MICROSTATION INFORMATION – BRIDGE DEPARTMENT

CFLHD'S FTP SITE ACCESS

server name = ftp.cflhd.gov
user name = cflhd
password = fhwa-cflhd

Feel free to tell the user name and password to anyone who needs it. The only reason this is not anonymous log-in is to keep out the casual hackers.

DOWNLOADABLE BRIDGE FILES ON THE CFLHD'S FTP SITE

The following METRIC files are on our ftp server in bridge\ MicrostationV8 new units.zip

metricV8 new units.dgn = MicroStation bridge seed files (this is the **main file** for creating drawings).

StandardV8.cel = standard bridge cell library:
bridge sheet borders used are MCENT and LAYOT1 or LAYOT2 (TS&L sheets).

fontcfl.rsc = standard bridge font libraries
Primarily use fonts 2 and Verdana (see **TEXT** below for details)

fhwals.rsc = custom bridge line style libraries

samplebar.dgn = bridge bar list sheets
Sample bridge sheet border, blank sheet border, standard bends (Note: An alternate form of bar list sheet, e.g. ASA, may be used with approval)

The following ENGLISH files are on our ftp server in bridge\ MicrostationV8 new units.zip

englishV8 new units.dgn = MicroStation bridge seed files (this is the **main file** for creating drawings).

StandardV8.cel = standard bridge cell library:
bridge sheet borders used are ECENT (English sheet border for all but bar list sheets), LAYOT1 or LAYOT2 (TS&L sheets).

fontcfl.rsc = standard bridge font libraries
Primarily use fonts 2 and Verdana (see **TEXT** below for details)

fhwals.rsc = custom bridge line style libraries

englishV8bar.dgn = bridge bar list sheets
Sample bridge sheet border, blank sheet border

NAMING CONVENTIONS FOR BRIDGE .dgn FILES & SHEET NUMBERING

File naming convention: Use RG number with identifying information.

Example: RG2737a.dgn
RG2737abut.dgn
RG2737gdr.dgn
RG2737rail.dgn
RG2737bar.dgn

PS&E PACKAGE COMPOSITION AND SHEET LAYOUT FORMAT

The following table is to be used as a general guide for the composition of a typical FLH bridge PS&E package. Additional sheets may be required depending on the complexity of the bridge. The Sheet Number shall begin with the Record Group (RG) number assigned to the bridge followed by the sequential alpha code.

Drawing No.	Bridge Drawing	Description
RG2737-A	1 of 17	Plan, elevation, north arrow: May have general notes, estimate of quantities if space allows
B	2 of 17	Foundation plan, north arrow, boring logs: May have slope protection, quantity estimate, general notes if A sheet does not have adequate space
C	3 of 17	Abutment
D	4 of 17	Abutment
E	5 of 17	Abutment as required
F	6 of 17	Abutment as required
G	7 of 17	Pier
H	8 of 17	Pier as required
I	9 of 17	Girder
J	10 of 17	Girder
K	11 of 17	Girder as required
L	12 of 17	Deck plan, typical section
M	13 of 17	Deck plan
N	14 of 17	Rail
O	15 of 17	Reinforcing bar lists
P	16 of 17	Reinforcing bar lists as required
R	17 of 17	Reinforcing bar lists as required

METRIC TEXT

The following would apply to a 1:10 scale drawing:

VERDANA:	WEIGHT	TX
TITLES	WT=3	.060 m
SECTIONS/VIEWS	WT=2	.044 m
VERDANA (ITALIC)		
All general text	WT=1	.035 m

For other scales see Scale Conversion section below.

ENGLISH TEXT

The following would apply to a 1 ½”=1’-0” scale drawing:

VERDANA:	WEIGHT	TX
TITLES	WT=3	.159
SECTIONS/VIEWS	WT=2	.116
VERDANA (ITALIC)		
All general text	WT=1	.093

For other scales see Scale Conversion section below.

VERDANA TEXT SPECIAL CHARACTERS

%%c = diameter symbol
%%p = plus & minus symbol
%%d = degree symbol

METRIC WORKING UNITS (10,000)
Meters, Millimeters

SCALES
11”x 17” sheets are considered true scale. Scale Conversions – See below.

Note: Bridge sheets are drawn actual size, the border sheet, and cells are imported in at an active scale shown below. The text size is also shown for the active scale being used.

SCALE CONVERSIONS W/ FULL SIZE [22x34]

APPROX. SIZE	METRIC SCALE	AC=MCENT, MWEST, MEAST) AS=	TERMINATOR AC=ARROW TS=	TX=(140)	TX=(175)	TX=(240)
1/4" = 1'-0"	1:50	.50	793.75	.175	.220	.300
3/8" = 1'-0"	1:30	.30	476.25	.105	.132	.180
1/2" = 1'-0"	1:25	.25	396.875	.0875	.110	.150
3/4" = 1'-0"	1:20	.20	317.5	.070	.088	.120
1-1/2" = 1'-0"	1:10	.10	158.75	.035	.044	.060
3" = 1'-0"	1:5	.05	79.375	.0175	.022	.030
1" = 10'-0"	1:100	1.00	1587.5	.350	.440	.600
1" = 20'-0"	1:250	2.50	3968.75	.875	1.100	1.500
1"= 40'-0"	1:500	5.00	7937.5	1.750	2.200	3.000

AUTO DIMENSION TERMINATOR
Cell = Arrow
Width = 2.50
Height = 0.50
Weight = 2

ACTIVE SCALE *(TRUE SCALE ACTIVATED)* COMPUTATION FOR STORED CELLS
For Metric Scale 1: [50] take [50] times 15.875 = 793.75

TEXT COMPUTATION
For Metric Text 1: [50] take [.050] times 3.5 = .175

FOR TRUE SCALE ON [11X17] SHEETS:
The above table is for true scale on [22” x 34”] sheets. Cells MCENT @ AS= .10 will produce a [11” x 17”] sheet which scales to 1:20.

ENGLISH WORKING UNITS (10,000)
Survey Feet, Survey Inches

SCALES

11”x 17” sheets are considered true scale. Scale Conversions – See below.

Note: Bridge sheets are drawn actual size, the border sheet, and cells are imported in at an active scale shown below. The text size is also shown for the active scale being used.

SCALE CONVERSIONS W/ FULL SIZE [22x34]

SCALE	AC=(ECENT, EWEST) AS=	TERMINATOR AC=ARROW TS=	TX=(140)	TX=(175)	TX=(240)
1/4" = 1'-0"	25.0	25.0	.564	.705	.967
3/8" = 1'-0"	16.67	16.67	.376	.470	.645
1/2" = 1'-0"	12.5	12.5	.282	.353	.483
3/4" = 1'-0"	8.33	8.33	.188	.235	.322
1" = 1'-0"	6.25	6.25	.140	.175	.240
1 1/2” = 1’-0”	4.17	4.17	.093	.116	.159
3" = 1'-0"	2.08	2.08	.047	.058	.080
1" = 10'-0"	62.5	62.5	1.4	1.75	2.4
1" = 20'-0"	125.0	125.0	2.8	3.5	4.8

FOR TRUE SCALE ON [11X17] SHEETS:

The above table is for true scale on [22”x 34”] sheets. Cells ECENT @ AS=4.17 will produce a [11”x 17”] sheet which scales to 3/4” = 1’- 0”

AUTO DIMENSION TERMINATOR
Cell = Arrow
Width = 2.70
Height = 2.70
Weight = 2

GENERAL CADD STANDARDS

The following table is intended to be used a guide for the proper Line Codes, Line Weights, Text Sizes, Fonts, and Levels for CADD level elements included in Bridge PS&E packages:

	Line Code	Line Weight	Text Size	Font	Level
BRIDGE BORDERS					
Park Name	0	2	4	2	8
Structure/Crossing Name	0	2	4	2	8
State Name	0	2	4	2	8
Sheet Title	0	3	6	2	8
Information Blocks (top of border)	0	0	3.5	2	1
Information Blocks (bottom of border)	0	0	3.5	2	8
PRELIMINARY…label	0	2	12	7	62
Time & Date of Plot	0	0	3.5	23	61
File Location	0	0	3.5	23	61
BRIDGE PLAN DETAILING					
Detail Title	0	3	4	2	1
Detail Sub Title	0	2	3.5	2	1
Detail Scale	0	2	3.5	2	1
Concrete Outline	0	3	N/A	N/A	2
Structural Steel Outline	0	1	N/A	N/A	2
Reinforcing Steel	0	1	N/A	N/A	4
Construction Joint Line	0	0	N/A	N/A	2
Existing Structure and Phantom Lines	6	0	N/A	N/A	11
Hidden Lines	3	0	N/A	N/A	2
Centerlines	4	0	N/A	N/A	2
Dimensions Lines	0	0	N/A	N/A	3
Witness Lines	0	0	N/A	N/A	3
Dimension Text	0	1	3.5	24	3
Detailing Notes Text	0	1	3.5	24	3
Rebar Labels and Text	0	1	3.5	24	5
Plan and Elevation General Notes	0	1	3.5	24	9