

## **"Sharrows": Extending the reach of bicycle facilities**

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"Sharrows", short for shared-use arrows, or shared lane marking, are bike stencils, capped by a pair of chevrons and increasingly being stenciled on roadways where lane widths are not considered adequate for marked/striped bike lanes. ***"Sharrows" are not a substitute for bike lanes.***

The "sharrow" guides cyclists on the road to keep clear of parked cars or the curb edge and reminds drivers to expect cyclists in their travel lane. In instances where there is inadequate space to allow bikes and cars to share a lane side by side, the "sharrow" positioning should suggest to drivers to keep behind a cyclist, or wait until a safe opportunity or adjacent lane is available for passing.

The bike with chevron design is being embraced by both Canadian and American authorities responsible for respective Manuals on Uniform Traffic Control Devices (MUTCD) as an acceptable and effective new stencil option for use in the road environment.

### **Local Examples**

Victoria and Saanich have a couple of pilot "sharrows" in use already.

Victoria's "sharrows" are found on Finlayson St where a lane is too narrow for bike lanes a short distance upstream of the pilot location at Douglas St. The block, otherwise equipped with bike lanes, was narrowed by a recent re-development that widened sidewalks for several dozen metres. The Victoria project was endorsed by the city's Cycling Advisory Committee.

In Saanich there are "sharrows" on Glanford Ave. at the end of short sections of marked bike lanes where the road narrows and shoulder space turns to gravel. They have been placed to channel cyclists out into the travel lane. The bike lane sections were built into the road as part of an intersection reconstruction project. Bike lanes along the remainder of the corridor are desirable and will likely be introduced in phases.

Projects in development in View Royal and Esquimalt may also use "sharrows" in several locations.

## Research

Research for the purpose of developing recommendations for further pilot projects in Victoria has turned up the following:

A San Francisco study found the "sharrow" effective at encouraging cyclists to ride further away from parked cars and in channeling motorists to drive further away from cyclists in the traffic stream. San Francisco has more information and media analysis of the "sharrow" issue, including links to the study at: <http://www.sfmta.com/cms/bproj/22747.html>

North American applications of the "sharrow" follow its use in Paris, France, where the stencil is used extensively, notably also through intersections.

## Canadian Guidelines (TAC)

The Transportation Association of Canada is recommending adoption of the "sharrow" as an approved treatment for inclusion in their guidelines on Bicycle Pavement Markings. A report prepared by Boulevard Transportation of Victoria will likely be adopted in the fall of 2007. Note that the final language in the guidelines may differ somewhat from the draft.

## Other jurisdictions

Following the San Francisco study, several U.S. cities are experimenting with "sharrows" under the watch of the National Committee on Uniform Traffic Control Devices (NCUTD). They are:

- Flagstaff, Arizona
- Fort Collins, Colorado
- Louisville, Kentucky (see story and illustration at: <http://www.osaurus.us/~dm/photos/08-13-2007/dscf0007.jpg>)
- Ithaca, New York
- Portland, Oregon
- Pittsburgh, Pennsylvania
- Sheboygan, Wisconsin
- Sacramento

The California MUTCD has approved use of the "sharrow", but restricts their use to locations where there is also on street parking. The treatment is targeted at keep cyclists clear of opening vehicle doors on target corridors.

Inquiries through the Thunderhead Alliance list-serve (Thunderhead is the national coalition of state and local bike and walk advocacy organizations in the U.S.) found that "sharrows" (including early variations on the stencil design) are or have been in use in:

- San Francisco. Pioneered the use of "sharrows" in North America and site of a focused study on stencil design and behaviour impacts (see above). Examples included in illustration references.
- Chicago. Illustrations.
- Vancouver, BC. Illustrations.
- Santa Barbara, California (story and illustration at: <http://www.sbbike.org/QR/2007/0703/0703.html#111>)
- Arlington County, Virginia
- Athens, Georgia (illustrations to follow)
- Seattle (also include the "sharrow" in their 2007 Bicycle Master Plan, illustrations and story at: [http://seattlepi.nwsourc.com/local/327282\\_sharrows10.html](http://seattlepi.nwsourc.com/local/327282_sharrows10.html))

## Older designs

The "sharrow" was settled on after several other designs were introduced and tested in other locations. The "bike in house" marking, was first used in Denver, Colorado and has been used in

other locations, including Missoula, Montana. The San Francisco study confirmed that the bike with chevron that constitutes the "sharrow" was the most intuitive design.

### **Appropriate use**

While the NCTCD is currently looking at using the "sharrow" in locations with on-street parking, several examples have been found where the treatment is used on streets without parking and have been found to be effective. Richard Mouer, an engineer with the Arizona Department of Transportation, and a member of the NCUTCD suggested that the Saanich use I described to him during a conversation at the Madison Pro Walk – Pro Bike conference, that the design sounded like an appropriate use of the "sharrow".

### **Placement**

Draft TAC guidelines will provide extensive illustrations of generic road designs with "sharrow" placements included.

U.S. guidelines for placement are quoted from Chicago, where the Chicagoland Bicycle Federation and responsible city departments work in concert. Chicago's handbooks on bicycle lane design is the model for U.S. best practices.

### **Illustrations:**

Several photo illustrations of "sharrows" including local applications and from around North America have been posted to [www.flickr.com/photos/luton/](http://www.flickr.com/photos/luton/) Photos will be found in the "sharrows" gallery.

### **Concluding remarks:**

This report has been prepared for the purpose of informing discussions at the Victoria Cycling Advisory Committee. Recommendations on pilot corridors for introduction of "sharrow" treatments into the city's toolkit of cycling friendly infrastructure designs will be developed this fall.

"Sharrows" can be an effective design to guide traffic on narrow roads or travel lanes where space is not available for marked bike lanes of adequate width. The treatment helps cyclists position themselves safely on the roadway or within a travel lane and encourages overtaking motorists to pass with care.