



Race St Connector Bike Lane

Philly Bike Action, District 1 (September 2026)

Philly Bike Action is an all-volunteer 501(c)(4) non-profit whose mission is improving the bicycle infrastructure and experience of riding a bike in Philadelphia.

Problem statement

Philly's bike network has a major gap on Race St between 4th St and the Delaware River.

2-way demand: Bike users want to travel east along Race St to access Old City restaurants and shops (via 2nd St) and other neighborhoods (via the Delaware River Trail). They also want to travel west along Race St to access the westbound Market St bike lanes (via 2nd St).

Existing conditions: One-way, separated eastbound bike lane on Race St (8th–4th Sts). It fails to connect to the 2nd St bike lane and the Delaware River Trail. East of 2nd St, signage directs bikes over a high-speed I-95 on-ramp instead of continuing along the south side of the street.

Major VRU risk: On September 20, 2026, [Robert Craskey was struck by a car](#) while crossing the Race St I-95 on-ramp on his bike. Robert was sent to the ICU with a skull fracture and severe internal bleeding. The street design enabled the conflict; future crashes are preventable.

Recommendations for Race St

The City must install a **separated bike lane on Race St between 4th St and Columbus Blvd**. This would connect to bike lanes on 8th, 6th, 5th, and 2nd Sts, and the DRT.

4th–2nd

- Replace a travel lane with a one-way bike lane on the south side of the street.
- Relocate parking from the south to the north side of the street.

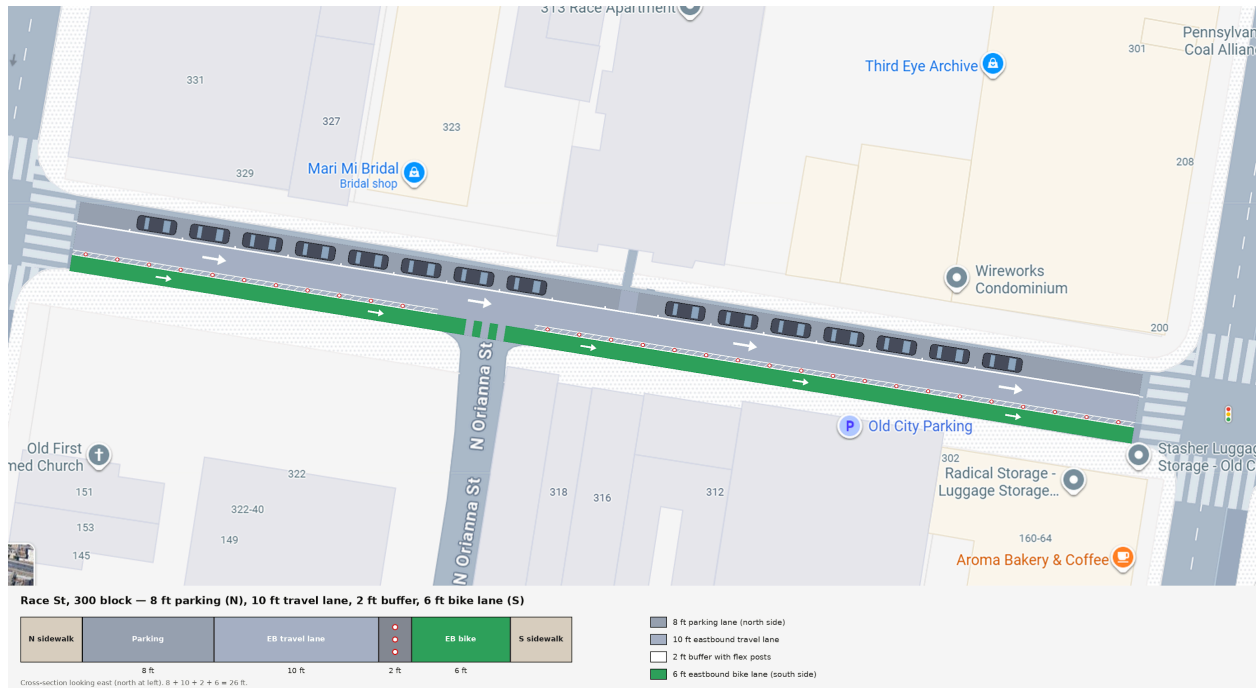
2nd–Columbus

- Add flex posts and green paint to the bike lane/shoulder on the south side of the street.
- Replace the southern travel lane with a one-way bike lane to create a 2-way bike path.
- Close the I-95 northbound on-ramp, which is duplicative of ramps on Columbus Blvd.



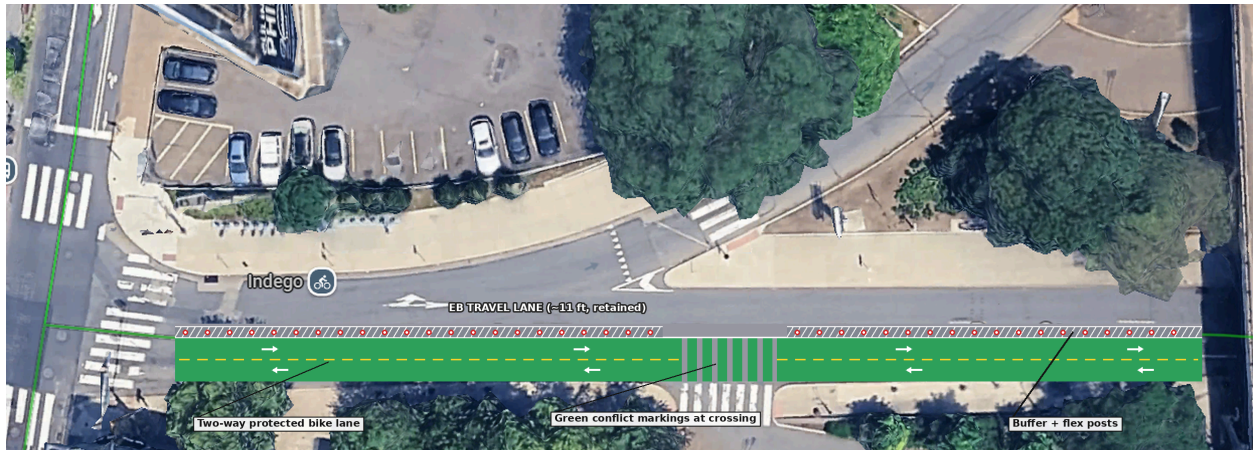
Proposed concept

4th–2nd





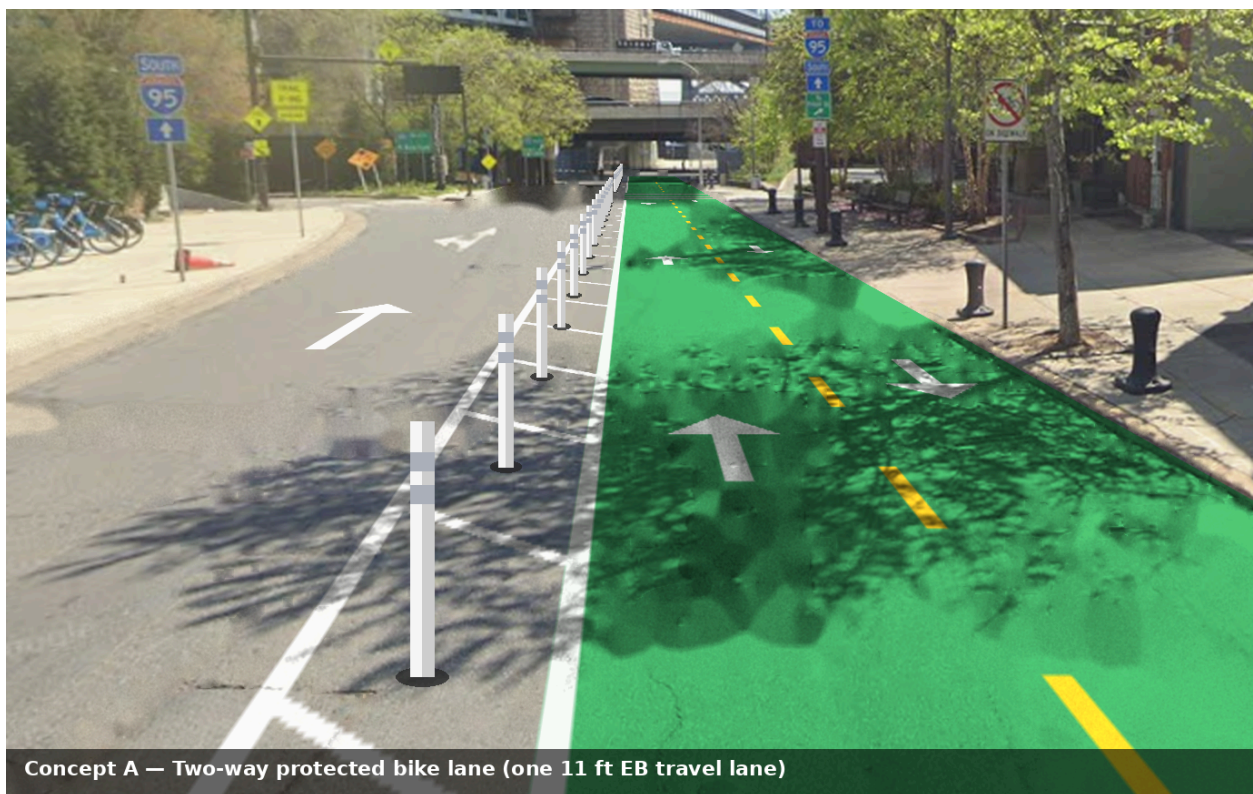
2nd-Columbus (Concept A)



Race St — Schematic Concept: Southern travel lane converted to two-way protected bike lane (26 ft curb-to-curb)

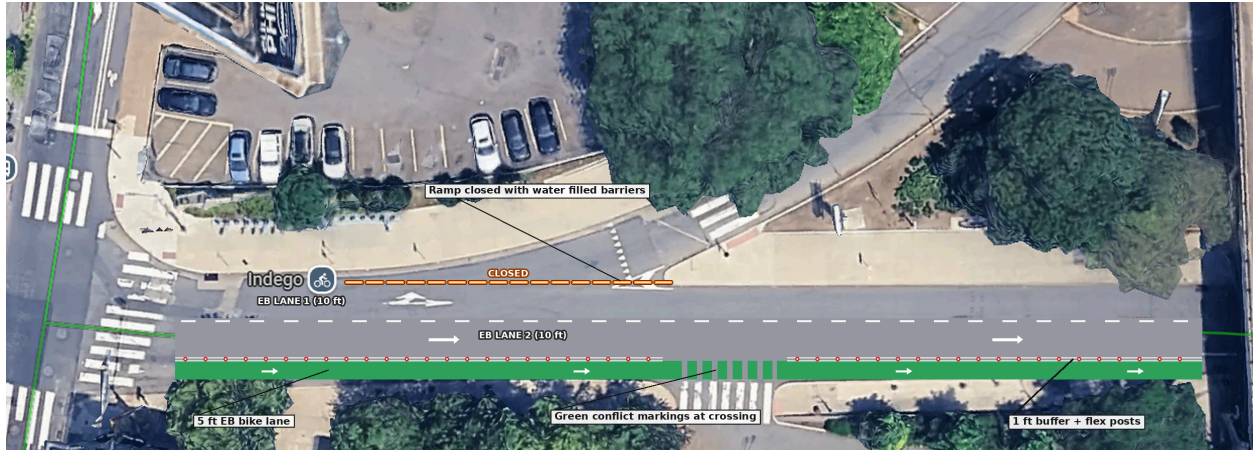


Cross-section looking east (north at left). 11 + 3 + 12 = 26 ft. Flex posts may be upgraded to precast curb or modular barrier.



Concept A — Two-way protected bike lane (one 11 ft EB travel lane)

2nd-Columbus (Concept B)



Race St — Concept B: Two 10 ft EB travel lanes + 5 ft EB protected bike lane; ramp closed



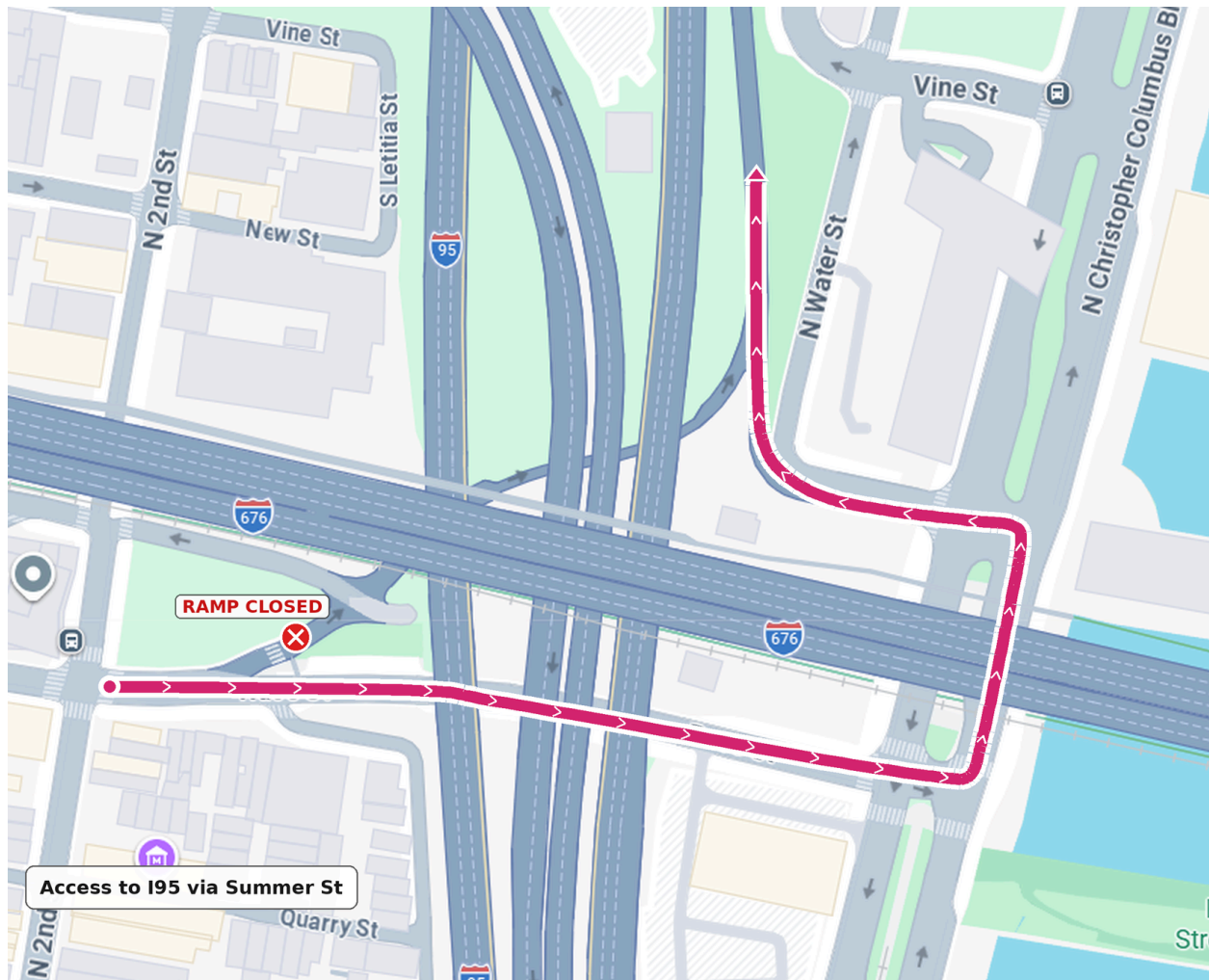
Cross-section looking east (north at left). 1 ft buffer is flex posts only.

- 5 ft eastbound bike lane
- Flex posts in 1 ft buffer
- Two 10 ft eastbound travel lanes
- Water-filled barriers



Motor vehicle access to I-95 in Concept B

Negligible addition to travel time.



The 100 block of Race St has more linear queue space than the 200 block. Directing 95-bound traffic to queue on the 100 block, not the 200 block, may reduce queueing pressure to the west.

Closure of the I-95 ramp would also reduce overall volumes on Race St. Motorists have only one way to access this particular I-95 ramp, but several ways to access northbound I-95 ramps via Columbus Blvd (such as Callowhill St), spreading traffic and easing localized congestion.



Traffic analysis

4th–2nd

PBA's proposal for Race St between 4th St and 2nd St requires a **travel lane reduction (road diet) from 2 travel lanes to 1 travel lane** to fit a bike lane. Public data indicates this is feasible.

June 2025 [PennDOT TIRe](#) data specifies Race St (6th–2nd) base AADT as 8384 and K-factor 8%, for a peak-hour volume of 671. A PennDOT [TMS Site 8165](#) count from June 2025 shows a peak volume of 822. [DVRPC](#) Vehicle Count #183836 (October–November 2025) shows a PM peak of 778. The mean of these peak estimates is **757 vehicles per hour**.

Race St has a 25-second green time at the 2nd St intersection, for a green-to-cycle-length ratio of 41.7%. The 2022 Highway Capacity Manual defines single-lane capacity at 1900 vehicles per hour at 100% green time. At 41.7% green, **a single lane on Race St could support 792 vehicles per hour**, above most peak counts. (Driver behavior may impact real efficiency.)

If necessary to support a lane reduction on Race St, the Streets Department could create additional capacity by modifying signal times at this intersection to match real traffic patterns. From DVRPC Vehicle count #183836 (Race, 2026) and Vehicle Count #162402 (2nd, 2022):

- **AM:** Race St peak is **549**, 2nd St peak is **669** (Race St is 45.1% of intersection volume)
- **PM:** Race St peak is **778**, 2nd St peak is **525** (Race St is 59.7% of intersection volume)

2nd St has a **morning peak**, while **Race St** has an **evening peak**.

The current 2nd & Race signal phase timing ratio is static, even though directional demand changes throughout the day. It is locally feasible to add **+5 seconds of green time to the Race St green phase during PM peak hours only**, proportional to observed AM/PM peak volumes.

During the PM peak, 30 seconds of green time on Race St would be a green-to-cycle length ratio of 50%. Including yellow time would be 58.3%. Assuming a 4-second time loss per cycle (motorist reaction delay from red to green, parallel parking, etc.), the PM peak green-to-cycle length ratio would be 29 seconds (48.3%), and including yellow 34 seconds (56.7%).

At 48.3% green time (including lost time), **a one-lane configuration on Race St could support up to 918 vehicles per hour**, well above the observed volumes of ~778–822. Therefore, replacing one travel lane with a separated bicycle lane is feasible.



2nd–Columbus

Race St between 2nd St and Columbus Blvd could easily support a travel lane reduction to fit a two-way protected bike lane.

This segment has a peak of only **434 vehicles per hour**, per DVRPC Vehicle Count #180040 (September 2025). PennDOT TIRe base AADT (2025 data) is 3473, with a K-factor of 11%, indicating a peak of only **382 vph**. Both values are far below the HCM's theoretical limit. Conservatively assuming a theoretical max of 1800 vph and a functional green time of 35%, a single lane on this segment of Race St could support **at least 630 vph**.

The Race St I-95 on-ramp is a safety hazard and unnecessary for traffic flow.

The I-95 on-ramp on the north side of Race St is duplicative of northbound on-ramps accessed from Columbus Blvd. The ramp induces unnecessary traffic on Race St. Highway access ought to be controlled through Columbus Blvd, an arterial road with enormous capacity and multiple nearby access points (Spring Garden St, Callowhill St, Dock St, Spruce St...). The current design channels excess highway-bound traffic onto Race St, creating unnecessary congestion in Old City and resulting in avoidable fatal and serious injury VRU crashes.

On the Race St ramp, DVRPC Vehicle Count #170812 (March 2024) shows a PM Peak of 218. DVRPC Vehicle Count #181547 (April 2026) shows a PM peak of 433. These volumes could feasibly be redistributed across the aforementioned connector streets to Columbus Blvd.

Conclusion

Philly Bike Action originally requested a lane reduction on Race St from 4th St to Columbus Blvd in April 2025. While the City has not yet performed the reduction, PBA is confident that it is necessary and feasible to create safer conditions for people biking and walking in Old City.

At the time of writing, Robert Craskey remains hospitalized. His crash was avoidable. Until real bike infrastructure is built on Race St, vulnerable road users remain at high risk of injury.

PBA requests that the City speedily install a bike lane on Race St between 4th St and Columbus Blvd as proposed, and work with PennDOT to close the I-95 on-ramp.

Philly Bike Action, District 1

Contact: info@bikeaction.org, district1@bikeaction.org

Website: bikeaction.org