

Δ	total central angle	M.L.	main line
Δc	curve central angle	M.P.	mile post
\emptyset	diameter	matl.	material
θs	spiral central angle	max.	maximum
abut.	abutment	MGAL	thousand gallon
ADT	average daily traffic	min.	minimum
AH	ahead	mon.	monument
appr.	approach	N	north
BK	back	NC	normal crown
b.f.	back face	o.c.	on center
BM	bench mark	o. to o.	out to out
BP	balance point	OD	outside diameter
br.	bridge	OG	original ground
brg.	bearing	OHWM	ordinary high water mark
btwn	between	PC	point of curve
cc or c. to c.	center to center	PCC	point of compound curve
ϵ	centerline	PCS	point of curve to spiral
clr.	clear	PI	point of intersection
CMP	corrugated metal pipe	pl.	plate
col.	column	POC	point on curve
conc.	concrete	POS	point on spiral
conn.	connection	POT	point on tangent
constr. jt.	construction joint	PS	point of tangent to spiral
cont.	continuous	PSF	pounds per square foot
CS	point of curve to spiral	PSI	pounds per square inch
ctrs.	centers	PSC	point of spiral to curve
CUFT	cubic foot (feet)	PST	point of spiral to tangent
culv.	culvert	PT	point of tangent
CUYD	cubic yard(s)	pvmt.	pavement
D	diameter	R	radius
DHV	design hourly volume	R.	range
dia.	diameter	R/W	right-of-way
diaph.	diaphragm	rdwy.	roadway
dist.	distance	reinf.	reinforcement
drwg(s).	drawing(s)	reqd.	required
E	east	rt. or RT	right
e	superelevation rate	rte.	route
e.f.	each face	S	south
El. 94.16	elevation in feet	SADT	seasonal average daily traffic
elev.	elevation	SC	point of spiral to curve
emb.	embankment	sect.	section
EOP	edge of pavement	shldr.	shoulder
EQ or eq.	equation	SLRY	slurry unit
EW	edge of water	spa.	spacing, spaces or spaced
exc.	excavation	SQFT	square foot
exp. jt.	expansion joint	SQYD	square yard
f.f.	front face	SRS	point of spiral to reverse spiral
fin.	finish	SS	point of spiral to spiral (no curve)
flg.	flange	ST	point of spiral to tangent
ftg.	footing	STA, Sta.	station
ga.	gage (gauge)	std.	standard
galv.	galvanized	strg.	stringer
ID	inside diameter	stiff.	stiffener
IE	invert elevation	struc.	structural
jt.	joint	STS	point of spiral to tangent spiral
KSI	thousand pounds per square inch	T	tangent distance
L	length of curve	T.	township
lat.	latitude	TBM	temporary bench mark
LNFT	linear foot (feet)	thd.	thread
long.	longitudinal	TS	point of tangent to spiral
LPSM	lump sum	Ts	tangent distance (spiraled curve)
Ls	length of spiral	typ.	typical
lt. or LT	left	V	design speed (velocity)
LW	low water	vph	vehicles per hour
		VPI	vertical point of intersection
		W	west

National Boundary	
State Boundary	
County Boundary	
City Boundary	
Township or Range Line	
Section Line	
Section Corner (Found, Projected)	
1/4 Section Line	
1/4 Section Corner (Found, Projected)	
1/16 Section Line	
1/16 Section Corner (Found, Projected)	
Property Line	
Parcel Number	
National Park Boundary	
National Forest Boundary	
National Wildlife Refuge Boundary	
BLM Lands Boundary	
Indian Reservation Boundary	
Existing Roadway (Paved, Gravel)	
Railroad	
Trail	
Fiber Roll	
Silt Fence	
Sandbag	
Intermittent Drainage or Small Creek	
Large Creek or River	
Lake, Pond or Reservoir; Marshland	
Spring or Seep	
Treeline; Individual Trees	
Material Source; Bore Hole; Test Pit	
Spot Elevation; Coordinate Grid Tick	
Above Ground Tank; Underground Tank	
Boulder; Well; Antenna; Grave	
Cooking Grate; Garbage Can; Picnic Table	
Flagpole; Fire Hydrant	
Gas & Water Meter; Gas & Water Valve	
Control Point (Terrestrial and GPS)	

North Arrow		EXISTING	PROPOSED
Slope Stake Limits	Top of Cut Toe of Fill		
Construction Limits	- no symbol -		
Bottom of Ditch			
Fence			
Gate with Fence			
Cattleguard			
Guardrail			
Concrete Barrier and Guard Wall			
Retaining Wall	wall face		
Signs (single, double post; portable)			
Delineators			
Pipe Culvert (arrow shows flow)			
Pipe Culvert with End Section			
Pipe Culvert with Headwall			
Pipe Culvert with Drop Inlet			
Box Culvert			
Underdrain			
Overhead/Above Ground Utilities			
Underground Utilities			
FM = force main, FO = fiber optic, G = gas, IRR = irrigation, O = oil, P = power, SA = sanitary sewer, SD = storm drain, SS = storm sewer, STEAM = steam, T = telephone, TV = CATV, W = water			
Poles (Power, Telephone, Joint Use, Light, Support w/Anchor)			
Miscellaneous Utility Features			
EM = electric meter, TP = telephone pedestal, TV = CATV pedestal, UP = transformer or junction box, WF = water fountain			
Building			
Right-of-Way Line			
Permanent Easement			
Construction Easement		- no symbol -	
Riprap			
	Section A-A		

NO SCALE

NOTE:

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

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF FEDERAL LANDS HIGHWAY

WFLHD DETAIL

PLAN SYMBOLS AND ABBREVIATIONS

DETAIL APPROVED FOR USE 11/2001	DETAIL
REVISED: 9/2005 1/2007 10/2009 10/2014	W101-1
6/2022	

Δ	total central angle	M.L.	main line
Δc	curve central angle	M.P.	mile post
\emptyset	diameter	m ²	square meter
θs	spiral central angle	m ³	cubic meter
abut.	abutment	matl.	material
ADT	average daily traffic	max.	maximum
AH	ahead	min.	minimum
appr.	approach	mon.	monument
BK	back	N	north
b.f.	back face	NC	normal crown
BM	bench mark	o.c.	on center
BP	balance point	o. to o.	out to out
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cc or c. to c.	center to center	PC	point of curve
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DHV	design hourly volume	R	radius
dia.	diameter	R.	range
diaph.	diaphragm	R/W	right-of-way
dist.	distance	rdwy.	roadway
drwg(s).	drawing(s)	rein.	reinforcement
E	east	reqd.	required
e	superelevation rate	rt. or RT	right
e.f.	each face	rte.	route
El. 94.016	elevation in meters	S	south
elev.	elevation	SADT	seasonal average daily traffic
emb.	embankment	SC	point of spiral to curve
EOP	edge of pavement	sect.	section
EQ or eq.	equation	shldr.	shoulder
EW	edge of water	SLRY	slurry unit
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galv.	galvanized	stiff.	stiffener
ID	inside diameter	struc.	structural
IE	invert elevation	STS	point of spiral to tangent spiral
jt.	joint	T	tangent distance
K.P.	kilometer post	T.	township
L	length of curve	TBM	temporary bench mark
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Section Line	
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Indian Reservation Boundary	
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Fiber Roll	
Silt Fence	
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Building			
Right-of-Way Line			
Permanent Easement			
Construction Easement	- no symbol -		
Riprap			
	Section A-A		

NO SCALE

NOTE:

- Other symbols used in the plans will be shown in a legend on the appropriate plan sheet.
- Dimensions in this plan set are in millimeters unless otherwise noted.

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 OFFICE OF FEDERAL LANDS HIGHWAY

WFLHD METRIC DETAIL

PLAN SYMBOLS AND ABBREVIATIONS

DETAIL APPROVED FOR USE 11/2001	DETAIL
REVISED: 9/2005 1/2007 10/2009 10/2014	WM101-1
6/2022	