

ABBREVIATIONS

℄	centerline
△	curve delta
A	abut.
ADT	average daily traffic
aggr.	aggregate
AH	ahead
alt.	alternate
appr.	approach
asph.	asphalt
B	b.f.
beg.	beginning, begin
BK	back
BM	bench mark
BP	balance point
br.	bridge
brg.	bearing
C	CBC
c-c	center to center
clr.	clear
CMP	corrugated metal pipe
Co.	county
col.	column
conc.	concrete
constr.	construction
constr. jt.	construction joint
cont.	continuous
corr.	corrugated
cr.	creek
CS	point of curve to spiral
ctrs.	centers
CTSM	contingent sum
culv.	culvert
D	decr.
DHV	design hour volume
DI	drop inlet
dia. or D	diameter
diag.	diagonal
diaph.	diaphragm
dist.	distance
Dist.	district
DLC	donation land claim
dwg(s).	drawing(s)
E	E
e	superelevation rate
El. 94.066	elevation with number
elev.	elevation
emb.	embankment
enr(s).	Engineer(s)
EOP	edge of pavement
EQ or eq.	equation
ER	edge of road
et al	and others
et ux	and wife
EW	edge of water
exc.	excavation
exp. jt.	expansion joint
ext.	exterior
F	f.f.
Fed.	federal
FES	flared end section
fin.	finish
ftg.	footing
G	ga.
galv.	galvanized
gdr.	girder
H	hdwl.
HES	homestead entry survey
hex.	hexagon
horiz.	horizontal
HW	high water
hwy.	highway
I	ID
incl.	inside diameter
incr.	inclusive, including
int.	increment
J	jt.
jt.	joint

L	L	length of curve
lam.	lam.	lamination
lat.	lat.	latitude
long.	long.	longitudinal
LPSM	LPSM	lump sum
Lt. or LT	Lt. or LT	left
LW	LW	low water
M	mag.	magnetic
maint.	maint.	maintenance
matl.	matl.	material
max.	max.	maximum
min.	min.	minimum
mon.	mon.	monument
mtn(s).	mtn(s).	mountain(s)
N	N	north
NC	NC	normal crown
neg.	neg.	negative
no. or #	no. or #	number
O	o.c.	on centers
o.f.	o.f.	other face
OD	OD	outside diameter
P	PC	point of curve
PCC	PCC	point of compound curve
perf.	perf.	perforate
PI	PI	point of intersection
pl.	pl.	plate
POC	POC	point on curve
POS	POS	point on spiral
POT	POT	point on tangent
proj.	proj.	project
psi	psi	pounds per square inch
PT	PT	point of tangent
pvm.	pvm.	pavement
quant., Qty	quant., Qty	quantities
R	R	radius
R.	R.	range
R/W	R/W	right-of-way
rd.	rd.	road
rdwy.	rdwy.	roadway
reconst.	reconst.	reconstruction
reinf.	reinf.	reinforcement
reqd.	reqd.	required
res.	res.	reservoir
Res.	Res.	Reservation
ret. wall	ret. wall	retaining wall
RH	RH	reference hub
Rt. or RT	Rt. or RT	right
rte.	rte.	route
S	S	south
SADT	SADT	seasonal average daily traffic
SC	SC	point of spiral to curve
sec.	sec.	section
shldr.	shldr.	shoulder
spa.	spa.	spacing, Spaces or Spaced
spec.	spec.	specification
st.	st.	street
ST	ST	point of spiral to tangent
sta.	sta.	station
std.	std.	standard
stiff.	stiff.	stiffener
str.	str.	straight
struc.	struc.	structural
sym.	sym.	symmetrical
T	T	tangent length
T.	T.	township
tan.	tan.	tangent
TBM	TBM	temporary bench mark
TCE	TCE	temporary construction easement
transv.	transv.	transverse
TS	TS	point of tangent to spiral
typ.	typ.	typical
V	V	design speed
vert.	vert.	vertical
vph	vph	vehicles per hour
VPI	VPI	vertical point of intersection
W	W	west

DRAINAGE SYMBOLS

Ditch (Existing, Proposed)

Flow Arrow

Drainage or Small Creek

Lake, Pond or Reservoir

Large Creek

Wetland

River

Spring

Bridge (Existing, Proposed)

Box Culvert (Existing, Proposed)

Pipe Culvert (Existing, Proposed)

With End Sections (Existing, Proposed)

With Headwalls (Existing, Proposed)

With Drop Inlet (Existing, Proposed)

Underdrain (Existing, Proposed)

Riprap Apron (Proposed)

EROSION CONTROL SYMBOLS

Mulching, Bonded Fiber Matrix

Check Dam

Diversion Berm

Erosion Control Mat

Riprap

Sediment Log at:

Culvert Inlet With End Section

Culvert Inlet With Head and/or Wing Walls

Ditch and/or Cut Slope

Drop Inlet

Slope Protection (Wattle)

Silt Fence

FENCE & CATTLEGUARD SYMBOLS

Fence (Existing, Proposed)

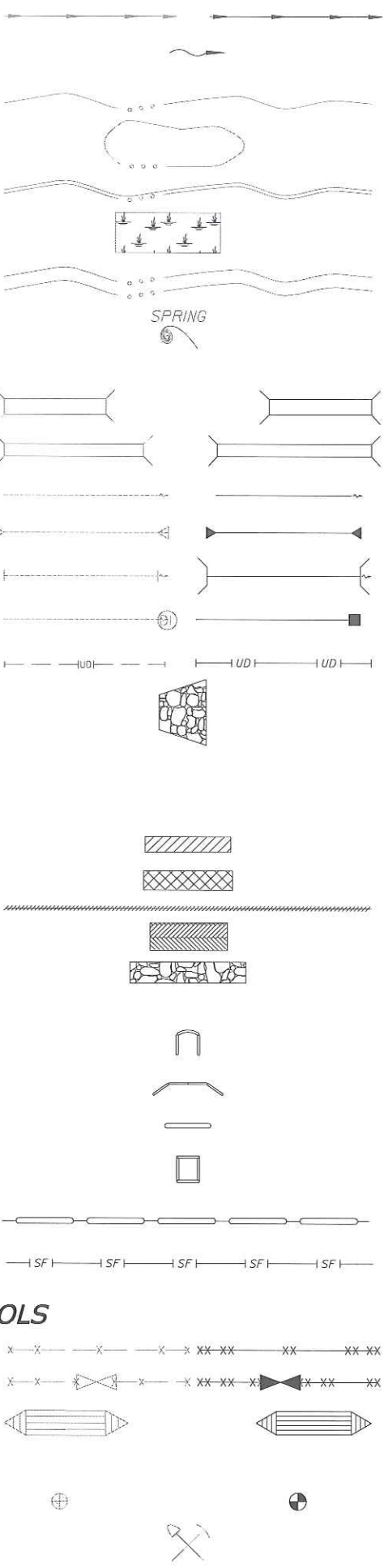
Fence w/ Gate (Existing, Proposed)

Cattleguard (Existing, Proposed)

GEOLOGIC SYMBOLS

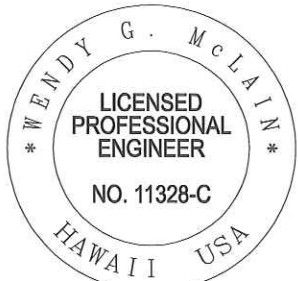
Boring Location (Existing, Proposed)

Material Source



STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(6)	A2	A18

INDEX TO SHEETS	
SHEET	DESCRIPTION
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B21-B24	MISCELLANEOUS SUMMARIES - CONVENTIONAL , B, OPTION X
C1-C37	SADDLE ROAD PLAN & PROFILE
C38	HWY 190 (MAMALAOA HWY) PLAN & PROFILE
D1	204 SPECIAL: APPROACH ROAD CONNECTIONS
D2-D6	APPROACH ROAD PLAN AND PROFILES
E1-E19	SADDLE ROAD EROSION AND SEDIMENT CONTROL PLANS
E20	MAMALAOA ROAD (HWY 190) EROSION CONTROL PLANS
E21	MSR ROAD EROSION AND SEDIMENT CONTROL PLAN
E22-E25	157 SPECIALS: EROSION CONTROL BMP'S
F1	EMBANKMENT BENCHING, SERRATED CUT SLOPE, AND FURROW DITCH
F2	211 SPECIAL: ROADWAY OBLITERATION
G1-G11	CULVERT PLAN AND PROFILE
G12-G14	251 SPECIALS: RIPRAP
G15	602 STANDARDS: PIPE CULVERT
G16-G20	602 SPECIALS: PIPE CULVERT
G21-G24	604 SPECIALS: DRAINAGE STRUCTURES
G25	620 SPECIAL: STONE MASONRY
G26	ENERGY DISSIPATION STRUCTURE PLAN
G27-G28	ENERGY DISSIPATION STRUCTURE SECTION AND DETAILS
T1-T2	635 TEMPORARY TRAFFIC CONTROL PLANS
T3-T14	635 STANDARDS: TEMPORARY TRAFFIC CONTROL
T15-T17	635 SPECIALS: TEMPORARY TRAFFIC CONTROL SIGNING



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
4/30/2012
SIGNATURE EXPIRATION DATE OF THE LICENSE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY

CONVENTIONAL PLAN SYMBOLS AND ABBREVIATIONS

Sheet 1 of 2

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LANDSCAPING & VEGETATION SYMBOLS

Tree 

Treeline 

MAPPING SYMBOLS

Building (Existing, Proposed) 

Coordinate Grid Tick 


North Arrow 

Railroad
Single Track 









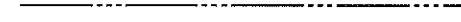
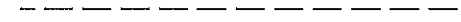



Double Track 


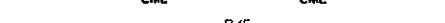
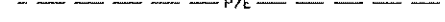
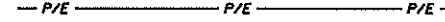
Spot Elevation 

Trail 

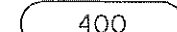
Traverse Point (Horizontal & Vertical) 

RIGHT-OF-WAY SYMBOLS

Boundaries
National 
State 
County 
City 
Township or Range Line 
Section 
1/4 Section 
1/16 Section 
Bureau of Indian Affairs 
Bureau of Land Management 
National Forest 
National Park 
National Wildlife Refuge 

Easements
Construction & Maintenance 
Permanent (Existing) 
Permanent (Proposed) 
Temporary (Proposed) 

Monument (As described) 

Parcel Number 

Property Line 
Right-of-Way Line (Existing) 
Right-of-Way Line (Proposed) 


Section Corner (Found, Projected) 


1/4 Section Corner (Found, Projected) 

1/16 Section Corner (Found) 




GUARDRAIL, BARRIER & WALL SYMBOLS

Guardrail (Existing, Proposed) 

Guardwall (Existing, Proposed) 

Median & Side Barrier (Existing, Proposed) 

ROADWAY SYMBOLS





Clearing/Construction Limits
Slope Stake Limits
Top of Cut 
Transition 
Toe of Fill 

Edge of Roadway
Existing 
Proposed 






Roadway Centerline (With Station ticks) 

Roadway Obliteration 


SIGN SYMBOLS

Signs
Commercial (Existing, Proposed) 
Delineator (Existing, Proposed) 
Portable (Proposed) 
Post Mounted (Existing, Proposed) 









UTILITY SYMBOLS

Irrigation Ditch
Underground (Existing, Proposed) 
Surface (Existing, Proposed) 
Support Pole (Existing, Proposed) 
Support Pole Anchor (Existing, Proposed) 
Street Light (Existing, Proposed) 



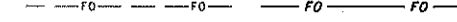

Telephone Booth (Existing, Proposed) 

Telephone Pedestal (Existing, Proposed) 

Underground Utility (Existing, Proposed)

CATV 
Fiber Optic 
Gas 
Oil 
Power 
Sanitary Sewer 
Telephone 
Water 

Overhead Utility Line (Existing, Proposed)

CATV 
Fiber Optic 
Power 
Telephone 

MISCELLANEOUS SYMBOLS

PROJECT SPECIFIC SYMBOLS

Proposed Storm Drain (SD) 

Proposed Manhole 

Proposed Drop Inlet 

Proposed Earth Berm 

Proposed Curb Cut 

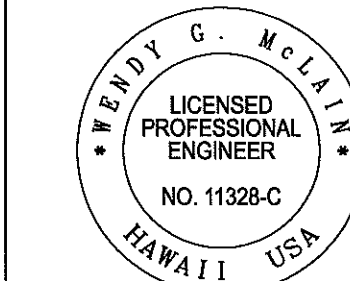
Proposed Asphalt Curb 

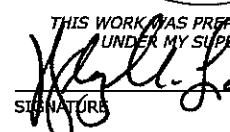
Approx. Limits of A'A Lava Flow 

Sediment Basin 

Work Not Included In Contract 

Potential Staging and Storage Area 



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**CONVENTIONAL PLAN
SYMBOLS AND ABBREVIATIONS**
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