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AMS 01-09-02
Event Trees

Group Asset Management

30 October 2025

02 Transmission

Coverage (1 of 2)

Event trees have been developed for Customer & Market, Safety, Environmental, and Bushfire consequence categories to provide a structured approach for assessing the likelihood of consequence (LoC). The trees illustrate how a sequences of events interact to determine LoC of an asset class or technical object type.
Development of event trees for Financial consequences is under review.

Asset Classes – Hyperlinked (If Applicable)	LoC			
	Customer & Market	Safety	Environmental	Bushfire
Power Transformers	No Event Tree Refer to AMS 01-09			
Circuit Breakers				
Bushings	No Event Tree Refer to AMS 01-09	Refer to 'Bushings, CTs, and VTs - Safety' section	Under Review	
Current Transformers (CTs)	No Event Tree Refer to AMS 01-09	Refer to 'Bushings, CTs, and VTs - Safety' section	No Event Tree Refer to AMS 01-09	
Voltage Transformers (VTs)	No Event Tree Refer to AMS 01-09	Refer to 'Bushings, CTs, and VTs - Safety' section	No Event Tree Refer to AMS 01-09	
Disconnectors (Isolators and Earth Switches)	No Event Tree Refer to AMS 01-09			
Transmission Line Structures (Towers and T-Poles)	No Event Tree Refer to AMS 01-09		Under Review	Refer to 'Transmission Line Conductors & Groundwires – Bushfire' section
Transmission Line Insulators	No Event Tree Refer to AMS 01-09		Under Review	Refer to 'Transmission Line Conductors & Groundwires – Bushfire' section
Transmission Line Conductors & Groundwires	No Event Tree Refer to AMS 01-09	Conductors Groundwires	Under Review	Refer to 'Transmission Line Conductors & Groundwires – Bushfire' section

Legend:

- Not considered
- Completed

Each event tree is paired with a table defining likelihood probabilities based on specific asset characteristics such as nominal voltage (kV), capacity, and technical object type.

The probabilities presented in this document are derived from either the DNO CNAIM methodology or have been developed and reviewed internally by AusNet subject matter experts (SMEs). Further clarification please refer to AMS 01-09.

Coverage (2 of 2)

Asset Classes – Hyperlinked (If Applicable)	LoC			
	Customer & Market	Safety	Environmental	Bushfire
Surge Diverters	No Event Tree Refer to AMS 01-09			
Civil Infrastructure	No Event Tree Refer to AMS 01-09		Under Review	
Communication Systems	No Event Tree Refer to AMS 01-09	Under Review		Under Review
Secondary Systems	No Event Tree Refer to AMS 01-09	Under Review		Under Review
Auxiliary Power Supplies	No Event Tree Refer to AMS 01-09	Under Review		Under Review
Power Cables	Under Review	Under Review		

Legend:

- Not Considered
- Completed

Power Transformers

Power Transformers – Safety (1 of 2)

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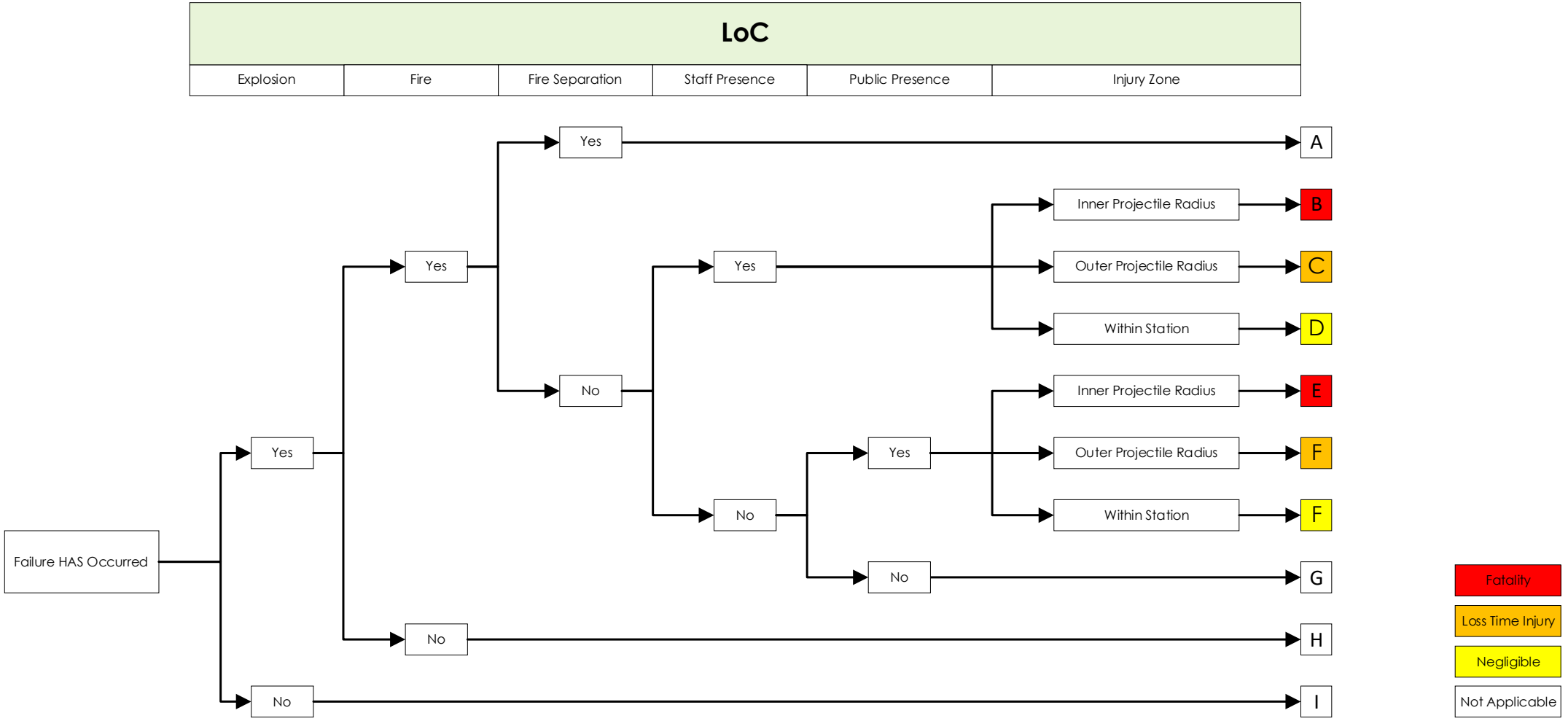


Power Transformers – Safety (2 of 2)

Power Transformer Safety LoC Combination Classifier.

Classifier ID	Asset Type	Nominal Voltage (KV)	Source	Fatality (B,E)	LTI (C,F)
1	Power Transformers	66kV ≤ V < 220kV	DNO	0.003134	0.000416
2		≥ 220kV	DNO	0.003134	0.000416

Power Transformer – Environmental

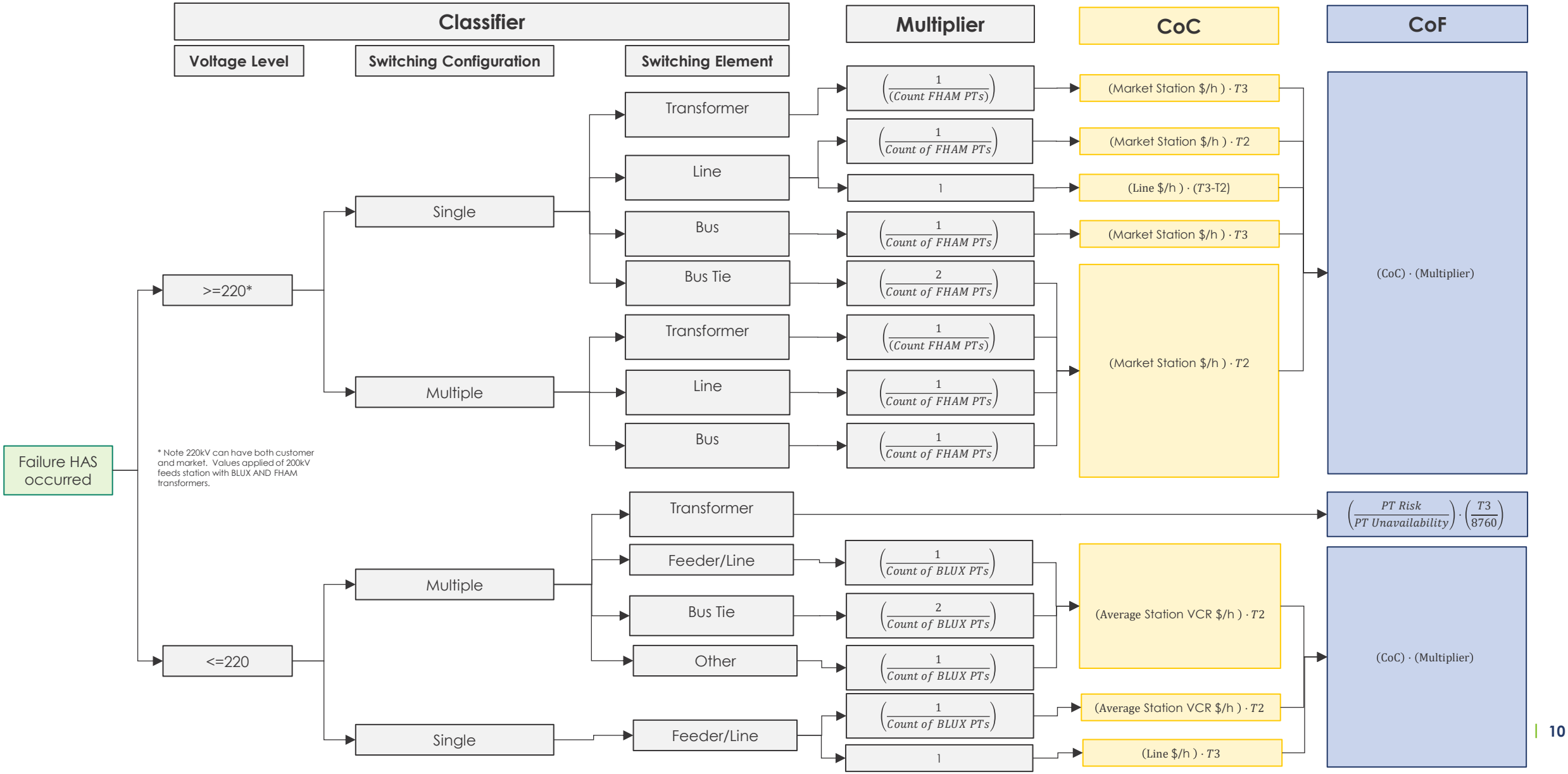
Power Transformer Environmental LoC Combination Classifier.

Classifier ID	Asset Type	Nominal Voltage (kV)	Object Type	Oil Containment System	Source	LoC
1	Power Transformer	66kV ≤ , < 220kV	PT	Compliant (C) Bund & Treatment	Internal Review	0.000375
2				(C) Bund only & Part Oil Treat	Internal Review	0.00075
3				Part (C) Bund & Porous Floor	Internal Review	0.00375
4				Part (C) with Trench Through Floor	Internal Review	0.00525
5				No Bunding	Internal Review	0.0075
6		≥ 220kV	PT	Compliant (C) Bund & Treatment	Internal Review	0.0005
7				(C) Bund only & Part Oil Treat	Internal Review	0.001
8				Part (C) Bund & Porous Floor	Internal Review	0.005
9				Part (C) with Trench Through Floor	Internal Review	0.007
10				No Bunding	Internal Review	0.01

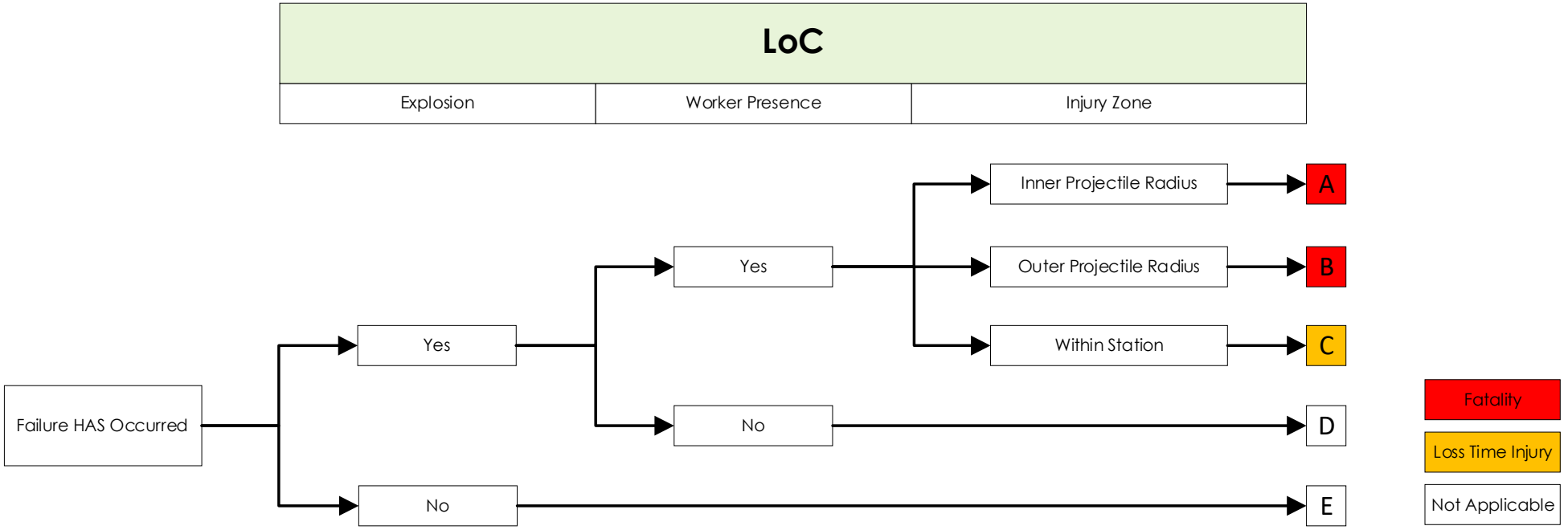
Note: This table provides LoCs for oil spills only.

Circuit Breakers

Circuit Breakers - Customer & Market



Circuit Breakers – Safety (1 of 2)



Circuit Breaker – Safety (2 of 2)

Circuit Breaker Safety LoC Combination Classifier.

Classifier ID	Asset Type	Nominal Voltage (kV)	Object Type	Source	Fatality (A, B)	LTI (C)
1	Circuit Breaker	66kV ≤ , < 220kV	CBBO	DNO	0.003134	0.000416
2			CBDT	DNO	0.003134	0.000416
3			CBGIN	DNO	0.003134	0.000416
4			CBLT	DNO	0.003134	0.000416
5			CBMO	DNO	0.003134	0.000416
6			CBVU	DNO	0.003134	0.000416
7		≥ 220kV	CBBO	DNO	0.003134	0.000416
8			CBDT	DNO	0.003134	0.000416
9			CBGIN	DNO	0.003134	0.000416
10			CBLT	DNO	0.003134	0.000416
11			CBMO	DNO	0.003134	0.000416
12			CBVU	DNO	0.003134	0.000416

Circuit Breaker – Environmental

Circuit Breaker Environmental LoC Combination Classifier.

Classifier ID	Asset Type	Nominal Voltage (kV)	Object Type	Construction Type	Source	LoC
1	Circuit Breaker	66kV ≤ , < 220kV	CBBO	Polymeric	Internal Review	0.02
2				Porcelain	Internal Review	0.05
3			CBDT	Polymeric	Internal Review	0.01
4				Porcelain	Internal Review	0.01
5			CBGIN	Polymeric	Internal Review	0.01
6				Porcelain	Internal Review	0.01
7			CBLT	Polymeric	Internal Review	0.01
8				Porcelain	Internal Review	0.01
9			CBMO	Polymeric	Internal Review	0.01
10				Porcelain	Internal Review	0.01
11			CBVU	Polymeric	Internal Review	0.01
12				Porcelain	Internal Review	0.01
13		≥ 220kV	CBBO	Polymeric	Internal Review	0.01
14				Porcelain	Internal Review	0.01
15			CBDT	Polymeric	Internal Review	0.01
16				Porcelain	Internal Review	0.01
17			CBGIN	Polymeric	Internal Review	0.01
18				Porcelain	Internal Review	0.01
19			CBLT	Polymeric	Internal Review	0.01
20				Porcelain	Internal Review	0.01

Classifier ID	Asset Type	Nominal Voltage (kV)	Object Type	Construction Type	Source	LoC
21	Circuit Breaker	≥ 220kV	CBMO	Polymeric	Internal Review	0.02
22				Porcelain	Internal Review	0.02
23			CBVU	Polymeric	Internal Review	0.01
24				Porcelain	Internal Review	0.01

Note: This table provides LoCs for oil spills only.

Bushings, CTs, and VTs

Bushings, CTs, and VTs – Safety (1 of 2)

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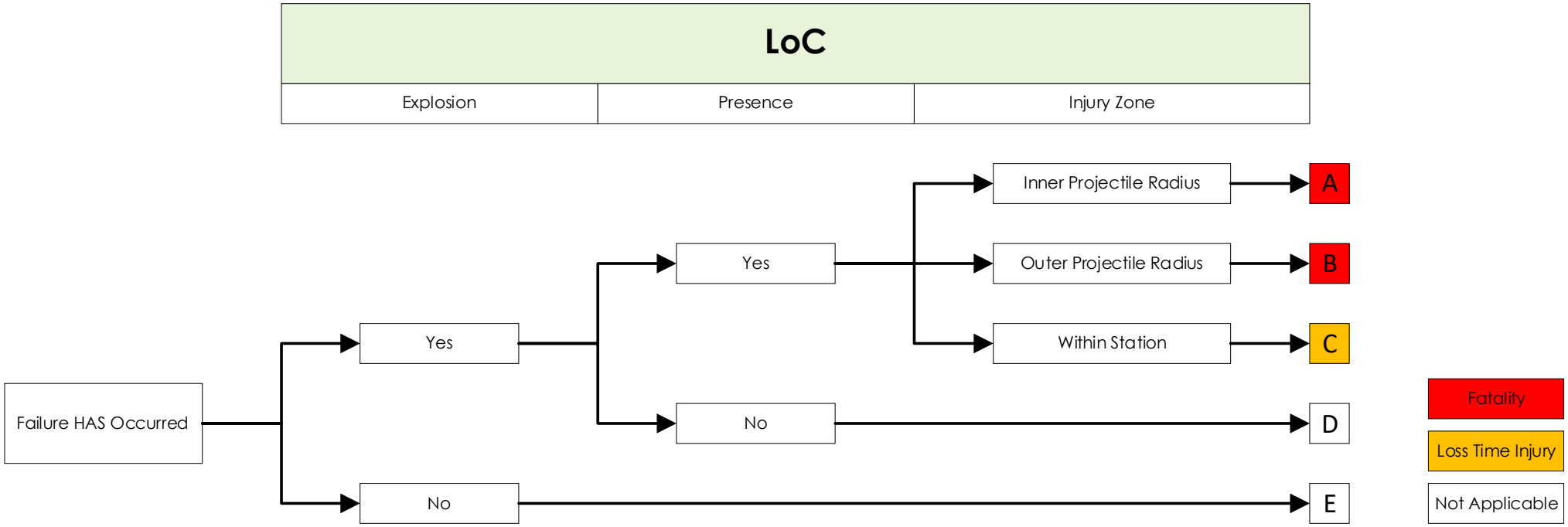


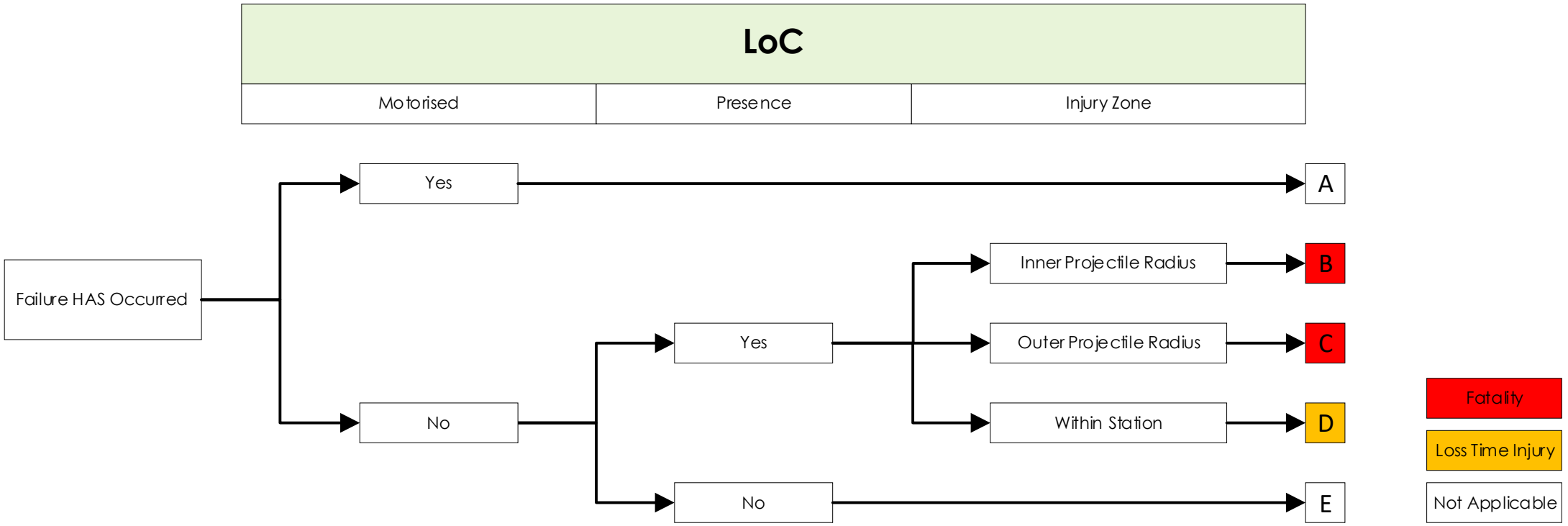
Bushings, CTs, and VTs - Safety (2 of 2)

Combination Classifier by Nominal Voltage and Construction Type for CB Bushings, PT Bushings, CTs, and VTs.

Classifier ID	Asset Type	Nominal Voltage (kV)	Construction Type	Source	Fatality (A, B)	LTI (C)
1	PT Bushing	66kV ≤ , < 220kV	RIP	DNO	0	0
2			OIP	DNO	0.00313	0.00042
3			SRBP	DNO	0.00313	0.00042
4		≥ 220kV	RIP	DNO	0	0
5			OIP	DNO	0.00313	0.00042
6			SRBP	DNO	0.00313	0.00042
7	CB Bushing	66kV ≤ , < 220kV	CBBO	DNO	0.0019	0.00026
8			CBLT	DNO	0.0019	0.00026
9		≥ 220kV	All	DNO	0.00313	0.00042
10			Other	DNO	0.00313	0.00042
11	Current Transformer	66kV ≤ , < 220kV	Hairpin	DNO	0.0019	0.00026
12			Other	DNO	0.0019	0.00026
13		≥ 220kV	Hairpin	DNO	0.00313	0.00042
14			Other	DNO	0.00313	0.00042
15	Voltage Transformer	66kV ≤ , < 220kV	CVT	DNO	0.0019	0.00026
16			MVT	DNO	0.0019	0.00026
17		≥ 220kV				

Disconnectors (Isolators and Earth Switches)

Disconnectors (Isolators and Earth Switches) – Safety (1 of 2)



Disconnectors (Isolators and Earth Switches) – Safety (2 of 2)

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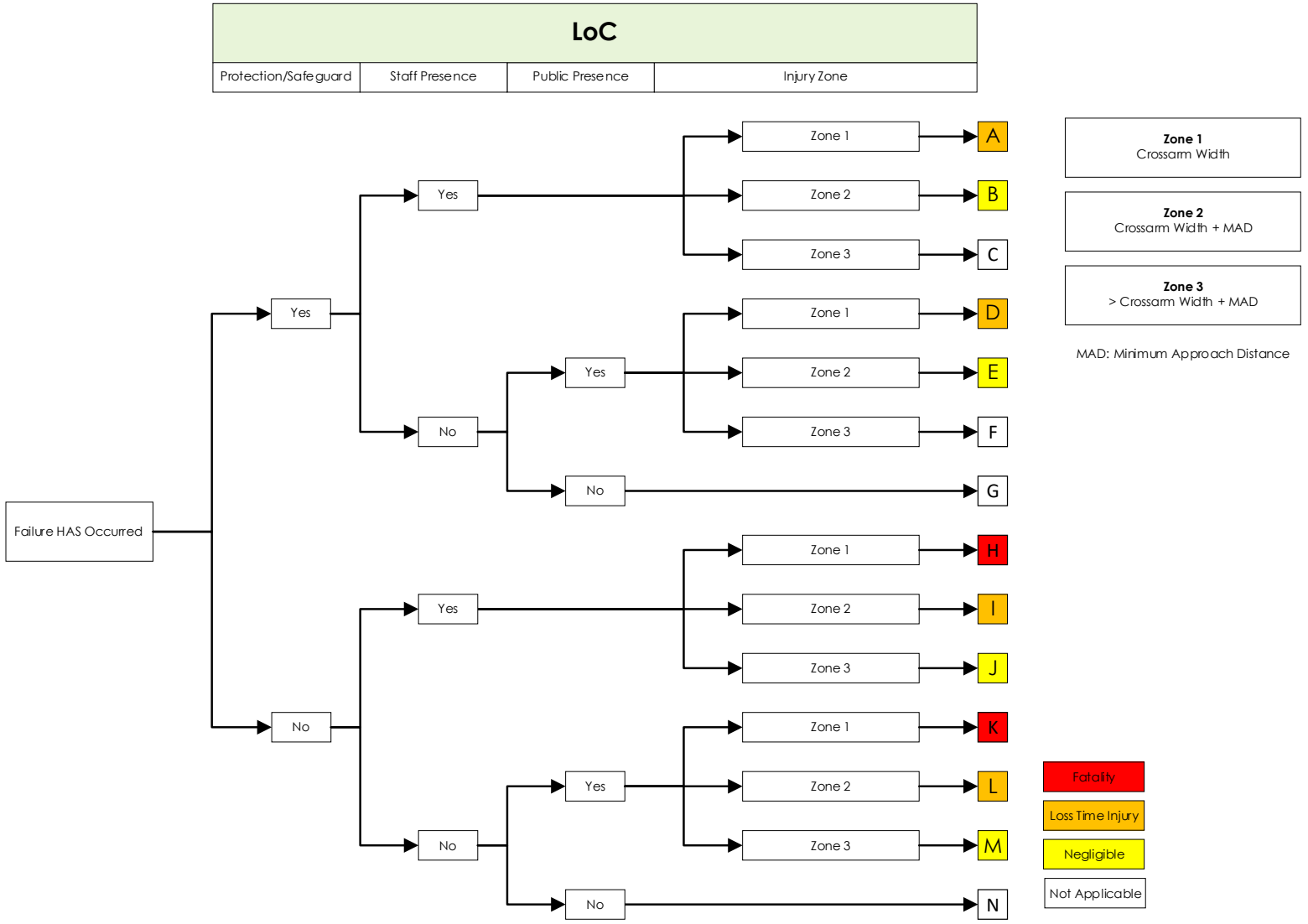
Disconnector Safety LoC Combination Classifier

Classifier ID	Asset Type	Nominal Voltage (kV)	Object Type	Source	Fatality (B, C)	LTI (D)
1	Disconnectors	66kV ≤, < 220kV	DISCGIN	DNO	0.00589	0.000713
2			ISOLGNGD	DNO	0.00589	0.000713
3			SWCHEARTH	DNO	0.00589	0.000713
4			SWEARTHGIN	DNO	0.00589	0.000713
5			ISOLROTARY	DNO	0.00589	0.000713
6			ISOL	DNO	0.00190	0.000260
7		≥ 220kV	DISCGIN	DNO	0.00589	0.000713
8			ISOLGNGD	DNO	0.00589	0.000713
9			SWCHEARTH	DNO	0.00589	0.000713
10			SWEARTHGIN	DNO	0.00589	0.000713
11			ISOLROTARY	DNO	0.00589	0.000713
12			ISOL	DNO	0.00190	0.000260

Transmission Line Structures (Towers and T-Poles)

Transmission Line Structures (Towers and T-Poles) – Safety (1 of 2)



Transmission Line Structures (Towers and T-Poles) – Safety (2 of 2)

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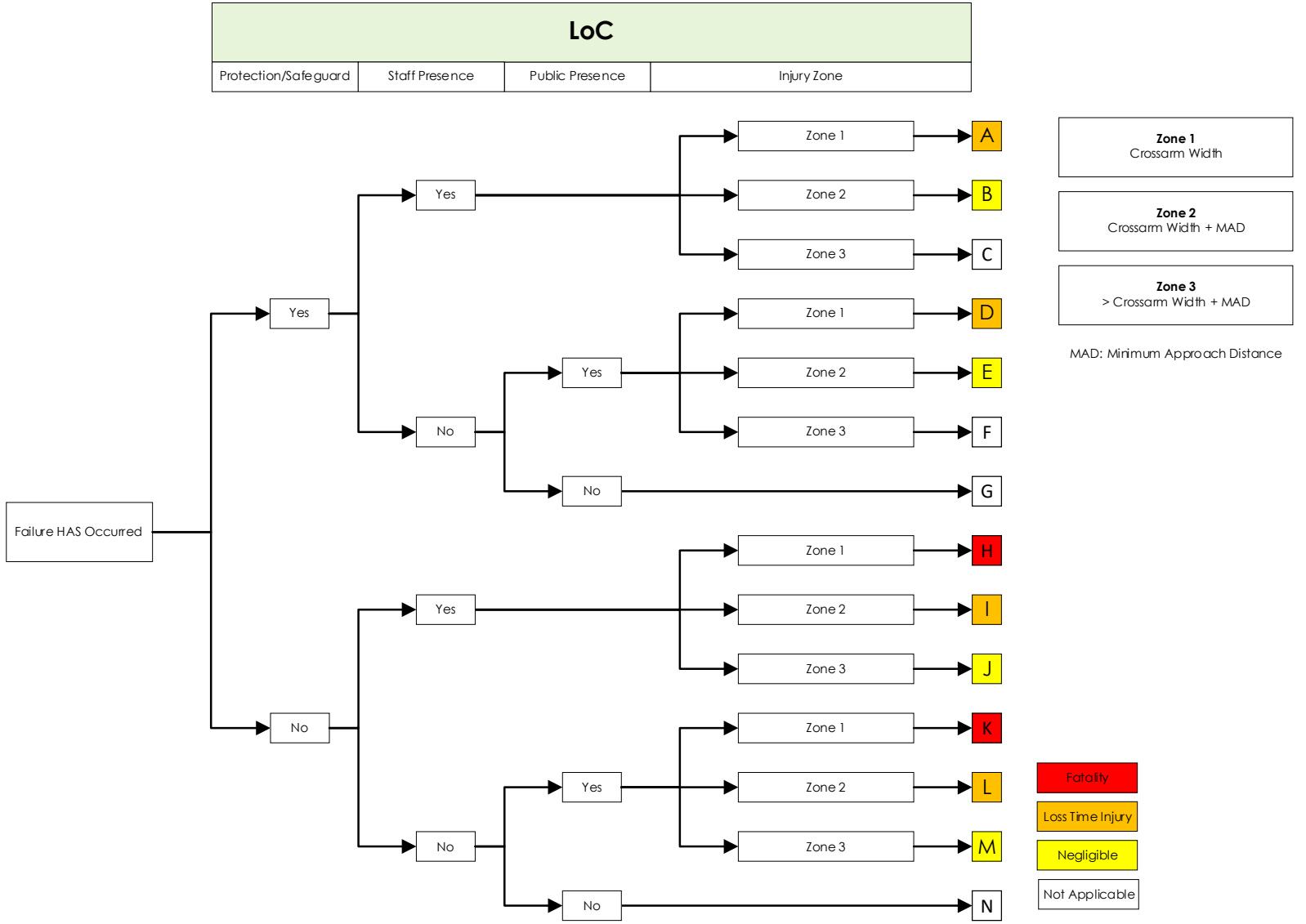
Structures Safety LoC Combination Classifier.

			Source	LTI (A, I)	Staff Fatality (H)	Public Fatality (K)	
						V/Multi	Single/Twin
Urban Score	0	Rural area	DNO	0.0001360	0.0000272		
	1	Residential area with clear easement	DNO	0.0001360	0.0000272		
	2	Residential area with built up easement	DNO	0.0001360	0.0000272		
	0	Rural area	Internal Review			0.0000750	0.0000750
	1	Residential area with clear easement	Internal Review			0.0075000	0.0075000
	2	Residential area with built up easement	Internal Review			0.0150000	0.0150000
Road Crossing Code	0	No Road Crossing	Internal Review			0.0001034	0.0001034
	1	Collector	Internal Review			0.0148392	0.0148392
	2	Sub-Arterial	Internal Review			0.0844415	0.0844415
	3	Arterial	Internal Review			0.1614056	0.1614056
	4	Highway	Internal Review			0.1202589	0.1202589
	5	Freeway	Internal Review			0.2654290	0.2654290

Transmission Line Insulators

Transmission Line Insulators – Safety (1 of 2)



Transmission Line Insulators – Safety (2 of 2)

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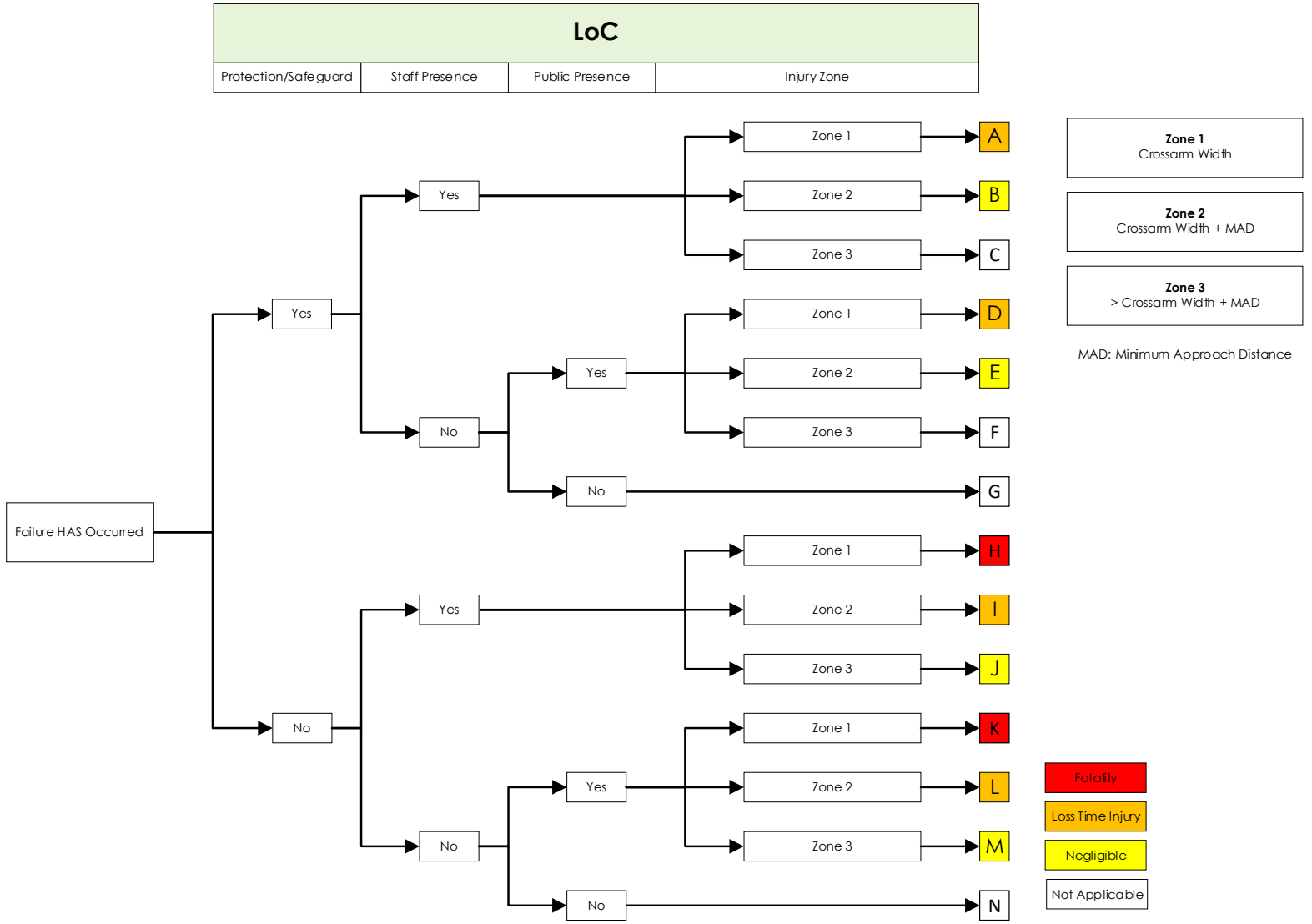
Line Insulators Safety LoC Combination Classifier

			Source	LTI (A, I)	Staff Fatality (H)	Public Fatality (K)	
						V/Multi	Single/Twin
Urban Score	0	Rural area	DNO	0.0001360	0.0000272		
	1	Residential area with clear easement	DNO	0.0001360	0.0000272		
	2	Residential area with built up easement	DNO	0.0001360	0.0000272		
	0	Rural area	Internal Review			0.0000800	0.0000800
	1	Residential area with clear easement	Internal Review			0.0037500	0.0037500
	2	Residential area with built up easement	Internal Review			0.0075000	0.0075000
Road Crossing Code	0	No Road Crossing	Internal Review			0.0000207	0.0001034
	1	Collector	Internal Review			0.0029678	0.0148392
	2	Sub-Arterial	Internal Review			0.0168883	0.0844415
	3	Arterial	Internal Review			0.0322811	0.1614056
	4	Highway	Internal Review			0.0240518	0.1202589
	5	Freeway	Internal Review			0.0530858	0.2654290

Transmission Line Conductors & Groundwires

Transmission Line Conductors and Groundwires – Safety (1 of 3)



Transmission Line Conductors – Safety (2 of 3)

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Conductors Safety LoC Combination Classifier

			Source	LTI (A, I)	Staff Fatality (H)	Public Fatality (K)	
						V/Multi	Single/Twin
Urban Score	0	Rural area	DNO	0.0001360	0.0000272		
	1	Residential area with clear easement	DNO	0.0001360	0.0000272		
	2	Residential area with built up easement	DNO	0.0001360	0.0000272		
	0	Rural area	Internal Review			0.0000800	0.0000800
	1	Residential area with clear easement	Internal Review			0.0037500	0.0037500
	2	Residential area with built up easement	Internal Review			0.0075000	0.0075000
Road Crossing Code	0	No Road Crossing	Internal Review			0.0001034	0.0001034
	1	Collector	Internal Review			0.0148392	0.0148392
	2	Sub-Arterial	Internal Review			0.0844415	0.0844415
	3	Arterial	Internal Review			0.1614056	0.1614056
	4	Highway	Internal Review			0.1202589	0.1202589
	5	Freeway	Internal Review			0.2654290	0.2654290

Transmission Line Groundwires – Safety (3 of 3)

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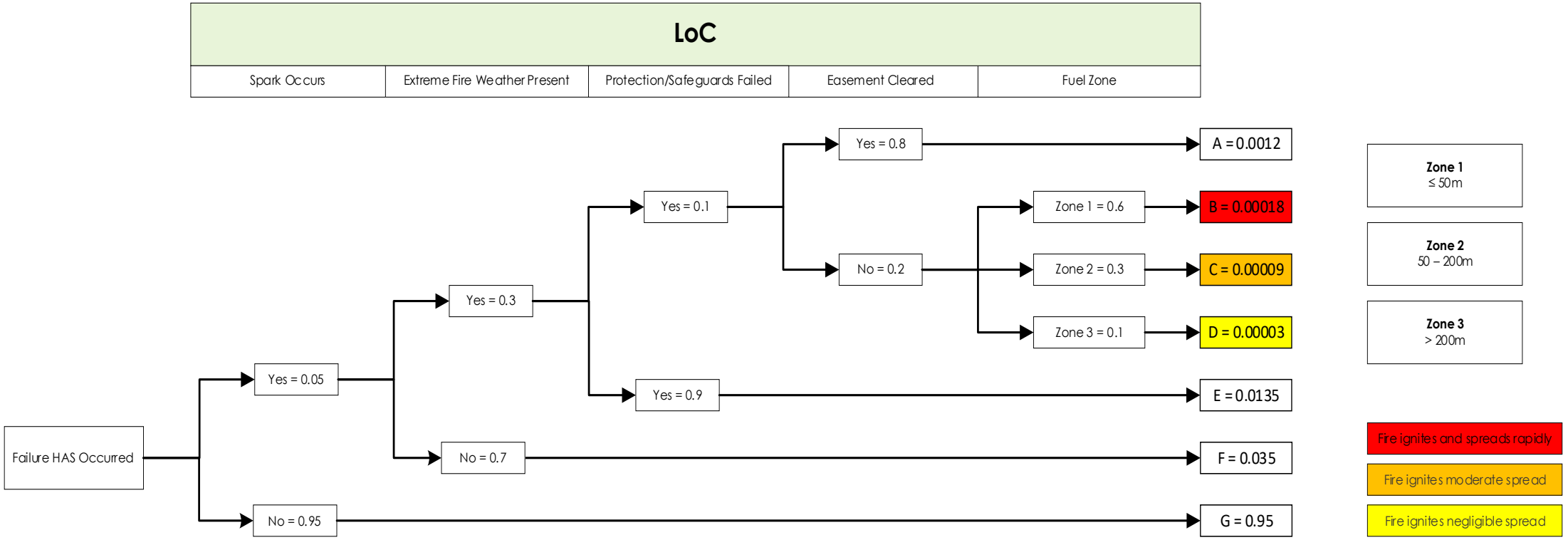
Groundwires Safety LoC Combination Classifier

			Source	LTI (A, I)	Staff Fatality (H)	Public Fatality (K)	
						V/Multi	Single/Twin
Urban Score	0	Rural area	DNO	0.0001360	0.0000272		
	1	Residential area with clear easement	DNO	0.0001360	0.0000272		
	2	Residential area with built up easement	DNO	0.0001360	0.0000272		
	0	Rural area	Internal Review			0.0000075	0.0000075
	1	Residential area with clear easement	Internal Review			0.0004000	0.0004000
	2	Residential area with built up easement	Internal Review			0.0045000	0.0045000
Road Crossing Code	0	No Road Crossing	Internal Review			0.0001034	0.0001034
	1	Collector	Internal Review			0.0148392	0.0148392
	2	Sub-Arterial	Internal Review			0.0844415	0.0844415
	3	Arterial	Internal Review			0.1614056	0.1614056
	4	Highway	Internal Review			0.1202589	0.1202589
	5	Freeway	Internal Review			0.2654290	0.2654290

Transmission Line Conductors & Groundwires – Bushfire



Note: The probability of a spark occurring after a failure (0.05) considers 10 conductor drops in 20 years where one in those 20 causes a spark. These considerations are assumed the same for Transmission Line Structures, Conductors, Groundwires, and Insulators.

Surge Diverters

Surge Diverters - Safety

Surge Diverters Safety LoC Combination Classifier

Classifier ID	Asset Type	Nominal Voltage (kV)	Source	LoC
1	Surge Diverters	66kV	Internal Review	0.000466
2		≥ 220kV	Internal Review	0.00071

Civil Infrastructure

Civil Infrastructure – Safety

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Civil Infrastructure Safety LoC Combination Classifier

Classifier ID	Asset Type	Source	Probability of Fatality	Probability of Injury
1	Fire	Internal Review	0.0100	0.5000
2	Building	Internal Review	0.0050	0.4000
3	SSC	Internal Review	0.0060	0.4500
4	Roads	Internal Review	0.0040	0.5000
5	Switchyards	Internal Review	0.0040	0.5000

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Thank You

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