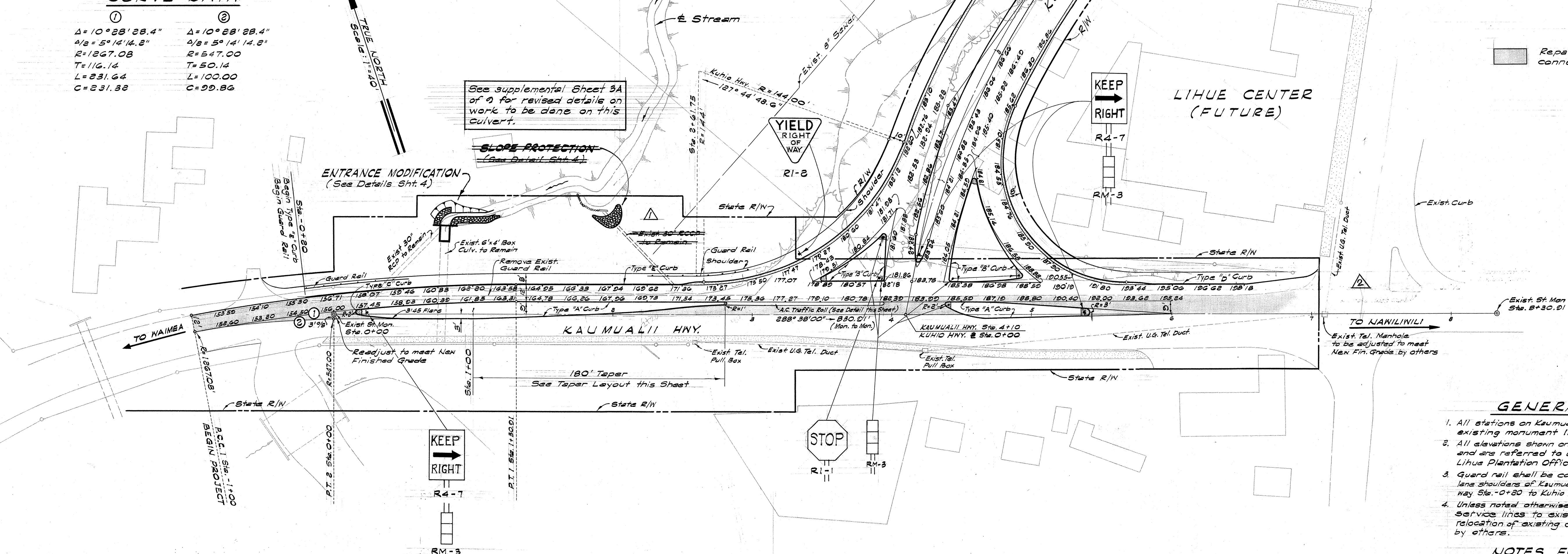


①	②
$\Delta = 10^{\circ} 28' 28.4''$	$\Delta = 10^{\circ} 28' 28.4''$
$A/2 = 5^{\circ} 14' 14.2''$	$A/2 = 5^{\circ} 14' 14.2''$
$R = 1267.08$	$R = 547.00$
$T = 116.14$	$T = 50.14$
$L = 231.64$	$L = 100.00$
$C = 231.32$	$C = 99.86$

 Repave and make smooth riding connection to Existing Pavement



1. All stations on Keamuelii Highway are referred to existing monument line.
2. All elevations shown on Plan are pavement grades and are referred to U.S.G.S. bench mark at Lihua Plantation Office, Elevation +206.47.
3. Guard rail shall be constructed continuously on the outbound side of Keamuelii Highway from Keamuelii Highway Sta. 0+30 to Kuhio Highway Sta. 8+50 as shown on the drawings.
4. Unless noted otherwise, disconnection of water and sewer service lines to existing structures to be demolished and relocation of existing overhead electrical lines shall be done by others.

1. New construction within the State Right-of-way shall be done in accordance with all applicable sections of the Standard Specifications for Road and Bridge Construction, dated May 1957 of the State Highway Department.
2. Curbs and gutters to be installed within Kaunauli Highway Right-of-way shall be constructed in accordance with the State Highway Department' Standard Details.
3. Unless noted otherwise all noses shall be Type "C" curb.
4. Where concrete curbs change from one type to another, the heights and faces shall have transitions of not less than 20 feet, unless directed otherwise.
5. Wherever A.C. is to be placed directly on an existing pavement, the surface of existing pavement shall be broomed and shall be given a tack coat of 0.25 gal. per sq. yd. of emulsified asphalt before laying variable thickness of A.C. leveling course or A.C. surface course.
6. Irregularities of existing pavements shall be leveled with A.C. mix required for leveling course before laying A.C. surface course. Where irregularities are to be laid over existing pavement, such pavement shall be removed and sub-grade rolled prior to placing of base course.
7. The approval of these plans by the Director of Transportation is for that portion of the work within the State Right-of-way only.
8. The Contractor shall obtain a construction permit from the State Highway Department Engineer in Lihue, Kauai prior to the commencement of work within the State Highway Right-of-way.

$$\text{Offset} = y = \frac{x^2}{4A}$$

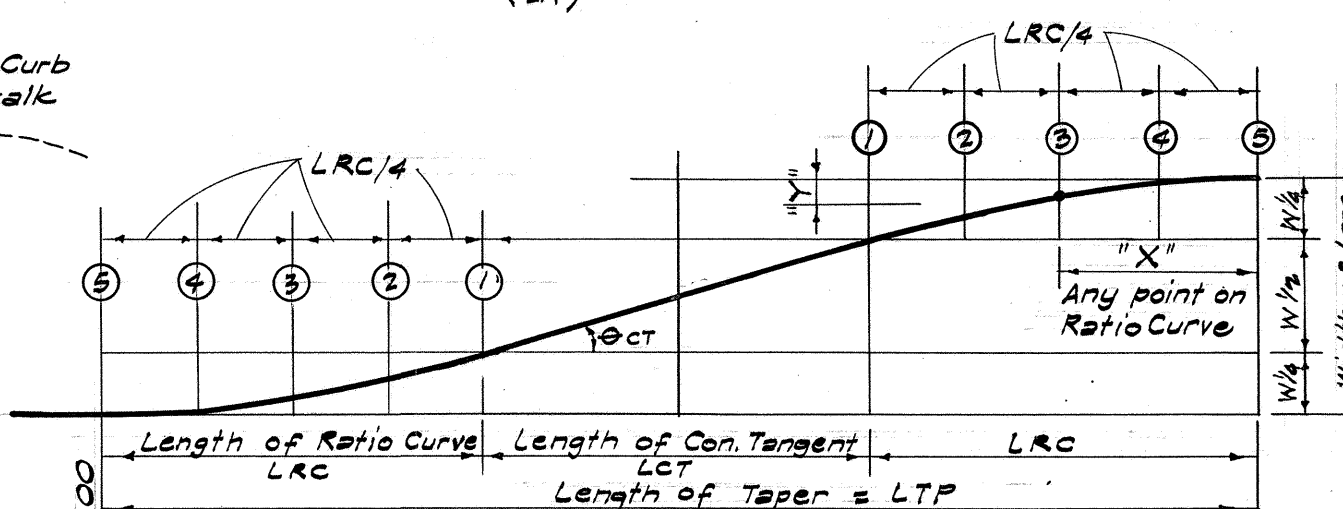
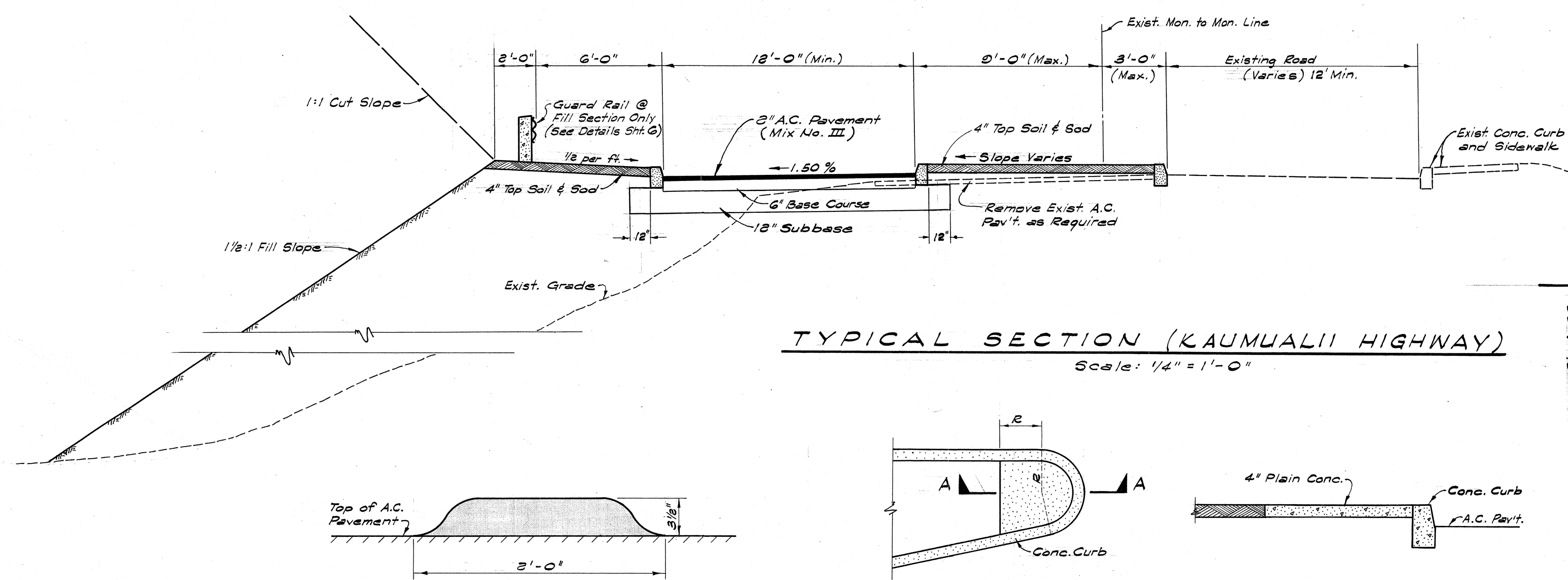
$$\Theta = \tan^{-1}\left(\frac{x}{2A}\right)$$


TABLE OF OFFSETS											
LTP	LCR LCT	RATIO	4A	OFFSET "Y"					2A	TAN. OCT	θ
				①	②	③	④	⑤			
180	GO	2 1/2:60	1440	2.60	1.41	0.63	0.16	0.0	720.00	0.083333	4° 45'

Not to Scale

9. All regulatory and Warning Signs specified on Kaumualii Highway shall be constructed and installed in accordance with the State Highway Department Standard Details.

10. Unless directed otherwise grass used for sodding shall be that locally known as "Maniania."



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

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

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

Scale: $\frac{1}{2}'' = 1'-0''$

CONCRETE NOSING DETAILS

<u>2</u>	6/64	Deleted curb	L.P.Co.	
<u>1</u>	6/10/68	Revised Culvert Details	P.H.	
REV	DATE	BRIFI	BY	APPROVED

LIHUE PLANTATION COMPANY
LIHUE, KAUAI

KUHIO HIGHWAY REALIGNMENT
LIHUE, KAUAI, HAWAII

PLAN - INTERSECTION KAUMUALII & KUHIO HWYS

APPROVED: Masao Kutaka
CHIEF ENGINEER

APPROVED: P. M. Hirota
REGISTERED ENGINEER

PROJECT NO. CK-56A-01-63

Sheet No. **2** of **9** Sheets

See supplemental Sheet BA of 9 for revised details on work to be done on this culvert.

CURVE DATA

③ Δ = 70° 53' 11.4" R = 150.00 T = 106.77 L = 185.58 C = 174.04	④ Δ = 115° 28' 38" R = 88.00 T = 130.14 L = 177.21 C = 148.75	⑤ Δ = 24° 10' 00" R = 448.90 T = 26.10 L = 180.34 C = 187.04	⑥ Δ = 24° 10' 00" R = 600.00 T = 128.45 L = 253.07 C = 251.20
--	--	---	--

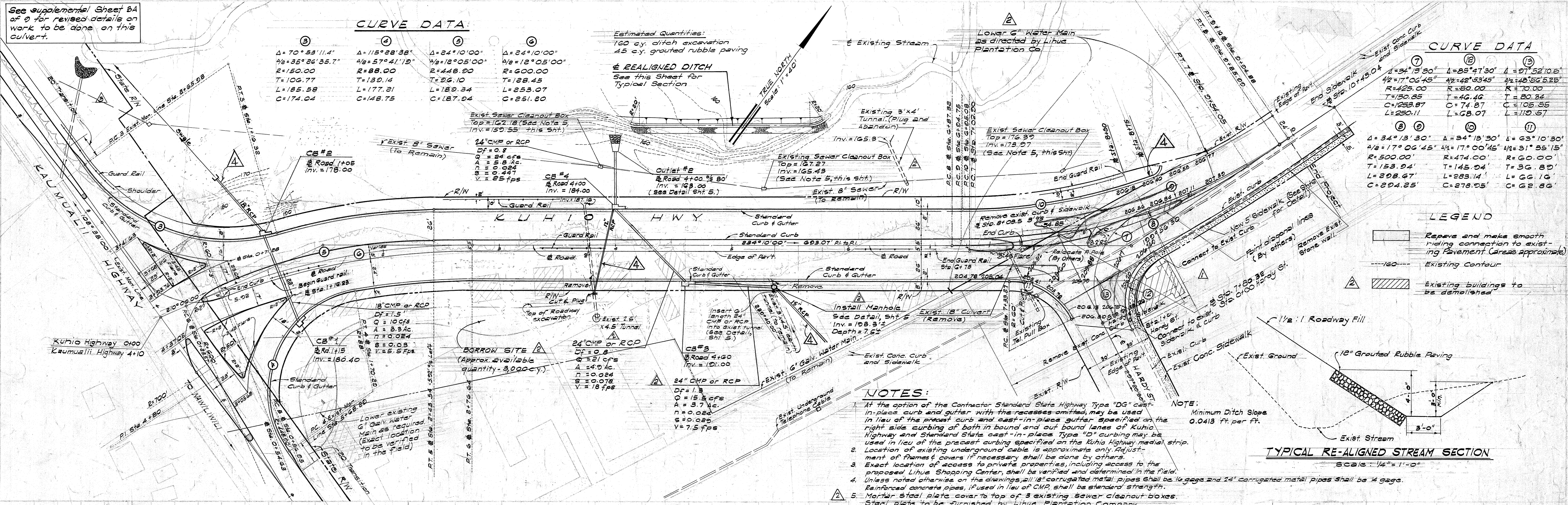
Estimated Quantities:
100 cy. ditch excavation
45 cy. grouted rubble paving
RE-ALIGNED DITCH
See this Sheet for Typical Section

CURVE DATA

⑦ Δ = 34° 13' 30" R = 425.00 T = 130.85 L = 253.87 C = 250.11	⑧ Δ = 34° 13' 30" R = 425.00 T = 130.85 L = 253.87 C = 250.11	⑨ Δ = 34° 13' 30" R = 425.00 T = 130.85 L = 253.87 C = 250.11	⑩ Δ = 34° 13' 30" R = 425.00 T = 130.85 L = 253.87 C = 250.11	⑪ Δ = 34° 13' 30" R = 425.00 T = 130.85 L = 253.87 C = 250.11
--	--	--	--	--

LEGEND

- Repave and make smooth riding connection to existing pavement (Areas approximate)
- Existing Contour
- Existing buildings to be demolished



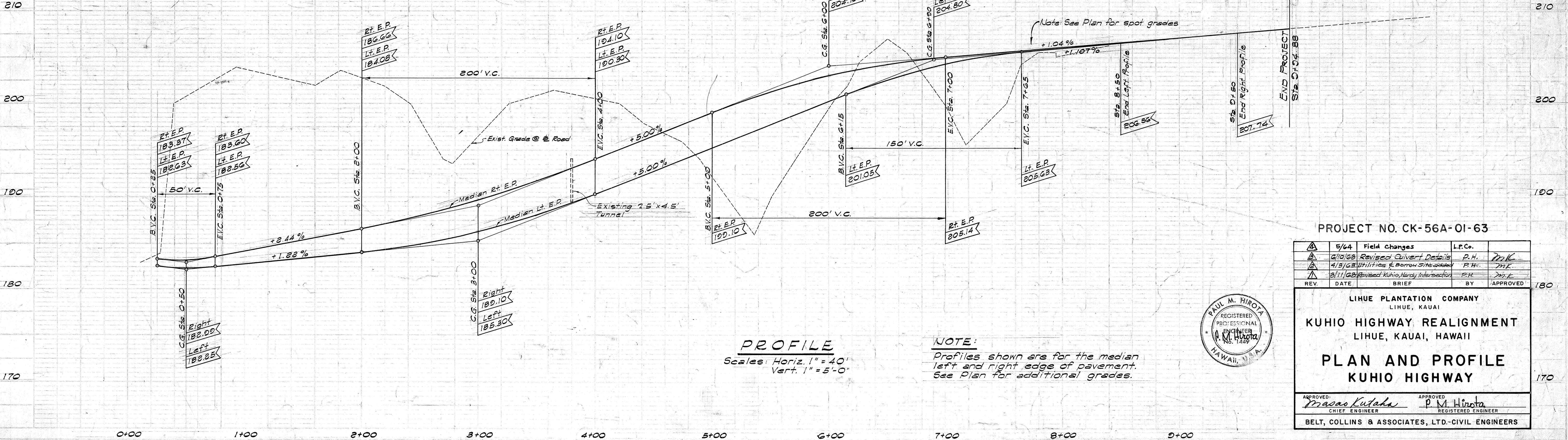
NOTES:

- At the option of the Contractor Standard State Highway Type "DG" cast-in-place curb and gutter with the recesses omitted, may be used in lieu of the precast curb and cast-in-place gutter specified on the right side curbing of both in bound and out bound lanes of KUHIO Highway and Standard State cast-in-place Type "12" curbing may be used in lieu of the precast curbing specified on the KUHIO Highway median strip.
- Location of existing underground cable is approximate only. Adjustment of frames & covers if necessary shall be done by others.
- Exact location of access to private properties, including access to the proposed Lihue Shopping Center, shall be verified and determined in the field.
- Unless noted otherwise on the drawings, all 18" corrugated metal pipes shall be 16 gage and 24" corrugated metal pipes shall be 14 gage. Reinforced concrete pipes, if used in lieu of CMP, shall be standard strength.
- Mortar steel plate cover to top of 3 existing sewer cleanout boxes. Steel plate to be furnished by Lihue Plantation Company.
- All work involved in the lowering of the 6" galvanized water main, capping of the sewer cleanouts and plugging of the existing tunnels shall not be paid for directly but shall be considered as incidental and included in the various payment items in the Proposal.

NOTE: Minimum Ditch Slope 0.0413 ft. per ft.

TYPICAL RE-ALIGNED STREAM SECTION

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



PROFILE

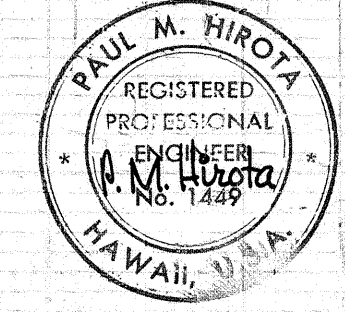
Scales: Horiz. 1" = 40'
Vert. 1" = 5'-0"

NOTE:

Profiles shown are for the median left and right edge of pavement. See Plan for additional grades.

PROJECT NO. CK-56A-01-63

REV	DATE	BRIEF	BY	APPROVED
5/64		Field Changes	L.F.C.	
6/10/63		Revised Culvert Details	P.H.	M.K.
4/13/63		Utilities & Borrow Site added	P.H.	M.K.
3/11/63		Revised KUHIO HWY Intersection	P.H.	M.K.



LIHUE PLANTATION COMPANY
LIHUE, KAUAI

KUHIO HIGHWAY REALIGNMENT
LIHUE, KAUAI, HAWAII

PLAN AND PROFILE
KUHIO HIGHWAY

APPROVED: Masao Kutaka, CHIEF ENGINEER
APPROVED: P. M. Hirota, REGISTERED ENGINEER

BELT, COLLINS & ASSOCIATES, LTD.-CIVIL ENGINEERS

