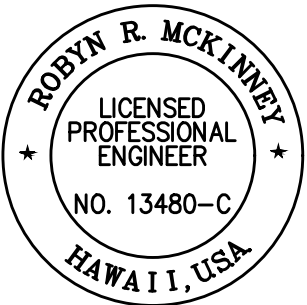


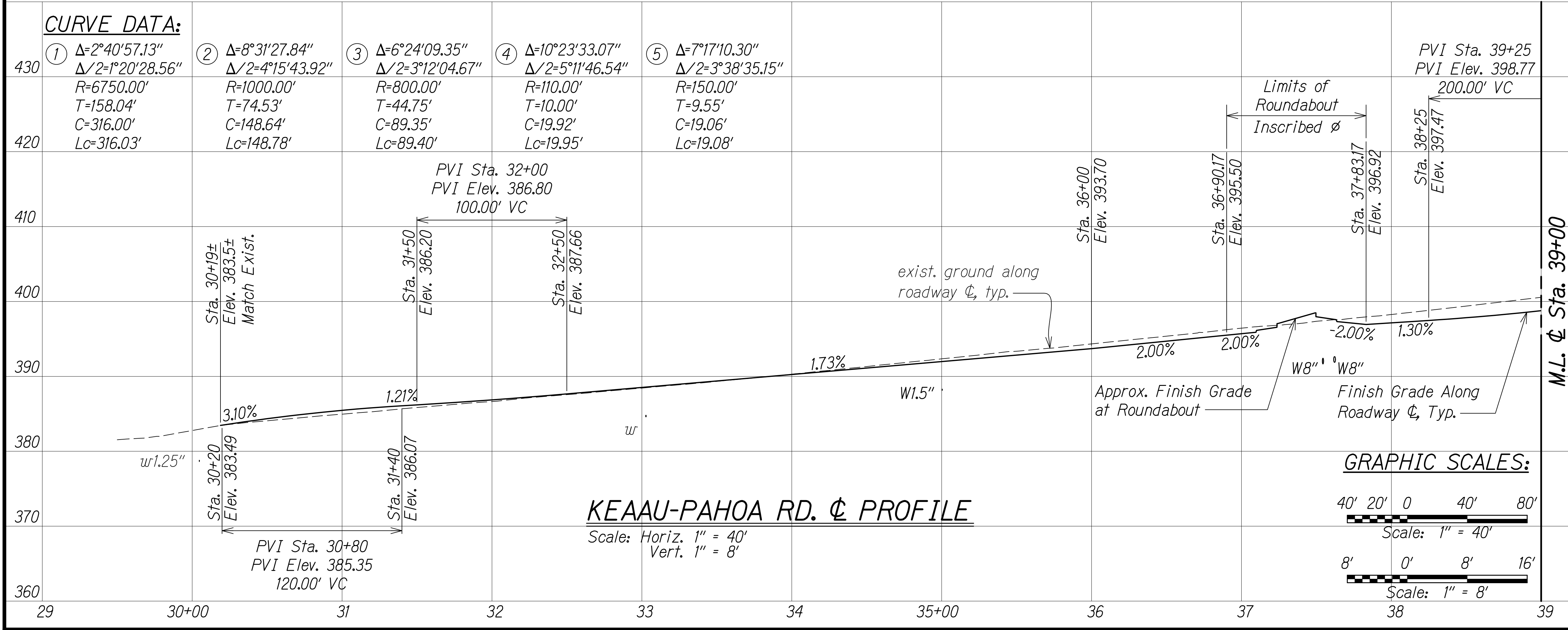
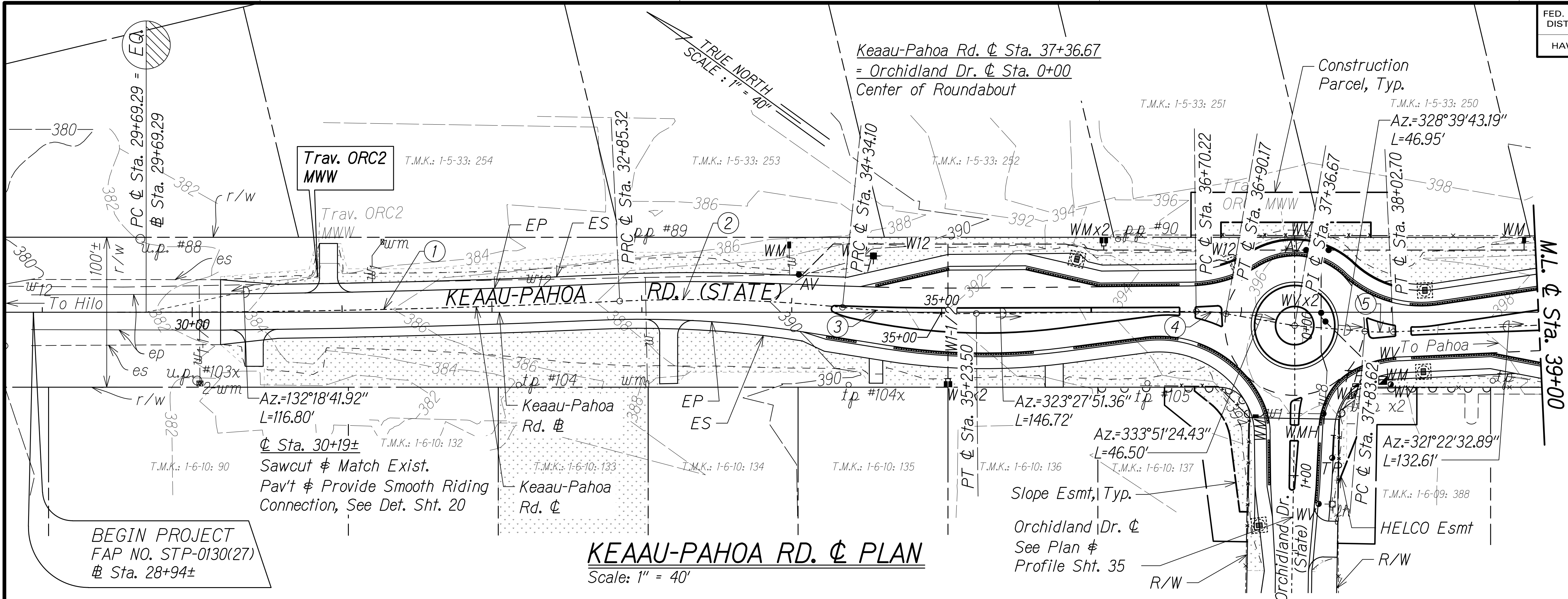
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	31	116

NOTE:
1. See Roadway Plans Shts. 37 to 40 for detailed roadway layout.



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

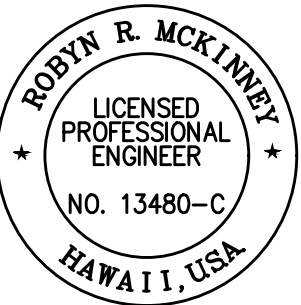
Robyn R. McKinney 04/30/22
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FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	32	116

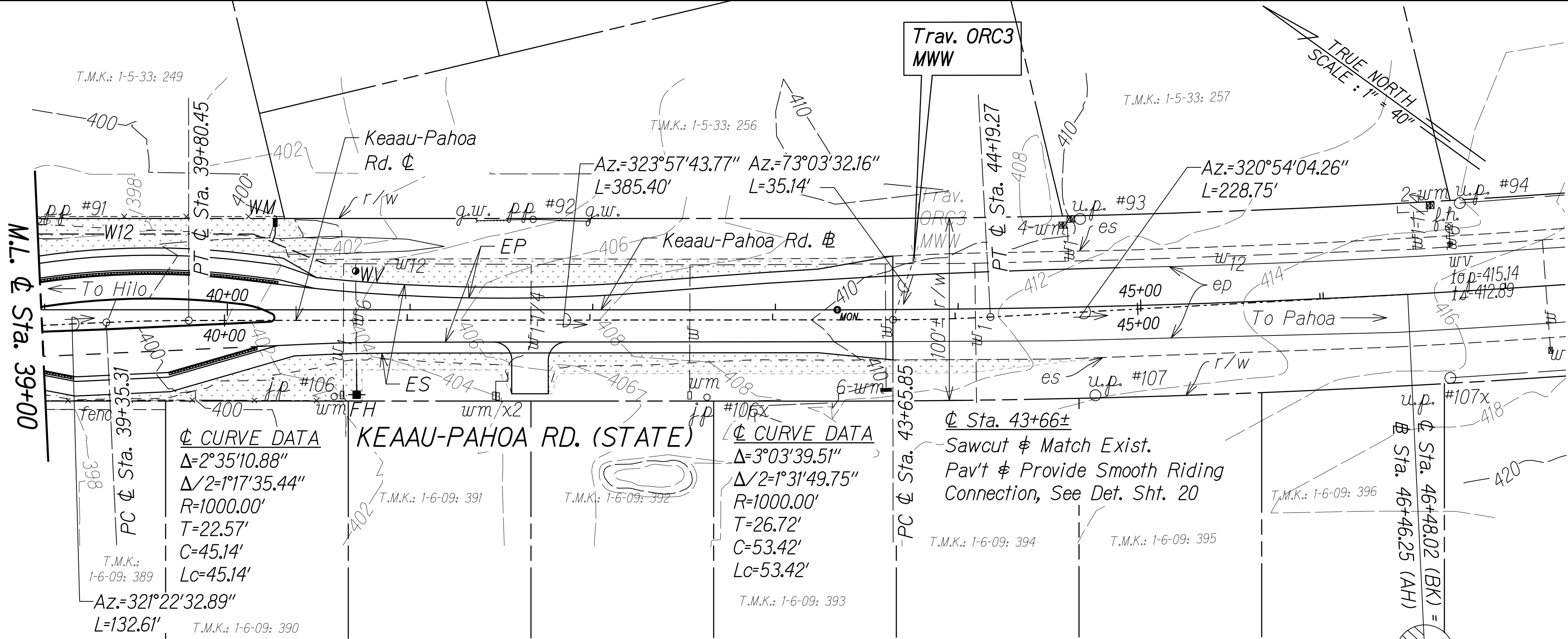
NOTES:

- See Roadway Plans Shts. 37 to 40 for detailed roadway layout.
- For new monuments, see HDOT Std. Plan D-08.



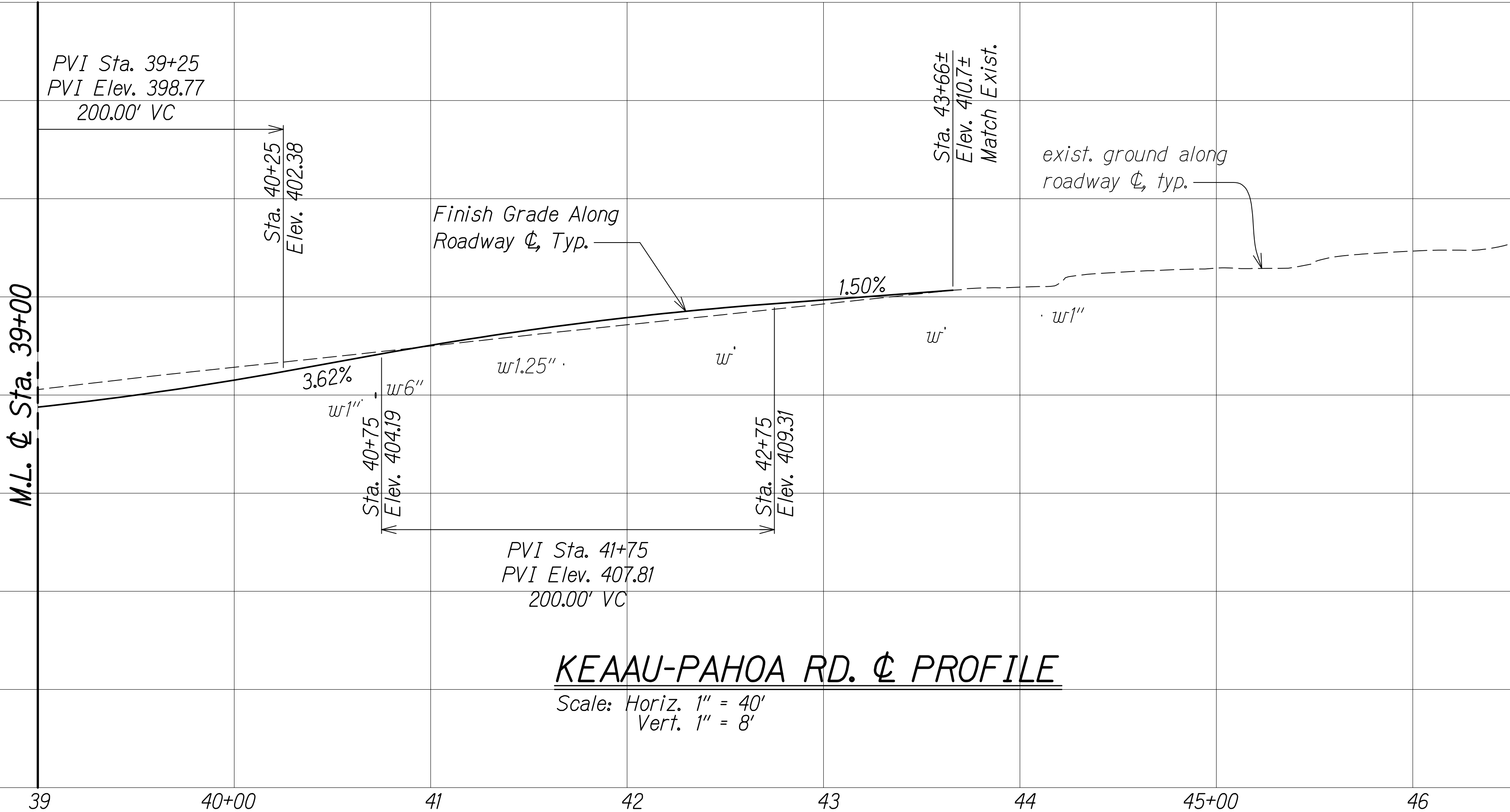
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KEAAU-PAHOA RD. ϕ PLAN

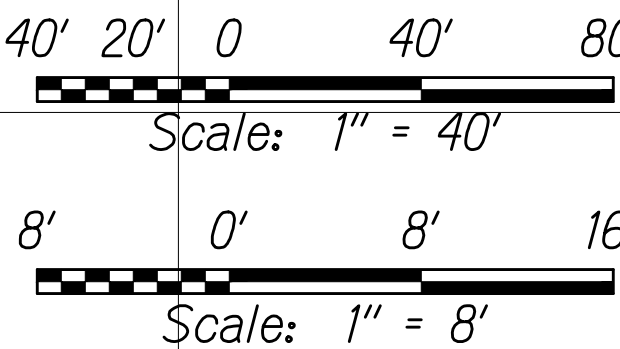
Scale: 1" = 40'



KEAAU-PAHOA RD. ϕ PROFILE

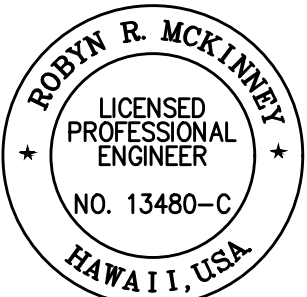
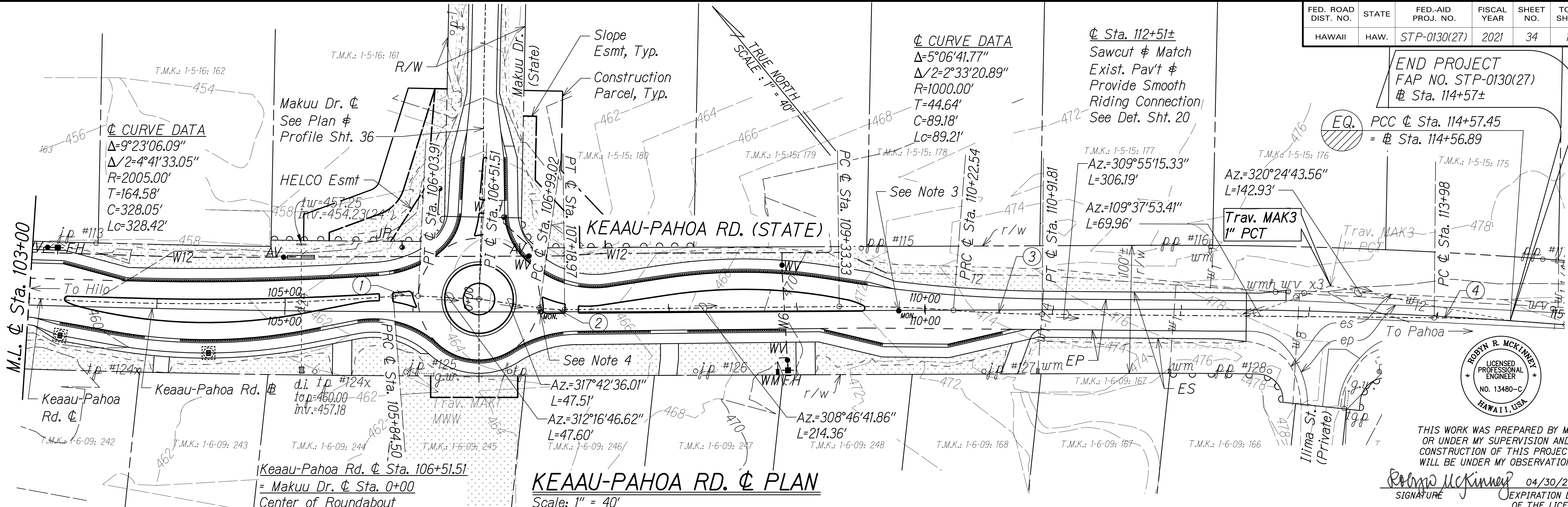
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Vert. 1" = 8'

GRAPHIC SCALES:



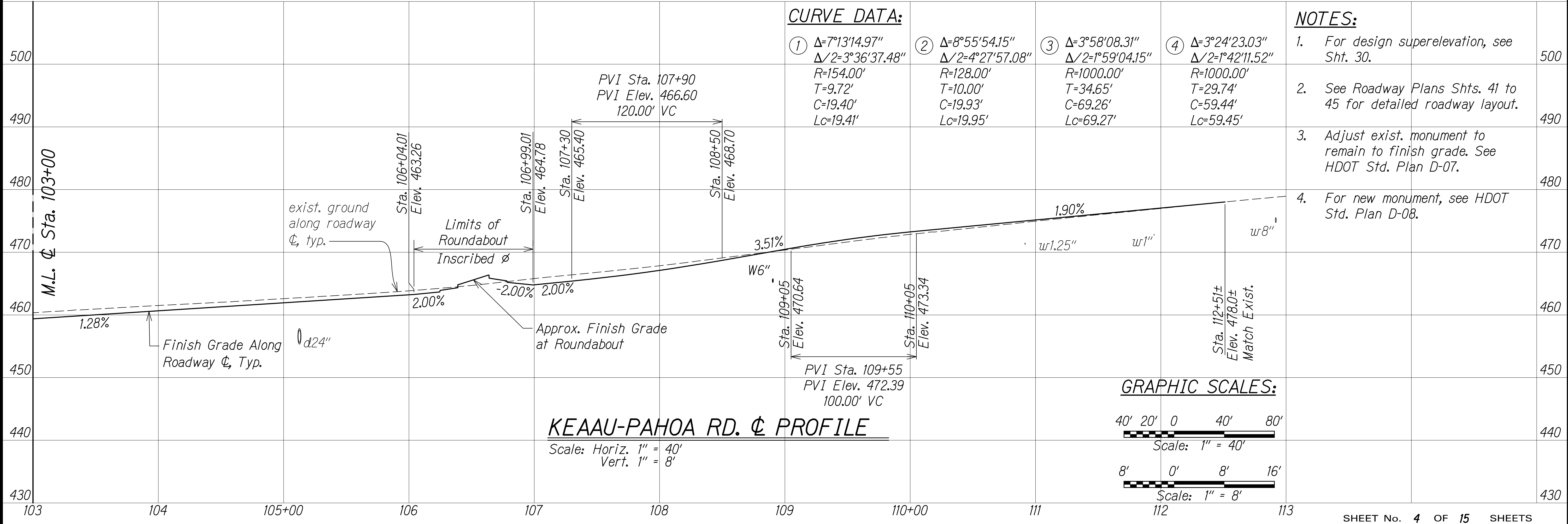
C:_CIVIL_3D_PROJECTS\2012_153.000_KEAAU-PAHOA RD IMPR RTE\130\ROUNDABOUT DESIGN\01 CIVIL DRAWINGS\02 ORCH AND MAKUU\033 - 034 ROADWAY R/W - KP MAKUU.DWG - 8/28/2020 12:36 PM SRODELAS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	34	116



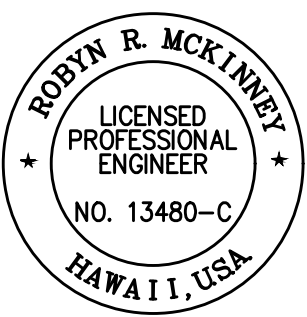
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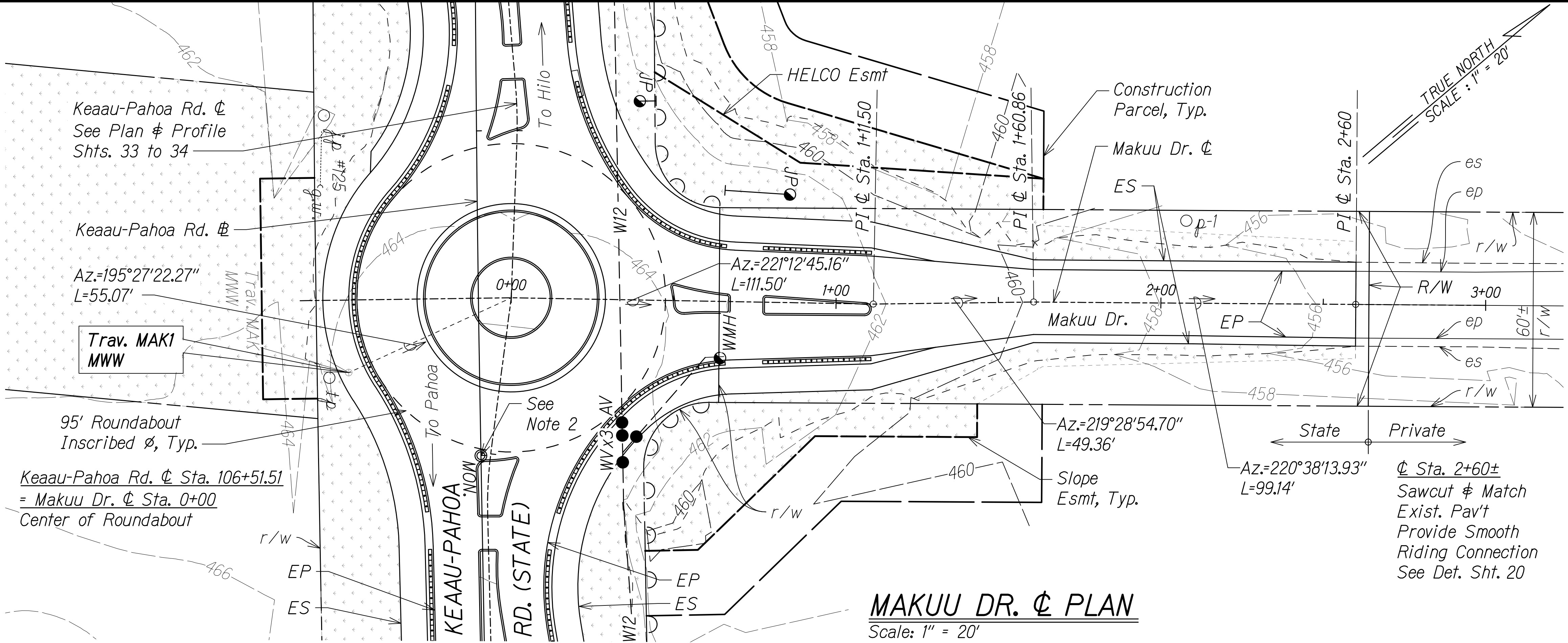
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	36	116

- NOTES:**
- See Roadway Plans Shts. 41 to 45 for detailed roadway layout.
 - For new monuments, see HDOT Std. Plan D-08.

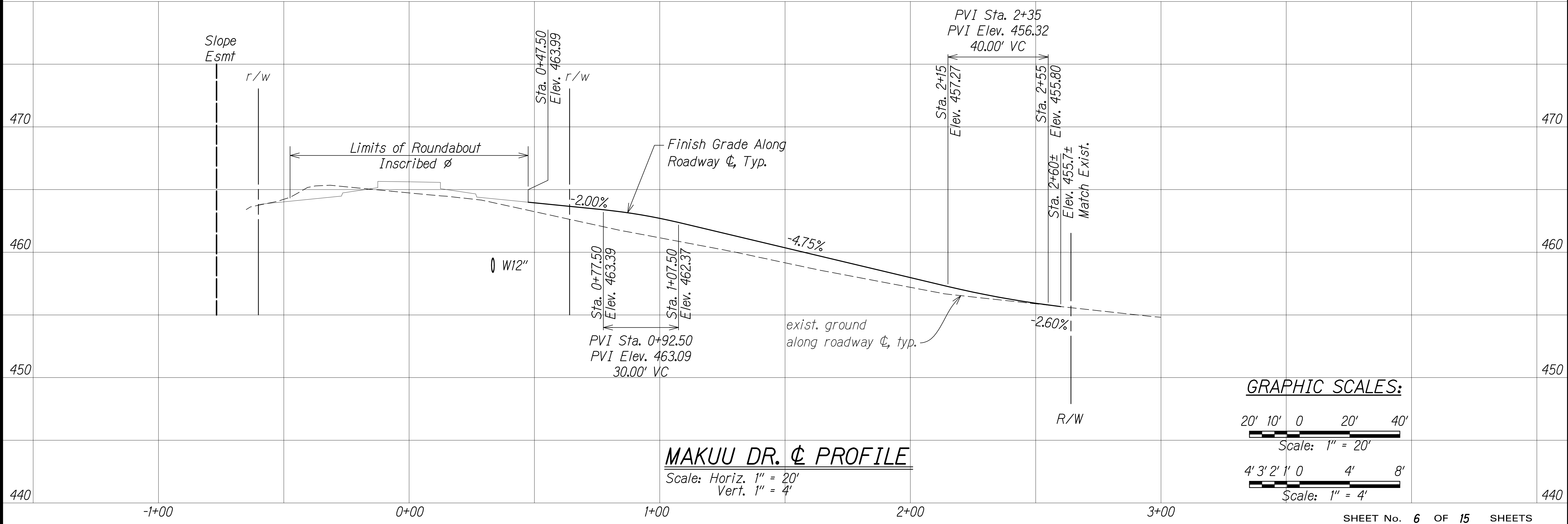


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Robyn R. McKinney 04/30/22
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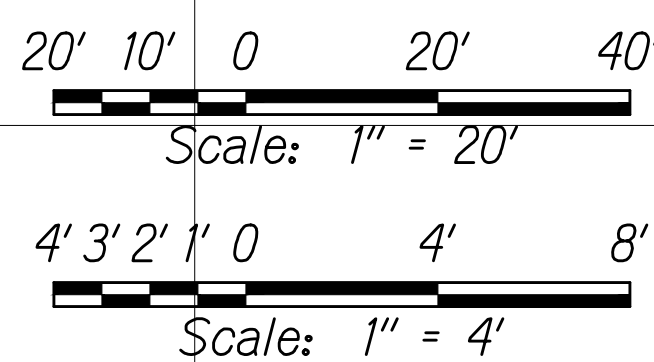


MAKUU DR. CL PLAN
Scale: 1" = 20'

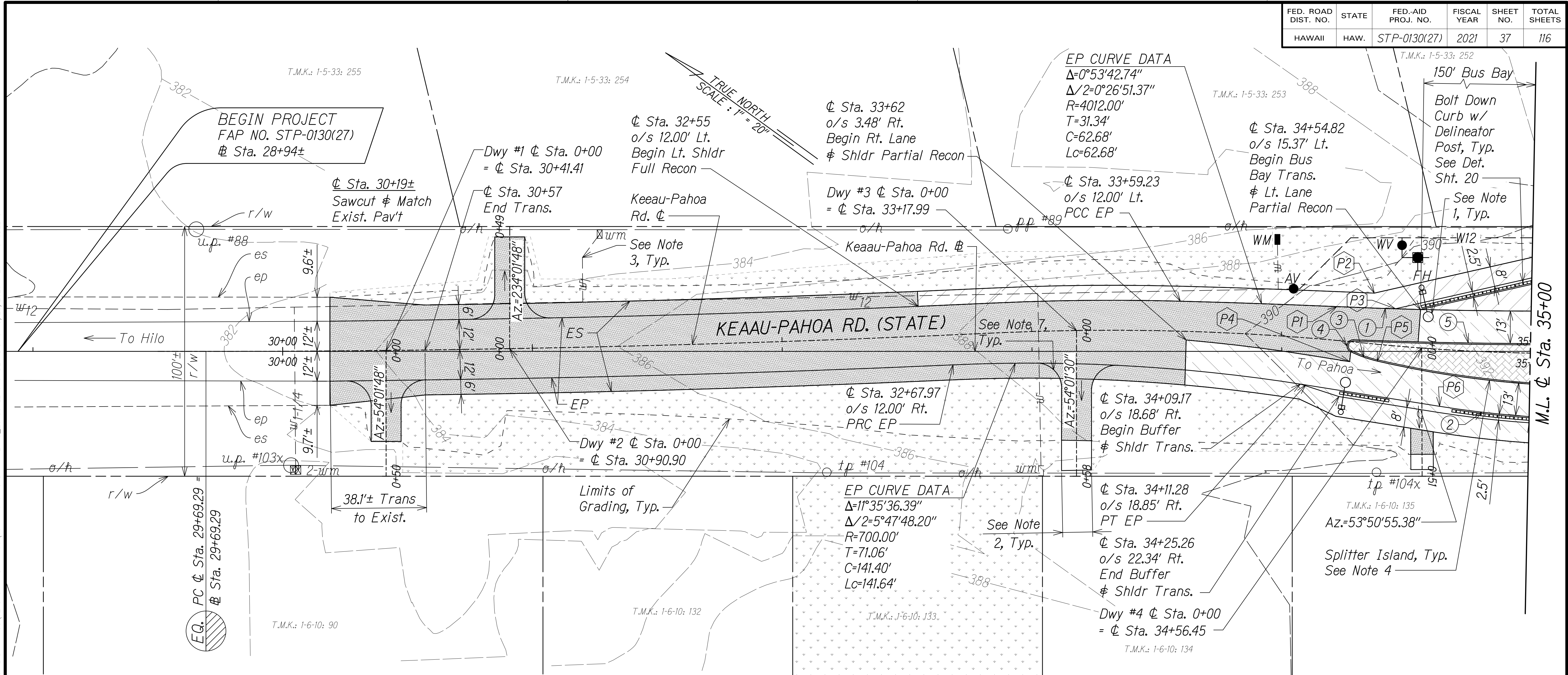


MAKUU DR. CL PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 4'

GRAPHIC SCALES:



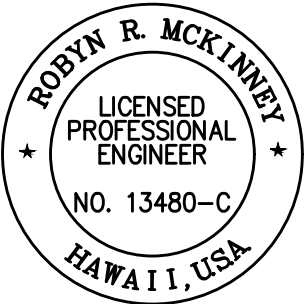
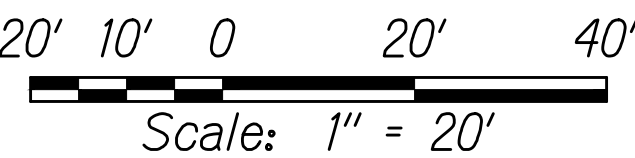
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	37	116



NOTES:

1. Protect all exist. utility poles. For street light pole location, see Electrical Plans.
2. For driveway profiles and typical sections, see Shts. 46 to 49.
3. Field locate and verify all exist. water service laterals.
4. Provide Type 2D Curb per HDOT Std. Plan D-05 around splitter islands.
5. For shallow drywell details, see Sht. 23.
6. For curve, line and point data, see Sht. 40.
7. Unless otherwise noted, driveway edge of pavement radius shall be 10'.

GRAPHIC SCALE:



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Robyn R. McKinney 04/30/22
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENTS
at Orchidland Drive & Makuu Drive
Federal-Aid Project No. STP-0130(27)

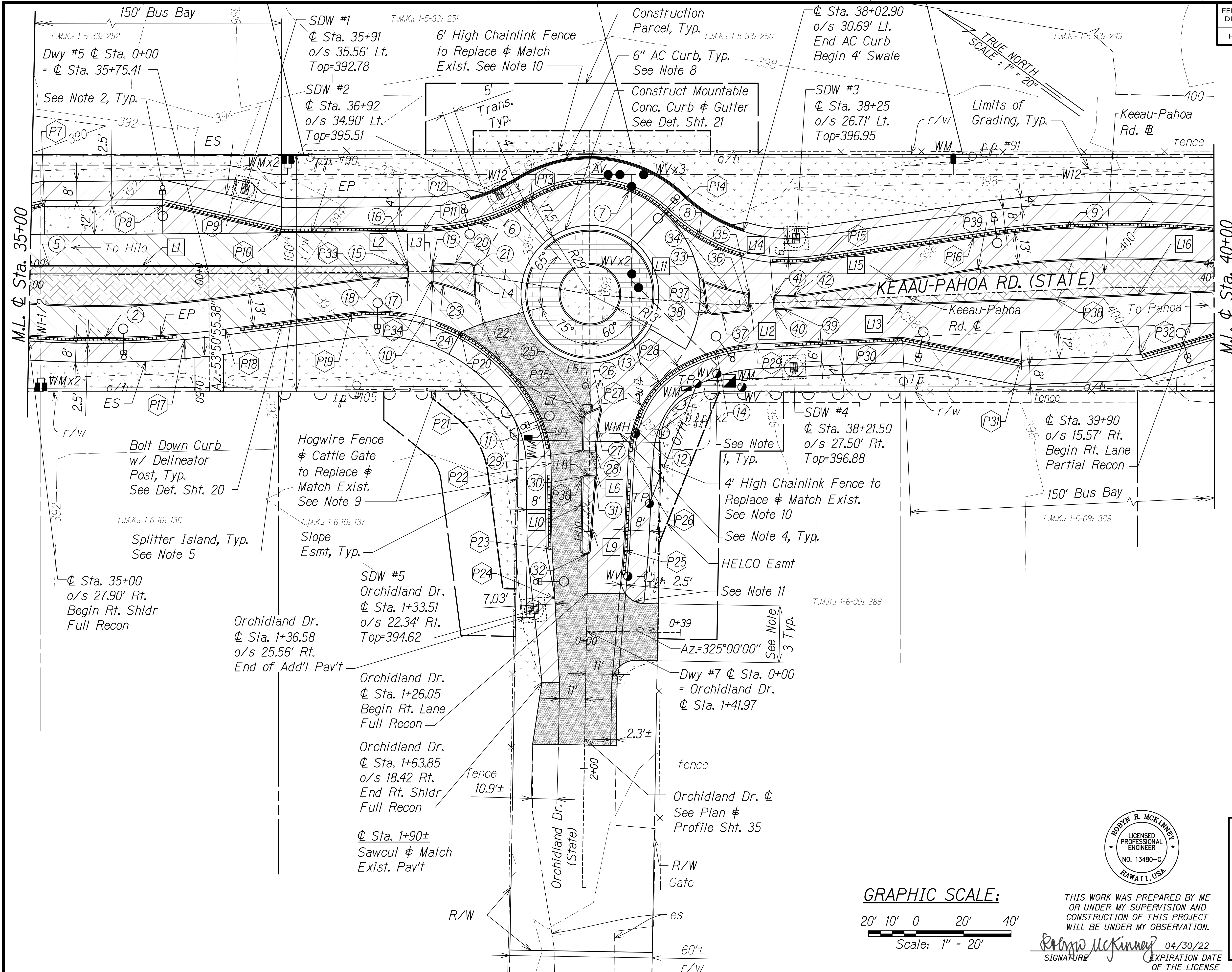
Scale: 1" = 20' Date: Sept, 2020

SHEET No. 7 OF 15 SHEETS

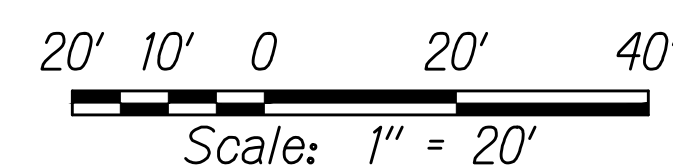
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	38	116

NOTES:

1. *Adjust all DWS exist. WMHs, WVs and WMs to remain to finish grade.*
2. *Protect all exist. utility poles. For street light pole location, see Electrical Plans.*
3. *For driveway profiles and typical sections, see Shts. 46 to 49.*
4. *Field locate and verify all exist. water service laterals.*
5. *Provide Type 2D Curb per HDOT Std. Plan D-05 around splitter islands.*
6. *For shallow drywell details, see Sht. 23.*
7. *For curve, line, and point data, see Sht. 40.*
8. *For Type 6 AC curb detail, see HDOT Std. Plan D-05.*
9. *For hog wire fence detail, see Sht. 22.*
10. *For chainlink fence detail, see HDOT Std. Plan D-02.*
11. *Unless otherwise noted, driveway edge of pavement radius shall be 10'.*

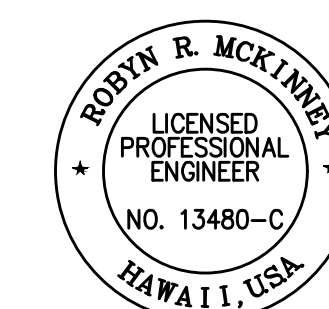


GRAPHIC SCALE:



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WILL BE UNDER MY OBSERVATION.

SIGNATURE Robyn McKinney EXPIRATION DATE 04/30/22
OF THE LICENSE



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

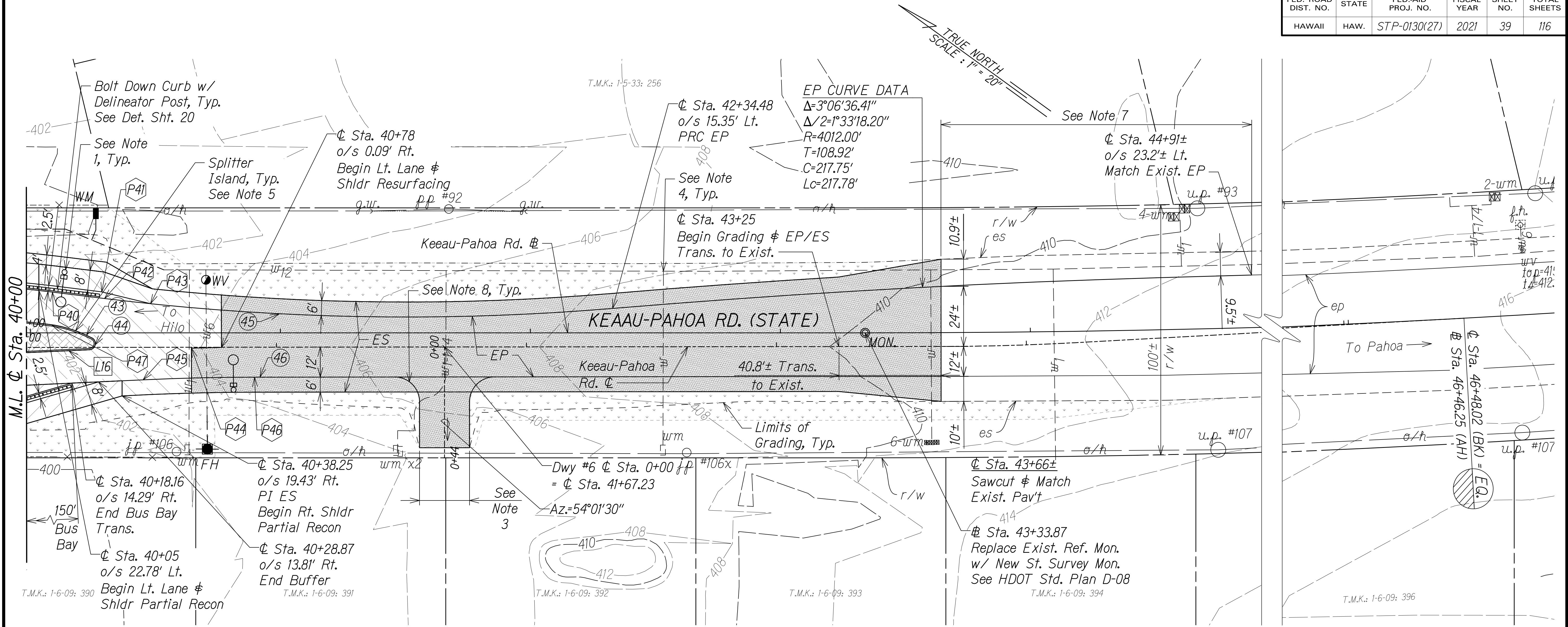
ROADWAY PLAN

KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENTS
at Orchidland Drive & Makuu Drive
Federal-Aid Project No. STP-0130(27)

SHEET No. 8 OF 15 SHEETS

C:\CIVIL 3D PROJECTS\2012_153.000 KEAAU-PAHOA RD IMPR RTE130\ROUNDABOUT DESIGN\01 CIVIL DRAWINGS\02 ORCH AND MAKUU\037 - 040 ROADWAY PLANS_20 SCALE ORCHID.LAND.DWG 9/1/2020 4:21 PM SRODELAS

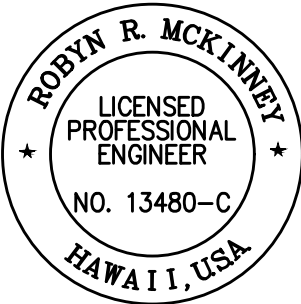
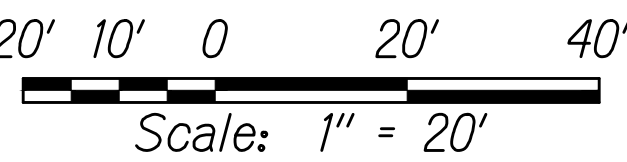
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	39	116



NOTES:

1. Adjust all DWS exist. WMHs, WVs and WMs to remain to finish grade.
2. Protect all exist. utility poles. For street light pole location, see Electrical Plans.
3. For driveway profiles and typical sections, see Shts. 46 to 49.
4. Field locate and verify all exist. water service laterals.
5. Provide Type 2D Curb per HDOT Std. Plan D-05 around splitter islands.
6. For curve, line, and point data, see Sht. 40.
7. Only striping work shall be done in the area noted. There shall be no grading of paving work.
8. Unless otherwise noted, driveway edge of pavement radius shall be 10'.

GRAPHIC SCALE:



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OR UNDER MY SUPERVISION AND
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.

Robyn R. McKinney 04/30/22
SIGNATURE EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

**KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENTS
at Orchidland Drive & Makuu Drive
Federal-Aid Project No. STP-0130(27)**

Scale: 1" = 20' Date: Sept, 2020

SHEET No. 9 OF 15 SHEETS

C:\CIVIL 3D PROJECTS\2012_153.000_KEAAU-PAHOA RD IMPR RTE130\ROUNDABOUT DESIGN\01 CIVIL DRAWINGS\02 ORCH AND MAKUU\037 - 040 ROADWAY PLANS_20 SCALE ORCHIDLAND.DWG 8/25/2020 5:16 PM KSAW

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	40	116

LINE DATA:

LINE	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16
Az	323°53'22.13"	54°05'06.78"	234°05'06.78"	51°32'10.48"	302°25'50.54"	145°00'00.06"	235°00'50.03"	325°00'00.06"	58°39'07.75"	235°00'50.03"	226°07'26.34"	52°26'54.29"	141°53'33.57"	232°26'54.29"	315°29'10.51"	141°22'32.89"
L	140.74'	3.90'	6.02'	10.37'	4.89'	4.00'	13.00'	3.93'	30.51'	30.38'	10.20'	5.78'	110.19'	3.92'	71.34'	92.05'

CURVE DATA:

CURVE	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱
Δ	0°58'02.52"	16°31'56.58"	13°01'25.77"	156°13'14.04"	2°22'26.48"	30°50'45.00"	74°42'09.97"	51°50'05.82"	15°33'51.20"	70°41'20.53"	26°00'55.79"	27°26'43.49"	29°30'29.62"	27°30'42.57"	0°38'03.54"	90°49'48.19"	94°27'08.58"	11°59'12.46"
Δ/2	0°29'01.26"	8°15'58.29"	6°30'42.88"	78°06'37.02"	1°11'13.24"	15°25'22.50"	37°21'04.98"	25°55'02.91"	7°46'55.60"	35°20'40.27"	13°00'27.89"	13°43'21.74"	14°45'14.81"	13°45'21.28"	0°19'01.77"	45°24'54.10"	47°13'34.29"	5°59'36.23"
R	1988.00'	413.00'	50.00'	2.50'	2001.00'	90.00'	46.50'	76.50'	413.00'	77.00'	50.00'	50.00'	40.00'	72.00'	500.00'	1.00'	1.00'	84.00'
T	16.78'	60.00'	5.71'	11.87'	41.46'	24.83'	35.49'	37.18'	56.44'	54.61'	11.55'	12.21'	10.53'	17.63'	2.77'	1.01'	1.08'	8.82'
C	33.56'	118.76'	11.34'	4.89'	82.90'	47.87'	56.42'	66.87'	111.85'	89.09'	22.51'	23.72'	20.37'	34.24'	5.54'	1.42'	1.47'	17.54'
Lc	33.56'	119.17'	11.37'	6.82'	82.91'	48.45'	60.63'	69.21'	112.19'	95.00'	22.70'	23.95'	20.60'	34.57'	5.54'	1.59'	1.65'	17.57'

CURVE	⑳	㉑	㉒	㉓	㉔	㉕	㉖	㉗	㉘	㉙	㉚	㉛	㉜	㉝	㉞	㉟	㊱	㊲
Δ	1°35'28.56"	91°14'42.78"	116°55'38.78"	11°44'22.18"	77°21'39.70"	67°25'00.51"	125°15'21.17"	12°41'11.65"	90°00'00.00"	90°00'49.97"	89°59'10.03"	93°39'07.69"	176°11'27.70"	119°03'41.02"	12°00'18.54"	79°16'05.47"	87°12'26.18"	1°37'21.35"
Δ/2	0°47'44.28"	45°37'21.39"	58°27'49.39"	5°52'11.09"	38°40'49.85"	33°42'30.25"	62°37'40.59"	6°20'35.83"	45°00'00.00"	45°00'24.99"	44°59'35.01"	46°49'33.85"	88°05'43.85"	59°31'50.51"	6°00'09.27"	39°38'02.73"	43°36'13.09"	0°48'40.68"
R	500.00'	3.00'	1.00'	84.00'	1.00'	3.00'	1.00'	71.00'	1.00'	1.00'	1.00'	1.00'	2.00'	1.00'	86.00'	1.00'	1.00'	500.00'
T	6.94'	3.07'	1.63'	8.64'	0.80'	2.00'	1.93'	7.89'	1.00'	1.00'	1.00'	1.07'	60.15'	1.70'	9.04'	0.83'	0.95'	7.08'
C	13.89'	4.29'	1.70'	17.18'	1.25'	3.33'	1.78'	15.69'	1.41'	1.41'	1.41'	1.46'	4.00'	1.72'	17.99'	1.28'	1.38'	14.16'
Lc	13.89'	4.78'	2.04'	17.21'	1.35'	3.53'	2.19'	15.72'	1.57'	1.57'	1.57'	1.63'	6.15'	2.08'	18.02'	1.38'	1.52'	14.16'

CURVE	㊳	㊴	㊵	㊶	㊷	㊸	㊹	㊺
Δ	0°51'49.17"	91°25'09.89"	92°46'02.58"	9°43'46.36"	20°58'43.33"	149°20'47.85"	11°48'28.42"	2°35'10.88"
Δ/2	0°25'54.59"	45°42'34.94"	46°23'01.29"	4°51'53.18"	10°29'21.66"	74°40'23.93"	5°54'14.21"	1°17'35.44"
R	500.00'	1.00'	1.00'	86.00'	50.00'	2.50'	988.00'	988.00'
T	3.77'	1.03'	1.05'	7.32'	9.26'	9.12'	102.17'	22.30'
C	7.54'	1.43'	1.45'	14.59'	18.21'	4.82'	203.25'	44.59'
Lc	7.54'	1.60'	1.62'	14.60'	18.31'	6.52'	203.61'	44.60'

POINT DATA:

<div>P1</div> <div>☒ Sta. 34+21.12 o/s 13.45' Lt. PCC EP</div>	<div>P2</div> <div>☒ Sta. 34+35.37 o/s 20.28' Lt. PI ES</div>	<div>P3</div> <div>☒ Sta. 34+44.60 o/s 14.83' Lt. Begin Buffer</div>	<div>P4</div> <div>☒ Sta. 34+28.26 o/s 8.00' Rt. End Median Resurfacing</div>	<div>P5</div> <div>☒ Sta. 34+39.26 o/s 6.70' Rt. Splitter Island</div>	<div>P6</div> <div>☒ Sta. 34+65.06 o/s 22.77' Rt. PC EP</div>	<div>P7</div> <div>☒ Sta. 35+05.70 o/s 28.92' Lt. Bus Pad</div>	<div>P8</div> <div>☒ Sta. 35+56.22 o/s 29.00' Lt. Bus Pad</div>	<div>P9</div> <div>☒ Sta. 35+87.45 o/s 39.50' Lt. End of Add'l Pav't</div>
<div>P10</div> <div>☒ Sta. 36+06.22 o/s 17.00' Lt. End Bus Bay Trans.</div>	<div>P11</div> <div>☒ Sta. 36+65.81 o/s 17.00' Lt. PT EP</div>	<div>P12</div> <div>☒ Sta. 36+83.27 o/s 31.36' Lt. End 4' Swale Begin AC Curb</div>	<div>P13</div> <div>☒ Sta. 37+06.02 o/s 34.97' Lt. PRC EP</div>	<div>P14</div> <div>☒ Sta. 37+65.72 o/s 36.31' Lt. PRC EP</div>	<div>P15</div> <div>☒ Sta. 38+33.37 o/s 16.60' Lt. PC EP</div>	<div>P16</div> <div>☒ Sta. 38+99.64 o/s 23.44' Lt. PT EP</div>	<div>P17</div> <div>☒ Sta. 35+65 o/s 27.60' Rt. End Rt. Shldr Full Recon</div>	<div>P18</div> <div>☒ Sta. 35+82.17 o/s 23.38' Rt. PT EP</div>
<div>P19</div> <div>☒ Sta. 36+35.25 o/s 16.94' Rt. PRC EP</div>	<div>P20</div> <div>☒ Sta. 36+84.46 o/s 24.90 Rt. End Rt. Buffer & Shldr Full Recon</div>	<div>P21</div> <div>Orchidland Dr. ☒ Sta. 0+49.44 o/s 21.87' Rt. PCC EP</div>	<div>P22</div> <div>Orchidland Dr. ☒ Sta. 0+71.52 o/s 16.19' Rt. PT EP</div>	<div>P23</div> <div>Orchidland Dr. ☒ Sta. 1+07.67 o/s 15.09' Rt. PI EP Begin Buffer & Shldr Trans.</div>	<div>P24</div> <div>Orchidland Dr. ☒ Sta. 1+27.67 o/s 13.63' Rt. End Buffer</div>	<div>P25</div> <div>Orchidland Dr. ☒ Sta. 1+07.67 o/s 15.00' Lt. PI EP</div>	<div>P26</div> <div>Orchidland Dr. ☒ Sta. 0+67.45 o/s 16.34' Lt. PC EP</div>	<div>P27</div> <div>Orchidland Dr. ☒ Sta. 0+45.07 o/s 22.87' Lt. PCC EP</div>
<div>P28</div> <div>☒ Sta. 37+76.46 o/s 27.48' Rt. PCC EP</div>	<div>P29</div> <div>☒ Sta. 38+06.34 o/s 17.00' Rt. PT EP</div>	<div>P30</div> <div>☒ Sta. 38+67.46 o/s 17.00' Rt. Begin Bus Bay Trans.</div>	<div>P31</div> <div>☒ Sta. 39+17.46 o/s 29.00' Rt. Bus Pad</div>	<div>P32</div> <div>☒ Sta. 39+68.41 o/s 28.47' Rt. Bus Pad</div>	<div>P33</div> <div>☒ Sta. 36+40.77 o/s 3.17' Rt. Splitter Island</div>	<div>P34</div> <div>☒ Sta. 36+69.38 o/s 3.82' Rt. Splitter Island</div>		
<div>P35</div> <div>Orchidland Dr. ☒ Sta. 0+52.48 o/s 2.98' Rt. Splitter Island</div>	<div>P36</div> <div>Orchidland Dr. ☒ Sta. 0+77.50 o/s 3.00' Rt. Splitter Island</div>	<div>P37</div> <div>☒ Sta. 37+86.19 o/s 2.04' Rt. Splitter Island</div>	<div>P38</div> <div>☒ Sta. 39+33.01 o/s 4.00' Rt. Splitter Island</div>	<div>P39</div> <div>☒ Sta. 39+00.97 o/s 10.50' Lt. Splitter Island</div>	<div>P40</div> <div>☒ Sta. 40+10.47 o/s 22.14' Lt. PC EP</div>	<div>P41</div> <div>☒ Sta. 40+30.14 o/s 22.21' Lt. End Buffer & Swale Trans.</div>		
<div>P42</div> <div>☒ Sta. 40+31.27 o/s 19.55' Lt. PT EP</div>	<div>P43</div> <div>☒ Sta. 40+49.70 o/s 17.44' Lt. Begin Buffer & Swale Trans.</div>	<div>P44</div> <div>☒ Sta. 40+66 o/s 0.32' Rt. Begin Rt. Lane & Shldr Resurfacing</div>	<div>P45</div> <div>☒ Sta. 40+46.67 o/s 13.01' Rt. PC EP</div>	<div>P46</div> <div>☒ Sta. 40+91.25 o/s 12.00' Rt. PT EP</div>				

ROBYN R. MCKINNEY

LICENSED
PROFESSIONAL
ENGINEER

NO. 13480-C

HAWAII, USA

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

Robyn McKinney

SIGNATURE

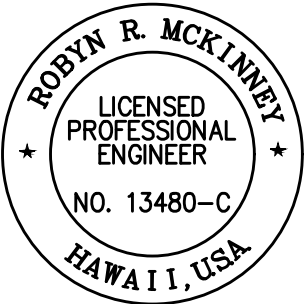
04/30/22

EXPIRATION DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURVE DATA

KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENT
at Orchidland Drive & Makua
Federal-Aid Project No. STP
Scale: N/A Date: Sep



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Robyn R. McKinney 04/30/22
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OF THE LICENSE

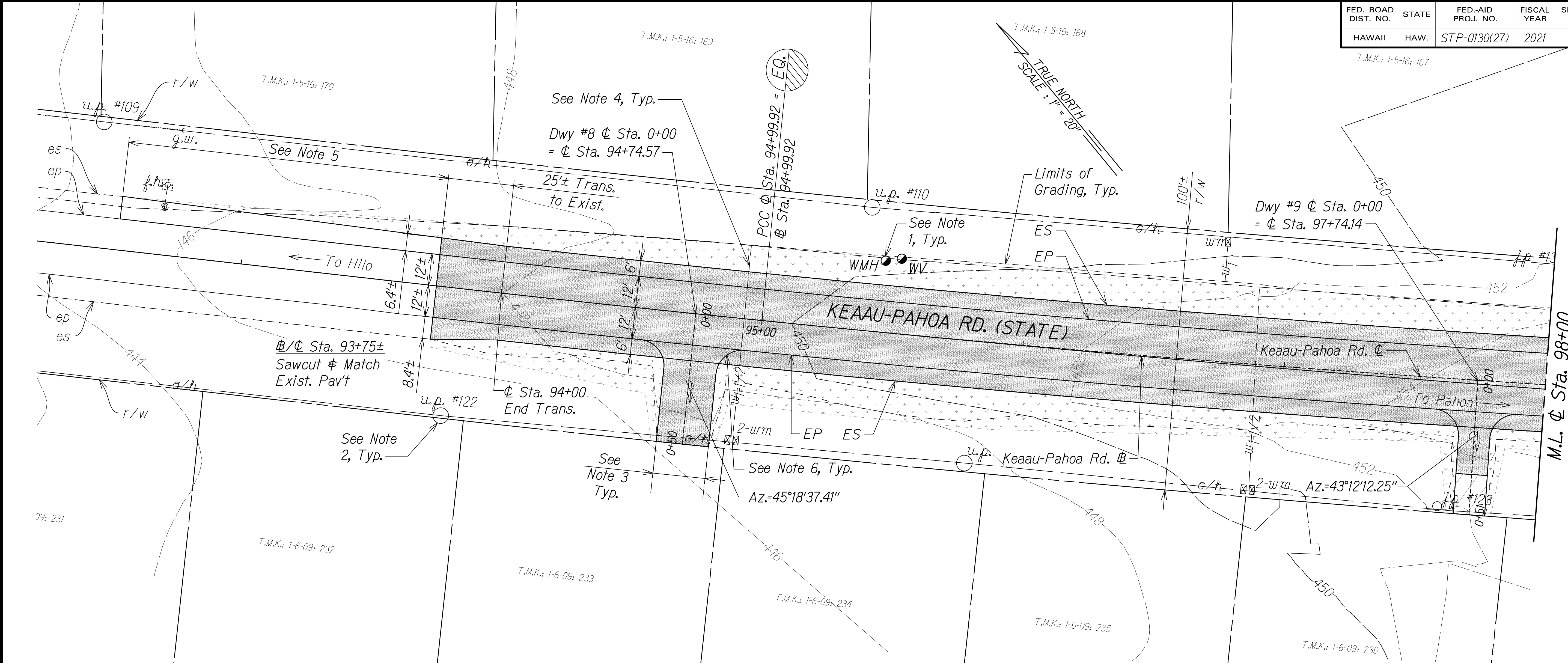
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURVE DATA
KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENTS
at Orchidland Drive & Makuu Drive
Federal-Aid Project No. STP-0130(27)

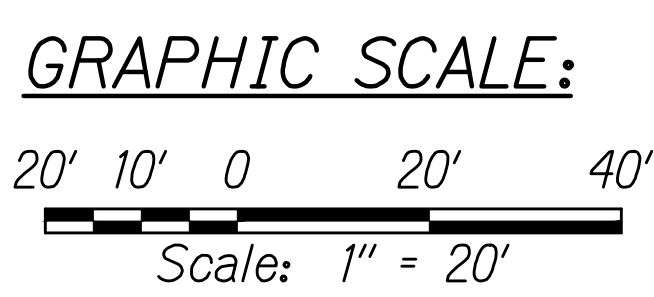
Scale: N/A Date: Sept, 2020

SHEET No. 10 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	41	116



- NOTES:**
1. Adjust all DWS exist. WMHs, WVs and WMs to remain to finish grade.
 2. Protect all exist. utility poles. For street light pole location, see Electrical Plans.
 3. For driveway profiles and typical sections, see Shts. 46 to 49.
 4. Field locate and verify all existing water service laterals.
 5. Only removal of exist. AC and striping work shall be done in the area noted. There shall be no grading or paving work.
 6. Unless otherwise noted, driveway edge of pavement radius shall be 10'.



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

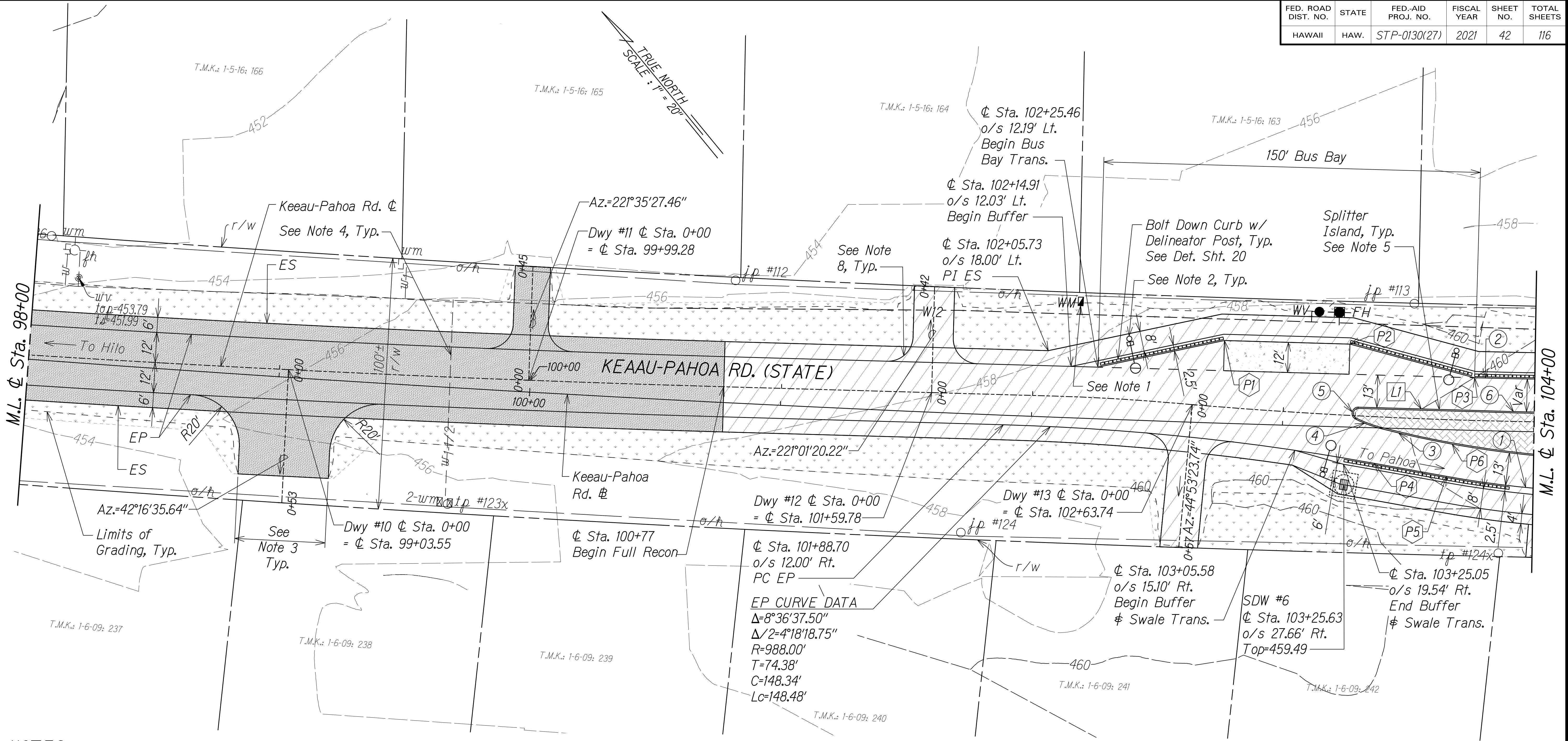
ROADWAY PLAN

**KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENTS
at Orchidland Drive & Makuu Drive
Federal-Aid Project No. STP-0130(27)**

Scale: 1" = 20' Date: Sept, 2020

SHEET No. 11 OF 15 SHEETS

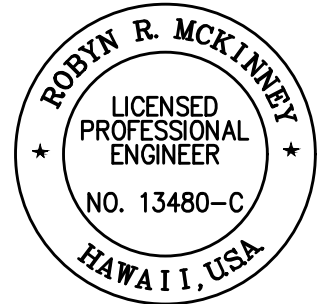
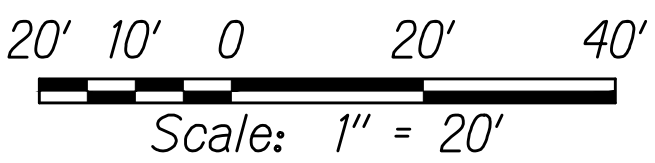
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	42	116



NOTES:

1. Adjust all DWS exist. WMHs, WVs and WMs to remain to finish grade.
2. Protect all exist. utility poles. For street light pole location, see Electrical Plans.
3. For driveway profiles and typical sections, see Shts. 46 to 49.
4. Field locate and verify all existing water service laterals.
5. Provide Type 2D Curb per HDOT Std. Plan D-05 around splitter islands.
6. For shallow drywell details, see Sht. 23.
7. For curve, line, and point data, see Sht. 45.
8. Unless otherwise noted, driveway edge of pavement radius shall be 10'.

GRAPHIC SCALE:



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

**KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENTS
at Orchidland Drive & Makuu Drive
Federal-Aid Project No. STP-0130(27)**

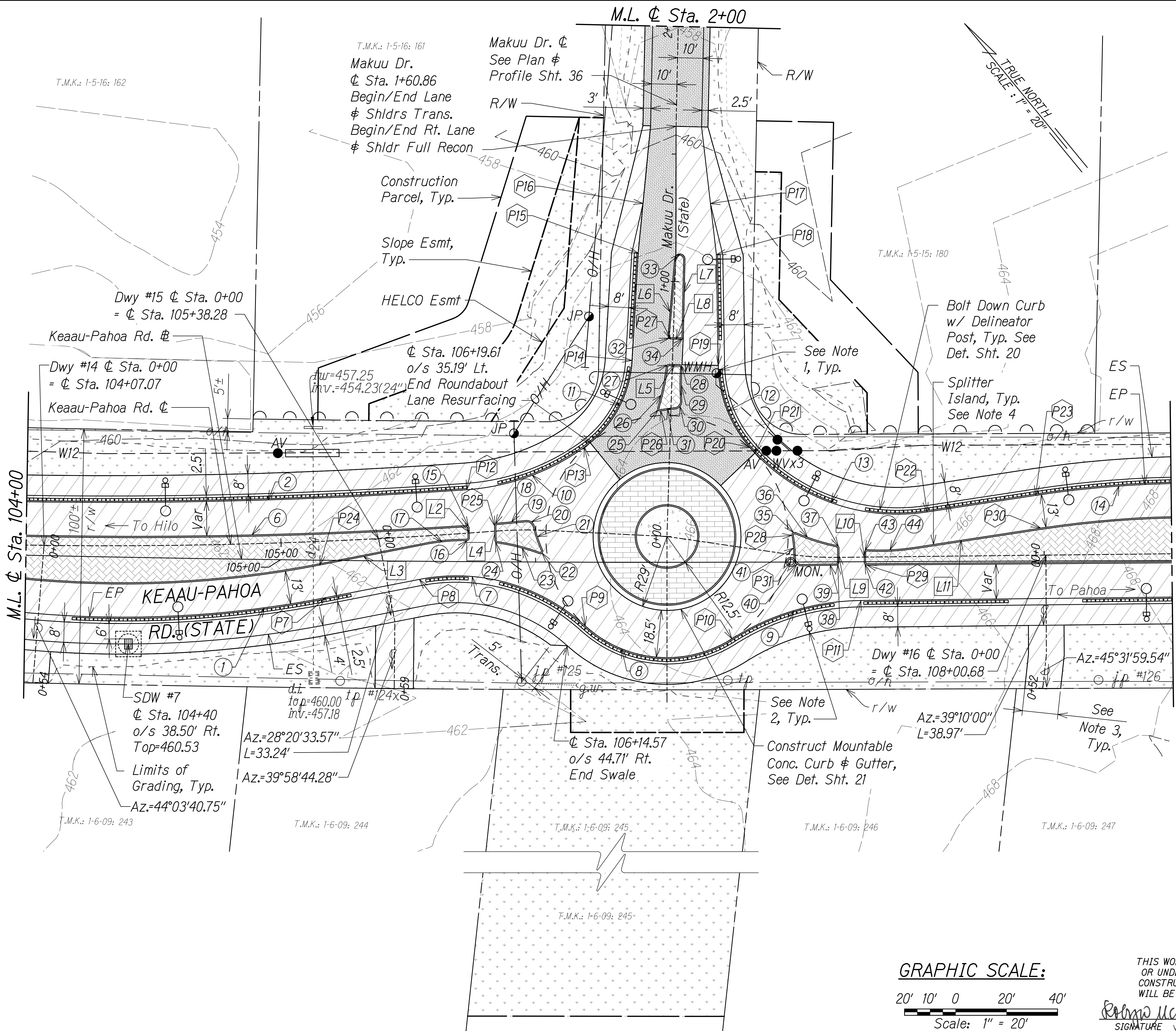
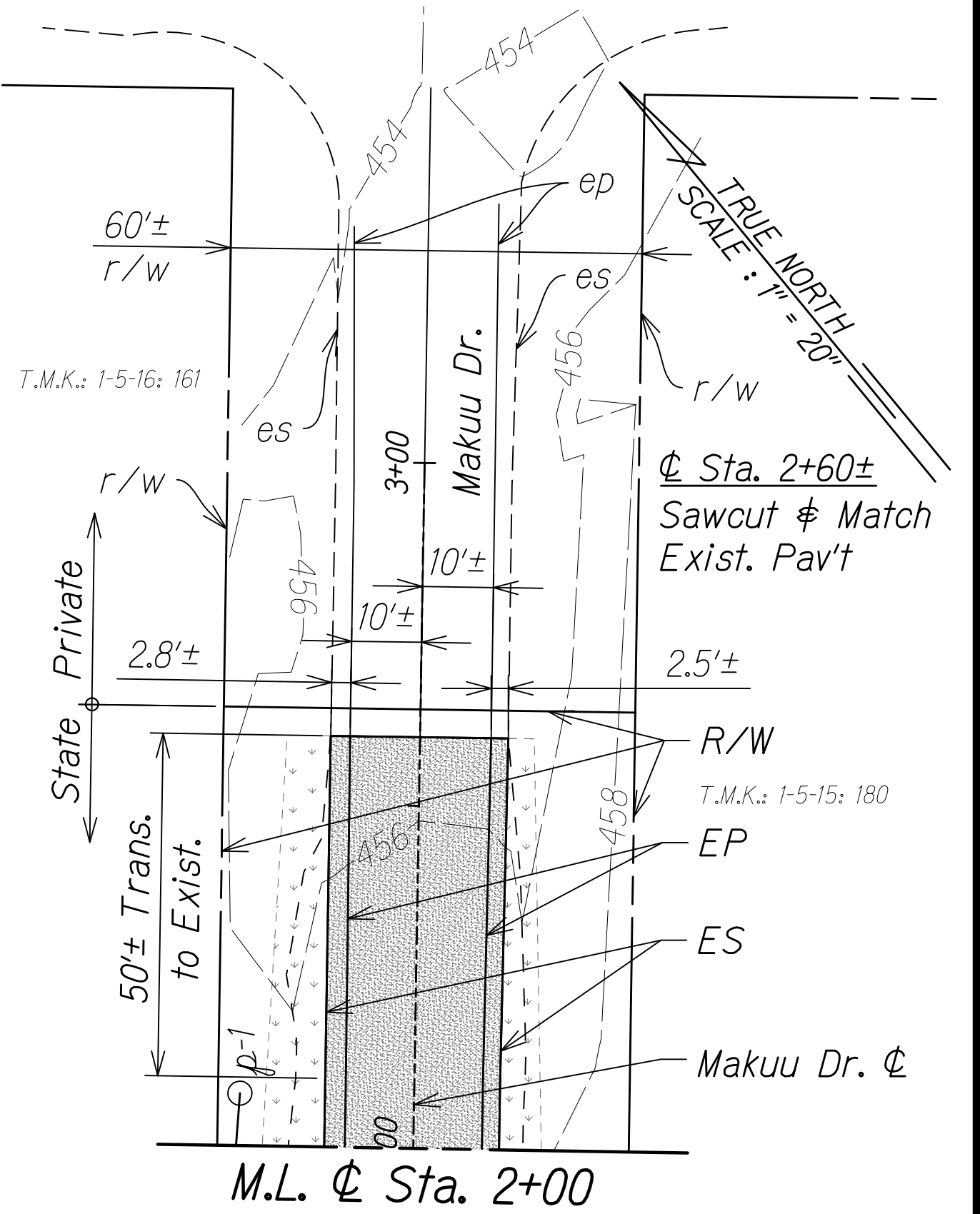
Scale: 1" = 20' Date: Sept, 2020

SHEET No. 12 OF 15 SHEETS

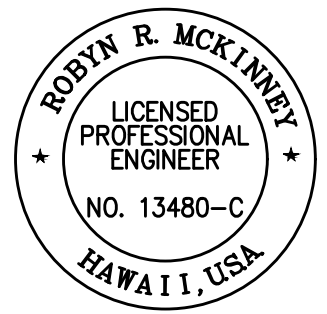
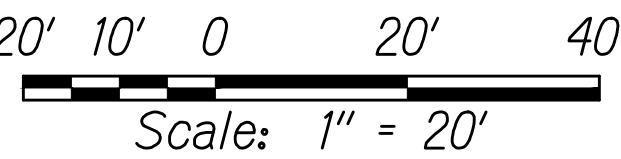
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	43	116

NOTES:

- Adjust all DWS exist. WMHs, WVs and WMs to remain to finish grade.
- Protect all exist. utility poles. For street light pole location, see Electrical Plans.
- For driveway profiles and typical sections, see Shts. 46 to 49.
- Provide Type 2D Curb per HDOT Std. Plan D-05 around splitter islands.
- For shallow drywell details, see Sht. 23
- For curve, line, and point data, see Sht. 45.



GRAPHIC SCALE:



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SIGNATURE: *Rodney R. McKinney* EXPIRATION DATE OF THE LICENSE: 04/30/22

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

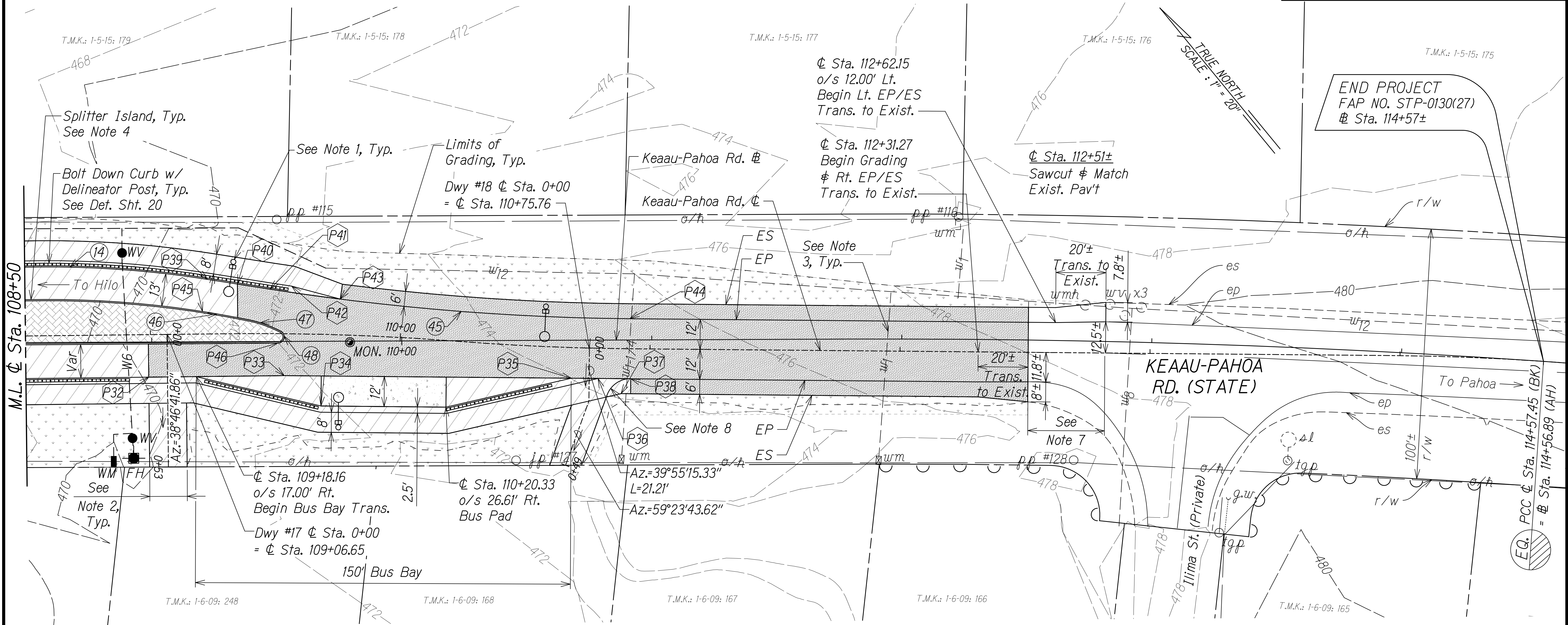
ROADWAY PLAN

KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENTS
at Orchidland Drive & Makuu Drive
Federal-Aid Project No. STP-0130(27)

Scale: 1" = 20' Date: Sept, 2020

SHEET No. 13 OF 15 SHEETS

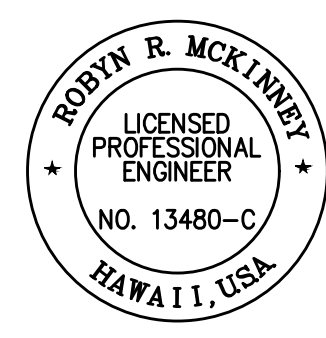
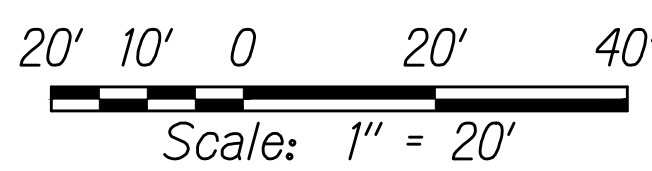
FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(27)	2021	44	116



NOTES:

1. Protect all exist. utility poles. For street light pole location, see Electrical Plans.
2. For driveway profiles and typical sections, see Shts. 46 to 49.
3. Field locate and verify all existing water service laterals.
4. Provide Type 2D Curb per HDOT Std. Plan D-05 around splitter islands.
5. For shallow drywell details, see Sht. 23.
6. For curve, line, and point data, see Sht. 45.
7. Only removal of exist. AC and striping work shall be done in the area noted. There shall be no grading or paving work.
8. Unless otherwise noted, driveway edge of pavement radius shall be 10'.

GRAPHIC SCALE:



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Rodin R. McKinney 04/30/22
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STATE OF HAWAII
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ROADWAY PLAN

**KEAAU-PAHOA ROAD
INTERSECTION IMPROVEMENTS
at Orchidland Drive & Makuu Drive
Federal-Aid Project No. STP-0130(27)**

Scale: 1" = 20' Date: Sept, 2020

SHEET No. 14 OF 15 SHEETS

C:\CIVIL 3D PROJECTS\2012_153.000_KEAAU-PAHOA RD IMPR RTE130\ROUNDABOUT DESIGN\01 CIVIL DRAWINGS\02 ORCH AND MAKUU\041 - 045 ROADWAY PLANS_20 SCALE MAKUUDWG - 8/24/2020 5:45 PM JAGULAR

LINE DATA:

LINE	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
Az	311°01'20.22"	38°27'31.50"	118°20'33.57"	218°27'31.50"	310°32'47.54"	224°18'31.23"	40°32'47.54"	130°32'47.54"	40°13'01.97"	220°13'01.97"	300°43'22.93"
L	45.59'	3.93'	41.87'	5.71'	4.10'	30.49'	30.37'	4.00'	5.70'	4.00'	50.69'

CURVE DATA:

CURVE	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲
Δ	21°17'24.15"	5°39'58.83"	4°10'01.18"	12°23'47.34"	154°49'33.98"	5°38'30.33"	53°30'11.81"	74°50'07.29"	31°46'03.78"	31°37'35.93"	51°02'56.55"	40°24'46.48"	57°21'10.44"	17°34'48.69"	92°47'31.22"	91°13'49.12"	11°20'47.05"	86°09'55.20"	1°19'01.63"
Δ/2	10°38'42.07"	2°49'59.42"	2°05'00.59"	6°11'53.67"	77°24'46.99"	2°49'15.16"	26°45'05.90"	37°25'03.65"	15°53'01.89"	15°48'47.97"	25°31'28.27"	20°12'23.24"	28°40'35.22"	8°47'24.34"	46°23'45.61"	45°36'54.56"	5°40'23.53"	43°04'57.60"	0°39'30.82"
R	413.00'	1988.00'	400.00'	50.00'	2.50'	2002.00'	75.00'	47.50'	96.50'	90.00'	45.00'	50.00'	77.00'	413.00'	1.00'	1.00'	84.00'	1.00'	500.00'
T	77.63'	98.38'	14.55'	5.43'	11.20'	98.65'	37.81'	36.34'	27.46'	25.49'	21.49'	18.40'	42.12'	63.86'	1.05'	1.02'	8.34'	0.94'	5.75'
C	152.58'	196.53'	29.08'	10.80'	4.88'	197.05'	67.52'	57.72'	52.82'	49.05'	38.78'	34.54'	73.90'	126.23'	1.45'	1.43'	16.61'	1.37'	11.49'
Lc	153.46'	196.61'	29.09'	10.82'	6.76'	197.13'	70.04'	62.04'	53.50'	49.68'	40.09'	35.27'	77.08'	126.72'	1.62'	1.59'	16.63'	1.50'	11.49'

CURVE	⑳	㉑	㉒	㉓	㉔	㉕	㉖	㉗	㉘	㉙	㉚	㉛	㉜	㉝	㉞	㉟	㊱	㊲	㊳
Δ	82°36'47.10"	10°55'48.32"	134°32'20.60"	11°42'34.72"	80°38'21.78"	118°21'34.63"	10°23'25.30"	84°29'05.79"	93°07'00.67"	8°11'53.36"	89°10'10.41"	6°32'32.84"	91°42'35.72"	178°17'24.28"	90°00'00"	123°30'11.80"	11°38'07.92"	79°04'20.74"	88°46'53.21"
Δ/2	41°18'23.55"	5°27'54.16"	67°16'10.30"	5°51'17.36"	40°19'10.89"	59°10'47.32"	5°11'42.65"	42°14'32.90"	46°33'30.34"	4°05'56.68"	44°35'05.21"	3°16'16.42"	45°51'17.86"	89°08'42.14"	45°00'00.00"	61°45'05.90"	5°49'03.96"	39°32'10.37"	44°23'26.61"
R	3.00'	52.00'	1.00'	84.00'	1.00'	1.00'	91.00'	1.00'	1.00'	92.00'	3.00'	49.00'	1.00'	2.00'	1.00'	1.00'	84.00'	1.00'	1.00'
T	2.64'	4.98'	2.39'	8.61'	0.85'	1.68'	8.27'	0.91'	1.06'	6.59'	2.96'	2.80'	1.03'	134.02'	1.00'	1.86'	8.56'	0.83'	0.98'
C	3.96'	9.90'	1.84'	17.14'	1.29'	1.72'	16.48'	1.34'	1.45'	13.15'	4.21'	5.59'	1.44'	4.00'	1.41'	1.76'	17.03'	1.27'	1.40'
Lc	4.33'	9.92'	2.35'	17.17'	1.41'	2.07'	16.50'	1.47'	1.63'	13.16'	4.67'	5.60'	1.60'	6.22'	1.57'	2.16'	17.06'	1.38'	1.55'

CURVE	③9	④0	④1	④2	④3	④4	④5	④6	④7	④8
Δ	1°31'23.30"	92°02'51.65"	10°14'46.18"	91°13'06.79"	92°46'25.36"	12°16'04.40"	8°22'56.29"	2°38'31.78"	16°00'59.27"	152°54'34.36"
Δ/2	0°45'41.65"	46°01'25.83"	5°07'23.09"	45°36'33.39"	46°23'12.68"	6°08'02.20"	4°11'28.15"	1°19'15.89"	8°00'29.63"	76°27'17.18"
R	500.00'	3.00'	50.50'	1.00'	1.00'	84.00'	988.00'	400.00'	50.00'	2.50'
T	6.65'	3.11'	4.53'	1.02'	1.05'	9.03'	72.40'	9.22'	7.03'	10.38'
C	13.29'	4.32'	9.02'	1.43'	1.45'	17.95'	144.41'	18.44'	13.93'	4.86'
Lc	13.29'	4.82'	9.03'	1.59'	1.62'	17.99'	144.54'	18.45'	13.98'	6.67'

POINT DATA:

<div>P1</div> ☉ Sta. 102+74.44 o/s 26.47' Lt. Bus Pad	<div>P2</div> ☉ Sta. 103+25.09 o/s 28.37' Lt. Bus Pad	<div>P3</div> ☉ Sta. 103+75.82 o/s 17.00' Lt. End Bus Bay Trans.	<div>P4</div> ☉ Sta. 103+37.08 o/s 18.51' Rt. PC EP	<div>P5</div> ☉ Sta. 103+65.82 o/s 22.55' Rt. PT EP	<div>P6</div> ☉ Sta. 103+67.69 o/s 9.69' Rt. Splitter Island	<div>P7</div> ☉ Sta. 105+16.75 o/s 22.11' Rt. PT EP	<div>P8</div> ☉ Sta. 105+53.29 o/s 16.84' Rt. PC EP	<div>P9</div> ☉ Sta. 106+21.26 o/s 36.62' Rt. PRC EP
<div>P10</div> ☉ Sta. 106+82.49 o/s 36.01' Rt. PRC EP	<div>P11</div> ☉ Sta. 107+27.98 o/s 17.00' Rt. PT EP	<div>P12</div> ☉ Sta. 105+74.10 o/s 17.00' Lt. PT EP	<div>P13</div> ☉ Sta. 106+17.42 o/s 33.33' Lt. PCC EP	<div>P14</div> Makuu Dr. ☉ Sta. 0+68.52 o/s 15.86' Lt. PC EP	<div>P15</div> Makuu Dr. ☉ Sta. 1+10.68 o/s 14.78' Lt. End Buffer ⌘ Shldr Trans.	<div>P16</div> Makuu Dr. ☉ Sta. 1+30.61 o/s 12.93' Lt. Begin Buffer Trans.	<div>P17</div> Makuu Dr. ☉ Sta. 1+30.61 o/s 13.52' Rt. End Buffer Trans.	<div>P18</div> Makuu Dr. ☉ Sta. 1+11.04 o/s 15.90' Rt. PI EP Begin Buffer ⌘ Shldr Trans.
<div>P19</div> Makuu Dr. ☉ Sta. 0+67.71 o/s 17.96' Rt. PT EP Begin Rt. Lane Full Recon	<div>P20</div> ☉ Sta. 106+78.66 o/s 39.22' Lt. PCC EP	<div>P21</div> ☉ Sta. 106+80.92 o/s 37.38' Lt. Begin Roundabout Lane Resurfacing	<div>P22</div> ☉ Sta. 107+54.25 o/s 17.43' Lt. PC EP	<div>P23</div> ☉ Sta. 107+96.90 o/s 23.47' Lt. PT EP	<div>P24</div> ☉ Sta. 105+14.81 o/s 9.26' Rt. Splitter Island	<div>P25</div> ☉ Sta. 105+84.02 o/s 2.08' Lt. Splitter Island	<div>P26</div> Makuu Dr. ☉ Sta. 0+49.09 o/s 4.01' Lt. Splitter Island	<div>P27</div> Makuu Dr. ☉ Sta. 0+77.47 o/s 1.03' Lt. Splitter Island
<div>P28</div> ☉ Sta. 107+00.02 o/s 7.53' Lt. Splitter Island	<div>P29</div> ☉ Sta. 107+30.41 o/s 3.10' Rt. Splitter Island	<div>P30</div> ☉ Sta. 107+98.72 o/s 10.59' Lt. Splitter Island	<div>P31</div> ☉ Sta. 107+00.06 Replace Exist. Ref. Mon. w/ New St. Survey Mon. See HDOT Std. Plan D-08	<div>P32</div> ☉ Sta. 108+99.15 o/s 17.00 Rt. Begin Rt. Lane Resurfacing	<div>P33</div> ☉ Sta. 109+53.67 o/s 16.80' Rt. PI EP	<div>P34</div> ☉ Sta. 109+68.94 o/s 28.68' Rt. Bus Pad		
<div>P35</div> ☉ Sta. 110+68.88 o/s 12.27' Rt. End Bus Bay Trans.	<div>P36</div> ☉ Sta. 110+79.47 o/s 12.08' Rt. End Buffer	<div>P37</div> ☉ Sta. 110+88.65 o/s 18.01' Rt. PI ES	<div>P38</div> ☉ Sta. 110+92.40 o/s 12.00 Rt. Begin Rt. Shldr Resurfacing	<div>P39</div> ☉ Sta. 109+23.11 o/s 21.85' Lt. PC EP	<div>P40</div> ☉ Sta. 109+35.00 o/s 19.85 Lt. Begin Lt. Lane Resurfacing			
<div>P41</div> ☉ Sta. 109+47.77 o/s 17.77' Lt. PT EP	<div>P42</div> ☉ Sta. 109+56.28 o/s 19.05' Lt. End Buffer ⌘ Shldr Trans.	<div>P43</div> ☉ Sta. 109+75.52 o/s 14.27' Lt. Begin Buffer ⌘ Shldr. Trans Begin Lt. Shldr Resurfacing	<div>P44</div> ☉ Sta. 110+91.81 o/s 12.00' Lt. PC EP	<div>P45</div> ☉ Sta. 109+20.96 o/s 9.03' Lt. Splitter Island	<div>P46</div> ☉ Sta. 109+50.99 o/s 3.80' Rt. Splitter Island			

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SIGNATURE

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EXPIRATION DATE OF THE LICENSE

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CURVE DATA

KEAAU-PAHOA ROAD

INTERSECTION IMPROVEMENTS

at Orchidland Drive & Makuu Drive

Federal-Aid Project No. STP-0130(27)

Scale: N/A

Date: Sept, 2020

SHEET No. 15

OF 15

SHEETS

45