

Lighting and Marking Requirements for Implements of Husbandry

Lighting and marking of implements of husbandry (IoH) are valuable safety features when operating on public roads. New regulations will take effect November 1, 2015 but may be followed at the present time. Many pieces of farm machinery have already been manufactured with the lighting and marking requirements that are now reflected in Wisconsin law.

What are Hours of Darkness?

Hours of Darkness is the period of time from one-half hour after sunset to one-half hour before sunrise and all other times when there is not sufficient natural light to render clearly visible to any person or vehicle upon a highway at a distance of 500 feet. Wisconsin law does not define hours of daylight.

Current lighting and marking requirements are during hours of darkness.

New wide IoH requirements for lighting require lights to be activated at all times vehicle(s) are operated on the highway.

SMV emblems are required at all times.

SMV Emblem Requirement

A slow-moving vehicle (SMV) emblem is a required marking on any type of IoH, including animal drawn, that *usually* travels at speeds less than 25 mph. It is to be **displayed at all times** on the most visible rear area of the vehicle or combination of vehicles. If a SMV emblem on a power unit is visible from rear and in compliance, then the towed units are not required to have an SMV emblem. It is allowable for two or three vehicle combinations to have more than one SMV emblem.

Retroreflective materials have glass beads or prismatic reflectors manufactured in the material. When a vehicle's headlights shine onto this material, the light is reflected.

This provides an increased visibility as the marking material appears brighter. The outer red part of this SMV emblem is retroreflective while the inner orange part is a non-reflective material.



Current Lighting and Marking Requirements for all IoH

Lights or lamps in the table below must be activated when operating on the road or parked in the right-of-way during **hours of darkness**.

Self-propelled IoH and farm tractors	• 2 white headlights • At least 1 red tail lights. If purchased with 2 red tail lights, both must be working. Tail lights are to be mounted 20-72 inches off the ground. • Work lights are prohibited for use on road or when parked in right-of-way.
Towed IoH	• 2 red tail lights or 2 red reflectors on the rear. (If manufactured before 1984, these IoHs are allowed to have only 1 red tail light or 2 red reflectors on the rear.) • Towed IoH that is more than 4 feet wide to the left side of the hitch must have an amber reflector, at the widest point on the left side, facing forward to warn on-coming traffic.
3-vehicle trains	• 1 red light or 1 red or amber reflector must be located on each side of every vehicle in the train. Light or reflector must be visible from a minimal distance of 500 feet.
Animal-drawn vehicle	• 1 white lamp visible from the front • 2 red lamps or lanterns visible from the rear marking the width of the vehicle visible for 500 feet and mounted to indicate extreme width of the vehicle.

New *Wide IoH* Lighting and Marking Requirements (Effective November, 2015)

What is a wide IoH?

Any **IoH exceeding 15 feet in total width or that extends over the center** of the roadway into a lane intended for the opposite direction of travel. Width is determined by the widest measurement of the equipment in a highway transport configuration.

A town road may have a roadway of 18 feet. This means at 9 feet an IoH vehicle or vehicle combination meets the definition of a wide IoH. Standard lane width for a county or state roadway with a marked center-line is 11 feet. It is important to know your route and roadway factors that may require additional considerations for wide IoH.

In addition to the current requirements for lighting and marking, the following requirements apply at all times when wide IoH vehicle or vehicle combination is operated or parked on a highway:

Self-propelled IoH including farm tractors in excess of 12 feet:

Must be equipped with a 360-degree yellow or amber rotating strobe or beacon light, mounted at the highest practicable point **or** 2 flashing amber lights visible to the front and rear.

Note: Any attachment to a self-propelled IoH or farm tractor is included in the vehicle's width.

Wide IoH must have:

- At least 2 amber flashing warning lamps, visible from both the front and rear. Must be mounted, as nearly as practicable, to indicate the extreme width but not more than **16 inches** from the lateral extremities.
- Red retroreflective material, visible to the rear and mounted within **25 inches** of the extreme left and extreme right of the IoH, spaced as evenly as practicable.
- At least 2 strips of yellow retroreflective material visible to the front. On left and right sides of IoH, the outer edge of this material shall be mounted within **16 inches** of the extreme left and extreme right of the IoH.
- At least 2 red tail lamps mounted to the rear of the IoH, or as close to the rear as practicable. These lamps are not required to be wired to light when headlamps or other lamps are activated. This provides for the use of battery powered tail lamps.
- A slow-moving vehicle (SMV) emblem.

IoH wider than 22 feet, must have all wide IoH lighting and marking. In addition, when traveling greater than 0.5 miles, an escort vehicle with hazard lights activated, is required. On a highway with:

- one lane of travel in each direction, the escort vehicle shall operate ahead of the wide IoH.
- more than one lane for travel in each direction or on a 3-lane highway, escort vehicle shall operate behind wide IoH.

Wide IoH Lighting and Marking Exemption

At times other than hours of darkness, a **wide IoH** may be operated on highway without additional lighting and marking requirements if *all of the following apply*:

- is accompanied by an escort vehicle same as for IoH wider than 22 feet.
- has 2 orange or red flags, not less than 12 inches square, attached to the rear of the wide IoH, or as close to the rear as practicable to mark extreme left and extreme right of IoH.

Agricultural IoH Train (3 IoH vehicle combination), require one of the following on each side of each vehicle in the train:

- One red or amber light
- One red or amber reflector

The use of a red or orange flag has been rescinded.

If the power unit for an agricultural train is a farm truck, motor truck or agricultural commercial motor vehicle; the power unit is required to meet lighting and marking requirements as a motor vehicle. The towed IoH in the agricultural train would need to meet the above marking requirements plus an SMV emblem on rear most visible vehicle.



Trailer IoH

There are two different conditions to consider for trailering IoH.

- 2015 Wisconsin Act 15, passed in April 2015, included provisions for transporting IoH on trailer or semi-trailer from farm to field, field to field or farm to farm. An IoH of any width can be transported during hours other than hours of darkness. During hours of darkness, the maximum width for any IoH being transported by trailer is 8 feet 6 inches.
- 2014 Wisconsin Act 377, provided provisions in 348.05(2)(g) Wis. Stats for IoH being operated or **transported** by an implement dealer or farmer for purposes of delivery, repair, or servicing of the IoH. An IoH of any width may be operated or **transported** within a 75- mile radius of either the farmer's owned or leased land to an implement dealer or the business location of the implement dealer to a farmer's owned or leased land but the following lighting and marking requirements must be applied. There are no hour of operation restrictions for this provision.

IoH being trailered for either of these conditions must comply with these wide IoH lighting and marking requirements:

- Yellow and red retroreflective tape
- 2 flashing amber warning lights, visible to the front and rear, activated
- SMV emblem

In addition, for self-propelled IoH and farm tractors exceeding 12 feet in width, a yellow or amber rotating strobe or beacon light or 2 flashing amber warning lights visible to front and rear must be activated.

During transport IoH headlights should not be activated.

This information was prepared by the Education and Outreach Committee of the IoH Study Group, representing Wisconsin Department of Transportation, Wisconsin Department of Agricultural Trade and Consumer Protection, University of Wisconsin Extension/Madison, Wisconsin Farm Bureau Federation, Wisconsin Towns Association, Professional Nutrient Applicators Association of Wisconsin, Wisconsin Custom Operators and Wisconsin Independent Business Agri-Business Coalition.

For legal reference, see Wisconsin State Statutes available at <http://legis.wisconsin.gov/rsb/stats.html>

For a electronic version of this publication, please see <http://fyi.uwex.edu/ioh>

November, 2015.



Rules of the Road

Changes to the law provided clarity in regards to wide IoH. Wide IoH with required lighting and marking requirements may:

- Extend over the center of road into the lane intended for travel in opposite direction.
- Extend into passing lane on a 3-lane highway.
- Extend into another lane intended for travel in the same direction, if it does not impede other vehicles from the rear.

However, operators :

- Must yield the right-of-way to an oncoming vehicle and yield half the roadway.
- May not drive on the left side of the roadway on a grade or curve or area designated as no passing zone if it creates a hazard to oncoming traffic.
- May not drive so slowly as to impede the normal movement of traffic.
- Must, if practicable, yield the roadway to an overtaking vehicle.

The ability for motorist to pass an IoH or Ag CMV in a no-passing zone was repealed by Act 377 in 2014.

Operator Considerations

While these items were not impacted by WI Act 377, it is important to know that:

- A valid driver's Wisconsin Class D license **is not** required when operating IoH on a highway between fields or between a farm and a field. Operating IoH in special events or in place of a motor vehicle does not meet the IoH definition of used exclusively in agriculture and a valid Wisconsin Class D driver's license is required.
- Youth may operate IoH on public roads after completing a Wisconsin Safe Tractor and Machinery Certification program. Youth working for their parents or guardians must be 12 years of age to enroll in these programs. Youth employed under Hazardous Occupation Order for Agriculture must be at least 14 years of age to receive certification. This certification does not allow the youth to drive motor vehicles for farm work on highways.
- Operators are responsible to understand and follow rules of the road the same as motor vehicle operators. This includes the responsibility to warn or signal motorists of their intent to turn at all times. Turn signal lights are acceptable but not required. Hand signals are also acceptable.
- While seatbelts are not required for self-propelled IoH or farm tractors, when operating these vehicles with roll-over protective structures (ROPs), operators should wear their seatbelt when operating on or off the highway.
- It is the responsibility of the owner/lessee of the equipment to be sure equipment meets safety requirements and has proper permits as required.
- The *Wisconsin Motorist Handbook* is available at <http://www.dot.state.wi.us/drivers/drivers/apply/handbook.htm>

For further information regarding , Implements of Husbandry operating on Wisconsin Highways, see

www.AgVehicles.DOT.wi.gov.