



MDOT SIGN HANDBOOK FOR ORV CONNECTOR ROUTES ON STATE TRUNKLINE HIGHWAYS



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INTRODUCTION

This handbook applies only to ORV Connector Route segments within the State Trunkline Highway right-of-way, that are specifically authorized by the Michigan Department of Transportation (MDOT) in accordance with The Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

This document was derived from the MICHIGAN MOTORIZED TRAIL SIGNING HANDBOOK published by the Michigan Department of Natural Resources (MDNR) and was modified and amended to establish guidance for signing ORV Connector route segments within the State Trunkline Highway.

The purpose of posting ORV route signs and highway advisory signs is to identify the limits of an authorized connector route, control and regulate the flow of ORV traffic, inform ORV users of route characteristics, and inform highway traffic of potential ORV presence.

The guidance provided in this handbook is intended to assist Local Units of Government, ORV Clubs, MDNR and MDOT staff in developing ORV facilities using uniform and consistent signing practices in the interest of traffic safety and for the convenience and benefit of the public.

DEFINITIONS

1. **“ORV route sign”** means a sign or marker that is intended to be read by ORV traffic to provide the ORV operator with information such as route location, regulations, and safety advisories for upcoming conditions.
2. **“Highway Sign”** means a sign that is intended to read by read by normal highway vehicular traffic to advise motorists of the potential for ORV traffic ahead.

GENERAL GUIDELINES

- All Highway and ORV route Regulatory and Warning signs shall conform to the guidelines and principles of the current editions of the Federal Manual on Uniform Traffic Control Devices (MUTCD) and the Michigan Manual on Uniform Traffic Control Devices (MMUTCD).
- All signs must be reflective and must be replaced as needed to maintain sign retroreflectivity at or above the minimum levels per (MMUTCD)
- ORV route signs may be placed on wooden posts no larger than 4 x 4 inches, flexible composite type posts or "yielding" type metal posts as defined in the MMUTCD. Posts shall be appropriate for sign holding purposes.
- All proposed signs must be approved by MDOT including the sign legend, sign location, sign materials, and post type.
- All ORV route signs shall be placed on the right side of the route. Exceptions to this guideline may be approved by MDOT as warranted to fit conditions.
- The minimum ORV route sign height is 5 feet above the tread measured to the bottom of the sign (exception ORV reassurance markers).
- ORV route signs and posts should be placed no more than 3 to 6 feet from the right side of the route.
- If two ORV route signs are placed on one post, the sign with the message of highest importance shall be placed on top. For example, a STOP sign shall always be placed above any other sign.
- No signs shall be placed on utility poles.
- ORV route signs shall not be placed on the posts of MDOT highway signs.

MEANING OF STANDARD, GUIDANCE, OPTION, AND SUPPORT

In this handbook sections dealing with design and application of traffic control devices the words “Standard,” “Guidance,” “Option,” and “Support” are used to describe specific conditions concerning the use of signs. To clarify the meanings intended in these guidelines the following definitions are given and are based on the MUTCD.

Excerpt:

1. **Standard** - a statement of required, mandatory or specifically prohibitive practice regarding a traffic control device. All standards are labeled and the text appears in bold type. The verb “shall” is typically used. Standards are sometimes modified by Options.
2. **Guidance** - a statement of recommended but not mandatory practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements are labeled and the text appears in unbold type. The verb “should” is typically used. Guidance statements are sometimes modified by Options.
3. **Option** - a statement of practice that is a permissive condition and carries no requirement or recommendation. Options may contain allowable modifications to a Standard or Guidance. All Option statements are labeled and the text appears in unbold type. The verb “may” is typically used.
4. **Support** - an informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition or enforceable condition. Support statements are labeled and the text appears in unbold type. The verbs “shall,” “should,” and “may” are not used in Support statements.

Standard:

This Handbook describes the application of traffic control devices, but shall not be a legal requirement of their installation.

HIGHWAY SIGNS

VEHICULAR TRAFFIC WARNING SIGNS



36" x 36" VEHICULAR TRAFFIC WARNING SIGN WITH FEDERAL ORV SYMBOL (W11-23)

Vehicular Traffic Warning Signs shall be used to inform normal highway vehicles (motorists) of the potential for ORV traffic ahead.

Standard:

1. **One sign shall be installed at each end of the connector route segment in advance of the location where the incoming route enters MDOT right-of-way. MDOT may require additional signs if there are other locations of concern such as trail crossings that have limited sight distance**
2. **This sign shall be installed with a bottom height of 7 feet above the road surface.**
3. **Sign locations (length in advance and lateral offset) shall be determined by an MDOT Traffic and Safety Engineer for each sign location based on site specific conditions such as speed limit, sight distance, existing signs, etc.**
4. **Signs must be installed in accordance with the MMUTCD by a contractor or governmental agency approved by MDOT.**

AUTHORIZED ORV ROUTE SIGNS

OFF-ROAD VEHICLE (ORV) ROUTE REASSURANCE MARKERS

Support:

Reassurance markers are essential to identify authorized motorized trail facilities.



← 3" x 3" ORV Reassurance Marker
(The black federal recreational symbol as shown is the universal symbol for all ORV types)



← 3" x 3" Route Marker (Optional)
The MDNR logo is to be used only on MDNR designated trails. For trails not designated by MDNR a logo representing the trail owner may be used with the reassurance maker otherwise post the 3" x 3" ORV Reassurance Marker only. No web addresses or phone numbers will be permitted on the route marker.

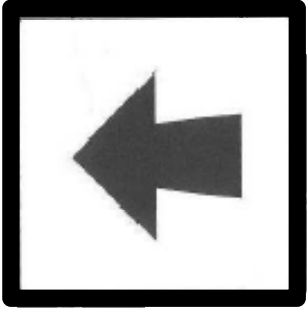
Standard:

1. **ORV route reassurance markers shall be 3" x 3", black federal recreational symbol on reflective yellow background.**
2. **For Combined ORV and Snowmobile Trails that are located outside of the highway shoulder; ORV route reassurance markers shall be placed on the same sign post as snowmobile trail reassurance markers on state trails designated for both motorized trail uses. When possible the snowmobile trail reassurance marker shall be placed above the ORV route reassurance marker for shared trails. (Combined use trail signing shall be approved by MDNR and MDOT)**

Guidance:

1. ORV reassurance markers should be placed at intervals of 1/4 mile along the route. If the route is on a rural section of highway with a well defined riding surface (such as the highway shoulder) marker spacing can be increased to 1/2 mile.
2. ORV reassurance markers should also be placed immediately beyond points of intersection with roads, streets or other trails, within a clear sight distance from the intersection or point where the ORV operator is expected to stop.

GUIDE SIGNS



OFF-ROAD VEHICLE (ORV) DIRECTIONAL GUIDE ARROW SIGN

Standard:

1. 8" x 8" reflectorized white sign with black arrow and border. This sign shall be used to direct ORV riders at trail junctions, intersections, turns, and trailheads.
2. Signs shall be rotated so that the arrow points in the appropriate direction and used in combination if more than one direction applies.

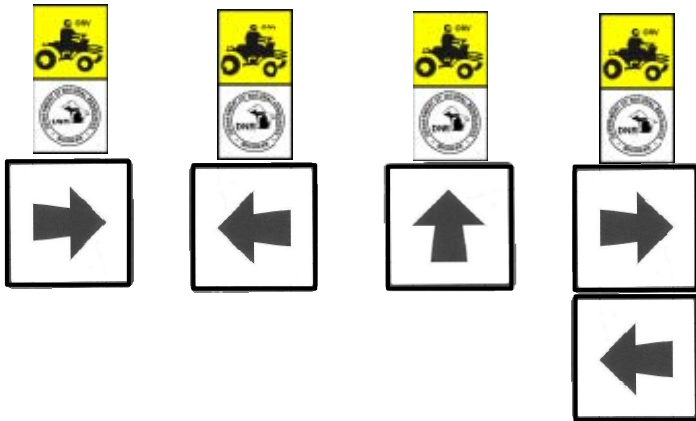
Guidance:

ORV reassurance markers should typically be placed above the directional guide arrows to clarify the purpose of the directional arrow for the benefit of ORV traffic and the general public .

Option:

This sign may be labeled "ROUTE," or "ORV" or used without a label. A label may be an adhesive decal attached at the time of posting, however the use hand written legends is not acceptable.

Examples of commons uses:



REGULATORY SIGNS



SEASONAL LIMITATIONS SIGN

Support:

The use of this sign can help accomplish multiple goals in the development, management and enforcement of ORV connector routes:

1. Allows for the ORV signs to remain in place during the “Closed Season” eliminating the need to take down all ORV signs at the end of the season and then reinstall them at the beginning of the next season (reducing the cost of maintaining the system).
2. Satisfies the requirement of The Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, which states; “Designated”, unless the context implies otherwise, means posted by the department, with appropriate signs, as open for ORV use.
3. Identifies the limits of a connector segment that is authorized in the state trunkline highway.
4. Will help facilitate law enforcement efforts.
5. Promotes ORV user education and public awareness (Even though the signs are installed primarily to be read by the ORV user, in many cases the sign will be visible to the general public as well)

Standard:

1. **12” x 18” reflectorized white sign with black ORV symbol and border.**
2. **One sign shall be installed at each end of the connector segment where the incoming ORV route enters MDOT right-of-way. Additional signs may be warranted at intersections with other roads or ORV routes that generate significant ORV traffic within the limits of the authorized connector segment.**
3. **Signs shall be installed at locations that are clearly visible and readable by ORV traffic, as close as possible to the location where the ORV route enters the highway right-of-way.**



REGULATORY / SELECTIVE EXCLUSION SIGNS

Support:

The figures above illustrate some examples of the use of the word text and prohibitive slashes.

1. Regulatory and selective exclusion signs convey to the ORV user specific restrictions on the route, road or support facilities such as trailheads.
2. These signs should be used sparingly and only in areas with a compelling or demonstrated need to restrict use.
3. Other regulatory and selective exclusion signs may be approved for special circumstances by MDOT.

Standard:

12" x 18" reflectorized white sign with black lettering or symbols, or recreation symbol with red slash.

Stay on Trail Sign

If used, Stay on Trail signs should be posted on the route where there is demonstrated evidence of off route operation by motorized vehicles.

ORV Prohibition Sign

If needed, these signs should be posted in locations where ORV operation is prohibited. This sign should be used sparingly. Examples of where this sign may be used include ORV damage restoration sites or nonmotorized trails where illegal ORV use is a continuous problem.



OBJECT MARKER (OM3)

Support:

Object markers may be used to mark obstructions within or adjacent to the route.

Guidance:

1. Object markers with stripes that begin at the upper right side and slope downward to the lower left side are designated as right object markers.
2. Object markers with stripes that begin at the upper left side and slope downward to the lower right side are designated as left object markers.

Standard:

- 1. Object markers are 12" x 36", reflectorized yellow signs with black diagonal markings.**
- 2. Object markers shall be used to mark the four (4) corners of a bridge located on a designated route.**
- 3. The inside edge of the marker shall be inline with the inner edge of the object, and the black diagonals shall always slope down and inward towards the route riding surface.**
- 4. When a potential hazard is located on one side of the route, an object marker shall be placed on each side of the hazard with the black diagonals sloping down and inward towards the route riding surface.**

Option:

Object markers may also be used to mark the ends of culverts, culvert headwalls or other obstructions along the route.

RESTRICTED ALLOWABLE USE OF REGULATORY AND WARNING SIGNS FOR ORV ROUTES

Support:

1. When an ORV route is designated for ORV traffic to operate on the highway shoulder with the flow of highway traffic, it is not feasible to post certain regulatory and warning signs (such as stop signs) that would apply to ORV traffic, without causing potential confusion and safety hazards if highway motorists perceive that those signs apply to highway traffic.
2. For ORV routes that are designated for ORV traffic to operate on the highway shoulder with the flow of highway traffic, the MDOT regulatory and warning signs that are in place shall apply to all traffic. (Exception: ORV Speed Limit)
3. At highway crossings, route connections, or on routes that are established outside of the maintained highway shoulder with adequate separation between highway traffic and ORV traffic, all applicable regulatory and warning signs, may be used.

Standard:

1. **Regulatory and Warning signs that are in conflict with MDOT highway signing shall not be placed adjacent to the highway shoulder in a position that is readable to normal highway traffic.**
2. **When an ORV route enters the highway from a local road or street no ORV route signs shall be posted that are in conflict with existing road signs controlling traffic at the highway intersection**



Examples of ORV route signs with restricted allowable use



STOP SIGN (R1-1)

Stop signs are intended for use where ORV traffic is required to stop.

Standard:

1. **18" x 18" sign (background and lettering are reflectorized)**
2. **Stop signs shall be placed at all intersections with improved state roads, county roads, plowed roads or other locations that warrant stopping. Stop signs shall be placed only on the right side of the trail.**

Guidance:

Stop signs should be placed as close as possible to the intended stopping point.

Option:

1. Stop signs may be placed on both the right and left side of the route, by exception for added emphasis. Exception to be approved by MDOT.



YIELD SIGN (R1-2)

Yield signs should be used where ORV traffic is required to yield to cross traffic.

Support:

Yield signs assign rights-of-way to traffic on certain approaches to an intersection. Vehicles controlled by a yield sign need to stop only when necessary to avoid interference with other traffic that has been given the right-of-way.

Standard:

1. **18" x 18" x 18" sign (background and lettering are reflectorized).**
2. **Yield signs shall be used where ORV traffic should be cautioned to slow down and be prepared to stop.**

Guidance:

If used, yield signs should be used where cross traffic has the right-of-way. Examples include intersections with forest roads or other roads open to highway traffic.

Option:

1. Yield signs may be used on ORV routes where they cross forest roads that have minimal use with approval of the MDNR or MDOT
2. Yield signs may be used on heavily used driveways with approval of the MDNR or MDOT

WARNING SIGNS

Support:

1. Warning signs call attention to unexpected conditions on or adjacent to the route, and to situations that might not be readily apparent to ORV users.
2. Warning signs alert route users to conditions that might call for a reduction of speed or an action in the interest of safety.

Guidance:

1. The use of warning signs should be kept to a minimum as the unnecessary use of warning signs tends to breed disrespect for all signs.
2. When used, warning signs should be placed to provide the route user sufficient time to react to a hazard or unexpected condition.



STOP AHEAD SIGN (W3-1)

Standard:

1. **18" x 18" Sign (background and symbol are reflectorized)**
2. **Stop Ahead signs shall be placed approximately 350 feet in advance of a Stop sign that is not visible for a sufficient distance to permit the ORV user to respond to the stop sign on the ORV route.**

Support:

Permanent obstructions causing limited visibility might include route alignment or structures. Intermittent obstructions might include foliage and vegetation.

Option:

1. On ORV routes, Stop Ahead signs may be used for additional emphasis before a Stop sign even when the visibility distance to the stop sign is satisfactory.

ROUTE LEGEND

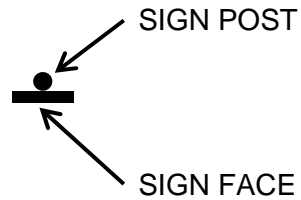
EXISTING ORV ROUTES
(ROUTES THAT ARE REQUESTED TO BE CONNECTED)



ONE WAY DIRECTIONAL



TWO WAY ROUTE



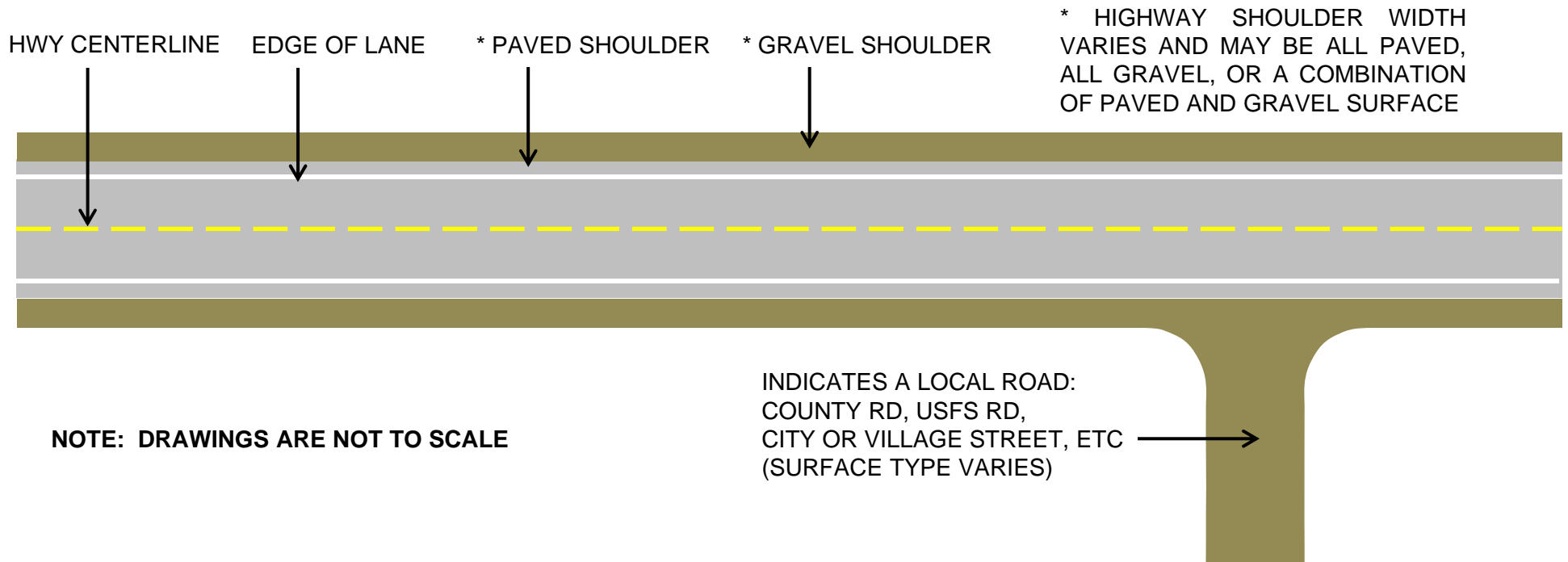
PROPOSED ORV CONNECTOR ROUTES
(USING STATE TRUNLINE HIGHWAY)



ONE WAY DIRECTIONAL

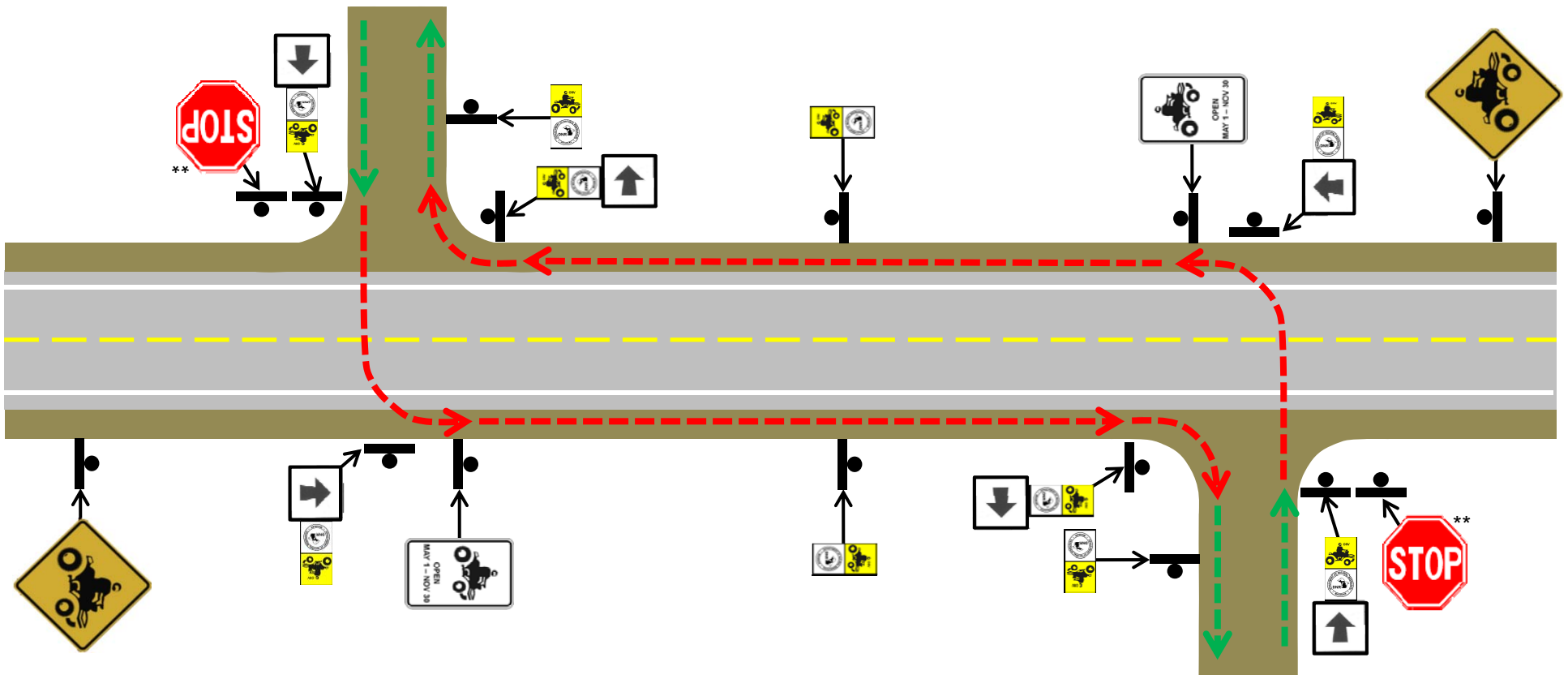


TWO WAY ROUTE OUTSIDE
OF THE HIGHWAY SHOULDER



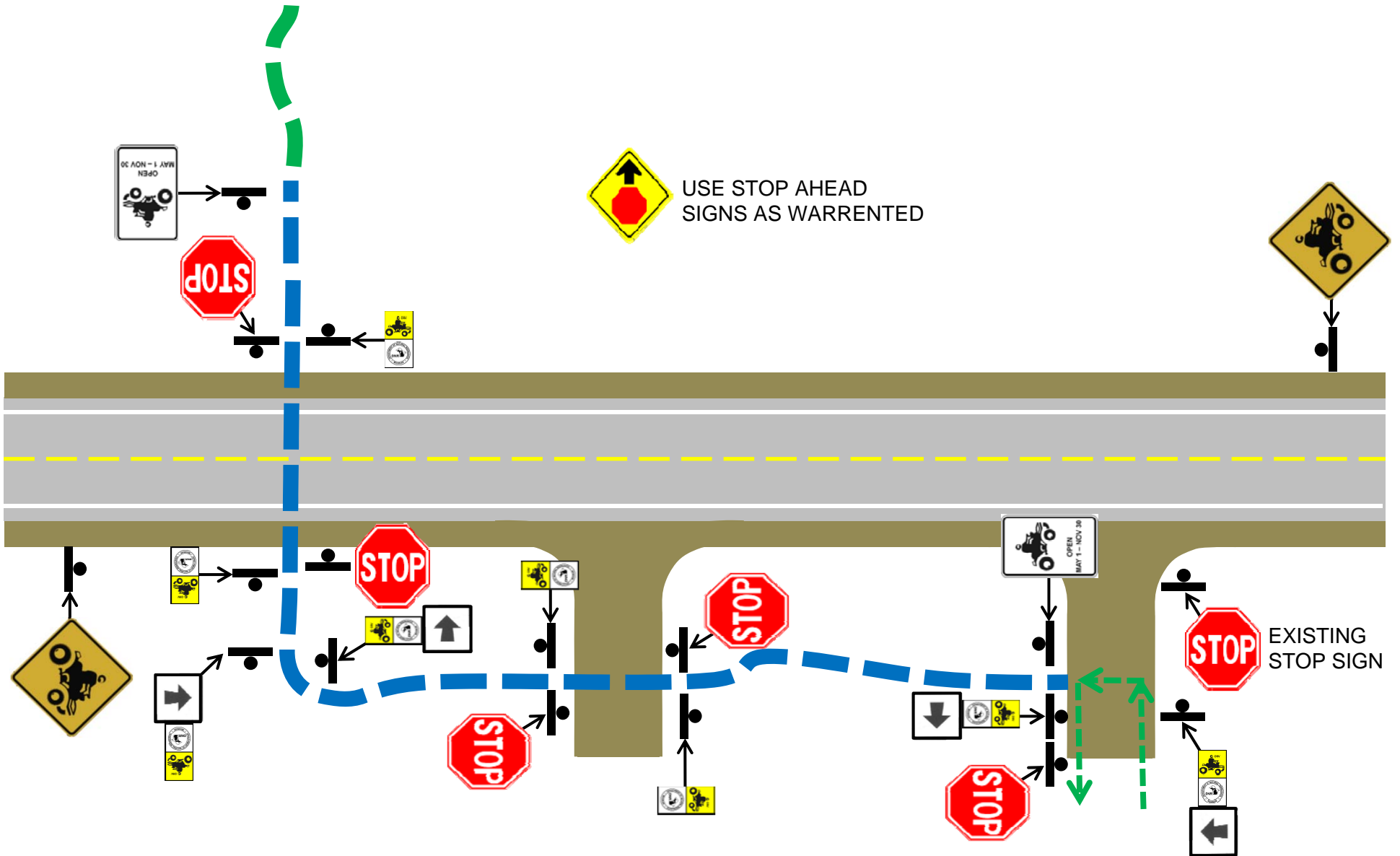
ILLUSTRATIONS

EXAMPLE CONNECTOR ROUTE USING HIGHWAY SHOULDER



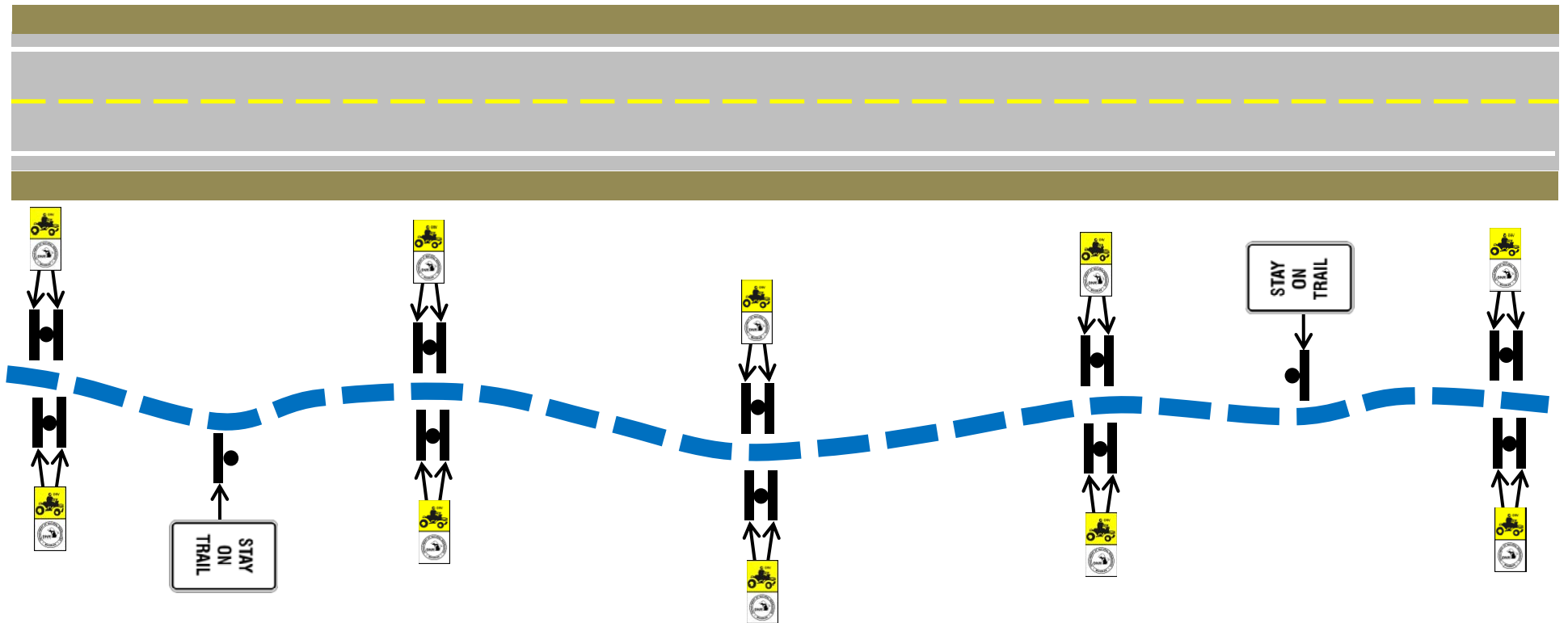
** EXISTING STOPS SIGNS AT ROAD INTERSECTIONS SHALL CONTROL ALL TRAFFIC INCLUDING ORV (DO NOT PLACE ROUTE STOP SIGNS WHERE ROAD STOP SIGNS ARE PRESENT)

EXAMPLE CONNECTOR ROUTE USING A TWO-WAY ROUTE OUTSIDE OF THE HIGHWAY SHOULDER



OPEN AREAS OF WIDE RIGHT-OF-WAY (INCREASED SIGNING FOR “STAY ON TRAIL”)

In areas where there is demonstrated evidence of off route operation additional signs may be used to control ORV traffic and limit disturbance of the surrounding terrain. Place ORV reassurance markers on both sides of the route, in both directions, to designate a corridor. For this use, reassurance markers may be placed less than 1/4 mile apart for visibility and to regulate use in open areas. Use in conjunction with “Stay on Trail” signs as warranted.



EXAMPLE TRANSITION FROM ROUTE ON SHOULDER TO ROUTE OFF SHOULDER

A connector segment within the highway right-of-way may have to use a combination of highway shoulder and routes that are off of the highway shoulder depending on local conditions. Some areas outside of the highway shoulder do not have suitable terrain; such as steep slopes, deep ditches, wet areas or environmental concerns. There are also areas where the highway does not have a shoulder or the shoulder is too narrow to accommodate ORV use. Each highway segment must be evaluated to determine if or where ORV routes can be accommodated.

