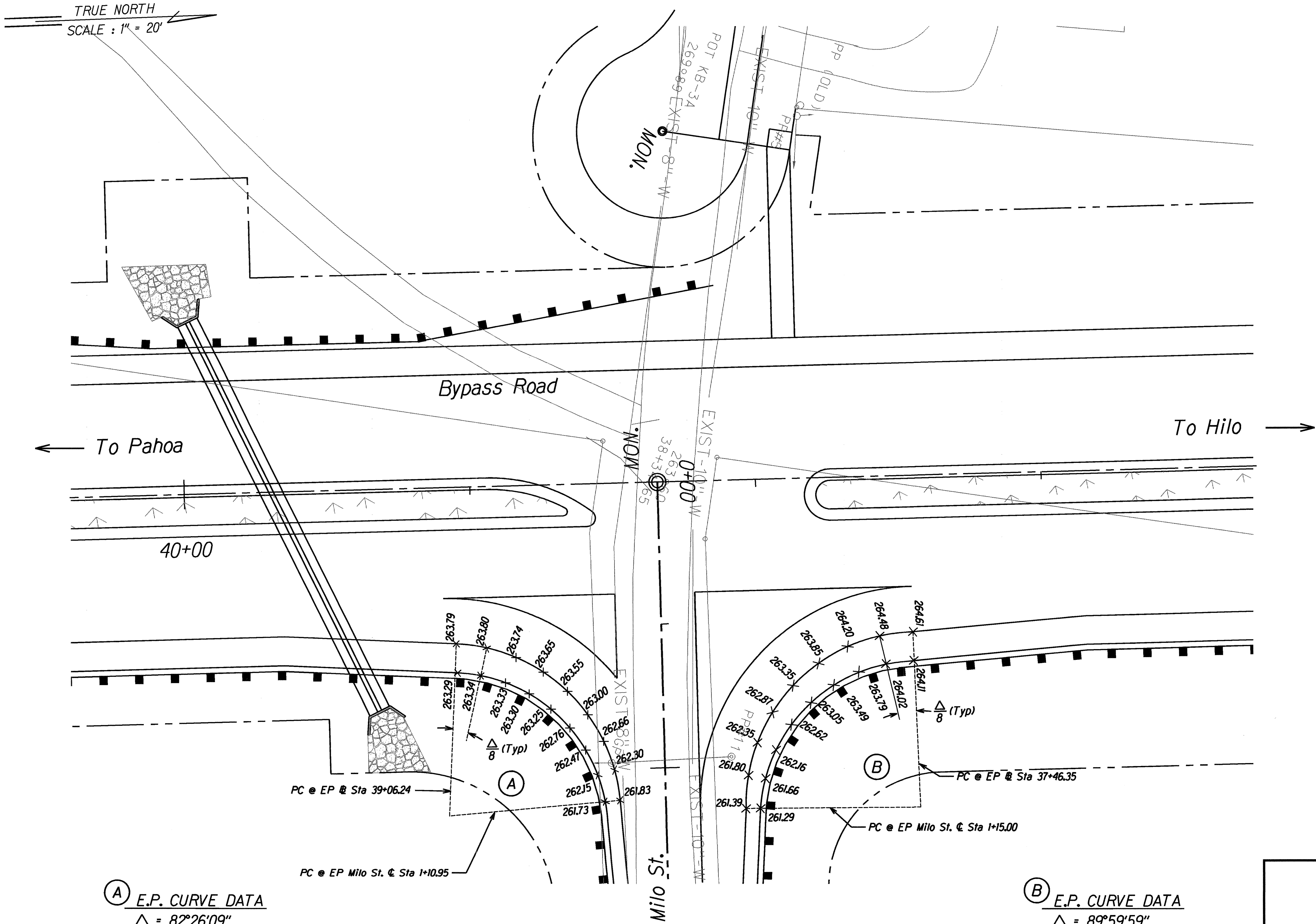


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	42	210



ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
DATE	



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

Nancy E. Burns

DATE: 9/11/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAV'T GRADE PLAN
MILO ST. INTERSECTION
KEA'AU-PAHOA ROAD VIC. OF KEA'AU TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98
Scale: 1"=20' Date: August, 1998
SHEET No. 5 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	43	210

COUNTY DEPARTMENT OF WATER SUPPLY NOTES

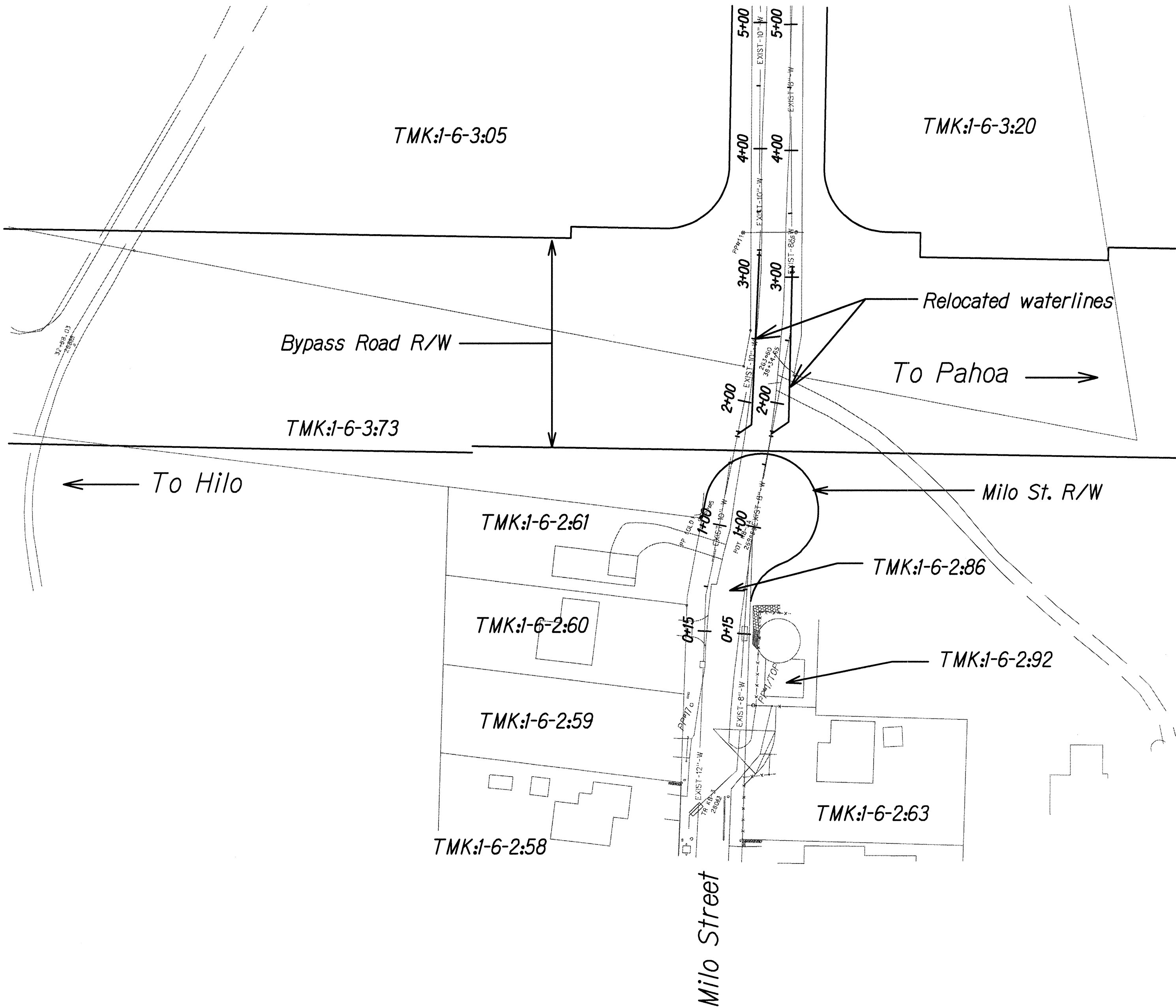
1. All work shall be done according to the Water System Standards, State of Hawaii, Volumes 1 and 2, dated 1985, as amended.
2. The Contractor shall inform the D.W.S. Engineer 72 hours prior to the beginning of any waterline work and one week prior to any connection, chlorination, shut-off or relocation.
3. All work and material furnished by the D.W.S. shall be paid for by the Contractor.
4. All existing waterline, waterline appurtenances and other utility locations shown on the plans are obtained from latest reliable sources. The Contractor shall be responsible to verify the exact location of all utilities in the field and shall bear all costs for damages done unto them during the contract period.
5. All hook-ups to existing waterlines shall be done by the Department of Water Supply. The Contractor shall provide all excavation, backfill, road repair, traffic control, etc.
6. Where water shut-off of more than 3-hours becomes necessary, the Contractor, at his own cost, shall provide a temporary bypass line, size of which shall be determined by the D.W.S. Engineer. The D.W.S. Engineer, also reserves the right to require bypass lines, regardless of the water shut-off period, of it is deemed necessary.
7. Minimum horizontal clearance between waterlines and other utilities shall be 8-feet for road right-of-ways of 50 feet or less, minimum vertical clearance between waterline and other utilities shall be 12-inches provided the other utility is concrete jacketed and 18-inches if no concrete jackets are used. In all applicable instances the waterlines shall be at a grade higher than other utilities. Minimum horizontal clearance between waterline and other utilities shall be 10-feet for road right-of-ways of more than 50-feet.
8. All fittings (Class 250) and all gate valves (Class 200) shall be ductile iron, with mechanical joints unless otherwise specified. Butterfly valves shall be class 250 with epoxycoated interior unless otherwise specified.
9. The waterline shall be tested at a minimum of 225 p.s.i. or one and a half times the static pressure at the low point, under D.W.S. supervision just prior to paving the roadways.
10. The Contractor shall be responsible for the chlorination of the water system and shall bear all cost. The person engaged to do the chlorination work must have the appropriate license to perform the work in the state of Hawaii.
11. Solder and flux shall contain not more than 0.2 percent lead.
12. "Water System Standards, Volume 2", Plate 77-Type A Valve Box for curb stop on multiple copper service shall be deleted.



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Nancy E. Burns
DATE: 8/24/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
WATERLINE VICINITY
MAP & NOTES
KEA'AU-PAHOA ROAD VIC. OF KEA'AU
TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98
Scale: NTS. Date: August, 1998
SHEET No. 1 OF 1 SHEETS

TRUE NORTH
SCALE : 1" = 40'



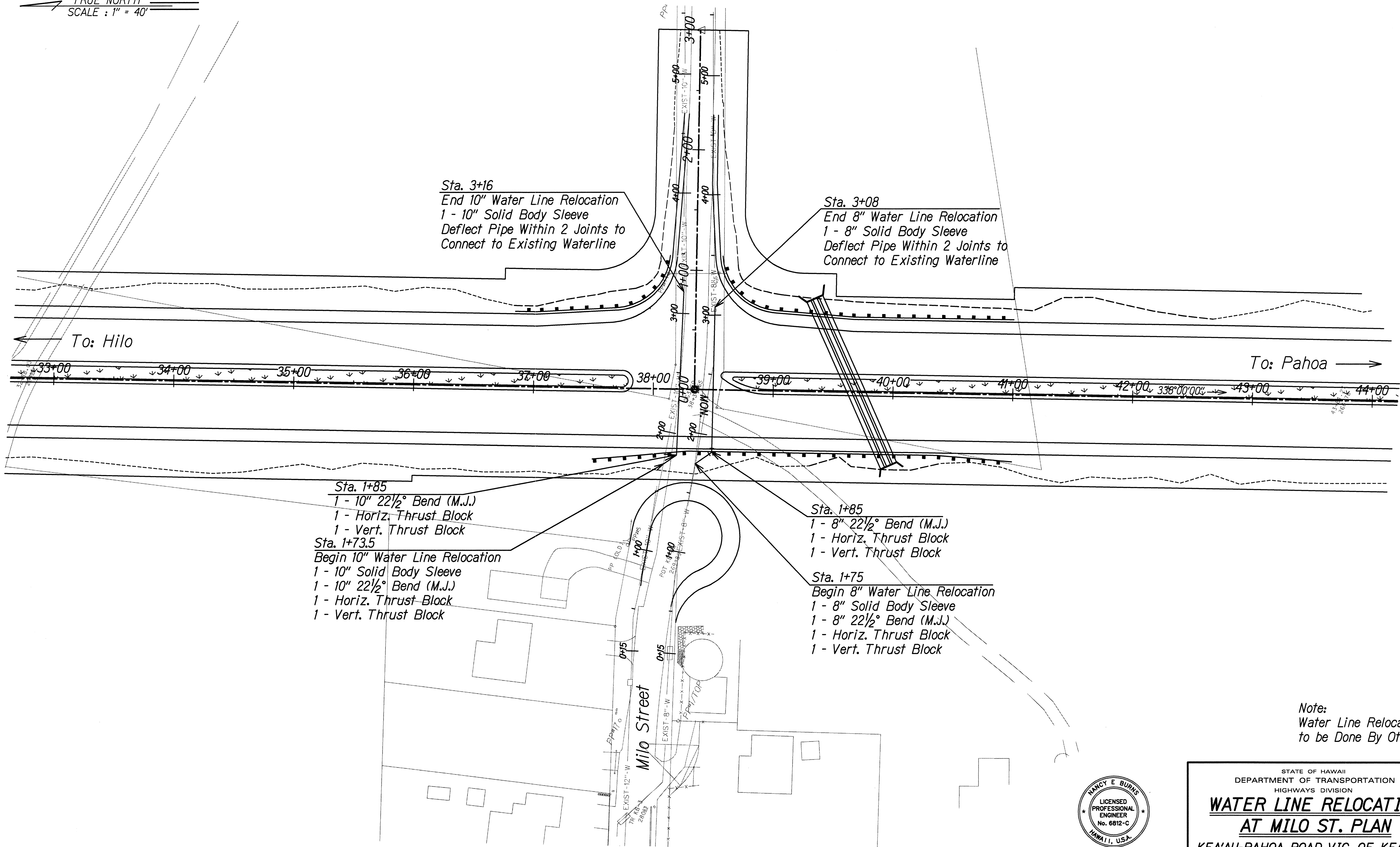
Note:
Water Line Relocation
to be Done By Others

VICINITY MAP
SCALE: NTS.

ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
CHECKED BY	
DATE	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	44	210

TRUE NORTH
SCALE : 1" = 40'



Note:
Water Line Relocation
to be Done By Others

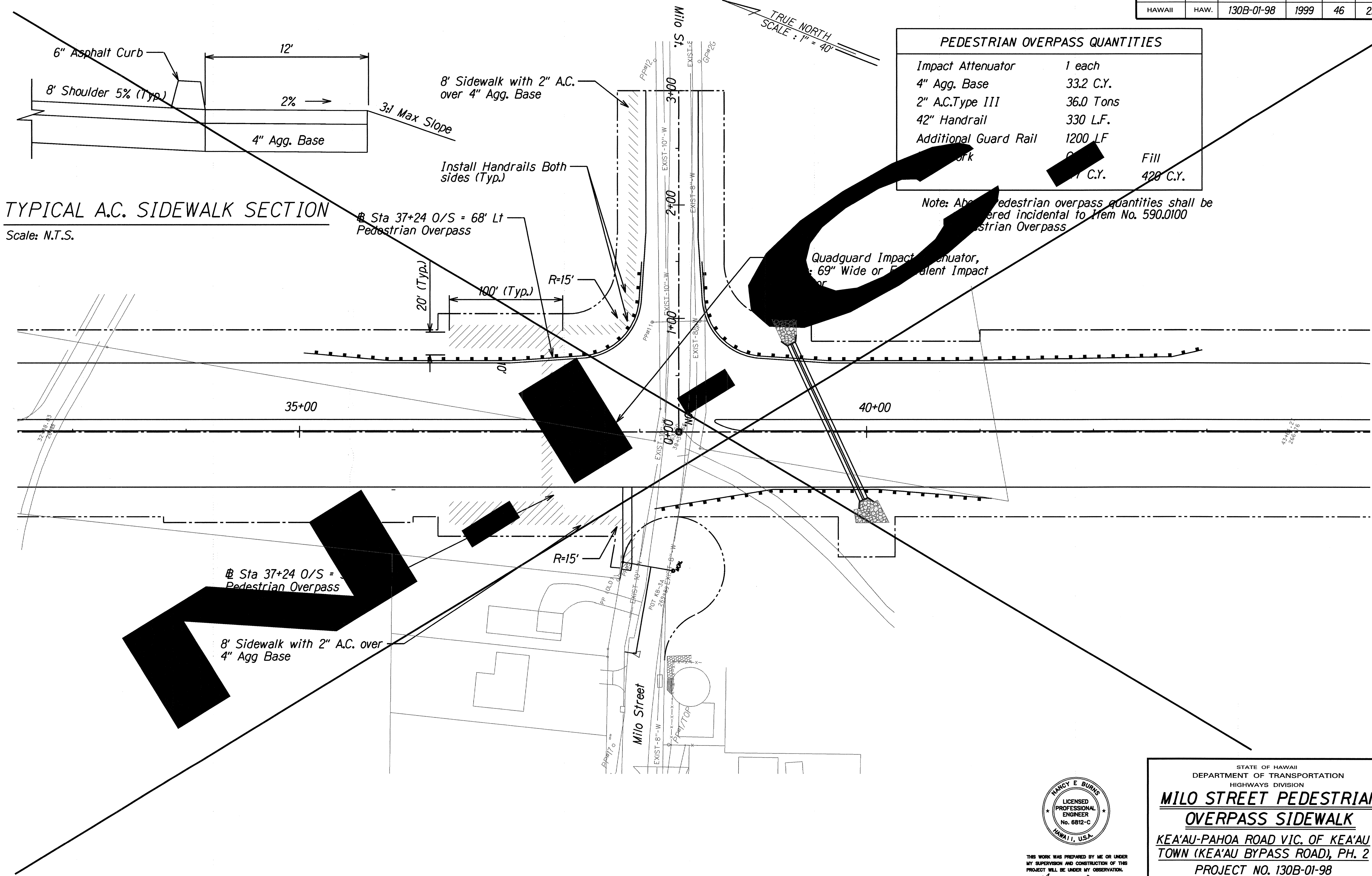


THIS WORK WAS PREPARED BY ME OR UNDER
MY SUPERVISION AND CONSTRUCTION OF THIS
PROJECT WILL BE UNDER MY OBSERVATION.
Nancy E. Burns
DATE: 8/29/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**WATER LINE RELOCATION
AT MILO ST. PLAN**
KEA'AU-PAHOA ROAD VIC. OF KEA'AU
TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98
Scale: 1"=40' Date: August, 1998
SHEET No. 1 OF 2 SHEETS

44

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



TYPICAL A.C. SIDEWALK SECTION

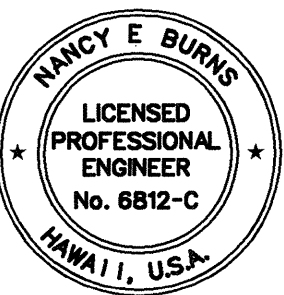
Scale: N.T.S.

PEDESTRIAN OVERPASS QUANTITIES

Impact Attenuator	1 each	
4" Agg. Base	33.2 C.Y.	
2" A.C.Type III	36.0 Tons	
42" Handrail	330 L.F.	
Additional Guard Rail	1200 L.F.	
Work	0	Fill
	1 C.Y.	420 C.Y.

Note: Above pedestrian overpass quantities shall be entered incidental to Item No. 590.0100 Pedestrian Overpass

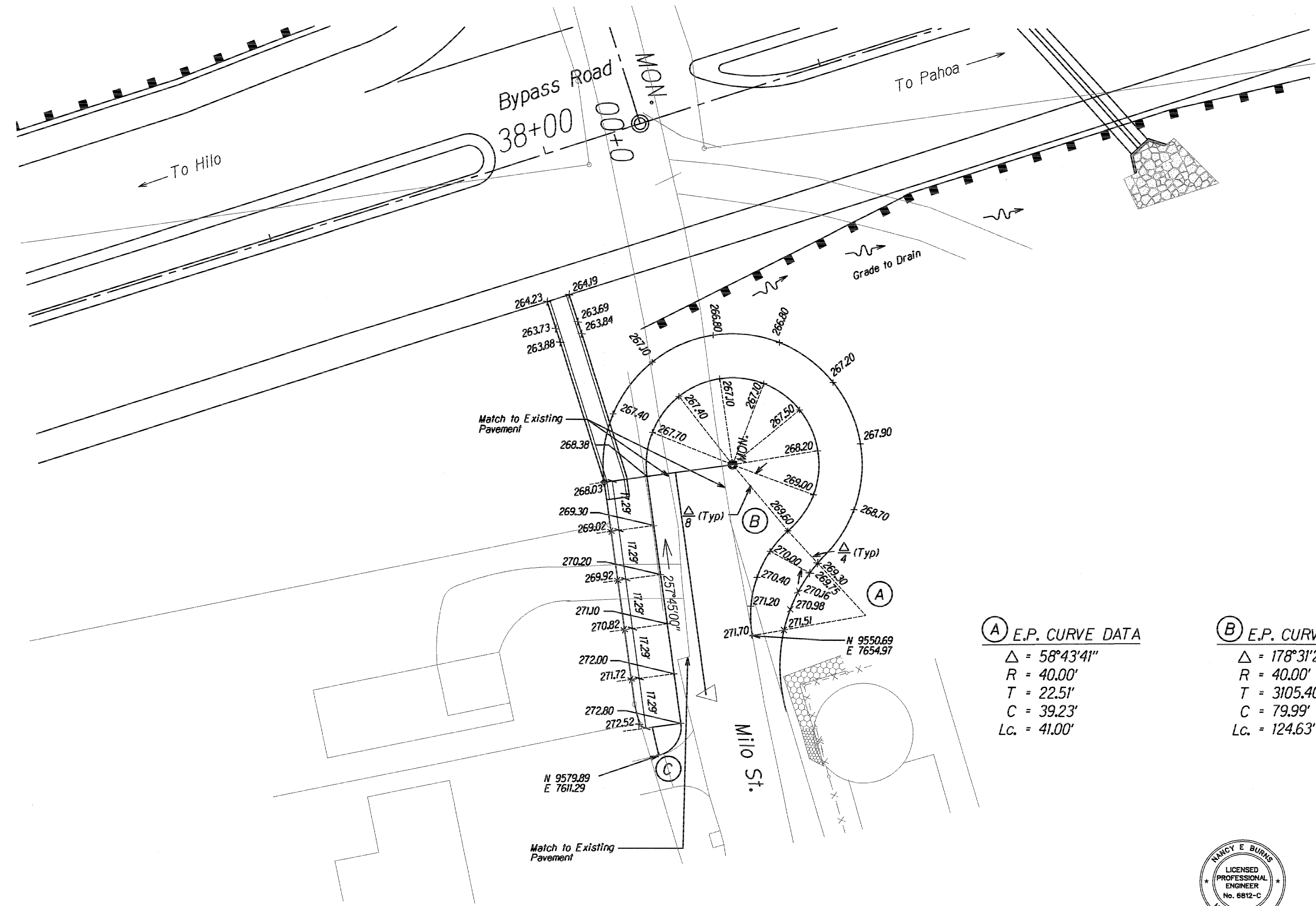
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO. OF SHEETS	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Nancy E. Burns
 DATE: 9/11/98

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MILO STREET PEDESTRIAN OVERPASS SIDEWALK
 KEA'AU-PAHOA ROAD VIC. OF KEA'AU TOWN (KEA'AU BYPASS ROAD), PH. 2
 PROJECT NO. 130B-01-98
 Scale: 1"=40' Date: August, 1998
 SHEET NO. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	48	210



TRUE NORTH
SCALE : 1" = 20'

(A) E.P. CURVE DATA
 $\Delta = 58^{\circ}43'41''$
 $R = 40.00'$
 $T = 22.51'$
 $C = 39.23'$
 $Lc. = 41.00'$

(B) E.P. CURVE DATA
 $\Delta = 178^{\circ}31'27''$
 $R = 40.00'$
 $T = 3105.40'$
 $C = 79.99'$
 $Lc. = 124.63'$

(C) E.P. CURVE DATA
 $\Delta = 84^{\circ}51'18''$
 $R = 10.00'$
 $T = 9.14'$
 $C = 13.49'$
 $Lc. = 14.81'$

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Nancy E. Burns
 DATE: 9/10/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAV'T GRADE PLAN
MILO ST. CUL-DE-SAC

KEA'AU-PAHOA ROAD VIC. OF KEA'AU TOWN (KEA'AU BYPASS ROAD), PH. 2

PROJECT NO. 130B-01-98

Scale: 1"=20' Date: August, 1998