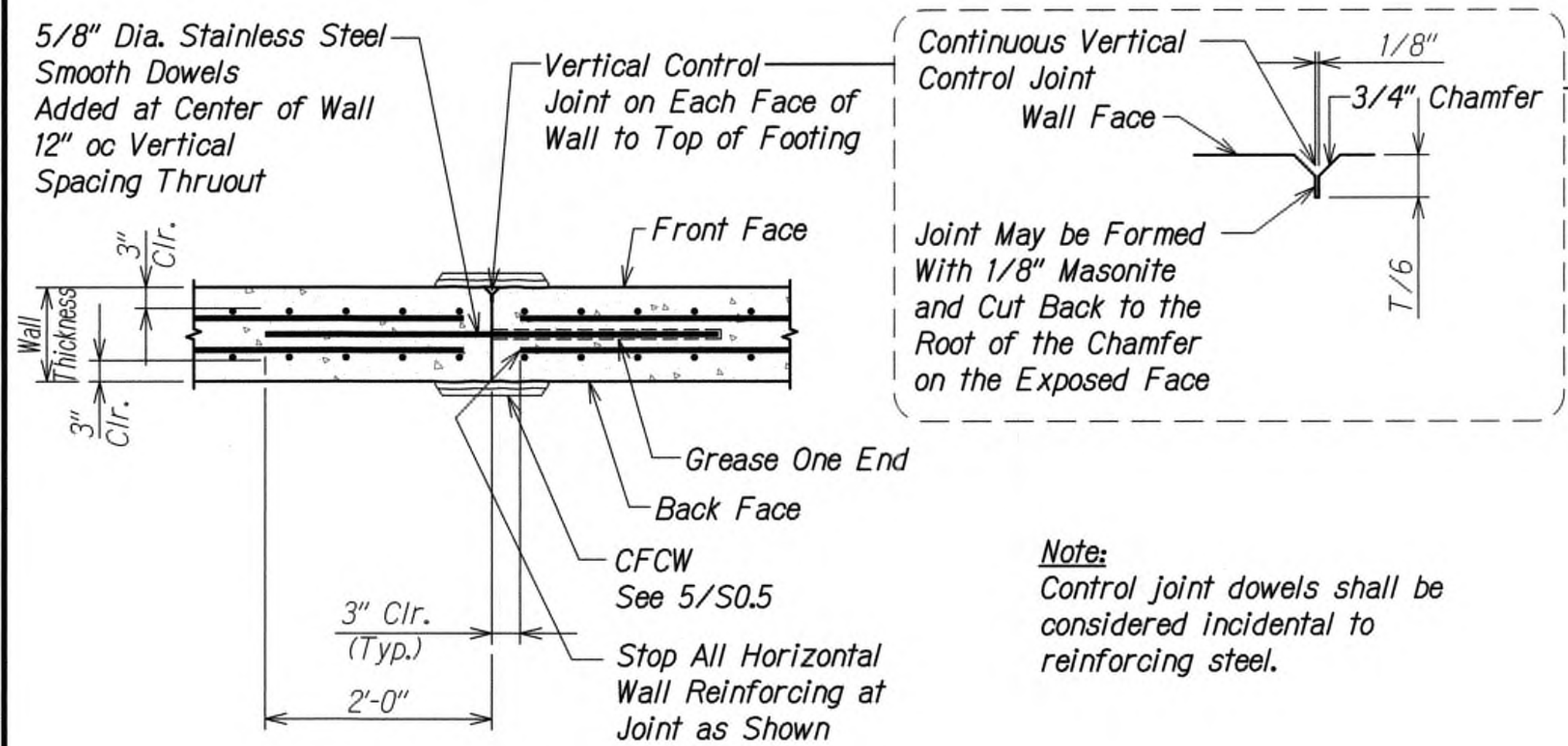
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: None Date: July 2019

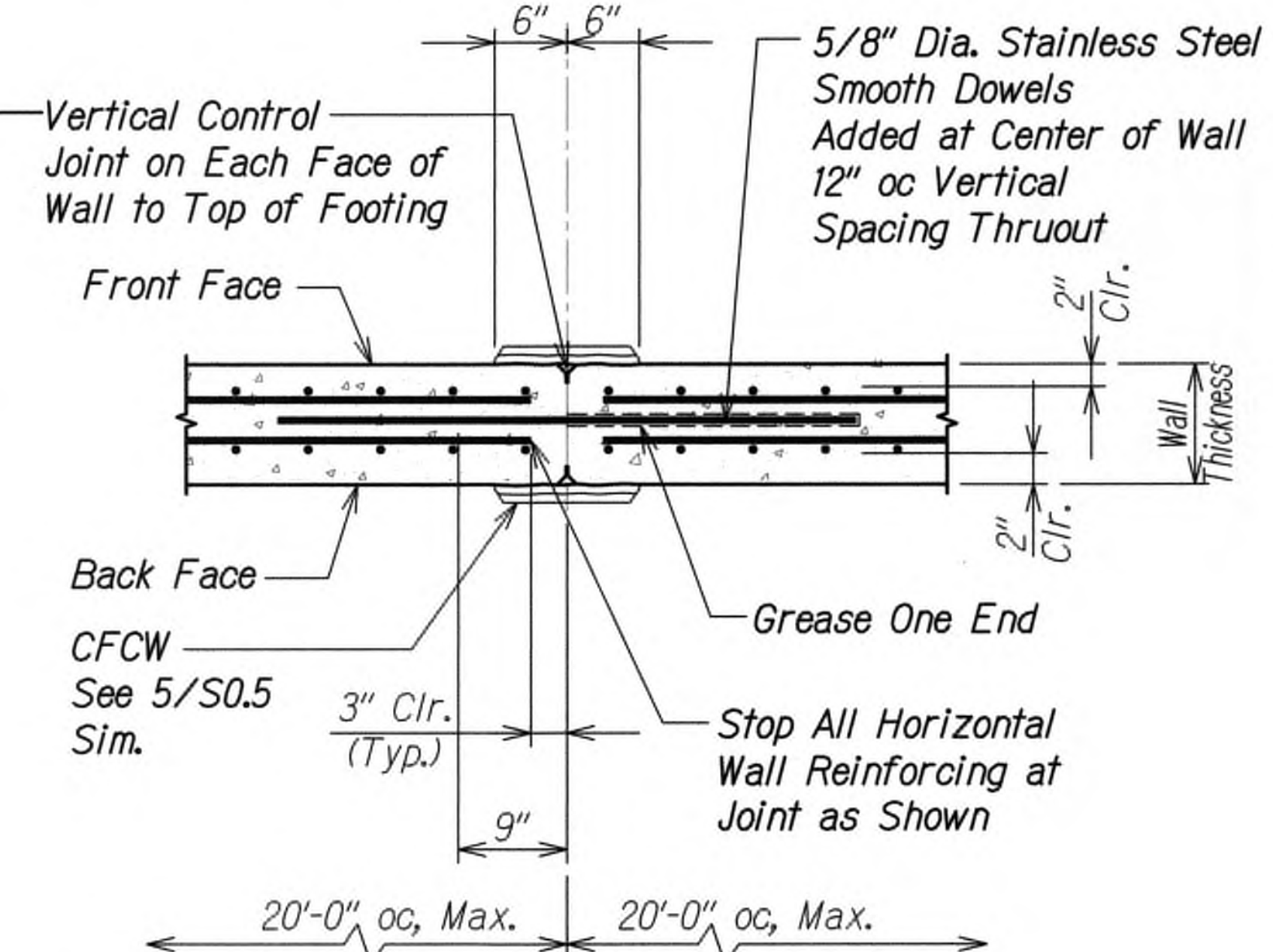
SHEET No. 50.4 OF 6 SHEETS



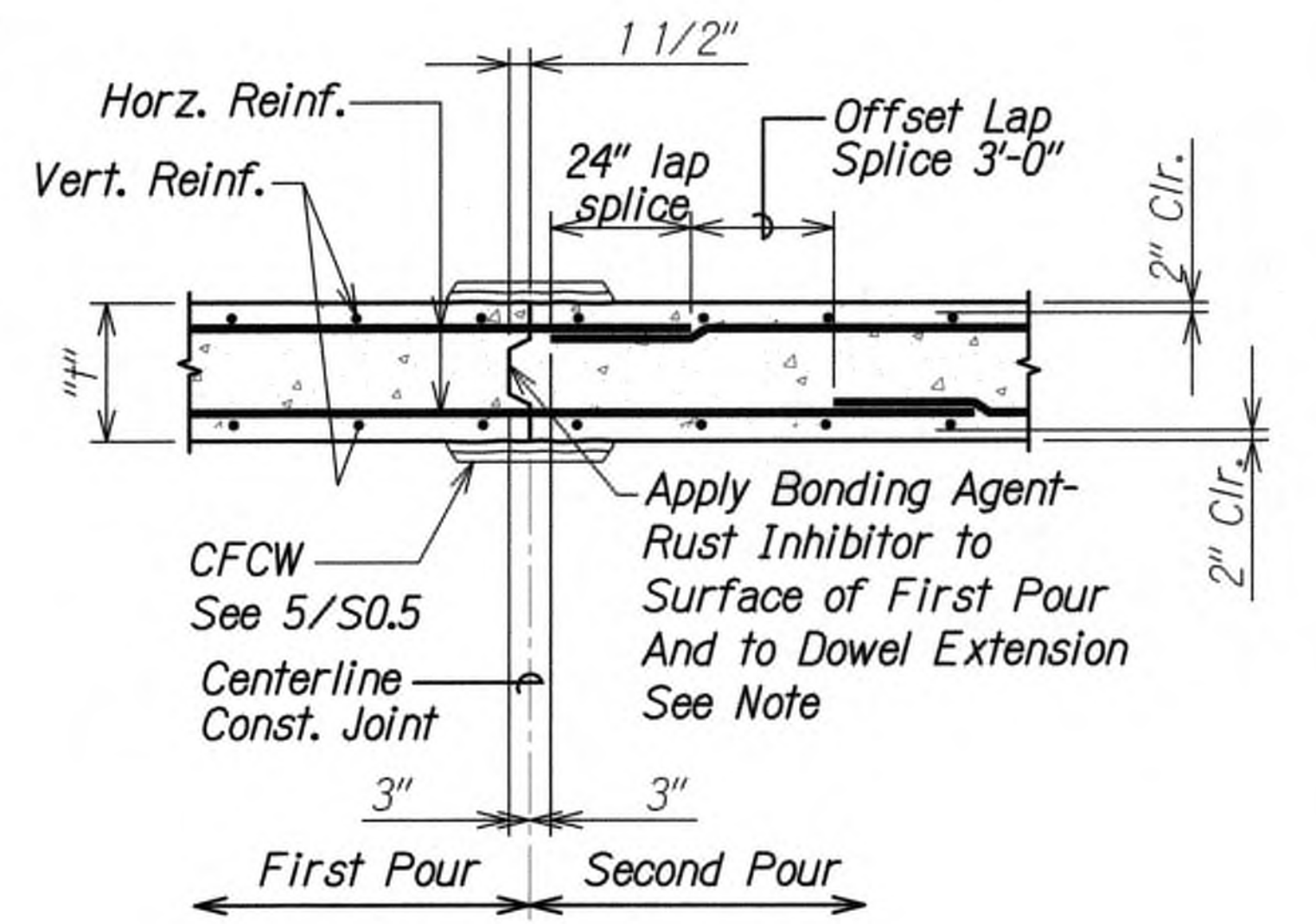
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.191	244



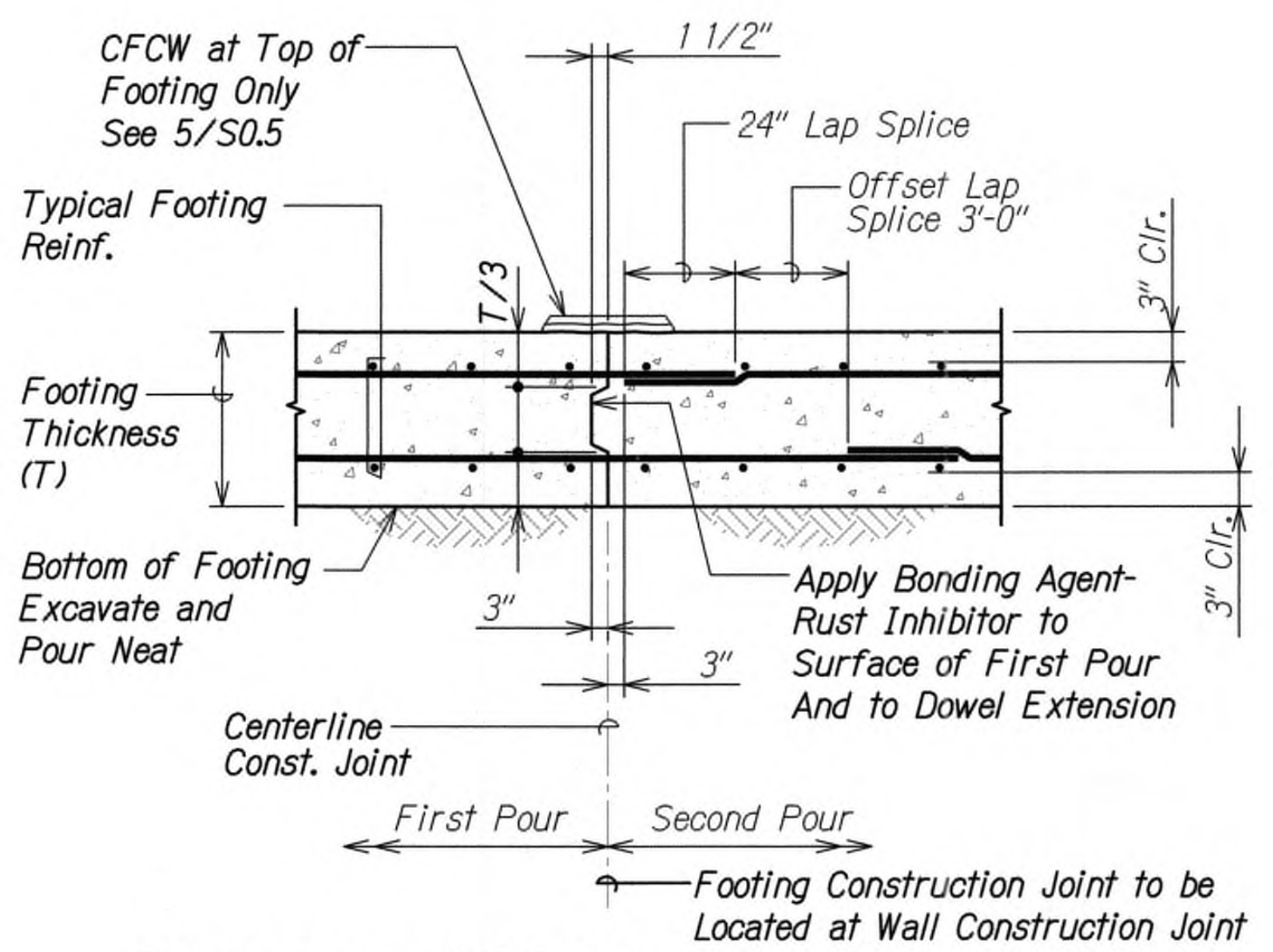
CONSTRUCTION JOINT AT  
CONTROL JOINT LOCATION 1  
Scale: 1" = 1'-0" S0.5 S0.5



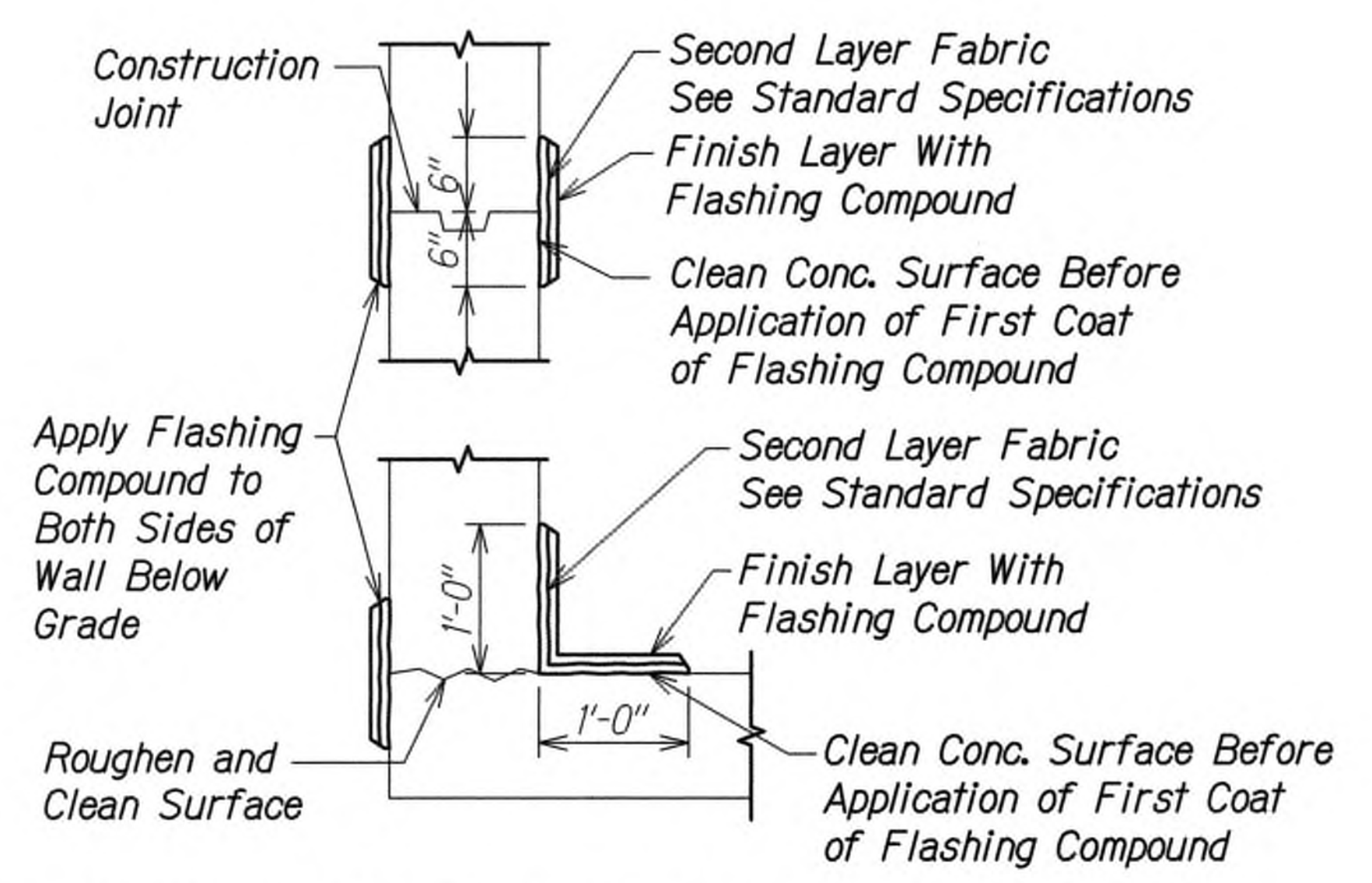
TYPICAL WALL VERTICAL  
CONTROL JOINT DETAIL 2  
Scale: 1" = 1'-0" S0.5 S0.5



Note: Use 1 1/2" Deep X 4" / 3 Keys.  
TYPICAL WALL VERTICAL  
CONSTRUCTION JOINT DETAIL 3  
Scale: 1" = 1'-0" S0.5 S0.5



TYPICAL FOOTING  
CONSTRUCTION JOINT DETAIL 4  
Scale: 1" = 1'-0" S0.5 S0.5



TYPICAL CONTINUOUS FLASHING  
COMPOUND WATERPROOFING (CFCW) 5  
Scale: 1" = 1'-0" S0.5 S0.5

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

PLANNING NAME: Z:\00-DWG\18-029-KUHIO-Hwy Short-Term Improvements-MOC\01-CAD\07-18-19-VELLUM\KUHIO-5005-S006-TYPICALS.DWG PLOT TIME: 07-18-19, 9:17 AM

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TYPICAL DETAILS

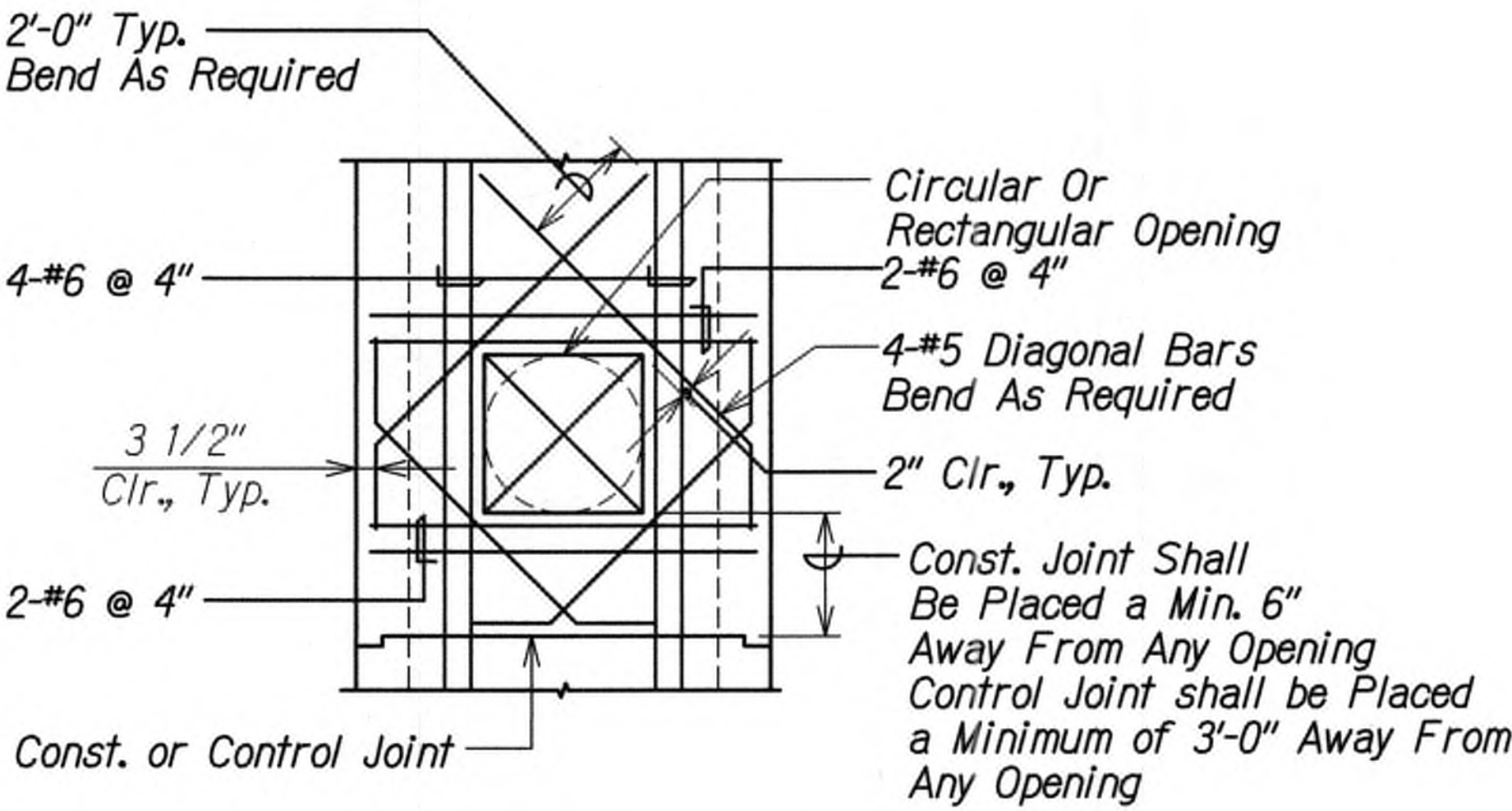
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)

Scale: As Noted Date: July 2019

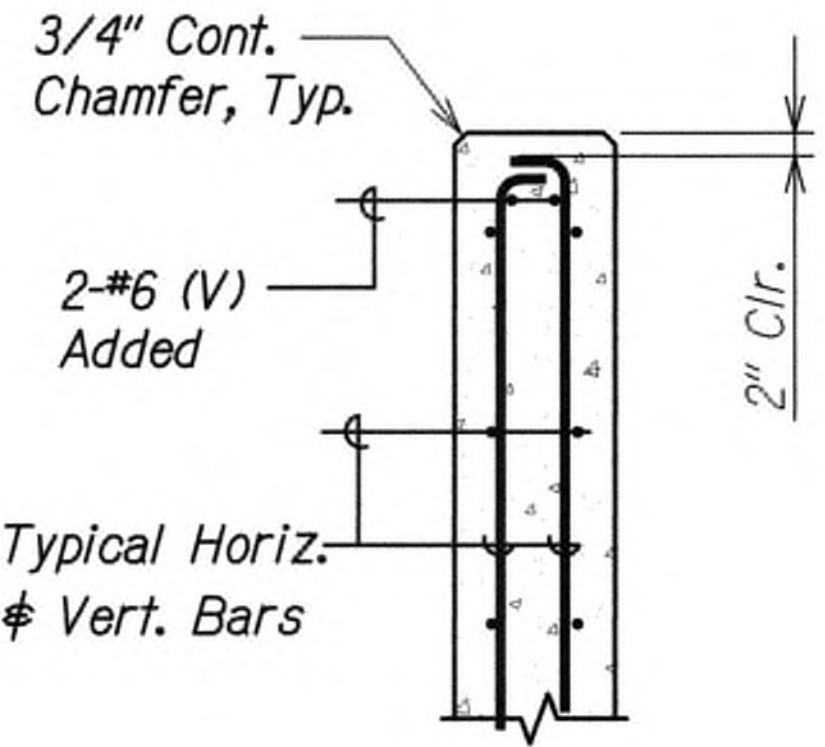
SHEET No. S0.5 OF 6 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.192	244



ADDED REINFORCING FOR OPENING 1  
 Scale: 1/2" = 1'-0" S0.6 S0.6



CONCRETE WALL ENDS 2  
 Scale: 1" = 1'-0" S0.6 S0.6

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

DRAWING NAME: 2100 DNGONG18-029-KUHIO HWY SHORT TERM IMPRVMTS-WOC101 CAD107-15-19 VELLUMS KSI-S005 S006 TYPDILS.DWG PLOT TIME: 07-15-19, 9:18 AM



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*[Signature]*  
 SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-20

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DATE	REVISION

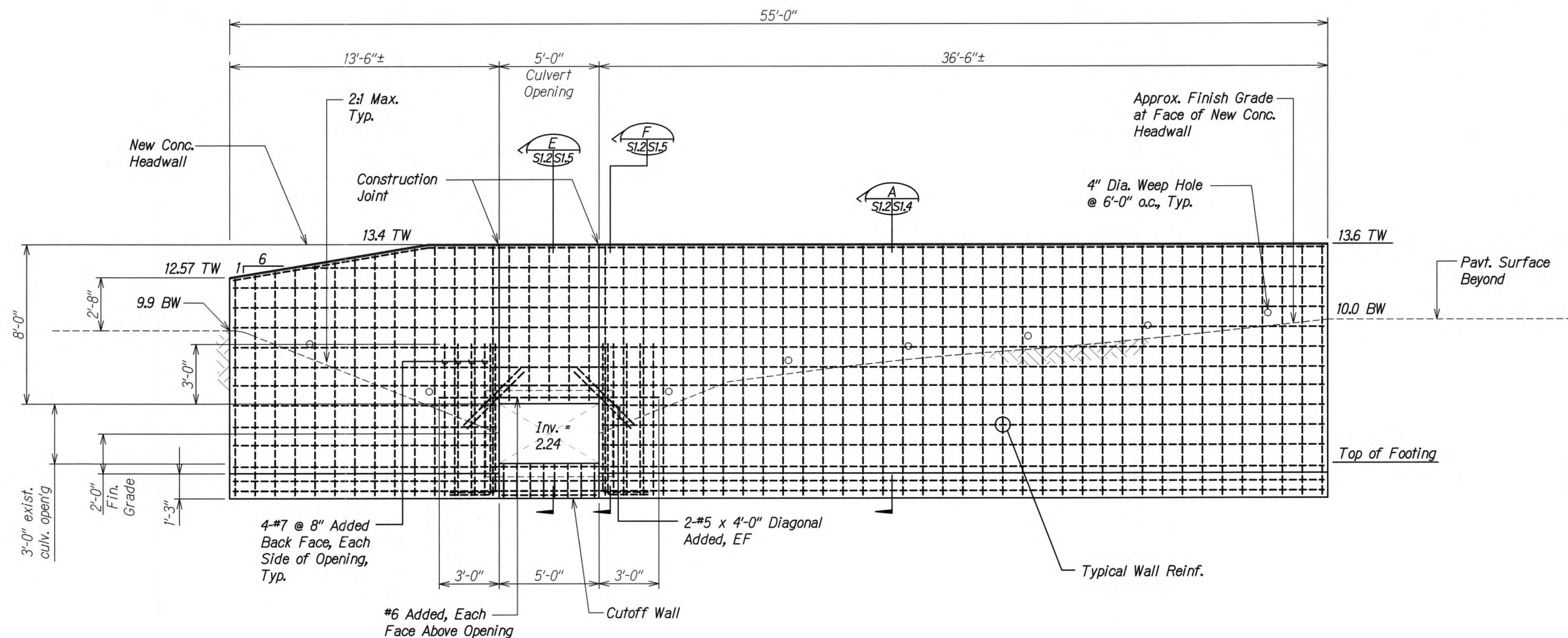
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
  
**TYPICAL DETAILS**  
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
 Scale: As Noted Date: July 2019  
 SHEET No. **S0.6** OF **6** SHEETS







FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.194	244



**HEADWALL ELEVATION - KUAMOO ROAD (EB)**  
Scale: 3/8" = 1'-0" A  
S1.2 S1.2



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

DRAWING NAME: ZALO D0200014-022-KUHO HWY SHORT TERM IMPROVTS-WOC01 CAY07-15-19 VELLUMSY8-S102 ELEV.CWG PLOT TIME: 07-15-19, 9:19 AM

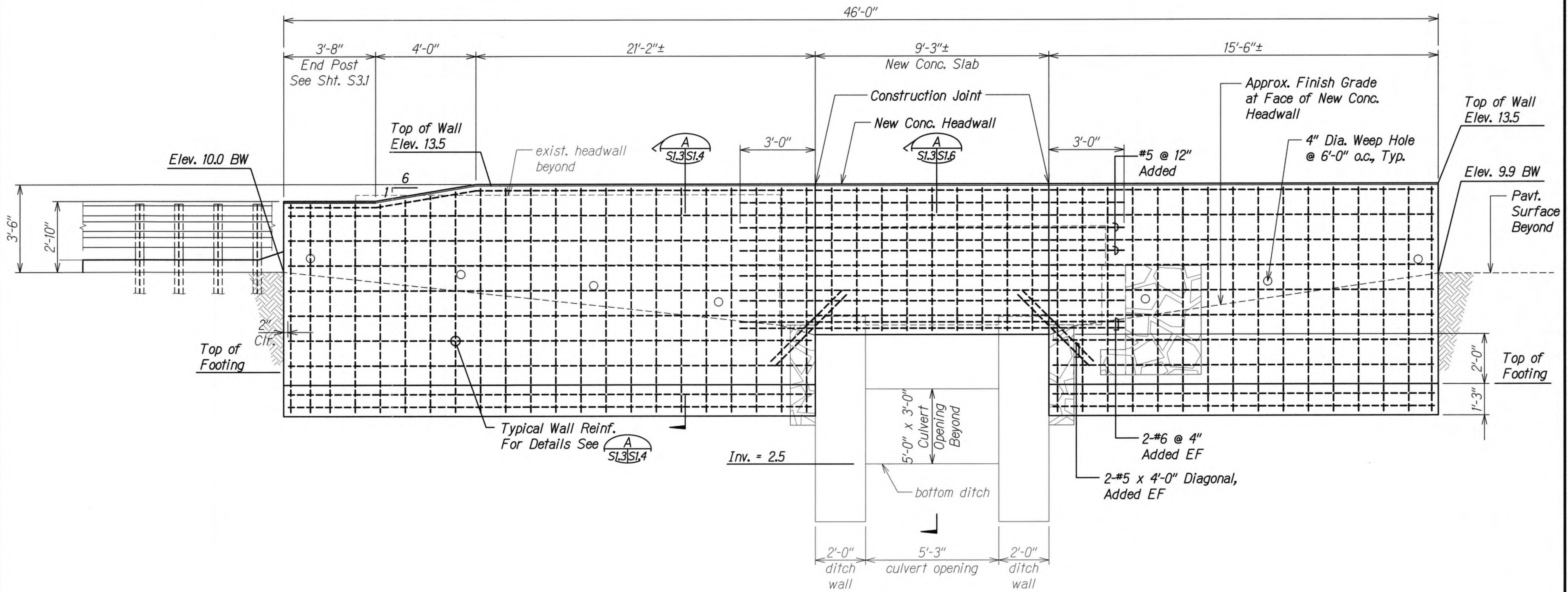
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KUAMOO ROAD EB**  
**CULVERT HEADWALL ELEVATION**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: As Noted Date: July 2019  
SHEET No. S1.2 OF 6 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.195	244



HEADWALL ELEVATION - KUAMOO ROAD (WB) A  
Scale: 1/2" = 1'-0"



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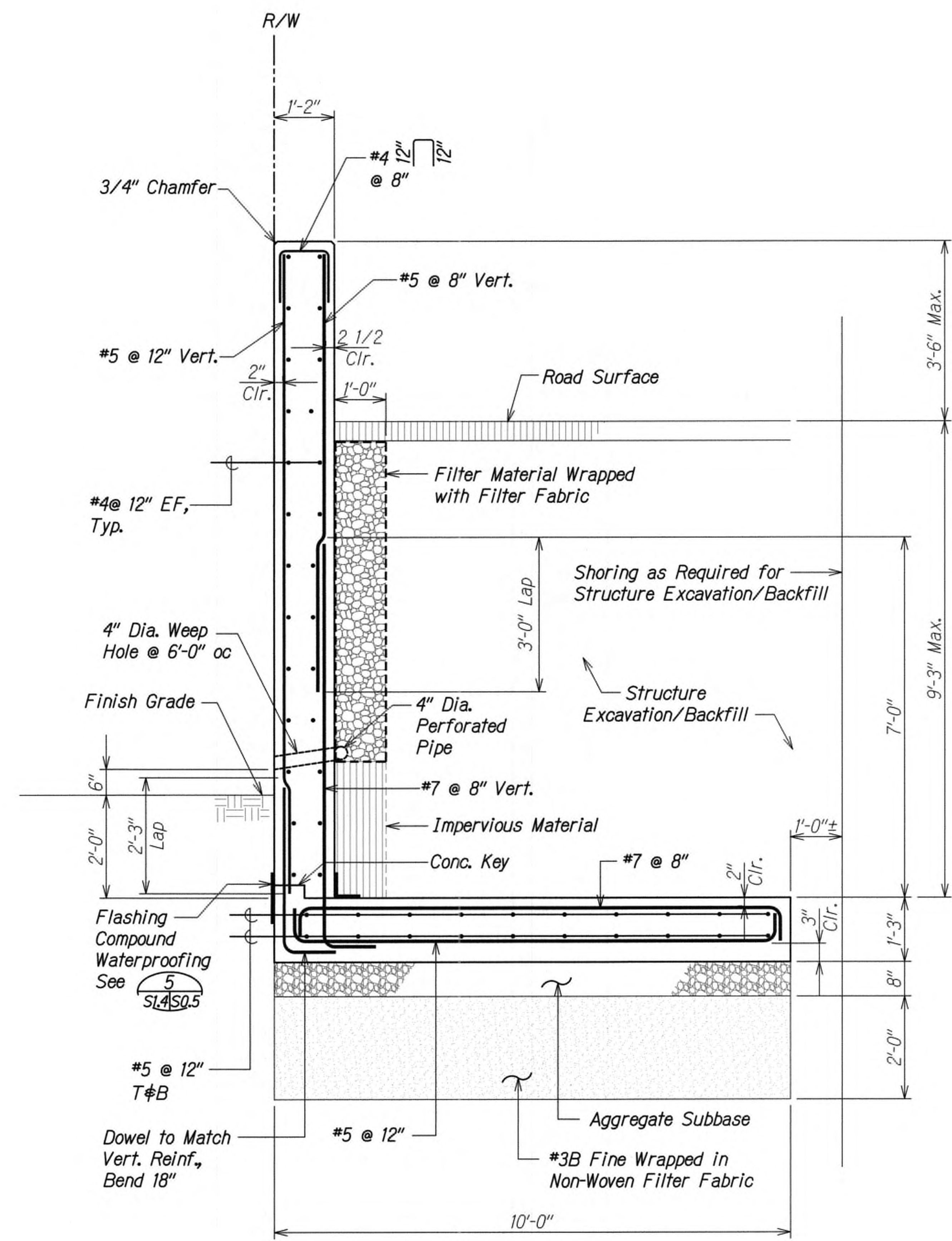
SIGNATURE: *[Signature]* EXPIRATION DATE OF THE LICENSE: 4-30-20

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KUAMOO ROAD WB**  
**CULVERT HEADWALL ELEVATION**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: As Noted Date: July 2019  
SHEET No. **SI.3** OF **6** SHEETS

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DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.196	244



**SECTION**  
Scale: 3/4" = 1'-0"  
A  
S1.2 S1.4  
S1.3



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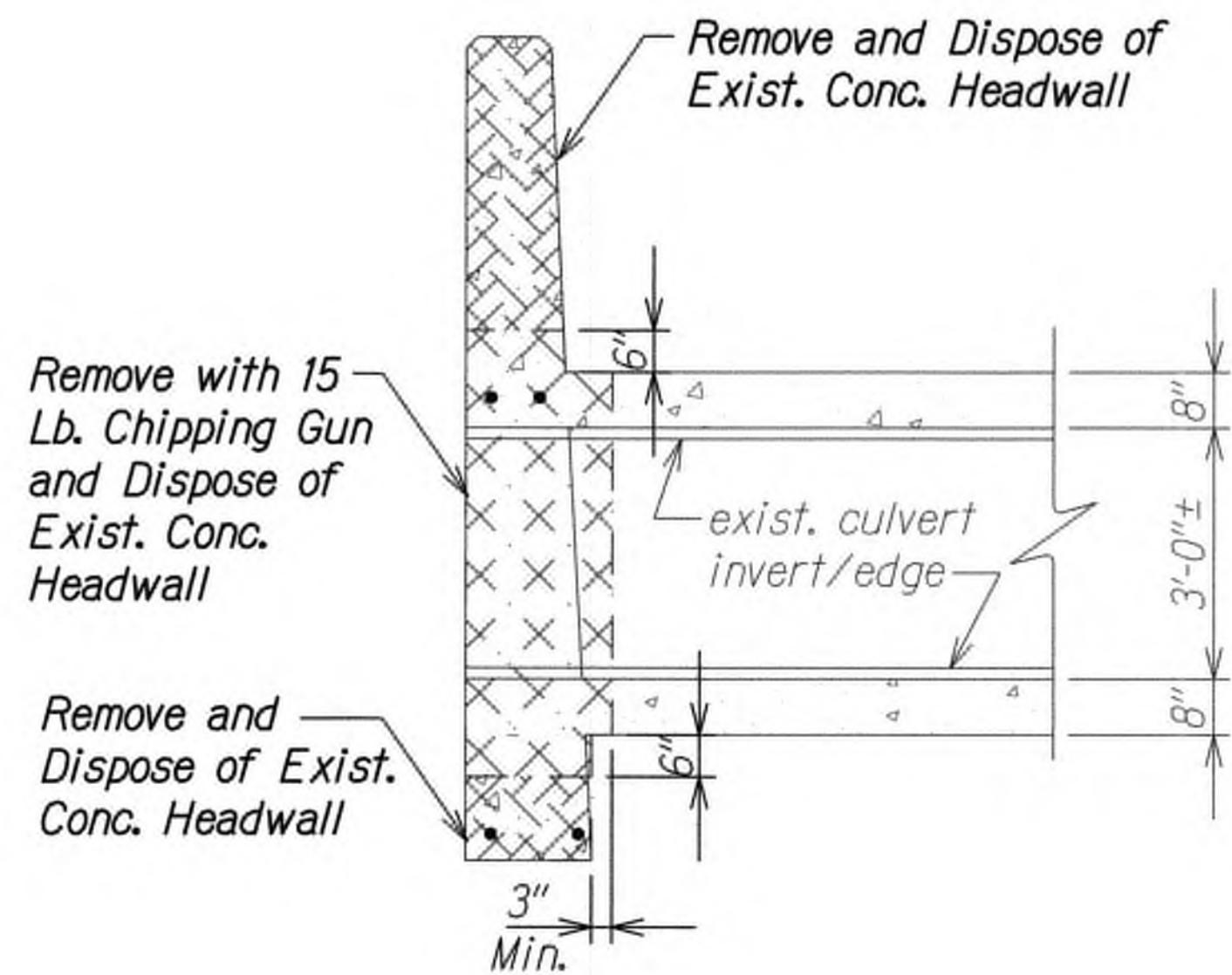
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KUAMOO ROAD EB**  
**CULVERT EXTENSION SECTION**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: As Noted Date: July 2019  
SHEET No. **S1.4** OF 6 SHEETS

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DATE REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.197	244

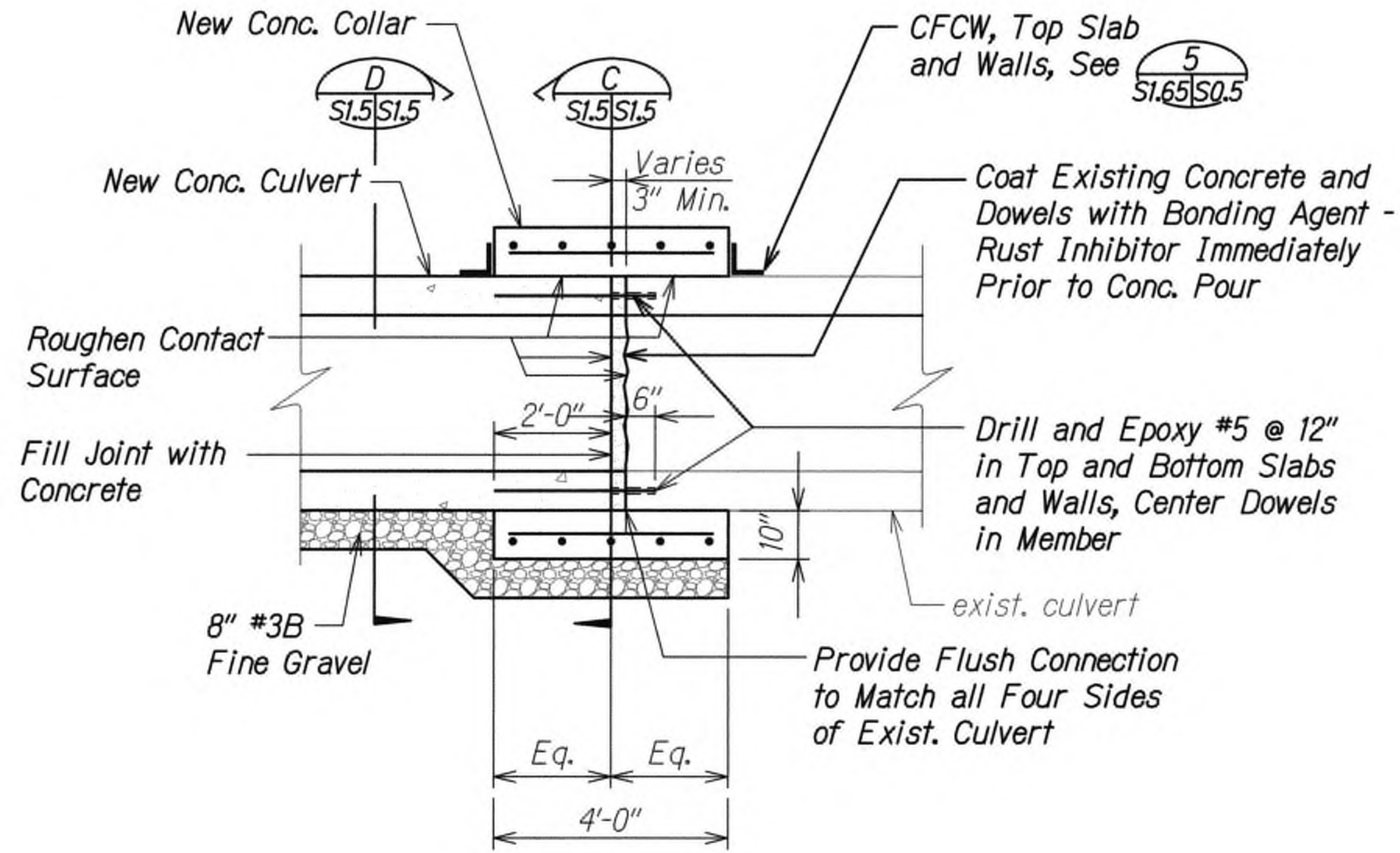


DEMOLITION SECTION  
AT KUAMOO ROAD (EB)

Scale: 1/2" = 1'-0"

A

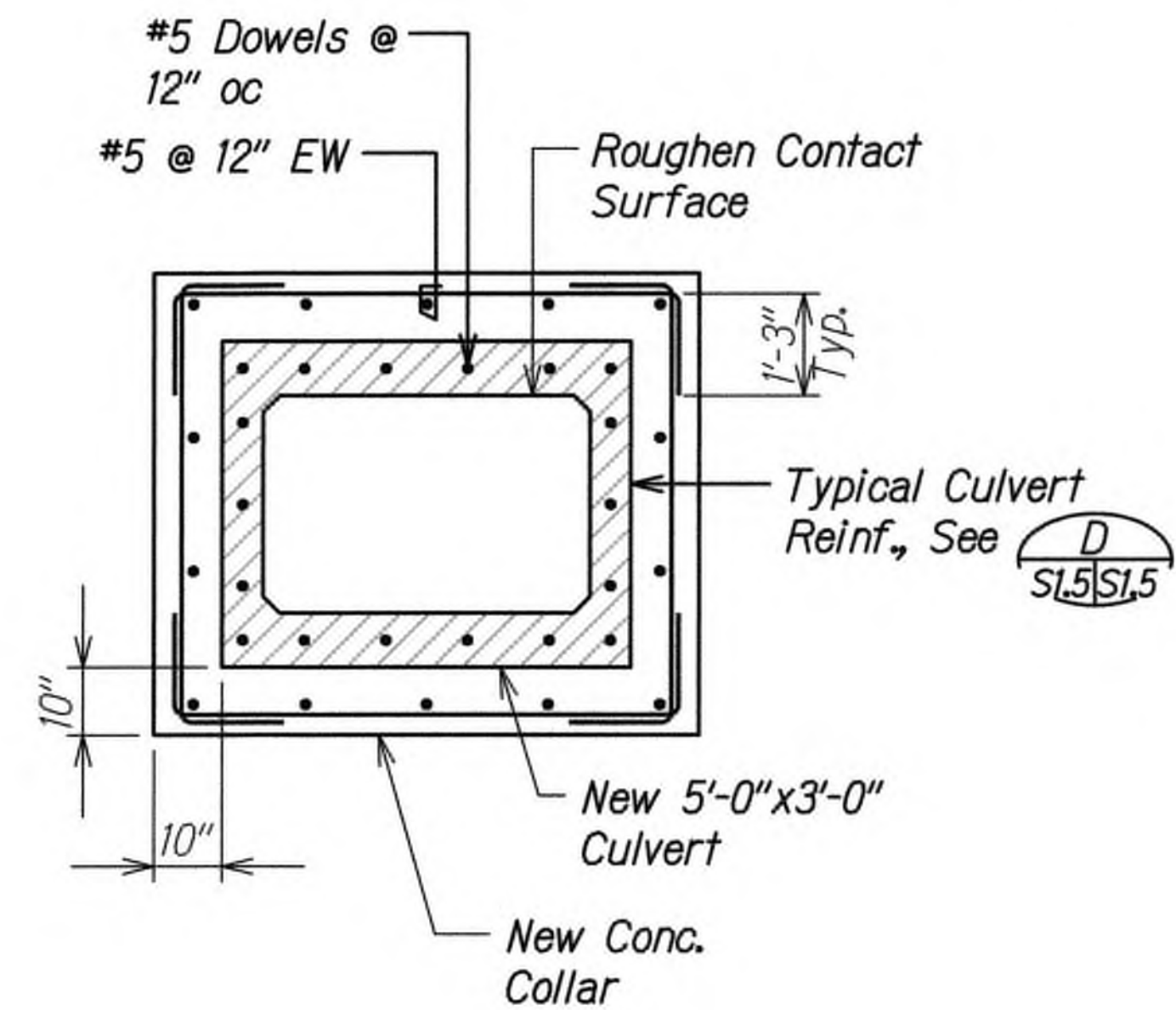
SI.1 SI.5



SECTION B

Scale: 1/2" = 1'-0"

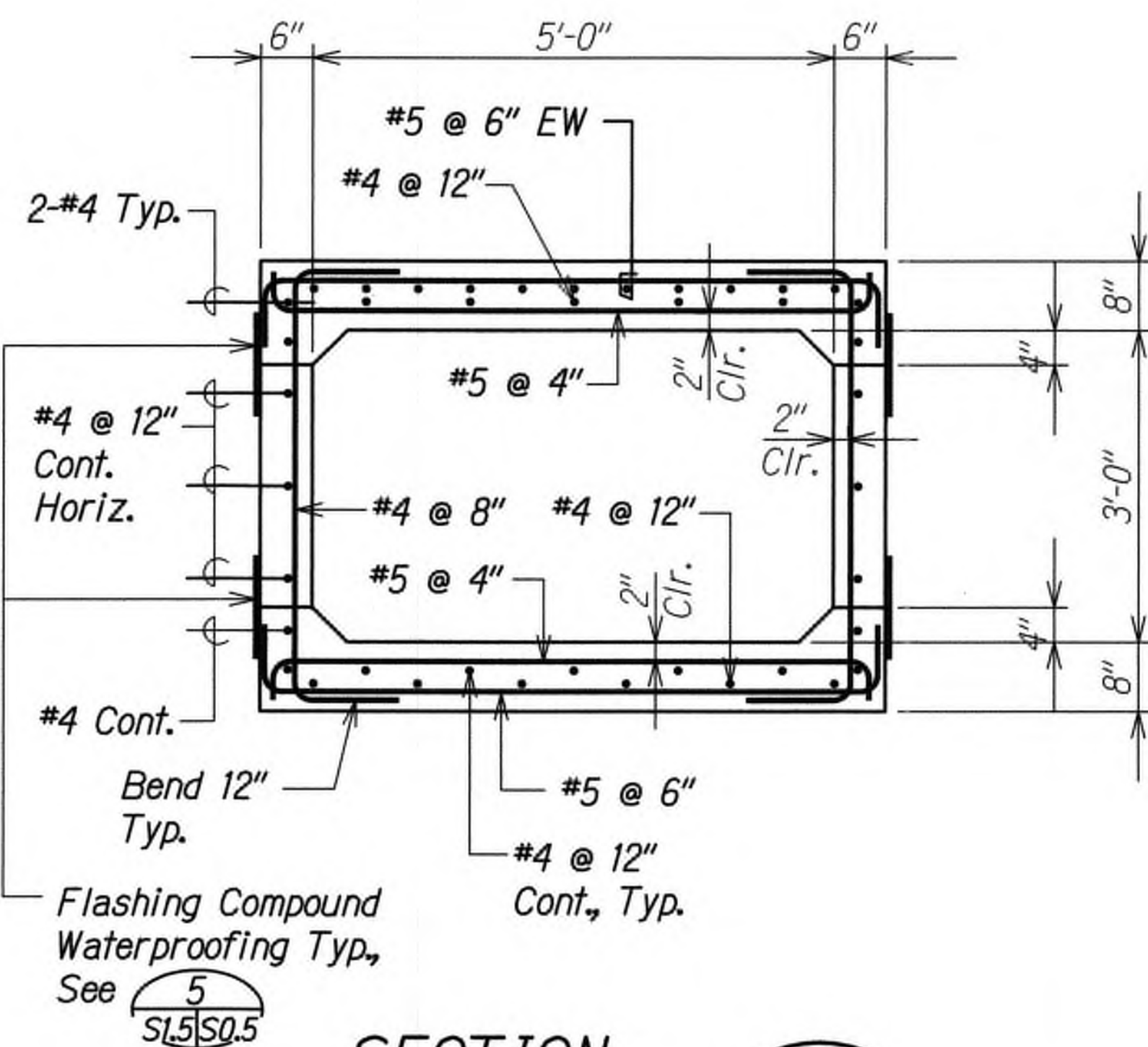
SI.1 SI.5



SECTION C

Scale: 1/2" = 1'-0"

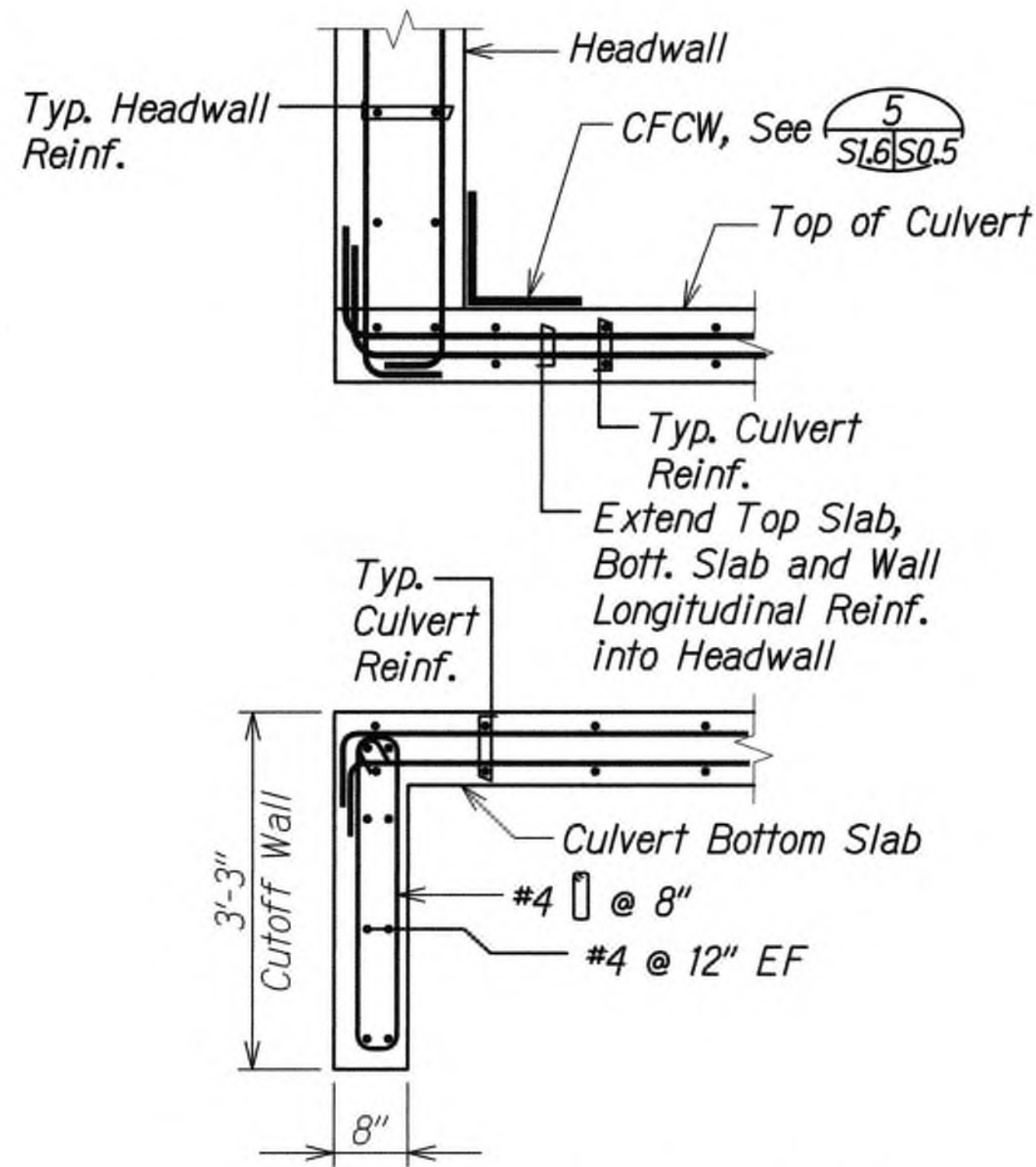
SI.5 SI.5



SECTION D

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

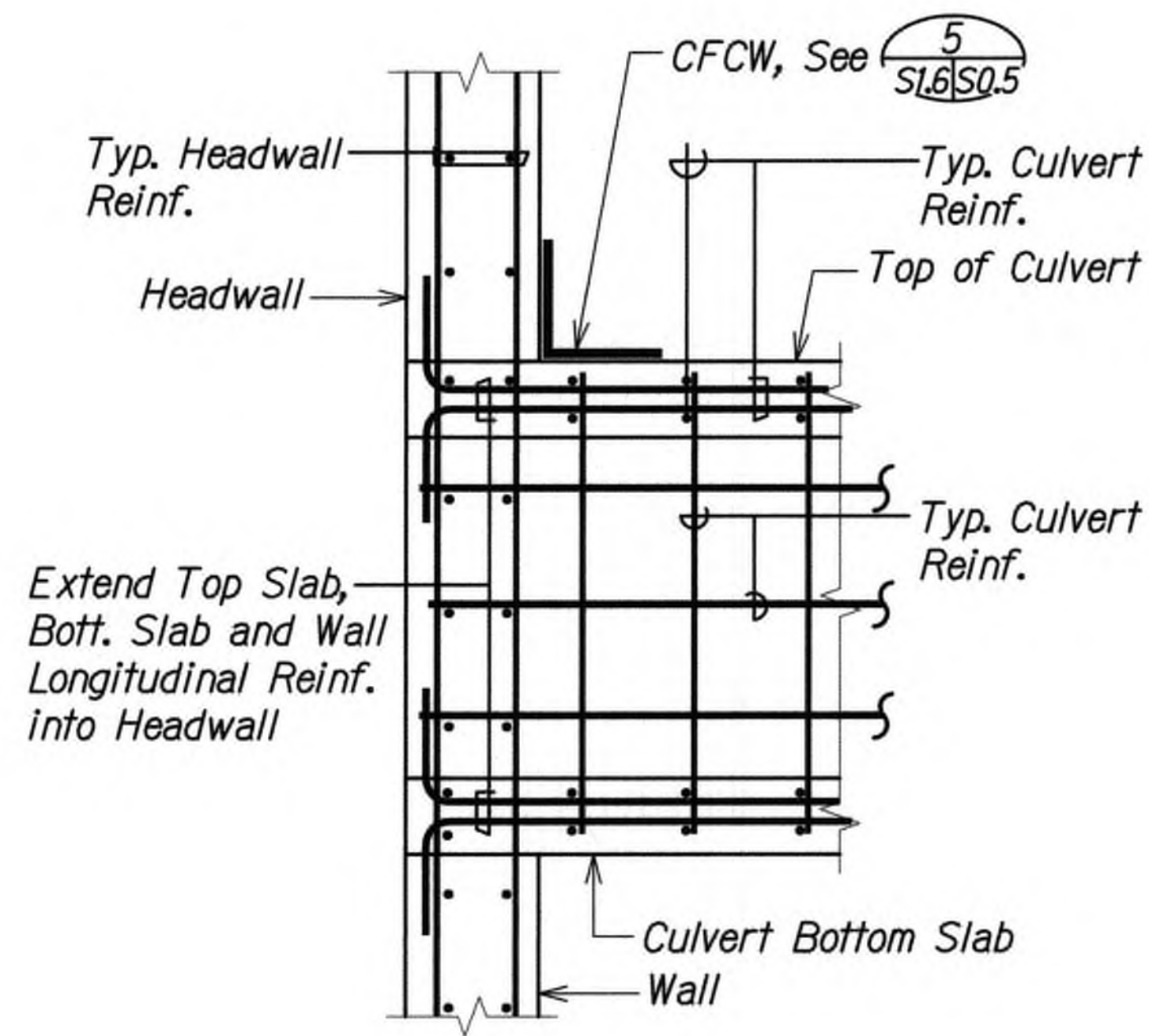
SI.5 SI.5



SECTION E

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

SI.2 SI.5



SECTION F

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

SI.2 SI.5

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

KUAMOO ROAD EB

CULVERT EXTENSION SECTIONS

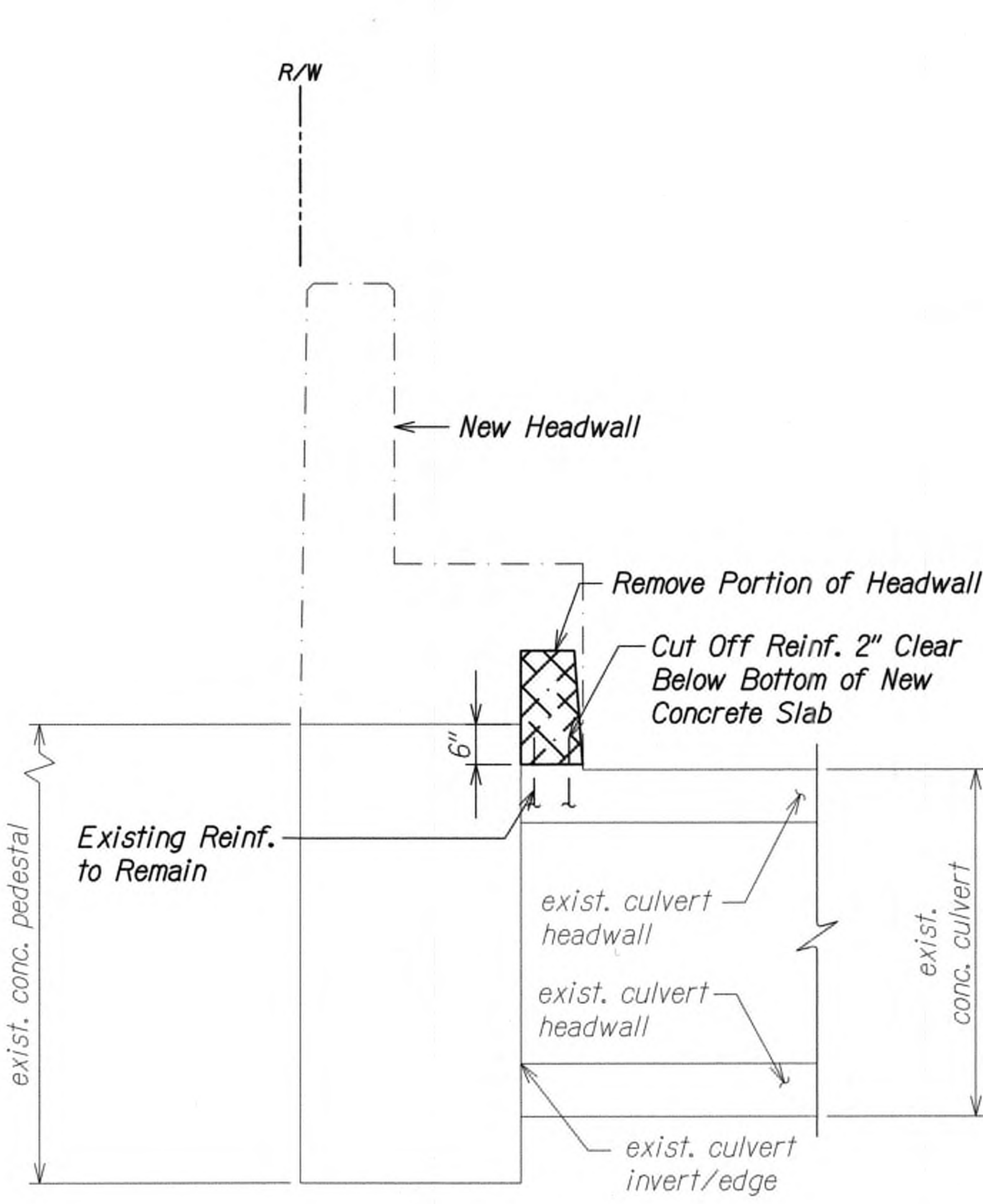
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD

Fed. Aid Proj. No. NH-056-1(50)

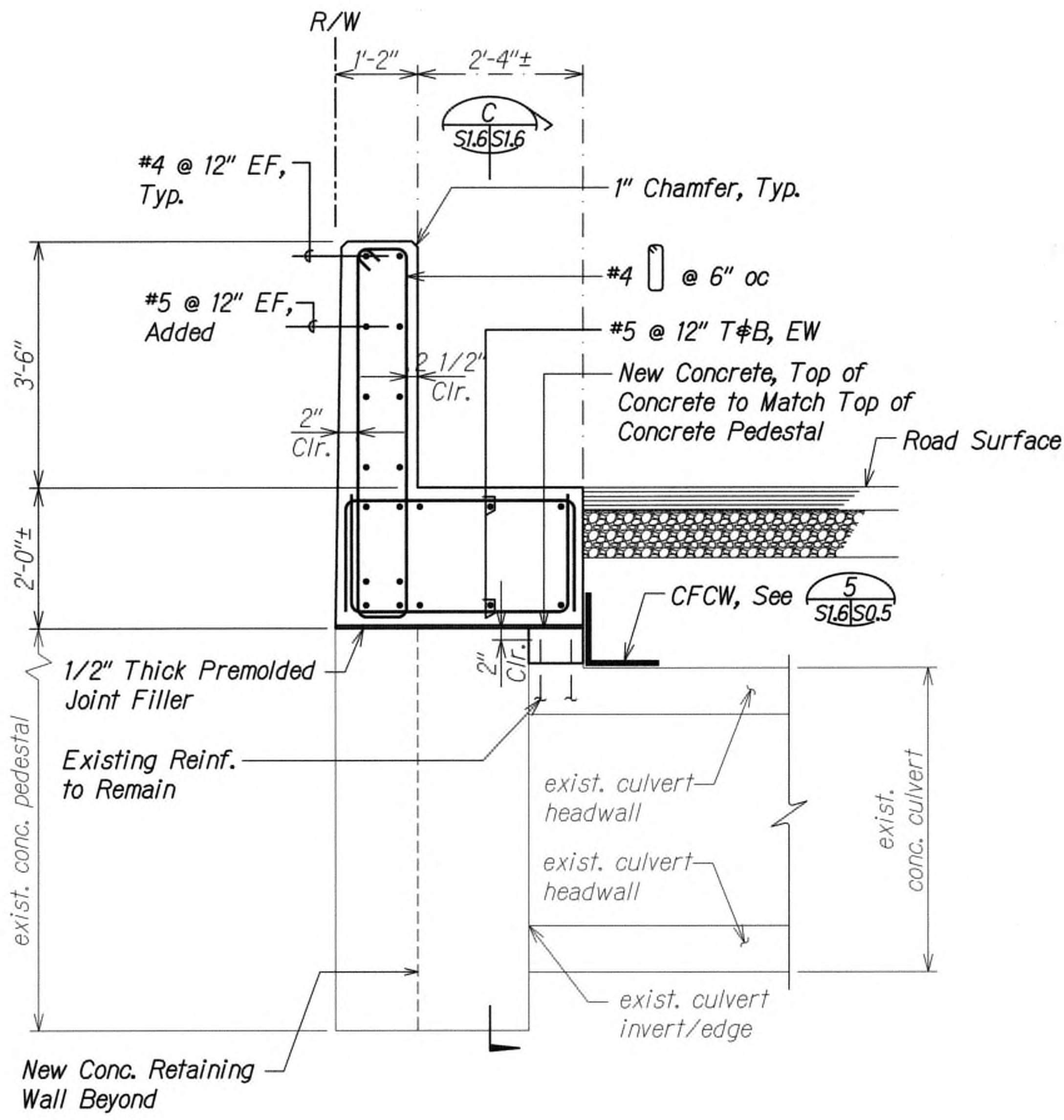
Scale: As Noted Date: July 2019



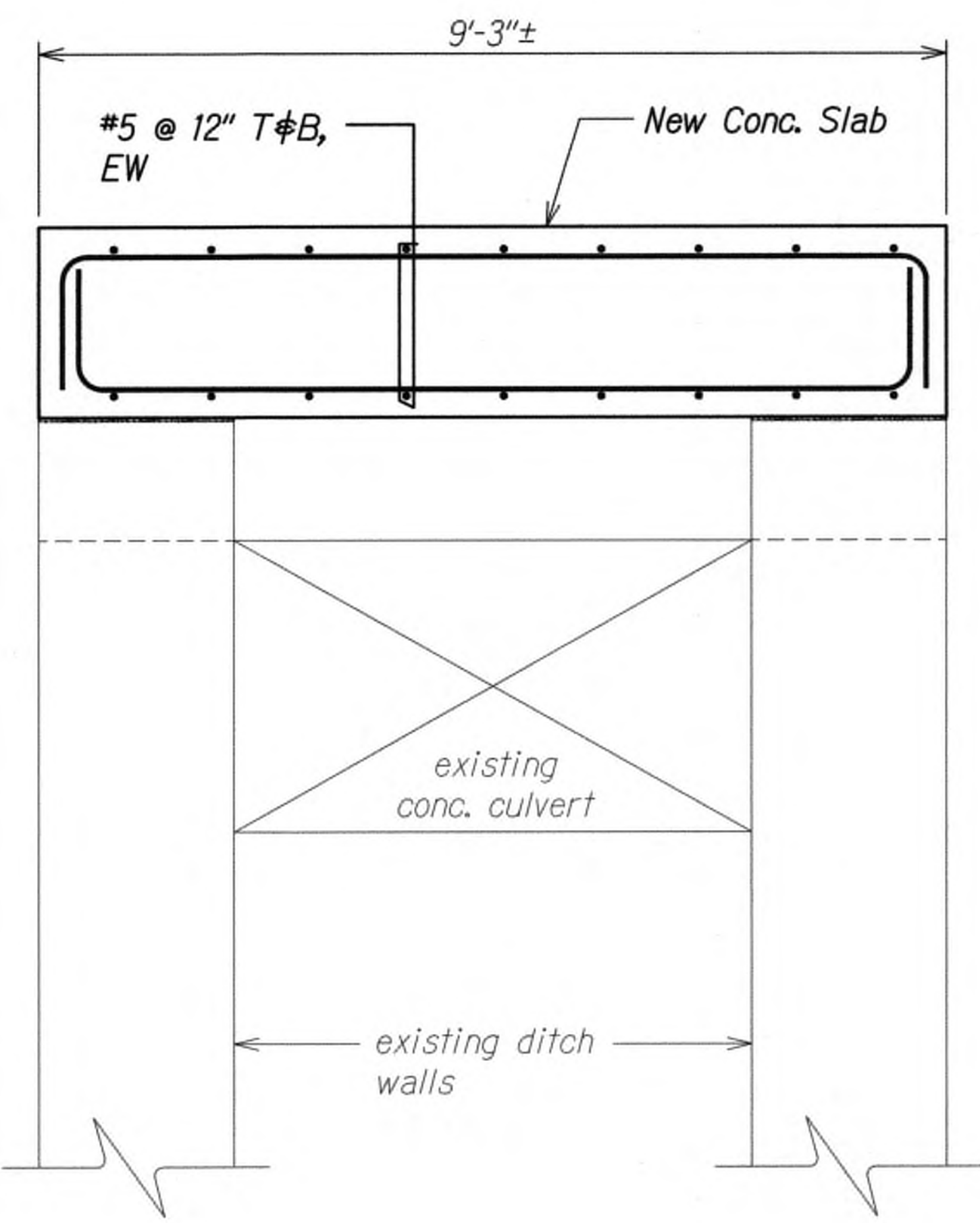
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.198	244



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



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



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

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

DRAWING NAME: 72.00 DNGRNC\18-029-KUHIO HWY SHORT TERM IMPROVTS-WDC\01 CAD\07-15-19 VELLUM\KSI-S106 WB SECTSLONG PLOT TIME: 07-15-19, 9:19 AM

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

**KUAMOO ROAD WB**

**CULVERT EXTENSION SECTIONS**

**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**

**Fed. Aid Proj. No. NH-056-1(50)**

Scale: As Noted

Date: July 2019

NOV 14 2019

CALVIN T. MIYAKURA

LICENSED PROFESSIONAL ENGINEER

NO. 8133-S

HAWAII, U.S.A.

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4-30-20

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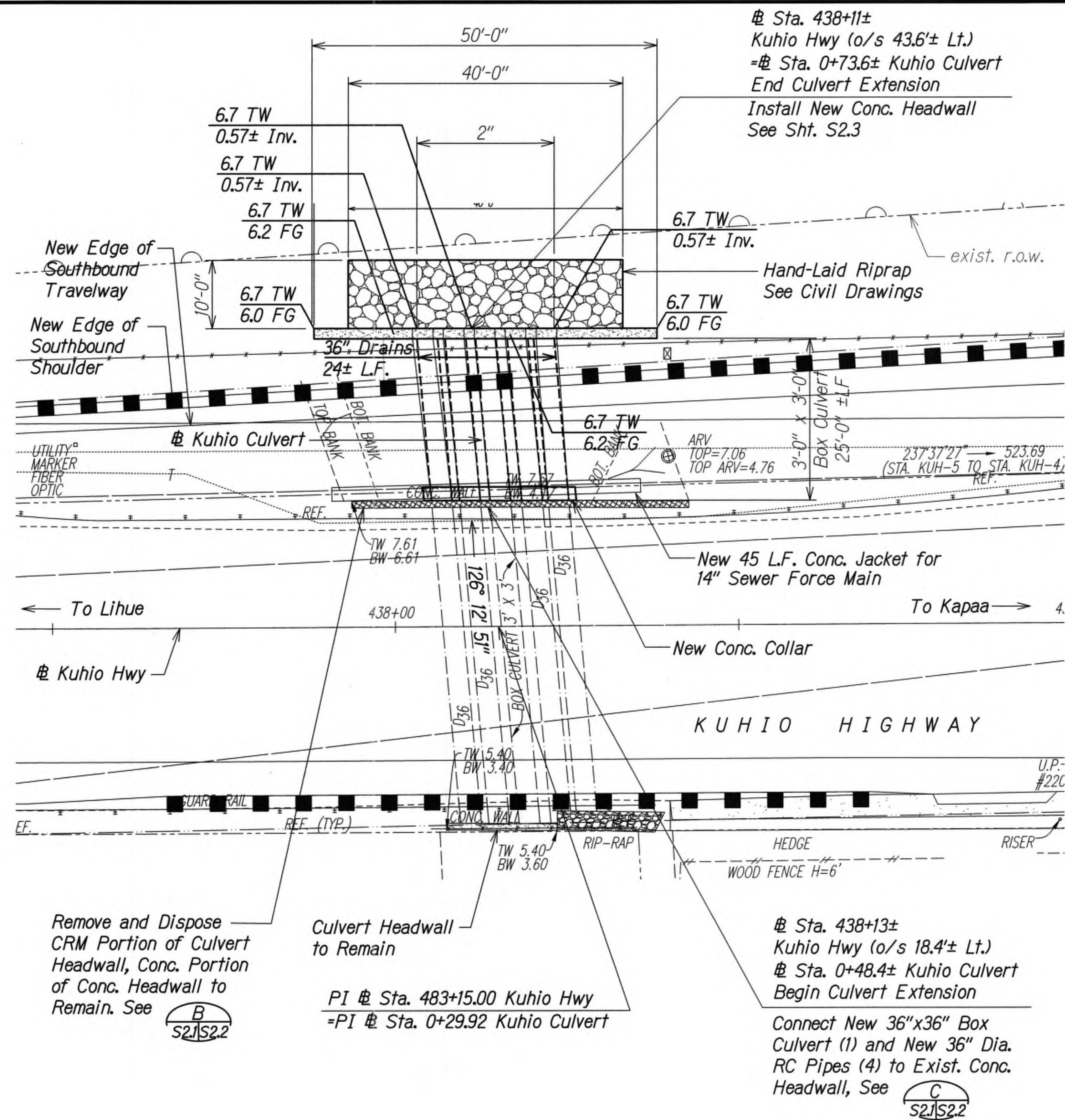
EXPIRATION DATE OF THE LICENSE

SHEET No. S1.6 OF 6 SHEETS

ADD.198



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD199	244



LAYOUT PLAN  
EXTENSION OF EXISTING BOX CULVERT  
AT STA. 438+15  
Scale: 1" = 10'

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

DRAWING NAME: Z:\00 ONGOING\18-029-KUHIO HWY SHORT TERM IMPROVEMENTS-WOC\01 CAD\07-15-19 VELLUNSKI-S201 KUHIO.DWG PLOT TIME: 07-15-19, 9:20 AM



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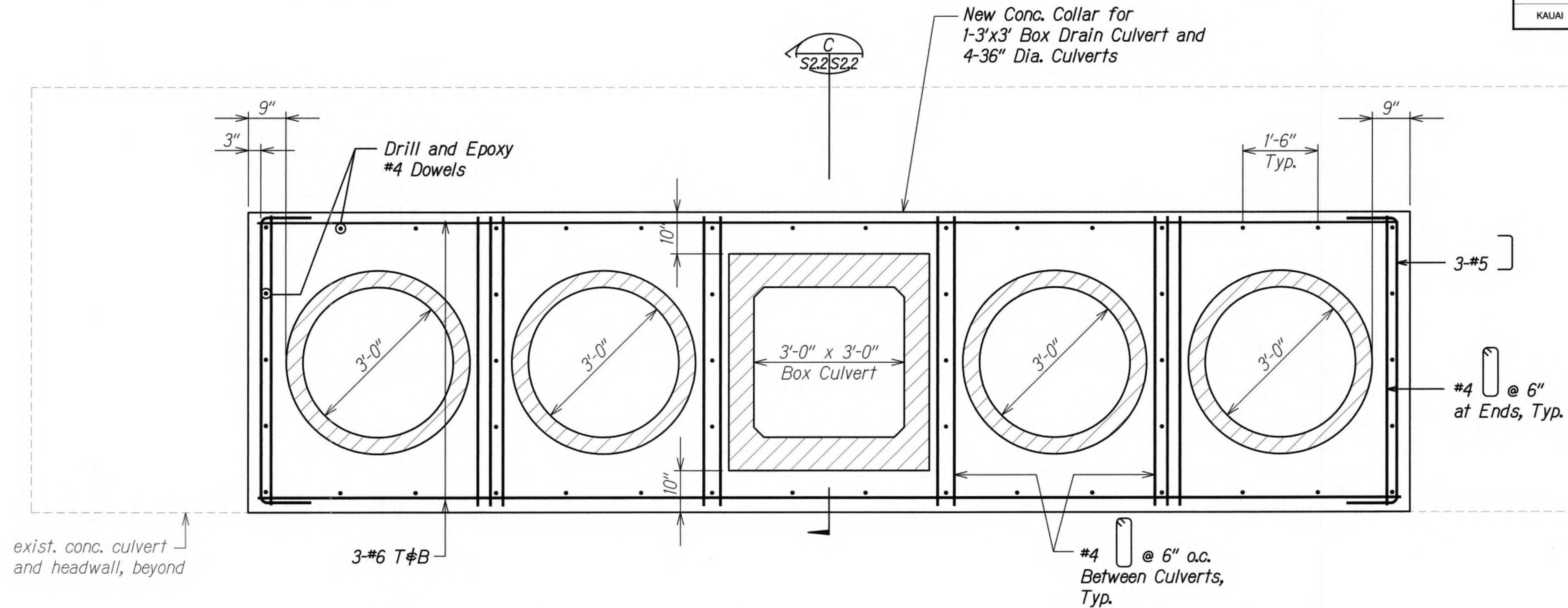
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE	REVISION
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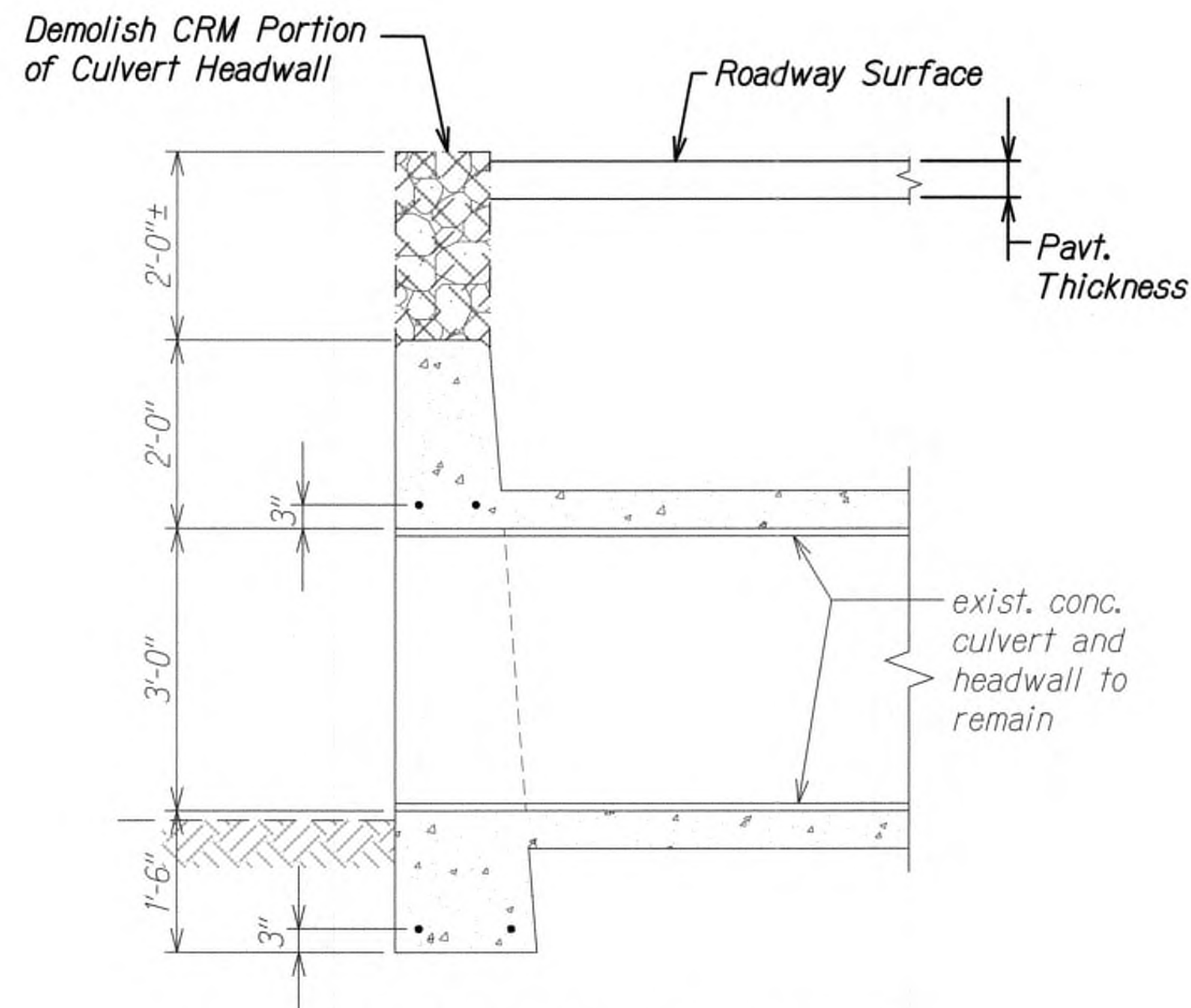
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KUHIO HIGHWAY  
CULVERT EXTENSION**  
KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Noted Date: July 2019  
SHEET No. S21 OF 5 SHEETS



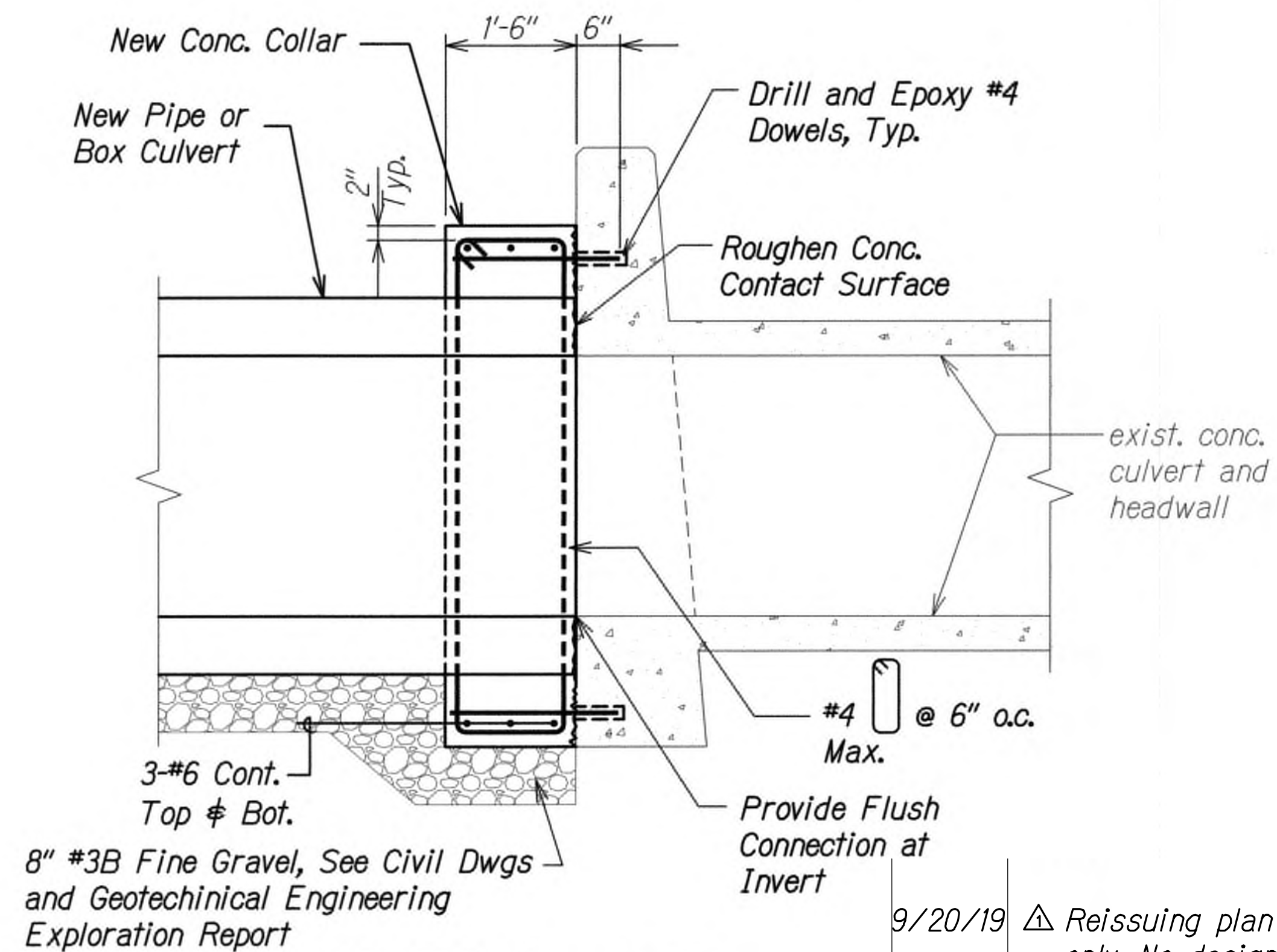
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD200	244



**COLLAR CONNECTION DETAIL FOR CULVERT EXTENSION** A  
S2.2 | S2.2  
Scale: 3/4" = 1'-0"



**DEMOLITION SECTION** B  
S2.1 | S2.2  
Scale: 3/4" = 1'-0"



**SECTION** C  
S2.2 | S2.2  
Scale: 3/4" = 1'-0"

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**KUHIO HIGHWAY**  
**CULVERT EXTENSION SECTIONS**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: As Noted Date: July 2019

SHEET No. S2.2 OF 5 SHEETS

**ADD.200**



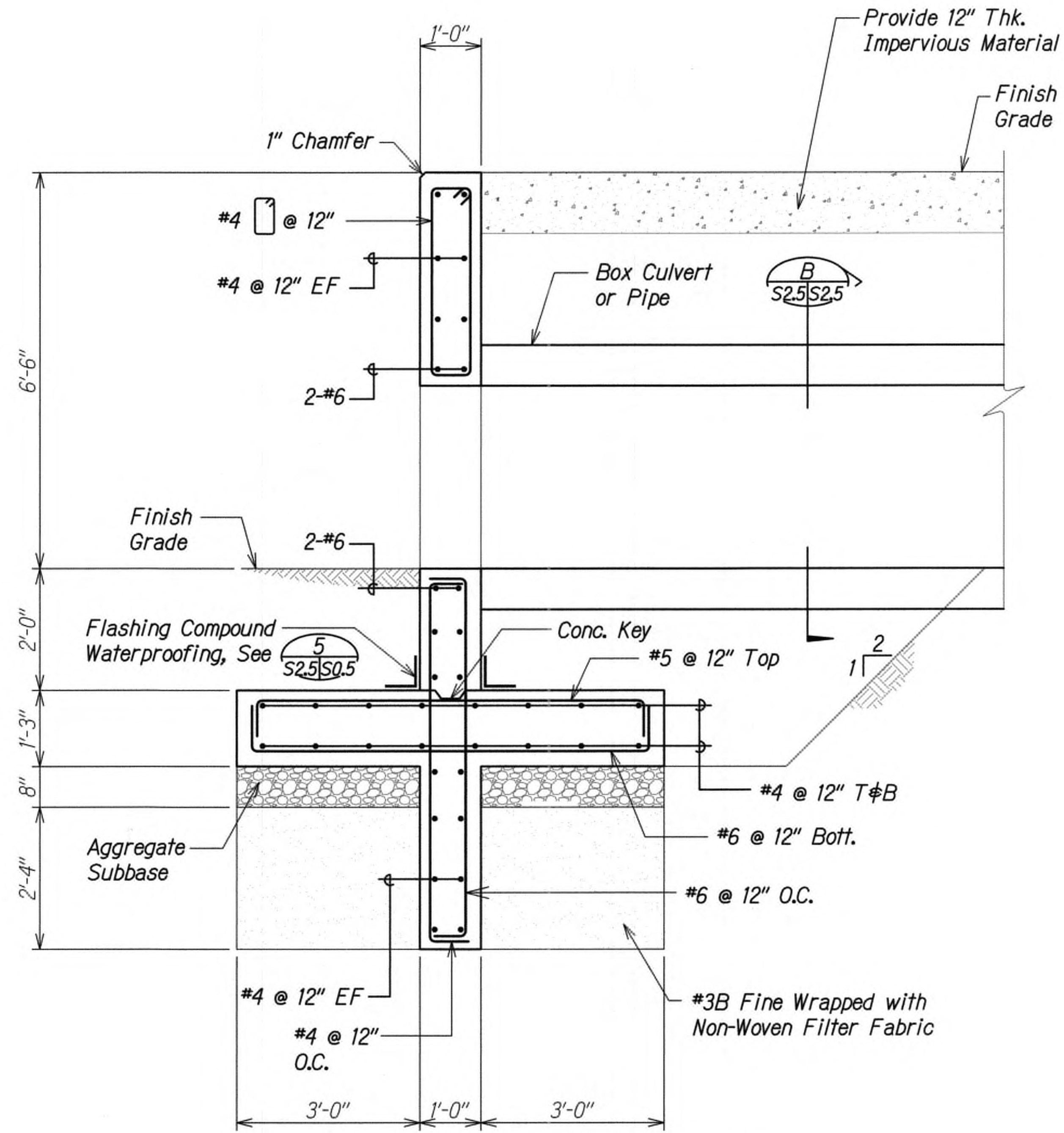






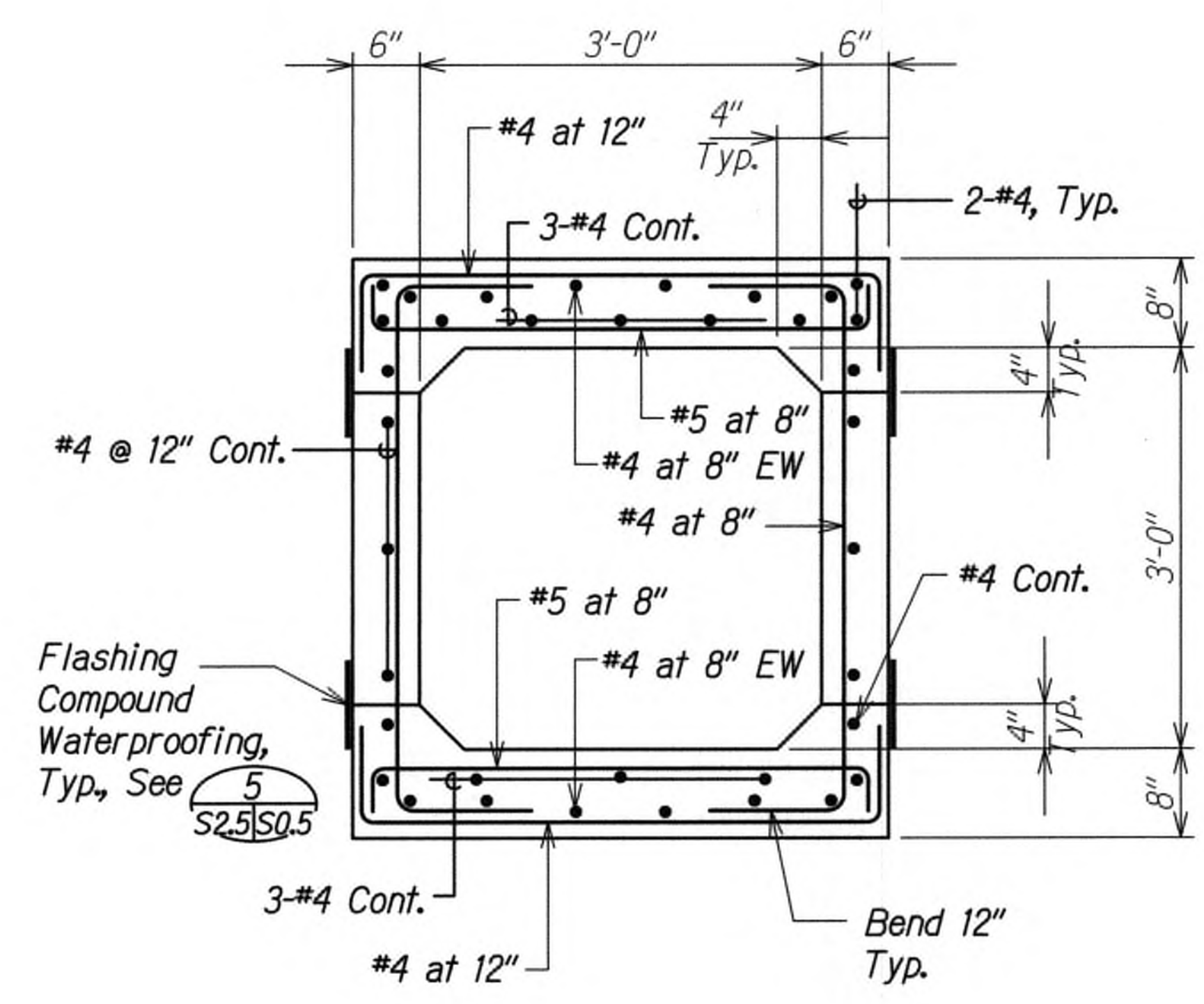


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.203	244



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

Note:  
See Civil plans for pipe details.



TYPICAL SECTION  
3'-0" x 3'-0" BOX CULVERT  
Scale: 1" = 1'-0"



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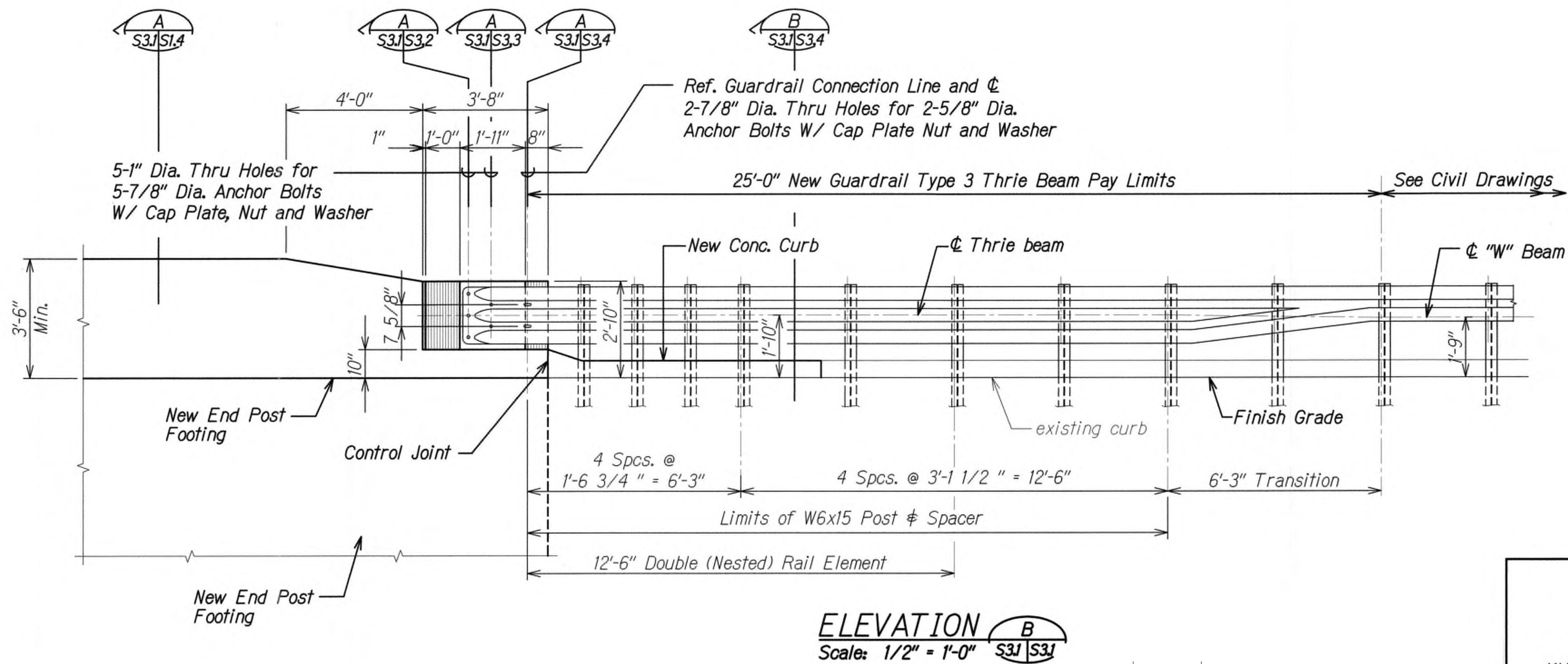
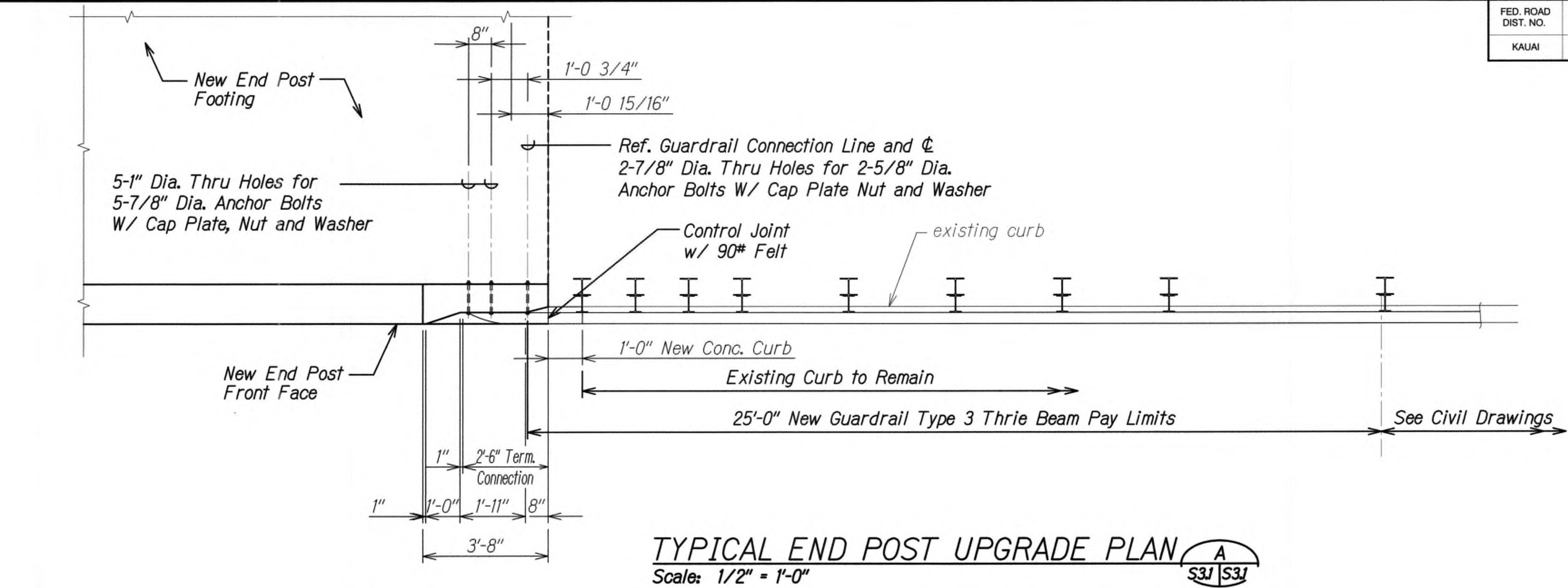
SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: 4-30-20

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KUHIO HIGHWAY**  
**CULVERT EXTENSION SECTIONS**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: As Noted Date: July 2019  
SHEET No. S2.5 OF 5 SHEETS

DATE	REVISION
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD204	244



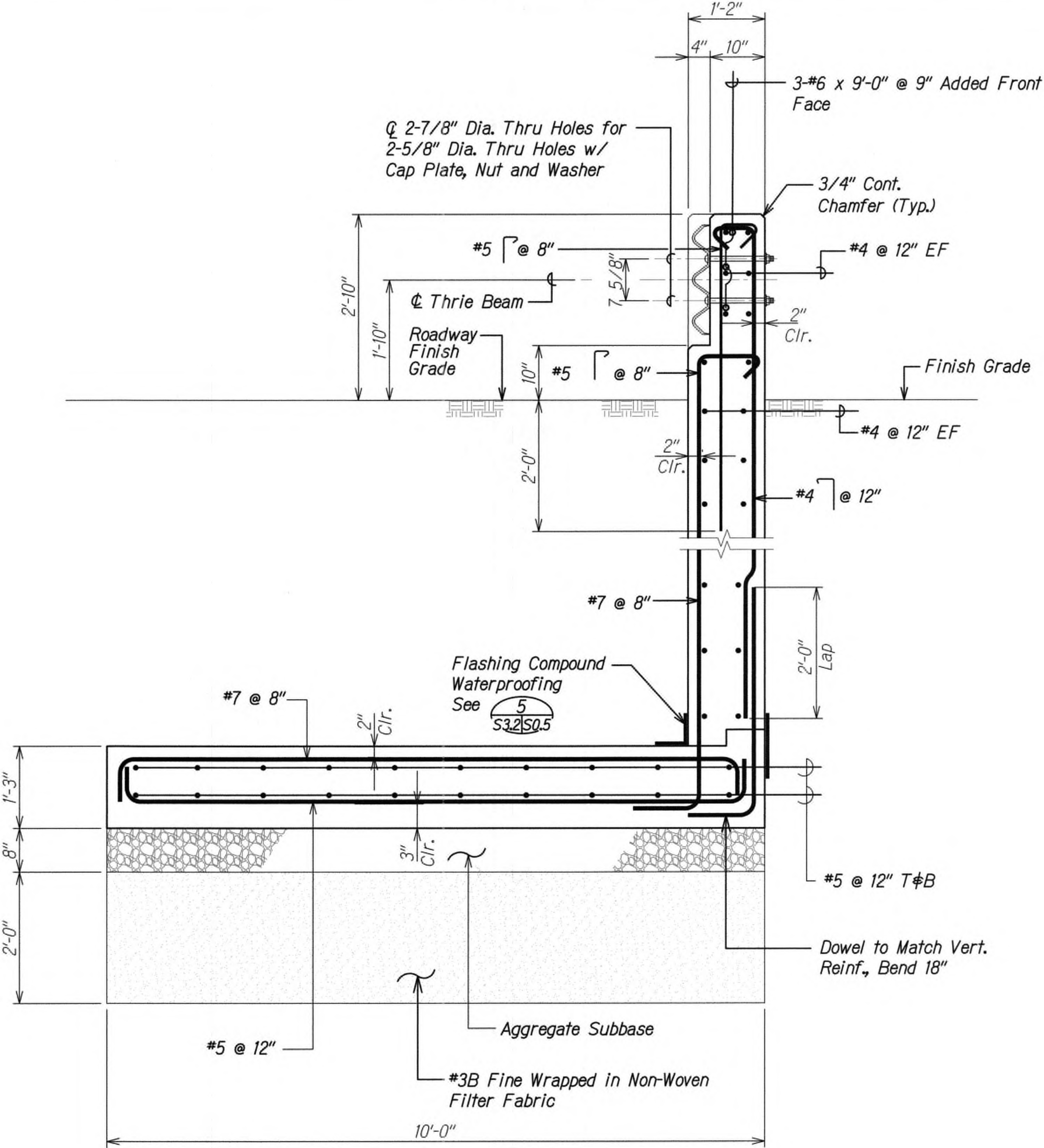
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TYPICAL END POST  
PLAN AND ELEVATION**  
**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: As Noted Date: July 2019  
SHEET No. S3J OF 4 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.205	244



SECTION A  
Scale: 1" = 1'-0" S31 S32



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL END POST SECTION**  
**KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: As Noted Date: July 2019

SHEET No. S32 OF 4 SHEETS

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

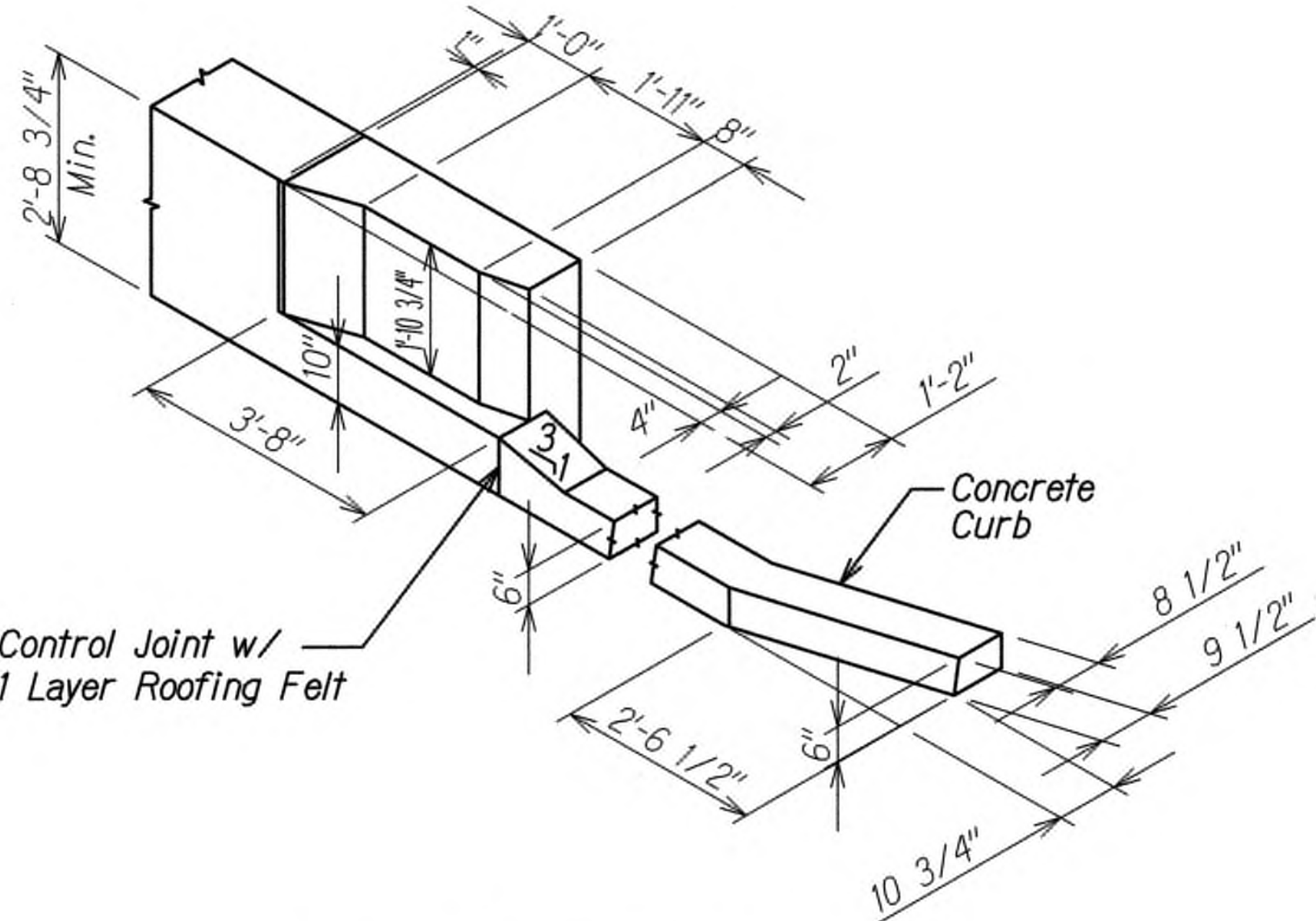
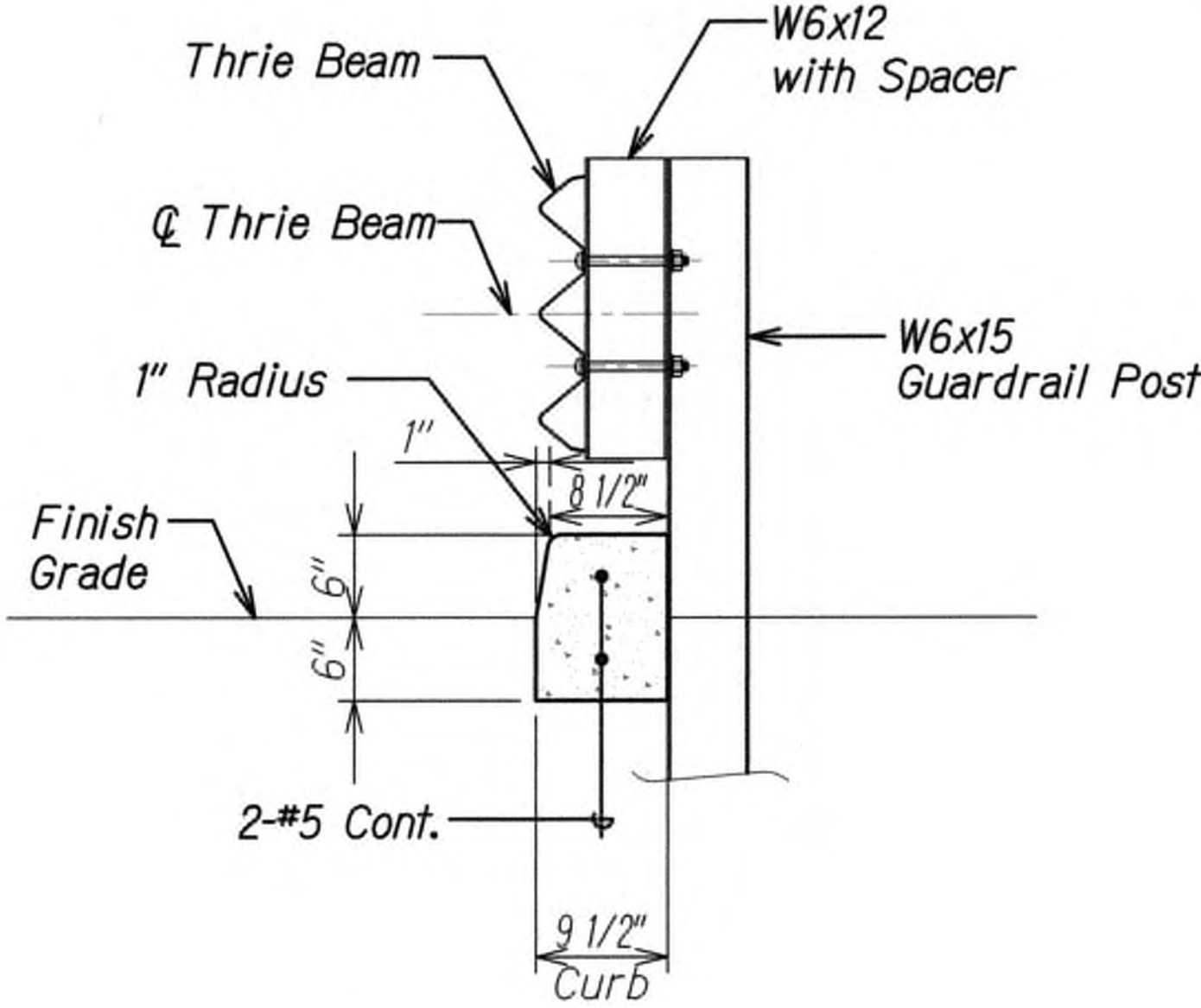
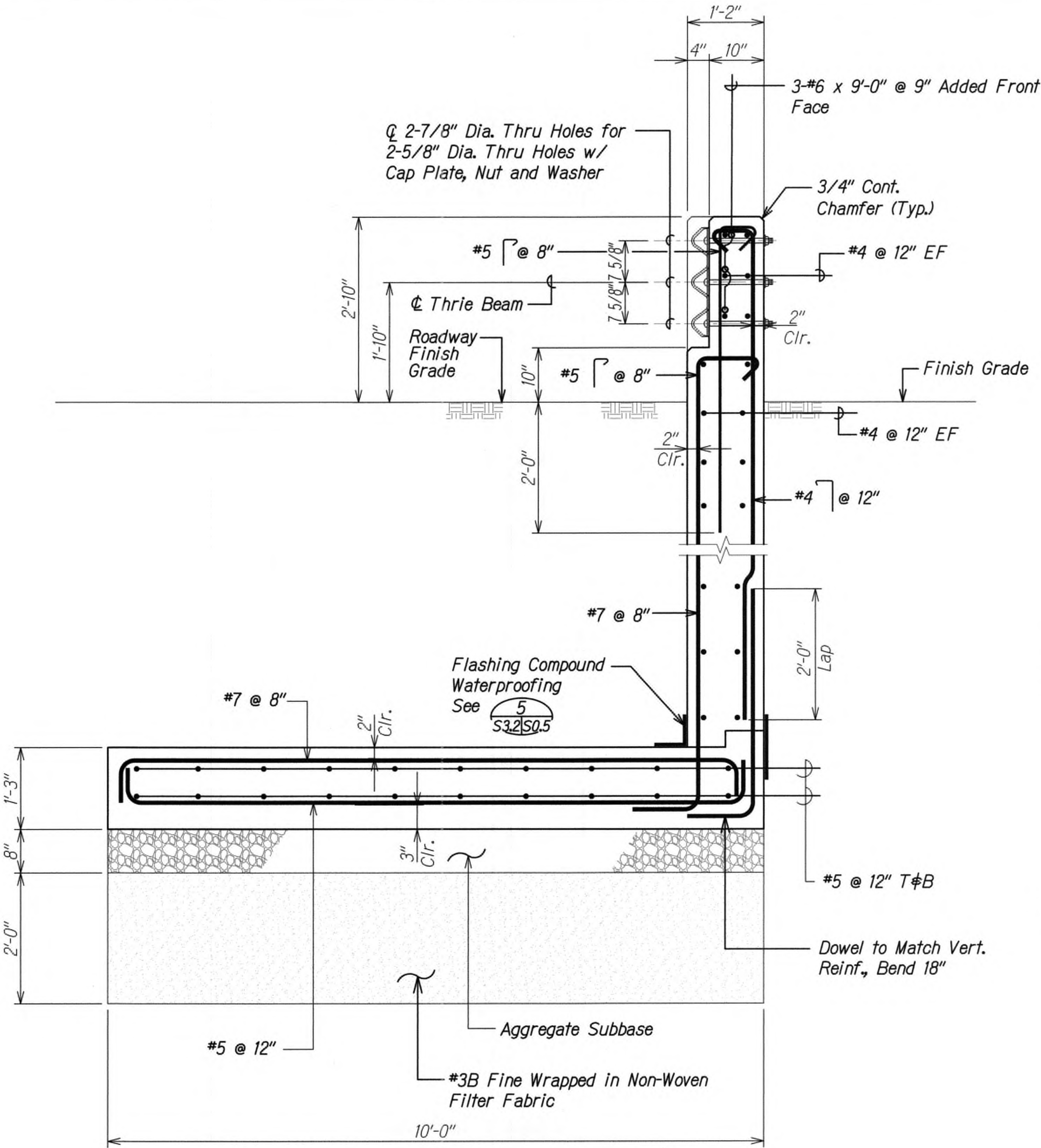
DATE	REVISION
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.207	244



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *[Signature]* EXPIRATION DATE OF THE LICENSE: 4-30-20

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL END POST  
SECTIONS AND DETAIL**  
**KUHIO HIGHWAY SHORT-TERM  
IMPROVEMENTS KUAMOO ROAD  
TO TEMPORARY KAPAA BYPASS ROAD**  
**Fed. Aid Proj. No. NH-056-1(50)**  
Scale: As Noted Date: July 2019

DATE  
9/20/19

REVISION  
△ Reissuing plan for legibility only. No design changes have been made.

SHEET No. S3.4 OF 4 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\18-029-KUHIO HWY SHORT TERM IMPROVEMENTS-WDC\01 CAD\07-15-19 VELLUM\KSI-S304.DWG PLOT TIME: 07:15:19, 9/24 AM)



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD208	244

ELECTRICAL SYMBOL LIST

SYMBOL		DESCRIPTION
EXISTING	NEW	
		Existing Street Light Mounted On Joint Pole
		New LED Street Light Luminaire And 15' Arm Mounted On Joint Pole (By KIUC)
		Pullbox/Handhole, Type As Noted
		Manhole, Type As Noted
		Traffic Signal Pullbox, Type B <span>6</span>
		Pad Mounted Transformer
		Utility Pole/Guy Pole
-- eoh/X --	OH/X	Overhead Conductors/Cables P = KIUC Primary S = KIUC Secondary T = Telephone V = CATV K = KIUC Fiber Optic Cable g = guy wire S = Traffic Signal
--- e ---	-----	Underground Ductline, Type as Indicated
--- ep ---		Existing KIUC Primary Ductline
--- et ---		Existing Hawaiian Telcom Ductline
--- eSIC ---		Existing Sandwich Isles Communications Ductline
	E-----	Ductline Stubout, Capped and Marked
	X	Denotes Removal/Demolition
		Electrical Equipment
	CATV	Cable Television
	GP	Guy Pole
	ELEC	Electric
	HH	Handhole
	HT	Hawaiian Telcom
	GND	Ground
	KIUC	Kauai Island Utility Cooperative
	R/W	Right Of Way
	SIC	Sandwich Isle Communications, Inc.
	SIC MH	Sandwich Isle Communications Manhole
	SL	Street Light
	TEL	Telephone
	TMH	Telephone Manhole
	TSL	Traffic Signal Light
	TSPB	Traffic Signal Pullbox
	WP	Weatherproof
		Detail Indicator: Top Half Denotes Detail Number, Left Denotes Sheet On Which Detail Shown
		Duct Indicator, See Schedule On Sheet E-36
		Note Indicator

GENERAL NOTES FOR CONSTRUCTION

1. The Contractor at his own expense, shall keep the project area and surrounding area free from rubbish, dust, noise, erosion, etc. The work shall be done in conformance with the air and water pollution control standards and regulations of the State Department of Health.
  2. Wherever connections to existing utilities are shown on the plans, the Contractor shall expose the existing lines to verify their locations and depths prior to excavation of the main trenches. Should any discrepancies be discovered, the Contractor shall notify the Engineer for direction.
  3. Wherever new utility lines cross existing underground utilities, the Contractor shall expose the existing lines and verify their locations, depths and clearances between existing utilities and the new lines prior to beginning excavation of the main trenches. Should any discrepancies be discovered, the Contractor shall notify the Engineer for direction.
  4. Existing underground utilities, pipes, cables or ductlines were determined on the basis of the best available information. Therefore, no assurance can be provided that the actual locations will be precisely as shown on the contract drawings. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating the area. Wherever connections of new utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines. The Contractor shall be responsible for any damages to any existing facilities.
  5. The Contractor at his own expense, shall remove all utility ductlines designated to be demolished. Do not abandon in place. Restore AC pavement and concrete sidewalk associated with ductline removal work. For pavement and sidewalk restoration requirements, see Civil plans for details.
- 6 Refer to DOT 2008 Standard Plans for Traffic Signal Pullbox details: TE-37, TE-37B, TE-37C, TE-37D, TE-37E, TE-37J.



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

*Michele N. Adolph*  
APR 30, 2020  
LIC. EXP. DATE

APPROVED:

*John P. ...*  
Kauai Island Utility Cooperative  
7/26/19  
Date

*...*  
Hawaiian Telcom  
7/29/19  
Date

*...*  
Spectrum  
7/26/19  
Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE

REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ELECTRICAL SYMBOL LIST &  
GENERAL NOTES

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: As Shown Date: July 2019

SHEET No. E-1 OF 37 SHEETS

ADD.208



KAUAI ISLAND UTILITY COOPERATIVE (KIUC)  
UNDERGROUND CONSTRUCTION NOTES AND  
REQUIREMENTS

1. These notes are not intended to be used in place of the Service Installation Manual, please refer to Service Installation Manual for all service issues.
2. Contractor shall contact KIUC Construction Coordinator/Inspector prior to start of work on KIUC Facilities and for scheduling site inspections. [West side: 246-2323; East side: 246-4343]
3. Contractor shall contact KIUC's Distribution Planning Coordinator @ 246-2373 for design approvals, standard detail drawings, and any items not addressed in these notes or drawings.
4. All contractors entering KIUC facilities must be approved by KIUC and must have proper licensing and insurance coverage. Contact KIUC Legal Coordinator @ 246-4369 for details.
5. All trenches and pullboxes must be inspected by KIUC prior to backfilling and concrete-encasing operations. For detailed trenching and backfilling requirements refer to KIUC's Service Installation Manual.
6. The Contractor shall provide a Poly-Line 200 lb. test line or equivalent as a pulling wire in all 1 inch, 2 inch, 3 inch and 4 inch conduits. In 5 inch and 6 inch conduits, the Contractor shall install Neptco WP1800 muletape as a pulling line.
7. All conduits, pullboxes, handholes, and manholes shall be cleaned and free from objectionable materials. Conduit ends shall be adequately covered until the conductor is installed by the electric company (covers shall be Carlon Plug with Pull Tab Series P258 equivalent or better.)
8. For all conduit other than services, refer to conduit schedule on drawings.
9. For all services where the conductor is 1/0 or less, the distance from KIUC's handhole and customer's meter is less than 125 feet, and not crossing any driveways or roads the conduit shall be 2 inch schedule 40 PVC. For services greater than 125 feet but less than 150 feet, contact KIUC Planner for field verification and underground service requirements. Any deviations will require KIUC written approval.
10. Primary and secondary conduits for new line extensions shall be Schedule 40 PVC. Under driveways and roadways, the conduits shall be encased in a minimum of 3 inch concrete jacket extending 12 inches outside the edge of pavement.

11. Schedule 80 PVC conduit may be substituted for the concrete encased Schedule 40 PVC for service conduit only crossing under unpaved private driveways and roadways from KIUC pole/handhole to customer's meter. If concrete driveway will be built over service conduit immediately after conduit is installed, then Schedule 40 PVC may be used provided that it meets with Rule No. 21.
12. All primary and secondary conduits which are crossing State or County roadways shall be Schedule 40 PVC encased in a minimum 3 inch concrete jacket, which shall extend a minimum of 12 inches outside of the edge of pavement.
13. Electrical supply ducts, when installed near communication cables, shall be separated from communication duct systems and buried communication cables or conductors by not less than 3 inches of concrete or 12 inches of earth when paralleling or crossing.
14. Chairs shall be installed and spaced at a maximum of 5 feet separation when concrete encasing conduits.
15. All conduits shall enter boxes at 90 degree angle, perpendicular and flush to the wall with bell ends to prevent cable damage.
16. 90 degree conduit bends shall be factory-made with a minimum radius of 3 feet in trench runs.
17. Conduit bends exceeding 90 degrees will not be accepted.
18. A 36 inch minimum horizontal clearance shall be maintained when running KIUC conduits parallel to water and sewer lines. If clearance is less than 36 inches, KIUC conduit shall be concrete encased.
19. No foreign pullboxes, handholes, manholes, concrete slabs/boxes, structures, etc. are to be installed over KIUC facilities with the exception of Hawaiian Telcom, CATV or waterline conduit crossings. Such crossing must be approved by KIUC's Service Assurance Department and KIUC conduit to be concrete encased. Concrete encasement must be minimum of 3 inch encasement and extend a minimum of 1 foot beyond crossing conduit or pipe.
20. Yellow marker tape to be placed 1 foot above electrical conduits in the trench during backfilling. (E-Z CODE WBT 6 inch wide 4 mill polyethylene Protect-A-Line Warning Tape NA-0708 "ELECTRIC LINE" in yellow, equivalent or better).
21. Unless otherwise noted, the top of all conduits shall be at depth of 36 inches.

22. All handholes, pullboxes, and manholes shall be Walker Industries type or approved equal. Contact KIUC prior to ordering underground boxes for vendor approval. Customer to submit manufacturer's shop drawings if substituting from Walker Industries type.
23. Typically, the top of all electrical utility boxes shall be 1 inch above finish grade, single phase transformer pads shall be 2 inches above finish grade, and three phase transformer pads shall be 4 inches above finish grade unless otherwise noted. (special conditions may apply to sidewalks, roadways, etc., see specific location notation).
24. At no time shall cement mortar, wood or any other material be used between pre-cast sections of KIUC pullboxes, handholes, or manholes. The permanent installation of wooden wedges to level or raise the pre-cast sections shall not be permitted.
25. A minimum of 6 inches of #3 crushed rock backfill shall be placed loosely beneath the bottom section of handholes and pullboxes. Crushed rock or other foreign materials are not to be placed inside handholes and pullboxes.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.209	244



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

*Michele N. Adolphi*  
APR 30, 2020  
LIC. EXP. DATE

APPROVED:

*Paul Jones*  
Kauai Island Utility Cooperative

7/26/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
KIUC CONSTRUCTION NOTES  
AND REQUIREMENTS  
  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
  
Scale: None Date: July 2019  
  
SHEET No. E-2 OF 37 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.210	244

HAWAIIAN TELCOM (HT) CONSTRUCTION NOTES  
GENERAL NOTES:

1. Installation of a HT ductline system shall conform with the requirements of the HT "Standard Specification for Placing Underground Systems" dated January 2007, all subsequent amendments and additions, and all other pertinent standards for telephone construction. Contractor shall familiarize his personnel by obtaining applicable specifications.
2. For underground cable locating and marking, five (5) working days advanced notice is required. Three (3) working days advanced notice is required for any inspection by a designated representative. The Contractor shall take necessary precaution not to damage any existing cables or ducts. A HT Inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contain HT facilities.
3. The Contractor shall closely coordinate all work with HT. All trenches must be inspected by HT prior to backfilling and concrete encasing operations. The Contractor shall notify the HT inspector at least 72 hours prior to the excavation, bracing, pouring of concrete or backfilling.
4. The location of HT's existing facilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity to HT's facilities. The Contractor shall verify their locations and shall be liable for any damages to HT's facilities. Any damages shall be reported immediately to HT's repair section at #611 (24 hours) or to the Excavation Permit Section during normal work days hours, Monday through Friday, except holidays.
5. When excavation is adjacent to or beneath HT's existing structures or facilities, the Contractor shall:
  - a. Sheet and/or brace the excavation to prevent slides, cave-ins or settlements to ensure no movement to HT's structures or facilities.
  - b. Protect existing structures and/or facilities with beams, struts or underpinning while excavating beneath them to ensure no movement to HT's structures or facilities.
  - c. Contractor shall be liable for any damages to Hawaiian Telcom Facilities.
6. The Contractor shall provide a 5/8 inch x 8 foot galvanized ground rod below the telephone cabinet or backboard and a #6 TW insulated green ground wire with a 3 foot coil. Telephone cabinets shall be grounded.
7. Concrete strength shall be 3,000 PSI in 28 days.
8. For pole bracing instructions should field conditions and/or construction procedures require that poles be braced to facilitate construction, the Contractor is to contact the HT Inspector at least 72 hours in advance.

9. Should it become necessary to relocate any HT facilities, the work shall be done by Contractor, otherwise noted on the plan. The Contractor shall be responsible for all coordination and costs associated with the relocation.
10. All construction must be inspected and approved by HT prior to the installation of any of its facilities and the energizing of its systems. Contractor shall commence installation only after the construction has been approved by HT.
11. The Contractor shall furnish his construction schedule forty-five (45) working days prior to starting any HT work. Contractor shall provide HT with sufficient time to inspect the work.

CONDUIT NOTES:

1. Unless otherwise indicated, all conduits, sweeps, couplings, adapters, and bell ends provided for concrete encased usage by HT shall be DB-100 or DB-120, 4 inch PVC meeting NEMA TC-6 & 8. Refer to HT Standard Drawing 34028 for installation. Schedule 40 conduit is acceptable as a substitute for DB-100 or DB-120 except that pole riser bends shall be Schedule 40 sun-resistant conduit.
2. Conduits from utility boxes to the individual lots shall be considered incidental to their respective main duct lines. Said conduits shall be DB-100 or DB-120, 4 inch PVC unless otherwise shown (see Item 1 above).
3. When utility ducts are concrete encased at intersection of water pipe and utility ducts, a 6 inch minimum separation between water pipe and top of the concrete encased utility ducts shall be maintained. Stones, rocks, etc. shall not be used with backfill material. Only nonexpansive select materials shall be used as backfill material.
4. Bends in the duct alignment, due to changes in grade, shall have a minimum radius of 20 feet. All 90-degrees C-bends at a pole or at the building floor penetration shall have a bend radius of ten times the diameter of the duct or greater.
5. The Contractor shall place 8-mil, 4 inch wide warning tape, orange in color with a black imprinted message "WARNING - STOP DIGGING - CALL HT, COMMUNICATIONS CABLE BURIED BELOW, FAILURE TO COMPLY COULD RESULT IN LEGAL ACTION", 12 inchs above the duct or concrete jacket for the entire length of all duct installations. See HT standard drawing 34028. Recommended tape is manufactured by Thor Enterprises, Inc., Sun Prairie, WI 53590 (phone: 1-800-827-8467) part numbers DTOGTE-41 (1000'), and DTOGTE-46 (6000'). Equivalent tapes are acceptable.

6. After the ducts are installed, but prior to concrete encasement, a mandrel with a square front not less than 12 inches long and having a diameter of 1/4 inch less than the inside diameter of the duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left in the line. Ducts shall be completely dry and clean. All ducts shall be capped to prevent entry of foreign material during construction and at the completion of installation. Recommended mandrels and brushes are made by General Machine Products Co. (GMP), Trevoze, PA (phone: 215-357-5500). Recommended GMP part number 8182-4R (test mandrel for 4 inch conduit), and part number 17094 (brush for 4 inch conduit) 2 inch ducts will require cleaning using rags.
7. All empty ducts and conduits shall have an #1800 polyester mule-tape (Neptco WP1800P, HT code no. 571154) installed through one entire length with 2 feet of slack in manholes and handholes, and 1 foot of slack in pullboxes. The mule-tape shall be rated for 1800 lbs. of pull and have footage markers for measuring duct lengths. The Neptco mule-tape is available in 3,000 feet, 6,500 feet and 10,000 feet reels. The Neptco mule-tape is prelubricated and printed with sequential footage markings. Using the Neptco mule-tape, the Contractor shall measure at least one duct of a common duct run. The distance shall be marked on the record prints and submitted to HT Inspector for record keeping.
8. Metallic entrance conduits shall be grounded.
9. All conduits within a building shall:
  - a. Be installed in the shortest and straightest possible run.
  - b. Have no section longer than 100 feet nor contain more than two 90-degree bends. An approved sized junction box or gutter box shall be placed if this is exceeded.
  - c. All bends shall be long sweep-radius bends but the inside radius of the bend must never be less than ten times the diameter of the conduit.



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

*Michele N. Adair* APR 30, 2020  
LIC. EXP. DATE

APPROVED:

*[Signature]*  
Hawaiian Telcom

7/29/19  
Date

9/20/19

△ Reissuing plan for legibility only. No design changes have been made.

DATE

REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
HAWAIIAN TELCOM CONSTRUCTION NOTES	
Kuhio Highway Short-Term Improvements Kuamoo Road to Temporary Bypass Road Fed. Aid Proj. No. NH-056-1(50)	
Scale: None	Date: July 2019
SHEET No. E-3 OF 37 SHEETS	

ADD.210



SPECTRUM CONSTRUCTION NOTES:


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.211	244

1. The Contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.
2. The locations of existing utilities are approximate only. The Contractor shall verify their locations and shall be responsible for any damages to these utilities as a result of his operations. Adjustments to the new ductline alignment, if required, shall be made to provide the required clearances.
3. The Contractor shall sawcut A.C. pavement, concrete gutter, and concrete sidewalk wherever new manholes, handholes, pullboxes or ductlines are to be placed and shall restore to existing condition or better.
4. The Contractor, at his own expense, shall keep the project and surrounding area free from dust nuisance. The cost for supplementary measures, which will be required by the State, shall be borne by the Contractor.
5. Prior to the excavation of the ductline, the Contractor shall request that Spectrum to locate existing ductline wherever required.
6. The Contractor shall take necessary precaution not to damage existing cables or ducts. Any work involving existing cables or ducts shall be done in the presence of the Spectrum inspector or his representative.
7. The Contractor shall notify the Spectrum Inspector 48 hours prior to the pouring of concrete or backfilling.
8. Wherever connections to existing utilities are shown on the plans, the Contractor shall expose the existing lines prior to excavation of the main trenches to verify their locations and depths.
9. Contractor shall provide all materials and furnish all labor and equipment necessary to install the ductline in place complete.
10. The Contractor shall be responsible for laying out all required lines and grades and shall preserve all bench marks and working points necessary to lay out the work correctly. The new ductline shall be adjusted by the Contractor to suit the existing conditions and the details as described in the plans.
11. The Contractor, at his own expense, shall keep the project area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State of Hawaii, Department of Health.
12. The location of CATV facilities shown on plans are from existing records with varying degrees of accuracy as to its actual fixed location. The Contractor shall use extreme caution when working in close proximity of CATV facilities.
13. The Contractor shall obtain excavation permit clearance from Spectrum's Engineering Section.
14. For any field assistance or verification of CATV facilities, the Contractor shall call Josh Martin at 855-2621.

15. Any work required to relocate CATV facilities shall be done by Spectrum and the Contractor shall be responsible for all coordination requirements and associated costs.
16. Any damage to Spectrum's Facilities shall be reported to Spectrum's Repair Dispatch Department.
17. The Contractor shall tunnel under existing concrete curb and gutter as necessary to extend conduit into existing CATV pullbox and into the proposed power supply pullbox.
18. All existing improvements that are disturbed during the construction phase shall be restored to its original or better condition at no cost to the State in accordance with State's standards.
19. At locations where existing CATV pullbox replacement is proposed, the Contractor shall take all necessary precaution not to damage the existing cables in the pullbox. All damages to existing cables shall be repaired by Spectrum and paid for by the Contractor.
20. Coordinate all penetration of telephone pullboxes with Hawaiian Telcom Inspector.
21. Smooth finish inside wall of existing pullboxes and handholes to its original condition or better.
22. The Contractor shall install Neptco WP1800 muletape or approved equal in all ductlines, leave muletape in place for future use as a pull or fish line, unless otherwise noted. Reference GTE Material Code No. 571154. All ducts shall be capped to prevent entry of foreign material during construction and at completion of installation.
23. The Contractor shall place poly cord through out project, and secure in manholes, handholes, and pullboxes.
24. Penetration into pullboxes if necessary to be from factory installed opening or from bricks position. Penetration from pullbox walls is not acceptable.
25. A minimum of (2) precast sections must be used on all 2 x 4 or 2 x 6 pullboxes.
26. Two minimum layers of bricks to be used shall always be at least one layer lower than the lowest duct entering the pullbox. At no time however, shall there be less than two layers of bricks on each installation.
27. At no time shall cement mortar, wood, or any other material be used between precast sections. Leveling or raising of boxes to grade must be done at brickwork section using cement mortar. The permanent installation of wooden wedges to accomplish this purpose will not be accepted.
28. Concrete precast base may be used as an alternative to bricks.
29. Trenching to be by hand digging near and across existing utility lines.

30. Minimum clearance between street light standards and fire hydrants shall be three feet.
31. Underground utilities shown hereon is for information only. No guarantee is made on the accuracy or completeness of said installation.
32. For underground cable locating and marking, five working days advance notice is required. Three working days advance notice is required for any inspection by a designated representative. Contractor shall take necessary precaution not to damage any existing cables or ducts. Spectrum's Inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contain Spectrum's facilities.
33. Concrete strength shall be 3,000 psi in 28 days.
34. Bends in the duct alignment, due to changes in grade shall have a minimum radius of 20-feet. All 90-degree C-bends at a pole or at the building floor slab penetration, shall have a bend radius of ten times the diameter of the duct or greater.
35. After ductline has been completed, a mandrel with a square front not less than 12-inch long and having a diameter of 1/4-inch less than the inside diameter of duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left inside. Ducts shall be completely dry and clean.
36. All construction must be inspected and approved by Spectrum prior to the installation of any of its facilities and the energizing of its system.
37. Contractor and/or customer shall provide Spectrum with sufficient installation time in their occupancy time table.
38. Install 4-mil. thick orange color warning tape 3-inch wide, entire length of trench when placing CATV conduits. Tape should read "CAUTION BURIED CABLE LINE BELOW". Manufactured by Harris Industries, Inc., Catalog Number UT-43 or equivalent tape. Tape to be installed 12-inches above ductline.

APPROVED:

  
Spectrum


26/19  
Date



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

Michele N. Adolpho  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>SPECTRUM CONSTRUCTION NOTES</u>	
<u>Kuhio Highway Short-Term Improvements</u> <u>Kuamoo Road to Temporary Bypass Road</u> <u>Fed. Aid Proj. No. NH-056-1(50)</u>	
Scale: None	Date: July 2019
SHEET No. E-4 OF 37 SHEETS	

9/20/19  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.212	244

HIGHWAY LIGHTING NOTES:

1. *The Contractor shall notify the State Highways, Highway Lighting and Traffic Supervisor 72 hours in advance before commencing installation of highway lighting system.*
2. *The Contractor shall have one set of approved plans at job site at all times during the construction work and record all changes which occur during construction of the highway lighting system. Coordinate and schedule work with KIUC.*
3. *Final acceptance and inspection will be undertaken only after all work has been completed. Street light provided and wired by KIUC.*
4. *Contractor shall trim tree branches to clear removal or installation of highway luminaires, at no additional cost the State.*
5. *Temporary Lighting*

*The Contractor shall schedule the construction work in such a manner that highway lighting is provided during all hours of darkness either with new, temporary or existing luminaires or a combination thereof. Temporary wiring and connections may need to be utilized. Temporary wiring may be installed in exposed conduit, where not subject to vehicular damage, or with overhead wiring. Overhead wiring shall be a minimum of 20 feet above roadways at its lowest measured point, unless approved by the Engineer. Coordinate with KIUC.*

Contractor shall maintain existing circuiting, provide temporary connections to existing highway lights or provide temporary luminaires through construction of the new highway lighting system. Maintain existing illumination levels utilizing a temporary lighting system, eg. utilizing existing or temporary wiring and connections temporary light standards, etc., until new highway lights can be energized and are approved by the Engineer. New highway lights shall be energized by either permanent or temporary wiring and connections prior to demolition of the existing highway lighting system or removal of the temporary lighting system.

Temporary lighting system shall meet the same design, safety, traffic, etc. requirements as the permanent lighting system.

*The temporary lighting system shall be incidental to the removal of the existing street lights. This includes any design work needed to implement the temporary lighting system.*

SANDWICH ISLES COMMUNICATIONS, INC (SIC) NOTES:

1. *The locations of existing utilities are approximate only. The Contractor shall exercise caution and shall maintain proper clearances whenever construction crosses or is in close proximity to Sandwich Isles Communications, Inc. (SIC) facilities.*
2. *Prior to excavating the Contractor shall call into Hawaii's One Call Center and shall comply with Hawaii Revised Statutes Chapter 269E. Contact Hawaii One Call at 1-866-423-7287.*
3. *If required, adjustment shall be made to new construction to provide required clearances from SIC facilities.*
4. *A SIC inspector or designated representative is required to be present during a breakage into or entry into any structure or conduit system that contain SIC facilities. Temporary duct or cable support shall be provided wherever necessary or required by SIC inspector.*
5. *The Contractor shall notify SIC Customer Service at least 72 hours prior to excavation, bracing, or backfilling of SIC facilities. Contact SIC Customer Service at 1-888-995-7274.*
6. *When excavation is adjacent to, above or below SIC facilities, the Contractor shall:*
  - a. *Sheet and/or brace the excavation to prevent slides, cave-ins, or settlements to ensure no movement or impact to SIC facilities.*
  - b. *Support existing structures and/or facilities with beams, struts, or underpinning while excavating around or beneath them to prevent any movement or impact to SIC facilities.*



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

Mark R. APRIL 30, 2011  
LIC EXP. D

9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

HIGHWAY LIGHTING AND SIC NOTES

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: None Date: July 2019

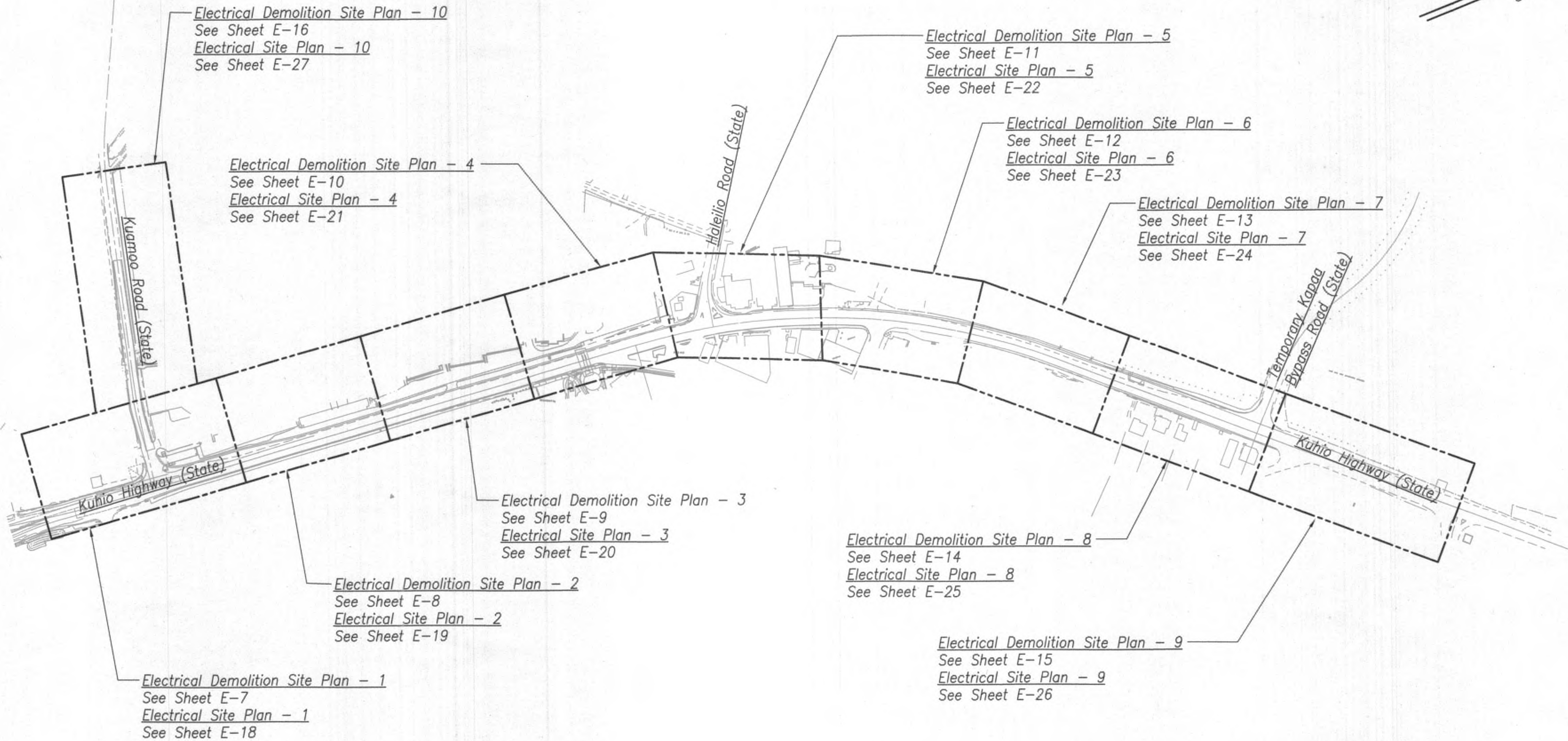
SHEET No. F-5 OF 37 SHEETS

ADD.212

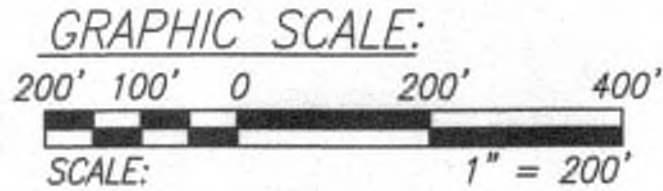


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.213	244

True North  
Scale: 1"=200'



OVERALL ELECTRICAL SITE PLAN  
SCALE: 1" = 200'



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DATE	REVISION



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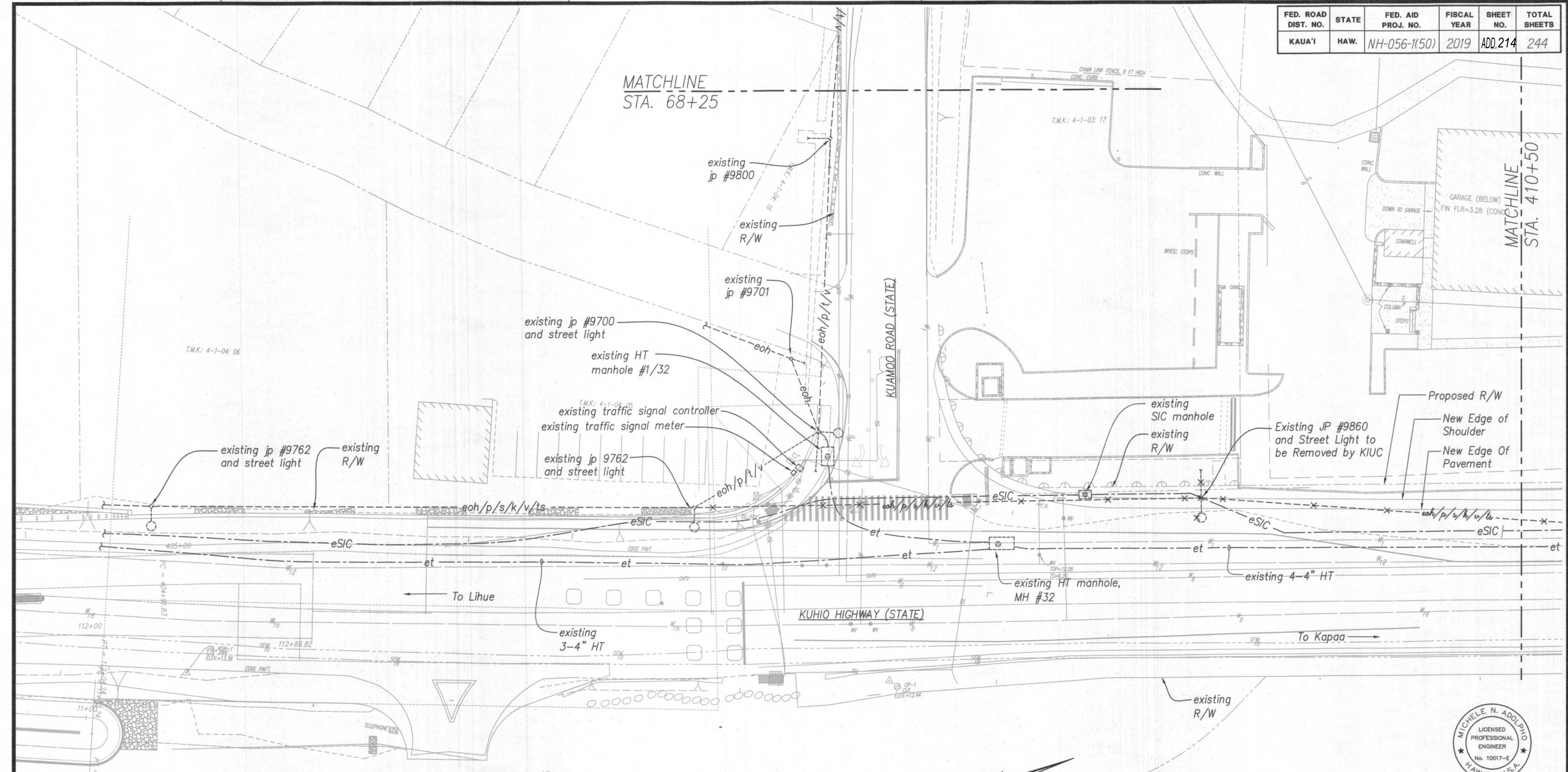
*[Signature]* APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
OVERALL ELECTRICAL  
SITE PLAN  
  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 200' Date: July 2019  
SHEET No. E-6 OF 37 SHEETS

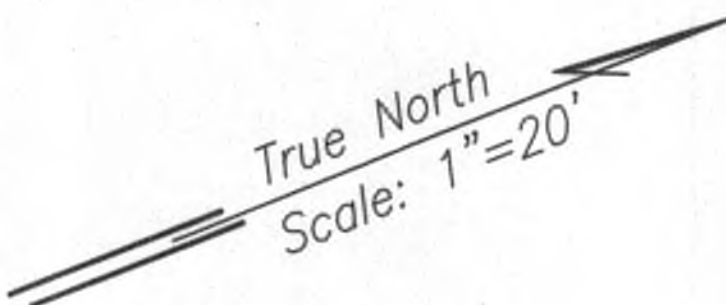
7/25/19-19-32 Y:\030\030.007\030.007 E-6.051.dwg



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.214	244



ELECTRICAL DEMOLITION SITE PLAN - 1  
SCALE: 1" = 20'

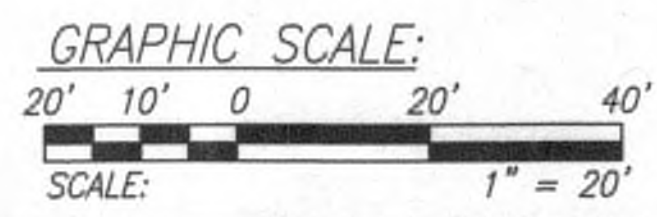


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*M. Adolpho* APRIL 30, 2020  
LIC. EXP. DATE

APPROVED:

<i>[Signature]</i> Kauai Island Utility Cooperative	7/26/19 Date
<i>[Signature]</i> Hawaiian Telcom	7/29/19 Date
<i>[Signature]</i> Spectrum	7/26/19 Date



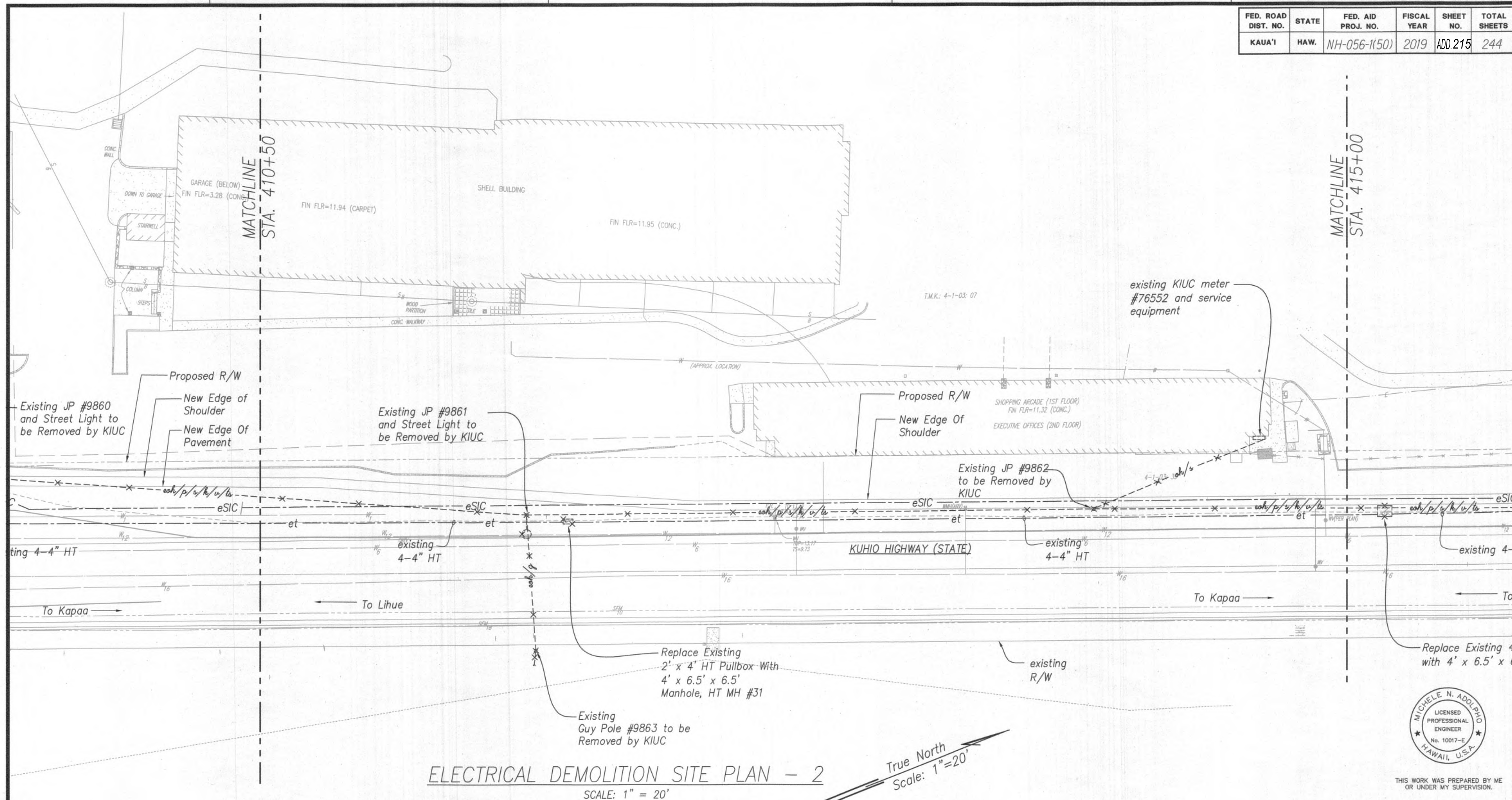
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
ELECTRICAL DEMOLITION  
SITE PLAN - 1  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20'      Date: July 2019  
SHEET No. E-7 OF 37 SHEETS

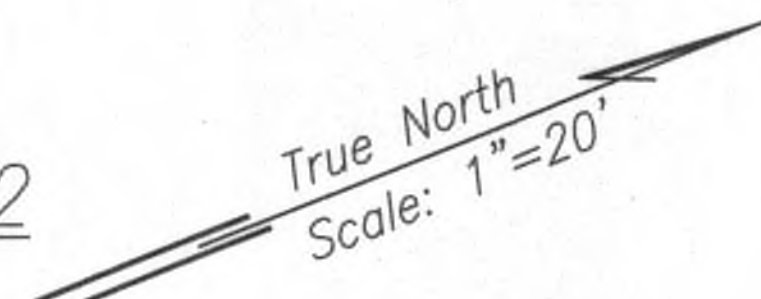
7/25/19-19-32 Y:\030\030.007\030.007 E07-E17.S01.dwg



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.215	244



**ELECTRICAL DEMOLITION SITE PLAN - 2**  
SCALE: 1" = 20'

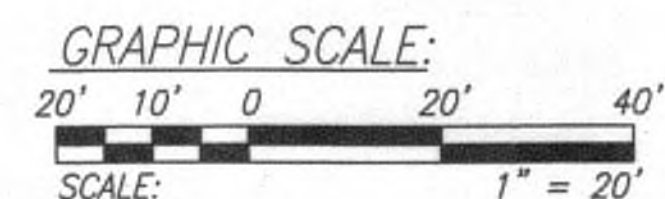


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*Signature* APRIL 30, 2020  
LIC. EXP. DATE

APPROVED:

*Signature* 7/26/19 Date  
Kauai Island Utility Cooperative  
*Signature* 7/29/19 Date  
Hawaiian Telcom  
*Signature* 7/26/19 Date  
Spectrum



9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL DEMOLITION**  
**SITE PLAN - 2**

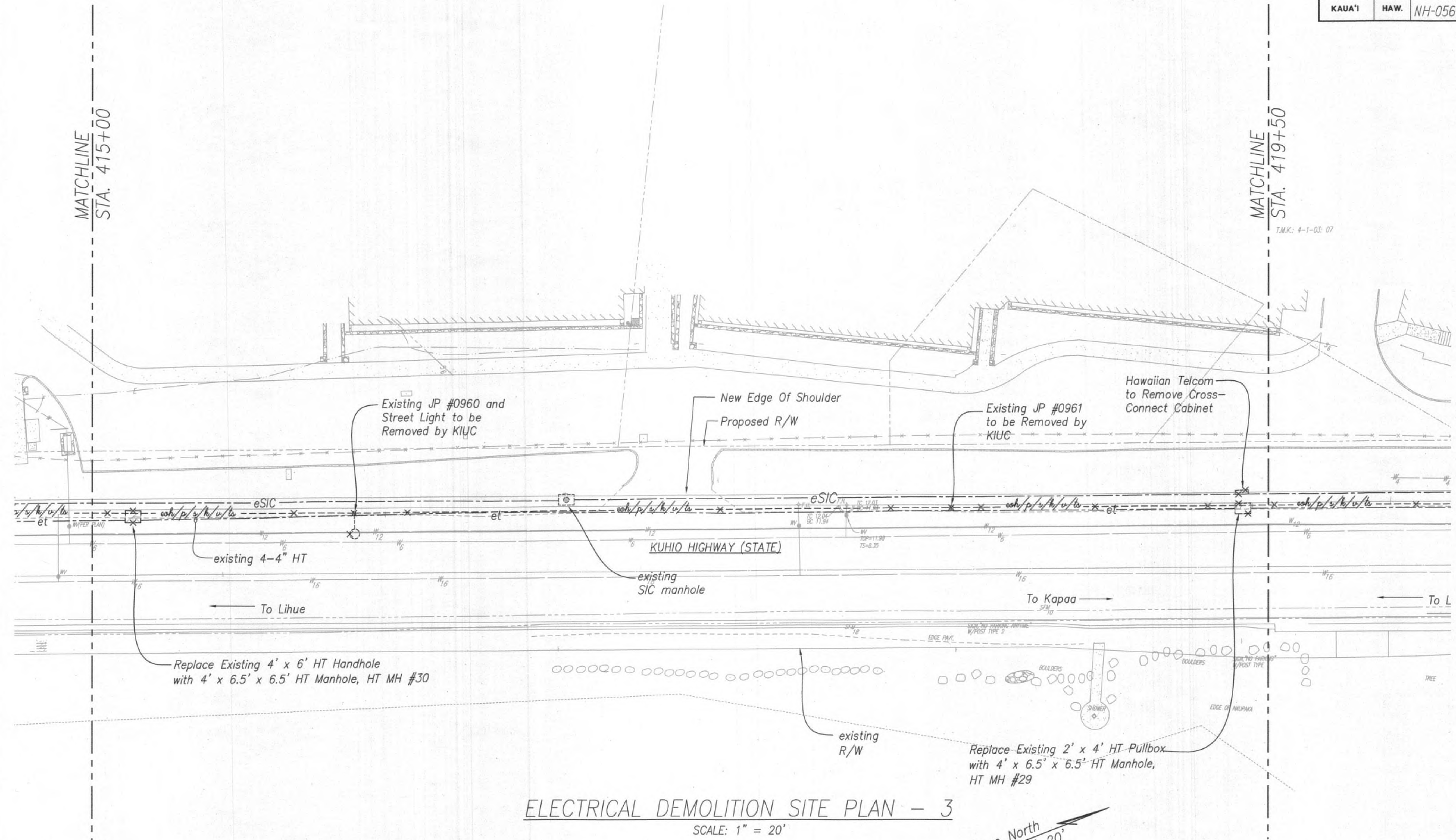
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

**SHEET No. E-8 OF 37 SHEETS**



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.216	244



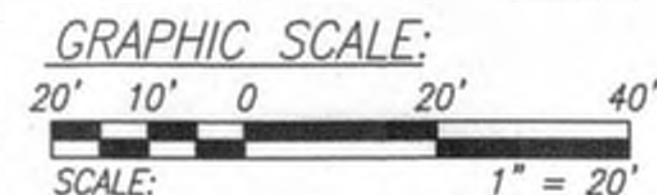
**ELECTRICAL DEMOLITION SITE PLAN - 3**  
SCALE: 1" = 20'

**APPROVED:**

*Greg Bon...* 7/24/19  
Kauai Island Utility Cooperative Date

*[Signature]* 7/29/19  
Hawaiian Telcom Date

*John K. Hall* 7/24/19  
Spectrum Date



9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]* APRIL 30, 2020 LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL DEMOLITION**  
**SITE PLAN - 3**

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

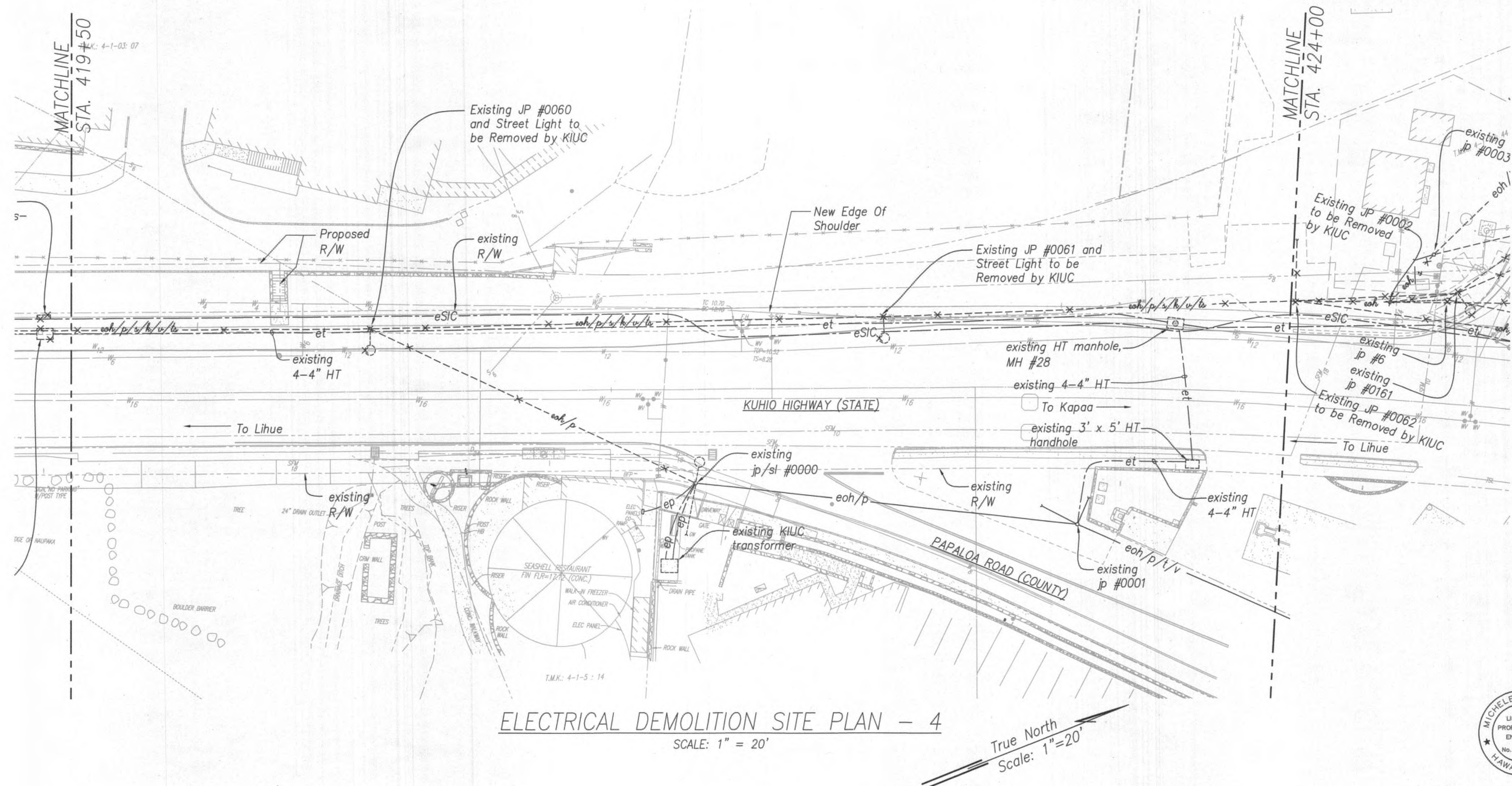
Scale: 1" = 20' Date: July 2019

**SHEET No. E-9 OF 37 SHEETS**

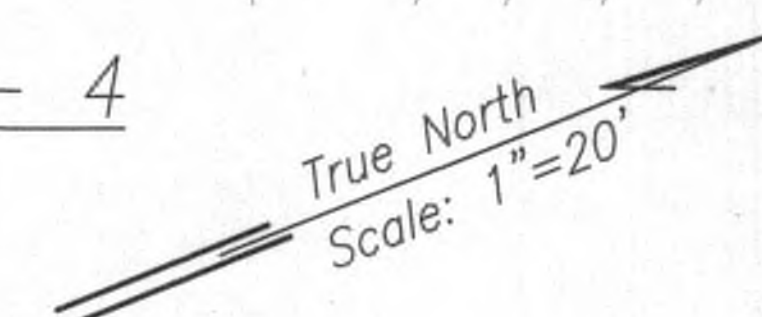
7/25/19-19:32 Y:\030\030.007\030.007 E07-E17 SDI.dwg



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.217	244



ELECTRICAL DEMOLITION SITE PLAN - 4  
SCALE: 1" = 20'



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LIC. EXP. DATE

APPROVED:

*[Signature]*  
Kauai Island Utility Cooperative

7/26/19  
Date

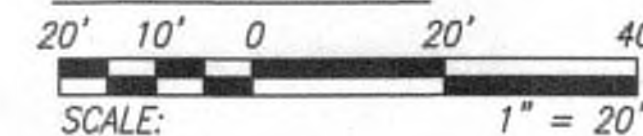
*[Signature]*  
Hawaiian Telcom

7/29/19  
Date

*[Signature]*  
Spectrum

7/26/19  
Date

GRAPHIC SCALE:



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DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ELECTRICAL DEMOLITION  
SITE PLAN - 4

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20' Date: July 2019

SHEET No. E-10 OF 37 SHEETS

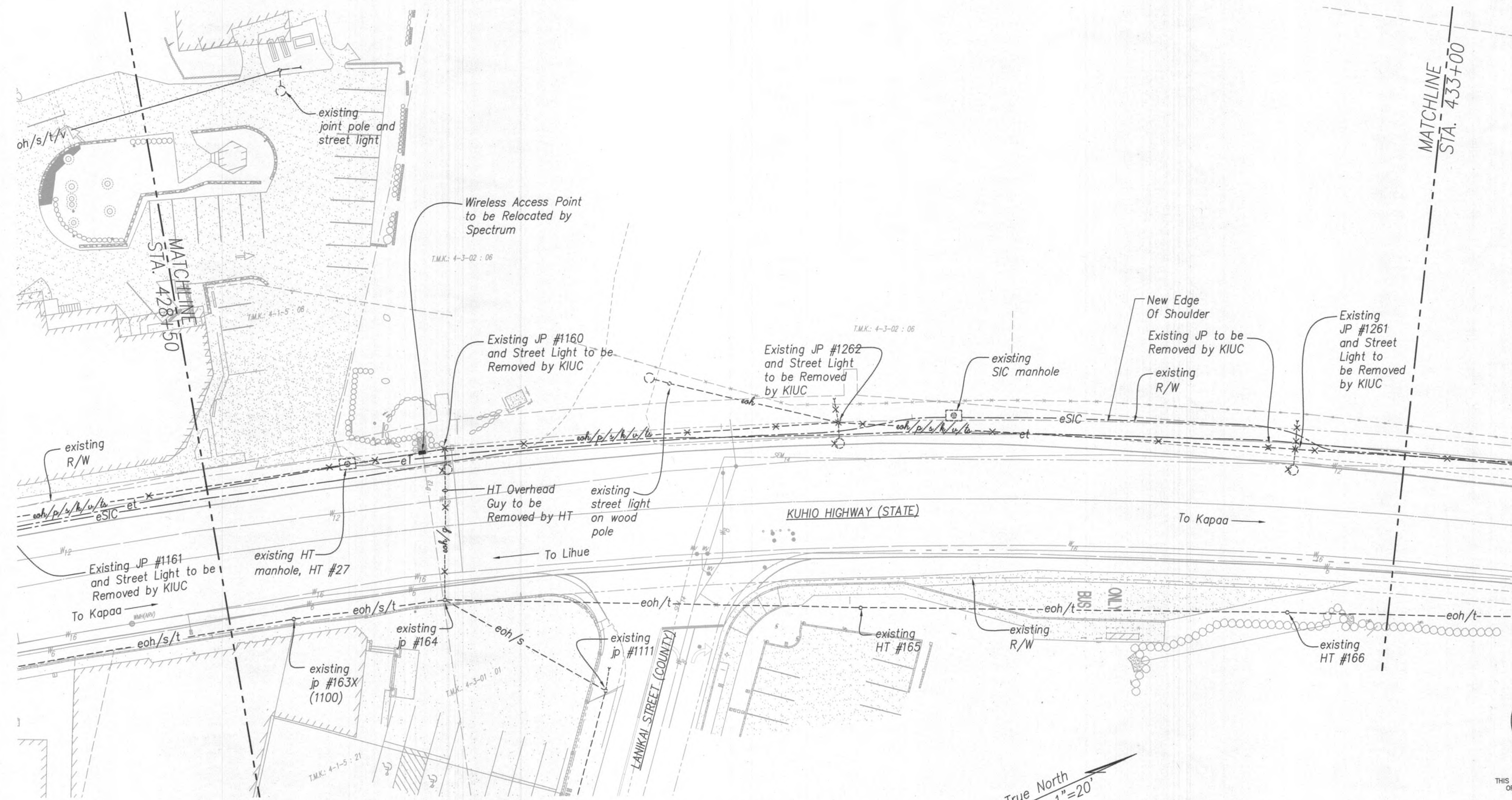
ADD.217







FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD219	244



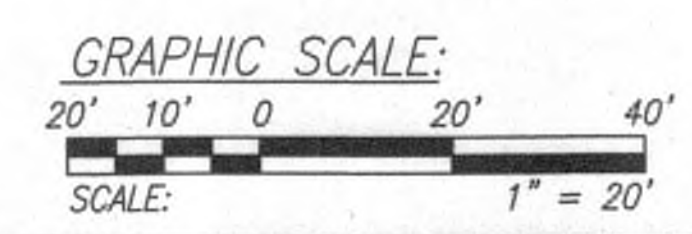
ELECTRICAL DEMOLITION SITE PLAN - 6  
SCALE: 1" = 20'

APPROVED:

*[Signature]* 7/26/19  
Kauai Island Utility Cooperative Date

*[Signature]* 7/29/19  
Hawaiian Telcom Date

*[Signature]* 7/26/19  
Spectrum Date



9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION



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*[Signature]* APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

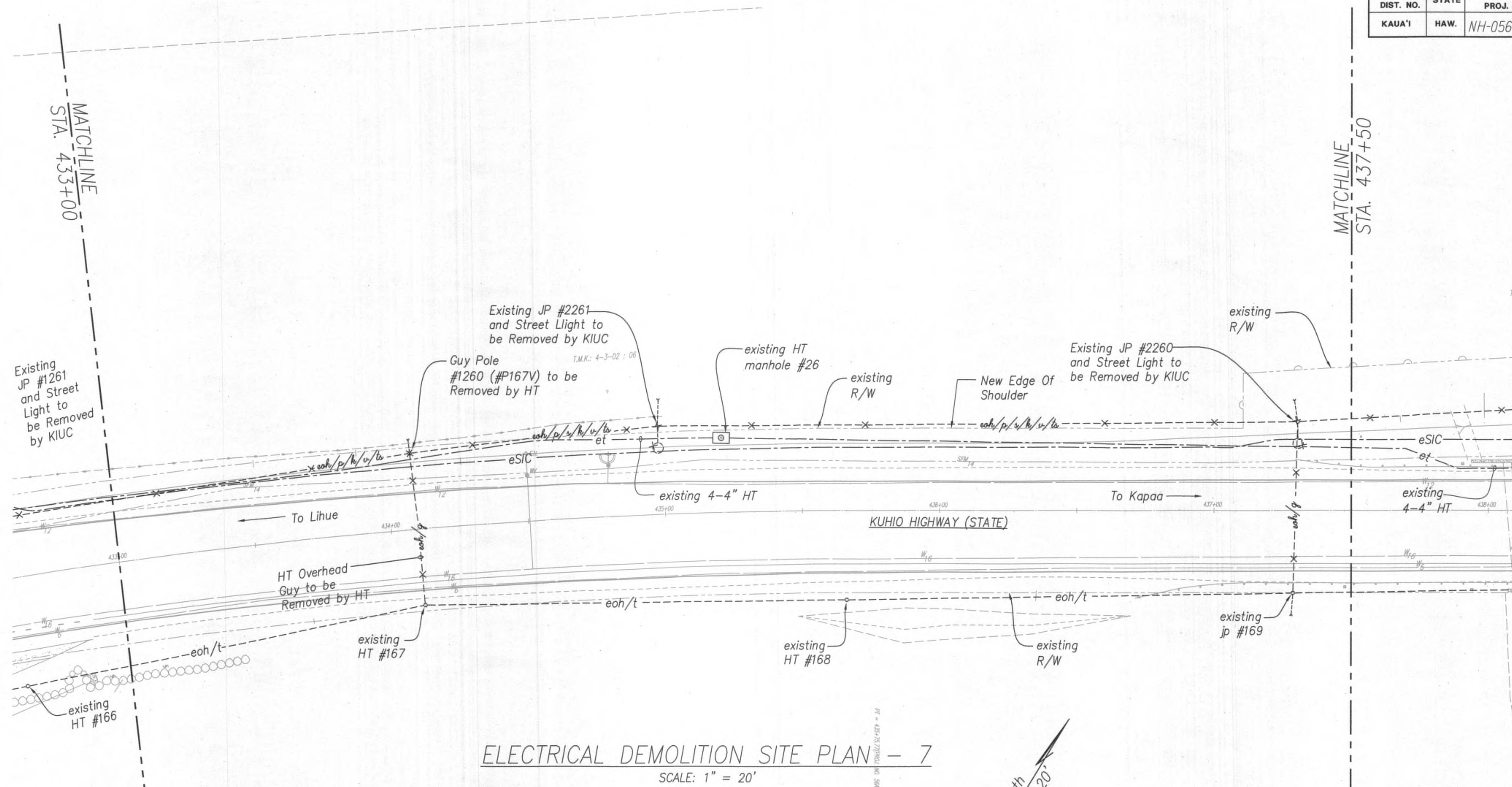
ELECTRICAL DEMOLITION  
SITE PLAN - 6  
Kuhio Highway Short-Term Improvements  
Kuaamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. E-12 OF 37 SHEETS

7/25/19-19-33 Y:\030\030\007\030\007 E07-E17 301.dwg

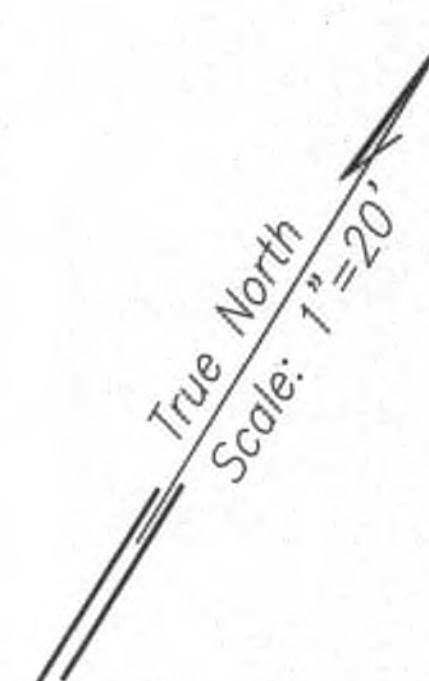


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.220	244



ELECTRICAL DEMOLITION SITE PLAN - 7

SCALE: 1" = 20'



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APPROVED:

*[Signature]*  
Kauai Island Utility Cooperative

7/26/19  
Date

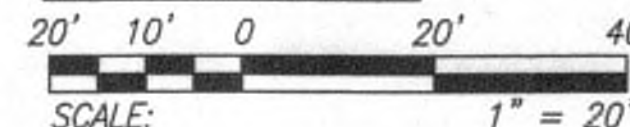
*[Signature]*  
Hawaiian Telcom

7/26/19  
Date

*[Signature]*  
Spectrum

7/26/19  
Date

GRAPHIC SCALE:



9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE

REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ELECTRICAL DEMOLITION  
SITE PLAN - 7

Kuahio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20'

Date: July 2019

SHEET No. E-13 OF 37 SHEETS

ADD.220



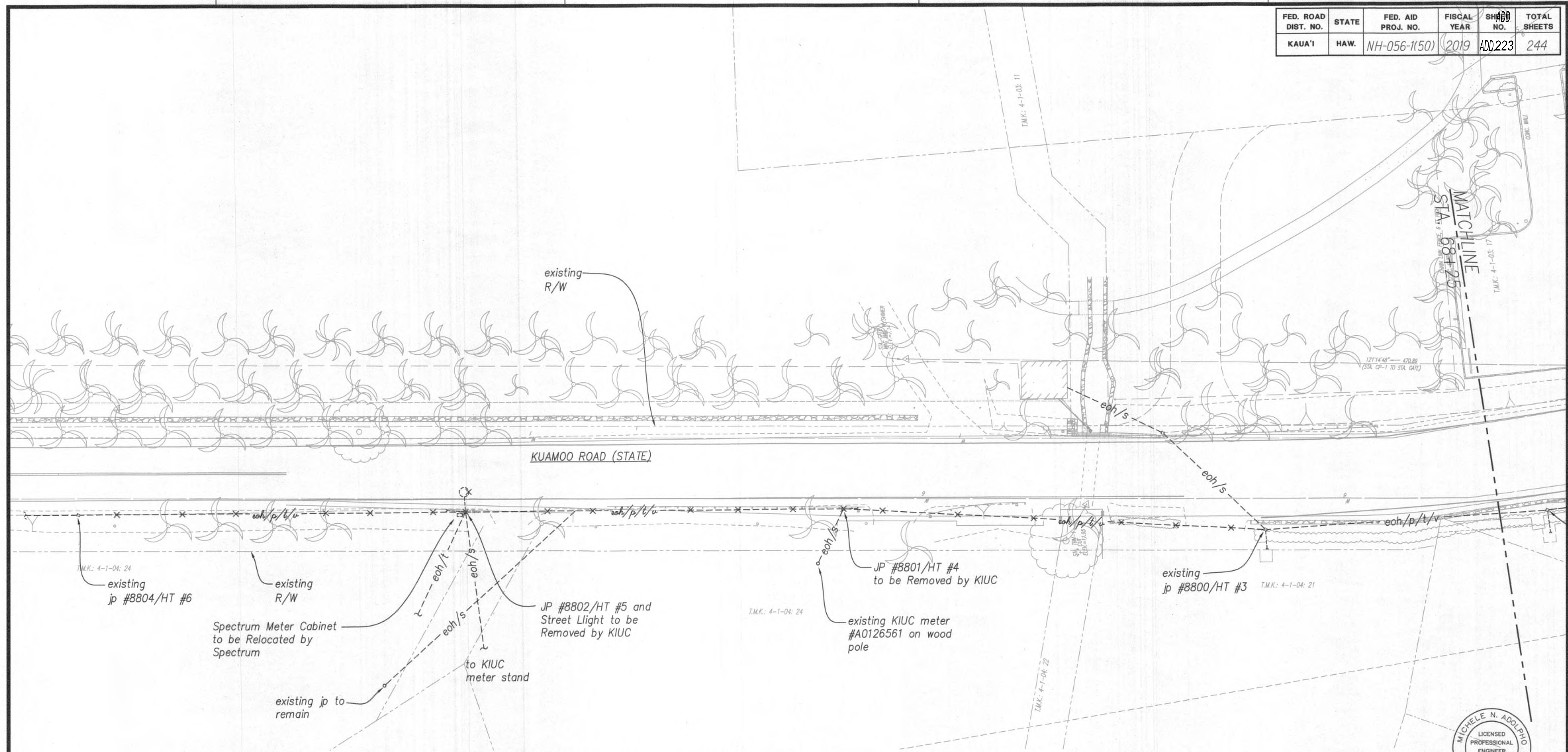




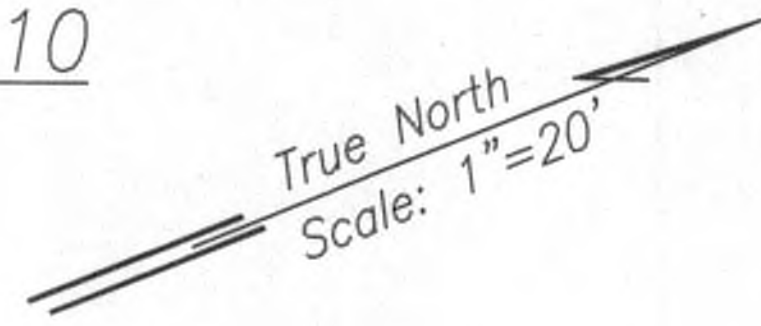




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD 223	244



**ELECTRICAL DEMOLITION SITE PLAN - 10**  
 SCALE: 1" = 20'



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*[Signature]* APRIL 30, 2020 LIC. EXP. DATE

**APPROVED:**

<i>[Signature]</i> Kauai Island Utility Cooperative	7/26/19 Date
<i>[Signature]</i> Hawaiian Telcom	7/29/19 Date
<i>[Signature]</i> Spectrum	7/26/19 Date



9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ELECTRICAL DEMOLITION

SITE PLAN - 10

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

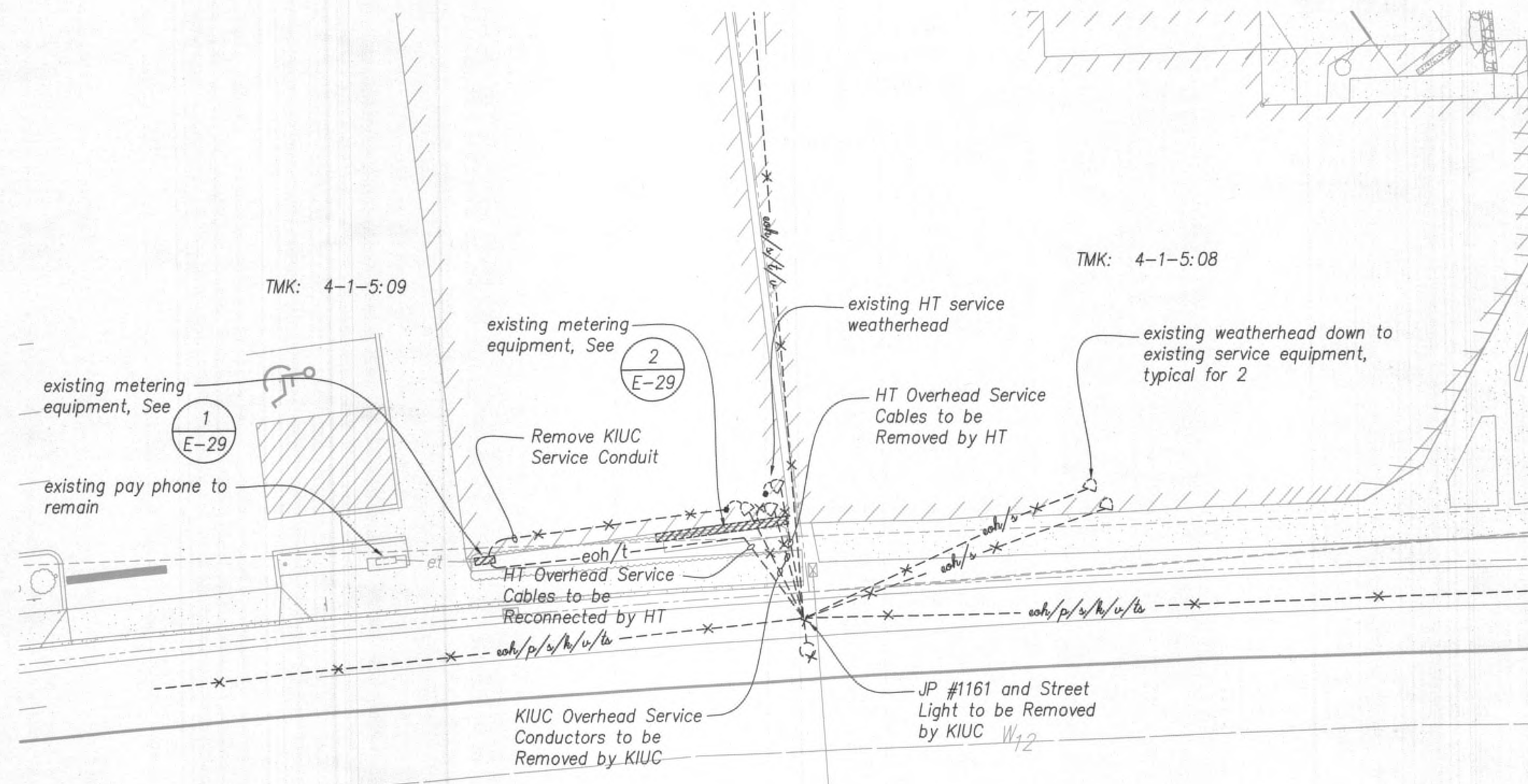
Scale: 1" = 20'      Date: July 2019

SHEET No. E-16 OF 37 SHEETS

7/25/19-19:33 Y:\030\030.007\030.007 E07-E17.501.dwg



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.224	244



1 ENLARGED ELECTRICAL DEMOLITION SITE PLAN  
E-17 SCALE: 1" = 10'

True North  
Scale: 1"=10'



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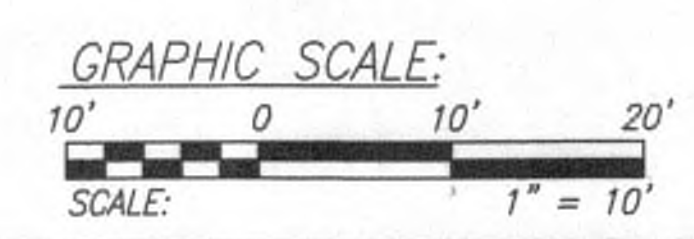
*[Signature]* APRIL 30, 2020  
LIC. EXP. DATE

APPROVED:

*[Signature]* 7/26/19  
Kadai Island Utility Cooperative Date

*[Signature]* 7/24/19  
Hawaiian Telcom Date

*[Signature]* 7/26/19  
Spectrum Date



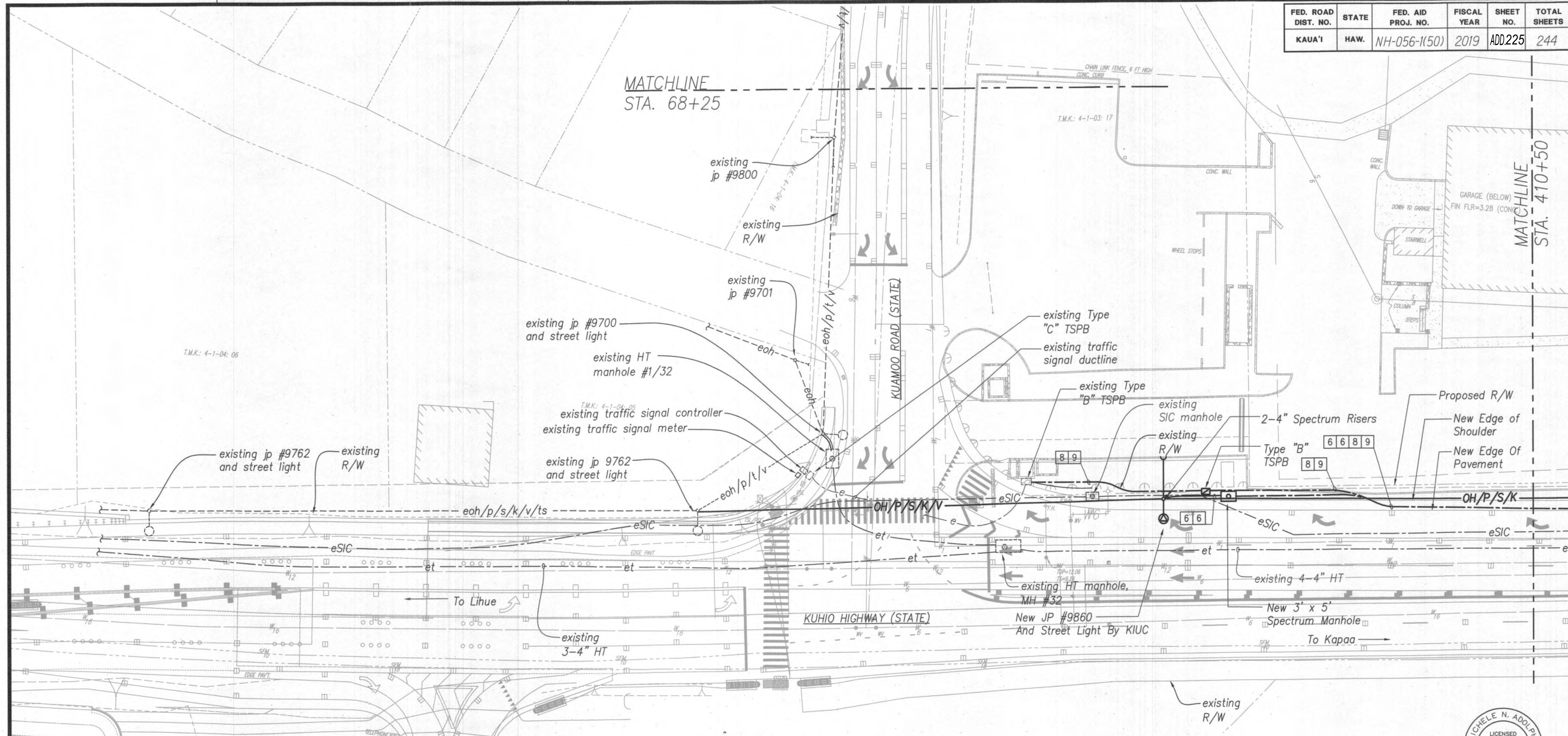
9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
**ENLARGED ELECTRICAL  
DEMOLITION SITE PLAN**  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 10' Date: July 2019  
SHEET No. E-17 OF 37 SHEETS

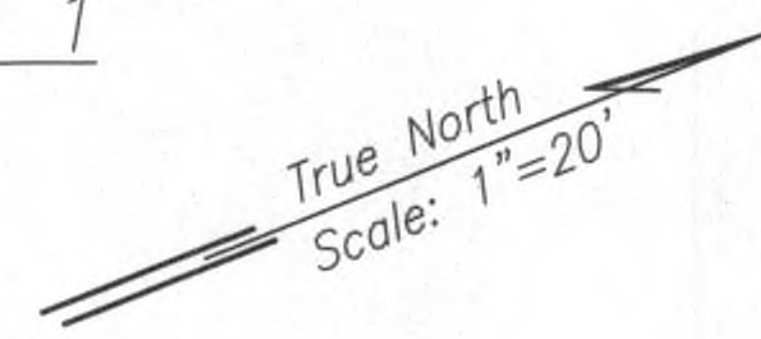
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.225	244



**ELECTRICAL SITE PLAN - 1**  
SCALE: 1" = 20'

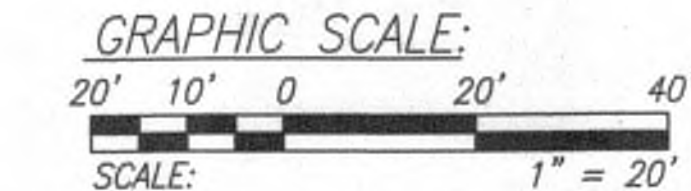


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*[Signature]* APRIL 30, 2020  
LIC. EXP. DATE

APPROVED:

<i>[Signature]</i> Kauai Island Utility Cooperative	7/26/19 Date
<i>[Signature]</i> Hawaiian Telecom	7/29/19 Date
<i>[Signature]</i> Spectrum	7/26/19 Date



9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

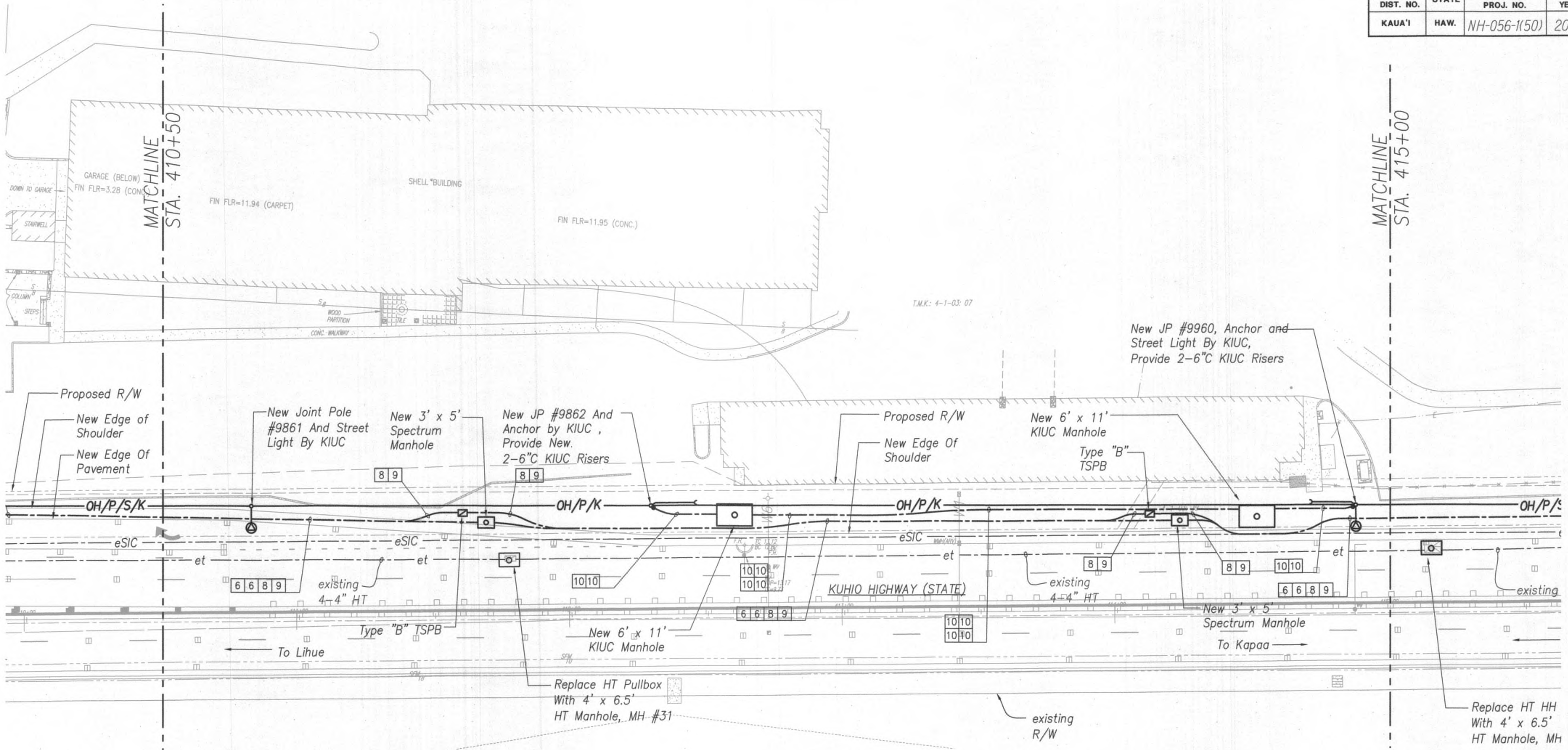
DATE	REVISION
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
**ELECTRICAL**  
**SITE PLAN - 1**  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019  
SHEET No. E-18 OF 37 SHEETS

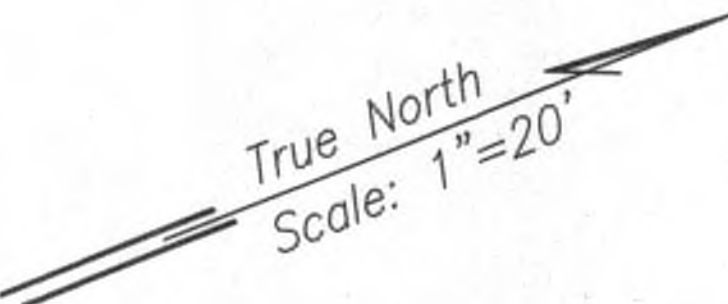
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD226	244



ELECTRICAL SITE PLAN - 2  
SCALE: 1" = 20'

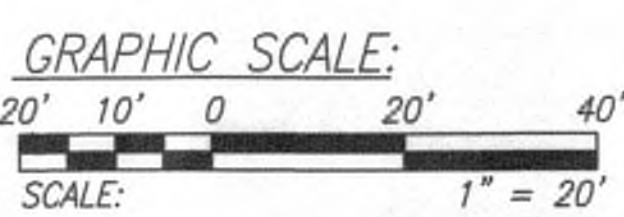


APPROVED:

*[Signature]* 7/26/19  
Kauai Island Utility Cooperative Date

*[Signature]* 7/26/19  
Hawaiian Telcom Date

*[Signature]* 7/26/19  
Spectrum Date



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DATE	REVISION



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*[Signature]* APRIL 30, 2020  
LIC. EXP. DATE

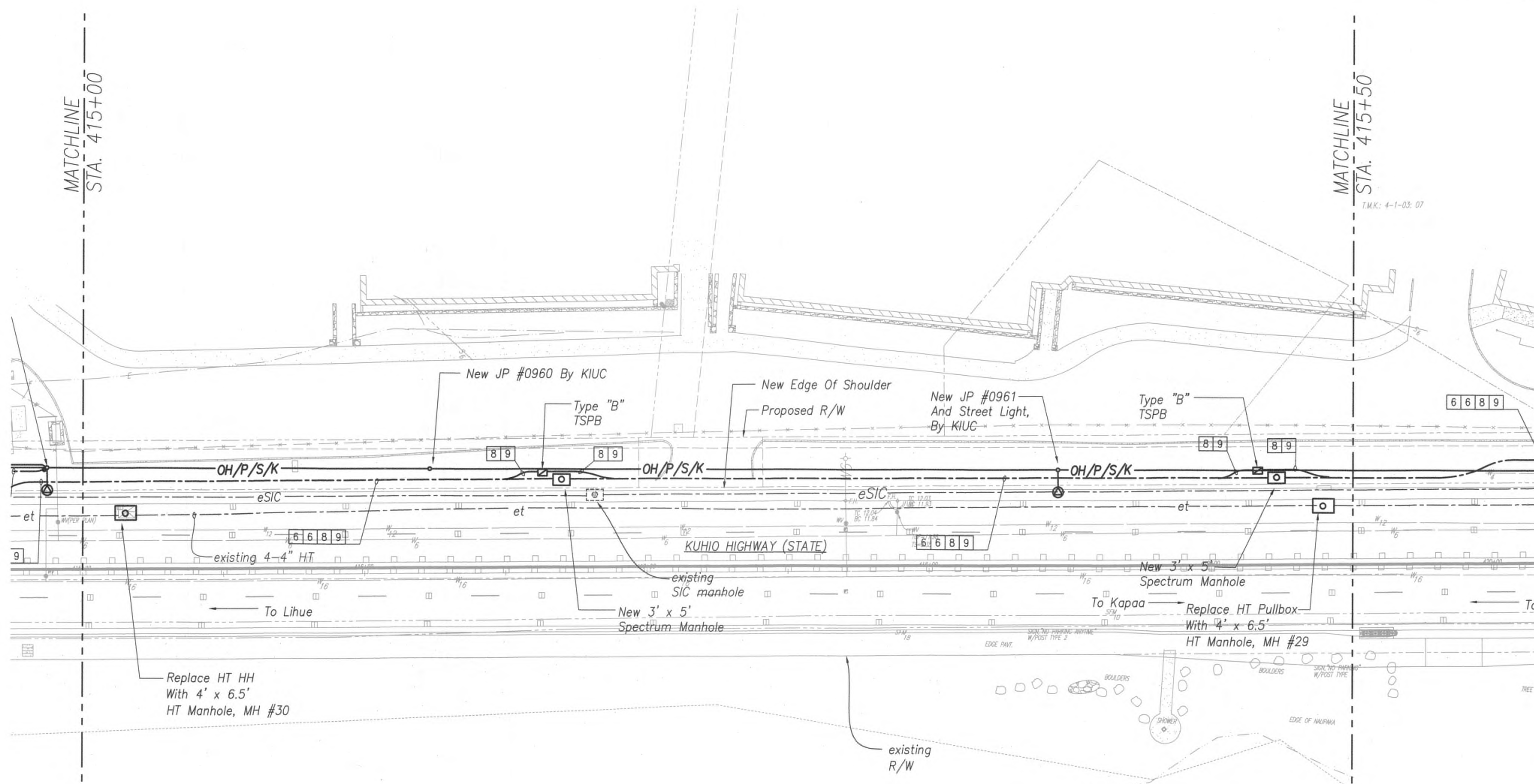
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ELECTRICAL  
SITE PLAN - 2  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. E-19 OF 37 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.227	244



# ELECTRICAL SITE PLAN - 3 SCALE: 1" = 20'

True North  
Scale: 1" = 20'

APPROVED:

*[Signature]*  
Kauai Island Utility Cooperative

7/26/19  
Date

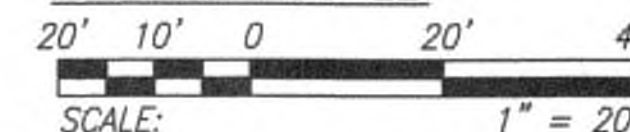
*[Signature]*  
Hawaiian Telecom

7/29/19  
Date

*[Signature]*  
Spectrum

7/26/19  
Date

GRAPHIC SCALE:



9/20/19 Δ Reissuing plan for legibility only. No design changes have been made.

DATE

REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ELECTRICAL  
SITE PLAN - 3

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20'

Date: July 2019

SHEET No. E-20 OF 37 SHEETS

ADD.227



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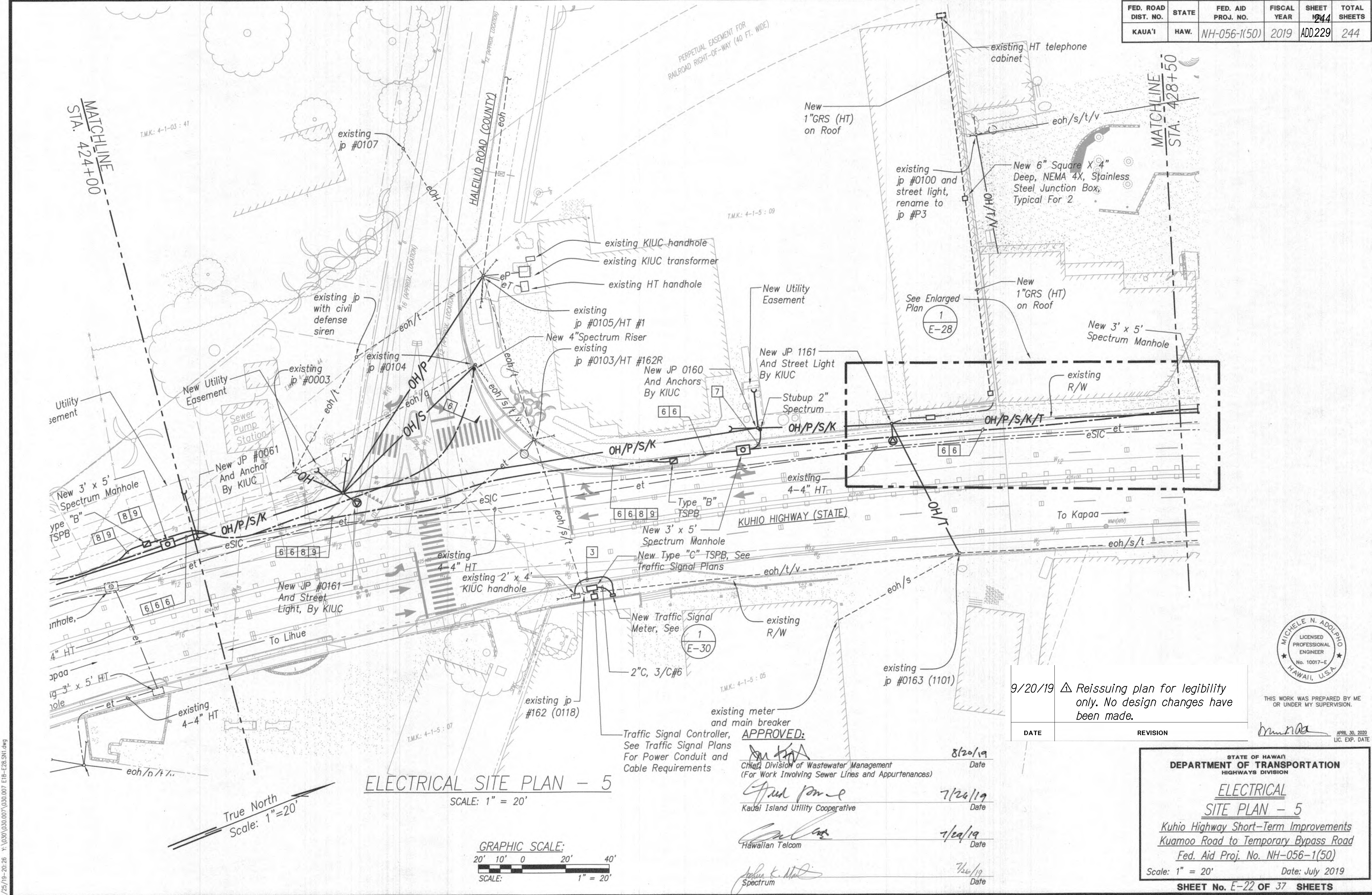
*[Signature]* APRIL 30, 2020  
LIC. EXP. DATE





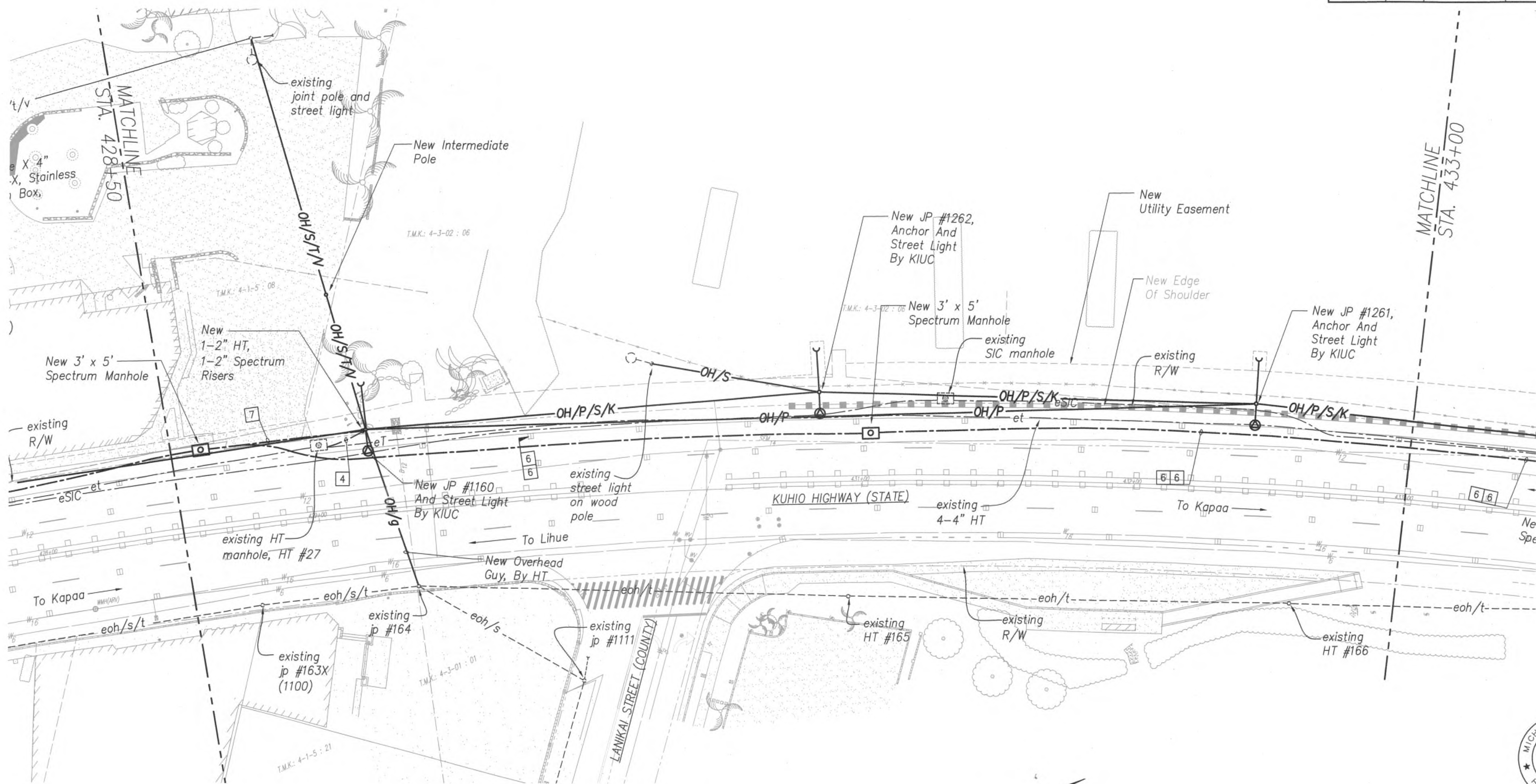


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD229	244

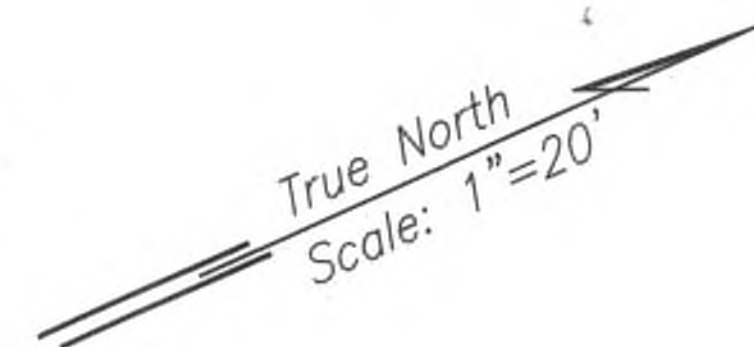




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD.230	244



ELECTRICAL SITE PLAN - 6  
SCALE: 1" = 20'



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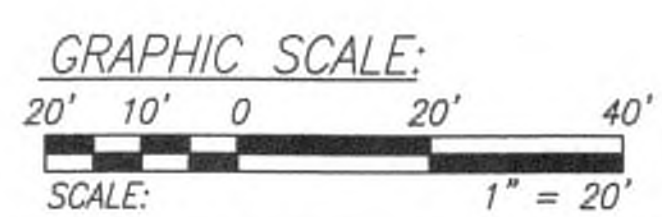
*M. Adolpho* APRIL 30, 2020  
LIC. EXP. DATE

APPROVED:

*[Signature]* 7/24/19  
Kauai Island Utility Cooperative Date

*[Signature]* 7/24/19  
Hawaiian Telcom Date

*[Signature]* 7/24/19  
Spectrum Date



9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

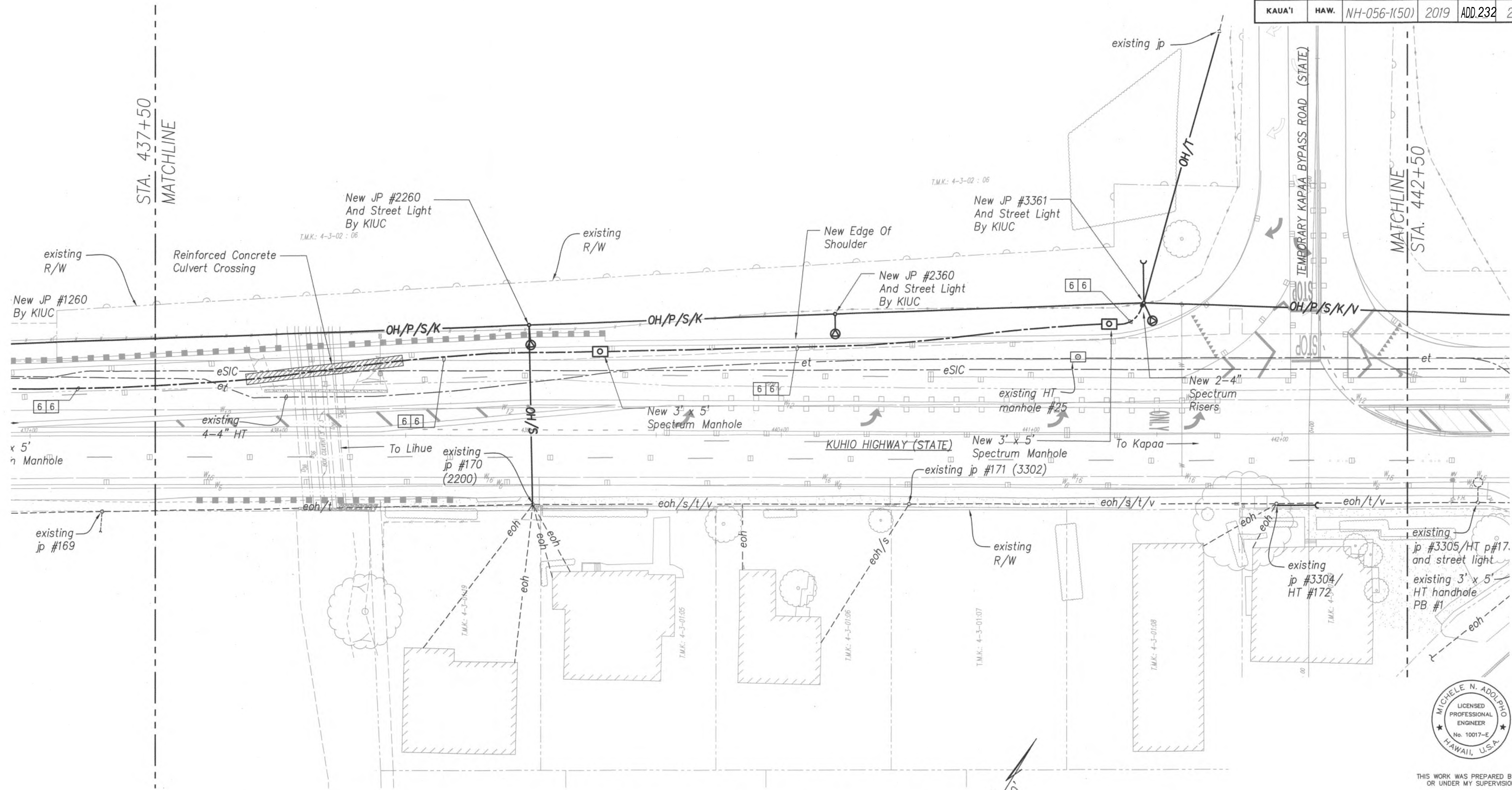
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
ELECTRICAL  
SITE PLAN - 6  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019  
SHEET No. E-23 OF 37 SHEETS







FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.232	244



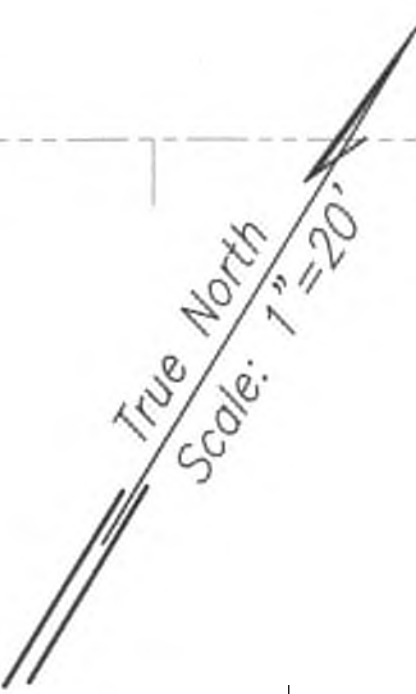
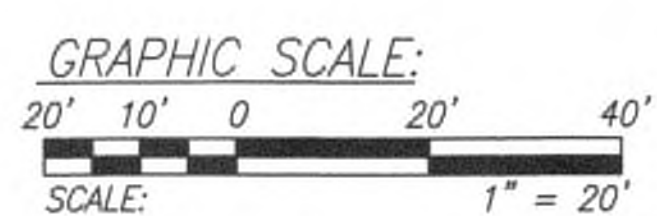
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

*M. Adolpho* APRIL 30, 2020 LIC. EXP. DATE

# ELECTRICAL SITE PLAN - 8 SCALE: 1" = 20'

APPROVED:

<i>Grad...</i>	7/26/19
Kauai Island Utility Cooperative	Date
<i>...</i>	7/29/19
Hawaiian Telcom	Date
<i>...</i>	7/26/19
Spectrum	Date



9/20/19	△ Reissuing plan for legibility only. No design changes have been made.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

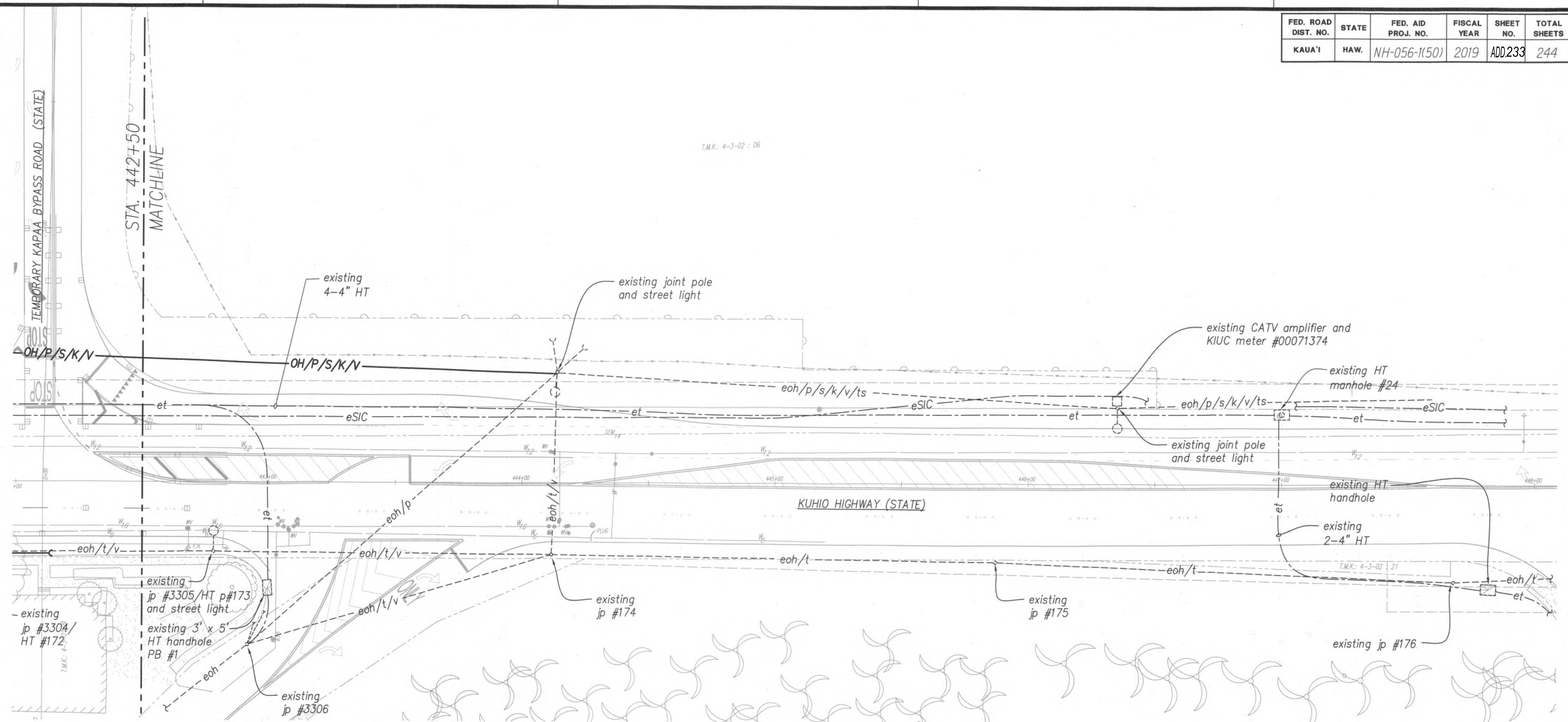
ELECTRICAL  
SITE PLAN - 8  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019

SHEET No. E-25 OF 37 SHEETS

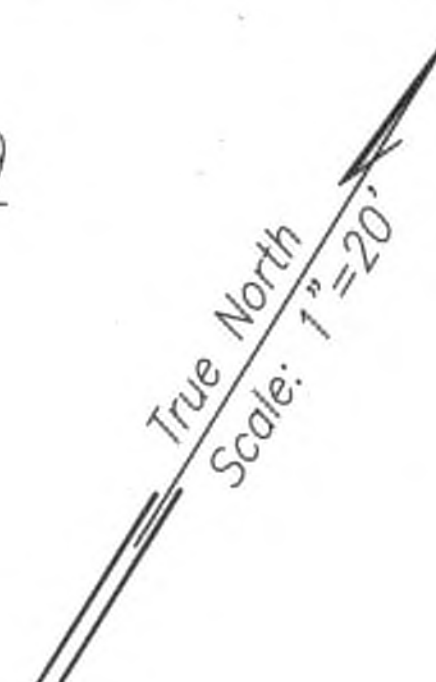
7/25/19-19:34 Y:\030\030.007\030.007 E18-E28 SH.dwg



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.233	244



**ELECTRICAL SITE PLAN - 9**  
SCALE: 1" = 20'



APPROVED:

*Greg Jones*  
Kauai Island Utility Cooperative

7/26/19  
Date

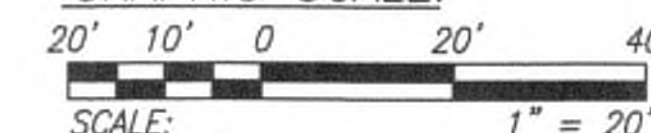
*[Signature]*  
Hawaiian Telcom

7/29/19  
Date

*[Signature]*  
Spectrum

7/26/19  
Date

GRAPHIC SCALE:



9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE

REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL**  
**SITE PLAN - 9**

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: 1" = 20'

Date: July 2019

SHEET No. E-26 OF 37 SHEETS



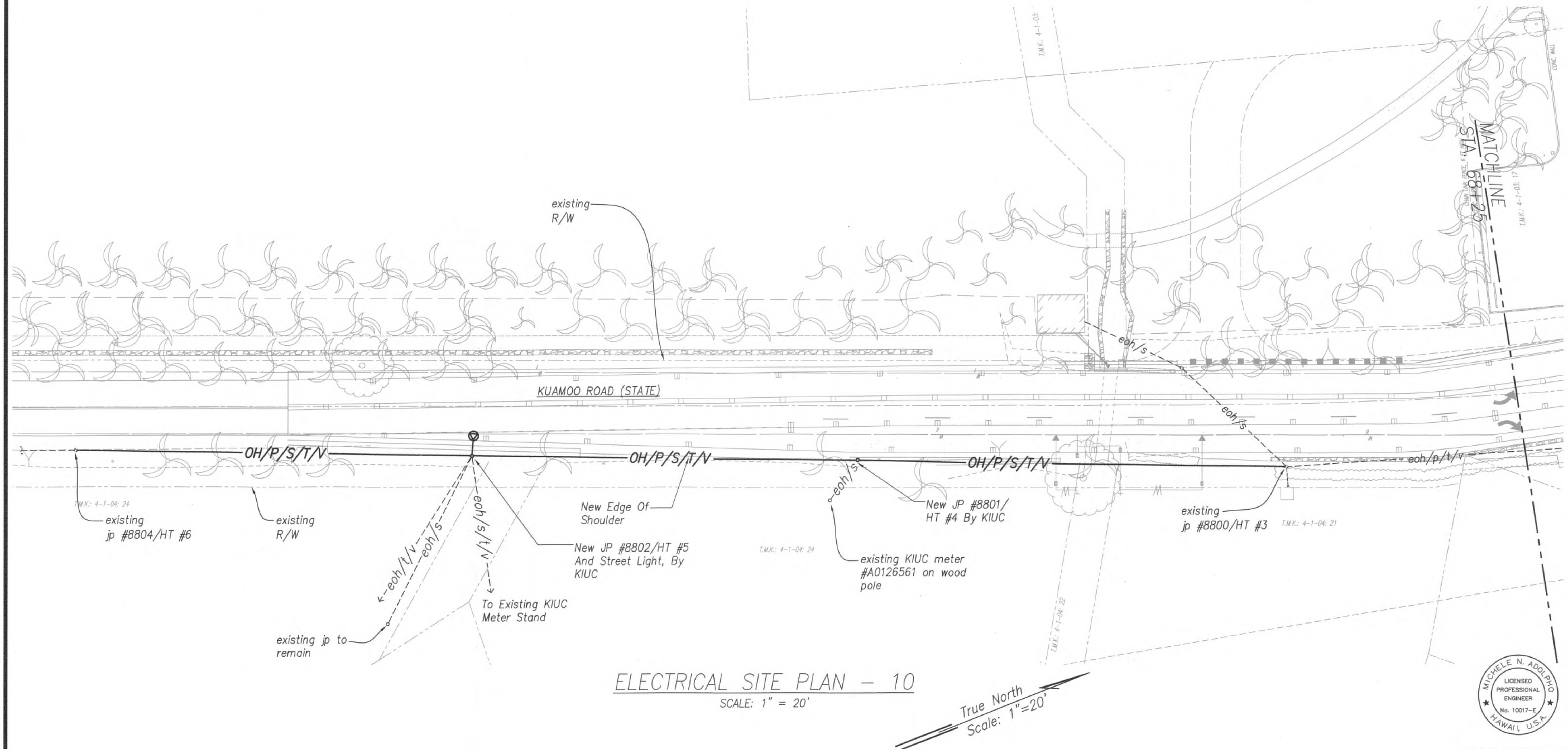
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*[Signature]*  
APRIL 30, 2020  
LIC. EXP. DATE

ADD.233



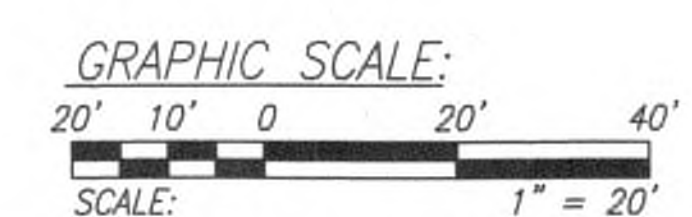
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.234	244



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*m-n-ad* APRIL 30, 2020 LIC. EXP. DATE

APPROVED:  
*[Signature]* 7/24/19 Date  
Kauai Island Utility Cooperative  
*[Signature]* 7/24/19 Date  
Hawaiian Telcom  
*[Signature]* 7/24/19 Date  
Spectrum



9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.  
DATE REVISION

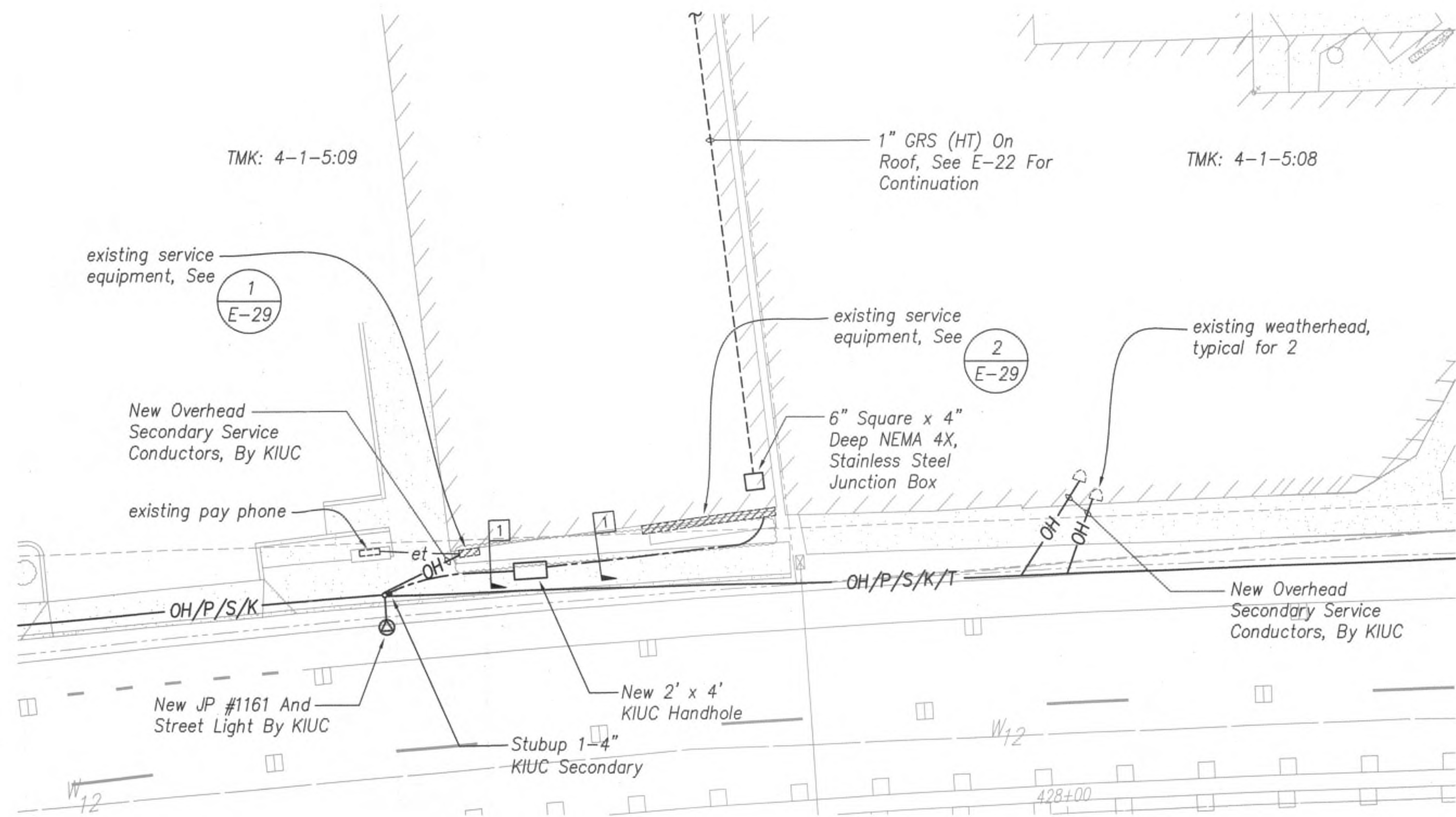
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ELECTRICAL**  
**SITE PLAN - 10**  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: 1" = 20' Date: July 2019  
SHEET No. E-27 OF 37 SHEETS

ADD.234

7/25/19-19-19-34 Y:\030\030.007\030.007 E18-E28 SHI.dwg



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD235	244



1 ENLARGED ELECTRICAL SITE PLAN  
E-28 SCALE: 1" = 10'

True North  
Scale: 1" = 10'



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OR UNDER MY SUPERVISION.

*[Signature]* APRIL 30, 2020  
LIC. EXP. DATE

APPROVED:

*[Signature]*  
Kauai Island Utility Cooperative

7/26/19  
Date

*[Signature]*  
Hawaiian Telcom

7/29/19  
Date

GRAPHIC SCALE:  
10' 0 10' 20'  
SCALE: 1" = 10'

9/20/19 Δ Reissuing plan for legibility  
only. No design changes have  
been made.

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ENLARGED ELECTRICAL  
SITE PLAN

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

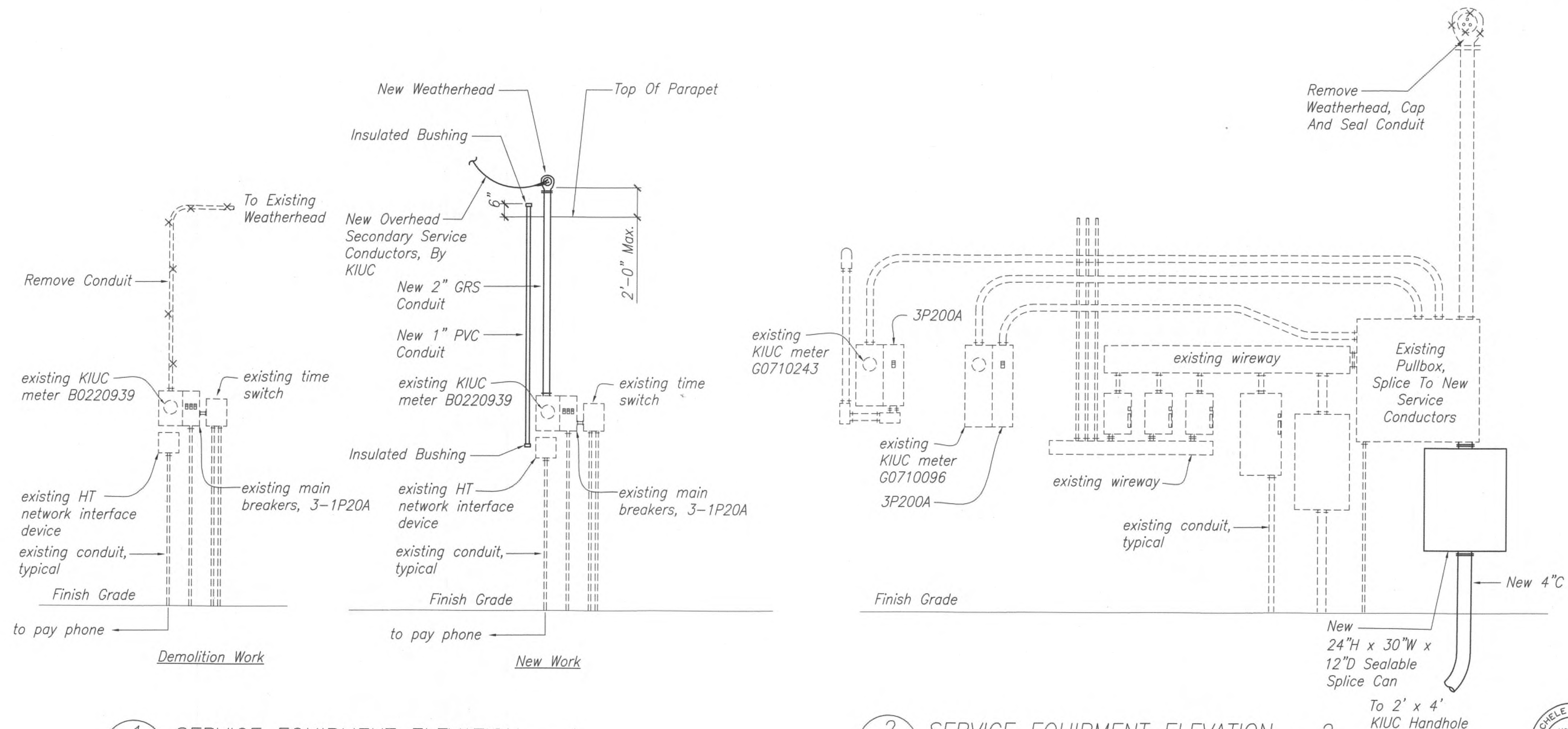
Scale: 1" = 10' Date: July 2019

SHEET No. E-28 OF 37 SHEETS

ADD235



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.236	244



1 SERVICE EQUIPMENT ELEVATION - 1  
E-29 Not To Scale

2 SERVICE EQUIPMENT ELEVATION - 2  
E-29 Not To Scale



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OR UNDER MY SUPERVISION.

*M. Adolpho* APRIL 30, 2020  
LIC. EXP. DATE

APPROVED:

*Greg Jones*  
Kauai Island Utility Cooperative

7/24/19  
Date

*Greg Jones*  
Hawaiian Telcom

7/29/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility  
only. No design changes have  
been made.

DATE

REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

SERVICE EQUIPMENT ELEVATIONS

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: As Shown

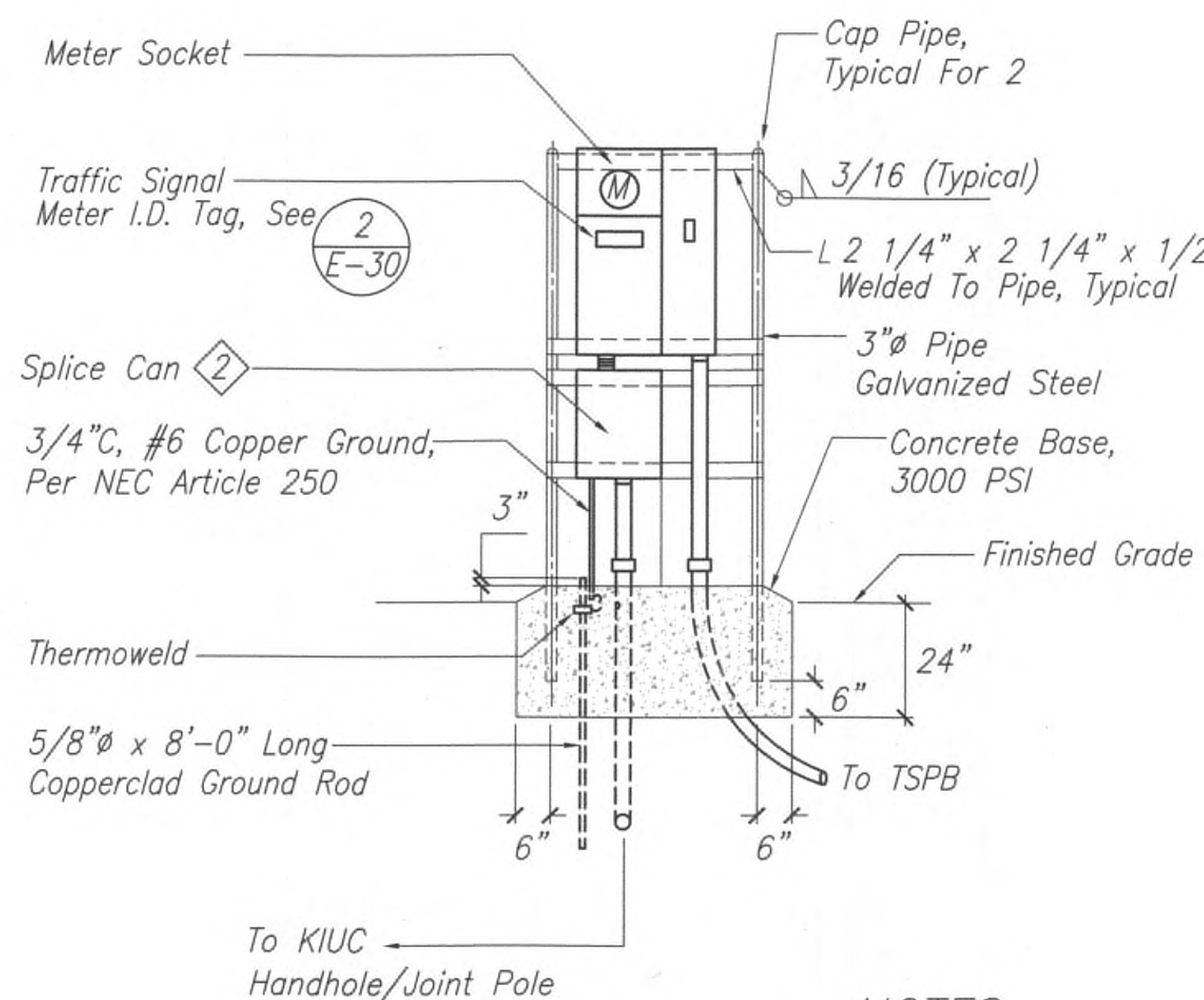
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SHEET No. E-29 OF 37 SHEETS

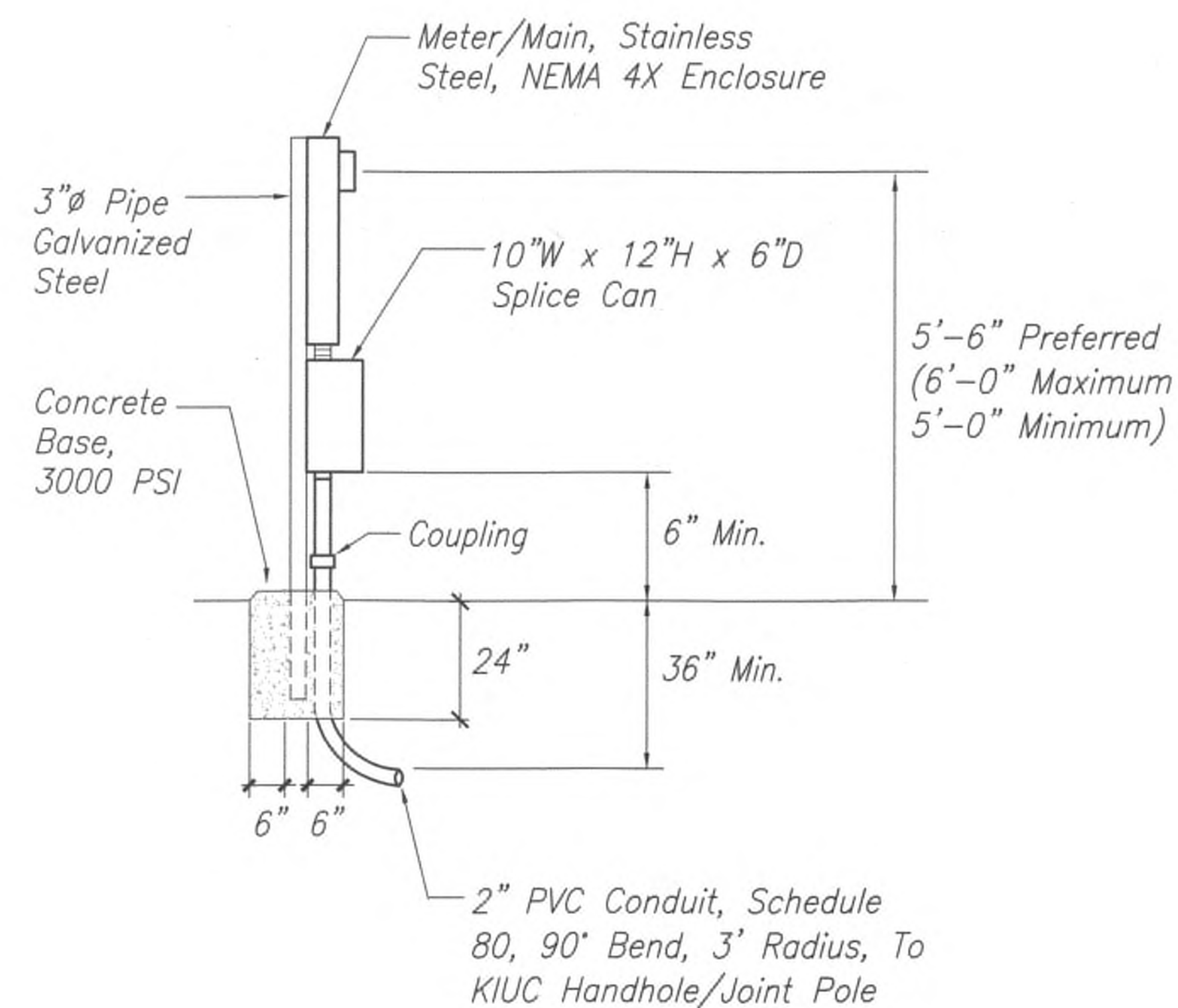
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.237	244



Front Elevation



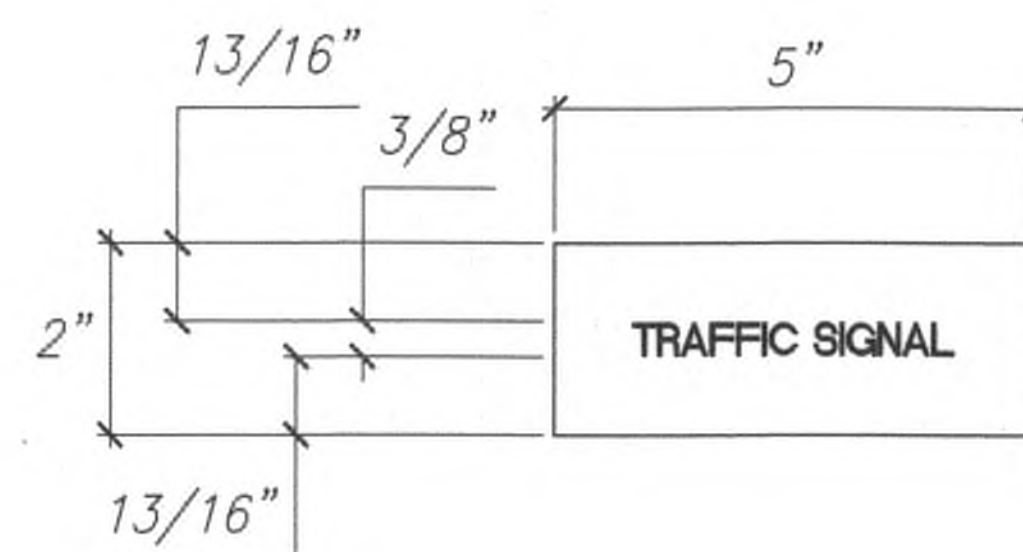
Side Elevation

**NOTES:**

- Pedestal Shall Be Hot-Dipped Galvanized After Fabrication. All Fastening Bolts, Nuts And Washers Shall Be Stainless Steel. Provide 4 Feet Clear In Front Of Meter.

- Sealable Stainless Steel Enclosure 10\"W x 12\"H x 6\"D.

1 TRAFFIC SIGNAL METER  
E-30 Not To Scale



**NOTES:**

- Use 3-Ply Laminated Flexible Plastic, Black-White-Black Thickness: Black Cap Sheet-0.010\", White Base Sheet-0.052\", Black Base Sheet-0.010\".
- Attach To Meter Socket Using Scotch 3M Brand Very High Bond (VHB) Double Coated Acrylic Foam Tape Or Equivalent.
- Letters/Numbers Shall Be 3/8\" High, 1/16\" Stroke, And White In Color.
- Letters/Numbers Area Inscribed By Cutting Through \"Black Cap Sheet\" To Expose White Letters/Numbers.

2 TRAFFIC SIGNAL METER I.D. TAG  
E-30 Not To Scale

APPROVED:

*[Signature]*  
Kauai Island Utility Cooperative

7/24/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*[Signature]*  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC SIGNAL METER  
DETAILS**

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

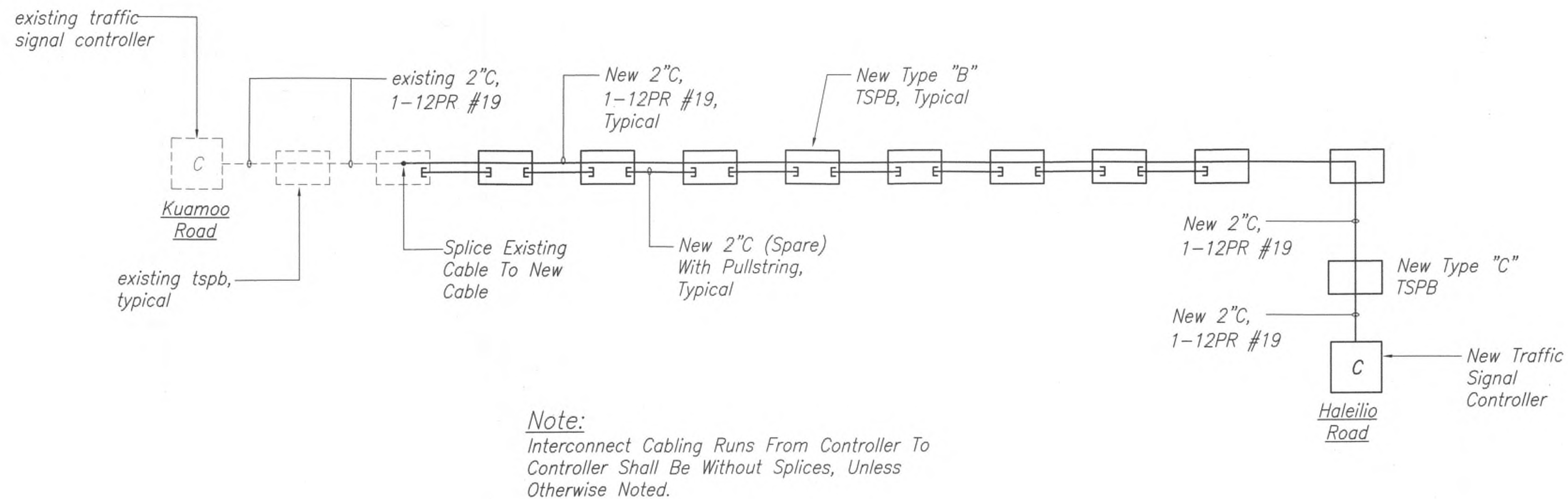
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SHEET No. E-30 OF 37 SHEETS

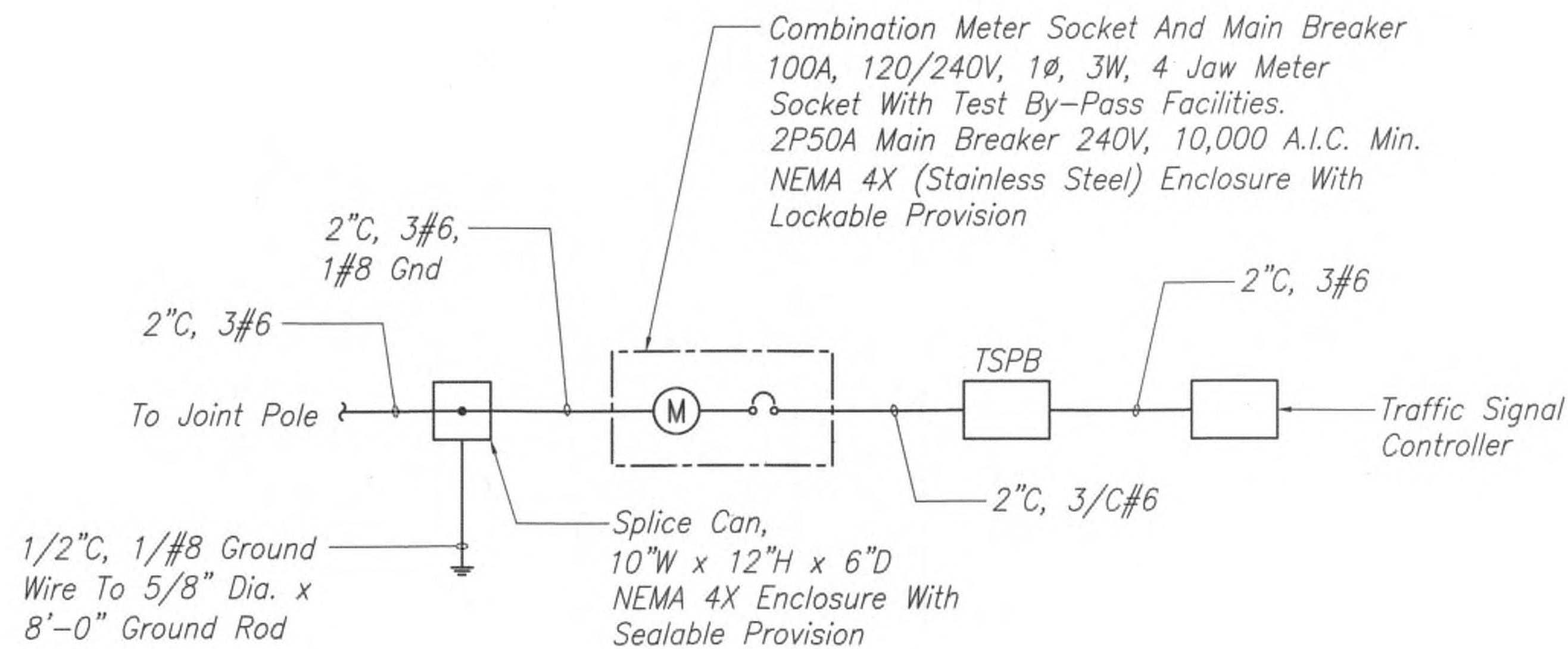
ADD.237



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.238	244



1 TRAFFIC SIGNAL INTERCONNECT CABLING DIAGRAM  
E-31 No Scale



2 TYPICAL TRAFFIC SIGNAL CONTROLLER ONE-LINE DIAGRAM  
E-31 No Scale

APPROVED:

*Grid*  
Kauai Island Utility Cooperative

7/26/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*M. Adolpho*  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

TRAFFIC SIGNAL DIAGRAMS

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: As Shown Date: July 2019

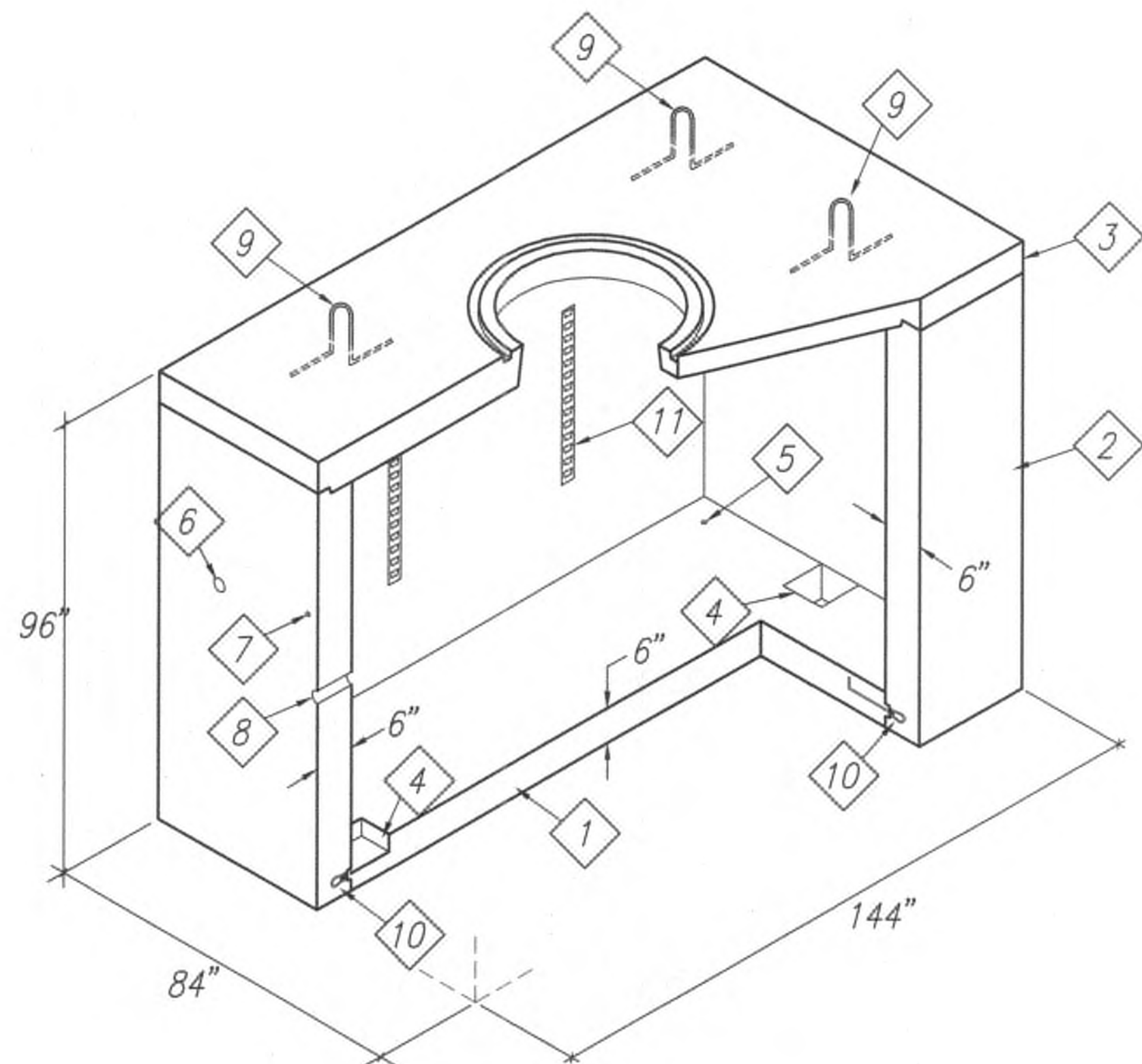
SHEET No. E-31 OF 37 SHEETS

ADD.238

7/25/19-19-34 Y:\030\030.007\030.007 E-31.D19.dwg



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.239	244



### Material Schedule

- 1 Floor Section – 8,400lbs.
- 2 Wall Section – 18,375lbs.
- 3 Roof Section – 10,120lbs.
- 4 12" x 12" Open Sump (Closed Sump In Areas Of High Water Table Only.)
- 5 1" Dia. Gnd. Rod Hole.
- 6 3" Dia. x 6" Lifting Hole (Contractor To Grout Solid After Placement Of Section.)
- 7 Pulling Iron As Required.
- 8 End Bell Cast In Wall As Required By KIUC Butterfly Drawing. Contractor To Request Drawing From KIUC Prior To Ordering Manhole.
- 9 #5 Lifting Loop.
- 10 Ferrule Loop Insert.
- 11 Cable Rack, Refer To KIUC Requirements

### Notes:

- Pullbox Designed In Accordance With HECO Standards Using 4,000 PSI Compressive Strength Concrete And 60,000 PSI Yield Strength Astm A-615 Steel Reinforcement Per Calcs.
- All Concrete And Reinforced Concrete Work Shall Be Done In Accordance With Project Specifications And Special Provisions. Handhole Shall Be Designed In Accordance With AASHTO LRFD Bridge Design Specification, 4th Edition 2007, With 2008 And 2009 Interim Revisions.
- Pullbox To Be Placed On A 6" Base Of #3 Crushed Rock For Ease Of Installation And Even Load Distribution.
- Product To Be Stenciled With Manufacturer Name And Date Of Pour.
- The Following Materials To Be Shipped With Each Handhole:
  - 7/8" Dia. U-bolt W/Nut (Galv) Pulling Iron
  - 1 1/2" Ramnek Joint Compound (36 Feet Required)
  - 32" Dia. "KIUC" Type Frame & Cover
  - 32" Dia. Octagonal Grade Ring (1 Required)

1 6' x 11' KIUC MANHOLE  
E-32 Not To Scale Ref. HECO Dwg. No. 100726

APPROVED:

*Garth Jones*  
Kauai Island Utility Cooperative

7/20/19  
Date

9/20/19 △ Reissuing plan for legibility only. No design changes have been made.

DATE REVISION



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*Michele N. Adolpho*  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

6' x 11' KIUC MANHOLE

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

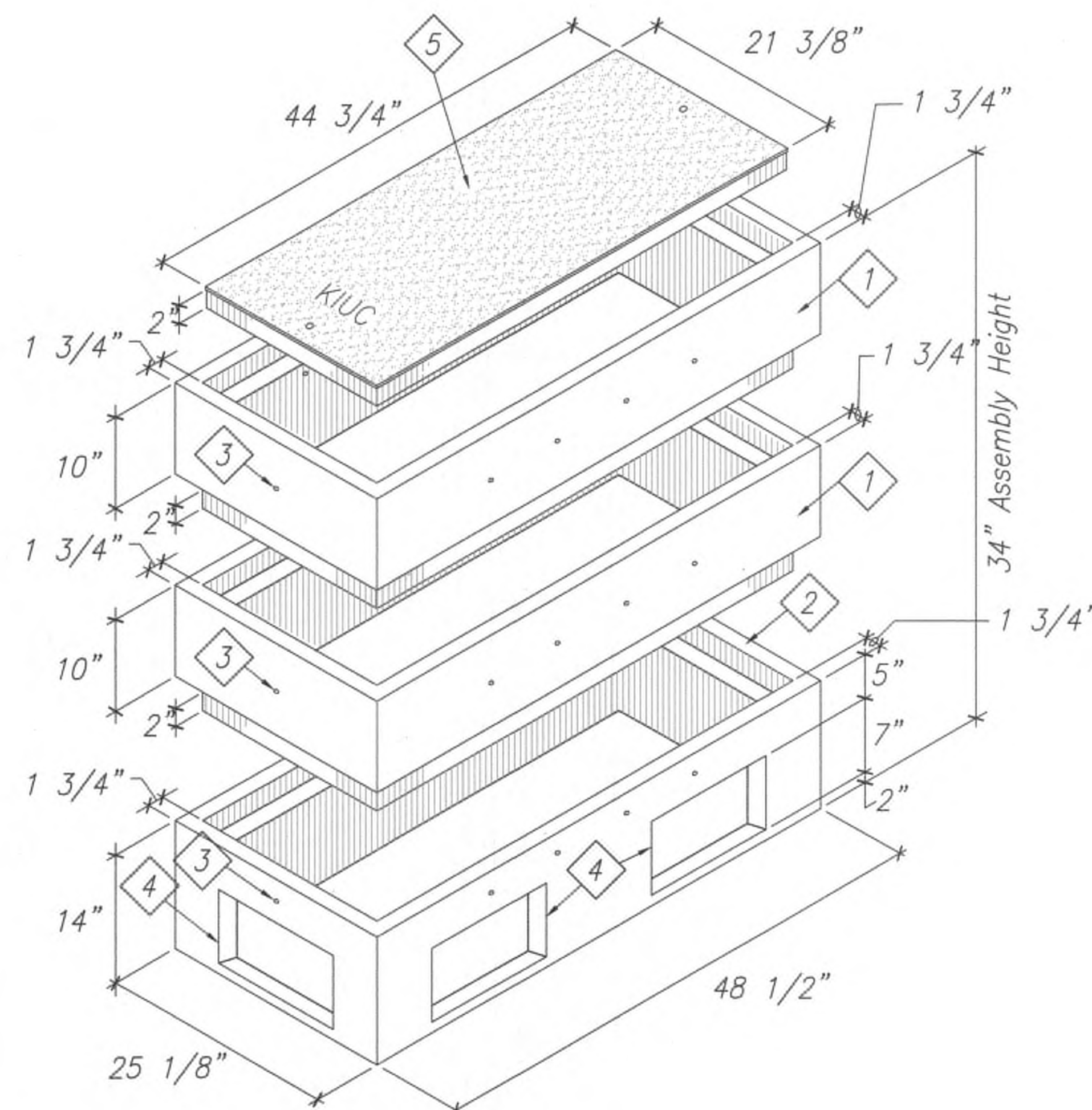
Scale: As Shown Date: July 2019

SHEET No. E-32 OF 37 SHEETS

ADD239



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.240	244



1 2' x 4' KIUC HANDHOLE  
E-33 Not To Scale

### Material Schedule

The Following Materials To Be Shipped With Each Handhole:

- 1 Top Section. Wt. 400 lbs.
- 2 Bottom Section With Knockouts. Wt. 430 lbs.
- 3 1/2"Ø x 4" Lifting Hole (Contr. To Grout Solid After Placement Of Section).
- 4 Conduit Opening Knockout.
- 5 Concrete Cover, Refer To HECO Dwg. No. 11312.

### Notes:

- Handhole Designed In Accordance With Hawaiian Electric Company Standards Using 4,000 PSI Compressive Strength Concrete And 60,000 PSI Yield Strength ASTM A-615 Steel Reinforcement Per Calcs.
- All Concrete And Reinforced Concrete Work Shall Be Done In Accordance With Project Specifications And Special Provisions.
- Handhole To Be Placed On A 6" Base Of #3 Crushed Rock For Ease Of Installation And Even Load Distribution.
- Product To Be Stenciled With Manufacturer Name And Date Of Pour.
- Ordering Information: 2' x 4' x 34" KIUC For Assembly As Shown. Approved For KIUC Specs. Total Weight Of Assembly Shown Is 1230 lbs.



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*M. Adolpho*  
APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

2' x 4' KIUC HANDHOLE

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Shown Date: July 2019

SHEET No. E-33 OF 37 SHEETS

ADD.240

APPROVED:

*Paul Jones*  
Kauai Island Utility Cooperative

1/24/19  
Date

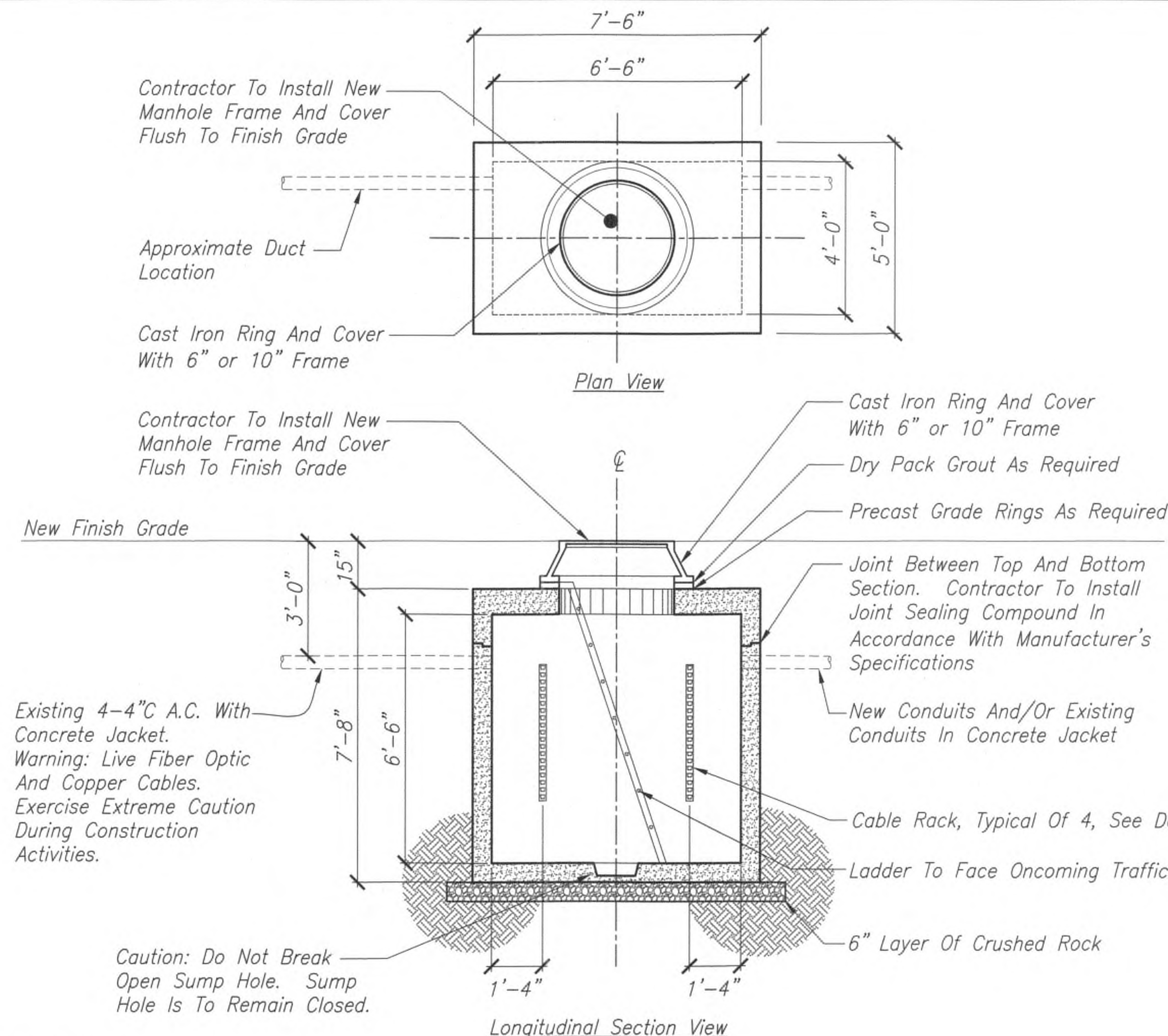
9/20/19  $\Delta$  Reissuing plan for legibility  
only. No design changes have  
been made.

DATE

REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD. 241	244



### Notes:

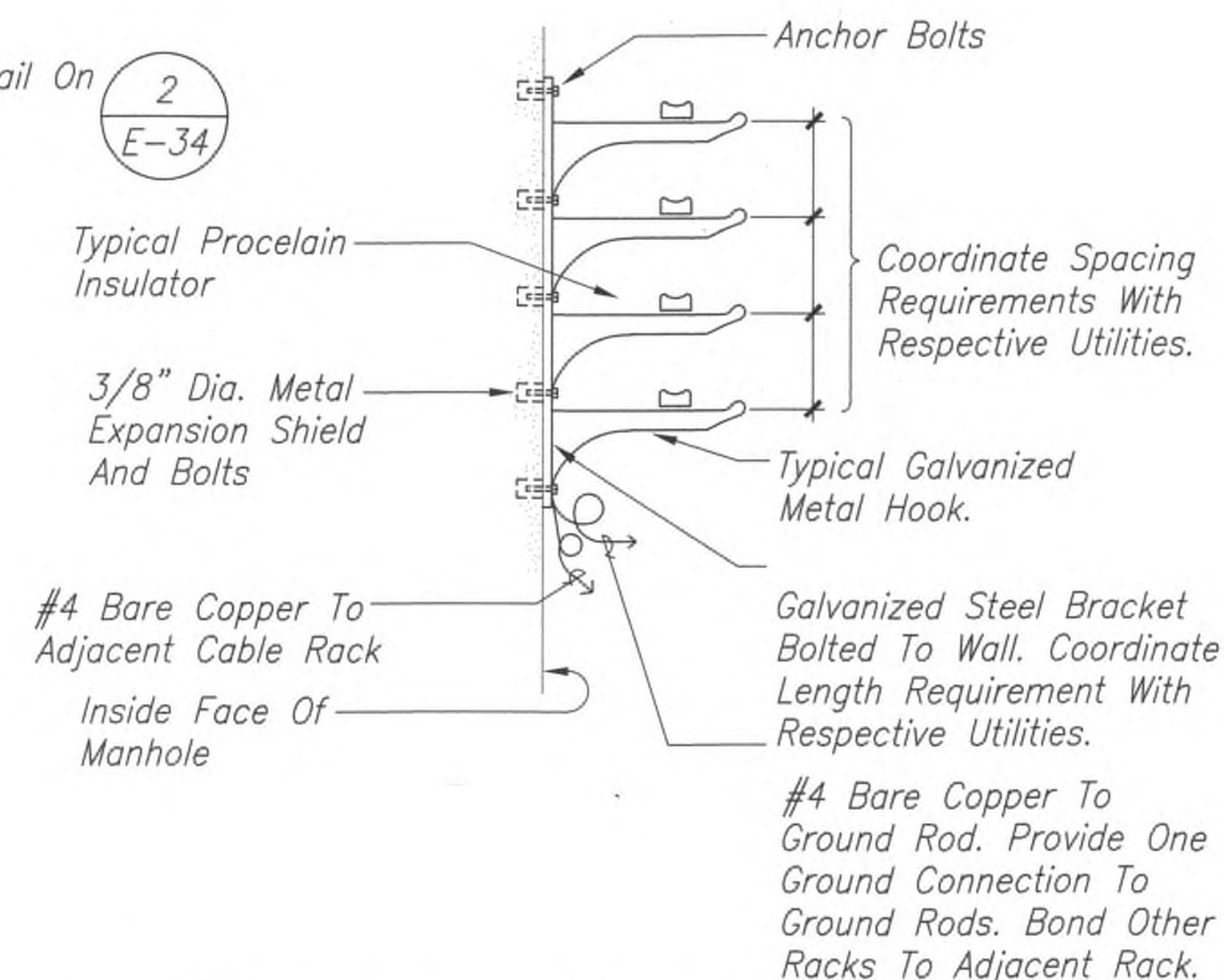
- Manhole Shall Be Designed In Accordance With: AASHTO LRFD Bridge Design Specification, 4th Edition 2007, With 2008 And 2009 Interim Revisions. State Of Hawaii, Department Of Transportation "Design Criteria For Bridges And Structures", April 2008. Compressive Strength Concrete and 60,000 PSI Yield Strength ASTM A-706 Steel Reinforcement.
- Manhole To Be Placed On A 6" Base Of Crusher Run For Ease Of Installation And Even Load Distribution.
- Limits Of Cover Over Roof Section 1'-0" To 5'-0".
- Interior Walls And Ceiling To Be Painted White.
- Product To Be Stenciled With The Following In Accordance With GTE GTS-8395 Specs:
  - Manufacturer Name
  - Date Of Pour
  - Product Number
- Existing Conduits May Be Asbestos Cement/Transite. Utilize Appropriate Procedures For Handling And Removal.
- Provide Segmented Intercept Manhole With Notches In Sections For Existing Ducts. Patch With Grout.

1 4' x 6.5' x 6.5' HT MANHOLE DETAILS  
E-34 Not To Scale

APPROVED:

*[Signature]*  
Hawaiian Telcom

7/22/19  
Date



2 TYPICAL CABLE RACK DETAILS  
E-34 Not To Scale

### Installation Procedures:

- Demolish Or Remove Existing HT Pullbox. Caution: Exercise Caution Around Existing Fiber Optic Cable. The Cable Shall Be Fully Supported During The Demolition And Installation Procedure.
- Two Methods To Install New Manhole.
  - Break Back On The Existing Jacket And 4" Ducts So That The Conduit, The Orange Subducts And The Associated Fiber Cable And Copper Can Be Moved Out Of The Way. Then Excavate For The Manhole. Place The Bottom Section And Return The Subducts To The Slot In The Bottom Section Of The Manhole. Install Split Ducts As Required.
  - Excavate Additional Area To One Side Of The Manhole So That The Bottom Section Of The Manhole Can Be Slid Under The Existing Fiber Optic Cable, Subducts, And Associated 4" Conduit. Split Duct As Required.
- Install Manhole Joint Compound And The Manhole Top Section. Concrete Encase The Conduit Entrance To The Manhole.



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*[Signature]* APRIL 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
HT MANHOLE DETAILS  
  
Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)  
Scale: As Shown Date: July 2019  
SHEET No. E-34 OF 37 SHEETS

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.  
DATE REVISION

ADD.241



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUA'I	HAW.	NH-056-1(50)	2019	ADD.242	244

# Notes:

- Concrete Shall Have A Compressive Strength Of 5,000 PSI At 28 Days.
- All Reinforcing Steel Shall Be New Stock Deformed Bars Conforming To ASTM A706W Grade 60 Unless Otherwise Noted. Placement Of Rebars Shall Be In Accordance With Project Specifications. All Bars Shall Be Clean Of Rust, Grease Or Other Materials Likely To Impair Bond. All Bends Shall Be Made Cold.
- All Reinforcing Bars Shall Be Accurately And Securely Placed. All Reinforcing Shall Be Lapped 40 Bar Diameters Or Eighteen (18) Inches, Whichever Is Greater At Splices. All Splices Shall Be Made Away From Point Of Maximum Stress.
- Concrete Cover to Reinforcing Steel Shall Be 1 1/2" Minimum.
- Allow Concrete To Cure A Minimum Of 7 Days Prior To Shipping.
- Structural Design Criteria:
  - AASHTO HS20-44 Loading
  - Active Earth Pressure Above The Water Table = 40 PCF
  - Soil Unit Weight = 110 PCF
- Manhole Shall Not Be Placed Below The Water Table.
- Manhole Shall Be Designed In Accordance With: AASHTO LRFD Bridge Design Specification, 4th Edition 2007, With 2008 And 2009 Interim Revisions. State Of Hawaii, Department Of Transportation "Design Criteria For Bridges And Structures", April 2008.

	Weight (lbs)	Concrete (C.Y.)
Base	3,900	0.87
Roof	1,800	0.38
Riser	600	0.15



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APRIL 30, 2020  
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

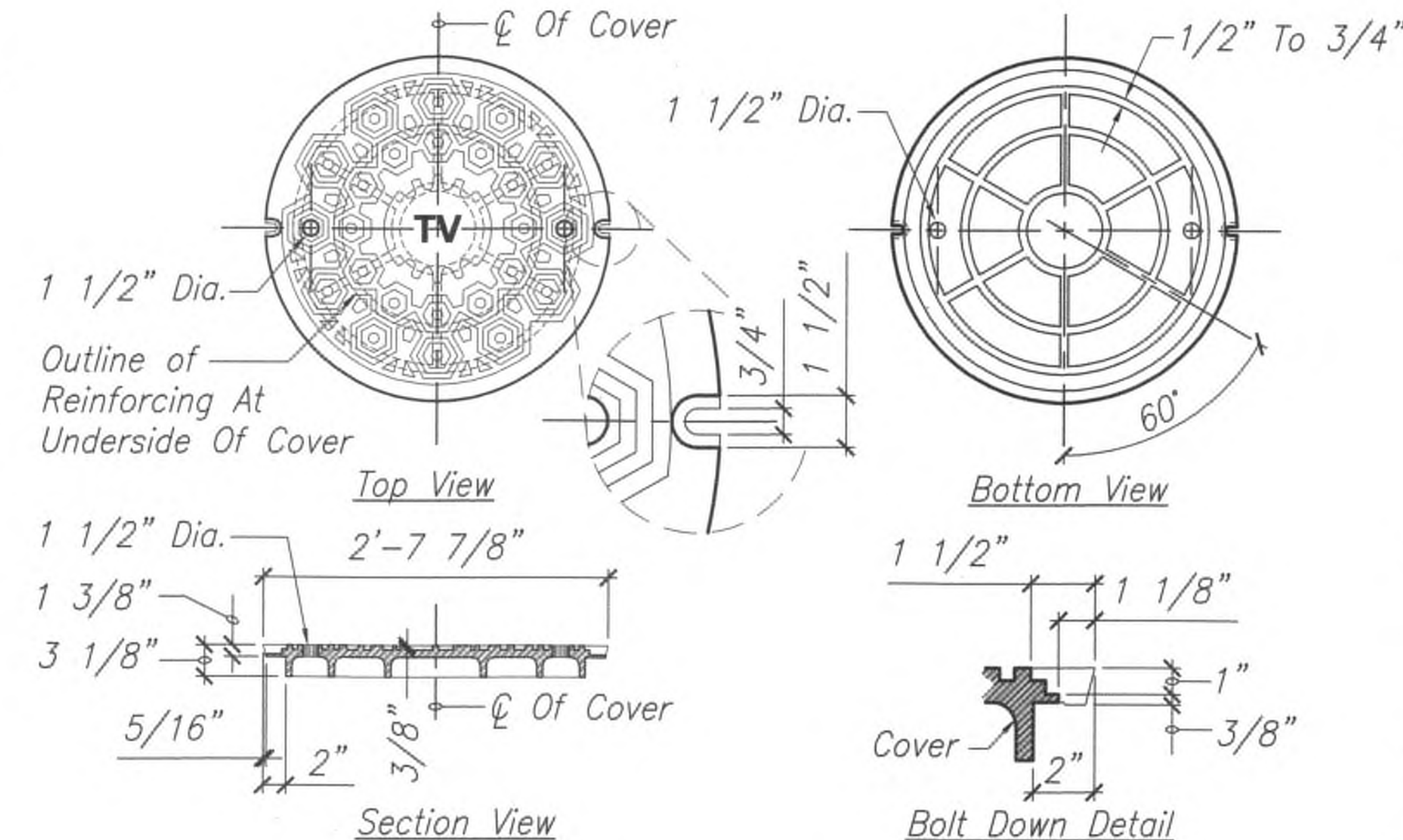
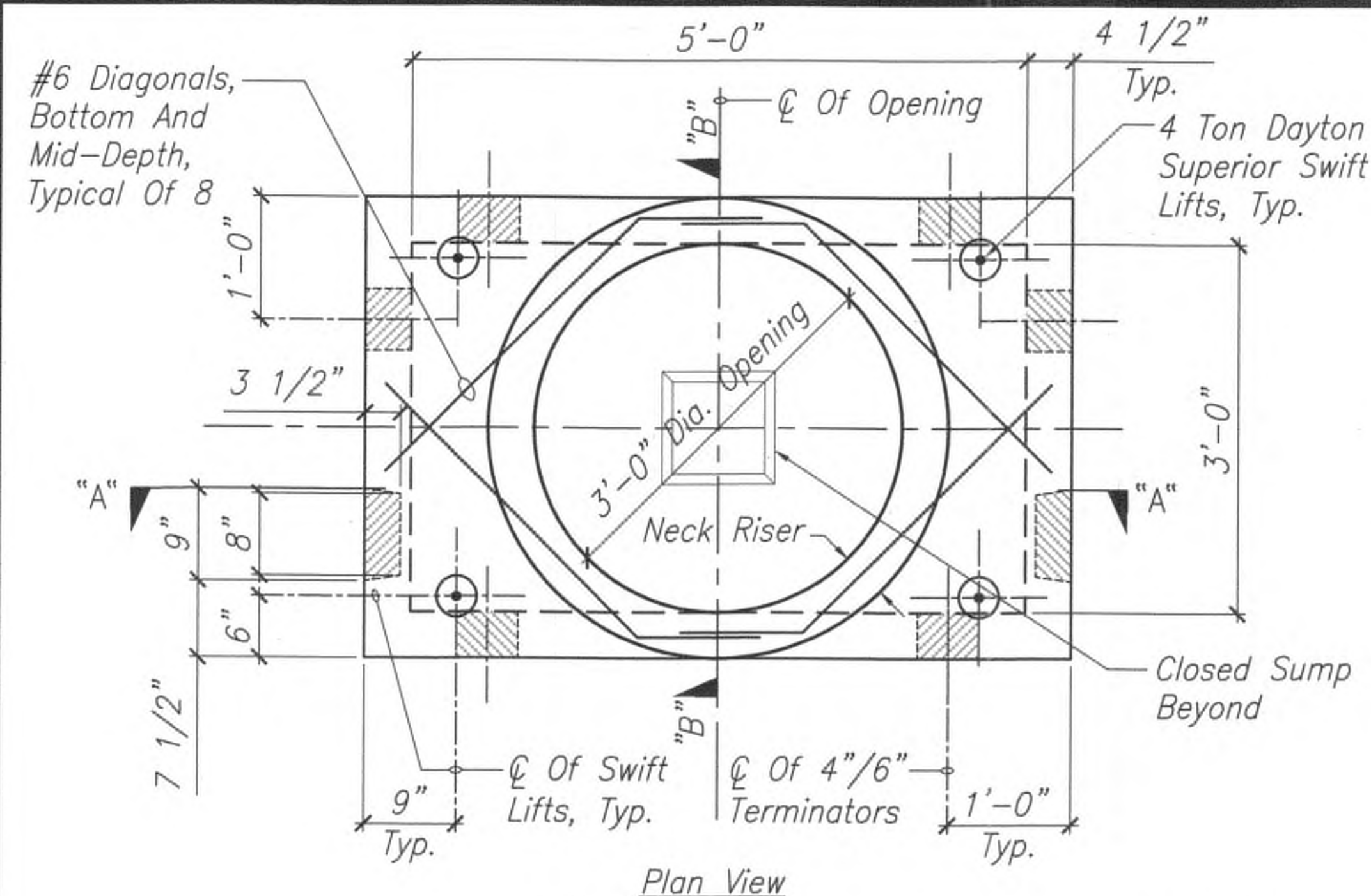
## SPECTRUM 3' x 5' MANHOLE

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

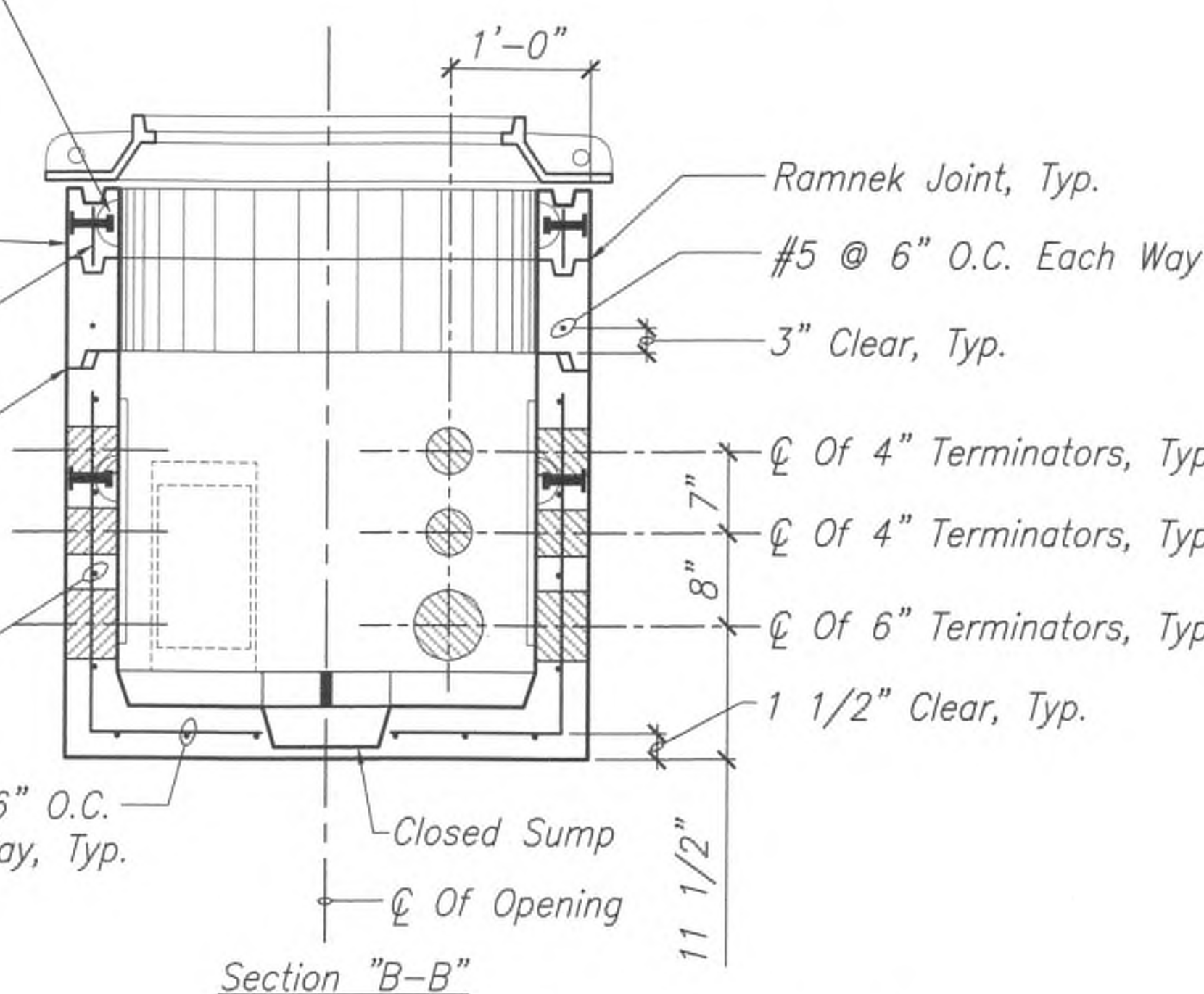
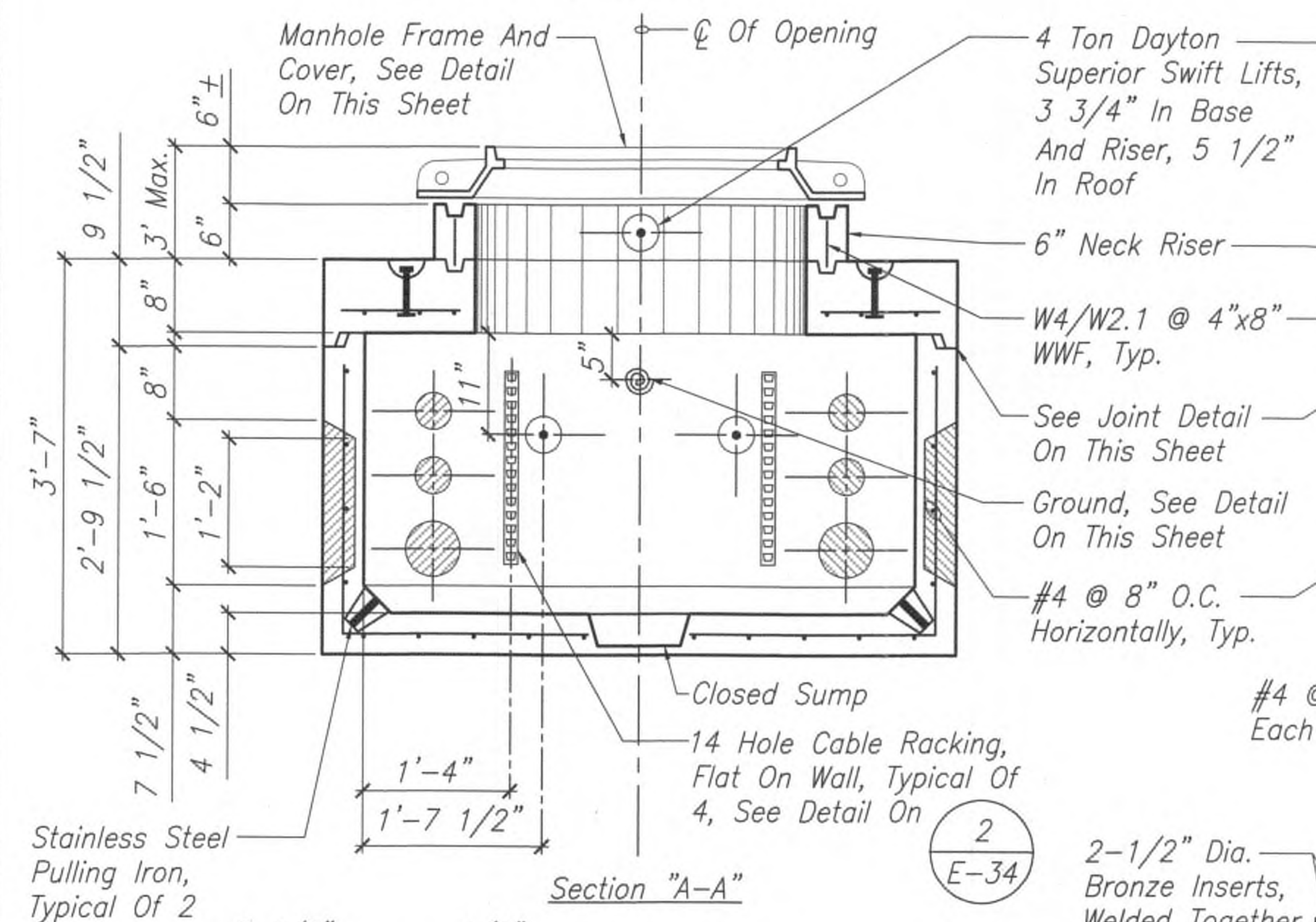
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SHEET No. E-35 OF 37 SHEETS

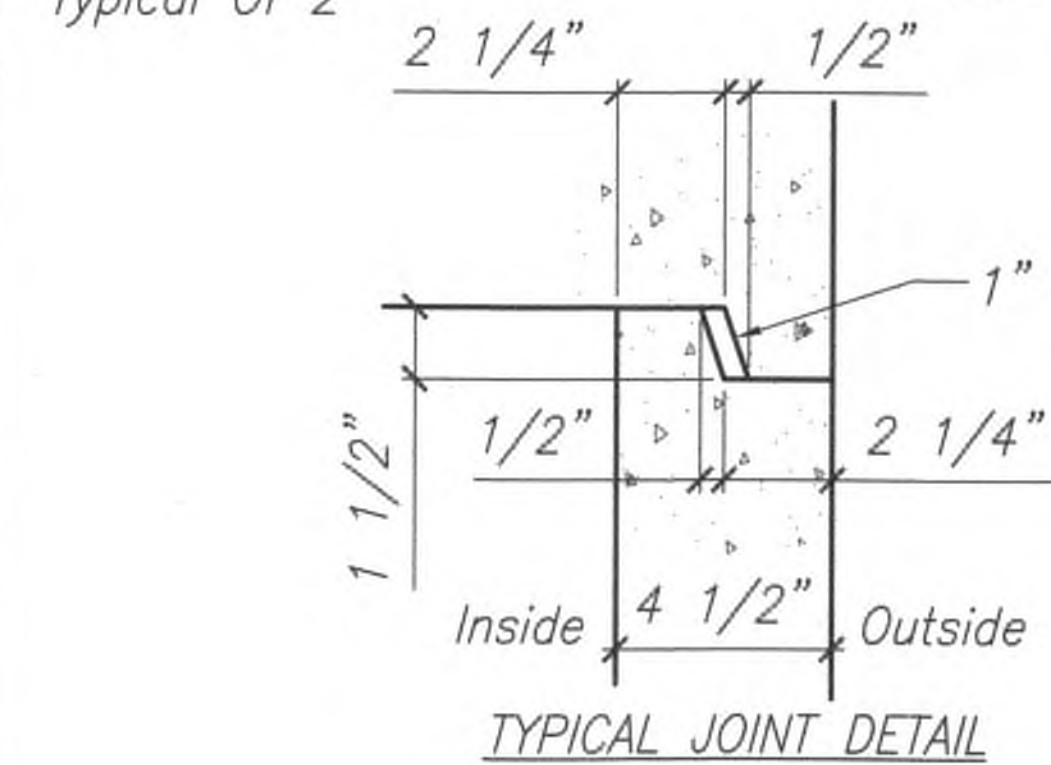
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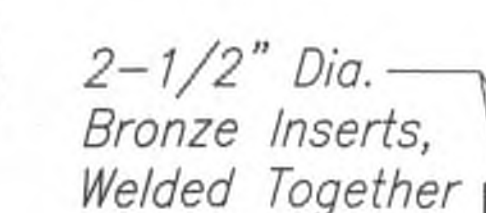
CAST IRON MANHOLE COVER



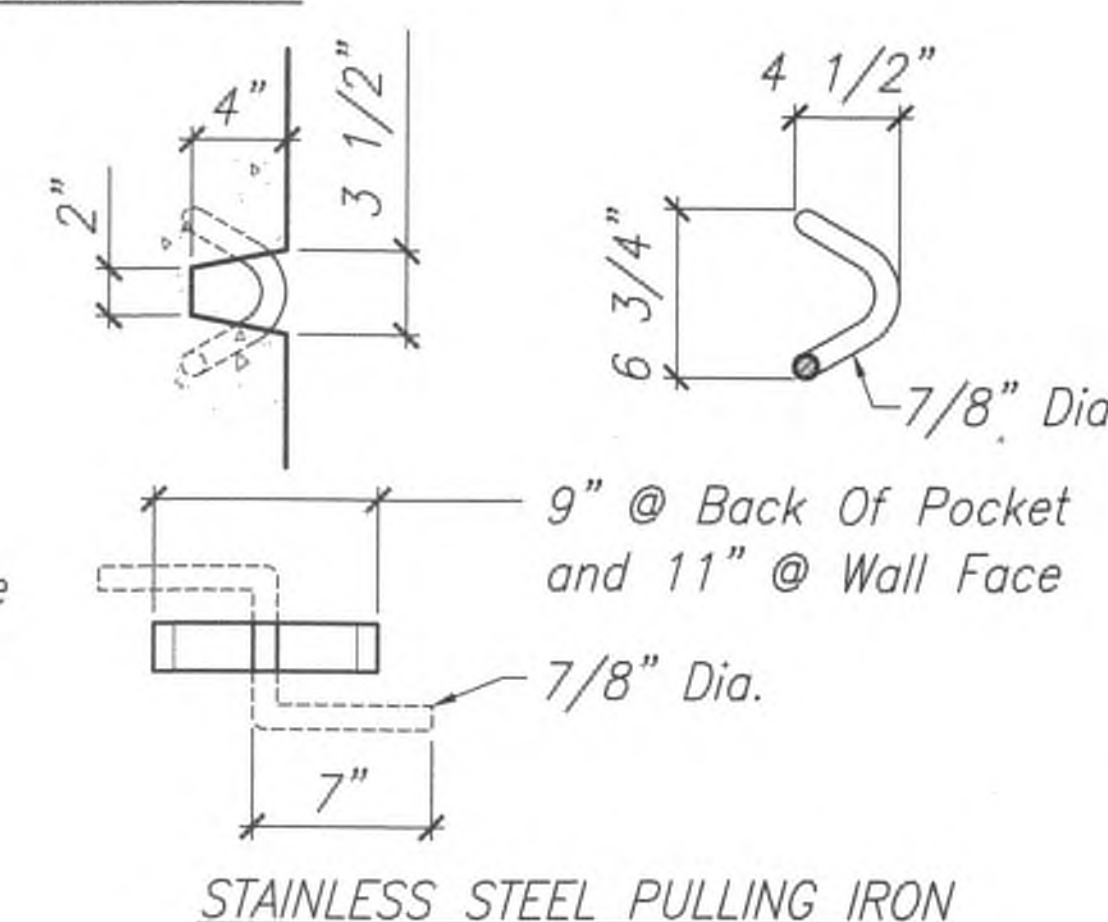
Section "B-B"



TYPICAL JOINT DETAIL



GROUND DETAIL



STAINLESS STEEL PULLING IRON

APPROVED:

*John K. Ma*  
Spectrum

7/26/19  
Date

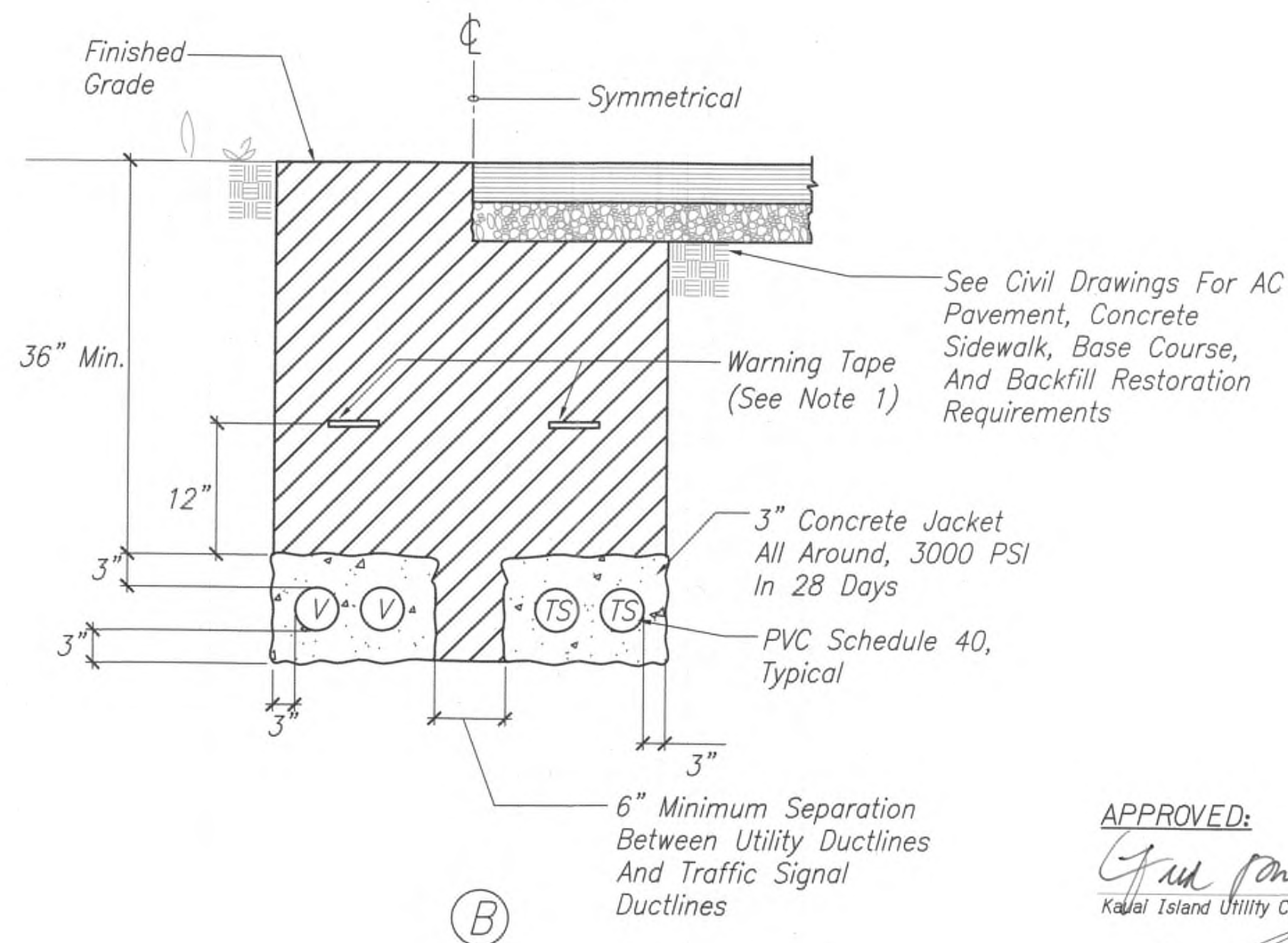
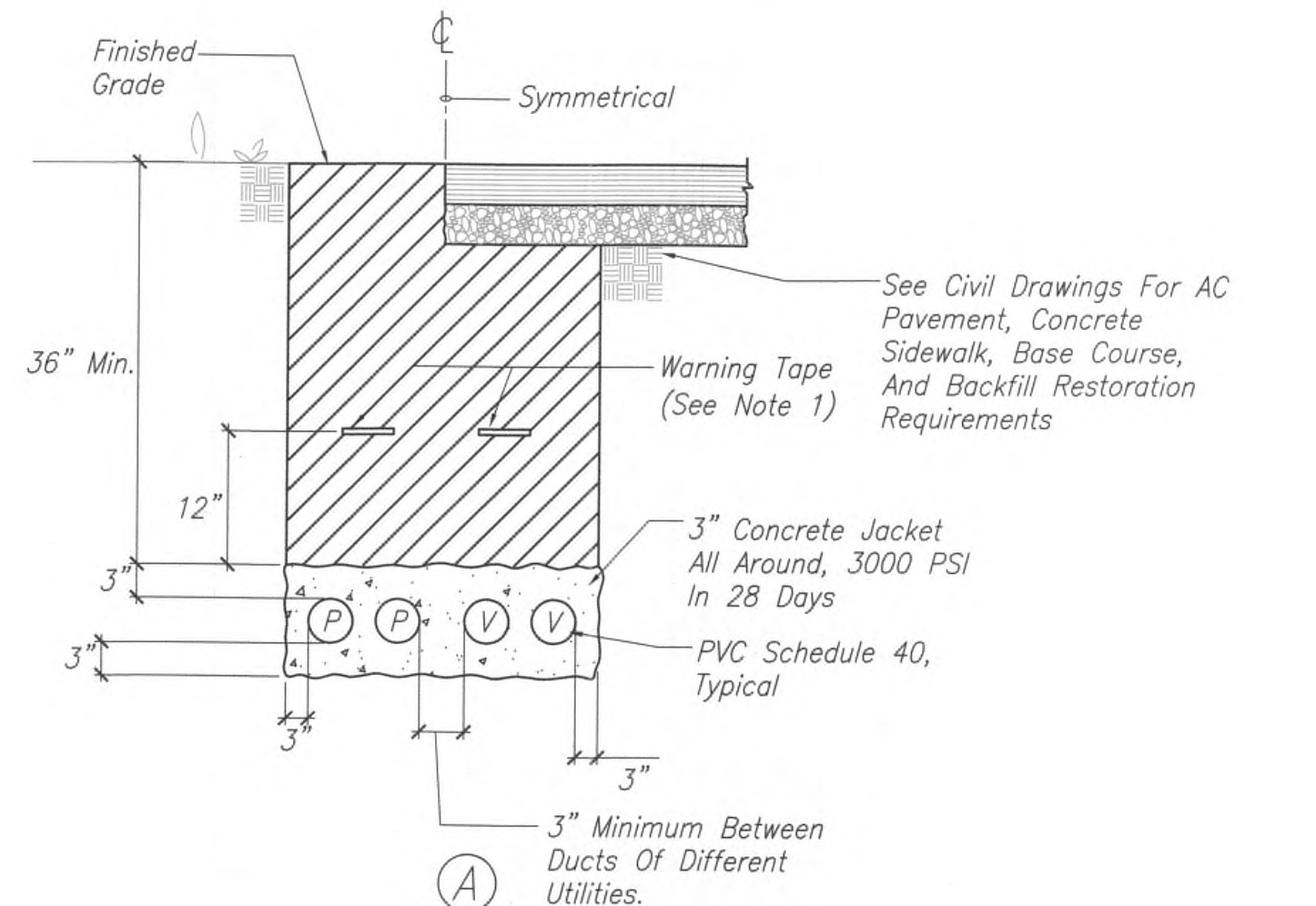
9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE REVISION

1 3' x 5' SPECTRUM MANHOLE  
E-35 Not To Scale

7/25/19-18-35 Y:\030\030.007\030.007 E-35.009.dwg





DUCT SCHEDULE			
Type	Use	Size (PVC 40)	Cables
1	KIUC Secondary, PVC Schedule 40	4"	By KIUC, Provide Pullstring
2	KIUC Secondary, PVC Schedule 40	3"	By KIUC, Provide Pullstring
3	KIUC Secondary, PVC Schedule 40	2"	3#6
4	HT, PVC Schedule 40	2"	By Hawaiian Telcom, Provide Muletape
5	HT, PVC Schedule 40	1"	By Hawaiian Telcom, Provide Muletape
6	Spectrum, PVC Schedule 40	4"	By Spectrum, Provide Muletape
7	Spectrum, PVC Schedule 40	2"	By Spectrum, Provide Muletape
8	Traffic Signal, PVC Schedule 40	2"	12PR #19
9	Traffic Signal, PVC Schedule 40	2"	Spare, Provide Pullstring
10	KIUC Primary	6"	By KIUC, Provide Muletape

# Notes:

- 8 Mil Thick Colored Plastic Warning Tape. 3" Wide With Continuous Metallic Backing And Corrosion Resistant Foil Core Inscribed With: "CAUTION - ELECTRICAL LINE BURIED BELOW" In Black Lettering, Repeated At 36" Intervals Above Power Ductlines. Orange Colored Plastic Warning Tape Per HT Standard 34028 Above HT Ductlines And Warning Tape Per Spectrum Standard Above Spectrum Ductlines.
- All Conduits In The Concrete Shall Be In Conduit Saddle. All Conduits Shall Be Tied Securely Into The Saddle, And All Saddles Shall Be Anchored Into The Ground So That The Conduits Do Not Float.

APPROVED:

*John K. Ma*  
Kauai Island Utility Cooperative

7/26/19  
Date

*John K. Ma*  
Hawaiian Telcom

7/29/19  
Date

*John K. Ma*  
Spectrum

7/26/19  
Date

9/20/19  $\Delta$  Reissuing plan for legibility only. No design changes have been made.

DATE

REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

*John K. Ma*  
APR 30, 2020  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## DUCT DETAILS

Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)

Scale: As Shown

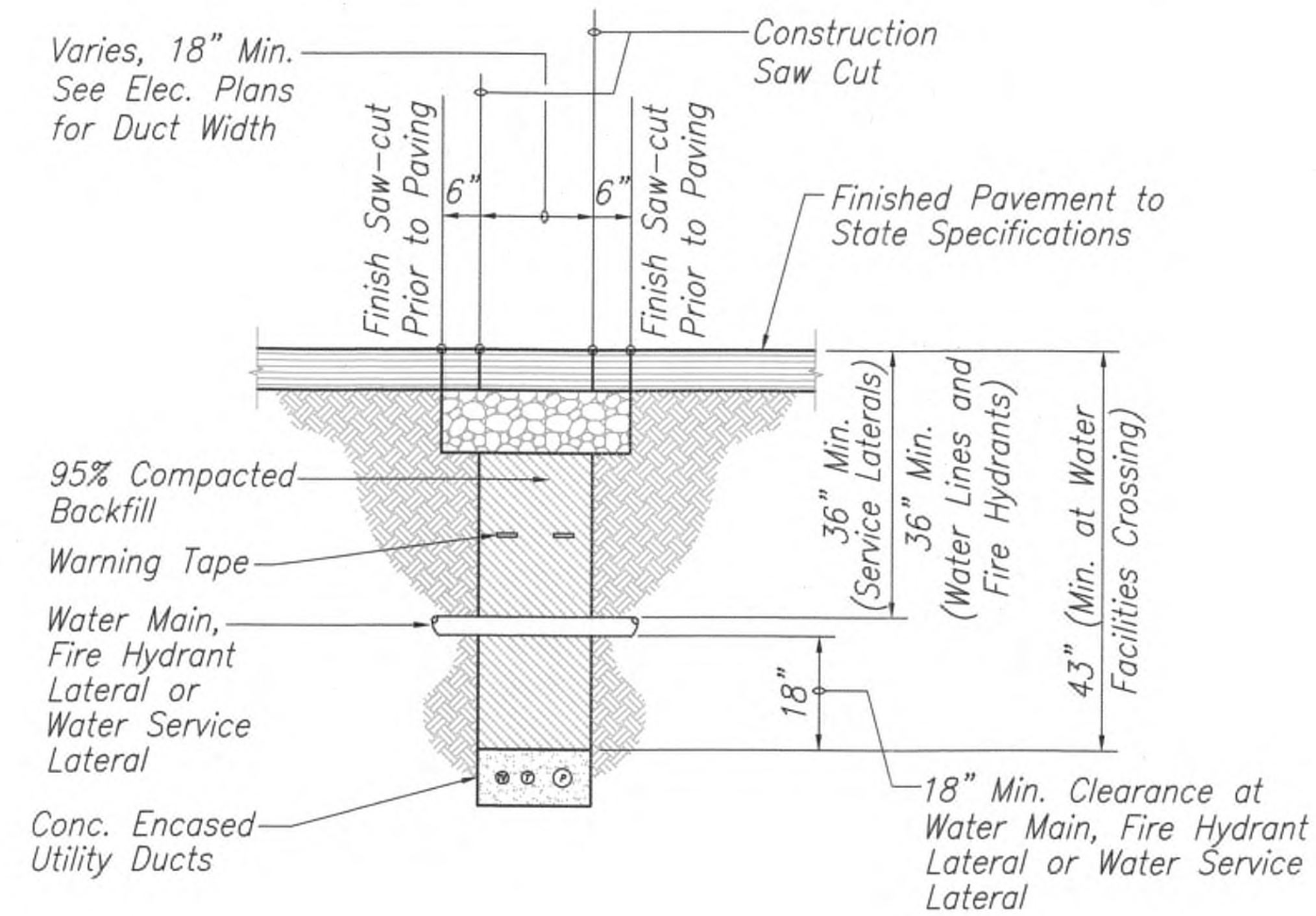
Date: July 2019

SHEET No. E-36 OF 37 SHEETS

ADD243



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	ADD244	244



### Water Notes:

1. The Contractor shall verify in the field the location of the existing water facilities prior to trenching. Excavation around existing water facilities shall be done by hand.
2. Material used for backfilling at the water facilities crossings shall not contain any stones, rocks, or other similar material and shall not contain vegetable matter or debris of any kind. No "Adobe" or similar material shall be used.
3. Provide concrete encasement for the conduits at all waterline, service lateral and fire hydrant crossings. The Contractor shall notify the Department of Water at least 24-hours prior to scheduling back filling operations at the water facilities crossings.
4. Provide 3-foot minimum distance of insitu soil between reaction blocks and excavation for ductlines.

### 1 DETAIL AT WATER FACILITIES CROSSINGS

E-37 Not To Scale



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

*Michele N. Adolpho*  
APRIL 30, 2020  
LIC. EXP. DATE

APPROVED

*[Signature]*  
MANAGER AND CHIEF ENGINEER,  
DEPARTMENT OF WATER,  
COUNTY OF KAUAI

7/22/19  
DATE

9/20/19  $\Delta$  Reissuing plan for legibility  
only. No design changes have  
been made.

DATE

REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

### DETAIL AT WATER CROSSING

*Kuhio Highway Short-Term Improvements  
Kuamoo Road to Temporary Bypass Road  
Fed. Aid Proj. No. NH-056-1(50)*

Scale: As Shown Date: July 2019

SHEET No. E-37 OF 37 SHEETS

ADD.244

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