A HECO standby inspector must be on-site anytime the excavation is within 10 feet of the outside face of the FTB enclosure surrounding 138kV cable pipes.

CAUTION! HECO 138kV duct bank consists of conduits and steel pipe that is not concrete encased.

Note:

See sheet 41 for notes, reconstruction callouts, and new construction callouts.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	ADD.40	291

TMK: 2-1-005, 009, 018, & 019

True North

Scale: 1"=10'

Kamamalu Park

Pacific Club

Central Middle School

Radial Point 3 — 139+67.47 ℄ "V" (99.97' Rt.)

Radial Point 1 — 141+12.67 ℄ "V" (98.18' Lt.)

Radial Point 4 — 139+55.34 ℄ "V" (100.01' Rt.)

Radial Point 2 — 141+02.10 ℄ "V" (100.00' Rt.)

P.C. 139+43.72 ℄ "V" =0+00.00 ℄ "Q" R=4030.00'

P.O.C. 140+31.57 ℄ "V" =0+00.32 ℄ "Q"

P.O.C. 140+35.59 ℄ "V" =0+00 ℄ "QE"

139+38.44± ℄ "V"

40+00

1+00

338°00' R=40'

350°00' R=40'

325° 57'

329° 19' R=40'

235° 49' R=40'

253° 07'

280° 00'

294° 40'

145° 20'

119° 20'

100° 20'

59° 19'

63° 00'

67° 00'

54° 00'

R=44.5'

167° 00'

234° 00'

2' min.

CITY STATE

STATE CITY

QUEEN EMMA ST (City)

VINEYARD BLVD. (State)

ONLY

R1 6 L.F.

R1 29 L.F.

N2 (-)1

N1 s 8

N3 conc. curb

N4 Curb Ramp-2V

N5 Curb Ramp-1V

N5 Curb Ramp-4V

Curb Ramp-3V

R2 6 L.F.

curb ramp to remain

drain inlet

3.25 fh

wm

wmh

wv

dmh

tmh

tss

tspb

cb

ppb

sl

jp

guy

d 24

d 48

w 8

w 6

w 2

30

41

47

10

58

GRAPHIC SCALES

SCALE 1"=10' 10' 5' 0 10' 20'

Approved By:

Chief, Wastewater Branch, DPP Date

Chief, Civil Engineering Branch, DPP Date
(For construction in City ROW only)

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

Dec 09, 2020-6:17pm
N:\ROW\CAD\STS\1512-Traffic Signal Modernization @ Various Locations P&E\FINAL\040 Roadway Plan V.1 Addendum 1.dwg

DATE	REVISION
12/09/20	Deleted Reconstruction Callout R6. Added Reconstruction Callout R5.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

Vineyard Blvd & Queen Emma St

ADDITIVE ALTERNATE #1

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=10' Date: Oct. 2020

CONRAD S. HIGASHIONNA — LICENSED PROFESSIONAL ENGINEER — No. 6763-C — HAWAII, U.S.A.

License Expiration Date 04-30-22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Conrad Higashionna

SHEET No. R-19 OF 81 SHEETS

ADD. 40

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	ADD.41	291

Notes:

1. *For Bench Mark, control points, and survey ties; see Demolition Plan sheet 24.*
2. *See curb ramp plans for additional sidewalk, curb, and gutter details.*
3. ***The cost for reconstruction over traffic signal ductlines shall be incidental to the installation of Traffic Signal Ductlines and will not be paid for separately. This includes the following reconstruction callouts:*** (R1) (R2) (R3) (R4) (R5)
4. ***The cost for 14–inch Concrete Pavement shall be paid for under Section 411 – Portland Cement Concrete Pavement. This includes the following new construction callout:*** (N5)
5. *The Contractor shall hire an ISA Certified Arborist to assist in tree root and branch pruning work necessary to facilitate construction. The certified arborist must assure that work performed does not destabilize the trees and does not cause the failure or demise of the trees.*

New Construction Callouts:

(N1) *11 L.F. Reinforced Concrete Jacket on 8" sewer per City Standard Detail S–5. See duct line profiles on sheet 157.*

(N2) *20 L.F. Reinforced Concrete Jacket on 8" sewer per City Standard Detail S–5. See duct line profiles on sheets 154 & 158.*

(N3) *Relocate 2" water lateral. For details, see sheet 56.*

(N4) *Curb Ramp–2V, see plan on sheet 70.*

(N5) *14–inch Concrete Pavement. See details on sheet 80.*

(N6) *Install new Detectable Warning Mat at existing curb ramp to remain. The work includes removing existing detectable warning mat and patching of concrete ramp, if needed. The cost for removal and ramp repair shall be incidental to this contract item and shall not be paid for separately.*

Reconstruction Over Traffic Signal Ductline Callouts:

(R1) *Curb & Gutter, Type 2DG Modified. 4 L.F. or as noted. For connection to existing, see details on sheets 79 & 80.*

(R2) *Curb, Type 2A. 4 L.F. or as noted. For connection to existing, see details on sheet 81.*

(R3) *Concrete Sidewalk per Standard Plan D–15. For connection to existing sidewalk, see details on sheet 81 and 82.*

(R4) *Limits of asphalt pavement restoration over trenching. See State detail* A 40|80 *and City detail* B 40|80 .

(R5) *Limits of asphalt pavement restoration over trenching and over concrete pavement. See detail* C 40|80 .

Curve Data (at Intersection of Vineyard Blvd., Queen Emma St.)				
	(1)	(2)	(3)	(4)
△	33° 20' 00"	67° 00' 00"	57° 10' 00"	93° 30' 00"
△/2	16° 40' 00"	33° 30' 00"	28° 35' 00"	46° 45' 00"
R	50.00'	42.80'	41.00'	40.00'
T	14.97'	28.33'	22.34'	43.52'
Ch	28.68'	47.25'	39.23'	58.27'
Lc	29.09'	50.05'	40.91'	65.28'

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

Dec. 09, 2020–6:07pm
N:\DOT\Work\20151512-Traffic Signal Modernization @ Various Locations P&E\FINAL\041 Roadway Plan V. 2 Addendum 1.dwg

Approved By:

Chief, Wastewater Branch, DPP — Date

Chief, Civil Engineering Branch, DPP — Date
(For construction in City ROW only)

CONRAD S. HIGASHIONNA
LICENSED PROFESSIONAL ENGINEER
No. 6763–C
HAWAII, U.S.A.

License Expiration Date 04–30–22

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Conrad Higashionna

DATE	REVISION
12/09/20	Deleted Reconstruction Callout R6. Revised Note 3. Added Note 5.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

Vineyard Blvd & Queen Emma St

ADDITIVE ALTERNATE #1

Traffic Signal Modernization, Oahu, Phase 1
Federal–Aid Project No. STP–0300(163)R

Scale: 1"=10' Date: Oct. 2020

SHEET No. R–20 OF 81 SHEETS

ADD. 41

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	43R	291

KALANIIKI ST.

CITY

STATE

℄ "KI"

Kalani High School

Scale: 1"=20'

True North

To Honolulu

Approx. Limits of Rock Fill

KALANIANAOLE HIGHWAY

(STATE)

24 25 26 27 28 29

ONLY

Base Line "KL"

Approx. Limits of P.C.C. Pav't.

To Hawaii Kai

STATE

CITY

A

42 43

ONLY

WAIELI STREET

Base Line "W"

WAIKUI ST.

(CITY)

STOP

(CITY)

Legend:

Approximate Limits of 8" thick P.C.C. Pavement.

Approximate Limits of Rock Fill
The Contractor shall not disturb or excavate into existing rock fill.

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

Dec 06, 2020-6:52pm
N:\CAD\OAHU\2015\1512-Traffic Signal Modernization @ Various Locations P&E\ENA\043 Existing Conditions K 1 Addendum 1.dwg

CONRAD S. HIGASHIONNA
LICENSED PROFESSIONAL ENGINEER
No. 6763-C
HAWAII, U.S.A.

License Expiration Date 04-30-22

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Conrad Higashionna

DATE	REVISION
12/09/20	Revised legend for Rock Fill.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS

Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=20' Date: Oct. 2020

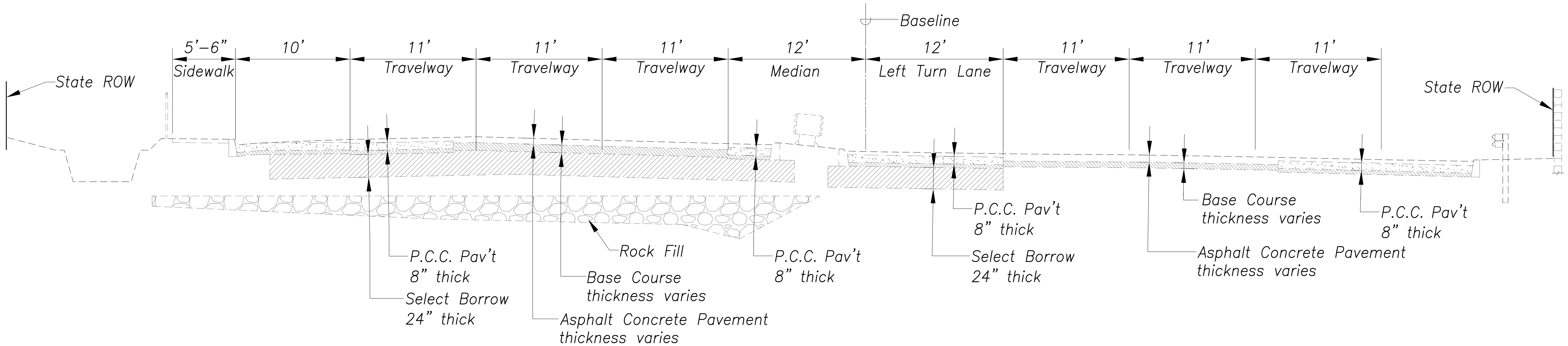
SHEET No. R-22 OF 81 SHEETS

43R

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	44R	291

Note:

The Contractor shall not disturb or excavate into existing rock fill.



SECTION A (43 | 44)

Scale: 1"=5'

DATE	REVISION
12/09/20	Added note on rock fill.

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

Dec 06, 2020-6:53pm N:\CAD\DWG\2015\1512-Traffic Signal Modernization @ Various Locations P&E\FINAL\044 Existing Conditions K 2 Addendum 1.dwg

GRAPHIC SCALE

1"=5' 5' 0 5' 10'

CONRAD S. HIGASHIONNA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

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Conrad Higashionna

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS

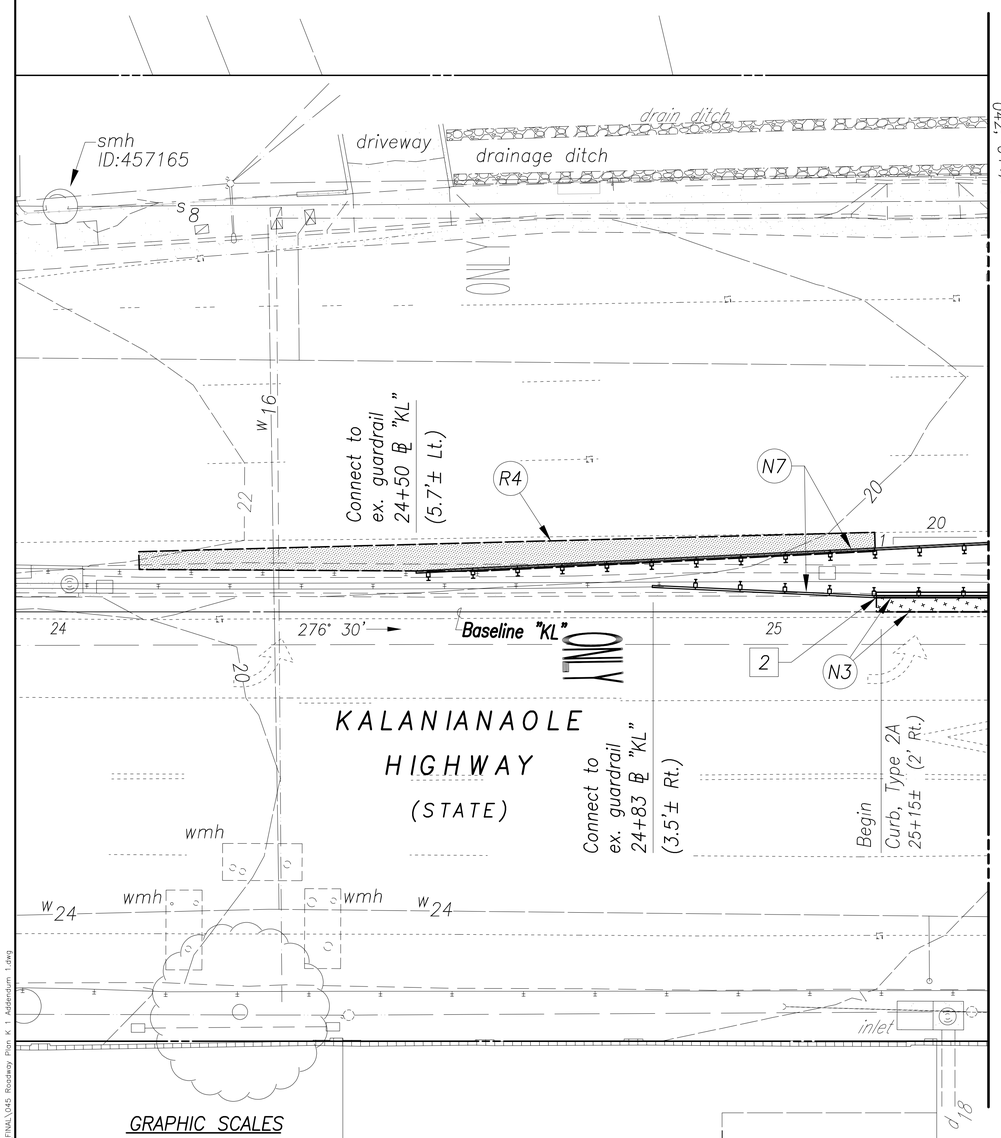
Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=5' Date: Oct. 2020

SHEET No. R-23 OF 81 SHEETS



GRAPHIC SCALES

SCALE 1"=10' 10' 5' 0 10' 20'

Curve Data (at Intersection of Kalanianaole Hwy., Kalaniiki St., and Waieli St.)										
	1	2	3	4	5	6	7	8	9	10
△	2° 34' 58.68"	90° 56' 24.5"	4° 00' 00"	78° 00' 00"	20° 10' 16"	141° 02' 32"	18° 47' 12"	22° 46' 16"	137° 37' 03"	19° 37' 41"
△/2	1° 17' 29.34"	45° 28' 12.25"	2° 00' 00"	39° 00' 00"	10° 05' 08"	70° 31' 46"	9° 53' 36"	11° 23' 08"	68° 48' 31.5"	9° 48' 50.5"
R	367.00'	32.00'	120.00'	40.00'	58.00'	1.00'	48.00'	43.00'	1.00'	48.00'
T	8.27'	32.53'	4.19'	32.39'	10.32'	2.83'	7.94'	8.66'	2.58'	8.30'
Ch	16.54'	45.62'	8.38'	50.35'	20.31'	1.89'	15.69'	16.98'	1.86'	16.35'
Lc	16.54'	50.79'	8.38'	54.45'	20.42'	2.46'	15.74'	17.09'	2.40'	16.43'

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

Dec 09, 2020-4:31pm
K:\DGN\Design\2015\15-12-Traffic Signal Modernization @ Various Locations P&E\FINAL\045 Roadway Plan K.1 Addendum 1.dwg

Reconstruction Callouts:

(R1) Curb & Gutter, Type 2DG. 4 L.F. min. unless noted on plan. For connection to existing curb and gutter, see details on sheets 80 and 81.

(R2) Curb, Type 2D Modified. 4 L.F. unless noted on plan.

(R3) Concrete Sidewalk (per Standard Plan D-15)

(R4) Limits of asphalt pavement restoration over trenching. See State detail A (45, 46, 47|80) and City detail B (46|80).

(R5) Limits of asphalt concrete pavement restoration over trenching and over concrete pavement. See detail C (46|80).

(R6) Limits of asphalt concrete pavement restoration for concrete jacket over existing 36-inch drain line. See Pavement Restoration over Concrete Jacket Detail on sheet 47 and concrete jacket details on sheet 191.

New Construction Callouts:

(N1) Curb & Gutter, Type 2DG Modified. For connection to existing curb and gutter, see details on sheet 81 and 82.

(N2) Concrete Sidewalk per Standard Plan D-15. For connection to existing sidewalk, see details on sheets 81 and 82.

(N3) Curb, Type 2A Modified and limits of asphalt concrete pavement restoration for installation of curb. For details, see sheet 51.

(N4) Limits of asphalt pavement restoration for installation of curb ramps, curb and gutter, and curb. For details, see sheets 81 and 82 and curb ramp plans.

(N5) 14-inch Concrete Pavement. For details, see sheet 49.

(N6) Curb, Type 2D Modified. For connection to existing curb, see details on sheet 81.

(N7) Guardrail, MASH compliant.

(N8) Terminal Impact Attenuator – HDOT Approved MASH Compliant, TL-3; and Transition Section. The Transition Section shall be incidental to the Terminal Impact Attenuator and will not be paid for separately.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	45R	291

New Construction Callouts continued:

(N9) 11 L.F. Reinforced Concrete Jacket on 8-inch sewer. See duct line profiles and concrete jacket details on sheets 198 and 201.

(N10) Relocate water meter, see sheet 57.

(N11) HMA Pavement State Mix No. V, 2-inch min. thick

(N12) HMA Pavement State Mix No. V, 4-inch± thickness

(N13) Apply Tack Coat either SS-1 or SS-1H Emulsified Asphalt

(N14) Hot Mix Asphalt (HMA) Sidewalk
2-inch thick, HMA Pavement State Mix No. V
4-inch thick, Aggregate Base Course
6-inch thick, Scarify and re-compact to 95% relative compaction

(N15) Fill void with Aggregate Base Course

(N16) Install new Detectable Warning Mat at existing curb ramp to remain. The work includes removing existing detectable warning mat and patching of concrete ramp, if needed. The cost for removal and ramp repair shall be incidental to this contract item and shall not be paid for separately.

(N17) 14-inch Concrete Pavement. For details, see sheet 80.

DATE	REVISION
12/09/20	Revised New Construction Callout N8.

CONRAD S. HIGASHIONNA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

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Conrad Higashionna

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=10' Date: Oct. 2020

SHEET No. R-24 OF 81 SHEETS

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	ADD.46	291

Notes:

1. For Bench Mark, control points, and survey ties; see Demolition Plan sheet 26.
2. Match into existing curb. Provide smooth connection.
3. See curb ramp plans for additional sidewalk, curb, and gutter details.
4. For (2) & (4) curb return profiles, see sheet 48.
5. ***The cost for reconstruction over traffic signal ductlines shall be incidental to the installation of Traffic Signal Ductlines and will not be paid for separately. This includes the following reconstruction callouts:*** (R1) (R2) (R3) (R4) (R5) (R6)
6. ***The cost for 14-inch P.C.C. pavement shall be paid for under Section 411 – Portland Cement Concrete Pavement. This includes the following new construction callouts:*** (N5) (N17)
7. *Existing tree(s) to remain. The Contractor shall establish tree protection zones.*

Match Line
Sta. 25+30
See sheet 45

Match Line
Sta. 27+70
See sheet 47

curb ramp to remain N16
smh ID:457166
smh ID:457168
Radial Point 5
25+93.85 ℄ "KL"
(60' Lt.)
drain ditch
R1 6 L.F.
R3
R4
R6
N16 curb ramps to remain
Kalani High School
KALANIIKI ST. (STATE)
R1 5 L.F.
True North
Scale: 1"=10'
TMK: 3-5-020: 042, 044, & 049
inlet
N8
R5 N5
25+35.70 ℄ "KL"
(10' Lt.)
End Curb, Type 2A
25+47 (10' Lt.)
25+73 ℄ "KL"
Begin concrete pad for Attenuator
26+00
N14
N3
N9
N17
6
℄ "KL"
276° 30'
Radial Point 8
26+98.85 ℄ "KL"
(33' Lt.)
Intersection
26+49.88 ℄ "KL"=
0+00 ℄ "KI"
℄ "KI"
186° 30'
Curb Ramp-4K
10
N2
27
Guardrail
27+44.55 (2.75' Rt.)
Curb (2' Rt.)
27+43.50
4' Curb Transition
2
N10
5
Intersection
26+50.40 ℄ "KL"=
0+00 ℄ "W"
Radial Point 7
25+98.37 ℄ "KL"
(38' Rt.)
℄ "W"
6° 30'
9
Guardrail
27+44.55 (9.25' Rt.)
Begin conc. pad for Attenuator
27+12
27+26
End Curb
N8
KALANIANAOLE HWY. (State)
Radial Point 10
26+98.37 ℄ "KL"
(50' Rt.)
Curb Ramp-3K
smh ID:457185
Curb Ramp-1K
Curb Ramp-2K
STATE CITY
WAIELI ST. (CITY)
ONLY
End curb, gutter, & sidewalk
25+82.78
Radial Point 3
25+10.25 ℄ "KL"
(109.88' Rt.)
Radial Point 4
25+88.50 ℄ "KL"
(93.25' Rt.)
Radial Point 2
27+00.42 ℄ "KL"
(85.50' Rt.)
Radial Point 1
30+35.37 ℄ "KL"
(80' Rt.)
264° 30'
268° 30'
95° 33' 35.50"
92° 58' 36.82"
GRAPHIC SCALES
SCALE 1"=10'
10' 5' 0 10' 20'

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

Approved By:

Chief, Wastewater Branch, DPP — Date

Chief, Civil Engineering Branch, DPP — Date
(For construction in City ROW only)

Dec 06, 2020-5:56pm
N:\ENG\2019\1512-Traffic Signal Modernization @ Various Locations R&E\FINAL\046 Roadway Plan K 2 Addendum 1.dwg

CONRAD S. HIGASHIONNA
LICENSED PROFESSIONAL ENGINEER
No. 6763-C
HAWAII, U.S.A.

License Expiration Date 04-30-22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Conrad Higashionna

DATE	REVISION
12/09/20	Added Note 7.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

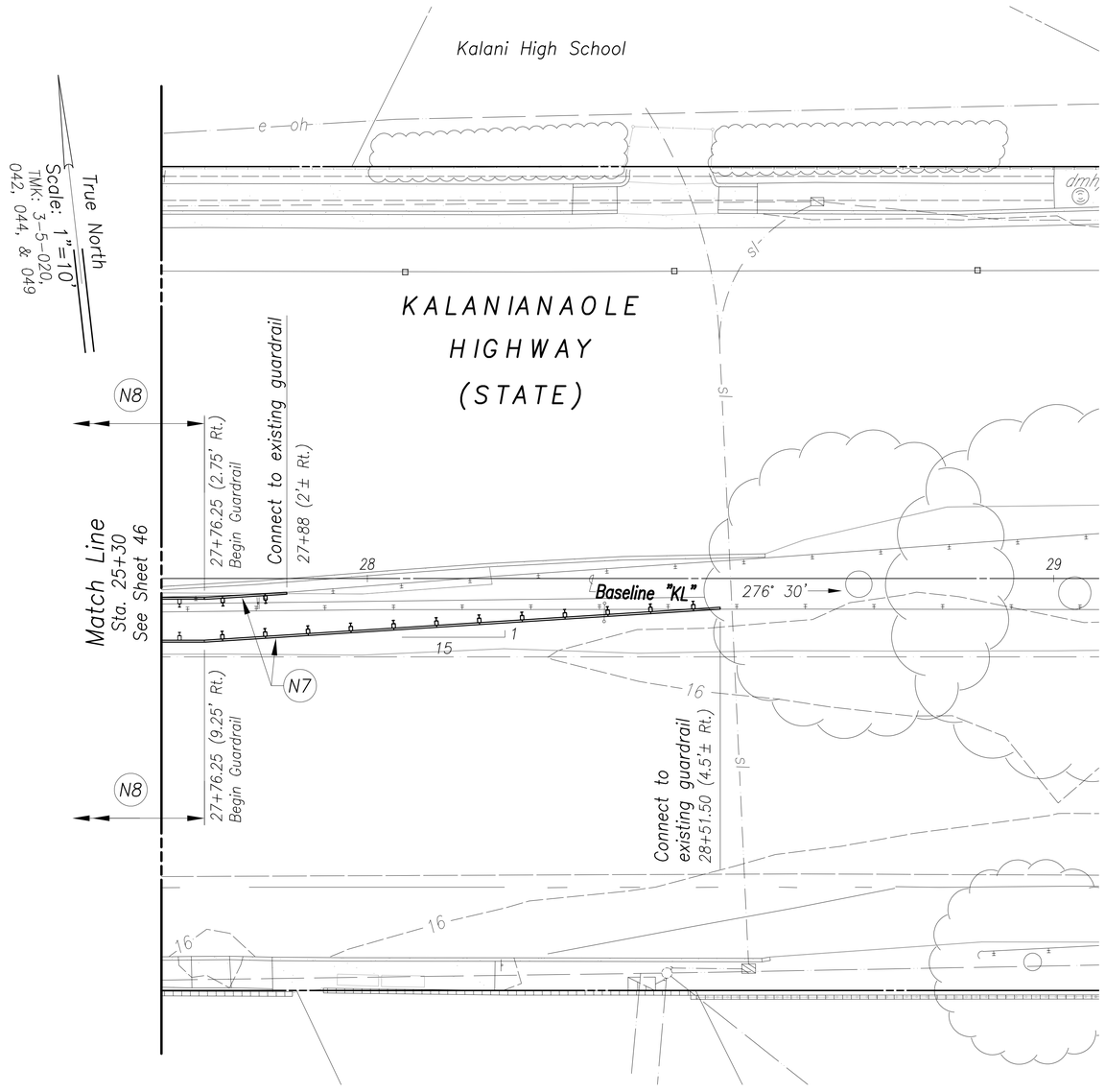
Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

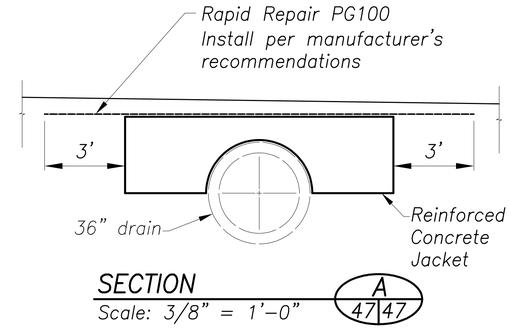
Scale: 1"=10' Date: Oct. 2020

SHEET No. R-25 OF 81 SHEETS

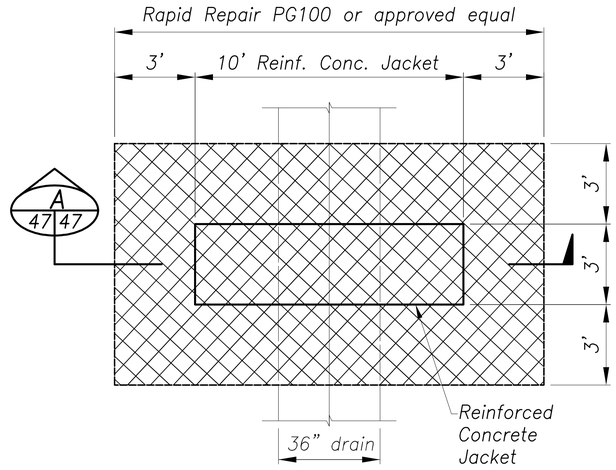
ADD. 46

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	47R	291





SECTION A 47|47
Scale: 3/8" = 1'-0"



PAVEMENT RESTORATION OVER CONCRETE JACKET DETAIL

Scale: 3/8" = 1'-0"

Notes:

1. The cost for furnishing and installation of Rapid Repair PG100 or approved equal shall be incidental to the Reinforced Concrete Jacket.
3. For Reinforced Concrete Jacket details, see sheet 191.

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

Dec 09, 2020-5:28pm
N:\DOT\ENG\DSN\TS\12-Traffic Signal Modernization @ Various Locations R&E\FINAL\047 Roadway Plan K, 3 Addendum 1.dwg

GRAPHIC SCALES

SCALE 1"=10' 10' 5' 0 10' 20'

SCALE 3/8"=1' 3' 2' 1' 0 5'

CONRAD S. HIGASHIONNA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

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Conrad Higashionna

DATE	REVISION
12/09/20	Called out beginning of new guardrail. Added New Construction Callout N8.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

Kalanianaole Hwy & Kalaniiki St

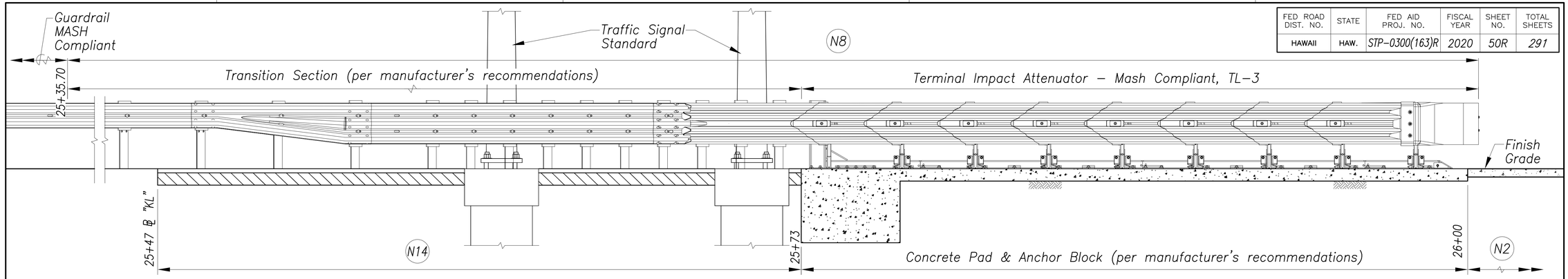
ADDITIVE ALTERNATE #2

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=10' Date: Oct. 2020

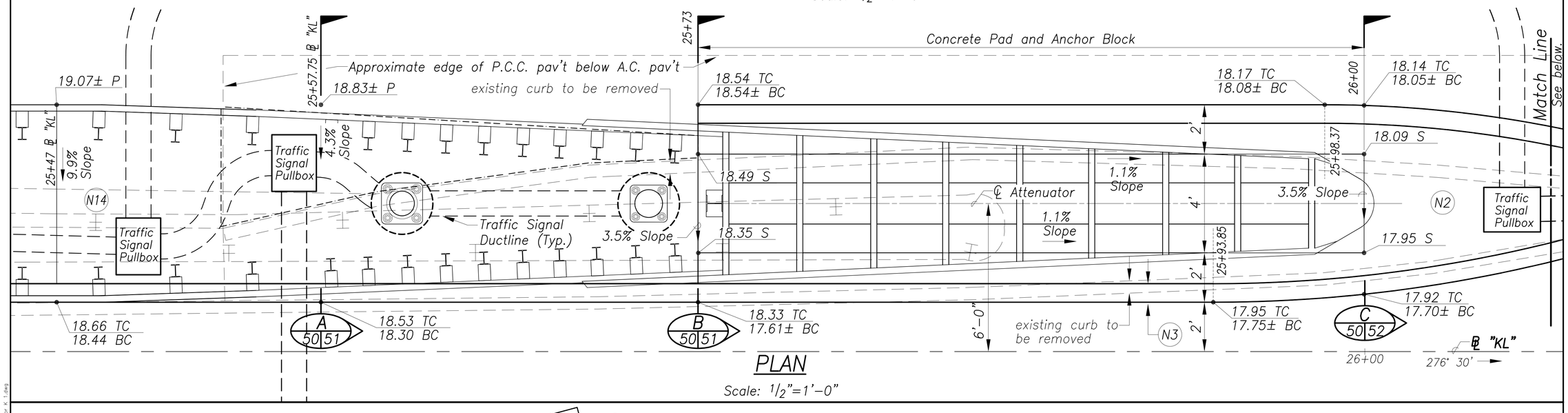
SHEET No. R-26 OF 81 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	50R	291



ELEVATION

Scale: 1/2"=1'-0"



PLAN

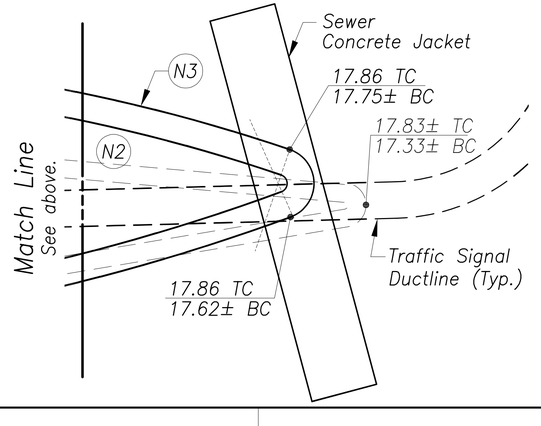
Scale: 1/2"=1'-0"

Legend

18.41± P	Existing Top Pavement Elevation
18.36 S	Finish Top Slab Elevation
18.16 TC	Finish Top Curb Elevation
18.03 BC	Existing Bottom Curb Elevation
	Demolish and dispose of P.C.C. Pav't

GRAPHIC SCALES

SCALE 1/2"=1' 2' 1' 0 2' 4'



New Construction Callouts:

(N2) Concrete Sidewalk per Standard Plan D-15. For connection to existing sidewalk, see details on sheets 81 and 82.

(N3) Curb, Type 2A Modified and limits of asphalt pavement restoration for installation of curb. For details, see sheet 51.

(N8) Terminal Impact Attenuator – HDOT Approved MASH Compliant, TL-3; and Transition Section. The Transition section shall be incidental to the Terminal Impact Attenuator and will not be paid for separately.

(N14) Hot Mix Asphalt (HMA) Sidewalk
2-inch thick, HMA Pavement State Mix No. V
4-inch thick, Aggregate Base Course
6-inch thick, Scarify and re-compact to 95% relative compaction

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

Dec. 09, 2020-4:35pm
N:\CAD\Work\2015\15-12-Traffic Signal Modernization @ Various Locations P&E\FINAL\050 Attenuator K 1.dwg

CONRAD S. HIGASHIONNA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Conrad Higashionna

DATE	REVISION
12/09/20	Added new construction callout N8. Revised Elevation view and added N8.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TERMINAL IMPACT ATTENUATOR

Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

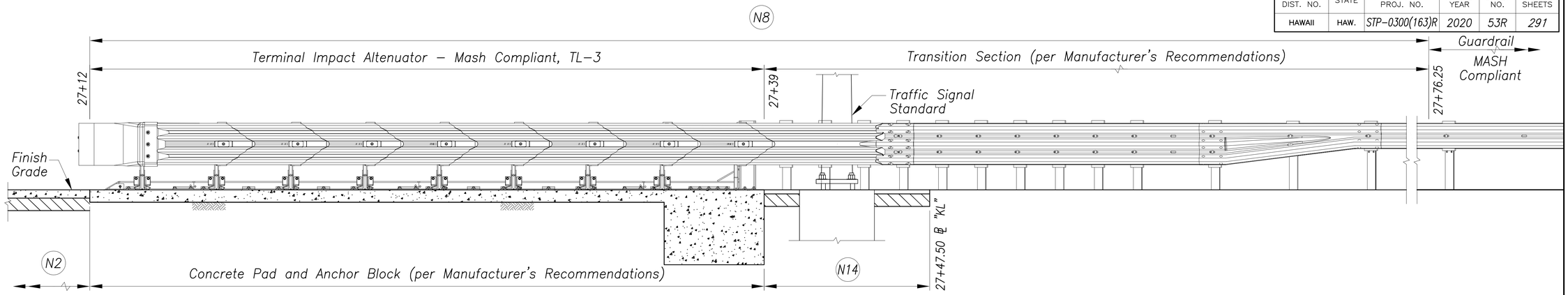
Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1/2"=1'-0" Date: Oct. 2020

SHEET No. R-29 OF 81 SHEETS

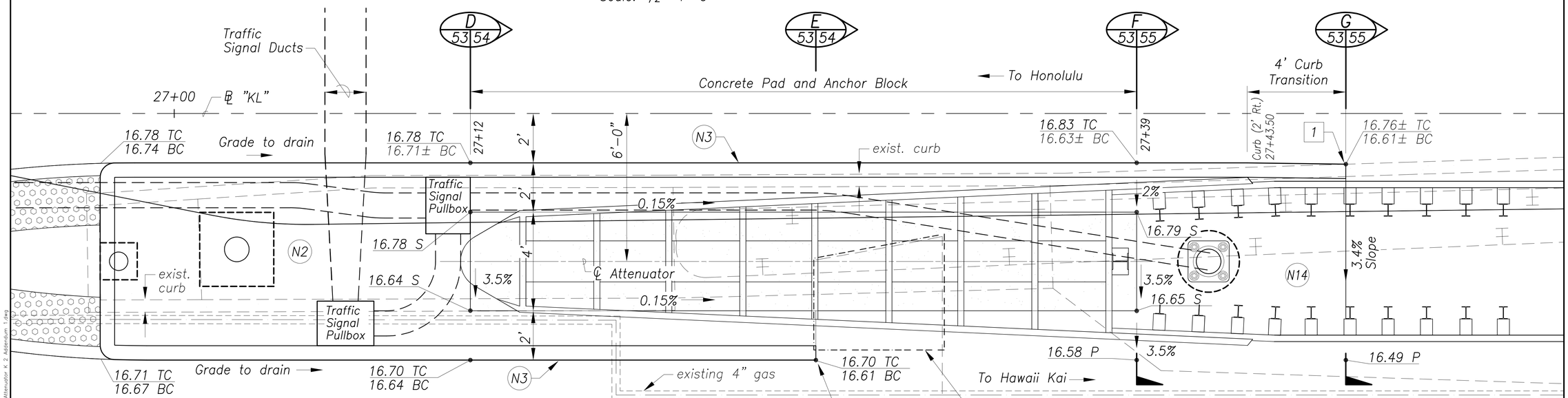
50R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	53R	291



ELEVATION

Scale: 1/2"=1'-0"



PLAN

Scale: 1/2"=1'-0"

New Construction Callouts:

(N2) Concrete Sidewalk per Standard Plan D-15.

(N3) Curb, Type 2A Modified. For details, see sheet 51.

(N8) Terminal Impact Attenuator – HDOT Approved MASH Compliant, TL-3; and Transition Section. The Transition section shall be incidental to the Terminal Impact Attenuator and will not be paid for separately.

(N14) Hot Mix Asphalt (HMA) Sidewalk
2-inch thick, HMA Pavement State Mix No. V
6-inch thick, Aggregate Base Course
6-inch thick, Scarify and re-compact to 95% relative compaction

Legend

18.41± P	Existing Top Pavement Elevation
18.36 S	Finish Top Slab Elevation
18.16 TC	Finish Top Curb Elevation
18.03 BC	Existing Bottom Curb Elevation

Notes:

1 Match into existing curb. Provide smooth connection.

GRAPHIC SCALES

SCALE 1/2"=1' 2' 1' 0 2' 4'

CONRAD S. HIGASHIONNA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

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Conrad Higashionna

DATE	REVISION
12/09/20	Added new construction callout N8. Revised Elevation view and added N8.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TERMINAL IMPACT ATTENUATOR

Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

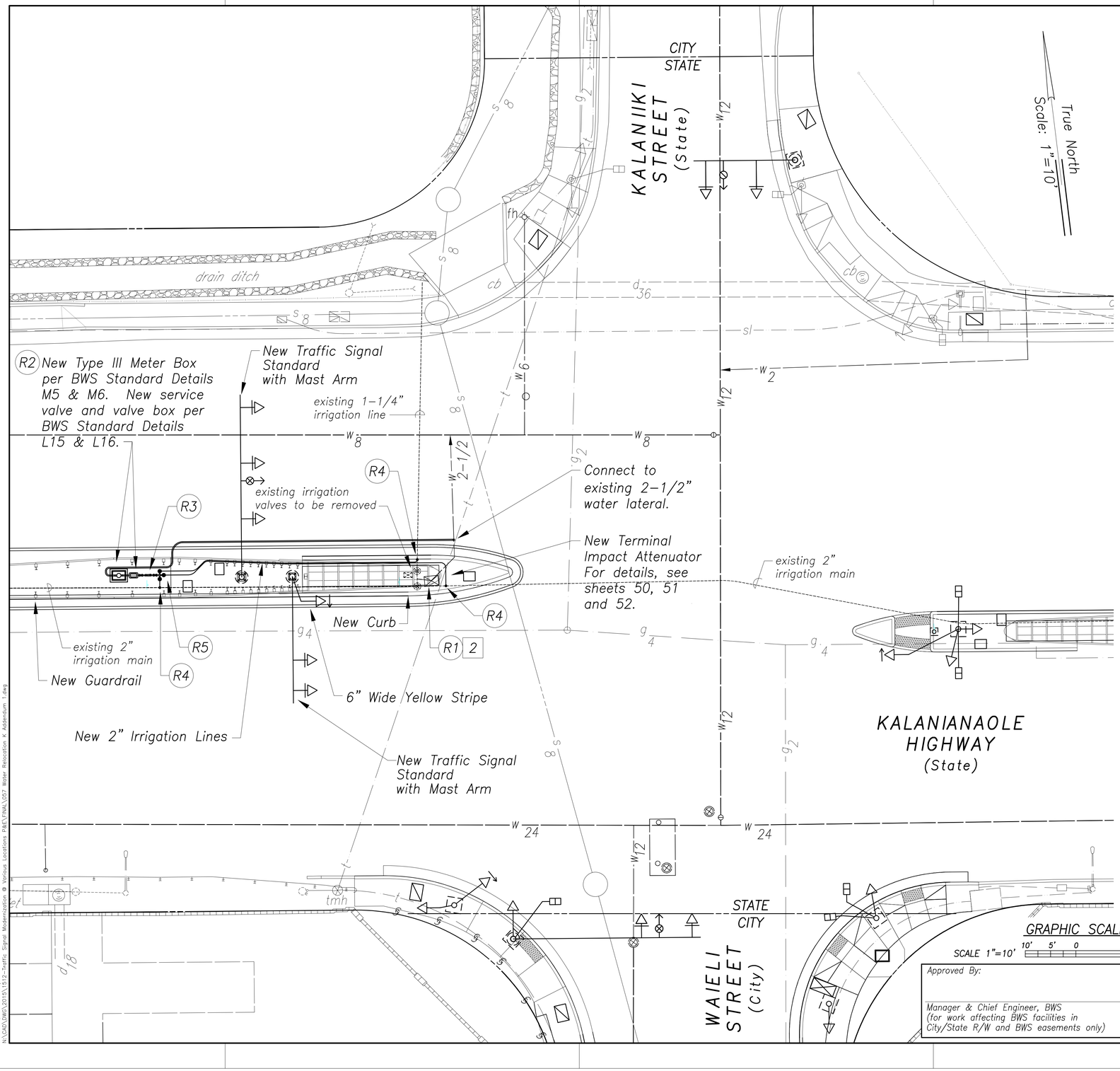
Scale: 1/2"=1'-0" Date: Oct. 2020

SHEET No. R-32 OF 81 SHEETS

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

Dec. 09, 2020-7:54pm
N:\CAD\Work\2019\1512-Traffic Signal Modernization @ Various Locations P&E\PMA\053 Attenuator K 2 Addendum 1.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	ADD.57	291



Notes:

1. No additional irrigation water demand will be required. Existing meters are adequate to serve the existing irrigation system.
2. P/ID 6663933769 M/N 13070170
3. The Contractor shall verify the location of the existing irrigation system prior to construction. The Contractor shall restore the existing irrigation system affected by the construction.

Water Relocation Callouts:

(R1) Remove and dispose of water meter box and valve boxes. Salvage frames and covers. Relocate water meter.

(R2) P/ID 6663933769 M/N 13070170
The Contractor shall install new 2-1/2" lateral & all necessary fittings to accommodate the relocation of the existing 2" meter, new Type III meter box & all appurtenances in accordance with Board of Water Supply standards. The Contractor shall relocate the existing meter and reconnect to the existing property pipe. The Contractor shall coordinate the relocation work with the Board of Water Supply.

(R3) New Board of Water Supply approved 2 1/2" reduced pressure principal backflow prevention assembly after the water meter prior to any tees or branches per BWS Standard Detail V-9.

(R4) The Contractor shall connect to new 2-inch irrigation lines to existing irrigation lines.

(R5) Install three new 2-inch irrigation valves and valve boxes.

GRAPHIC SCALES
SCALE 1"=10' 10' 5' 0 10' 20'

Approved By:

Manager & Chief Engineer, BWS Date
(for work affecting BWS facilities in City/State R/W and BWS easements only)

CONRAD S. HIGASHIGAWA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Conrad Higashigawa

DATE	REVISION
12/09/20	Revised Note 3. Revised Water Relocation Callouts R3 and R5.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER PLAN

Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=10' Date: Oct. 2020

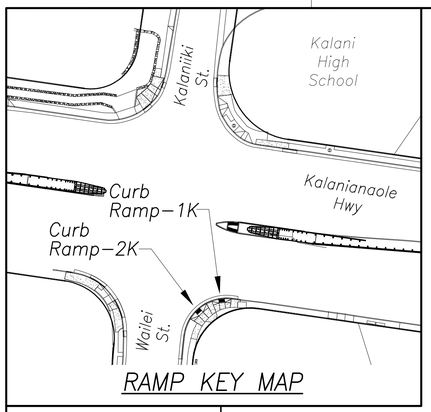
SHEET No. R-36 OF 81 SHEETS

ADD. 57

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

Dec. 09, 2020-6:03pm
N:\DOI\BWS\DESIGN\13-Traffic Signal Modernization @ Various Locations R&E\FINAL\057 Water Relocation K Addendum 1.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	ADD.76	291



RAMP KEY MAP

Curve Data Back of Sidewalk	
	Curve 1
△	40° 11' 00"
△/2	20° 05' 30"
R	30.00'
T	12.48'
Ch	23.05'
Lc	23.66'
	Curve 2
△	20° 00' 00"
△/2	10° 00' 00"
R	23.00'
T	8.37'
Ch	15.73'
Lc	16.06'

Legend:

19.40 TC	Finish Top Curb Elev.
18.90 BC	Finish Bottom Curb Elev.
19.58	Finish Elevation
18.79 G	Finish Gutter Elev.
20.67±	Existing Elevation

New Construction Callouts:

(N1) Curb & Gutter, Type 2DG Modified. For connection to existing curb and gutter, see details on sheets 81 and 82.

(N2) Concrete Sidewalk per Standard Plan D-15. For connection to existing sidewalk, see details on sheets 81 and 82.

(N6) Curb, Type 2D Modified. For connection to existing curb, see details on sheets 81 and 82.

Notes:

1. Neat saw cut. Provide smooth riding connection.
2. Install new traffic signal pull box flush with finish grade.
3. Match into HECO pull box. Provide smooth riding connection.
4. Grassed Surface and 4-inch thick Imported Planting Soil. The Contractor shall restore existing irrigation system affected by his work to equal or better condition; and protect trees to remain.
5. New Type I standard with pedestrian push button (PPB-1).
6. New Type I standard with pedestrian push button (PPB-2).
7. Detectable Warning. All detectable warnings shall be cast-in-place and replaceable.
8. Grass Surface and Imported Planting Soil 4-inch thick.

GRAPHIC SCALES
SCALE 1"=2' 2' 1' 0 2' 4'

Approved By:

Chief, Civil Engineering Branch, DPP Date
(For Construction in City ROW only)

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

Dec 06, 2020-6:56pm
N:\CAD\Civil\2015\1512-Traffic Signal Modernization @ Various Locations, P&E\ENA\1076 Curb Ramp K 1-2 Addendum 1.dwg

CONRAD S. HIGASHIONNA
LICENSED PROFESSIONAL ENGINEER
No. 6763-C
HAWAII, U.S.A.

License Expiration Date 04-30-22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Conrad Higashionna

DATE	REVISION
12/09/20	Revised Note 4.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP PLAN

Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

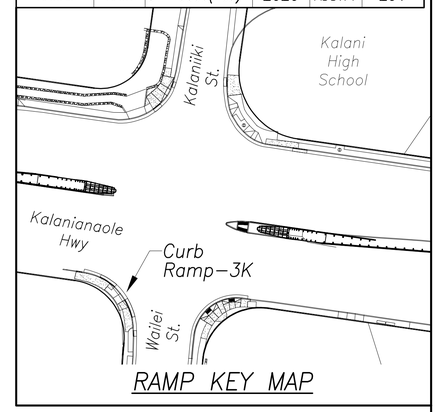
Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=2' Date: Oct. 2020

SHEET No. R-55 OF 81 SHEETS

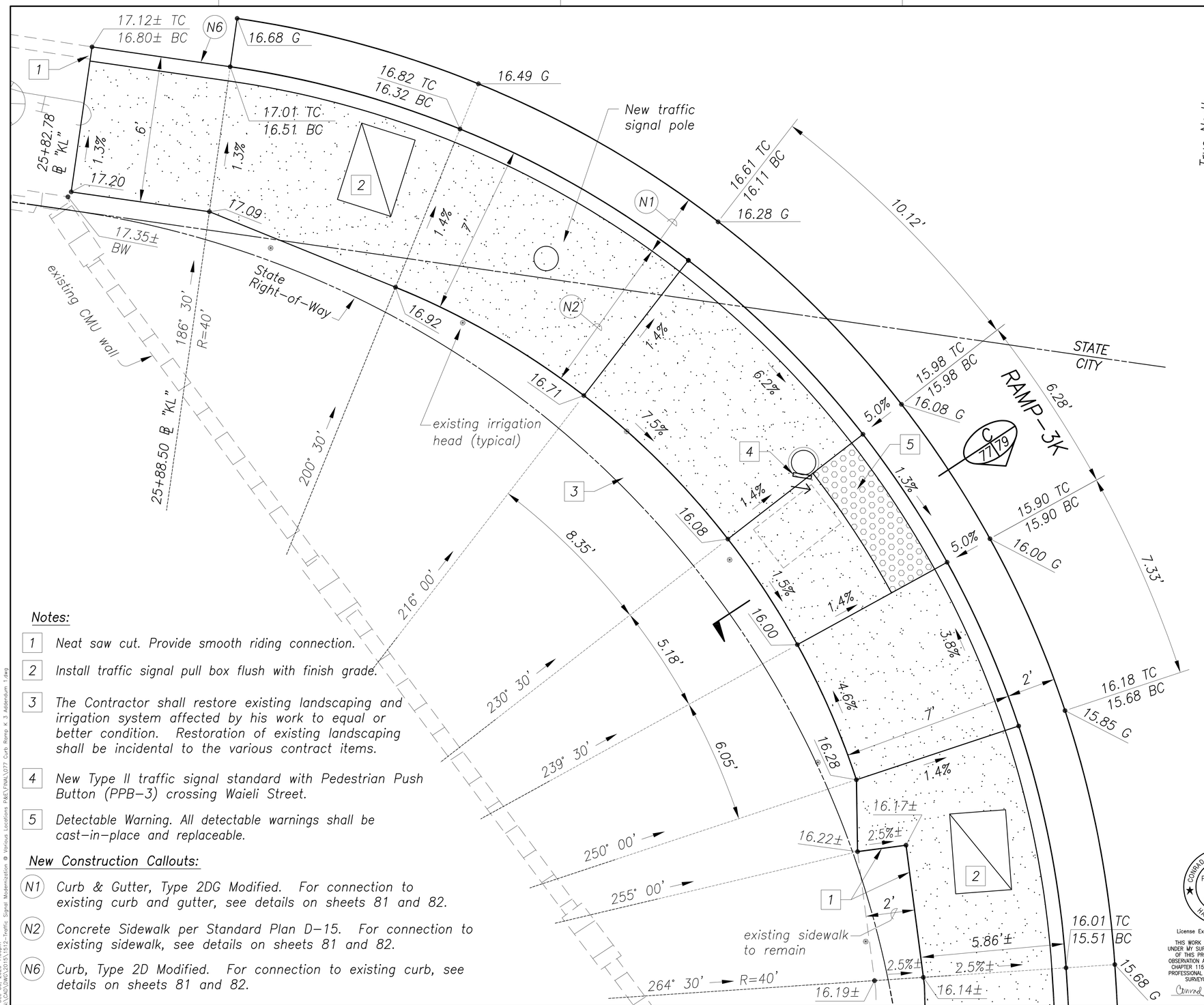
ADD. 76

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	ADD.77	291



RAMP KEY MAP

True North
Scale: 1"=2'



Legend:

20.67±	Existing Elevation
19.58	Finish Elevation
19.40 TC	Finish Top Curb Elevation
18.90 BC	Finish Bottom Curb Elevation
18.79 G	Finish Gutter Elevation

Approved By:

Chief, Civil Engineering Branch, DPP — Date
(For construction in City ROW only)

GRAPHIC SCALES
SCALE 1"=2' 2' 1' 0 2' 4'

Notes:

1. Neat saw cut. Provide smooth riding connection.
2. Install traffic signal pull box flush with finish grade.
3. The Contractor shall restore existing landscaping and irrigation system affected by his work to equal or better condition. Restoration of existing landscaping shall be incidental to the various contract items.
4. New Type II traffic signal standard with Pedestrian Push Button (PPB-3) crossing Waieli Street.
5. Detectable Warning. All detectable warnings shall be cast-in-place and replaceable.

New Construction Callouts:

(N1) Curb & Gutter, Type 2DG Modified. For connection to existing curb and gutter, see details on sheets 81 and 82.

(N2) Concrete Sidewalk per Standard Plan D-15. For connection to existing sidewalk, see details on sheets 81 and 82.

(N6) Curb, Type 2D Modified. For connection to existing curb, see details on sheets 81 and 82.

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

Dec 08, 2020-7:06pm
N:\CAD\WO\2015\1512-Traffic Signal Modernization @ Various Locations, P&E\FINAL\077 Curb Ramp_K 3 Addendum 1.dwg

DATE	REVISION
12/09/20	Added Note 3.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP PLAN

Kalanianaole Hwy & Kalaniiki St

ADDITIVE ALTERNATE #2

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=2' Date: Oct. 2020

CONRAD S. HIGASHIONNA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

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Conrad Higashionna

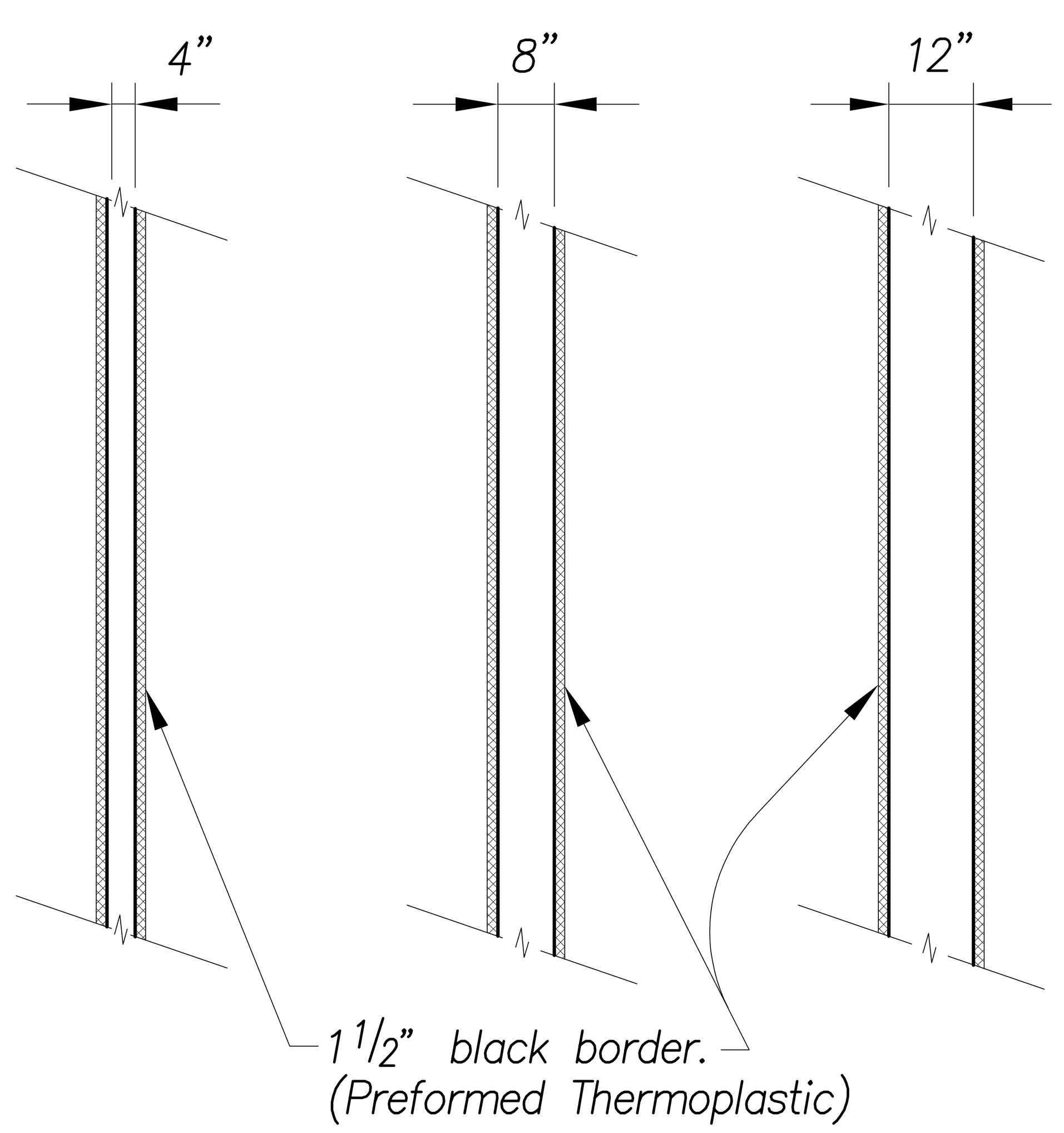
SHEET No. R-56 OF 81 SHEETS

ADD. 77

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	88R	291

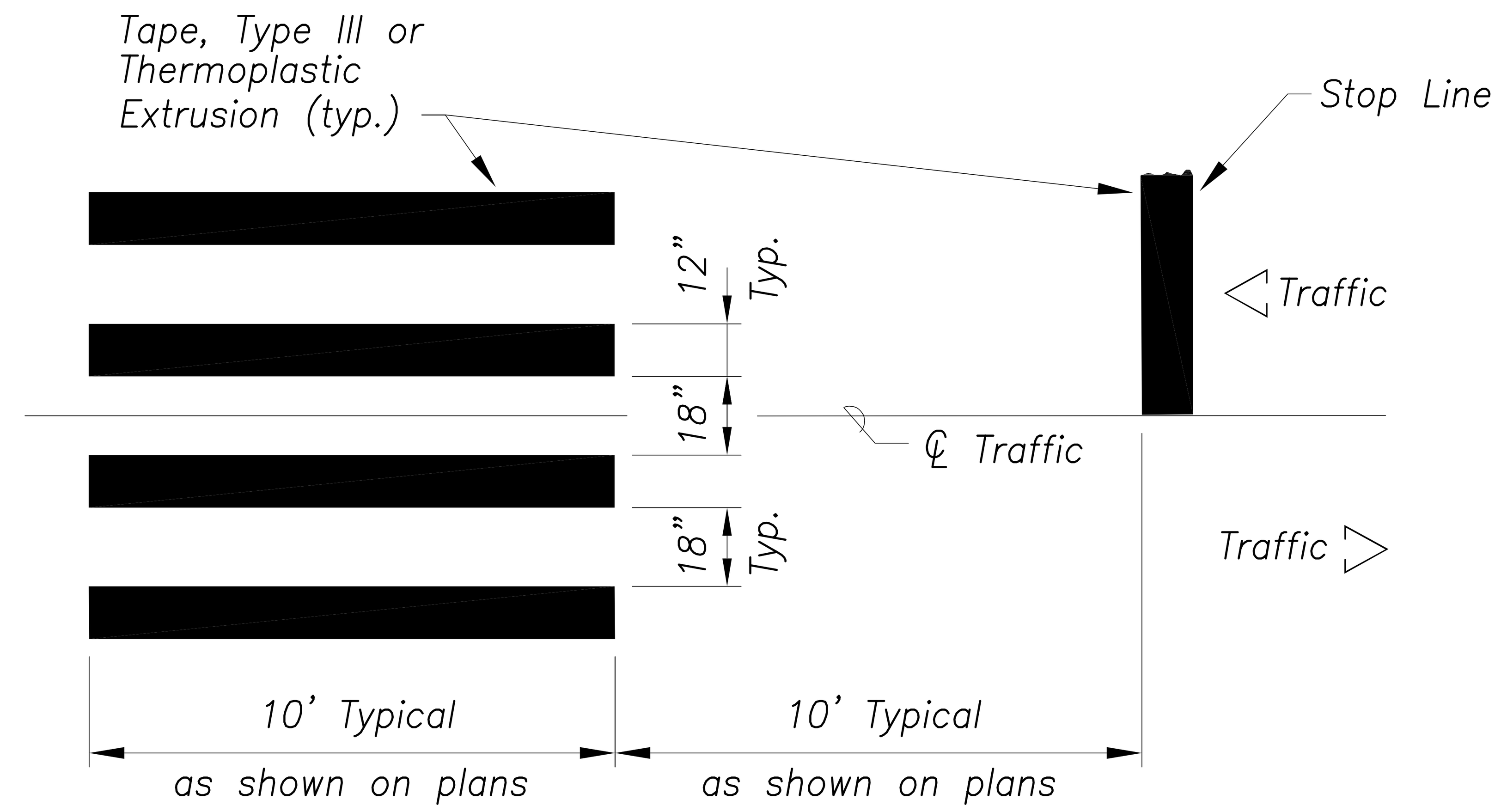
Notes:

1. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
2. Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various pavement marking items.
3. Raised pavement markers shall not be installed within crosswalks.
4. Final locations of all signs shall be approved by the Engineer prior to any installation work.
5. 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.
6. Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
7. All pavement striping shall be as noted on the legend or plans.
8. 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 applications.
9. All pedestrian warning signs with supplemental sign shall be on a fluorescent yellow-green retroreflective background with a black legend and border.
10. The Contractor shall install preformed thermoplastic pavement markings with a black border on Portland Cement Concrete (PCC) pavement as shown on sheets 94 and 95.
11. The Contractor shall install preformed thermoplastic pavement markings per the manufacturer's recommendations.



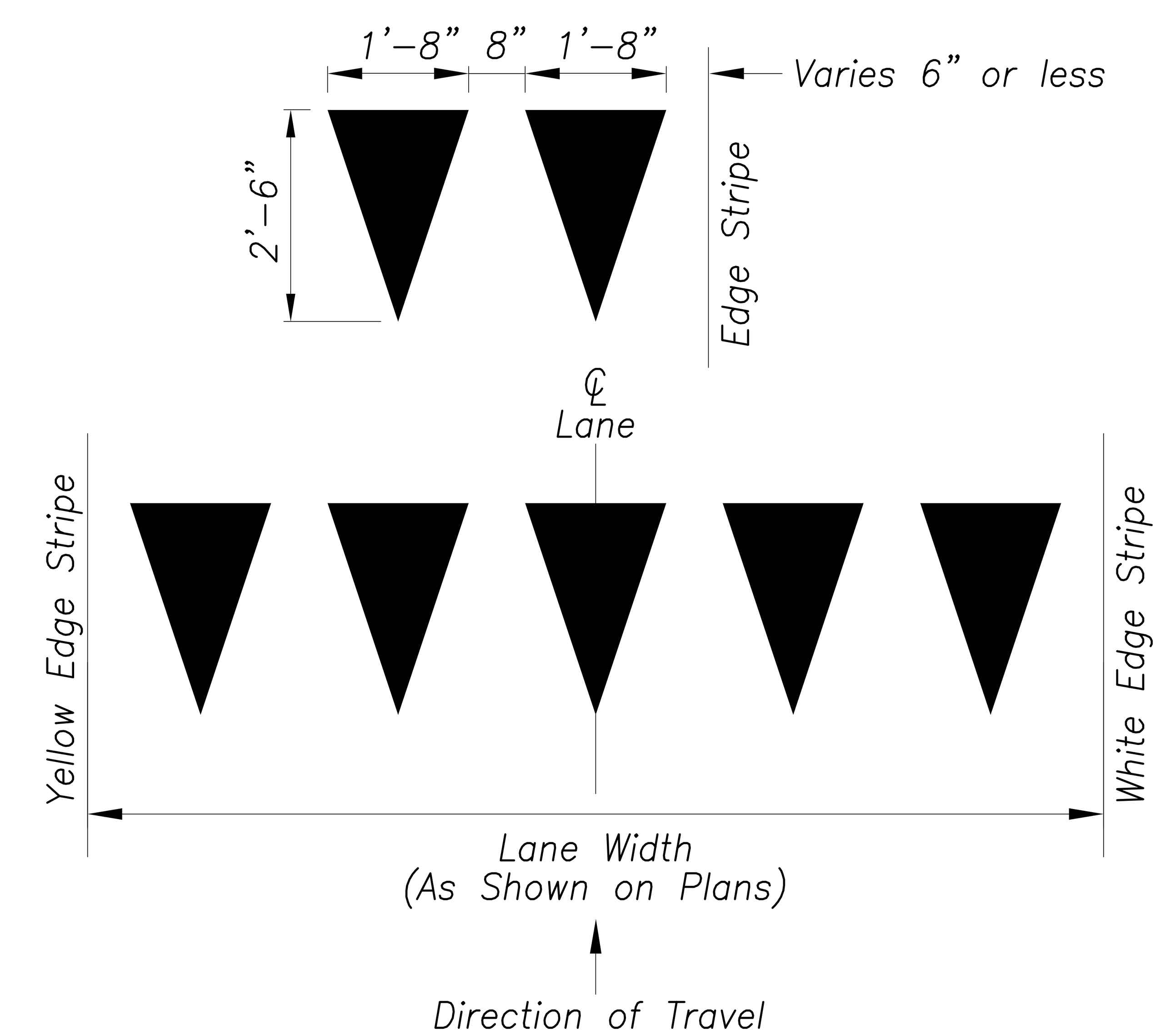
4", 8" & 12" WHITE STRIPE ON P.C.C. PAVEMENT

Not to Scale



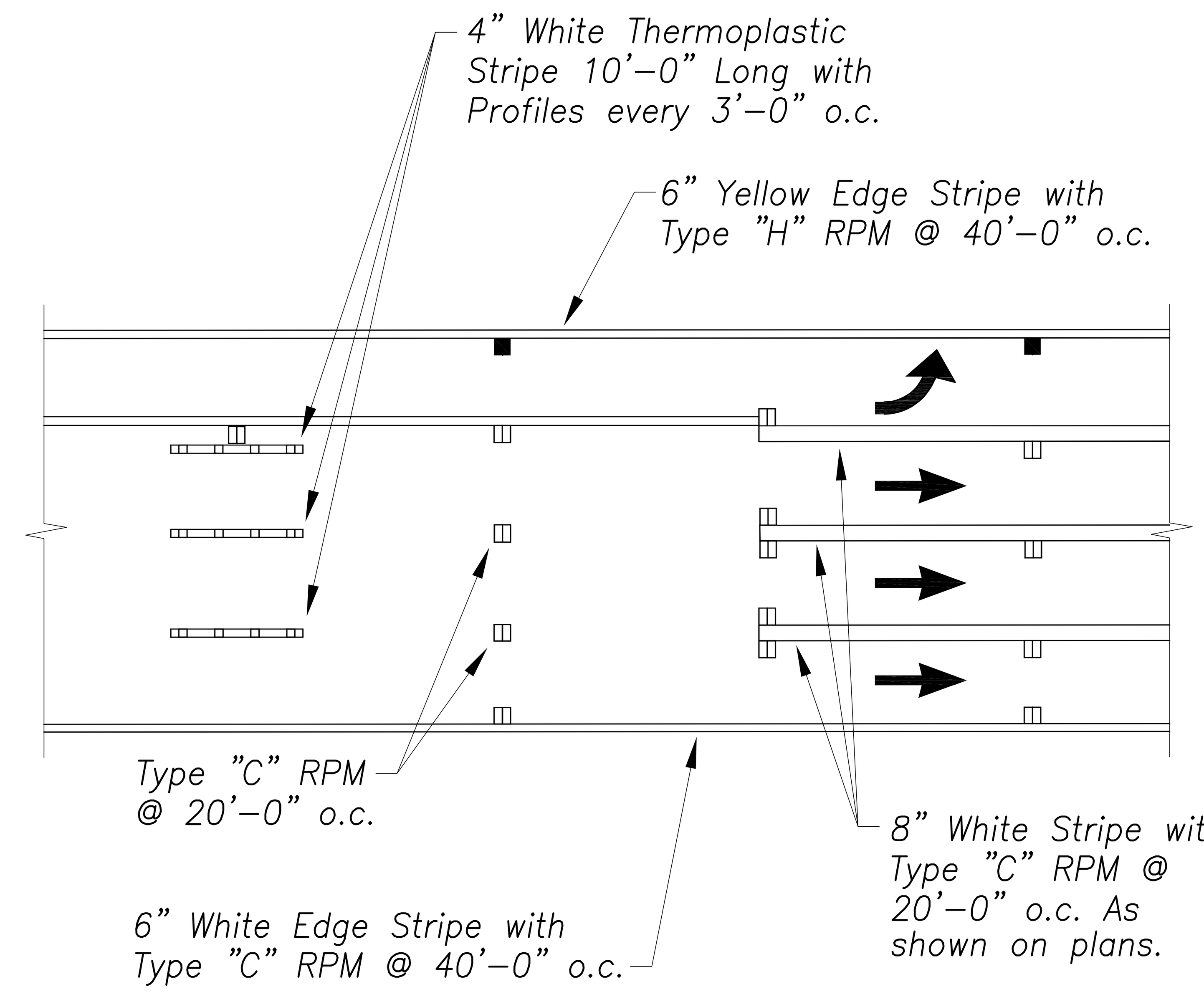
CROSSWALK STRIPING DETAIL

Not to Scale



YIELD LINE

Not to Scale



LANE LINE PAVEMENT MARKINGS

No Scale

DATE	REVISION
12/09/20	Revised Note 10.

CONRAD S. HIGASHIONNA
LICENSED PROFESSIONAL ENGINEER
No. 6763-C
HAWAII, U.S.A.

License Expiration Date 04-30-22

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRIPING NOTES & DETAILS

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

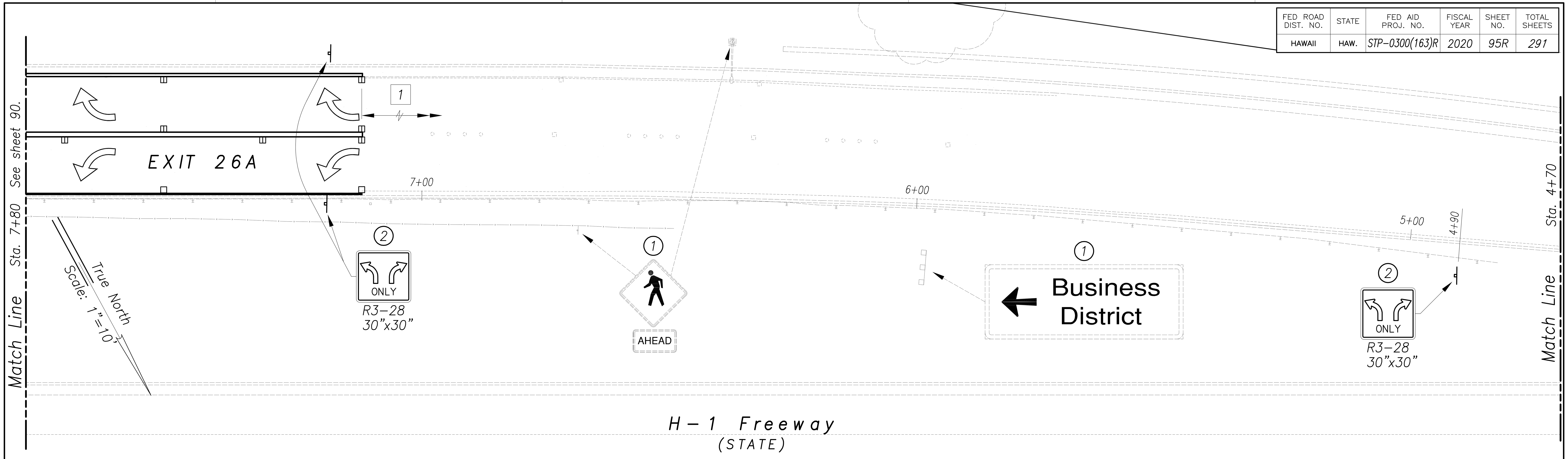
Scale: As shown Date: Oct. 2020

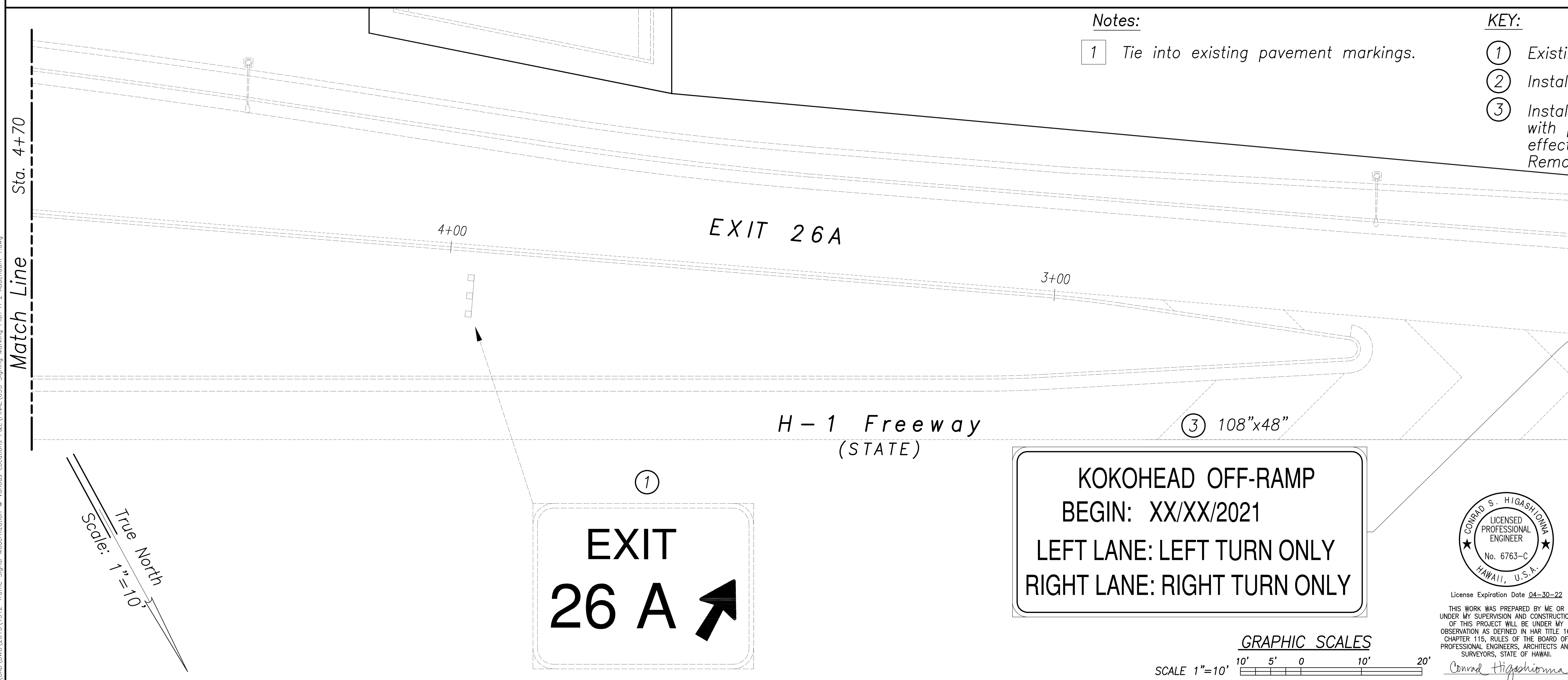
SHEET No. R-67 OF 81 SHEETS

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

Dec 09, 2020-3:16pm

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	95R	291





Notes:

1. Tie into existing pavement markings.

KEY:

(1) Existing sign(s) to remain.

(2) Install new sign(s) on new post(s).

(3) Install temporary "Notice To Motorists" sign with posts. Install sign one week prior to effective date. Inform DIR-P at 587-2160. Remove sign one week after effective date.

GRAPHIC SCALES

SCALE 1"=10' 10' 5' 0 10' 20'

CONRAD S. HIGASHIONNA, LICENSED PROFESSIONAL ENGINEER, No. 6763-C, HAWAII, U.S.A.

License Expiration Date 04-30-22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Conrad Higashionna

DATE	REVISION
12/09/20	Added key for existing "EXIT 26A ↗" sign to remain.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & STRIPING PLAN

H-1 Exit 26A & Koko Head Ave

ADDITIVE ALTERNATE #3

Traffic Signal Modernization, Oahu, Phase 1

Federal-Aid Project No. STP-0300(163)R

Scale: 1"=10' Date: Oct. 2020

SHEET No. R-74 OF 81 SHEETS

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

Dec 09, 2020–3:17pm N:\CAD\DWG\2015\1512–Traffic Signal Modernization @ Various Locations P&E\FINAL\095 Signing Marking Plan H 2 Addendum 1.dwg

TRAFFIC SIGNAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	ADD.104	291

1. The locations of the traffic signal standards, pedestrian push buttons, traffic controller, pull boxes, 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.

2. Any required splicing shall be done in the pull boxes.

3. Furnishing and installing controller barriers, risers on poles and conduit stub outs (pull boxes to the edge of pavement) will not be paid for separately but shall be considered incidental to the various contract items.

4. A solid #8 bare copper wire shall be pulled with the traffic signal control cable for equipment ground. Cost shall be incidental to the installation of the control cable.

5. All traffic signal controller equipment shall be completely wired in the cabinet and shall control traffic signals as called for on the plans.

6. The Contractor shall install the meter socket breaker as shown in the electrical drawings.

7. The loop amplifier units furnished for this project shall be capable of operating the loop detector configurations shown on the plans. Cost for the loop amplifier shall be incidental to the installation of the loop detector.

8. Should any defect be encountered during the controller warranty period, the manufacturer will be notified and he shall promptly correct such defect. Service call (by factory qualified representative) during the warranty period for repairs or other maintenance shall be answered within 24 hours and shall be done at no expense whatsoever to the State. All repairs shall be done as soon as possible.

9. Existing traffic signal standards to be replaced shall be removed together with its respective footing. The Contractor may elect to remove only the top portion of the footing and shall ensure that the remaining footing is 2 feet below the existing or finish ground. Costs shall be considered incidental to the various contract items.

10. The existing traffic signal and CCTV systems shall remain in operation until the new traffic signal system is put into service. The Contractor shall arrange his work accordingly and shall provide temporary relocations and wiring, as necessary. Payment shall be considered incidental to the various contract items.

11. The Contractor shall clean and/or repair the existing traffic signal pull boxes to be used prior to installing conduits and cables. This work will not be paid for separately but shall considered incidental to the various contract items.

12. The Contractor shall clean all existing conduits prior to pulling cables. This work will not be paid for separately but shall be considered incidental to the various contract items.

13. The existing controller foundations and pull boxes not to be incorporated in the final signal system shall be removed in accordance with Section 202, "Removal of Structures and Obstruction" of the Standard Specifications. Pavement shall be constructed to match surrounding pavement.

14. The Contractor shall maintain a 36" clearance between the control duct line and loop detectors.

15. Restoration of existing pavements and improvements unavoidably damaged shall be incidental to the various contract items. Restoration shall be to the original or better condition.

16. Removing and disposing of existing power source equipment (i.e. meter, conduits, cables, etc.) shall not be paid for separately but considered incidental to the various contract items.

17. The Contractor shall verify and remove existing traffic signal heads, standards, foundations, pedestrian pushbuttons, pull box frame and covers, cables, and appurtenances, etc. which are called for removal in the plans, abandoned, or not incorporated into the new traffic signal system. The Engineer shall determine the salvageable equipment. All salvageable equipment shall become the property of the City Department of Transportation Services and the un-salvegeable equipment shall become the property of the Contractor for proper disposal. Removing and salvaging existing traffic signal equipment shall not be paid for separately but considered incidental to the various contract items.

18. The Contractor shall notify the Traffic Signal and Technology Division, Department of Transportation Services, three (3) days prior to commencing work of the Traffic Signal and CCTV system (Phone: 768-8388).

19. Concrete encased conduits and Type 2 cables between the pedestrian push button and pull box shall be furnished and installed in sufficient numbers and lengths, as required. Cost shall be incidental to the installation of pedestrian push buttons.

20. Concrete encased conduits and signal drop cables between traffic signal standards and pull boxes shall be furnished and installed in sufficient numbers and lengths, as required. Cost shall be incidental to traffic signal foundation.

21. The Contractor shall verify all work in the field prior to submitting of bid, ordering of materials, fabrication of brackets, etc.

22. The Contractor shall not construct conduits, pull boxes, traffic signal standard foundations, etc. outside of State or County right-of-way unless shown otherwise on the plans.

23. Existing conduits not incorporated into the new traffic signal system shall be plugged with concrete and abandoned in place. This work shall be incidental to the various contract items.

24. The Contractor shall use a 5-foot length to transition from normal duct section to fit conduits within pullbox knockout unless otherwise noted. All conduits shall enter pullbox through knockouts.

25. The Contractor shall remove all temporary microwave detectors not incorporated in the final signal system after the new signal system is operational and prior to final acceptance unless otherwise notified by the State. Temporary microwave detectors shall be salvaged and delivered to the City and County Department of Transportation Services.

26. The Contractor shall provide 3'-0" minimum cover over top of concrete jacket for traffic signal ducts installed within the traveled way and shoulders, unless otherwise called for on the plans.

27. For new Type I Traffic Signal Standards, the Contractor shall provide new Type I Signal Standard and new footing per 2008 Standard Plan TE-32, unless otherwise called for on the plans. The Contractor shall provide new traffic signal heads, pedestrian signal heads, ADA compliant pedestrian push button, and necessary new mounting equipment and accessories as required and as shown on the plans. The Contractor shall provide one 2-inch Schedule 40 conduit concrete encased with cables required for traffic and pedestrian signal heads and pedestrian push buttons.

28. For new Type II Traffic Signal Standards, the Contractor shall provide new Type II Signal Standard and new drilled shaft foundation per 2008 Standard Plan TE-33A.1 and TE-33A.2, unless otherwise called for on the plans. The Contractor shall provide new traffic signal heads, pedestrian signal heads, ADA compliant pedestrian push button, and necessary new mounting equipment and accessories as required and as shown on the plans. The Contractor shall provide 2-inch Schedule 40 conduits concrete encased with cables for traffic signal heads, pedestrian signal heads, pedestrian push buttons, and Opticom detector.

29. The Contractor shall ensure that traffic signal standards are designed and manufactured to be compatible with the drilled shaft design to avoid bolt circle-cage conflicts.

30. Existing traffic signal pullboxes, street light pullboxes, and traffic signal standards to remain shall be adjusted to finish grade. The cost shall be incidental to the various contract items.

31. Existing traffic signal systems shall remain operational at all times during construction; the Contractor shall provide temporary equipment or power as needed to facilitate construction. The cost shall be incidental to the various contract items.

32. The Contractor shall hire an ISA Certified Arborist to assist in tree root and branch pruning work necessary to facilitate construction. The certified arborist must assure that work performed does not destabilize the trees and does not cause the failure or demise of the trees.

DATE	REVISION
12/09/20	Added Traffic Signal Note 32.

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

Approved By:

Chief, Traffic Signals & Technology, DTS Date

CONRAD S. HIGASHIONNA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Conrad Higashionna

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL NOTES

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

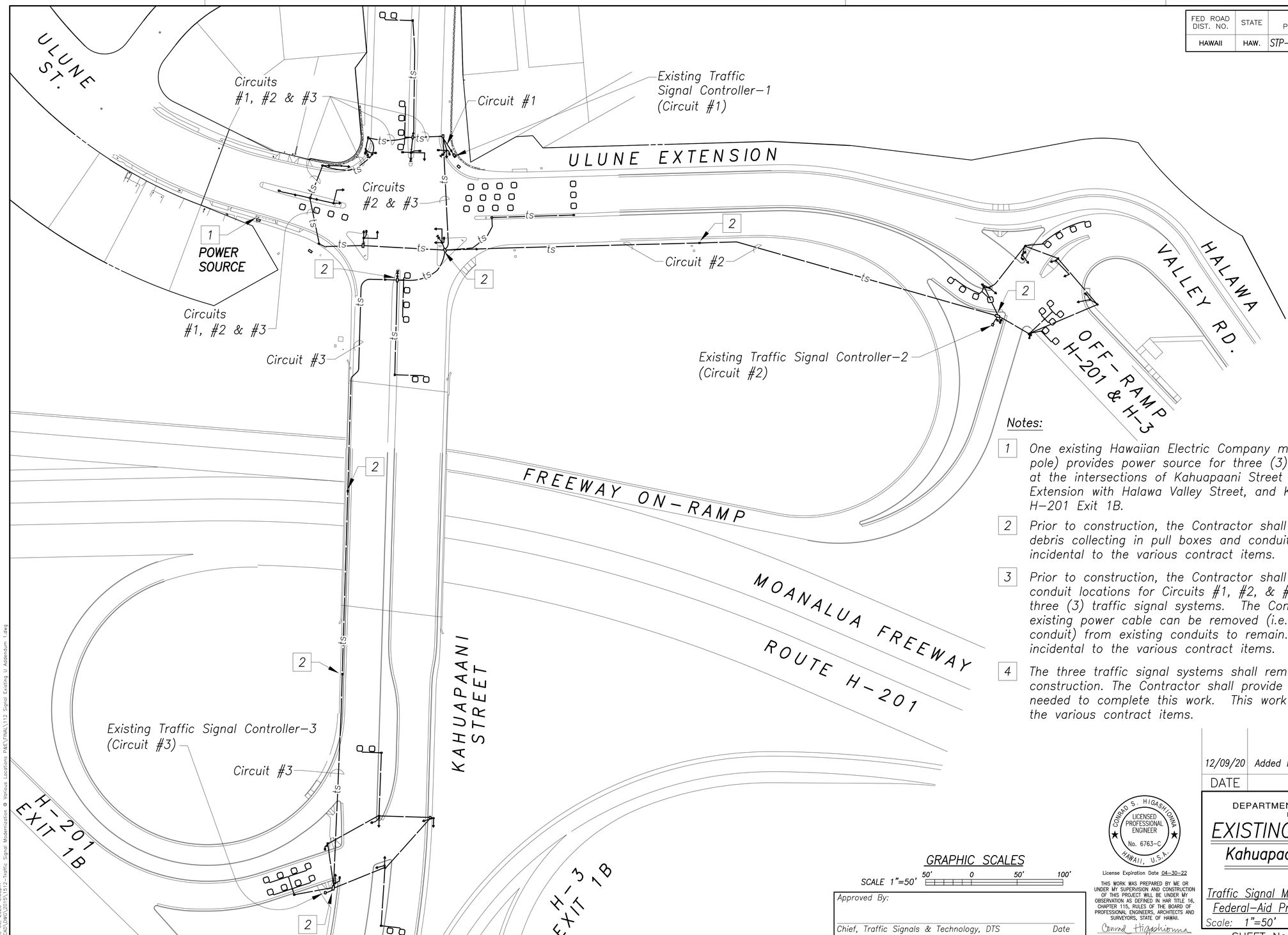
Scale: Date: Oct. 2020

SHEET No. TS-2 OF 113 SHEETS

ADD. 104

Dec 06, 2020-5:57pm
N:\DGN\Work\20151572-Traffic Signal Modernization @ Various Locations P&E\FINAL\104 Signal Notes 2 Addendum 1.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	ADD.112	291



Notes:

1. One existing Hawaiian Electric Company meter (mounted to wood pole) provides power source for three (3) traffic signal systems at the intersections of Kahuapaani Street with Ulune Street, Ulune Extension with Halawa Valley Street, and Kahuapaani Street with H–201 Exit 1B.
2. Prior to construction, the Contractor shall remove sediment and debris collecting in pull boxes and conduits. This work shall be incidental to the various contract items.
3. Prior to construction, the Contractor shall verify pull box and conduit locations for Circuits #1, #2, & #3 providing power to the three (3) traffic signal systems. The Contractor shall verify existing power cable can be removed (i.e., is not stuck in conduit) from existing conduits to remain. This work shall be incidental to the various contract items.
4. The three traffic signal systems shall remain operational during construction. The Contractor shall provide temporary power as needed to complete this work. This work shall be incidental to the various contract items.

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

Dec. 06, 2020–5:58pm
N:\OAD\WO\2015\1512-Traffic Signal Modernization @ Various Locations R&E\FINAL\113 Signal Existing U Addendum 1.dwg

GRAPHIC SCALES
SCALE 1"=50' 50' 0 50' 100'

Approved By:

Chief, Traffic Signals & Technology, DTS Date

CONRAD S. HIGASHIONNA LICENSED PROFESSIONAL ENGINEER No. 6763-C HAWAII, U.S.A.

License Expiration Date 04-30-22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Conrad Higashionna

DATE	REVISION
12/09/20	Added Note 4.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING SIGNAL PLAN

Kahuapaani St & Ulune St

BASE BID

Traffic Signal Modernization, Oahu, Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: 1"=50' Date: Oct. 2020

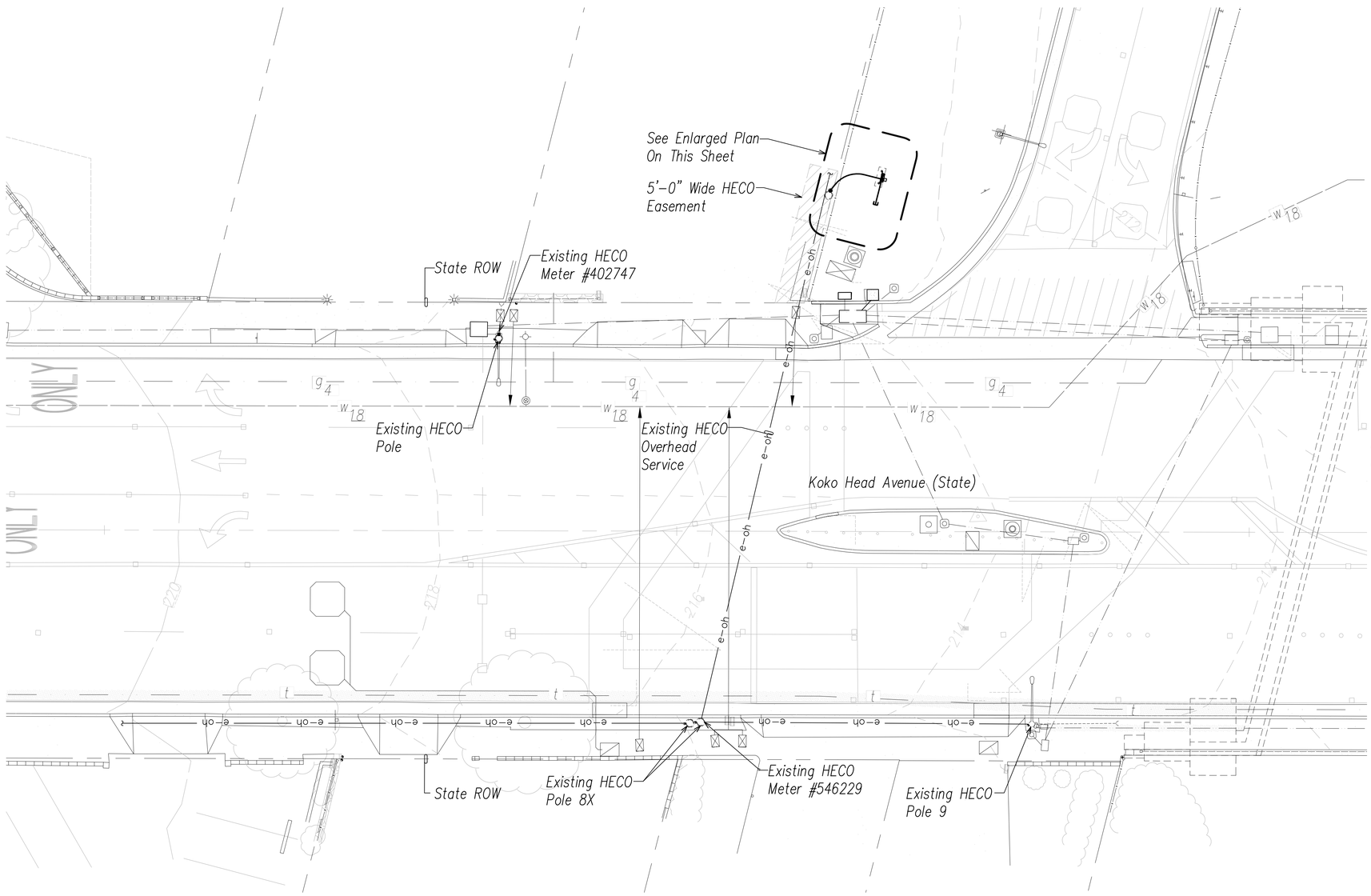
SHEET No. TS–10 OF 113 SHEETS

ADD. 112

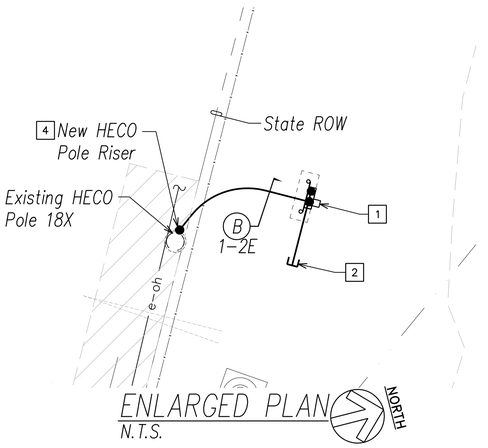
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(163)R	2020	235R	291

NOTES:

1. New Traffic Signal Electrical Equipment, See Detail On Sheet E-18
2. Electrical Conduit Stub Out; See Traffic Signal Sheets For Continuation
3. Duct Run And Riser Location To Be Determined By HECO Underground Inspector.
4. Provide A Riser Stub 12" Minimum up Pole 18x.



KOKO HEAD AVENUE ELECTRICAL PLAN
SCALE: 1"=10'



ENLARGED PLAN
N.T.S.

10' 5' 0 10' 20' 30'
SCALE: 1"=10'
GRAPHIC SCALE

Ronald N. S. Ho & Associates, Inc.
Electrical Engineers

JENSON J. SANTOS
LICENSED PROFESSIONAL ENGINEER
No. 14286-E
HAWAII, U.S.A.

This work was prepared by me or under my supervisions and constructionof this project will be under my observation.
Exp. 04-30-22
Signature 2020.11.30

DATE	REVISION
12/07/20	Move Graphic Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL PLAN
H-1 Exit 26A & Koko Head Ave
ADDITIVE ALTERNATE #3
Traffic Signal Modernization, Oahu - Phase 1
Federal-Aid Project No. STP-0300(163)R

Scale: As Noted Date: Oct. 2020

SHEET No. E-17 OF 19 SHEETS

235R

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

2020-11-30 10:56 AM Z:\KOA\PROJECTS\218154\e017-218154-koko head elec plan add 1