

LITIGATION GRAPHICS • 3D RECONSTRUCTION • SPECULATIVE STUDY

3.8 SECONDS

A left turn across a lane the driver could not see — and the 2.7 seconds in which neither driver could see the other.

Reyes v. Northgate Delivery Co. (fictional). Five demonstratives for a jury: the scene as surveyed, the turn frame by frame, each driver's line of sight, the signal record, and the speed question answered honestly.



POSTURE

Jury trial • plaintiff

EVIDENCE

Survey • signal log • EDR • telematics • camera

METHOD

Time-distance reconstruction • sightline analysis

INDEPENDENT SPECULATIVE CASE STUDY. ALL PARTIES, EVIDENCE, AND DATA ARE FICTIONAL AND WERE CREATED SOLELY TO DEMONSTRATE LITIGATION-GRAPHICS STRATEGY. VEHICLES AND STREETScape ARE SIMPLIFIED SCALE MODELS.

Reyes v. Northgate Delivery Co.

At 18:47 on 14 October 2025, at the signalised intersection of Alder Avenue and 9th Street, a Northgate box truck turned left across the northbound lanes and was struck on its right side by a sedan driven by the plaintiff, Dana Reyes. Dusk, dry pavement, posted limit 35 mph. A transit bus was stopped in the opposite left-turn pocket. The plaintiff's injuries are not in dispute; fault is.

The defense account: the truck driver came to a complete stop, waited for a green arrow, and turned lawfully; the sedan was travelling at least 52 mph and could have avoided the truck at any lawful speed. The case, they say, is about the plaintiff's speed.

The plaintiff's account: the green arrow had ended twenty seconds earlier; the truck rolled into a permissive left turn on a flashing yellow arrow without stopping, across a lane the driver could not see because the bus was blocking it; the sedan was doing 41 in a 35 and braked the moment the truck appeared, 1.1 seconds before impact.

DESIGN EXERCISE • THE PLAINTIFF

Posture: jury trial (fictional). Objective: convert five data sources — survey, signal-controller log, city camera, the sedan's EDR and the truck's fleet telematics — into one 3D model the jury can trust, and answer the speed question before the defense asks it.

Five clocks, one timeline

Every demonstrative in the set is generated from a single kinematic model rather than drawn by hand: the truck’s path is fixed to its 1 Hz telematics and the surveyed turn geometry, the sedan’s to its 0.5 s EDR speed trace integrated back from impact, and both are placed on the surveyed intersection. The signal log and the camera timestamp are aligned to the same NTP clock. Change one number and every panel changes with it — which is exactly what an opposing expert will test.

t -3.8 s	Truck front bumper at the stop bar, 4.5 mph and accelerating. Sedan 69 m out at 41 mph.
t -1.9 s	Truck nose crosses the centre line at 8.7 mph. Sedan 35 m out, hidden by the bus.
t -1.1 s	First moment each driver can see the other. Sedan 19.5 m out.
t -0.7 s	Truck enters northbound lane 1.
t -0.35 s	Sedan brakes (EDR), 0.74 s after first sight.
t = 0	Impact, 18:47:12.4. Sedan 35 mph, truck 13 mph.

The honest rule the set obeys: nothing is estimated from memory. Where testimony and record disagree, both are shown at the same scale with the source named, and the jury is left to see the gap for itself.

The sightline exhibit is the system’s signature: a driver’s-eye render computed from the truck’s eye height, showing that the bus hid 97 metres of the very lane the driver was turning across — and that for 2.7 seconds neither driver could have seen the other.

The speed exhibit concedes what must be conceded. At the posted limit the collision still happens, at 25 mph instead of 35; only a sedan 10 mph under the limit avoids it. The defense’s 52 mph is tested and ruled out by the crush evidence. Speed set the severity; the turn created the collision.

ALDER & 9TH, 3.8 SECONDS BEFORE IMPACT

Three vehicles at 18:47:08.6 – a delivery truck rolling into a permissive left turn, a transit bus waiting in the opposite turn pocket, and a sedan 69 metres away in the lane the truck is about to cross. Built from the survey, the signal plans and both vehicles' data recorders (fictional).



CITY TRAFFIC CAMERA · NE MAST
records 2 fps with timestamp
frame 18:47:09.2 in evidence

NORTHGATE BOX TRUCK · SB LEFT-TURN LANE
front bumper at the stop bar
rolling 4.5 mph – never fully stopped (telematics)
signal for this movement: FLASHING YELLOW ARROW

POINT OF IMPACT · 18:47:12.4
sedan front to truck right side, behind the cab
inside the intersection, lane 1

TRANSIT BUS · NB LEFT-TURN POCKET
12 m long, 3.2 m high, stopped at the stop bar
waiting to turn – not a party
stands between the two drivers

REYES SEDAN · NB THROUGH LANE 1
69 m from the point of impact
41 mph steady (EDR) · lane signal: GREEN
posted limit 35 mph

■ NORTHGATE BOX TRUCK · DEFENDANT ■ REYES SEDAN · PLAINTIFF ■ TRANSIT BUS · STOPPED, NOT A PARTY ■ POINT OF IMPACT

REYES v. NORTHGATE DELIVERY CO. – FICTIONAL MATTER

RECONSTRUCTION FROM SURVEY DATA, SIGNAL TIMING SHEETS, EDR & FLEET TELEMATICS · SCALE MODEL,
VEHICLES SIMPLIFIED

PANEL 3.1 · ESTABLISHING VIEW

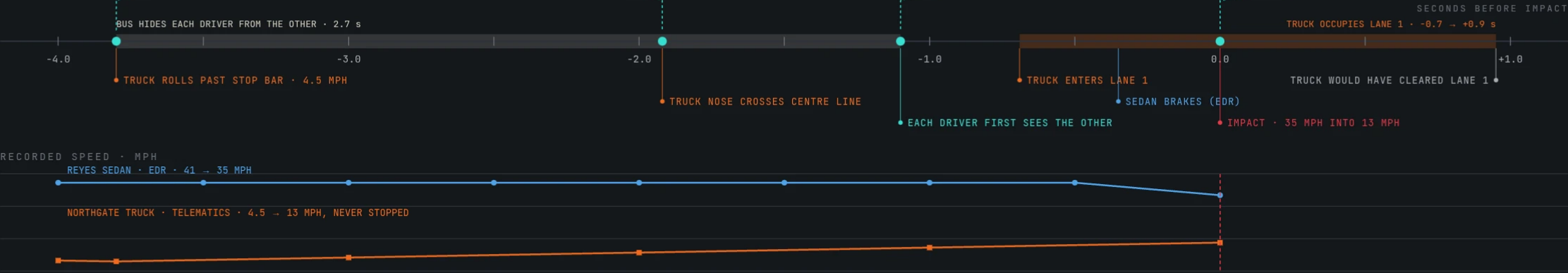
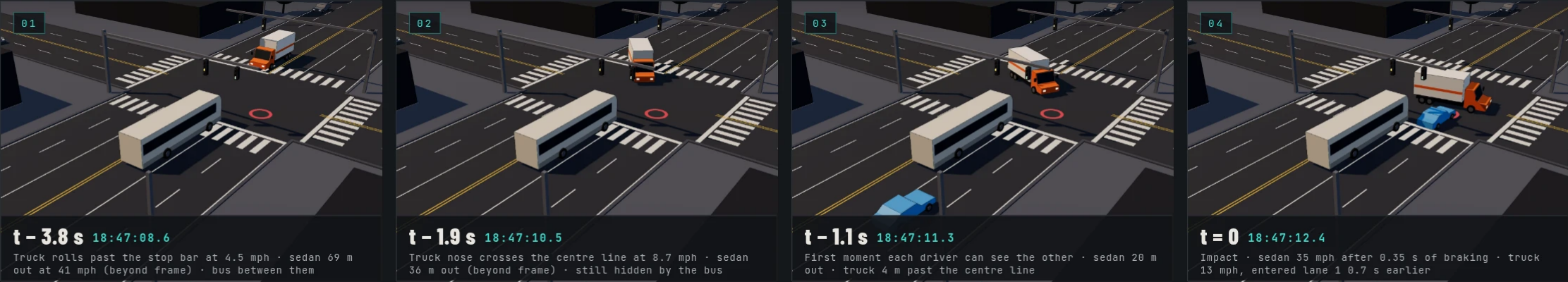
t = -3.8 s · 18:47:08.6 · DUSK, DRY PAVEMENT · POSTED 35 MPH

INDEPENDENT SPECULATIVE CASE STUDY

ALL PARTIES, EVIDENCE, AND DATA ARE FICTIONAL AND CREATED SOLELY TO DEMONSTRATE LITIGATION-
GRAPHICS STRATEGY

FOUR MOMENTS. ONE DECISION ALREADY MADE.

The same camera, four times. Every position is computed from the truck's fleet telematics and the sedan's event data recorder, then placed on the surveyed intersection — nothing is estimated from memory.



REYES v. NORTHGATE DELIVERY CO. — FICTIONAL MATTER

TRUCK POSITIONS: FLEET TELEMATICS 1 Hz + TURN GEOMETRY · SEDAN POSITIONS: EDR 0.5 s SPEED TRACE INTEGRATED FROM IMPACT

PANEL 3.2 · SEQUENCE

t = -3.8 · -1.9 · -1.1 · 0 s · FIXED CAMERA, SOUTH-EAST

INDEPENDENT SPECULATIVE CASE STUDY

ALL PARTIES, EVIDENCE, AND DATA ARE FICTIONAL AND CREATED SOLELY TO DEMONSTRATE LITIGATION-GRAPHICS STRATEGY

YOU CANNOT YIELD TO WHAT YOU CANNOT SEE.

Through the truck's windscreen at the moment the driver committed to the turn. The bus fills the view of the very lane he is about to cross. The sedan is 69 metres away, behind it.



97 m

OF LANE 1 HIDDEN FROM THE STOP BAR

The bus blocks everything between 19 m and 116 m. A car at 41 mph covers that in 5.3 seconds – longer than the whole turn.

2.7 s

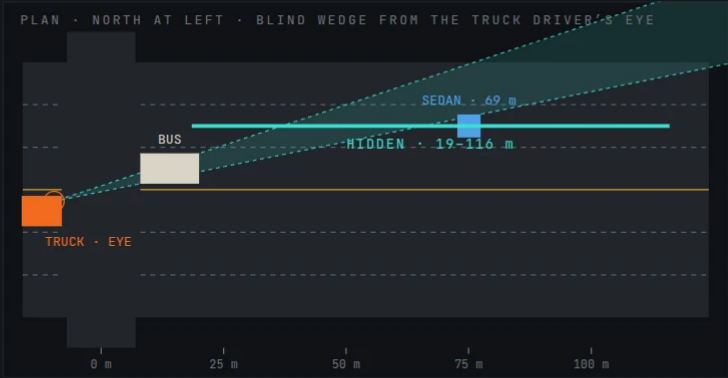
NEITHER DRIVER COULD SEE THE OTHER

From t = 3.8 to t = 1.1 the bus hides each vehicle from the other. Only one of them was moving into the other's lane.

1.1 s

FIRST SIGHT, FOR BOTH

When the sedan finally appears, the truck's nose is already 4 m past the centre line. The decision was made 2.7 seconds earlier, blind.



REYES v. NORTHGATE DELIVERY CO. – FICTIONAL MATTER

SIGHTLINES COMPUTED FROM SURVEYED GEOMETRY, BUS DIMENSIONS (12.0 × 2.55 × 3.2 m) AND VEHICLE POSITIONS · EYE HEIGHTS: TRUCK 2.25 m, SEDAN 1.2 m

PANEL 3.3 · SIGHTLINE ANALYSIS

DRIVER'S-EYE RENDER + PLAN-VIEW BLIND WEDGE

INDEPENDENT SPECULATIVE CASE STUDY

ALL PARTIES, EVIDENCE, AND DATA ARE FICTIONAL AND CREATED SOLELY TO DEMONSTRATE LITIGATION-GRAPHICS STRATEGY

"I HAD MY ARROW." THE CONTROLLER SAYS OTHERWISE.

The intersection uses a flashing yellow arrow for permissive left turns. The controller logs every phase change to the tenth of a second; the city camera stamps every frame. Both put the truck in the intersection twenty seconds after its protected arrow ended.

SB LEFT-TURN HEAD • 4 SECTIONS

RED • STOP

YELLOW • CLEAR

FLASHING YELLOW ARROW • LIT

GREEN ARROW • OFF

What the driver was looking at

SB left-turn head from 15 m before the stop bar, as lit at 18:47:08. Section 3 of 4: a flashing yellow arrow. Meaning under the code: turn permitted only after yielding to oncoming traffic.

CAM 07 • ALDER/9TH NE • 2025-10-14 18:47:09.2

REC 2 fps • NTP

City camera, frame 18:47:09.2

Rendered from the camera's surveyed position and lens on the NE mast. The truck's nose is 1.3 m past the stop bar and still rolling — 17.2 s after its green arrow ended.

"I came to a complete stop at the line. I waited for my arrow. When the arrow came on, I went."

DEFENDANT DRIVER • DEPOSITION, p. 41 (FICTIONAL)

SIGNAL CONTROLLER EVENT LOG • CABINET 1141 • 14 OCT 2025 • 0.1 s RESOLUTION

PHASE 5
SB LEFT

RED

GREEN ARROW • PROTECTED

YEL

FLASHING YELLOW ARROW • PERMISSIVE • YIELD

PHASE 2
NB THROUGH

RED

GREEN • SEDAN'S LANE

18:46:30

18:46:40

18:46:50

18:47:00

18:47:10

18:47:20

18:47:30

GREEN ARROW ENDS • 18:46:52.0

TRUCK AT STOP BAR • 18:47:08.6

CAMERA FRAME • 18:47:09.2

IMPACT • 18:47:12.4

NORTHGATE TELEMATICS • TRUCK SPEED, LAST 30 s • 1 Hz

20 mph

10 mph

0 mph

-30 s

-20 s

-10 s

0 s

LOWEST READING 4.0 MPH • NEVER ZERO

STOP BAR

IMPACT

20.4 s
ARROW ENDED BEFORE IMPACT

The protected green arrow ended at 18:46:52.0. Impact was 18:47:12.4.

16.0 s
INTO THE FLASHING YELLOW

The truck reached the stop bar 15.6 s after the permissive phase began — and never stopped there.

4.0 mph
LOWEST SPEED, 30 s BEFORE IMPACT

Fleet telematics at 1 Hz. A "complete stop" would read zero.

REYES v. NORTHGATE DELIVERY CO. — FICTIONAL MATTER

SOURCES: CITY SIGNAL CONTROLLER EVENT LOG (0.1 s), CITY CAMERA 07 (2 fps, NTP-STAMPED), NORTHGATE FLEET TELEMATICS (1 Hz GPS + ACCELEROMETER)

PANEL 3.4 • TESTIMONY v. RECORD

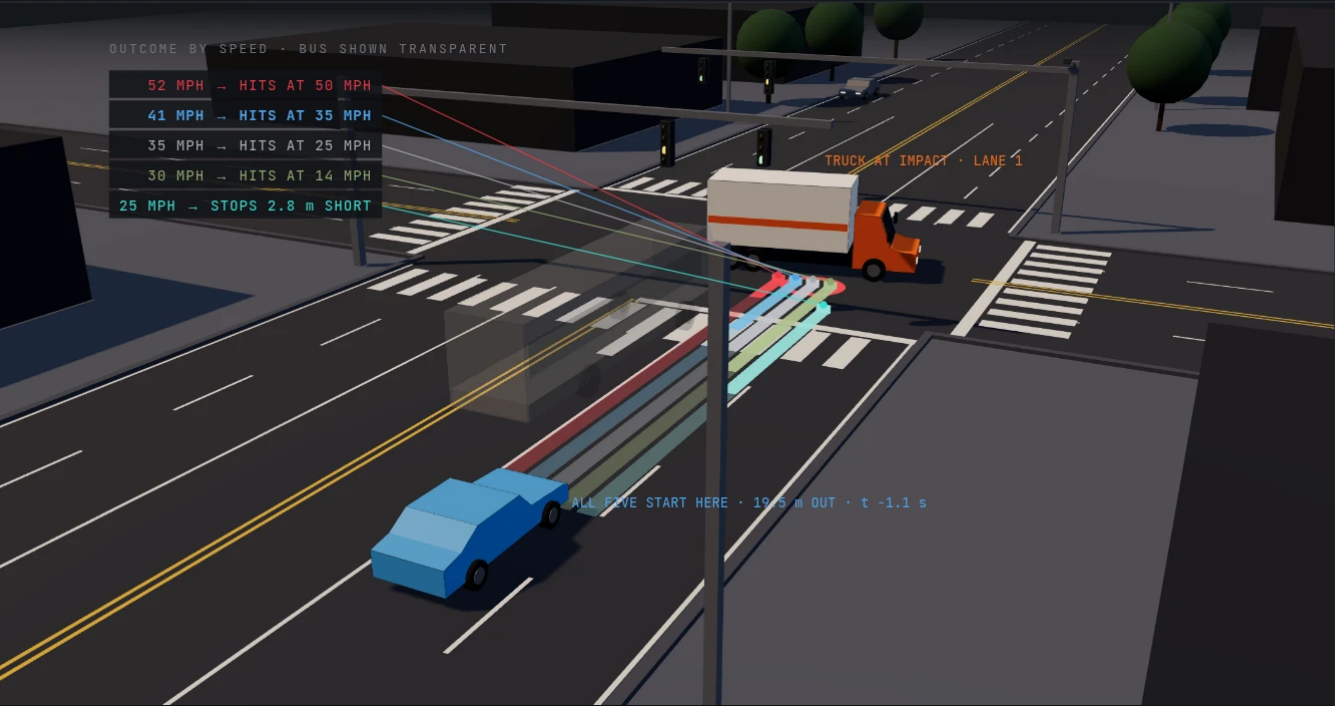
SIGNAL STATE, CAMERA FRAME, TELEMATICS

INDEPENDENT SPECULATIVE CASE STUDY

ALL PARTIES, EVIDENCE, AND DATA ARE FICTIONAL AND CREATED SOLELY TO DEMONSTRATE LITIGATION-GRAPHICS STRATEGY

WOULD 35 MPH HAVE CHANGED THE OUTCOME?

Defense argues the sedan was doing 52; the EDR says 41. We ran the last 1.1 seconds at every speed the jury will hear, holding the truck's recorded path fixed. The honest answer — yes, but not the collision — is the one that survives cross-examination.



Same spot, five speeds: 19.5 m from the point of impact when the truck first comes into view

Each bar is one sedan: a dim reaction segment (0.74 s at constant speed), then a bright braking segment at 7.4 m/s². Four bars reach the truck's flank. One stops short. Sedan shown at the sighting point; truck shown at impact.

TIME-DISTANCE • SEDAN NOSE TO POINT OF IMPACT • TRUCK IN LANE 1 SHADED



SEDAN SPEED	WHO SAYS SO	NEEDS TO STOP	RESULT FROM 19.5 m
52 mph	Defense reconstruction	53.7 m	Impact at 50 mph — ruled out by crush depth (33–37 mph)
41 mph	EDR, 0.5 s trace	36.3 m	Impact at 35 mph — matches crush, matches EDR
35 mph	Posted limit	28.2 m	Impact at 25 mph — still a collision
30 mph	—	22.1 m	Impact at 14 mph
25 mph	—	16.7 m	Stops 2.8 m short — no collision

SPEED SET THE SEVERITY. THE TURN CREATED THE COLLISION.

At the posted limit the crash still happens, at 25 mph instead of 35. Only a sedan travelling 10 mph under the limit avoids it — a standard no driver is held to. The defense's 52 mph would have produced an impact the physical evidence rules out.

REYES v. NORTHGATE DELIVERY CO. — FICTIONAL MATTER

MODEL: TRUCK PATH FIXED TO TELEMATICS • SEDAN PRT 0.74 s • DECELERATION 7.4 m/s² (DRY ASPHALT, ABS) • CRUSH RANGE FROM DAMAGE PROFILE

PANEL 3.5 • AVOIDABILITY

FIVE SPEEDS • ONE TRUCK • SAME 3.8 SECONDS

INDEPENDENT SPECULATIVE CASE STUDY

ALL PARTIES, EVIDENCE, AND DATA ARE FICTIONAL AND CREATED SOLELY TO DEMONSTRATE LITIGATION-GRAPHICS STRATEGY

One model, **every** exhibit

- D-1 · The scene, as surveyed — establishing aerial with callouts
- D-2 · The turn, frame by frame — four fixed-camera moments + timeline
- D-3 · Lines of sight — driver's-eye render + plan-view blind wedge
- D-4 · The signal — signal head, camera frame, controller log, telematics
- D-5 · The speed question — five speeds, one truck, honest answer

- D-6 · The EDR, explained — teaching exhibit on the sedan's recorder
- D-7 · The turn, animated — 3.8 s real-time sequence for opening and closing
- D-8 · What the bus hid — blind-zone sweep, second by second
- D-9 · Testimony overlay — deposition lines placed on the timeline

VISUAL SYSTEM

■ Truck orange ■ Sedan blue ■ Bus, not a party ■ Analysis

Barlow + Barlow Condensed + JetBrains Mono · one procedural 3D model, every camera surveyed · vehicles simplified to scale boxes so nothing reads as a photograph.

Independent speculative case study

This study was created independently to demonstrate litigation-graphics strategy for a motor-vehicle collision at trial. All parties, the intersection, the signal plan, the vehicle data, the camera frame and the testimony are fictional and reconcile by construction: one kinematic model generates every position, speed and time shown.

No client engagement, verdict or result is claimed or implied. The deliverable is the communication system itself.

Method: fictional record built first (survey, signal timing sheet and controller log, EDR trace, fleet telematics, camera frame); a physics model written to reconcile them; a procedural 3D scene rendered from surveyed camera positions; the system designed outward from the two exhibits the case would turn on — the sightline and the speed question.

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