CURRENT DATE: 12-14-2006 FILE DATE: 12-14-2006
CURRENT TIME: 09:02:36 FILE NAME: 45THHOOV

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CU LV NO.	SITE DATA: INLET ELEV. (ft)	SITE DATA: OUTLET ELEV. (ft)	SITE DATA: CULVERT LENGTH (ft)	CULVERT SHAPE, MATERIAL, INLET: BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	1333.66	1333.38	183.00	2 RCB	6.00	3.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

FILE: 45THHOOV CULVERT HEADWATER ELEVATION (ft) DATE: 12-14-2006

DISCHARGE (cfs)	1	2	3	4	5	6	ROADWAY
0	1333.66	0.00	0.00	0.00	0.00	0.00	0.00
36	1334.77	0.00	0.00	0.00	0.00	0.00	0.00
72	1335.42	0.00	0.00	0.00	0.00	0.00	0.00
108	1335.96	0.00	0.00	0.00	0.00	0.00	0.00
144	1336.45	0.00	0.00	0.00	0.00	0.00	0.00
180	1336.90	0.00	0.00	0.00	0.00	0.00	0.00
216	1337.29	0.00	0.00	0.00	0.00	0.00	0.00
252	1337.69	0.00	0.00	0.00	0.00	0.00	0.00
288	1338.39	0.00	0.00	0.00	0.00	0.00	0.00
324	1339.09	0.00	0.00	0.00	0.00	0.00	0.00
360	1339.74	0.00	0.00	0.00	0.00	0.00	0.00
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

The last row, if not 0, is for a point above the roadway.

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PERFORMANCE CURVE FOR CULVERT 1 - 2(6.00 (ft) BY 3.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	1333.66	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
36.00	1334.77	1.00	1.11	3-M1t	0.83	0.66	0.83	0.83	3.62	1.87
72.00	1335.42	1.60	1.76	3-M2t	1.32	1.04	1.23	1.23	4.88	2.35
108.00	1335.96	2.10	2.30	3-M2t	1.75	1.36	1.54	1.54	5.83	2.67
144.00	1336.45	2.55	2.79	3-M2t	2.15	1.65	1.81	1.81	6.64	2.92
180.00	1336.90	2.98	3.24	3-M2t	2.53	1.92	2.04	2.04	7.35	3.13
216.00	1337.29	3.43	3.63	3-M2t	3.00	2.16	2.25	2.25	7.99	3.31
252.00	1337.69	3.93	4.03	3-M2t	3.00	2.40	2.45	2.45	8.59	3.46
288.00	1338.39	4.48	4.73	3-M2t	3.00	2.62	2.63	2.63	9.14	3.60
324.00	1339.09	5.11	5.43	2-M2c	3.00	2.84	2.84	2.79	9.52	3.72
360.00	1339.74	5.82	6.08	6-FFc	3.00	3.00	3.00	2.95	10.00	3.84

El. inlet face invert 1333.66 ft El. outlet invert 1333.38 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	1333.66 ft
OUTLET STATION	183.00 ft
OUTLET ELEVATION	1333.38 ft
NUMBER OF BARRELS	2
SLOPE (V/H)	0.0015
CULVERT LENGTH ALONG SLOPE	183.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	6.00 ft
BARREL RISE	3.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (30-75 DEG. FLARE)
INLET DEPRESSION	NONE

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******* REGULAR CHANNEL CROSS SECTION ****************

BOTTOM WIDTH	20.00 ft
SIDE SLOPE H/V (X:1)	4.0
CHANNEL SLOPE V/H (ft/ft)	0.003
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	1333.38 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	1333.38 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	1333.38	0.000	0.00	0.00	0.00
36.00	1334.21	0.361	0.83	1.87	0.16
72.00	1334.61	0.374	1.23	2.35	0.23
108.00	1334.92	0.380	1.54	2.67	0.29
144.00	1335.19	0.383	1.81	2.92	0.34
180.00	1335.42	0.386	2.04	3.13	0.38
216.00	1335.63	0.388	2.25	3.31	0.42
252.00	1335.83	0.390	2.45	3.46	0.46
288.00	1336.01	0.391	2.63	3.60	0.49
324.00	1336.17	0.392	2.79	3.72	0.52
360.00	1336.33	0.393	2.95	3.84	0.55

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ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	80.00 ft
CREST LENGTH	4000.00 ft
OVERTOPPING CREST ELEVATION	1340.00 ft

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