

Ocean Express



Executive Director of Engineering Division
Ir. George Tso



- Travel Time: 182sec
- Max capacity: 5,000 visitors per hour per direction
- Headway: 5 minutes
- Max. Speed: 10 m/s
- Distance between terminus 1300m approx.
- Gradient: 9%



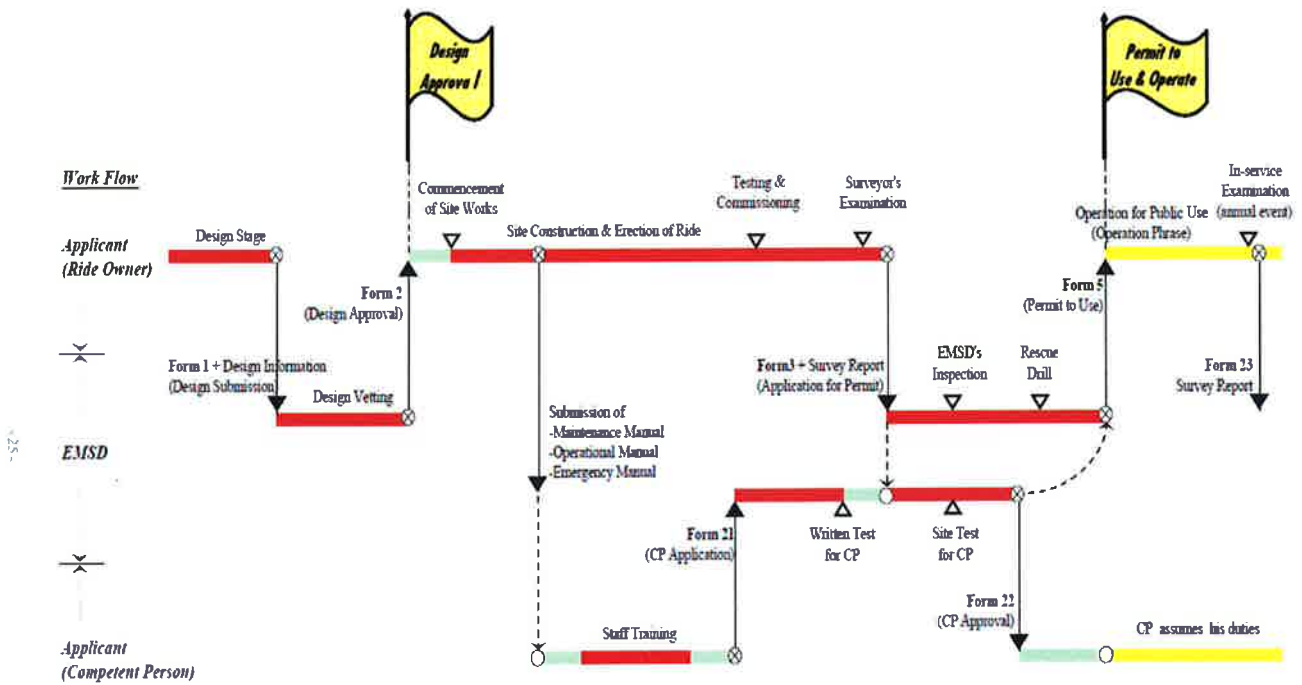
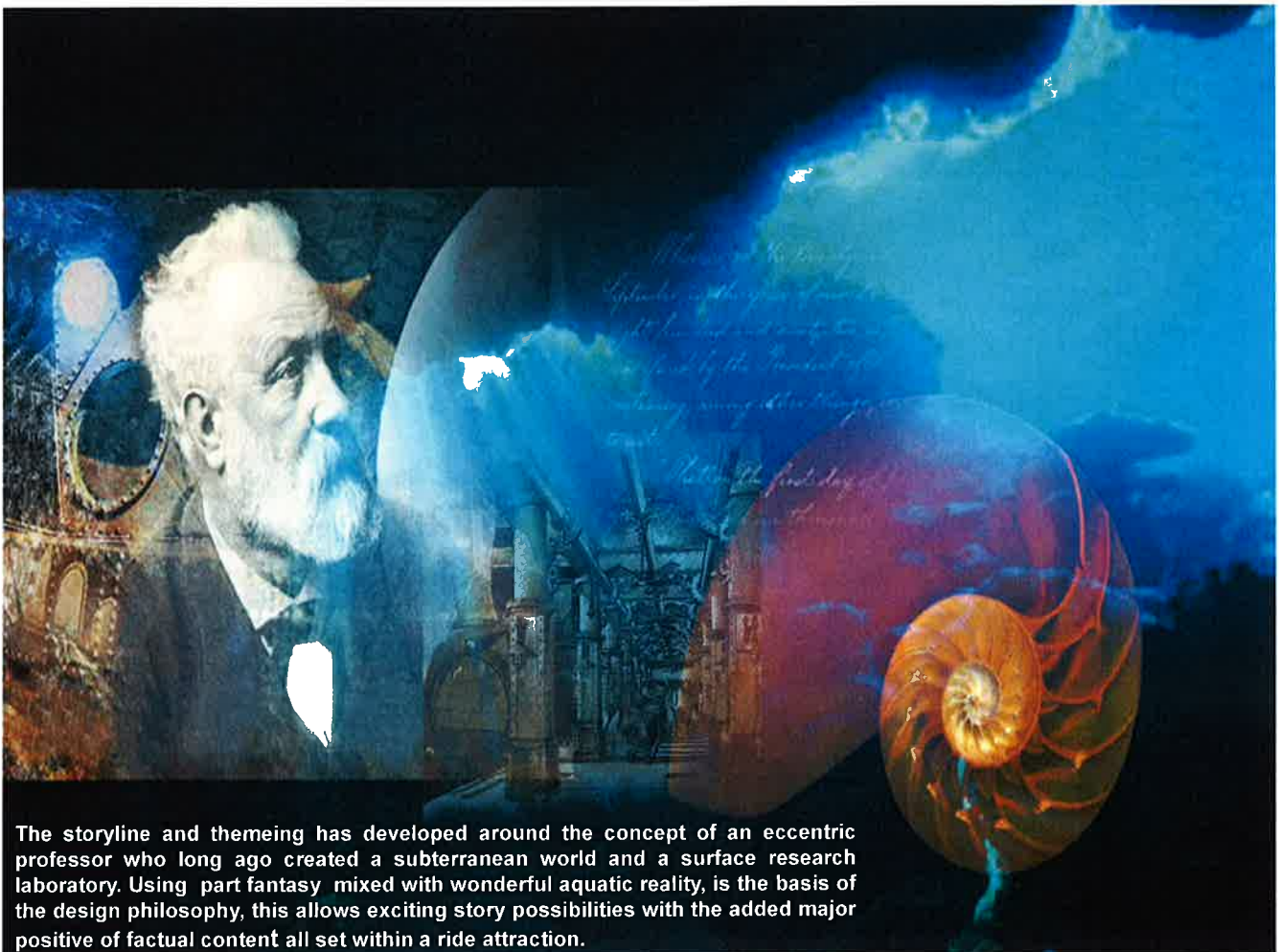
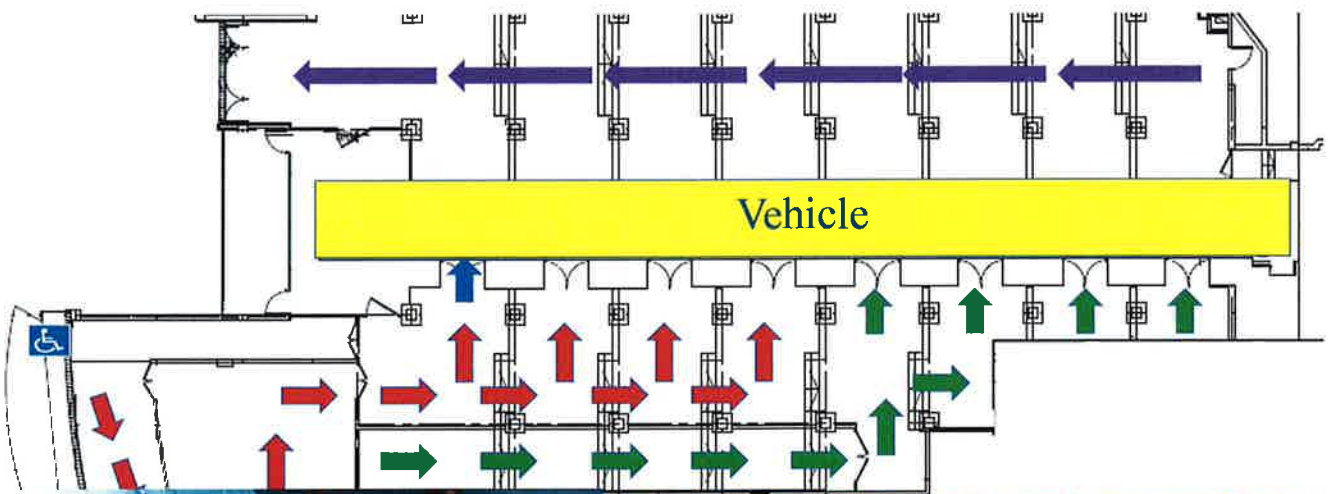


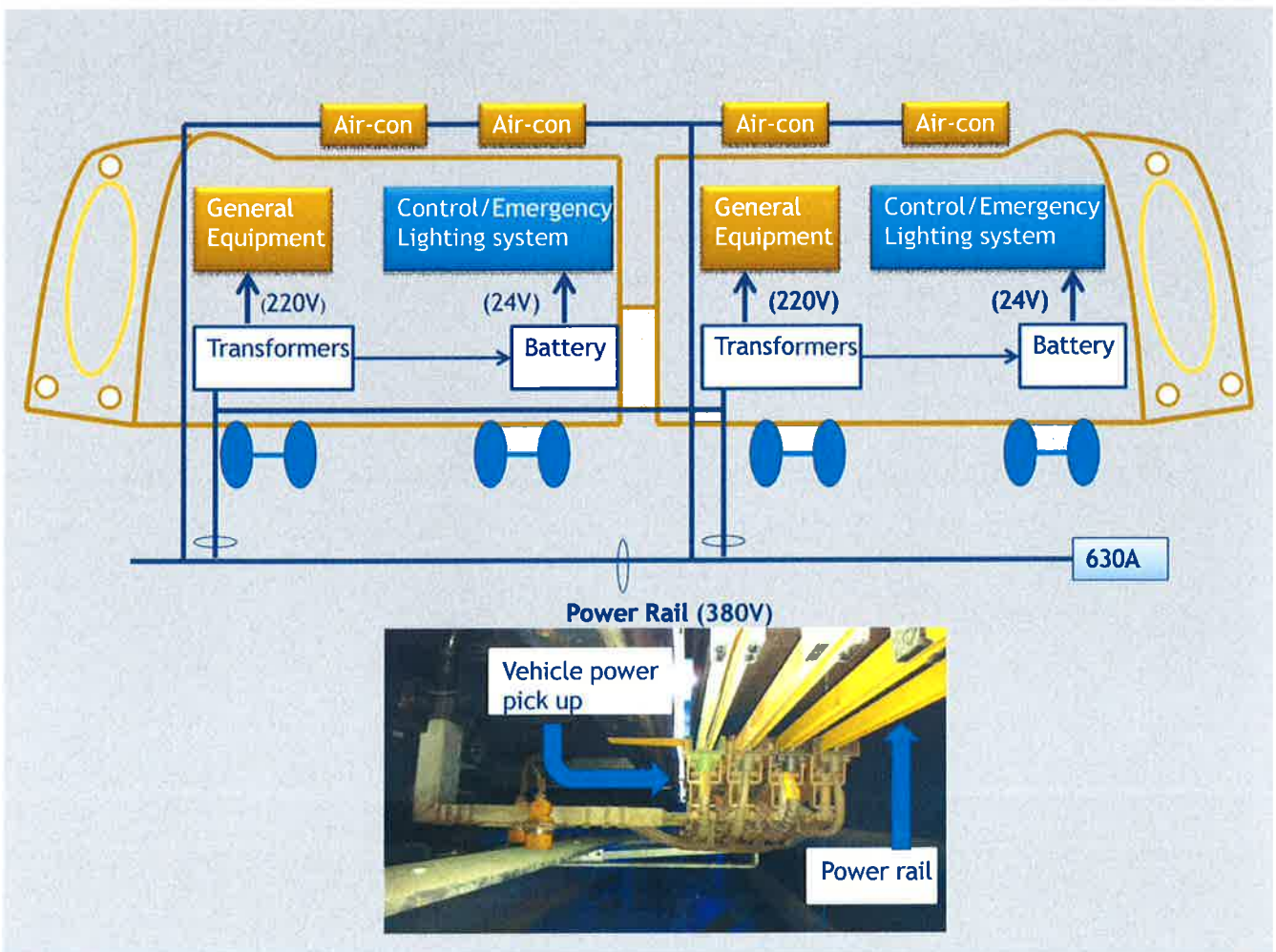
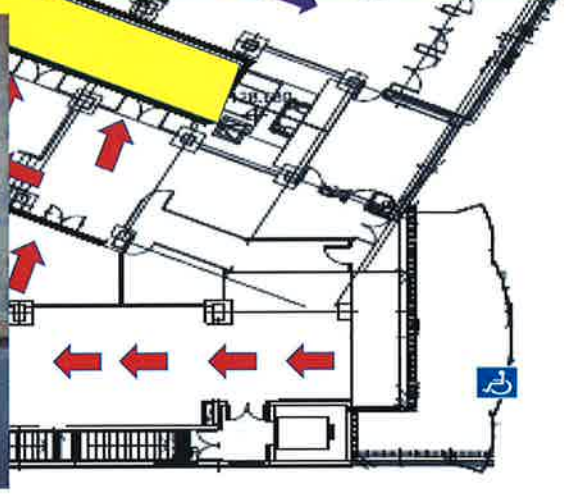
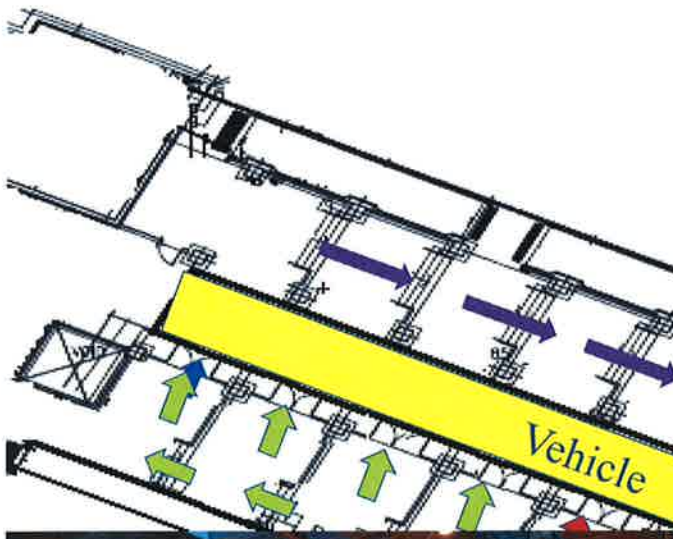
Figure 1 : Sequence of Events and Key Milestones for a Typical Licensing Process under Amusement Rides (Safety) Ordinance, Cap. 449

Year	2007	2008	2009
Month	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
	Design		
	Construction, Testing and Commissioning		
			Trail Operation
Contract Award	2/07		
Form 1 (Design Submission)		3/08	
Tunnel Blast Through		5/08	
Form 2 Award (Design Approval)			11/09
Form 21 Submission (Competent Person Application)			5/09
Form 22 Award (Competent Person Approval)			6/09
Surveyor Inspection Report Submission			7/09
Form 5 Award			8/09
Soft Opening			8/09
Grand Opening			9/09



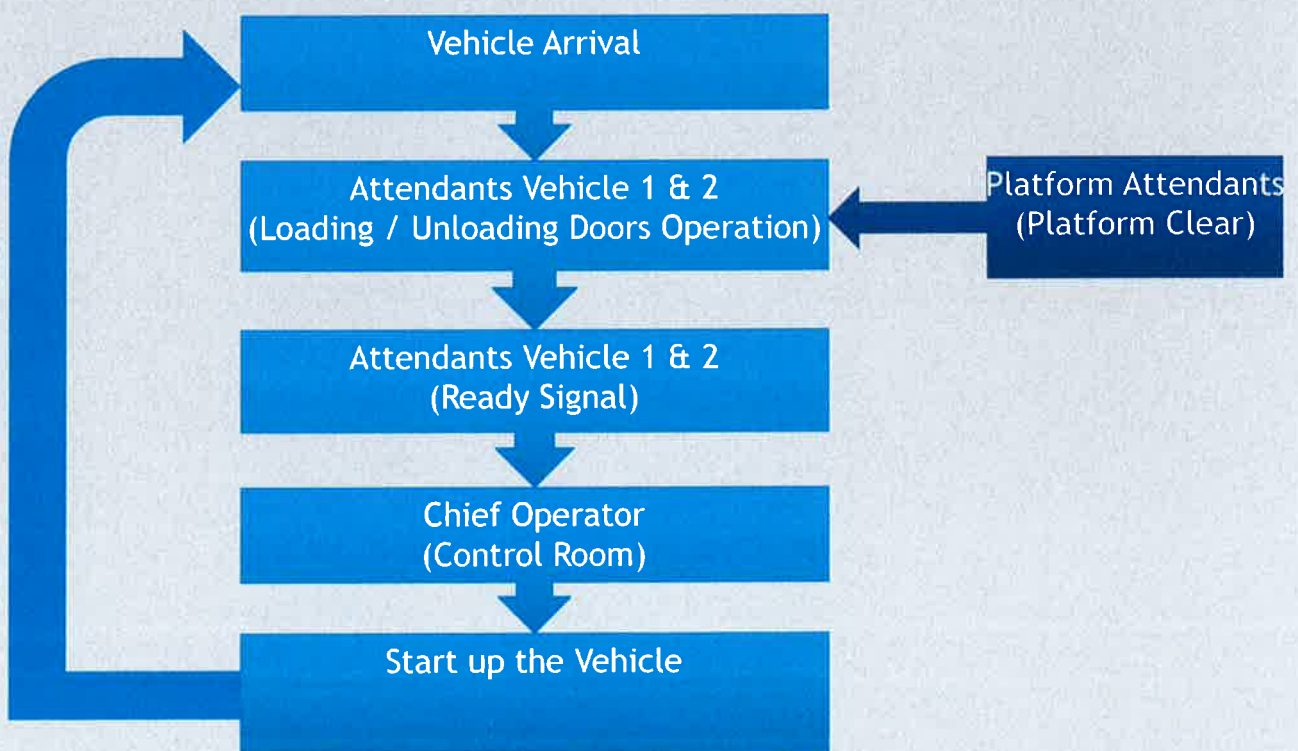
The storyline and theming has developed around the concept of an eccentric professor who long ago created a subterranean world and a surface research laboratory. Using part fantasy mixed with wonderful aquatic reality, is the basis of the design philosophy, this allows exciting story possibilities with the added major positive of factual content all set within a ride attraction.



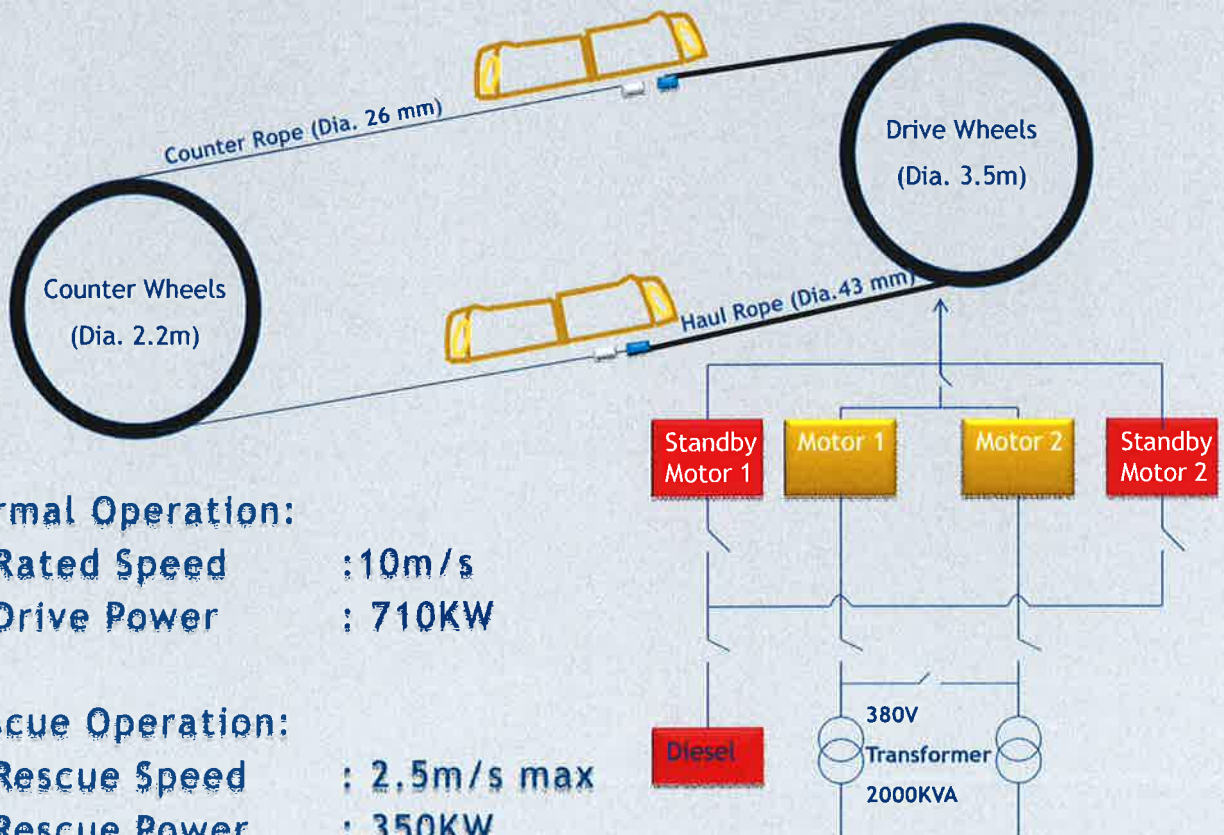
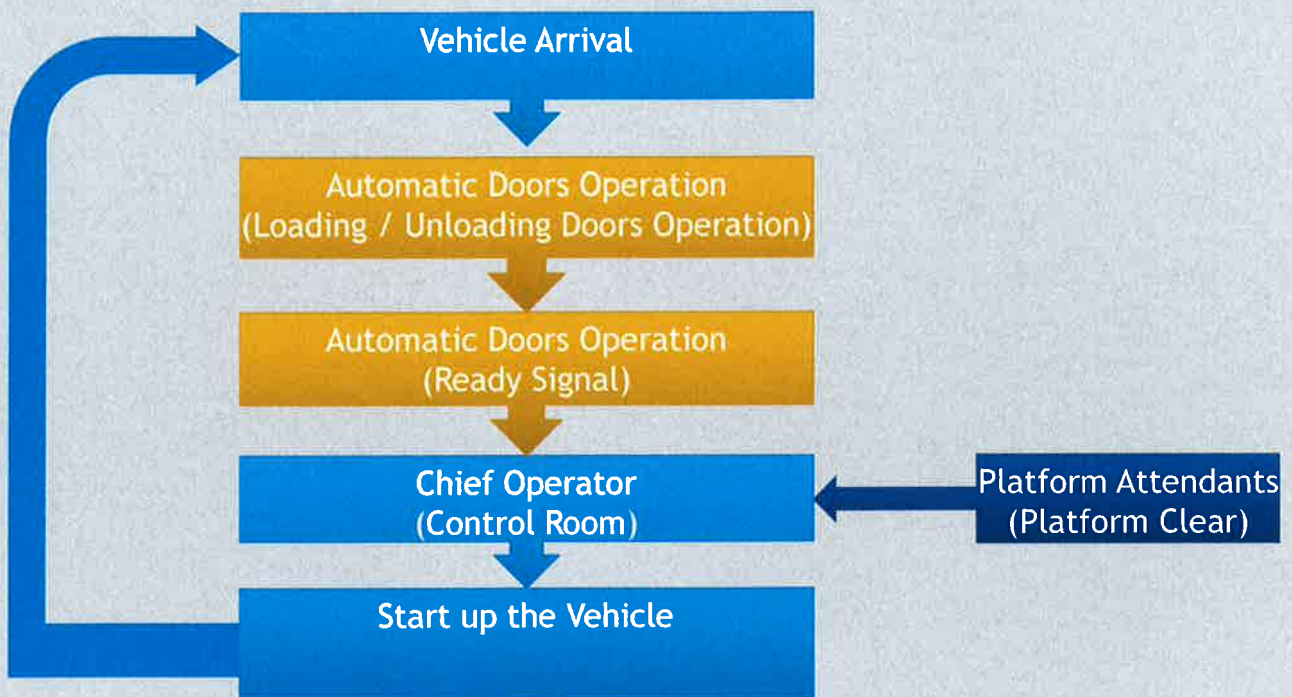




Manual Mode Operation



Auto Mode Operation



Normal Operation:

- Rated Speed : 10m/s
- Drive Power : 710KW

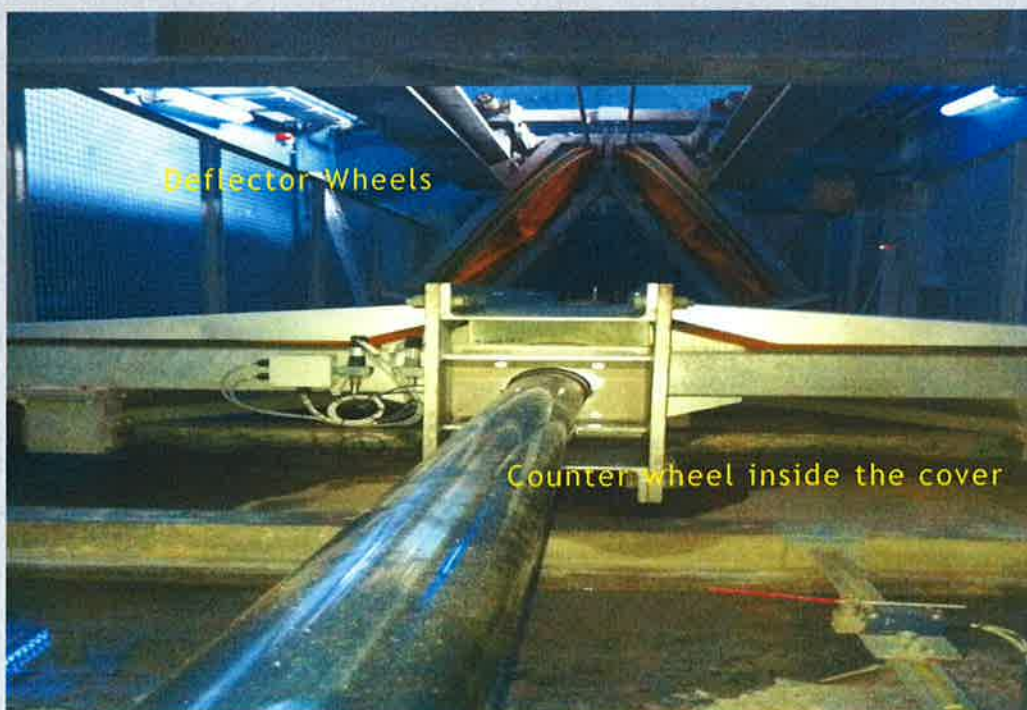
Rescue Operation:

- Rescue Speed : 2.5m/s max
- Rescue Power : 350KW

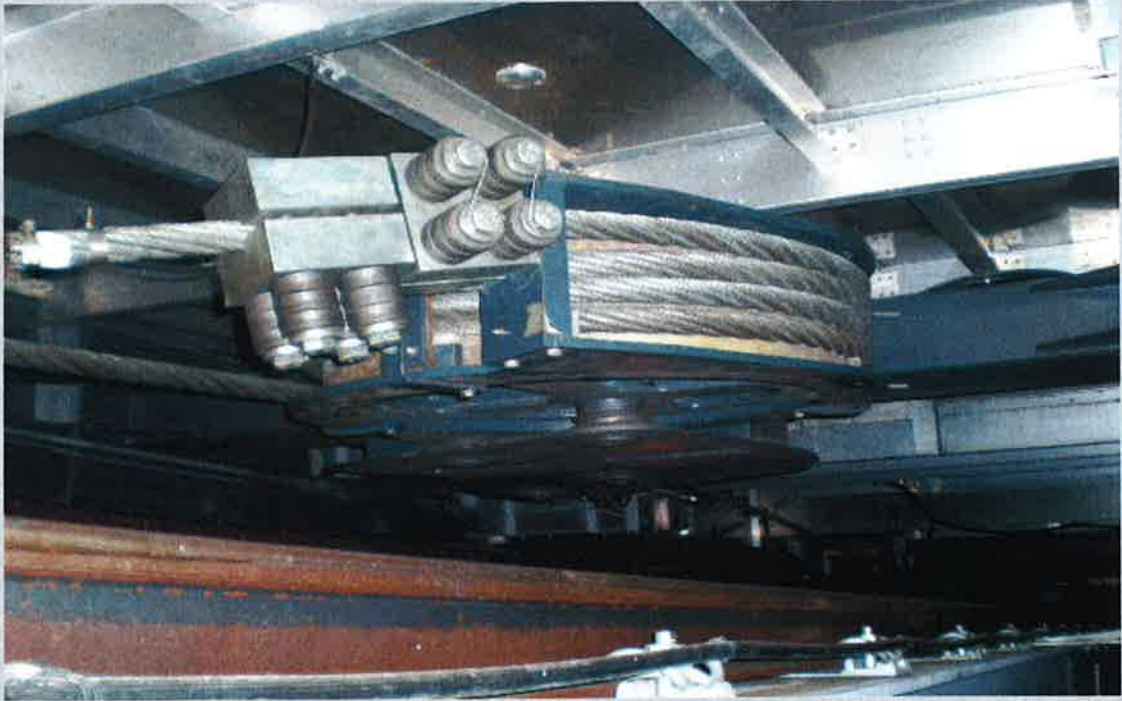
Drive Wheels



Counter Wheels



Ropes Connection



Motor Drives

Main Motor 1



Standby Drive 1

Standby Drive 2

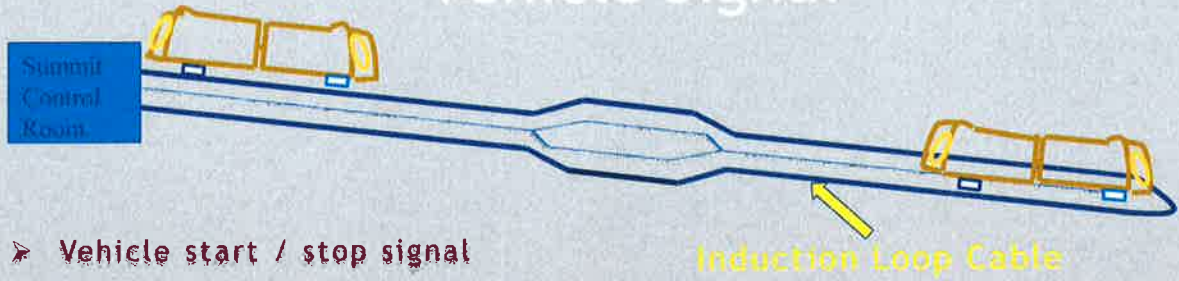
Main Motor 2



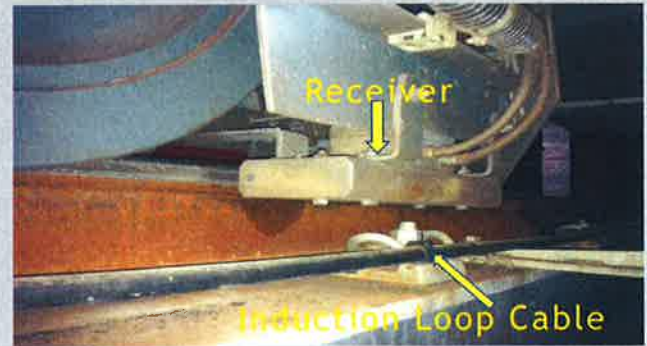
Diesel



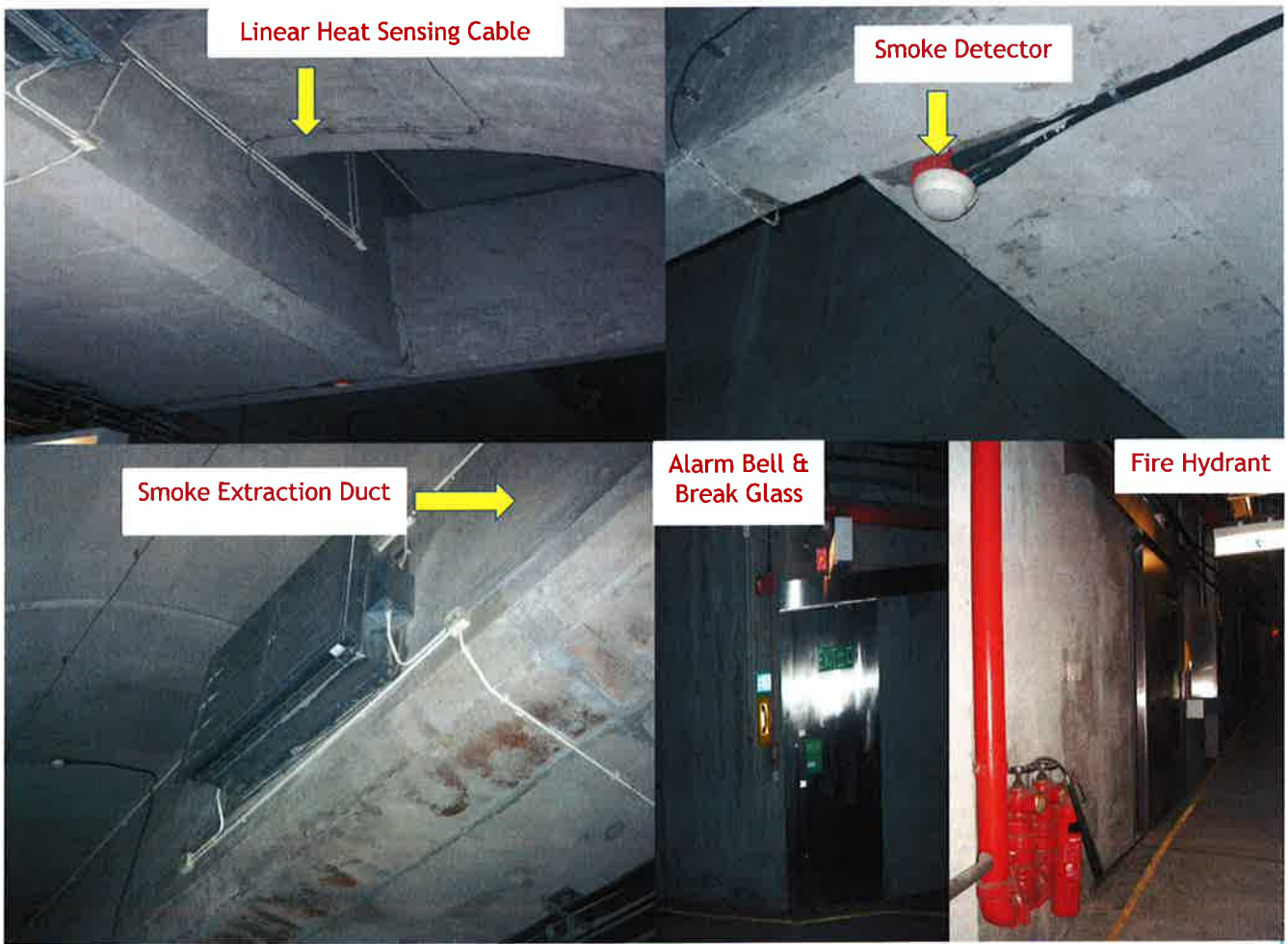
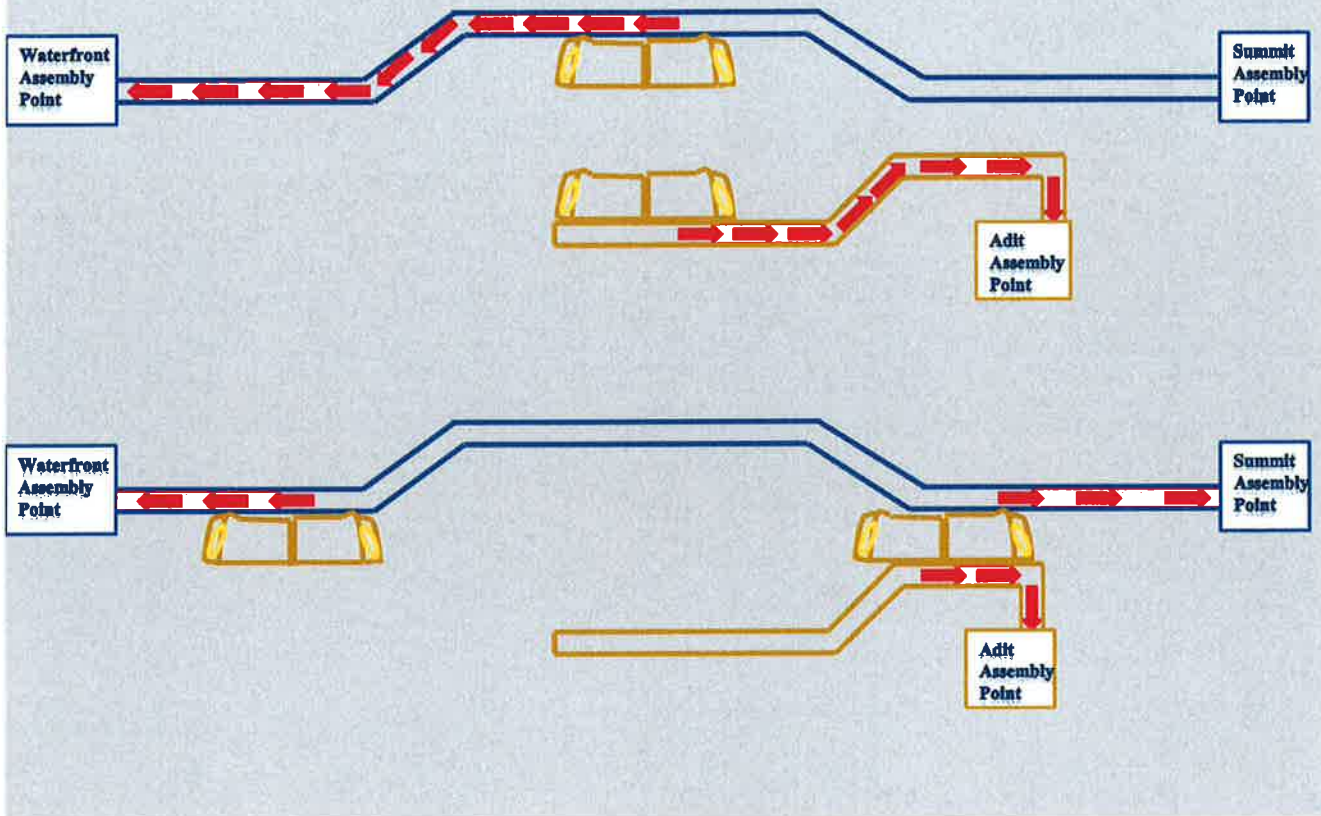
Vehicle Signal



- Vehicle start / stop signal
- Brakes signal
- Position signal
- Overload signal
- PA / Emergency phone / CCTV signal
- Safety signal



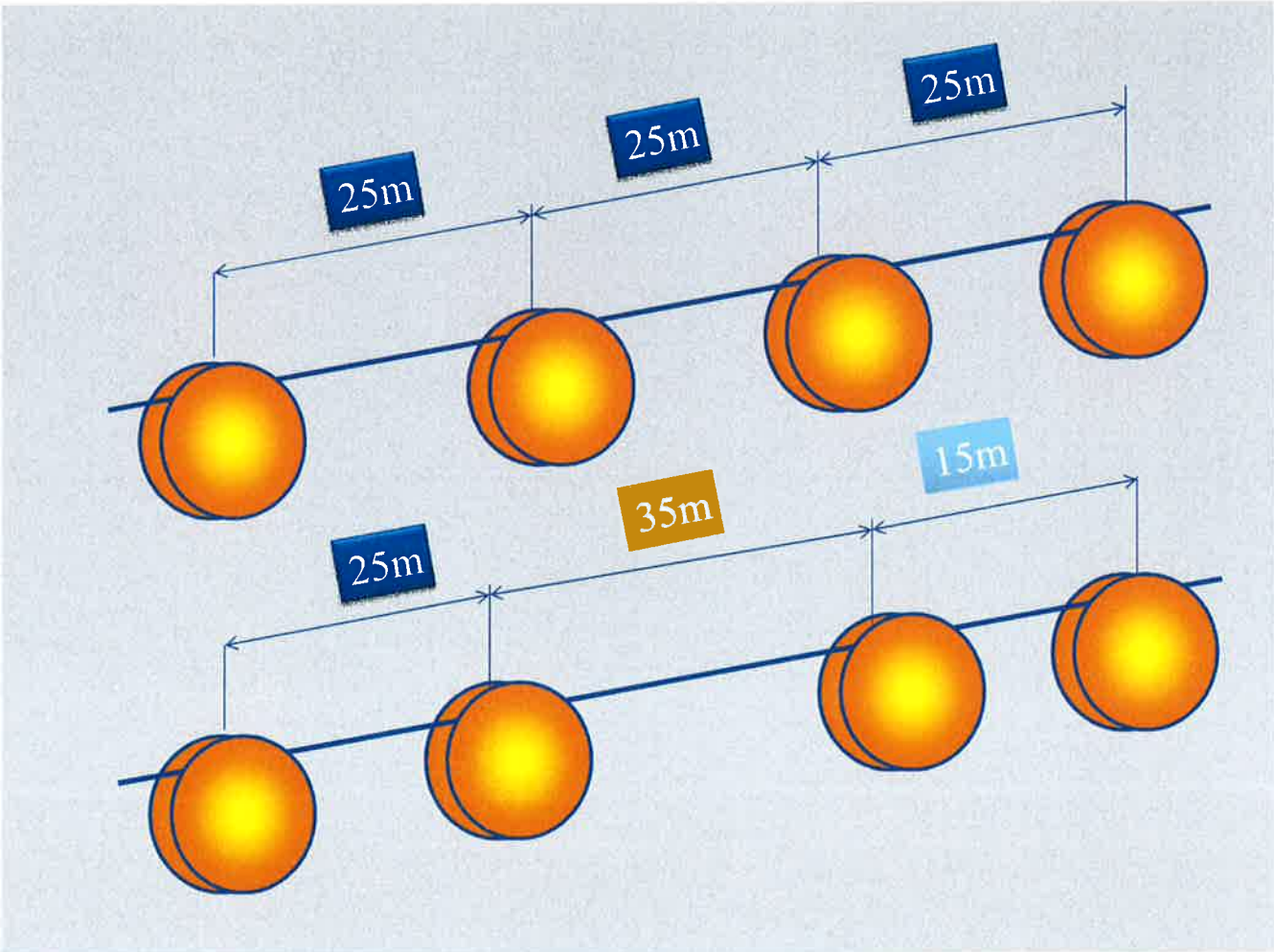
Evacuation Routes:



Problem: Rope Resonance



Haul rope vibrates laterally hitting line-sheave side flanges repeatedly



**Thank You
Q&A**

