



**METROPOLITAN
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COMMISSION**

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Memorandum

TO: Regional Bicycle Working Group

DATE: June 19, 2007

FR: Sean Co

W. I.

RE: Stop Sign and Traffic Signal Changes for Cyclists

Background

MTC is investigating legislation to allow cyclists to treat stop signs as yield signs and signalized intersections as stop signs. Idaho's motor vehicle code has allowed cyclists to slow down and yield to traffic in the intersection at stop signs since 1982. In 2005, the traffic code 49-720 was amended to allow a cyclist approaching a red traffic signal to stop and then proceed once clear, yielding to traffic in the intersection.

The state of Oregon in 2003-debated HB 2768 (Attachment 1) similar to Idaho's motor vehicle code, which passed in the House but did not make it out of the Senate Rule Committee. This bill had the support of several bicycle coalitions. Opposition came from local law enforcement and the Department of Transportation.

Benefits

Safety

The Idaho law offers safety benefits of bicyclists at stop signs and signals. A common collision know as the "right hook" occurs when a vehicle making a right hand turn hits a bicyclist who is waiting to make a right turn at an intersection. The law would allow the bike to proceed through and out of the area of conflict.

Since many bike and vehicle collisions occur at intersections, visibility of cyclists is a large issue. Cyclists rolling through stop signs or lights would be able to establish themselves in the intersection and would have better visibility in the intersection. To increase visibility for pedestrians in a crosswalk, a Lead Pedestrian Interval (LPI), which gives pedestrians a few second head start before cars are given a green, is an increasing popular practice in many jurisdictions.

Starting from a dead stop is more difficult for cyclist than for vehicles. This is discussed further below. In addition to being cumbersome, in some instances bicyclists can't clear an intersection when given a green. From a rolling stop, cyclists will have the momentum to clear an intersection before the light turns red.

MTC will analyze collision data for Idaho to compare the safety of cycling to California. We will review vehicle to bicycle crash data and compare that to Vehicle Miles Traveled (VMT) and estimated number of bicycle trips in each state.

Clarify definition of a complete stop

There is not a clear definition of a complete stop for a bicycle. Many cyclists are taught to put one foot down when coming to a complete stop at a controlled or uncontrolled intersection. Law enforcement agencies seem to agree with this definition of a full stop for a bicyclist. However, the California Vehicle Code is not very clear on the issue for cyclists. A stop for bicyclists and vehicles is defined as the “cessation of movement.”¹ For vehicles, this law is relatively straightforward; a car is stopped when there is no forward motion. For bikes, the law does not specify how long or the method of stopping. Many cyclists can balance for a second or two after stopping without any movement. In some circumstances this “stop” is adequate to follow right of way rules at intersections with stop signs and allows the cyclist to proceed through safely. Other, more experienced cyclists, can “track stand” which is balancing while at a complete stop with both feet on the pedals.

Police officers must make judgment calls to assess if a cyclist made a complete stop at a controlled intersection. Allowing cyclists to roll through takes the ambiguity of the law away and allows law enforcement to focus on more serious violations.

Bike detection at signalized intersections

Many intersections won't detect cyclists who approach on a side street and unless a car is present, the light won't change. Cyclists frustrated by this know that the light won't change and will proceed through the intersection. Officials in Idaho cited this circumstance as one reason for the 2005 motor vehicle code revisions. Idaho budget constraints made it unlikely to retrofit all signals in the state to detect bicycles.

In California SB 1581 was passed in January 2008, adding section 21450.5 to the C.V.C requiring new signals to detect bicycles and motorcycles². This new section does not currently require that existing signals to be retrofitted leaving many traffic signals in California unable to detect bicycles.

¹ 587. "Stop or stopping" when prohibited shall mean any cessation of movement of a vehicle, whether occupied or not, except when necessary to avoid conflict with other traffic or in compliance with the direction of a police officer or official traffic control device or signal.

Added Ch. 1917, Stats. 1961. Effective September 15, 1961.”

² 21450.5 Traffic-Actuated Signals: Detection of Motorcycles and Bicycles

(b) Upon the first placement of a traffic-actuated signal or replacement of the loop detector of a traffic-actuated signal, the traffic-actuated signal shall, to the extent feasible and in conformance with professional traffic engineering practice, be installed and maintained so as to detect lawful bicycle or motorcycle traffic on the roadway.

(c) Cities, counties, and cities and counties shall not be required to comply with the provisions contained in subdivision (b) until the Department of Transportation, in consultation with these entities, has established uniform standards, specifications, and guidelines for the detection of bicycles and motorcycles by traffic-actuated signals and related signal timing.

Added and repealed Sec. 2, Ch. 337, Stats. 2007. Effective January 1, 2008. Repeal operative January 1, 2018.

Encouragement

Cyclists' needs while riding are different than cars. Coming to a complete stop for cyclists is much more difficult than stopping for cars. Cyclists have to overcome the inertia of a complete stop rather than relying upon momentum from rolling through an intersection. Cyclists produce their own power so this difference is not only a greater physiological challenge but also reduces the average speed of a trip. For this reason many cyclists prefer routes with few stop lights or stop signs.

85th Percentile

In many jurisdictions, the speed limit is set to the majority of vehicles speed traveling on the roadway. The theory is that the traffic law should reflect what the majority of people are doing rather than criminalize "typical" behavior. An example was raising the 55 mph speed limit for freeways because so few drivers complied with the law.

Few bicyclists come to a complete stop as understood by law enforcement agencies (one foot on the ground). As discussed this below, this behavior stems from practical considerations rather than a blatant disregard for the law. The same argument for speed limit changes for cars could be made for cyclists.

This argument may have some negative consequences. Unlike car drivers, cyclists are often marginalized and seen as a small minority in transportation planning. Making stop sign and stop light rolling behavior legal might be seen as giving in to the bicycling scofflaws who have no regard for their own safety.

Issues to be Resolved

In the debates from the Oregon bill, several issues were raised about the implementation and practicality of the law. These issues were discussed by law enforcement and also by the Department of Transportation Bicycle and Pedestrian Safety coordinator.

Drivers' confusion over intent of cyclists

Opponents noted that the new law would confuse motorists to the intent of bicyclists at intersections. When cyclists have the option to roll through a stop sign or light, the motorist may not be clear if they should proceed through or yield to a cyclist. This unpredictable behavior could cause confusion and collisions at intersections.

This law would also be confusing to school age children who are being taught to ride their bike for the first time on city streets. Children may not be able to adequately judge if they should yield to a vehicle in an intersection. They would also have a more difficult time judging vehicle speed and when it is safe to proceed through a signalized intersection after coming to a stop (see Attachment 2).

Idaho teaches young or inexperienced bike riders to stop at all stop signs to ensure safety rather than emphasize the legal right to roll through a stop sign. This emphasis on stopping teaches riders to be aware of conflicts with motor vehicles thus training cyclists to be aware of the interaction between bike and cars.

Image of Cyclist Breaking Law

Perhaps one of the greatest concerns deals with car drivers' perception of cyclists breaking the law by rolling through stop signs or crossing an intersection on red. Many non-cyclist car drivers are not aware of the rights and responsibilities of cyclists on the roads. Cyclists are often honked at for legal maneuvers that the uninformed vehicle driver perceives are disobeying the law. An example is a car driver's agitation over what they believe are cyclists riding not far enough to the right and "blocking their path," where debris or other road conditions prevent a cyclist from riding in the shoulder. This perception could be exacerbated by drivers' who see cyclists "run" stop signs and traffic lights at intersections. It is clear that should such a law be passed, an education campaign targeted to both cyclists and car drivers needs to be included at the state, regional and local level.

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Attachment 1 Oregon HB 2768

72nd OREGON LEGISLATIVE ASSEMBLY--2003 Regular Session

NOTE: Matter within { + braces and plus signs + } in an amended section is new. Matter within { - braces and minus signs - } is existing law to be omitted. New sections are within { + braces and plus signs + } .

LC 1173

A-Engrossed

House Bill 2768

Ordered by the House April 28

Including House Amendments dated April 28

Sponsored by Representative PROZANSKI

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure.

Permits person operating bicycle to enter intersection with specified traffic control device without stopping providing person operating bicycle slows to safe speed and yields right of way to traffic or pedestrians. Permits person operating bicycle to turn without stopping at intersection with specified traffic control device providing person operating bicycle slows to safe speed and yields right of way to traffic or pedestrians.

Creates offense of improper entry into intersection where traffic is controlled by stop sign. Punishes by maximum fine of { - \$75 - } { + \$300 + }.

Creates offense of improper entry into intersection where traffic is controlled by flashing red signal. Punishes by maximum fine of { - \$75 - } { + \$300 + }.

A BILL FOR AN ACT

Relating to bicycles; creating new provisions; and amending ORS 811.260 and 811.265.

Be It Enacted by the People of the State of Oregon:

SECTION 1. { + Sections 2 and 3 of this 2003 Act are added to and made a part of ORS 814.410 to 814.480. + }

SECTION 2. { + (1) A person operating a bicycle who is approaching an intersection where traffic is controlled by a stop sign may, without violating ORS 811.265, do any of the following without stopping if the person slows the bicycle to a safe speed:

- (a) Proceed through the intersection.
- (b) Make a right or left turn into a two-way street.
- (c) Make a right or left turn into a one-way street in the direction of traffic upon the one-way street.

(2) A person commits the offense of improper entry into an intersection where traffic is controlled by a stop sign if the person does any of the following while proceeding as described in subsection (1) of this section:

(a) Fails to yield the right of way to traffic lawfully within the intersection or approaching so close as to constitute an immediate hazard;

- (b) Disobeys the directions of a police officer;
- (c) Fails to exercise care to avoid an accident; or

(d) Fails to yield the right of way to a pedestrian in an intersection or crosswalk under ORS 811.040.

(3) The offense described in this section, improper entry into an intersection where traffic is controlled by a stop sign, is a Class B traffic violation. + }

SECTION 3. { + (1) A person operating a bicycle who is approaching an intersection where traffic is controlled by a flashing red signal may, without violating ORS 811.265, do any of the following without stopping if the person slows the bicycle to a safe speed:

(a) Proceed through the intersection.

(b) Make a right or left turn into a two-way street.

(c) Make a right or left turn into a one-way street in the direction of traffic upon the one-way street.

(2) A person commits the offense of improper entry into an intersection where traffic is controlled by a flashing red signal if the person does any of the following while proceeding as described in subsection (1) of this section:

(a) Fails to yield the right of way to traffic lawfully within the intersection or approaching so close as to constitute an immediate hazard;

(b) Disobeys the directions of a police officer;

(c) Fails to exercise care to avoid an accident; or

(d) Fails to yield the right of way to a pedestrian in an intersection or crosswalk under ORS 811.040.

(3) The offense described in this section, improper entry into an intersection where traffic is controlled by a flashing red signal, is a Class B traffic violation. + }

SECTION 4. ORS 811.260 is amended to read:

811.260. This section establishes appropriate driver responses to specific traffic control devices for purposes of ORS 811.265. Authority to place traffic control devices is established under ORS 810.210. Except when acting under the direction of a police officer that contradicts this section, a driver is in violation of ORS 811.265 if the driver makes a response to traffic control devices that is not permitted under the following:

(1) Green signal. A driver facing a green light may proceed straight through or turn right or left unless a sign at that place prohibits either turn. A driver shall yield the right of way to other vehicles within the intersection at the time the green light is shown.

(2) Green arrow. A driver facing a green arrow signal light, shown alone or in combination with another signal, may cautiously enter the intersection only to make the movement indicated by such arrow or such other movement as is permitted by other signals shown at the same time.

(3) Steady circular yellow signal. A driver facing a steady circular yellow signal light is thereby warned that the related right of way is being terminated and that a red or flashing red light will be shown immediately. A driver facing the light shall stop at a clearly marked stop line, but if none, shall stop before entering the crosswalk on the near side of the intersection, or if none, then before entering the intersection. If a driver cannot stop in safety, the driver may drive cautiously through the intersection.

(4) Steady yellow arrow signal. A driver facing a steady yellow arrow signal, alone or in combination with other signal indications, is thereby warned that the related right of way is being terminated. Unless entering the intersection to make a movement permitted by another signal, a driver facing a steady yellow arrow signal shall stop at a clearly marked stop line, but if none, shall stop before entering the crosswalk on the near side of the intersection, or if none, then before entering the intersection. If a driver cannot stop in safety, the driver may drive cautiously through the intersection.

(5) Steady circular red signal. A driver facing a steady circular red signal light alone shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection, or if none, then before entering the intersection. The driver shall remain standing until a green light is shown except when the driver is permitted to make a turn under ORS 811.360.

(6) Steady red arrow signal. A driver facing a steady red arrow signal, alone or in combination with other signal indications, shall not enter the intersection to make the movement indicated by the red arrow signal. Unless entering the intersection to make some other movement which is permitted by another signal, a driver facing a steady red arrow signal shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection, or if none, then before entering the intersection. The vehicle shall remain standing until a green light is shown except when the driver is permitted to make a turn under ORS 811.360.

(7) Traffic control devices at places other than intersections. If a traffic control device that is a signal is erected and maintained at a place other than an intersection, the provisions of this section relating to signals shall be applicable. A required stop shall be made at a sign or marking on the roadway indicating where the stop shall be made, but in the absence of such sign or marking the stop shall be made at the signal.

(8) Flashing red signal. When a driver approaches a flashing red light used in a traffic control device or with a traffic sign, the driver shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection, or if none, then at the point nearest the intersecting roadway where the driver has a view of approaching traffic on the intersecting roadway before entering it. The right to proceed shall be subject to the rules applicable after making a stop at a stop sign. This subsection does not apply { + to:

(a) Drivers + } at railroad grade crossings. Conduct of a driver approaching a railroad grade crossing is governed by ORS 811.455.

{ + (b) A person operating a bicycle. + }

(9) Flashing yellow signal. When a driver approaches a flashing yellow light used as a signal in a traffic control device or with a traffic sign, the driver may proceed through the intersection or past the signal only with caution. This subsection does not apply at railroad grade crossings. Conduct of a driver approaching a railroad grade crossing is governed by ORS 811.455.

(10) Lane direction control signals. When lane direction control signals are placed over the individual lanes of a highway, a person may drive a vehicle in any lane over which a green signal light is shown, but shall not enter or travel in any lane over which a red signal light is shown.

(11) Stop signs. A driver approaching a stop sign shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection or, if none, then at the point nearest the intersecting roadway where the driver has a view of approaching traffic on the intersecting roadway before entering it. After stopping, the driver shall yield the right of way to any vehicle in the intersection or approaching so { - closely - } { + close + } as to constitute an immediate hazard during the time when the driver is moving across or within the intersection. { + This subsection does not apply to a person operating a bicycle. + }

(12) Yield signs. A driver approaching a yield sign shall slow the driver's vehicle to a speed reasonable for the existing conditions and if necessary for safety, shall stop at a line as required for stop signs under this section, and shall yield the

right of way to any vehicles in the intersection or approaching so closely as to constitute an immediate hazard.

SECTION 5. ORS 811.265 is amended to read:

811.265. (1) A person commits the offense of driver failure to obey traffic control device if the person drives a vehicle and the person does any of the following:

(a) Fails to obey the directions of any traffic control device.

(b) Fails to obey any specific traffic control device described in ORS 811.260 in the manner required by that section.

(2) A person is not subject to this section if the person is doing any of the following:

(a) Following the directions of a police officer.

(b) Driving an emergency vehicle or ambulance in accordance with the privileges granted those vehicles under ORS 820.300.

(c) Properly executing a turn on a red light as authorized under ORS 811.360.

(d) Driving in a funeral procession led by a funeral lead vehicle or under the direction of the driver of a funeral escort vehicle.

{ + (e) Properly entering an intersection or executing a turn at a stop sign as authorized under section 2 of this 2003 Act.

(f) Properly entering an intersection or executing a turn at a flashing red signal as authorized under section 3 of this 2003 Act. + }

(3) The offense described in this section, driver failure to obey a traffic control device, is a Class B traffic violation.

(name)

Attachment 2
TITLE 49
MOTOR VEHICLES
CHAPTER 7

PEDESTRIANS AND BICYCLES

49-720. STOPPING -- TURN AND STOP SIGNALS.

(1) A person operating a bicycle or human-powered vehicle approaching a stop sign shall slow down and, if required for safety, stop before entering the intersection. After slowing to a reasonable speed or stopping, the person shall yield the right-of-way to any vehicle in the intersection or approaching on another highway so closely as to constitute an immediate hazard during the time the person is moving across or within the intersection or junction of highways, except that a person after slowing to a reasonable speed and yielding the right-of-way if required, may cautiously make a turn or proceed through the intersection without stopping.

(2) A person operating a bicycle or human-powered vehicle approaching a steady red traffic control light shall stop before entering the intersection and shall yield to all other traffic. Once the person has yielded, he may proceed through the steady red light with caution. Provided however, that a person after slowing to a reasonable speed and yielding the right-of-way if required, may cautiously make a right-hand turn. A left-hand turn onto a one-way highway may be made on a red light after stopping and yielding to other traffic.

Senates Bill 1245 renumbered Idaho Code 49-720 as such in 1988, but no real substantive changes were made. Before 1988, it existed as Idaho Code 49-746, which was added to the Idaho Code in 1982 by House Bill 541aa, along with many other traffic law revisions. The red-light law change was effective July 1, 2005.

In retrospect the stop-sign law is not a bad law. It certainly makes riding a bike more enjoyable. Overcoming inertia takes a lot of energy from a cyclist. However, there are two issues that need to be addressed. One is how the motor vehicle driver perceives the cyclist who in his uneducated view is breaking the law when the cyclist rolls through a stop sign or makes a rolling right on red, and two, the safety issue for younger cyclists who view this behavior of more experienced cyclists.

In addressing the motor vehicle operator reaction one can easily observe that the vast majority of motor vehicle operators do not come to a complete stop at stop signs or when turning right on red unless traffic conditions dictate that they do—regardless of what the "law" states. The bicyclist rolls through a little faster however, when conditions and sight distance permit, and some people may view this as a blatant disregard for safety. I can assure you that cyclists understand very well the repercussions of motor-vehicle/bicycle collisions and are not "blatantly" inviting disaster by disregarding common-sense safety checks at these well-marked intersections.

Young or inexperienced bicycle riders often ride on sidewalks and obey pedestrian crossing rules. Safety educators in Idaho teach all riders to STOP at stop signs to maximize SAFETY. The "law" isn't emphasized in any safety presentations. If you teach children safety based on obedience to the law eventually the decision will be "do I want to obey the law?" and if the answer is no then the resulting disobedience may put that person or others at risk. Emphasizing safety instills a "cause and effect" perspective that is harder to ignore.

The red-light stop-and-go law has not been in effect long enough to give intelligent comment on other than for many cyclists nothing has changed. Right or wrong, this was the way they rode. Many traffic sensitive devices at lights do not pick up cyclists. The cost for installing special devices in a time of shrinking transportation dollars is a constant struggle. I guess this state has found a way to bypass that and time will tell if the decision was the right one.

In closing, I believe there is no substitute for a well-organized and ongoing bicycle and pedestrian safety-education campaign at the local level. The development of safe facilities is just as important. The organization, development, and implementation, whether education or facility

related, must be a collaborative effort of law enforcement, educators, citizens, and local government officials who are concerned about the issues of bicycle and pedestrian safety.

I would be glad to continue this discussion or answer any other questions you may have.

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