00–02 IDENTIFICATION AND ALIGNMENT FORM

00–02ID_ALG.DGN
E.H.H. 06/2010

CARD TYPE	STRUCTURE ID	DESCRIPTION PROJECT NUMBER, DESIGNER, DETAILER, LOCATION, REMARKS, ETC.
	1 2 3 4 5 6 7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
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HORIZONTAL ALIGNMENT

CARD TYPE	△				PI STATION	D_c			SPIRAL LENGTHS		PROFILE OFFSET (+RIGHT/–LEFT)	RADIUS	STATION EQUATION	
	L or R	DEG	MIN	SEC		DEG	MIN	SEC	L_S IN	L_S OUT			BACK STATION	AHEAD STATION
	1 2	3	4 5 6	7 8	9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	24 25	26 27	28 29 30 31	32 33 34 35 36 37	38 39 40 41 42 43	44 45 46 47 48 49 50 51	52 53 54 55 56 57 58	59 60 61 62 63 64 65 66 67 68 69	70 71 72 73 74 75 76 77 78 79 80
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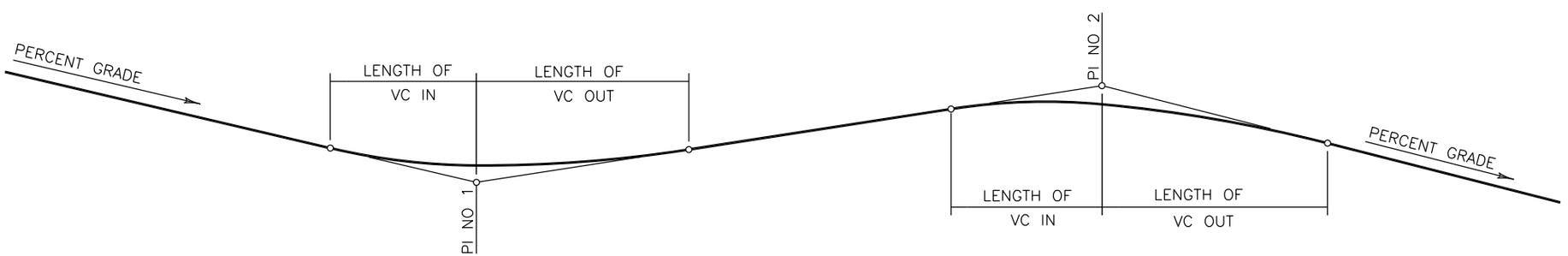

VERTICAL ALIGNMENT

CARD TYPE	PERCENT GRADE	VERTICAL CURVE NO 1				VERTICAL CURVE NO 1				PERCENT GRADE
		LENGTH OF VC IN	STATION OF PI	ELEVATION OF PI	LENGTH OF VC OUT	LENGTH OF VC IN	STATION OF PI	ELEVATION OF PI	LENGTH OF VC OUT	
	1 2 3 4 5 6 7 8 9 10 11	12 13 14 15 16 17	18 19 20 21 22 23 24 25 26	27 28 29 30 31 32 33 34 35	36 37 38 39 40 41	42 43 44 45 46	47 48 49 50 51 52 53 54 55 56	57 58 59 60 61 62 63 64 65	66 67 68 69 70	71 72 73 74 75 76 77 78 79 80
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03-04 SUPERELEVATION AND LAYOUT DATA FORM

03-04SUP_LAY.DGN
E.H.H. 05/2000

CARD TYPE	CROWN TYPE	CROSS SLOPE AND TRANSITION DATA											PARABOLIC CROWN DATA			
		NOMINAL CROSS–SLOPE	SUPER RATE (e)	PIVOT OFFSET FROM PROFILE LINE (+RIGHT/–LEFT)	TRANSITION IN: RUN–OUT	TRANSITION IN: TRANSITION LENGTH FOR SIMPLE CURVE	TRANSITION IN: PERCENT OF TRANSITION OUTSIDE SIMPLE CURVE	TRANSITION OUT: RUN–OUT	TRANSITION OUT: TRANSITION LENGTH FOR SIMPLE CURVE	TRANSITION OUT: PERCENT OF TRANSITION OUTSIDE SIMPLE CURVE	MAX. LENGTH OF TRANS VC		WIDTH (FEET)	HEIGHT (INCHES)	SLOPE LEFT (FT/FT)	SLOPE RIGHT (FT/FT)
1 2	3	4 5 6 7 8	9 10 11 12	13 14 15 16 17 18 19 20	21 22 23 24 25	26 27 28 29 30	31 32 33 34 35	36 37 38 39 40	41 42 43 44 45	46 47 48 49 50	51 52 53	54 55	57 58 59 60 61 62 63 64 65	66 67 68 69 70	71 72 73 74 75	76 77 78 79 80
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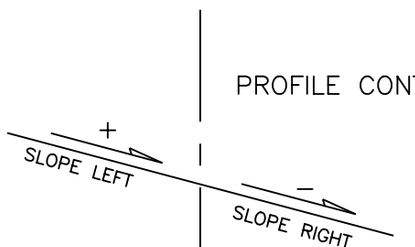
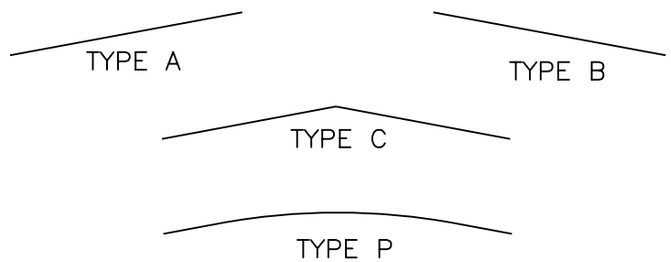
OPTIONAL SUPERELEVATION OVERRIDE

CARD TYPE	STATION	SLOPE LEFT (FT/FT)	SLOPE RIGHT (FT/FT)		
1 2	3 4 5 6 7 8 9 10 11	12 13 14 15 16	17 18 19 20 21	22 23 24	25
0 3	+ .	.	.	.	
0 3	+ .	.	.	.	
0 3	+ .	.	.	.	
0 3	+ .	.	.	.	
0 3	+ .	.	.	.	
0 3	+ .	.	.	.	



CROSS–SLOPE SIGN CONVENTION
(SECTION LOOKING AHEAD STATION)



CROWN TYPES
(COLUMN 3)

REFERENCE LINE DATA

CARD TYPE	REFERENCE STATION		SKEW: L OR R	SKEW: DEG	SKEW: MIN	SKEW: SEC		*		1 *	2 *	3 *		4 *	5 *	6 *		TRANSFORM CONSTANT FOR LAYOUT COORDINATES: X	TRANSFORM CONSTANT FOR LAYOUT COORDINATES: Y	LIMITS OF VALID ELEVATION AND CROSS SLOPE DATA: BEGIN STATION	LIMITS OF VALID ELEVATION AND CROSS SLOPE DATA: END STATION
1 2	3 4 5 6 7 8 9 10 11 12 13	14	15	16 17	18 19	20 21 22 23	24	25	26	27	28	29	30	31	32	33	34 35 36 37 38 39 40	41 42 43 44 45 46 47 48 49	50 51 52 53 54 55 56 57 58	59 60 61 62 63 64 65 66 67 68 69	70 71 72 73 74 75 76 77 78 79 80
0 4	+ .					.												.	.	+ .	+ .

STATION IS ON: 0) HORIZONTAL CONTROL
1) BACK TANGENT
2) AHEAD TANGENT
3) SAME REFERENCE AND LAYOUT LINES AS PREVIOUS SECTION (ONLY * FIELDS MUST BE SPECIFIED)

SKEW IS WITH RESPECT TO: 1) HORIZONTAL CONTROL
2) LAYOUT LINE
3) BACK TANGENT
4) AHEAD TANGENT

DEFAULT SKEW ANGLE FOR BENT LINES:
0) PARALLEL TO REFERENCE LINE
1) SAME SKEW (TO HORIZ. CONTROL) AS REFERENCE LINE

LAYOUT LINE IS 1) BACK TANGENT
2) CHORD
3) AHEAD TANGENT

REVERSE LAYOUT LINE (0 INCR/NOT
(1DEC/REVERSED
(2 DECR/NOT
(3 INCR/REVERSED

SELECT OPTIONS:

1. SEGMENTED GIRDER LINES TO BE BROKEN AT REFERENCE LINE (COL 27)
2. SUPRESS LISTING (COL 28)
3. OFFSET OPTION FOR SEGMENTED GIRDER PATTERN SHIFT (COL 29)
4. REQUEST X-O POINTS (COL 30)
5. ADJUSTED ELEVATIONS ON TRANSLUCENT (COL 32)
6. EXTEND PRINT CAPABILITY (COL 33)

05 GIRDER LINE DATA FORM

05GIRLINE.DGN
E.H.H. 11/2015

GIRDER LINE DATA

CARD TYPE	1	OFFSET DISTANCE (+RIGHT/−LEFT) INITIAL	2	OFFSET DISTANCE (+RIGHT/−LEFT) TERMINAL	2	ELEVATION SHIFT (+ABOVE/-BELOW)	DESCRIPTION	3	4	5	6	7	8	9	
1 2	3	4 5 6 7 8 9 10 11	12	13 14 15 16 17 18 19 20	21	22 23 24 25 26 27 28 29	30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	50	51	52 53	54	55	56	57	58 59
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GIRDER LINE DATA RECORDS

1. LINE TYPE (COL 3)
   0) PARALLEL TO HORIZ CONTROL
   1) SEGMENTED GIRDER LINE
   2) PARALLEL TO LAYOUT LINE
   3) FLARED GIRDER LINE
   4) OFFSET VARIES WITH SUPER

2. OFFSET TYPE
   FOR A LINE TYPE 0, 2, 0R 3 (COL 12 OR 21)
   1) ALONG A BENT LINE FROM LAYOUT LINE
   2) ALONG A NORMAL FROM LAYOUT LINE
   3) ALONG A BENT LINE FROM HORIZONTAL CONTROL
   4) ALONG A NORMAL FROM HORIZONTAL CONTROL

   FOR A LINE TYPE 1 (COL 12)
   5) NORMAL OFFSET FROM BASE CHORD

   FOR LINE TYPE 4 (COL 12)
   1) FROM HORIZ CONTROL AT NOMINAL C/S
   2) FROM HORIZ CONTROL AT LEVEL C/S
   3) FROM PIVOT POINT AT NOMINAL C/S
   4) FROM PIVOT POINT AT LEVEL C/S

3. SEGMENTED GIRDER LINES ARE PARALLEL TO TO CHORDS ON THIS LINE (LINE TYPE 0 ONLY) (COL 50)

4. LAYOUT LINE IS A CHORD ON THIS LINE (LINE TYPE 0 OR 3 ONLY) (COL 51)

5. X-TYPE FRACTIONAL POINTS (COLS 52-53)
   DESIGNATE THE EXTERIOR GIRDER WITH A CHARACTER IN COL 52

   DESIGNATE THE OUTSIDE LINE(S) WITH THE CORRESPONDING CHARACTER IN COL 53

   FRACTIONAL POINTS ON THE OUTSIDE LINE WILL BE LOCATED ON NORMALS FROM THE FRACTIONAL POINTS ON THE EXTERIOR GIRDER

   SELECTIVE INTERSECTIONS (COL 53)
   A GIRDER LINE WITH ANY CHARACTER (A-Z OR 1-9) IN COL. 53 WILL INTERSECT WITH A BENT LINE (06 RECORD) HAVING THE SAME CHARACTER IN COL. 43.

   A GIRDER LINE WITH ANY DIGIT (1-9) IN COL. 53 WILL INTERSECT WITH A BENT LINE (06 RECORD) HAVING THE DIGIT ZERO (0) IN COL. 43.

6. CHARACTER TO MATCH 07 RECORD COL 3 FOR DEAD LOAD DEFLECTIONS (COL 54)

7. REQUEST CAMBER CUTTING SCHEDULE (COL 55)

8. LINE OF CONSTANT OFFSET FOR TYPE 4 GIRDER LINES (LINE TYPE 0 ONLY) (COL 56)

9. SUPRESS LISTING (COL 57)

06 BENT LINE DATA FORM

06BENLINE.DGN
E.H.H. 05/2000

BENT LINE DATA

CARD TYPE	DISTANCE (FEET) (+AHEAD/-BACK)	1	SKEW L OR R	SKEW DEG	SKEW MIN	SKEW SEC	2	FRACTIONAL POINTS	DESCRIPTION	3	4	5	6	7	8	9	
1 2	3 4 5 6 7 8 9 10	11	12	13 14	15 16	17 18 19 20	21	22 23 24 25 26 27 28	29 30 31 32 33 34 35 36 37 38	39	40	41	42	43	44	45 46	47 48 49 50
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BENT LINE DATA RECORDS
(80 MAX. PER SECTION)

1. DISTANCE TYPE (COL 11)
   DISTANCE IS FROM REFERENCE LINE ALONG:
   0) HORIZONTAL CONTROL LINE
   1) LAYOUT LINE
   2) BACK TANGENT
   3) AHEAD TANGENT
   4) NORMAL TO REFERENCE LINE

   DISTANCE IS FROM BENT LINE REFERENCED BY COL 46:
   6) NORMAL OFFSET
   7) SEGMENTED CHORD LENGTH

   (MAY NOT USE COLS 40 OR 41
   MUST HAVE DEFAULT SKEW)

2. SKEW TYPE (COL 21)
   SKEW IS WITH RESPECT TO:
   0) DEFAULT
   1) HORIZONTAL CONTROL LINE
   2) LAYOUT LINE
   3) BACK TANGENT
   4) AHEAD TANGENT

3. SEGMENTED GIRDER LINE TO BE BROKEN AT THIS BENT LINE (COL 39)

4. BENT LINE OFFSETS FOR FLARED GIRDER LINES (COL 40)

5. INITIAL OR TERMINAL BENT TO DEFINE CHORD LAYOUT LINE (COL 41)

6. SUPPRESS LISTING (COL 42)

7. SELECTIVE INTERSECTIONS (COL 43)
   A BENT LINE WITH A CHARACTER (A-Z OR 1-9)IN THIS COL WILL BE INTERSECTED ONLY WITH GIRDER LINE (05 RECORD) HAVING THE SAME CHARACTER IN COL 53

   A BENT LINE WITH THE DIGIT ZERO IN THIS COL WILL BE INTERSECTED ONLY WITH GIRDER LINES HAVING ANY DIGIT (1-9) IN COL 53

   A BENT LINE WITH THE CHARACTER * IN THIS COL WILL NOT INTERSECT ANY GIRDER LINE

8. CHARACTER TO MATCH 07 RECORD COL 4 FOR DEAD LOAD DEFLECTIONS (COL 44)

9. SECONDARY REFERENCE LINES (COLS 45-46)

   INDICATE A SECONDARY REFERENCE LINE WITH A CHARACTER IN COL 45

   BENT LINES REFERENCED BY DISTANCE TYPE 6 OR 7 MUST HAVE THIS CHARACTER IN COL 46

07–08 DEAD LOAD DEFLECTIONS AND ROADWAY APPROACHES FORM

07-08DLD_APP.DGN
E.H.H. 11/16/2000

DEAD LOAD DEFLECTION DATA

CARD TYPE	05/54	06/44	F (FEET)		DEFLECTIONS AT TENTH POINTS (+DOWNWARD -UPWARD)										
					0 (BRG)	1	2	3	4	5	6	7	8	9	10 (BRG)
1 2	3	4	5	6 7 8 9 10 11 12 13 14	15 16 17 18 19 20	21 22 23 24 25 26	27 28 29 30 31 32	33 34 35 36 37 38	39 40 41 42 43 44	45 46 47 48 49 50	51 52 53 54 55 56	57 58 59 60 61 62	63 64 65 66 67 68	69 70 71 72 73 74	75 76 77 78 79 80
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0,7					.	.	.	.	.	.	.	.	.	.	.
0,7					.	.	.	.	.	.	.	.	.	.	.

ROADWAY APPROACHES

CARD TYPE	BEGIN STRUCTURE	END STRUCTURE	APPROACH LENGTH (150 DEF)	OFFSETS FROM HORIZONTAL CONTROL (+RIGHT/-LEFT) TO EDGE OF SHOULDER, EDGES OF TRAVEL LANES, PROFILE LINE, PIVOT POINT, ETC.							
1 2	3 4 5 6 7 8 9	10 11 12 13 14 15 16	17 18 19 20 21 22 23 24	25 26 27 28 29 30 31 32	33 34 35 36 37 38 39 40	41 42 43 44 45 46 47 48	49 50 51 52 53 54 55 56	57 58 59 60 61 62 63 64	65 66 67 68 69 70 71 72	73 74 75 76 77 78 79 80	
0,8	.	.	.	.	.	.	.	.	.	.	