

# Sharing Right Turn-Only Lanes with Bike Lanes

Right turn only lanes (RTOLs) and the challenge they present to bicycling on road shoulders



Bike Delaware Special Meeting, April 14<sup>th</sup>, 2011



## The problem.

Crossing solid white edge lines, cyclists proceed straight through right turn only lanes due to cut off shoulder.







## The problem (cont.)

A typical RTOL with pork chop in Delaware. It is very easy to be “right hooked” in these lanes, and throughout the country, drivers are seldom faulted even when there's a fatality.



# Solution in the State of Hawaii



Shared bike  
“Pocket Lanes”  
applied along  
minor arterials,  
and others  
containing  
RTOLs.





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Adopts the shared RTOL/Bike Lane concept, includes it in their state MUTCD.

**Shared Right Turn Only Lanes with Through Moving Bicyclists**

In locations where it is not possible to provide a separate through bicycle lane or at locations that have a low volume of right turning vehicle movements, a shared right turn only/bicycle through lane may be provided. For this treatment, a 3 foot pocket lane with dash lane markings is provided on the left side of the right turn only lane as shown in Figure 3.24. While a separate through bicycle lane (as described previously) is preferred, this design helps to reinforce proper bicyclist operating position when continuing straight through the intersection. It is preferable to provide a wide right turn lane to allow safe sharing of the lane.

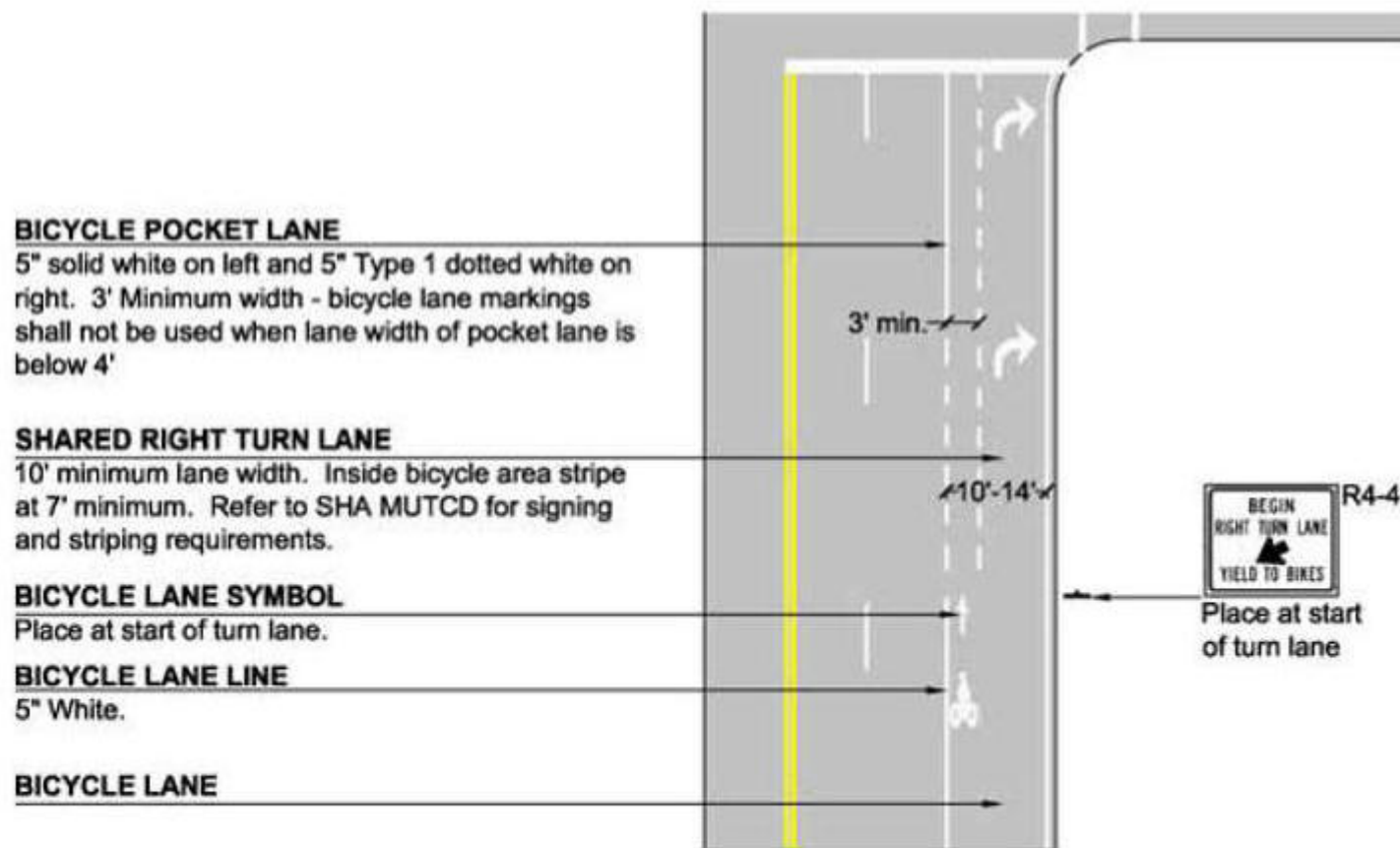


Figure 3.24 - Example of Shared Right Turn Lane with Bicycle Pocket Lane

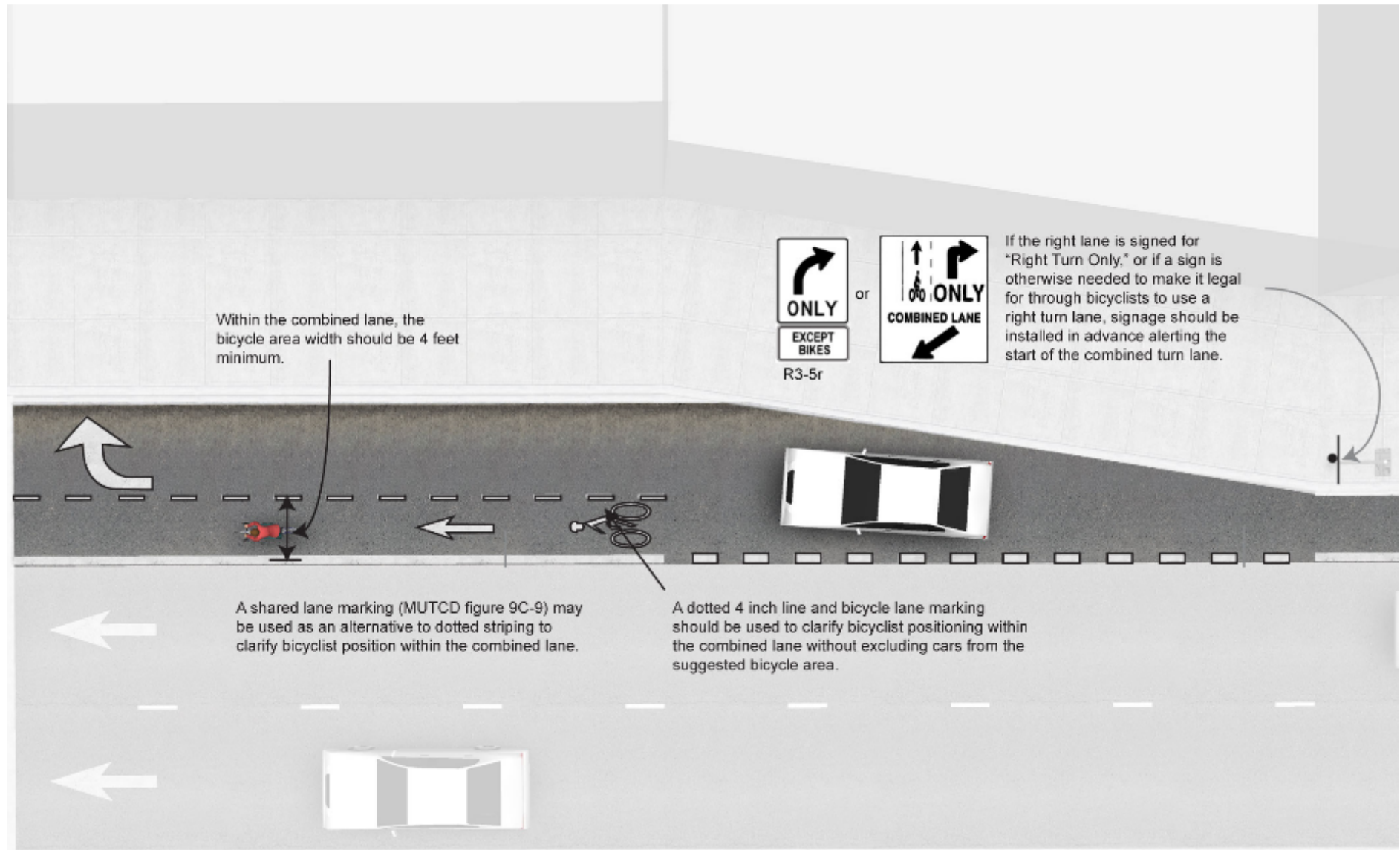


# Solution in the State of Maryland

Shared bike  
“Pocket Lanes”  
applied along minor  
arterials, and  
others containing  
RTOLs.









# Solution in the City of Eugene, Oregon

Shared bike  
“Pocket Lanes”  
applied along  
minor arterials,  
and others  
containing  
RTOLs.







Combined RTOL with bike lane on Otts Chapel Road (above)

\*Combined RTOL with bike lanes for the entire length of Old Baltimore Pike (right, and next page)

# Some unintentional\* examples found here in Delaware

\*addressed by DeIDOT as errors that will be corrected with next pave & rehab







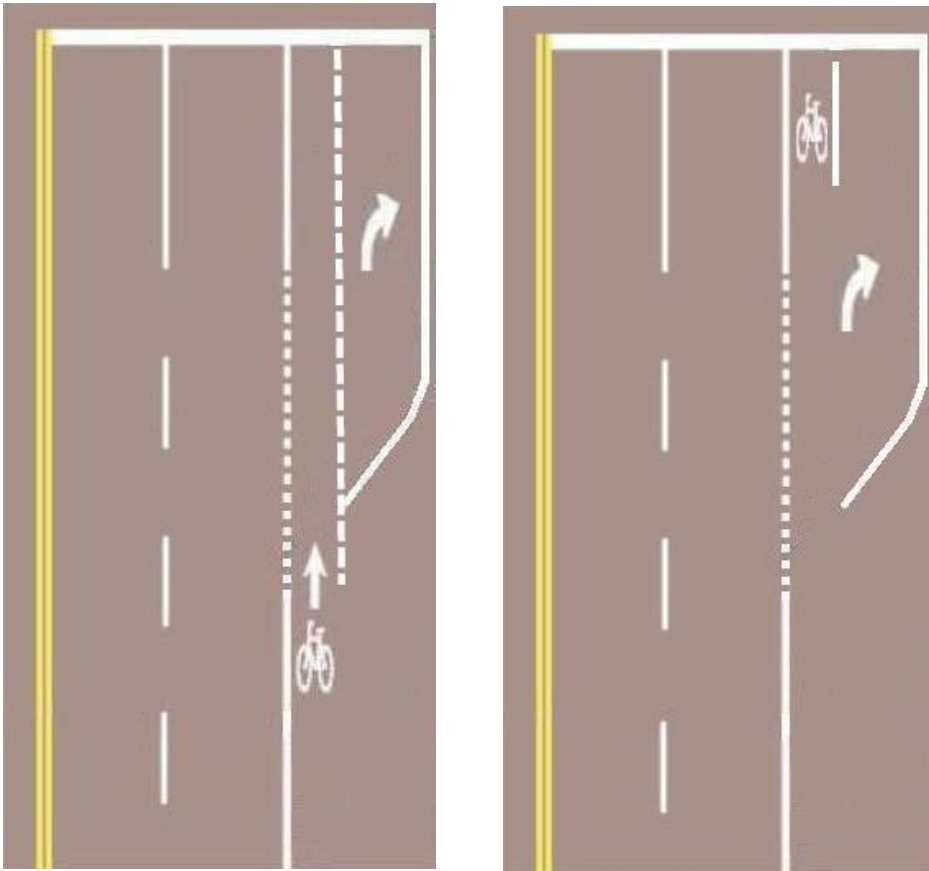
Old Baltimore Pike

Christiana Farms Pl

© 2010 Google

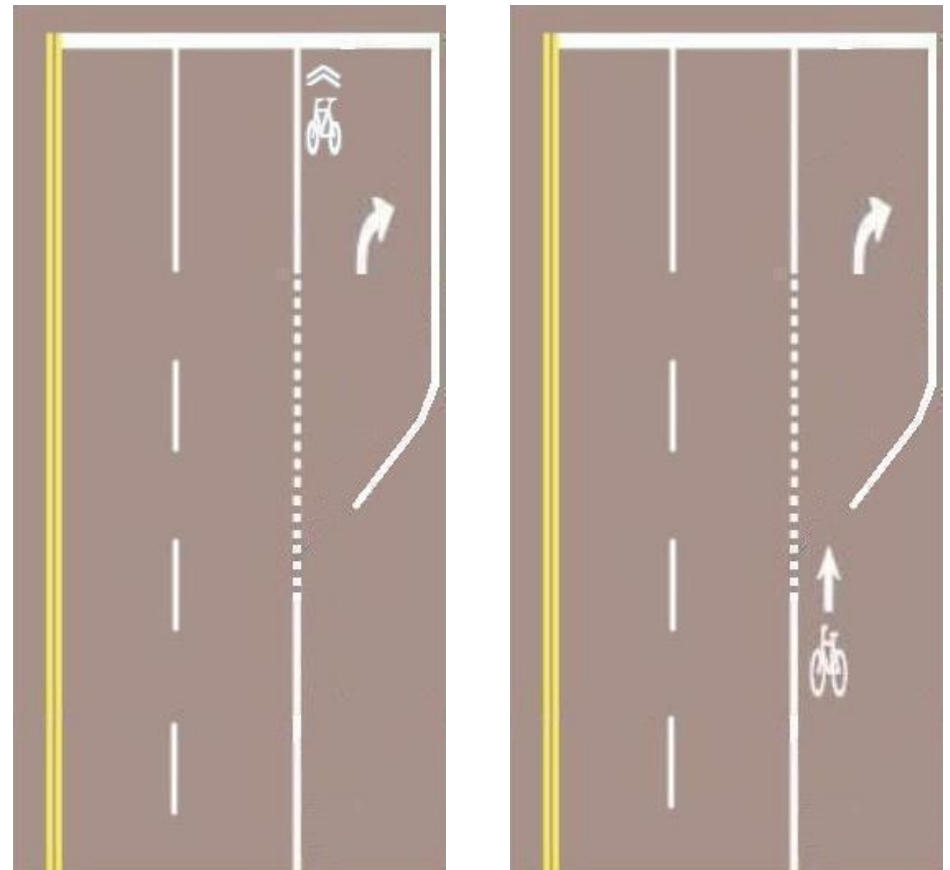


# Schematic ideas for shared RTOLs in Delaware?



Bike Pocket Lane with delineation (above, preferred)

Shared RTOL without delineation (right)



# **Bike Delaware Proposed SB to the Delaware Bicycle Council**

SENATE BILL NO. XXX

AN ACT TO AMEND TITLE 21 OF THE DELAWARE CODE RELATING TO OPERATION OF BICYCLES AND TO RIGHT-OF-WAY

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF DELAWARE:

**Section 1.** Amend Chapter 41, Title 21, Delaware Code by adding the following section:

**“Section 4137. Using right turn only lanes.**

**The driver of a vehicle entering a right turn only lane shall yield the right-of-way to any bicycle already traveling in the right turn only lane.”**

**Section 2.** Amend Section 4196(a), Chapter 41, Title 21, Delaware Code by adding the following:

**“(4) When bicycling straight in a right turn only lane, in which case the person shall ride as close as practicable to the left-hand edge of the right turn only lane.”**


## SYNOPSIS

This bill establishes that a bicyclist already riding in a right turn only lane has the right-of-way over vehicles entering the right turn only lane. It also creates an exception to the general rule that bicyclists riding upon a roadway at less than the normal speed of traffic shall ride as close as practicable to the right-hand edge of the roadway.



**Bike Delaware** thanks the following participants in crafting our position statement: *Anthony Aglio, Trevor Booz, John Boyle, Chris Junk, Frank Warnock, Ed Weirauch, Amy Wilburn, and James Wilson.*

**We appreciate** DeIDOT's commitment to facilitate alternate modes of transportation, in this case bicycling. They have held steadfastly to the state's Bicycle Policy, maintained right of way for bicycles in lane expansion projects, and altered guidelines to ensure channelizing islands no longer encroach on shoulders through intersections. For these we are very grateful. A missing piece of the puzzle, however, is defining this space. This includes shared bike and right turn-only lanes available to engineers and planners in the Delaware MUTCD. It is entirely possible to define safe entry and delineation where traditional bike lanes cannot be installed due to lane width restrictions. We also ask that it be included in DeIDOT's Road Design Manual, or ultimately, in a dedicated Delaware Bicycle Design Manual unique to our state.



# Bike Delaware [www.bikede.org](http://www.bikede.org)

A coalition of like minded citizens and organizations that promote bicycling as a healthy alternative to driving and advocate safe provisions within our transportation system.

## Bike Lanes at Intersections with Right Turn-Only Lanes

Position Statement January 2, 2011

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**Summary:**  
Throughout the state, DeIDOT has identified a system of bicycle routes, as illustrated in Figure 1 on the statewide bicycle map. Many of these consist of wide shoulders where riding is feasible even when the prevailing speed of adjacent motorized traffic is high. The challenge to bicyclists comes when these shoulders suddenly or gradually become right turn lanes for cars. When a "right turn only lane" (RTOL) is present, the shoulder ends and the bicyclist must merge with vehicular traffic, causing potential hazards and crash situations for the bicyclist(s), turning driver, and all adjacent traffic. On higher speed roads (45+ mph), it becomes dangerous for virtually every class of bicyclist.

Therefore, on all shouldered roads in Delaware (minus limited access) that are controlled and maintained by DeIDOT, Bike Delaware strongly advocates that bike lanes be installed to the left of right turn only lanes wherever they must occur.

Figure 2 shows a typical road in Delaware with a wide shoulder replaced by a right turn only lane. Figure 3 (next page) is a schematic drawing of the same situation. In the interest of safety, bicyclists must choose to continue using the right turn only lane instead of entering the through lanes to continue straight, or risk a serious altercation or crash by suddenly moving left and into conflict.

### Bicycling Routes

**Statewide Bicycle Route**  
These routes are north-south connections between New Castle, Kent and Sussex Counties.

[With Bikeway\\*](#)   [Without Bikeway](#)   


**Regional Bicycle Route**  
These routes provide direct connections between major municipalities and activity centers.

[With Bikeway\\*](#)   [Without Bikeway](#)

**Connector Bicycle Route**  
These routes provide connections from local activity and recreational centers to the larger bicycle network.

[With Bikeway\\*](#)   [Without Bikeway](#)

\* Bikeways include shoulders and wide outside lanes, which may or may not be marked and signed as bike routes. Be alert for occasional turn lanes in these areas.



**Figure 2**