

1.0 Summary of Results

Table 1. Summary of Results for EMF Calculations.							
		Magnetic Flux Density (mG)			Electric Field Strength (kV/m)		
Profile #	ROW Width (ft.)	Left Edge of ROW	Max Level on ROW	Right Edge of ROW	Left Edge of ROW	Max Level on ROW	Right Edge of ROW
1	150	28.6	147.8	28.6	0.04	1.92	0.04
2	100	24.0	79.9	25.7	0.26	0.76	0.21
3	100	35.8	100.0	35.8	0.39	0.74	0.39
4	175	9.6	139.6	35.7	0.22	1.98	0.06

2.0 Assumptions

EMF Calculations were performed based on the following assumptions:

1. Max conductor sag on a typical span is 20 ft.
2. Max OHGW sag on a typical span is 12 ft.
3. Phase spacing on all H-frame structures is 12 ft.
4. All currents flow in the westerly direction for all lines.
5. Calculation current used for the existing Circuit #984 was 300 A.
6. Circuit #984 conductor was assumed to be 1033.5 kcmil 45/7 Ortolan ACSR.
7. Calculation currents for the new Circuits #726-1 and #726-2 were each assumed to be 945 A.
8. Conductors for Circuits #726-1 and #726-2 were assumed to be 477.0 kcmil 18/1 Pelican ACSR.
9. Shield wires for Circuits #726-1 and #726-2 were assumed to be 3/8" EHS. For Circuit #984, 7/16" EHS was assumed.
10. Electric field calculations were performed at 1.05 PU line voltage (120.8kV Line-Line).
11. Reported magnetic field levels are resultant values.

3.0 Results By Profile

3.1 Profile 1 – Two Adjacent Circuits in Vertical Configuration, Proposed Circuits #726-1 and #726-2

For Profile 1, the phasing arrangement shown in Figure 1 was assumed for the calculation. Resultant EMF levels are provided in Table 2.

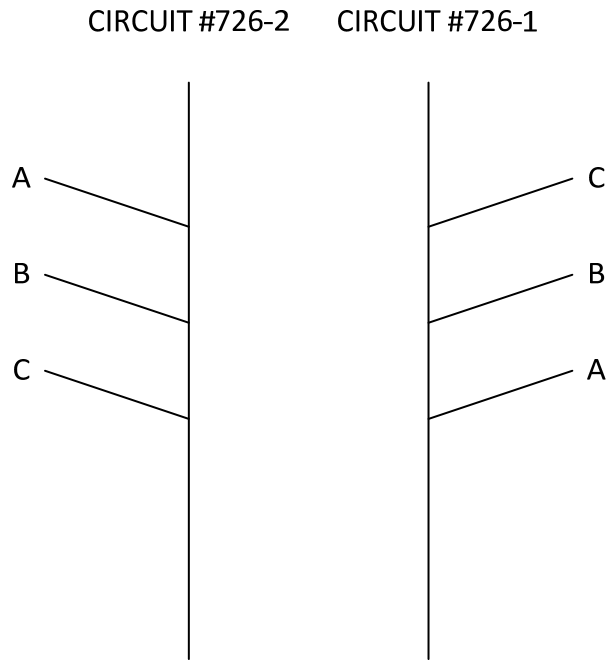


Figure 1. Profile 1 Phasing Assumption.

Table 2. Profile 1 Electromagnetic Field Levels.		
	Magnet Flux Density (mG)	Electric Field Strength (kV/m)
Left ROW Edge	28.6	0.04
Max	147.8	1.92
Right ROW Edge	28.6	0.04

3.2 Profile 2 – Delta Configuration, Circuit #726-1

For Profile 2, the phasing arrangement shown in Figure 2 was assumed for the calculation. Resultant EMF levels are provided in Table 3.

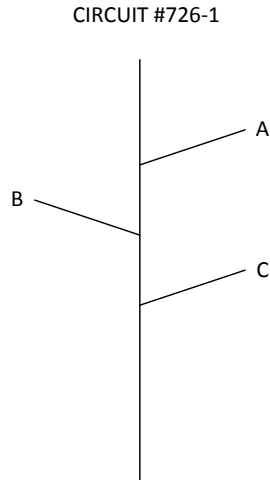


Figure 2. Profile 2 Phasing Assumption.

Table 3. Profile 2 Electromagnetic Field Levels.		
	Magnet Flux Density (mG)	Electric Field Strength (kV/m)
Left ROW Edge	24.0	0.26
Max	79.9	0.76
Right ROW Edge	25.7	0.21

3.3 Profile 3 – H-Frame Configuration, Proposed Circuit #726-1

For Profile 3, the phasing arrangement shown in Figure 3 was assumed for the calculation. Resultant EMF levels are provided in Table 4.

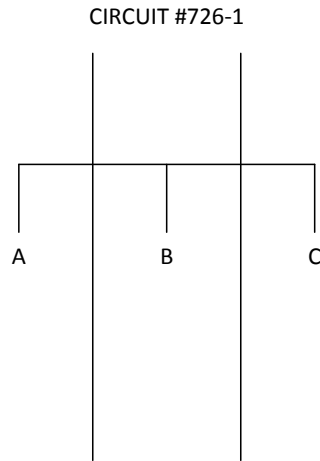


Figure 3. Profile 3 Phasing Assumption.

Table 4. Profile 3 Electromagnetic Field Levels.		
	Magnet Flux Density (mG)	Electric Field Strength (kV/m)
Left ROW Edge	35.8	0.39
Max	100.0	0.74
Right ROW Edge	35.8	0.39

3.4 Profile 4 – Existing Circuit #984 and Proposed Circuit #726-1

For Profile 4, the phasing arrangement shown in Figure 4 was assumed for the calculation. Resultant EMF levels are provided in Table 5.

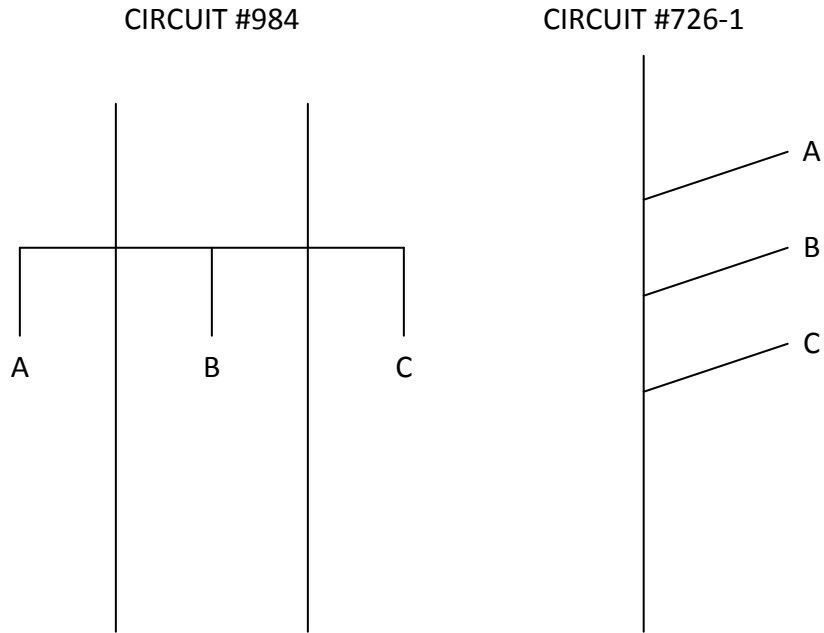


Figure 4. Profile 4 Phasing Assumption.

Table 5. Profile 4 Electromagnetic Field Levels.		
	Magnet Flux Density (mG)	Electric Field Strength (kV/m)
Left ROW Edge	9.6	0.22
Max	139.6	1.98
Right ROW Edge	35.7	0.06