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February 2026

**Special Crash Investigations:  
Remote Frontover Incident  
Investigation;  
Vehicle: 2022 Honda Civic;  
Location: California;  
Incident Date: March 2023**

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<b>16. Abstract</b>  This report documents the remote investigation of a frontover incident in California in March 2023 that involved a 62-year-old male and 60-year-old female, both nonmotorist pedestrians, who were struck by a 2022 Honda Civic driven by an unlicensed, belted, 18-year-old male. The Honda had stopped at the crosswalk in the right turn lane while the pedestrians were standing on the sidewalk at the intersection. Upon seeing the "walk" signal the pedestrians entered the crosswalk. The Honda driver then drove forward and struck both pedestrians. The female pedestrian was knocked to the ground. The male pedestrian jumped onto the hood while being struck. The Honda driver saw both pedestrians and stopped the vehicle. The male pedestrian did not sustain injuries. The female pedestrian sustained "C" (complaint of pain) injuries to her head, left shoulder, left hand, and right leg. She was transported to a local hospital where she was treated and released. The Honda driver was not injured. The Honda was not damaged.			
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**Special Crash Investigations**  
**Remote Frontover Incident Investigation**  
**Case Number: DS23009**  
**Vehicle: 2022 Honda Civic**  
**Location: California**  
**Incident Date: March 2023**

## **Background**

This report documents the remote investigation of a slow-moving frontover incident selected by the Special Crash Investigations (SCI) group of the National Highway Traffic Safety Administration via the Police Accident Report Sampling Engine. SCI forwarded the police crash report (PCR) with on-scene images to the team in May 2023 and the case was assigned on the same day. The investigation was intended to determine the events leading up to the incident, driver actions, vehicle characteristics and equipment, environment/scene conditions and layout, and nonmotorist/pedestrian activities.

This incident occurred at 1:08 p.m. in March 2023 in California. The incident site was the marked crosswalk in the north leg of a four-leg intersection. The intersection's traffic signals were functioning properly. The intersection's north leg had a right turn lane, left turn lane, southbound through lane, and northbound through lane. The speed limit was 48 km/h (30 mph). Conditions at the time were clear, daylight, and dry. The 2022 Honda Civic was driven by a belted 18-year-old male. The Honda was initially traveling southbound and had stopped at the crosswalk in the right turn lane. A 62-year-old male and a 60-year-old female were standing on the intersection's northwest sidewalk waiting for the "walk" crosswalk signal. Upon seeing the walk signal they entered the roadway walking east in the crosswalk. The Honda driver looked to his left at westbound traffic, saw it was clear, and began driving the vehicle forward, striking both pedestrians. The female was knocked to the ground. According to the PCR, the male jumped onto the hood while being struck. At this point, the Honda driver saw both pedestrians and stopped the vehicle.



*Figure 1. The 2022 Honda Civic, front plane  
(police photo)*

The male nonmotorist did not sustain any injuries. The female nonmotorist sustained "C" (complaint of pain) injuries to her head, left shoulder, left hand, and right leg. She was transported to a local hospital where she was treated and released. The Honda was not damaged

(Figure 1). The Honda driver was unlicensed. The vehicle owner was contacted. She took possession of the vehicle and drove it from the scene.

## **Summary**

### **Incident Site**

The incident occurred in the yellow ladder-style crosswalk in the north leg of a four-leg intersection. The intersection was controlled with traffic and designated crosswalk signals that were functioning properly. The intersection's north leg had a right turn lane, left turn lane, southbound through lane, and northbound through lane. The asphalt roadway was straight and level. The speed limit was 48 km/h (30 mph). Conditions at the time were clear, daylight, and dry. The weather at the nearest reporting site was 16 °C (61 °F) with 44 percent humidity and calm winds. At the reported incident time, solar azimuth was 178.9° and solar elevation was 57.2°. An incident diagram and site satellite view are included at the end of this report.

### **Pre-Incident**

The Honda was traveling southbound and had stopped at the crosswalk in the right turn lane. The traffic signal was red. Both nonmotorists/pedestrians were standing on the intersection's northwest sidewalk waiting for the "walk" crosswalk signal. Upon seeing the walk signal they entered the roadway walking east in the crosswalk approaching the Honda from the right. The Honda driver looked to his left at westbound traffic, saw it was clear, and began moving forward. In the interview the driver said that he had taken his foot off the brake and the vehicle rolled forward without him accelerating. He felt a bump as the vehicle traveled forward. The creep speed of this vehicle with an automatic transmission is low and dependent on the engine idle. The vehicle had an auto idle stop function that would prevent the vehicle from moving until the accelerator is pressed if the function was activated. It is unknown if the function was activated. It seems most likely that the driver transitioned from the brake to the accelerator before moving forward.

### **Incident**

The Honda struck both pedestrians (Events 1 and 2). The female nonmotorist was knocked to the ground. The male nonmotorist jumped onto the hood while being struck. The Honda driver saw both nonmotorists at that point and stopped the vehicle.

### **Post-Incident**

The male nonmotorist did not sustain injuries. The female nonmotorist sustained "C" (complaint of pain) injuries to her head, left shoulder, left hand, and right leg. She was transported to a local hospital where she was treated for a hand abrasion and shoulder contusion and was released. The Honda was not damaged. The Honda driver was unlicensed. The vehicle owner was contacted. She took possession of the vehicle and drove it from the scene.

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## 2022 Honda Civic

### Vehicle Description

The 2022 Honda Civic was a 4-door sedan identified by VIN 2HGFE2F5XNHxxxxxx. It had a 2.0-liter, 4-cylinder gasoline engine, front-wheel-drive, automatic transmission, and two rows of seats. It had an EDR but it was not imaged due to this being a remote investigation. It had a collision mitigation braking system (crash avoidance technology) that assists when it determines there is a possibility of the vehicle colliding with a vehicle (including motorcycles) ahead from behind, an oncoming vehicle, a pedestrian, or a bicyclist. The system uses a front wide-view camera behind the rearview mirror that starts monitoring the roadway ahead when the vehicle speed is about 5 km/h (3 mph) or above and will search for a vehicle, pedestrian, or moving bicycle in front. The system activates when the difference between the vehicle and another vehicle, pedestrian, or moving bicycle detected in front of the vehicle becomes about 5 km/h (3 mph) or above with a chance of a collision.

The pedestrian detection feature may not activate or may not detect a pedestrian in front of the vehicle under certain environmental, roadway, and vehicle conditions.

Pedestrian-related detection limitations as stated in the owner's manual may include the following:

- The distance between your vehicle and the vehicle ahead of you, oncoming vehicle, pedestrian, or moving bicycle ahead of you is too short.
- The vehicle ahead of you, oncoming vehicle, pedestrian, or moving bicycle suddenly cuts in front of or jumps out in front of you.
- The bicycle is stopped.
- The vehicle ahead of you, oncoming vehicle, pedestrian, or moving bicycle blends in with the background, preventing the system from recognizing them.
- Several pedestrians or bicycles are moving ahead in a group.
- A pedestrian or moving bicycle crosses the road too quickly.
- A pedestrian or moving bicycle approaches from the opposite direction.
- Part of a pedestrian (head, limbs, etc.) is hidden by load.
- A pedestrian is bent over or squatting, when the hands are raised, or the person is running.
- The pedestrian is shorter than about 3.3 ft (1 m) or taller than about 6.6 ft (2 m).
- The pedestrian is pushing a stroller or bicycle.
- The vehicle ahead of you, oncoming vehicle, pedestrian, or moving bicycle is not in front of the vehicle.

The pedestrians were approaching the vehicle from the right side. The driver did not report any crash avoidance activity. The impact speed was likely below the 5 km/h (3 mph) threshold.

## Exterior Damage

The Honda did not sustain any residual damage (Figure 2). The collision deformation classifications for the no residual damage contacts were 12F9EU1 and 12F9EU1.



Figure 2. The 2022 Honda Civic, front plane  
(police photo)

## Interior Damage

The Honda did not sustain interior damage.

## Manual Restraint Systems

The Honda had lap and shoulder belts for all seating positions. According to the PCR the driver was belted.

## Supplemental Restraint Systems

The Honda had driver's and passenger's frontal and knee air bags, first- and second-row inflatable curtain air bags, first- and second-row outboard seat-mounted side-impact air bags. There were no air bag deployments.

## NHTSA Recalls and Investigations

Searches of the NHTSA recall database (<http://www.nhtsa.gov/recalls>) using the Honda's VIN in May 2023 and April 2025 revealed two unrepaired recalls for this vehicle. One was related to a steering box issue and one to a steering linkage issue. Both recalls were issued in 2024.

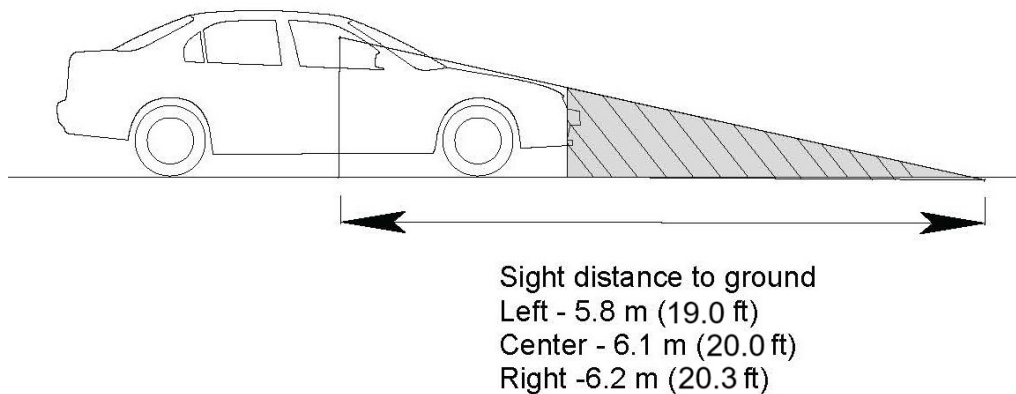
## Front Visibility

An exemplar Honda was examined to obtain front visibility information. The following baseline items were obtained from the vehicle, vehicle specifications, anthropometric documents, and a New Car Assessment Program report for this vehicle.

Item	Measurement
Front overhang	93 cm (36.6 in)
Front bumper to base of windshield	126 cm (49.6 in)

Item	Measurement
Front bumper height (top)	50.9 cm (20.0 in)
Front bumper height (bottom)	38.7 cm (15.2 in)
Hood leading edge height	76.6 cm (30.1 in)
Ground to driver's eye height (estimated)	119.7 cm (47.1 in)
Seat to eye height according to body height <sup>1</sup>	72.2 cm (28.4 in)
Average H-point to ground (small car) <sup>2</sup>	47.5 cm (18.7 in)
Driver's head to side window (New Car Assessment Program dummy position)	32.5 cm (12.7 in)

Based on available data, the sight distances to the ground for the driver looking forward over the hood's left side, center, and right side were 5.8 m (19.0 ft), 6.1 m (20.0 ft), and 6.2 m (20.3 ft), respectively (Figure 3).



*Figure 3. Sight visibility diagram*

### Side Visibility

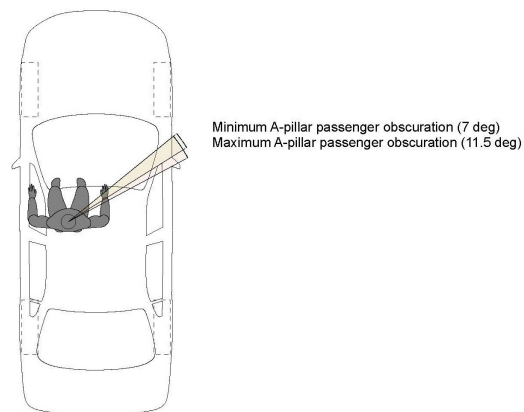
The right A-pillar was a potential blind spot as the nonmotorist came from the right to the left. The wider the A-pillar the wider the blind spot. For the Honda, the width dimensions for the A-pillar were 24 cm (9.4 in), 8 cm (3.1 in), and 9 cm (3.5 in) for the bottom, middle, and top. One third-party study focused on A-pillar driver obscuration/location and A-pillar passenger obscuration, which determines the interaction between a driver and the vehicle's pillar, which

<sup>1</sup> Pejnović, P. (2010). Impact of anthropometric measurements on ergonomic driver posture and safety. *Periodicum Biologorum*, 112(1), 51–54. [www.researchgate.net/publication/279506800\\_Impact\\_of\\_anthropometric\\_measurements-on\\_ergonomic\\_driver\\_posture\\_and\\_safety](http://www.researchgate.net/publication/279506800_Impact_of_anthropometric_measurements-on_ergonomic_driver_posture_and_safety)

<sup>2</sup> H-point is the pivot center of the torso and thigh on the two- or three-dimensional devices used in defining and measuring vehicle seating accommodation. For more information see [http://dossin.weebly.com/uploads/7/9/8/6/7986350/05-occupant\\_packaging.pdf](http://dossin.weebly.com/uploads/7/9/8/6/7986350/05-occupant_packaging.pdf).

affects the driver's ability to see external objects, including pedestrians.<sup>3</sup> In the study vehicle pillars are measured in the all-around view from the driver's monocular eye point 63.5 cm (25 in) above the seating reference point taking into account all obstructive elements. Research was done on approximately 75 vehicles. The minimum A-pillar obscuration was reported as 7° and the maximum 11.5° (Figure 4). The authors noted that there are other interior dimensions that affect obscuration/location, including seating reference point to ground front, seat height, and torso angle. There were two nonmotorists involved in this incident. Their position relative to one another is unknown and the A-pillar would not have obscured both if they were not exactly side by side.

In the interview the driver said he never saw the two nonmotorists prior to the incident but could



*Figure 4. Passenger A-pillar obscuration*

not say if the A-pillar was a factor or not. It is unclear if he looked to the right before proceeding.

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<sup>3</sup> Santos, A. C., Gerez, A., Pádua, A., Genaro, P., Silva, R., & Ferreira, S. (2019, October 14-19). *The influence of A-pillar obscuration/location on driver visibility*. Proceedings of the 2019 SAE Brasil Congress & Exhibition (Technical Paper: 2019-36-0062), Sao Paulo, Brazil. <https://doi.org/10.4271/2019-36-0062>

## 2022 Honda Civic Occupant

### Driver Demographics

Age/sex:	18 years/male
Height:	163 cm (64 in)
Weight:	59 kg (130 lb)
Eyewear:	None
Seat type:	Bucket
Seat track position:	Unknown
Manual restraint usage:	Lap and shoulder belt used
Usage source:	PCR
Air bags:	Frontal, inflatable curtain, knee, seat-mounted bags available; none deployed
Alcohol/drug data:	None
Egress from vehicle:	Exited under own power
Transport from scene:	None
Type of medical treatment:	None

### Driver Injuries

The Honda driver was not injured during the incident.

### Driver Kinematics

There was likely no movement during the incident due to the low speeds.

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## Nonmotorist/Pedestrian 1

### Nonmotorist 1 Demographics

Age/sex: 60 years/female  
Height: 152 cm (60 in)  
Weight: 68 kg (150 lb)  
Transport from scene: Ambulance  
Type of medical treatment: Treated and released

### Nonmotorist 1 Injuries

Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Component (IPC)	IPC Confidence Level
1	Abrasions, left hand	710202.1	Ground	Certain
2	Contusion, left shoulder	710402.1	Ground	Certain
3	Neck pain, right hip pain	Not codeable		

Source: Emergency room records, radiology report.

### Nonmotorist 1 Kinematics

The 60-year-old female nonmotorist was initially standing on the intersection's northwest sidewalk waiting for the "walk" crosswalk signal with her husband. Upon seeing the walk signal they entered the roadway walking east in the crosswalk. The Honda driver looked to his left at westbound traffic, saw it was clear, and began moving forward. She was struck by the slow-moving vehicle and knocked to the ground.

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## **Nonmotorist/Pedestrian 2**

### **Nonmotorist 2 Demographics**

Age/sex:	62 years/male
Height:	165 cm (65 in)
Weight:	91 kg (201 lb)
Transport from scene:	Traveled to hospital with wife
Type of medical treatment:	None

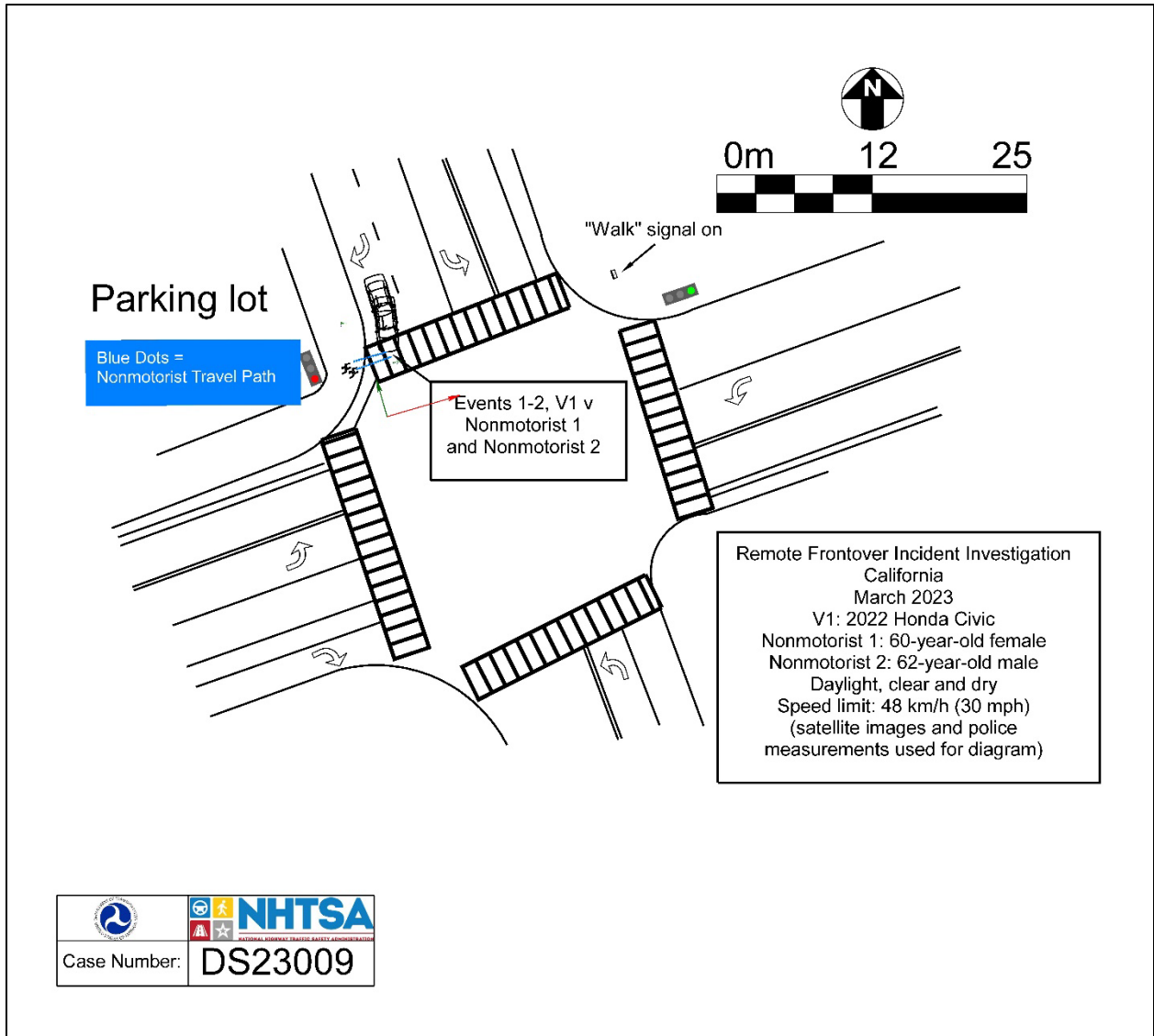
### **Nonmotorist 2 Injuries**

There were no reported injuries.

### **Nonmotorist 2 Kinematics**

The 62-year-old male nonmotorist was initially standing on the intersection's northwest sidewalk waiting for the "walk" crosswalk signal with his wife. Upon seeing the walk signal they entered the roadway walking east in the crosswalk. The Honda driver looked to his left at westbound traffic, saw it was clear, and began moving forward and struck the nonmotorist. According to the PCR, the male nonmotorist jumped onto the hood while being struck.

# Incident Diagram



## Incident Site Satellite View



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*Google Maps © 2023 Maxar Technologies, U.S. Geological Survey Map data*

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