Incident Summary #II-1957556-2025 (#58471) (FINAL)

SUPPORTING INFORMATION	Incident Date		August 26, 2025
	Location		Prince Rupert, BC
	Regulated industry sector		Amusement Devices - Amusement ride
	Impact – Injury	Qty injuries	1
		Injury description	Fatal human/amusement ride collision.
		Injury rating	Fatal
	Impact – Damage	Damage description	N/A
		Damage rating	None
	Incident rating		Severe
	Incident overview		While the ride was in motion, an experienced attendant entered the path of the moving ride and was impacted by a passenger carrying unit (PCU). They sustained a head injury and were later pronounced deceased by BC Coroners Service. **Please note that the cause of death (COD) is not determined by Technical Safety BC. The BC Coroners Service conducts their own investigation to determine COD. **
INVESTIGATION CONCLUSIONS	Site, system and components		**Travelling Amusements** Portable amusement rides can be set up at community events, annual fairs or carnivals for the public. Typically, they are set up in large empty lots or public spaces like parks. The operators and staff of the amusement companies generally travel together across large geographical areas from around April until October. The travelling group can include a mix of long-term, experienced employees, newer seasonal employees, and family members. **Ownership** The amusement company operation referenced in this report has been under its current ownership since 2020. The current owner has been affiliated with the company since 2017, previously serving as General Manager. The owner's total experience in the industry exceeds 44 years. **The Zipper Ride** (Image 1) The Zipper is an amusement ride that has been in use around the world since the 1960's, manufactured by Chance Rides based out of Wichita, Kansas. The specific Zipper ride that was involved in this incident was manufactured around 1973. According to the operator, it is no longer in service.

Ride Function and Rotation
The 56 ft Zipper ride consists of a boom typically with twelve PCUs.

Each PCU can seat two adults or two children over 52 inches tall with a maximum combined weight of 340lbs.

The boom rotates all twelve PCUs simultaneously, each PCU will then individually rotate, creating a swinging and rolling motion.

At all times, while the ride is in motion, an attendant could walk the inside perimeter of the public fence barrier where waiting patrons are lining up on the outside. This was generally done for the purposes of gathering ride-vouchers and preparing passengers for their next loading.

Preparation would include taking bags and other items and storing them behind the public fence barrier, where there is limited space between the fence line and the ride pathway. The fenced area is designed to keep spectators and riders far enough away from the ride so not to come into contact with the ride.

There was no defined, specific reference to employee policy, signage, or official training documentation around entering the fenced area while ride is in motion. However, the foreman of the ride who was also the operator the day of the incident stated they specifically told new employees during orientation to stay out of the pathway or Deadman's zone (Red Zone - Image 5) as some ride staff refer to it.

There was applicable code requirements being met for the public, patrons and spectators to keep from approaching too close to the ride within the fenced areas. However, no physical defined barrier existed inside the public fenced barrier area to keep operators out of the direct pathway while the ride is in motion (Image 4).

Despite this, it is common for operators to work within this zone (Yellow Zone Image 5).

Inside the fenced area, there is an unmarked buffer zone located outside of the ride path. While not immediately hazardous, this space lacks a physical barrier and is commonly used by attendants during ride operation.

Once the PCUs are loaded with passengers, the attendant steps out of the ride pathway. The operator at the control podium then initiates the ride-session, which generally lasts a few minutes. Confirmation that the attendant is clear from the ride pathway is communicated through established non-verbal signals between the operator and attendant.

The ride will start and reach boom rotations of 7.5 revolutions per minute. The cable with the PCUs moves around four revolutions per minute. This translates to the end of the boom moving approximately three metres per second.

The operator can determine whether to rotate directions both clockwise (CW) and counterclockwise (CCW). (Image 2) This unpredictability is part of the design and creates a “thrill” according to rider feedback.

Spaces around the ride (Image 3)
The direct path of travel of the ride is immediately hazardous. It has been referred to by employees as the “Deadman’s zone” but is not separately delineated or barricaded in the set up of the ride.

The perimeter of fencing is made up of aluminum or metals specifically designed at a regulated height of 48”. However, distance from the ride path is typically determined by the amusement company or employees during each set up as space available in each unique area they are setting up can vary in each location. According to regulation it must be erected to inhibit overturning and slip throughs by spectators or riders. The adopted code states it should prevent contact between passers-by and the ride itself.

Control for the Zipper Ride (Image 2)
The control podium houses all the controls needed for operating the Zipper ride and is located on the loading platform adjacent to the ride. There are two toggle switches for operating the hydraulic pump and the lights respectively. These would both typically remain on throughout the operating period. The ride controls will not move the ride if the hydraulic pump is off. Once the pump is turned on the ride has two independent rotations.

The left-hand switch typically controls the boom in the CW or CCW directions. The right-hand switch typically controls the PCUs around the boom, with the boom stationary. For both movements, typically the top controls will move the boom/PCUs CCW, and the bottom will move the boom/PCUs CW. The buttons must be held down to continue operation. If the operator stops depressing the buttons the ride will automatically stop moving. A large red “EMERG STOP” button is raised.

Zipper Ride Attendants and Foreman
This amusement company has a dedicated foreman for this ride who has expertise in the mechanics and operation of the Zipper ride. The foreman oversees supervision, training and mentorship of the other control operators for the ride who are part of a small team who exclusively operates this ride.

Incident Summary #II-1957556-2025 (#58471) (FINAL)

Failure scenario(s)	The amusement company was at the incident location for a multi-day community event/carnival where rides are set up and operated for the public's enjoyment. The rides are operated by employees who live within the travelling community of amusement employees for a seasonal period usually in the warmer months—March to October as they move throughout events in the province. Many employees have worked together for decades and consider themselves family. Although some employees are trained on multiple rides, some employees have just one dedicated ride they operate regularly. The Zipper ride has specifically dedicated employees that are allowed operate the control podium (Image 2). This is a small close group of four to five people. The Zipper ride that was involved in the incident is considered by employees as one of the busiest and more advanced rides for operators to control. At approximately 22:30 on the evening of the incident, the foreman of the Zipper ride came alone to relieve and replace the two operators who were running the Zipper operations and finished their shift for the night. The fair was winding down but patrons were still lined up for the ride. The foreman came alone and was doing both the operation control position and the loading and unloading attendant position. This is not unusual for less busy times of day or for times when relieving a colleague for a shift change or a bathroom break etc. The foreman took the position at the ride controls, standing behind the operating podium, back to the public, facing the ride (Image 3). A few minutes later a fellow employee and close friend of the foreman who had extensive experience around this ride arrived. Although they were not generally involved in the daily operations of the Zipper, they offered to help "crack buckets" in the vacant attendant position. This is a term used to describe loading and unloading of passengers from the PCU's. They then moved along inside the fence line (Image 4) where the attendants would often walk amongst temporarily stored items from riders left on the ground which must be outside the PCU's during a ride. Items such as backpacks, purses, drinks and coats. Loose items are not permitted on the ride as per manufacturer's instructions as they can become loose inside the PCU or fall out from a height. In order to gather tickets from lined up patrons waiting, attendants navigate around the items on the ground to prepare riders and gather tickets for the next load.

Incident Summary #II-1957556-2025 (#58471) (FINAL)

The foreman, who was operating the ride, started a ride cycle just as three members of the public approached from behind, noting the attendant was in the fenceline position at this time in the yellow zone (Image 4).

The operator was physically touched or “tapped” on the back, turned to see what was happening. The three people standing behind the operator with only the waste high fence between them began asking questions about the ride and were pleading for special allowances for a third rider to be allowed in the two person PCU which the operator repeatedly told them “no” (Image 7). This interaction was estimated as only a few seconds by the operator but it was during these seconds one of two magnetic broom tools (Image 7) was moved from its normal location at the fence in front of the operator control podium. This magnetic retrieval broom device is used to retrieve small metal items like coins or small parts and was only accessible to the attendant inside the fence line during operation of the ride.

CCTV footage, from a camera showing the broad view of the carnival, showed that there was a brief pause in the Zipper ride for several seconds, moments before the incident. (Image 5) The ride is paused in a "T'd” off position when the boom is perpendicular to the mast forming the shape of the letter 'T'. Previous ride cycles show the operators usually switch directions at this point, but it is up to the operator’s discretion.

In these seconds the operator activated the ride from the “T’d” off position and continued its ride-cycle but now in a CCW direction which was from above and behind the attendant who was now standing directly in the path of the ride and the PCU struck them from behind.

After the incident the magnetic broom was found on the ground under the furthest side away from the podium in the redzone directly under the pathway of the ride. (Image 7).

Facts and evidence	**Elevating Devices Safety Regulation** Definitions: • **"Operator"** means a person who (a) has direct control over the starting, stopping or speed of an amusement ride or part of the ride, or (b) is in charge of the entire operation of an amusement ride. • **"Attendant"** means an individual involved in marshalling passengers, cars or carriers, in assisting or instructing patrons or in other safety related operating duties. **CSA Z267-00 (Current adopted code)** Operational Requirements Apply The adopted code in British Columbia includes requirements important to this incident including training, proper erection of fencing, and requirements for passenger clearance. The requirements did not specify anything regarding whether staff can enter the barricaded area. 7.5.1 Manufacturer's Instructions Each owner/operator of an amusement ride or device shall read and become familiar with the contents of the manufacturer's maintenance instructions and specifications when received. 7.5.4 Inspection 7.5.4.1 Pre-opening Inspection (a) Before the ride or device carries passengers, the owner/operator shall conduct, or cause to be conducted, a daily documented and signed pre-opening inspection, based on provided instructions, to ensure the proper operation of the ride or device. The inspection program shall include, but not be limited to, the following: (f) visual inspection of all fencing, guarding, and barricades; 8.2.3 Training the owner/operator shall provide training for each ride or device operator and attendant of an amusement ride or device. This training shall include, but not be limited to, the following, where applicable: (a) instructions on ride or device operating procedures; (b) instructions on specific duties of the assigned position; (c) instructions on general safety procedures; (d) instructions on emergency procedures; (e) demonstration of the physical ride or device operation; (f) supervised observation of the ride or device operator's physical operation of the ride or device; and (g) additional instructions such as deemed necessary by the owner/operator.

5.3.3 Passenger Clearance
Passenger clearance shall be designed to minimize the opportunity for contact between a contained passenger and any object where said contact is likely to cause injury during operation of a ride or device.

5.10 Fencing
Where fences and gates are provided to protect spectators and riders, they shall be constructed to meet the following minimum requirements:

(a) They shall be a height of at least 1067 mm (42 Inches) above the surface on which the spectators or riders stand.
(b) They shall be constructed so as to reject a 100 mm (four inches) ball at all openings.
(c) They shall be designed, constructed, and erected to inhibit overturning by spectators or riders.
(d) Where used, entrance, exit, and loading gates shall open away from the ride or device, unless equipped with a positive latching device.
(e) Gates shall be designed such that if opened during the amusement ride or device cycle, the gate will not contact the amusement ride or device or cause a hazard to riders.
(f) Fences and gates shall be constructed to inhibit spectator contact with the ride or device and rider contact with fences and gates.

Note: *Horizontal members in Q fence or gate may be used to improve construction or efficiency but should be minimized to reduce the ease of climbing.*

Observations - Barriers Around the Ride
There are no barricades or enclosures higher than the partially open fencing that spans a few feet just behind the operator but is open on both sides. This is a height of just over 40 inches and does not protect the operator from physical interference from the public.

Technical Safety BC – Post Incident Testing
Unit operation and functions were as per original design.

Control functions tested:

- Stop.
- Emergency stop.
- Loading jog function.
- Full operational speed.
- Both CCW and CW rotations.

Amusement Company - Internal Zipper Operational Manual
Daily Duties Section-Ongoing throughout the day:

- Clean up garbage and debris all day. Do not allow any garbage to be on the ground inside the ride area or on the platform or stairs.
- Ensure the entrance/exit deck is always clear of debris.
- Continually monitor fence area for people who are leaning or standing on fence.
- After loading ride, close gates, check fencing.

- Ensure you understand and know the rules of this ride as shown on the sign.
- Each time you operate the ride, always visually check that the operating area is clear of all obstructions each time you turn the ride, both on the ground such as fence line.
- The operator must always remain in full control of the operating controls during the operation of the ride.
- The ride and its passengers must be given the full attention of the operator.
- Never leave the operating console while the ride is in operation.

Statement
Summary of the Zipper ride foreman who was operating the Zipper ride at time of the incident.

- This person was the foreman and ride operator responsible for the activation, operation, and control of the Zipper ride at the time of the incident.
- They reported approximately 30 years of experience in the amusement industry, including over 20 years working specifically with the Zipper ride maintenance and operations across multiple amusement companies and has been working at the current amusement company for approximately five to six years.
- Responsibilities include erection, teardown, maintenance, daily operation of the ride, and informal instruction of employees working in the ride area. Four other individuals were trained to operate the Zipper ride.
- On the night of the incident, this witness stated they arrived at the ride area at approximately 22:00 hours, at which time they relieved two other operators and remained at the controls before and during the incident.
- The witness acknowledged that the ride manufacturer recommends two operators; however, the ride is sometimes operated by a single operator, depending on staffing availability.
- The witness was positioned at the control podium facing the ride throughout operation until the moments proceeding the ride/attendant impact.
- The ride was operating normally and within its expected range of motion. No unusual sounds, vibrations, or mechanical irregularities were observed. General maintenance had been completed earlier that day, including checks or work on the H-bar, fishplates, and tires.
- Music was regularly played during operation using a Bluetooth speaker, but this witness preferred the volume reduced to allow the operator to monitor for squeaking, grinding, or abnormal mechanical noises.
- The ride had completed approximately six to seven rotations (or four revolutions) prior to the incident.

The foreman-operator and the person who arrived to act as an attendant were close friends and they had plans to hang out after the ride closed. This attendant started helping by loading and unloading the PCU.

Before being hit by the ride, they were last located inside the fenceline taking tickets and personal items from pending riders lined up on the outside of the inner fence.

- The witness did not observe any reason for any personnel to be within the active ride path (red zone) during operation.
- The witness stated that operators and attendants walking inside the fenced area (yellow zone) does occur frequently, and that the co-worker that was acting as the attendant had extensive experience working at the carnival and around the Zipper ride but was not typically involved with the day-to-day operation.
- There is a lack of physical protection or barrier between the control podium and the public.
- They have previously experienced interference from members of the public, including being struck or punched while at the controls, and that they occasionally must divide attention between operating the ride and monitoring individuals behind them.
- The witness reported hearing a “thud” during ride operation. Upon hearing the sound, the witness turned toward the ride and observed the attendant lying on the ground in the front-left area beneath the ride.
- The witness stated they immediately left the control podium, went to the attendant, and radioed for assistance multiple times.
- The witness stated that all Zipper operators were re-trained and signed off on ride safety in May 2025, and that since the previous summer, four to five operators had received refresher training and signoffs.
- Employees are reportedly instructed regarding where to stand, where to move, and not to cross into the ride path, which the employees referred to as a “Deadman’s zone.” The witness stated there was no operational reason for anyone to reach under the ride while it was in motion despite it happening on occasion.
- The witness stated that items frequently fall to the ground in the ride area like money and small parts, and that both employees and patrons have attempted to retrieve such items.
- Magnetic broom tools are commonly used for item retrieval.
- Prior to the incident, two magnetic brooms were located in front of the control podium and had previously been attached to the fence where they are stored during ride operation when not in use.
- Following the incident, the witness observed that one magnetic broom was no longer in its prior location.
- The witness reported that no defined or formal training exists for the magnetic broom accessory, which is used during ride loading and unloading.

This witness identified several safety concerns:

- Insufficient physical separation between the operator and the public
- The need for additional space between the control podium and the ride.
- Potential benefit of booth-style enclosures to protect operators during ride operation

	• The witness stated that when positioned at the controls, they determine when it is safe to initiate ride operation based on their observation and experience. • Passenger items left inside fenced area walking areas when loading. • Limited distance between the control podium and the ride • Clutter along the fence line, including purses, phones, and drinks, which could create a tripping hazard **CCTV** *Predictability* After the change of ride operators, the ride moved in a different pattern under the control of the foremen which can be expected but is still unpredictable as movement and direction can be changed for rider's experience and could be different in direction and timing every ride. **Broom Location** *Retrieving Items* Although it is common for attendants to retrieve items from the ride path when the ride is stopped or in the loading and unloading position, operators reported that items have occasionally been retrieved while the ride is in a T'd off position or temporarily paused above the ride pathway. In some instances, attendants will use one of the two magnetic brooms (Image 7), which are typically stored on the fence in front of the operator. This storage point is 44-inches from the edge of the PCU's. In addition, members of the public sometimes place purses, back packs, drinks and other items within the 44-inch space and other limited path-space inside the fenced area while loading which is an area that attendants must also walk through.
Causes and contributing factors	The incident was caused by the attendant moving into the direct pathway of an active Zipper ride that moves at a speed of approximately three metres per second in full activation. **Contributing Factors:** • There were no defined communication requirements or practices between attendants and operators to confirm the ride was safe to approach before entering the path of the ride. • Operators were exposed to distraction and physical interference while the ride was in operation. • No protective barrier between ride operators and the public to minimize interference during ride operation. • No current direction in the adopted Z267 code was in place to require specific protective measures for operators and owners to *keep an employee specific* envelop or required distances from an active ride. • The ride was in the stopped position when the attendant entered into the direct path. When the ride resumed motion it rotated towards the employee's back, out of their line of sight.

Image 1 – Front viewpoint of the Zipper ride behind middle operator section.

Image 2 – Operator’s control podium facing ride.

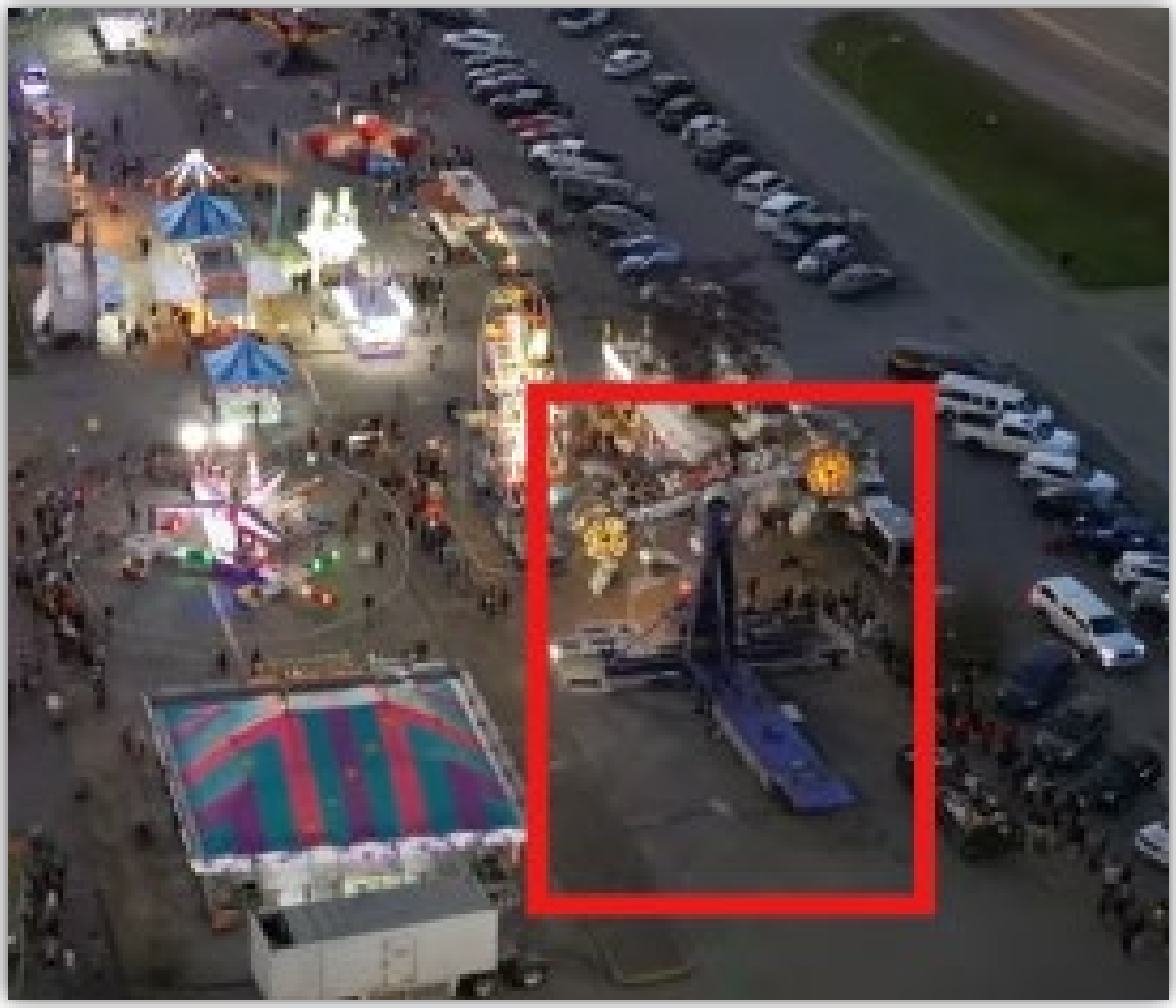

Image 3 - Ariel viewpoint of the Zipper ride in the evening in Prince Rupert BC (photo/still by Northcoast Drone Sept 5th, 2022).

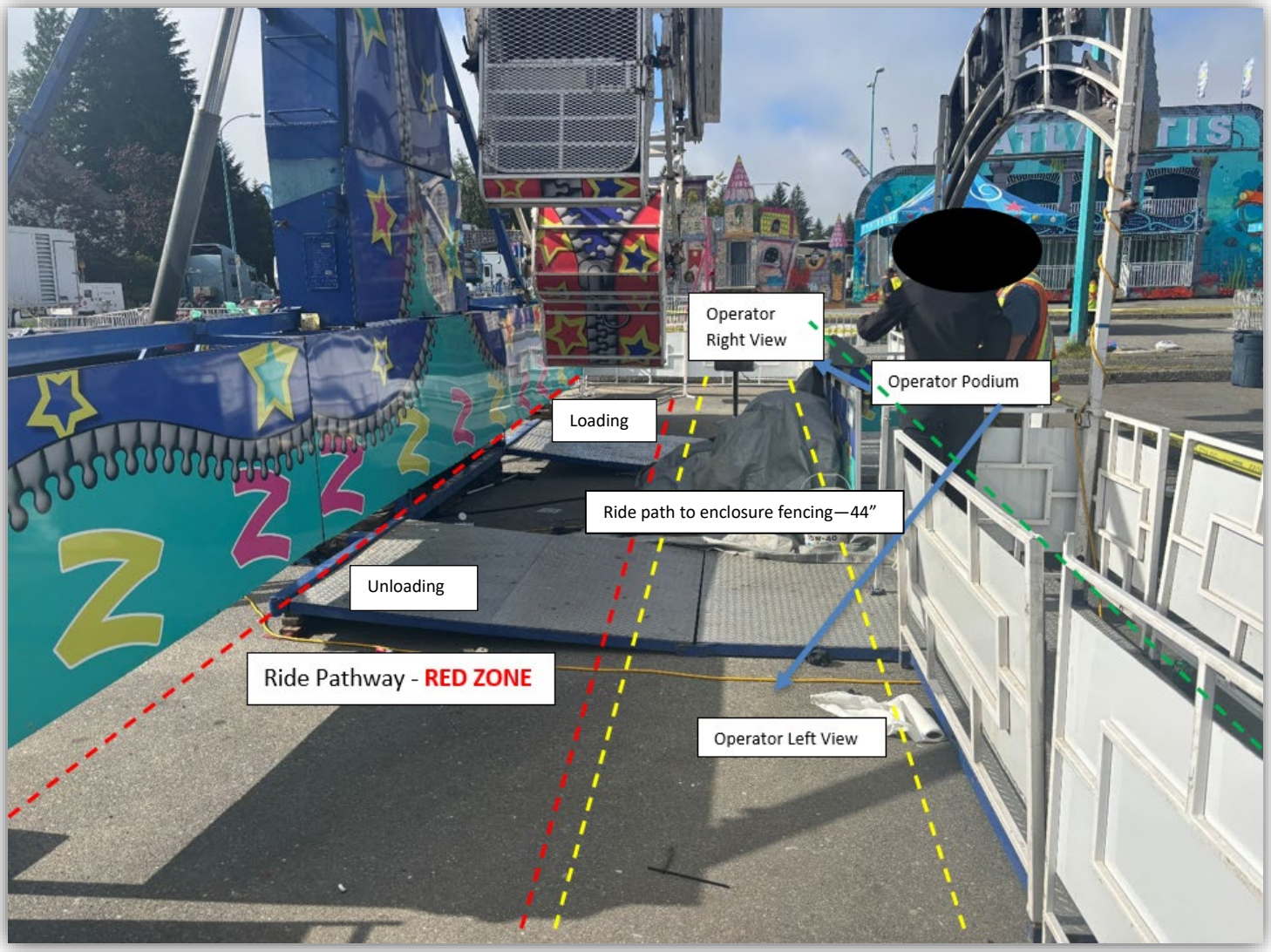

Image 4 – Left viewpoint of space and operator position from operator podium.

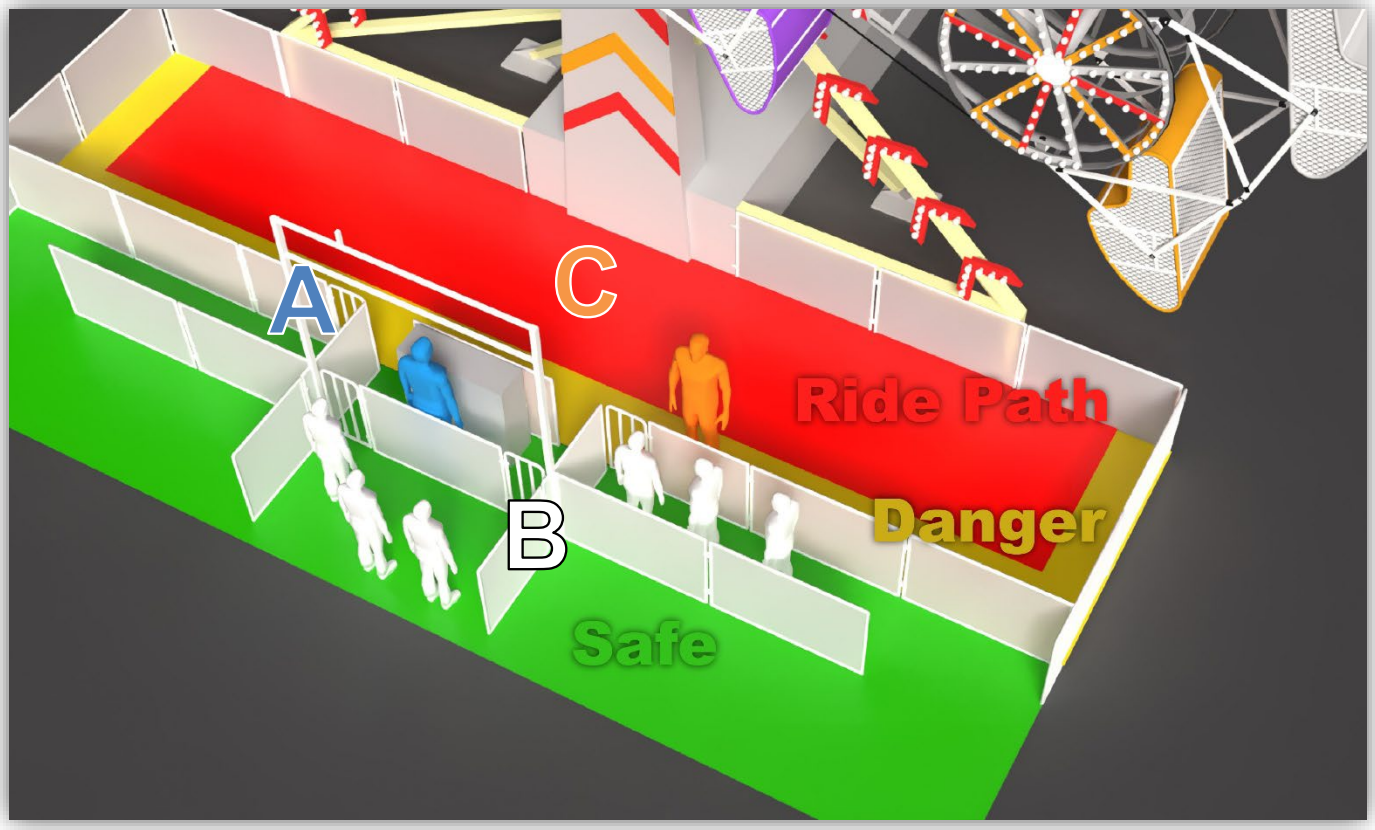

Image 5 – Locations:

A. Operator is facing the ride at the control podium right before impact between ride and attendant. They are in the Safe zone.
B. Members of the public are lined up waiting for ride in the safest area, the safe zone.
C. Attendant was last seen by the operator in the danger zone where attendants prepare waiting passengers for their ride. Close to ride path zone, but not yet in ride path.

Disclaimer: All depictions and illustrations are for informational purposes only and are provided to assist with understanding the facts and evidence; they should not be interpreted as exact reconstructions.

Image 6a – Example of magnetic broom.

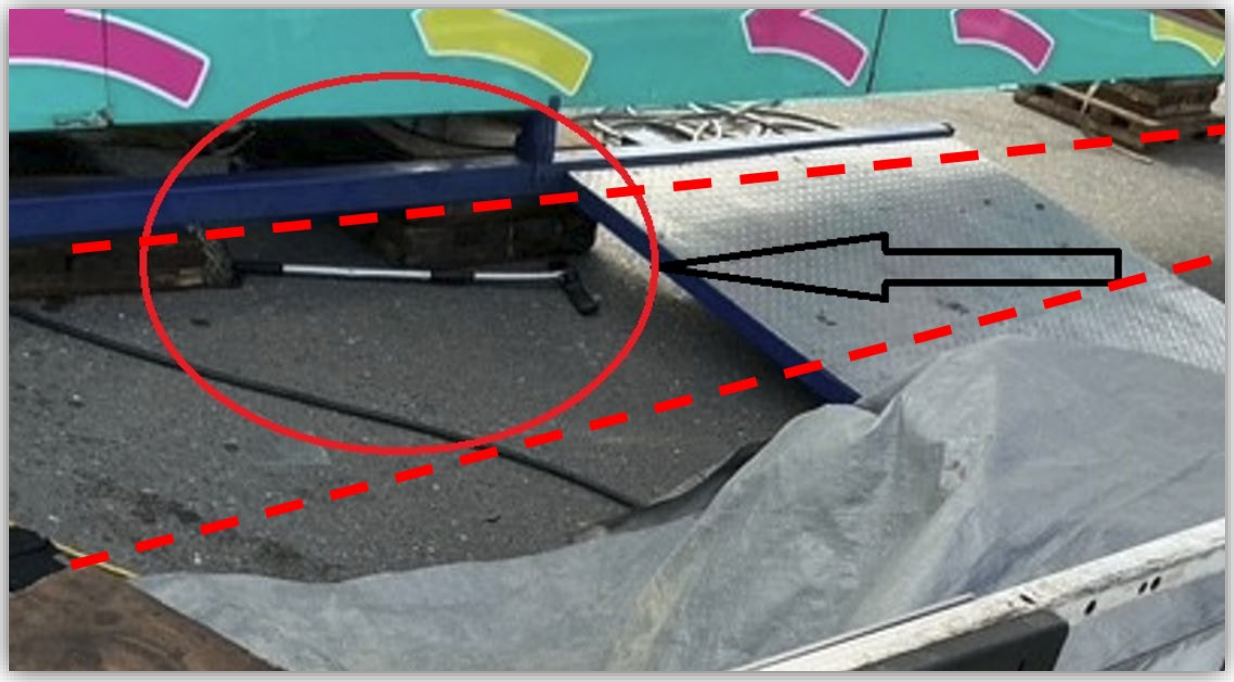

Image 6b – After incident magnetic broom found under ride path zone.

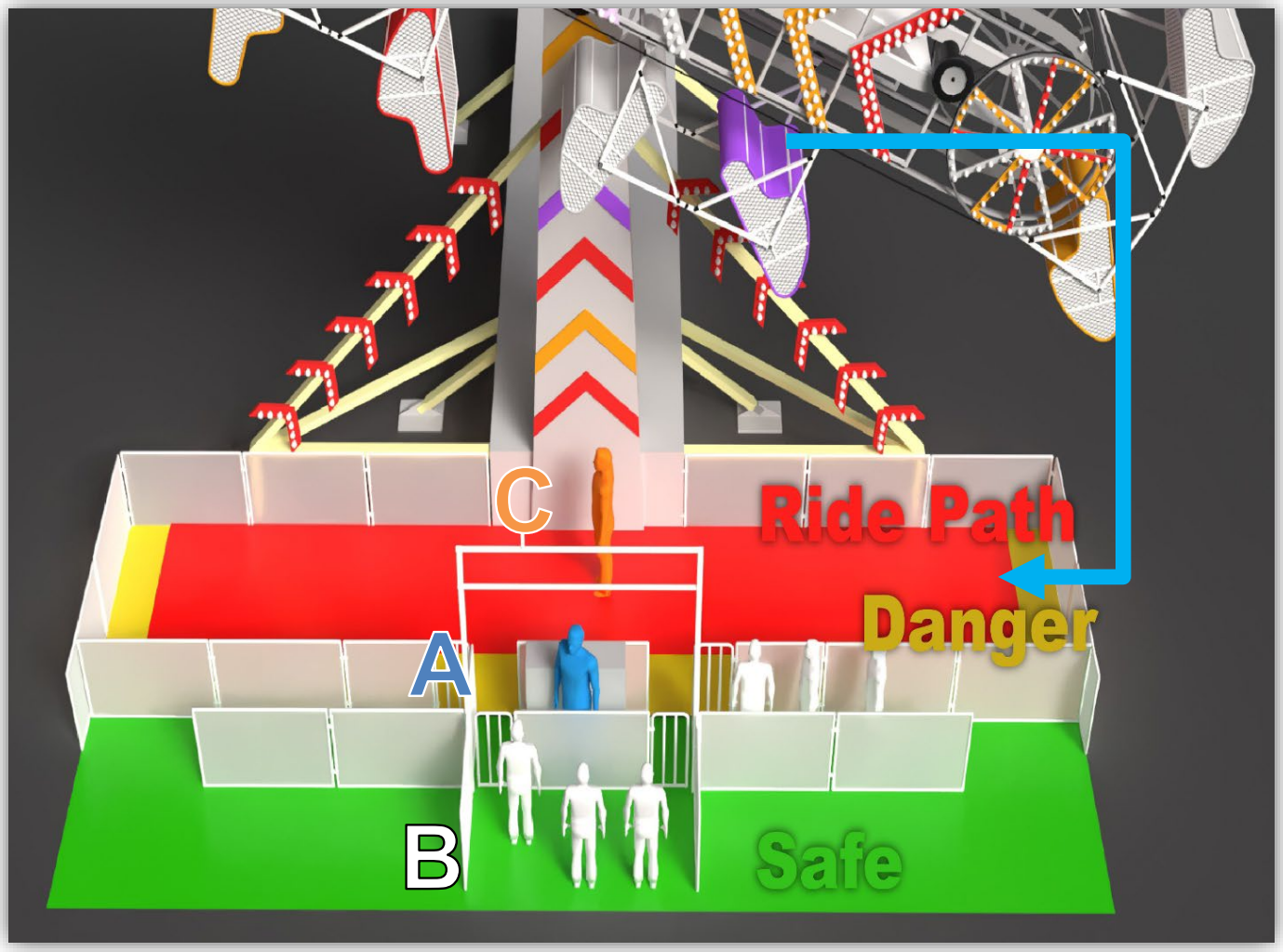

Image 7 – Final positions - in the seconds before impact between ride and attendant [C].

The ride swings through the ride path zone. T's off a few seconds overhead, the operator [A] was approched by three members of the public [B] behind them and turns briefly, and then the ride changes directions and comes down from behind the attendant who moved into the ride path zone and was subsequently struck by the ride.

Disclaimer: All depictions and illustrations are for informational purposes only and are provided to assist with understanding the facts and evidence; they should not be interpreted as exact reconstructions.