

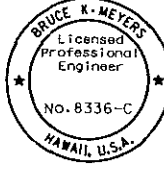
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abutment	abut.
acceleration	Accel
aggregate	aggr.
ahead	AH
algebraic difference in grades	A
alternate	alt.
and	&
and others	et al
and wife	et ux
and so forth (et cetera)	etc.
approach	appr.
approximate	approx.
asphalt	asph.
asphalt concrete	A.C.
at	@
average daily traffic	ADT
back	BK
back to back	b. to b.
balance point	BP
baseline	℄
batter	btr.
beam	bm.
bearing	brg.
beginning	beg.
bench mark	BM
bottom	Bot.
bridge	br.
cast iron	C.I.
cement rubble masonry	CRM
centerline	℄
center to center	cc or c. to c.
centers	ctr.s.
channel change	ch. ch.
chord	chord
clear	clr.
column	col.
concrete	conc.
connection	conn.
construction	constr.
construction joint	constr. jt.
contingent sum	CTSM
continuous	cont.
contracting officer	co
corrugated	corr.
corrugated metal pipe	CMP
coulomb	C
county	co.
countersink	ctsk.
creek	cr ³
cubic meter	m or m3
culvert	culv.
curve left	LT
curve right	RT
deceleration	Decel
degree	°. deg.
degree Celsius	°C
delta	Δ
design hour volume	DHV
detail	Det.
Department of Forestry and Wildlife	DOFAW
Department of Hawaiian Homelands	DHHL
diagonal	diag.
diameter	dia. or D
diaphragm	diaph.
district	Dist.
donation land claim	DLC
drawing(s)	drwg(s).

east	E
edge of pavement	EP
edge of shoulder	ES
edge of water	EW
edge of road	ER
elevation	elev.
elevation with number	EI. 94.066
embankment	emb.
Engineer(s)	engr(s).
equation	EQ or eq.
excavation	exc.
existing	Exist.
expansion joint	exp. jt.
federal	Fed.
feet	’, ft.
finish	fin.
flange	flg.
footing	ftg.
for example	e.g.
galvanized	galv.
gage (gauge)	ga.
Hawaii Department of Transportation	HDOT
Hawaii Electric Light Company	HELCO
headwall	hdwl.
hectare	ha
height	Ht.
hexagon	hex.
high water	HW
highway	hwy.
house	hse.
homestead entry survey	HES
horizontal	Horiz.
hydraulic grade line	H.G.R.
identification	iden.
inch	"
inclusive	incl.
incoming road grade	GI
inside diameter	ID
invert	Inv.
joint	jt.
K (length of vert curve per percent change in algebraic difference in grades)	L/A
kilogram	kg
kilometer	km
kilometer per hour	km/h
lamination	lam.
latitude	lat.
left	lt.
length of curve	Lc
linear feet	L.F.
longitudinal	long.
low water	LW
lump sum	LPSM
magnetic	mag.
maintenance	maint.
material	matl.
maximum	max.
meter (measurement)	m
metric ton	t
millimeter	mm

mile post	M.P.
miles per hour	M.P.H.
minute(s) (angular)	'
minimum	min.
miscellaneous	misc.
modified	mod.
monument	mon.
mountain(s)	mtn(s).
negative	neg.
not in contract	N.I.C.
north	N
newton	N
not to scale	N.T.S.
number	no. or #
on center	O.C.
offset	O/S
original ground	OG
out to out	a. to a.
outgoing road grade	G2
outside diameter	OD
pascal	Pa
pavement	pvmt.
pedestrian	ped
percent	pct. or %
perforate	perf.
permanent berm	PB
Plan & Profile	PP
plate	pl. or plt.
Pohakuloa Training Area	PTA
point of beginning	POB
point of compound curve	PCC
point of ending	POE
point of vertical curve	PVC
point of vertical intersection	PVI
point of vertical tangent	PVT
Portland Cement Concrete	P.C.C.
point of curve	PC
point on curve	POC
point of intersection	PI
point of spiral to curve	PSC or SC
point of curve to spiral	PCS or CS
point on spiral	POS
point of spiral to tangent	PST or ST
point on tangent	POT
point of tangent to spiral	PS or TS
point of tangent	PT
project	proj.
Q ₅₀	50-year water runoff
quantities	quant.
radian	rad
radius	R
range	R.
reconstruction	reconst.
reinforcement	reinf.
required	req'd.
reservoir or Reservation	res.
retaining wall	ret. wall
right	rt.
right-of-way	R/W or ROW
road	rd.
roadway	rdwy.
route	rte.
school	sch.
second (angular)	"
second (time)	s

section	sec.
sheet	sht.
sidewalk	sidewlk
slope	slp.
slope protection	sl. prot.
south	S
spacing, Spaces or Spaced	spa.
specification	spec.
speed	spd
square	sq
square meter	m ² or m2
standard	std.
station	sta.
stiffener	stiff.
straight	str.
street	st.
stringer	stgr.
structural	struc. or strctl.
superelevation	SE
superelevation rate	e
symmetrical	sym.
tangent	tan.
tangent length	T
tax map key	TMK
temporary construction easement	TCE
temporary bench mark	TBM
that is	i.e.
thick	thk.
thread	thd.
township	T.
typical	typ.
vehicles per hour	vph
velocity	V
vertical	vert.
vertical point of intersection	VPI
warehouse	whs.
weight	wt.
west	W

 The work was prepared by me or under my supervision and construction of this project will conform to the Hawaii Engineering Code. Expiration Date of License 4/06.	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
	PLAN ABBREVIATIONS	
	Scale: N/A	Date: December 5, 2005
SHEET No. 1 OF 1		

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		STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
		HI	HI A-AD/STP 6(3) & 200(1)	A3	A4

NATIONAL BOUNDARY	-----	CONTOURS	-----	EXISTING	-----	PROPOSED	-----
STATE BOUNDARY	-----	FENCE	---x---x---	EXISTING	---x---x---	PROPOSED	---x---x---
COUNTY BOUNDARY	-----	GATE with FENCE	---xXx---	EXISTING	---xXx---	PROPOSED	---xxXxx---
CITY BOUNDARY	-----	CATTLEGUARD	-----	EXISTING	-----	PROPOSED	-----
TOWNSHIP or RANGE LINE	-----	GUARDRAIL	No Symbol	EXISTING	No Symbol	PROPOSED	-----
SECTION LINE	-----	MEDIAN & SIDE BARRIER	-----	EXISTING	-----	PROPOSED	-----
1/4 SECTION LINE	-----	SIGNS	POST MOUNTED PORTABLE COMMERCIAL	EXISTING	No Symbol	PROPOSED	-----
1/16 SECTION LINE	-----	RETAINING WALL	-----	EXISTING	-----	PROPOSED	-----
NATIONAL PARK or FOREST BOUNDARY	////	POWER POLE with UTILITY LINE	-----	EXISTING	-----	PROPOSED	-----
PROPERTY LINE	-----	TELEPHONE POLE with UTILITY LINE	-----	EXISTING	-----	PROPOSED	-----
RIGHT-OF-WAY LINE	-----	JOINT USE POLE with UTILITY LINES	-----	EXISTING	-----	PROPOSED	-----
RIGHT-OF-WAY LINE with MONUMENT	EXISTING PROPOSED	SUPPORT POLE with ANCHOR	-----	EXISTING	-----	PROPOSED	-----
PARTIAL CONTROL OF ACCESS	EXISTING PROPOSED	TELEPHONE BOOTH or PEDESTAL	-----	EXISTING	-----	PROPOSED	-----
FULL CONTROL OF ACCESS	EXISTING PROPOSED	STREET LIGHT	-----	EXISTING	-----	PROPOSED	-----
EASEMENT (Permanent)	-----	UNDERGROUND UTILITIES	-----	EXISTING	-----	PROPOSED	-----
SLOPE STAKE	TOP OF CUT TOE OF FILL	BRIDGE	-----	EXISTING	-----	PROPOSED	-----
JEEP TRAIL/GRAVEL ROAD	-----	PIPE CULVERT (arrow shows flow)	-----	EXISTING	-----	PROPOSED	-----
ROADWAY, EXISTING	-----	PIPE CULVERT with END SECTION	-----	EXISTING	-----	PROPOSED	-----
RAILROAD	SINGLE TRACK MULTIPLE TRACK	PIPE CULVERT with HEADWALL	-----	EXISTING	-----	PROPOSED	-----
TRAIL	-----	BOX CULVERT	-----	EXISTING	-----	PROPOSED	-----
INTERMITTENT DRAINAGE & SMALL CREEK	-----	CULVERT with DROP INLET	-----	EXISTING	-----	PROPOSED	-----
LARGE CREEK	-----	UNDERDRAIN	-----	EXISTING	-----	PROPOSED	-----
RIVER	-----	TRAVERSE POINT (Horizontal & Vertical)	-----	EXISTING	-----	PROPOSED	-----
CONSTRUCTION LIMITS	-----	TRAVERSE POINT (Horizontal)	-----	EXISTING	-----	PROPOSED	-----
EARTH BERM	-----	BRASS CAP	-----	EXISTING	-----	PROPOSED	-----
EARTH LINED CHANNEL	-----	STEEL PIN	-----	EXISTING	-----	PROPOSED	-----
ENVIRONMENTALLY SENSITIVE AREA	-----	HUB & TACK	-----	EXISTING	-----	PROPOSED	-----
EXISTING WATERLINE	-----	SPOT ELEVATION	-----	EXISTING	-----	PROPOSED	-----
GRADE FIELD ACCESS ROAD	-----	COORDINATE GRID TICK	-----	EXISTING	-----	PROPOSED	-----
HAUL ROAD	-----	BUILDING	-----	EXISTING	-----	PROPOSED	-----
MULCHING, HYDRAULIC METHOD	-----	BORING LOCATION	-----	EXISTING	-----	PROPOSED	-----
OBLITERATE EXISTING ROADWAY/ REMOVE ASPHALT PAVEMENT	-----			EXISTING	-----	PROPOSED	-----
SEDIMENT CONTROL LOGS	-----			EXISTING	-----	PROPOSED	-----
SILT FENCE	-----			EXISTING	-----	PROPOSED	-----
TEMPORARY CONSTRUCTION EASEMENT (TCE)	-----			EXISTING	-----	PROPOSED	-----
SURVEY CONTROL POINT TIES	-----			EXISTING	-----	PROPOSED	-----

LAKE, POND or RESERVOIR; MARSHLAND	-----
SPRING	-----
TREELINE; TREE	-----
BUSH	-----
MATERIAL SOURCE	-----
MORTARED RIPRAP	-----
PLACED RIPRAP	-----
CHECK DAM	-----

FOUND	PROJECTED
SECTION CORNER	-----
1/4 SECTION CORNER	-----
1/16 SECTION or PROPERTY CORNER	-----
PROPERTY CORNER	-----
PARCEL NUMBER	-----
NORTH ARROW	-----

NOTE:
Other symbols used in the plans will be shown in a legend on the appropriate plan sheet.

BRUCE K. MEYERS Licensed Professional Engineer No. 8336-C HAWAII, U.S.A.	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION
The work was prepared by me or under my supervision and construction of this project will be in accordance with the plans and specifications.	PLAN SYMBOLS
Expiration Date of License: 3/08.	Scale: N/A
	Date: December 5, 2005
	SHEET No. 1 OF 1