## **Traffic Engineering Instructions (TEI)**

**Distribution:** Director of Highway Division, Director of Maintenance and Operations, Director of Policy, Planning and Intermodal Development, Director of Project Delivery, Director of Municipal Assistance, District Administrators, District Project Managers and Technicians, Municipal Assistance Project Managers, Highway Safety & Design Project Managers, Structures Project Managers, Consultant designers

Approved:	APPROVED By Joshua Schultz at 9:04 am, Jun 05, 2018	Date:
	Joshua Schultz, PE	
	Transportation Systems Management and Operations Manager	

### Subject: 2009 MUTCD Clarification of Sign Options on Non-Limited Access Highways

#### **Administrative Information:**

Effective Date:	TEI 18 - 200 shall be effective from the date of approval.
Superseded TEI:	TEI 16 - 200.
Exceptions:	Not applicable.
Disposition of TEI Content:	The content of TEI 18 - 200 will be incorporated into future revisions to the Vermont Agency of Transportation Standard Drawings, Traffic Design Manual and/or other applicable design guidance documentation.

#### **Purpose:**

The federal Manual on Uniform Traffic Control Devices (MUTCD) allows optional uses of signs; TEI 18- 200 will clarify how the Vermont Agency of Transportation (VTrans) will typically apply discretion towards those options.

These instructions are intended to apply to Non-Limited Access Highways, although there may be applicability in some cases to Limited Access Highways. A separate engineering instruction will be issued to address sign issues specific to Limited Access Highways.

#### **Technical Information:**

Vermont currently does not have its' own State version of the MUTCD; the federal MUTCD is adopted by 23 VSA 1025. There are many prescriptive "shall" statements in the MUTCD, which must be applied in all situations to the extent practicable. There are also many "should" statements of recommended practice that can be deviated from if engineering judgment or engineering study supports the deviation. This engineering instruction is intended to clarify some of the "may" conditions where no specific recommendation is given. This engineering instruction is a statement of typical practice; engineering judgment should be applied for site specific applications.

# TEI 18 - 200 Page 2 of 15

All MUTCD references in this instruction refer to the 2009 MUTCD and its revisions to date.

### **GENERAL:**

#### **General Sign Location Considerations:**

- Sign spacing of 200 ft minimum is desirable. In low speed urban/village settings this may not be practically attainable, and in these cases, sign spacing of at least 100 ft is desirable. Where more space is available, signs may be placed further apart to give drivers more time to read and react to each sign and to avoid excessive sign stacking (picket fence effect).
- Where possible, there should be no unrelated signs placed between a warning sign and the condition being warned for. (For example, a curve warning sign should be the only sign preceding a curve, but an intersection warning sign may be followed by guide signs related to that intersection.)
- Signs should not be placed in front of windows of adjacent buildings. In residential areas, signs should be placed near property lines and away from landscaping features where practical to minimize impact to front yards.
- Sign visibility should be maximized to the extent possible. Avoid placing signs adjacent to or behind trees or other visual obstructions; consider potential growth of branches. Consider effects of horizontal and vertical curvature on sign visibility. Signs on the inside of curves may be not be consistently visible "through" the curve due to snowbanks or vegetation growth. Gateposting may be considered when adequate sign visibility is not attainable.
- If sign location is not critically specific, avoid areas difficult for installation, such as ledge or steep side slopes. Avoid placing signs on bridges where possible.
- Avoid placing signs immediately upstream of driveways if a downstream location is available, to limit visual clutter when looking left to see traffic in the near lane. A sign to the right will generally not be as problematic since a driver can pull out a little for better visibility after verifying that the left is clear.
- When there is a green strip, place signs between the sidewalk and the curb rather than behind the sidewalk, if lateral offset minimum from curb/sidewalk can be met.
- The offset between signs and utility poles should be at least 10 feet when possible to improve safety for utility workers.
- For stop controlled approaches to state highway intersections, the main route marker directional assembly should be installed on the downstream side of the intersection (across the crossroad from the stopped approach). (Follow MUTCD Figure 2D-6 rather than E-127 in this respect.)
- Relocation of Official Business Directional Signs (OBDS) should be avoided where possible. If an OBDS needs to be relocated due to higher priority sign placement needs, OBDS placement should be coordinated with the VTrans Sign Control Unit (Toni May/Richard Cleveland).

• No other types of signs may be co-located on an OBDS assembly.

#### Sign Project Plan development:

- <u>Sign Location (milepoint)</u>: Existing sign locations should be collected using a calibrated DMI (Distance Measuring Instrument). Accuracy and consistency should be verified by cross checking against the VTrans videolog in Mapillary, which will be considered the standard baseline for milepoints. "Reviewer notes" for preliminary and final plan sets should state which version (year) of video was used for a baseline during plan development. In the sign summary sheets, any sign that is not replacing another sign at the same location should have a location description in the comment field (ie, xx feet in yy direction from a discrete physical object, such as a utility pole, driveway, guardrail terminal, or distinct tree. This distance is measured along the edgeline in the direction of travel.)
- Bridge object markers are more prone to being struck by plows, therefore bolts, not rivets, should be used during installation.
- Do not use tubular aluminum posts; use 2-1/2 inch square posts (with special provision item soil bearing slip bases when appropriate) or tubular steel posts.
- Thinning and trimming for signs should be performed in order to adjust the sight distance triangle diagram to reflect a minimum sight distance of 250 feet. This matches the legibility distance assumed in the warning sign placement in MUTCD Table 2C-4, and is greater than the legibility distance of the six inch text on destination boards (assumed to be 30 feet per inch in MUTCD 2A.13 paragraph 02).
- In the sign summary sheet, specify color for any sign that may be designed in optional colors, such as route marker auxiliary plaques which depend on the color of the parent sign, and for any sign using fluorescent yellow or fluorescent yellow green.
- For sign project plans that do not include layout sheets, the layout of a multi-sign assembly should be shown in the sign summary sheet, rather than showing each sign individually on the line associated with that sign's properties. This will make it easier for the installer, easier to check the frame size required, and easier to visually check that all signs have been included in a large route marker assembly.
- The signs in a multi-sign assembly should be listed from top to bottom, and then left to right (starting with the sign on the upper left, down all the left side signs, then back to the top, ending with the lower right.) That will make it easier to check the color assignments since associated signs will be listed sequentially.
- No private or commercial signs are allowed in the state highway right of way. These should be removed, not retained or replaced.
- For projects that include signs on both state highway and Class 1 TH (or any other TH), include a note in the sign summary sheet that denotes which signs are in the TH segment. There are stickers required for the back of the signs (per the Construction Standard Specifications 675.02)

# **TEI 18 - 200** Page 4 of 15

that denote ownership by VAOT or the TOWN. This is often overlooked and leads towns to think that VTrans owns and maintains the signs when we do not.

• Overhead sign structures should be evaluated for necessity. On conventional highways, some overhead sign structures may be able to be replaced by roadside signs, particularly at single lane approaches to intersections. Overheads are most appropriate for multi-lane intersection approaches where gateposting of signs is not possible and roadside signs may be occluded by vehicles in an adjacent lane.

#### **Obsolete E-Standard Drawings:**

Many E-Standard Drawings are functionally obsolete (non-MUTCD compliant), and are in the process of being modified as T-Standards. Use T-Standards when available. Until revised Standard Drawings are approved and adopted:

- Do not use E-Standard Drawing sheet references for MUTCD standard sign details; specify the Standard Highway Signs and Markings Book, SHSM.
- For non-MUTCD standard signs, include sign details in plans rather than including an E-Standard Drawing sheet reference when it is reasonable to do so.

## **REGULATORY SIGNS:**

#### Legal Load Limit Signs

VTrans is required by statute (23 VSA 1394) to install legal load limit signs at all roads leading from the State Highway system

- Place signs 20 to 50 feet from an intersection, facing entering traffic. Town owned regulatory signs may be installed below legal load sign (speed limit signs typical). Remove Town owned warning signs (typically "dead end" or "no outlet") and salvage or replace on a new post further up the side road. Remove "No Thru Trucks" signs; the Town does not have the legal authority to limit the destinations of vehicles on public roads. Remove "Children at Play" signs and salvage (return to town).
- The statutory legal load is 24,000 pounds for most Town Highways, 16,000 pounds if a bridge with wood stringers is encountered before other destinations on the same highway. If the bridge is further away from the intersection, it should be posted separately, while the approaching roadway remains posted at 24,000 pounds.
- All streets in cities and incorporated villages (see list <u>http://vermont-archives.org/govhistory/governance/Villages/villagelist.htm</u>) are considered the same as a State Highway and do not need legal load signs. [NOTE there is pending legislation in 2018 which may change this.]
- If a Town desires a Town Highway (except as noted above) to be posted "Legal Load As for State Highways," they must request permission from the Secretary of Transportation.
- If a Town desires a different legal load limit to be posted on a Town Highway, they must have an ordinance in place specifying the altered legal load limit.

#### **Speed Limit Signs**

- Use a W3-5 speed reduction warning sign for speed limit reductions of 10 mph or greater. This sign is not typically used for five mph reductions, but may be used for emphasis on a case by case basis.
- Make sure lead sign locations match legal speed limit certificate. Speed limit signs for opposite directions should be directly across from each other at speed limit transition points. Variations up to 50 feet are allowed to optimize sign location.
- Upsize the first sign in a reduced speed zone to 30 inch x 36 inch. Do not upsize signs for speed increases.
- In reduced speed zones, install intermediate speed limit signs after higher volume intersections, where roadside development changes but speed limit does not (i.e., dense residential to spread commercial, where drivers might have a tendency to increase speed), and/or at one to two minute intervals based on the driving speed.

# TEI 18 - 200 Page 6 of 15

• In 50 mph zones, install intermediate 50 mph signs after major intersections (all State routes, and higher volume Town Highways), or where emphasis is needed to manage speeds, such as long tangents with passing zones.

#### Radar Speed Feedback Signs

In general, VTrans does not install RSFS, and most RSFS on state highways are owned and maintained by municipalities under a Section 1111 permit. Use of radar speed feedback signs is governed by VTrans policy:

- <u>https://vermontgov.sharepoint.com/sites/VTRANS/VTransIntranetHome/VTrans%20Policy%20</u> <u>Manual/Use%20of%20Radar%20Speed%20Feedback%20Signs.pdf</u>
- <u>http://www.aot.state.vt.us/documents/3014\_Guidelines\_on\_the\_Use\_of\_Radar\_Speed\_Feedback\_Signs.pdf</u>

#### No Parking Zones:

- No parking zones must match the legal no parking certificate established by the Traffic Committee.
- At the beginning of a no parking zone, the R8-3 symbol should have a black on white M4-14 BEGIN plaque beneath it. At the end, a black on white M4-6 END plaque should be used. (The M series BEGIN/END plaques are 24" wide, matching the conventional size R8-3. When using 30" parent signs, use the 30" R3-9cP BEGIN and R3-9dP END plaques) Some existing BEGIN/END plaques are red on white.
- For longer no parking zones, intermediate no parking symbol signs may be installed parallel to the roadway (facing the centerline)

#### No Passing Zones:

- Signed No Passing zones must match the legal no passing certificate established by the Traffic Committee.
- At the end of a signed No Passing zone, if there is a marked passing zone, an R4-2 PASS WITH CARE sign should be installed. If the end of a signed No Passing zone is in a marked double yellow, a VR-417 END NO PASSING sign should be installed. This is because we do not want to inadvertently encourage passing in these locations through use of an R4-2. (Vermont statute allows passing on double yellow in certain circumstances. In signed No Passing zones passing is expressly prohibited. Marked passing zones simply indicate where there is sufficient sight distance to safely pass a vehicle travelling near the speed limit.)

#### State Highway Begins/Ends, Throughway Begins/Ends

• Use VR-039 SHB/VR-038 SHE at all Class 1 Town Highway limits. These are typically installed above speed limit signs since the Class 1 line is often a speed limit transition point.

# TEI 18 - 200 Page 7 of 15

• Remove VR-041 TWB/VR-040 TWE signs except in cases where the numbered route turns left across an uncontrolled opposing lane (for example, VT 116 NB in East Middlebury). Install W3-1 "Stop Ahead", W3-2 "Yield Ahead" or W3-3 "Signal Ahead" warning signs at all controlled State Highway intersections, unless there is a series of such intersections in which case only the first is warned.

#### **Border Crossing Signs:**

At the entrances to the State, it is desirable to inform drivers of laws that may be different than those of our neighboring States, and call to drivers' attention certain laws promoting safety on our highways.

- The typical border sign progression on non-limited access State Highways includes:
  - "Welcome to Vermont" VD 421
  - Three sign speed limit assembly (replaces large VR-114)
    - STATE LAW, VW-362P, Fluorescent Yellow, 24 inch x 12 inch
    - SL 50, R2-1, 24 inch x 30 inch
    - UNLESS OTHERWISE POSTED, R2-5P, 24 inch x 18 inch
  - Safety Belts Required, VR-128, 30 inch x 36 inch
  - o No Drinking/Driving symbol sign, VR-654, 24 inch x 24 inch
  - o No Hand Held Electronic Devices assembly
    - STATE LAW, VW-362P, Fluorescent Yellow 36 inch x 12 inch
    - DRIVERS/HAND-HELD ELECTRONIC DEVICES PROHIBITED, VR-430, 36 inch x 48 inch
- Where the speed limit is not 50 mph at the crossing location, the speed limit assembly should be installed at the nearest transition to a 50 mph speed limit.
- French translation signs will not be used at Canadian border crossings since the most important messages are conveyed with numbers and symbols.
- "State Law Stop for School Bus Flashing Red Lights" (VR-048) are no longer used, since this is not unique to Vermont and is therefore not a critical regulatory message. All school busses now use stop signs that flip out from the bus, in addition to the flashing red lights.
- "\$500 Fine for throwing trash on highways and streams" (VR-023B) will no longer be included in the border sign progression. This sign will be used on a case by case basis where littering is identified as an issue (typically roadside pull-offs that are identified by District personnel as problem areas).

#### **Think Signs**

"THINK" signs were installed at the request of the Emergency Nurses Association (ENCARE) at locations of alcohol related fatal crashes with the permission of the family. This program has been inactive for several years.

These signs should be retained if less than 10 years old, and removed if greater than 10 years old.

### WARNING SIGNS:

#### Warning Sign Color – Use of Fluorescent Sheeting

The MUTCD requires that all school related warning signs be fluorescent yellow-green (FYG). FYG sheeting is optional for non-school related bicycle and pedestrian signs. Fluorescent yellow (FY) is an option for all other warning signs.

- Use FYG sheeting for all pedestrian signs (W11-2, W11-9, and W11-15) and associated plaques. Do not use FYG for bicycle and trail signs. Where there is insufficient room to locate warning signs on separate posts, a pedestrian sign may be installed on the same assembly as another warning sign and both signs should be FY, not FYG.
- Consider FY for any other types of warning signs in deeply shaded areas, areas prone to fog (riversides for example), and high crash locations. Do not mix yellow and fluorescent yellow in a series of signs.

#### Curve Advance Warning Signs

MUTCD Table 2C-5 recommends curve warning signs where the difference between the speed limit and advisory speed is five mph, and requires warning signs when the difference is 10 mph or greater.

- Curve warning signs should also be installed for unexpected curves (unseen over vertical crest, or the first curve after long tangents) even if an advisory speed is not needed.
- Use a winding road curve sign with distance plaque when there are three or more curves in succession with less than 600 feet of tangent. Use advisory speed for the worst curve in the series. Alternatively, if there is one severe curve in a series of curves, the advisory speed can be based on the typical curve in the segment, and the severe curve can be separately warned with its' own advisory speed.
- Many existing older curve warning signs are located too far from the curve. In accordance with Table 2C-4, the curve warning sign should be within 100-125 feet of the beginning of the curve in all but the most severe cases.
- Do not replace existing curve advisory speeds in kind without ball banking curve, or using curve design speed for reclaim/reconstruction projects. Existing curve advisory speeds may not be supported by engineering. The advisory speed should be determined separately for each direction.
- <u>Mountainous/winding roads</u>: In some cases, the prevailing speed on a winding or mountainous road may be considerably less than the speed limit, especially in the uphill direction. Speed limits are generally based on the 85<sup>th</sup> percentile speed of traffic, but are posted the same in both directions. In cases where the prevailing speed is likely to consistently be below the posted speed limit, the 85<sup>th</sup> percentile speed may be used instead of the posted speed limit to determine sign requirements in Table 2C-5. The speed study should be included in the design records.

#### Curve Delineation Signs – Use of Large Arrows, Chevrons, and Delineators:

MUTCD Table 2C-5 requires that curve delineation signs be used for some curves and recommends their use for others, but does not distinguish between the use of large arrow signs and chevrons.

- The determination to use curve delineation signs or delineators should be based on the more severe direction, and the treatment should be the same in each direction.
- <u>Large Arrow:</u> A single large arrow sign should be used for short, sharp curves. In cases where there is also a crest vertical curve which limits sight distance through the curve, a series of chevrons may be more appropriate to assist the driver.
- <u>Chevrons:</u> A series of chevrons should be used for long sweeping curves (typically, where application of the spacing shown in MUTCD Table 2C-6 results in the use of four or more chevrons). Chevrons facing each direction of traffic should be installed on separate posts at least five feet apart. (VTrans experience with angled brackets for mounting chevrons on a single post has not been favorable.) The first chevron facing traffic should be one "space" (see spacing in Table 2C-6) downstream of the end of tangent/beginning of the curve. The last chevron facing traffic should be at the beginning of the tangent (one "space" downstream of the first chevron for the opposite direction.) See Figure 2C-2.
- <u>Delineators:</u> Where the use of curve delineation signs is optional per MUTCD Table 2C-5, but where severe unprotected hazards exist within the clear zone, delineators should be used. Post mounted delineators may also be used at the ends of guardrail runs to complete the delineation of otherwise protected curves.
  - Space delineators in accordance with MUTCD Table 3F-1. If the curve radius is unknown, Table 2C-6 may be used to approximate the radius using the advisory speed, but the spacing for delineators should be based on Table 3F-1.
  - Delineators shall be white, ASTM Type III minimum, six inches by eight inches.
  - Install back to back on 1-3/4 inch square posts with a 30 inch anchor, at a height of four feet (measured from the edge of the travelled lane, not from ground surface).
  - Delineators are typically installed only on the outside of curves. For reverse curves, place on the outside of the more severe curve and continue on the same side of road along the inside of the following curve. Avoid changing the sides of road unless there is a sufficient gap between the two runs to prevent driver confusion in low visibility conditions.
- <u>Mountainous/winding roads</u> As noted above, the 85<sup>th</sup> percentile speed may be used in place of the speed limit in Table 2C-5 to determine whether curve delineation devices are required.

#### **School Related Signs:**

School zones should be signed on State Highways adjacent to a school property, or where the school is a short distance away on a Town Highway and there is a school crosswalk across the State Highway. Private schools must be listed by the Department of Education as approved or recognized independent schools <u>http://education.vermont.gov/vermont-schools/school-operations/independent-schools</u>

- Use the S4-3P "SCHOOL" plaque in conjunction with S1-1 symbol sign at the beginning of school zones. "SCHOOL" pavement marking stencils should be used in conjunction with the school zone assembly.
- The school zone should be as short as is reasonable; previous editions of the MUTCD specified that the school zone should extend no more than 200 feet beyond the school property.
- Crosswalks within the school zone should be signed using S1-1 and W16-7P school crossing assemblies.
- School speed limit zones are legally established by the Vermont Traffic Committee on state highways and by municipal ordinance on town highways. School speed limit assemblies shall not be relocated, nor should their type be changed (i.e., "when flashing", "when children are present" or time based) without formal Traffic Committee action. An R2-1 speed limit sign shall be installed above an S5-3 "End School Speed Limit" sign at the end of the school speed limit zone, directly across from the opposing school speed limit assembly.
- S3-1 School Bus Stop Ahead signs may be installed in advance of stops where the sight distance is less than 500 feet. When replacing existing SBSA's, verify with the local school bus coordinator that the stop is still used.

#### **In-Street Pedestrian Signs**

• In-street pedestrian signs may be used by permit only; a Town can get a permit from Traffic Operations, and must purchase their own signs.

#### **Street Name Plaques on Intersection Warning Signs**

- Where intersection warning signs are used, include a W16-8p street name plaque for higher volume side roads (typically Town Highway Major Collectors). The street name plaque may be omitted for low volume side roads (typically Class 3 Town Highways).
- Street name plaques are typically used instead of, not in conjunction with, advisory speed plaques. However, where crash history indicates a safety issue, both may be used.

#### **Hidden Drive Signs**

Because of their limited effectiveness, hidden drive signs are typically only installed upon request, in cases where the property owner can't improve sight distance by mowing or trimming and the visibility of the driveway is less than the SSD for the posted speed limit. Except in extreme circumstances, hidden drive signs are not installed in village environments where driveways are an expected roadway feature.

#### Cattle Crossing/Farm Machinery Signs

These are installed upon request of the farmer, and should be removed when obsolete. They may be displayed seasonally – the farmer may agree to remove the sign and post from the anchor for storage during the off-season, and install a delineator with post to protect the anchor.

#### Wildlife Crossing Signs

Wildlife crossing signs are not particularly effective in reducing animal collisions, and should be used extremely sparingly. There are few places in Vermont where deer and other animals *do not* cross. Consult with game wardens and AOT biologists to identify major habitat crossing areas.

Use a text sign rather than a symbol sign for moose in order to reduce vandalism and theft.

#### **Bridge Ices Before Road sign**

- W8-13 "Bridge Ices Before Road" sign replaces "Bridges Freeze Before Road" sign for bridges over 300 feet on Standard Drawings E-126 (Typical Freeway Interchange Signing).
- This sign should also be considered for long State Highway bridges. The recommendation from the District Transportation Administrators is to install the sign for all 200 foot structures, and to consider installation for any bridge over 100 feet on a curve.

#### **Snowmobile Sign**

The W11-6 "Snowmobile Crossing" sign should only be installed for official (VAST) trail crossings that have limited sight distance. The sign should be hinged so it can be folded in the off-season.

## **GUIDE SIGNS:**

#### **Route Marker Assemblies:**

- Match color of auxiliary plaques (ie, TO, JCT, Cardinal direction, Arrows) to parent route marker. Use G/W for state highways, B/W for US Routes and State Numbered Town Highways, and W/Blue for interstates.
- Use black circular route shield (M1-5) for state numbered town highways.

#### Street Name Signs

- If there is a conflict between data sources as to the legal name of the street, the E-911 street name is the official name.
- All street name signs shall be designed in upper and lower case text. The required font size refers to the upper case letter height; the font will automatically ensure that the lower case letters are the correct height. For example, where the MUTCD calls for six inch capital letters with 4-1/2 inch lower case letters, design the sign with six inch font; do not use 4-1/2 inch font for the lower case letters, or they will come out smaller than 4-1/2 inches.
- Replace, do not salvage, non-MUTCD compliant street name signs for Town Highways. Replace private road street name signs only if they are maintained by the municipality; if they are maintained by the property owner they should be retained or salvaged. If replaced, State law requires private road street name signs to include "PVT" in the legend. Use the smaller supplemental text size for "PVT" (i.e., the same size as "ST").
- Unless a Town specifies an MUTCD optional color combination (see MUTCD 2D.43.18), use white on green with a border.
- Use street name only, unless a Town specifies the use of a TH number with supplemental text ("TH-23"). Use three inch font for the TH number, and place to the right of the street name legend. Salvage address range plaques if present.
- For the purpose of applying the option in paragraph 06 of MUTCD 2D.43, "local roads" will be defined as Town Highways (including Class 1 TH) with speed limits of 30 mph or lower. These roads may use an eight inch blade with four inch font. Use of a larger size for major intersections (containing turn lanes and/or signals) is strongly recommended.
- Street name sign blade length should be incremented in 6 inch increments (ie, 24-30-42-48)
- Street name signs up to 42 inches long may be installed independently on a single post or installed on top of a stop sign. Signs longer than 42 inches should be installed independently on two posts, with sufficient spacing from other signs to avoid too many posts in an eight foot path, consistent with breakaway design. Street name signs should be installed where there is sufficient visibility for approaching traffic. The stop sign is placed for side road visibility and may not be an appropriate location for a street name sign.

# TEI 18 - 200 Page 13 of 15

- Sign design may be adjusted in the following hierarchy to reduce the overall length of street name signs when SHSM design criteria result in a 48 inch length (modify to 42 inches for single post installation) or when overall length exceeds 72 inches (maximum desirable length):
  - Reduce space between the sign legend and edges of sign to two inches
  - Reduce font from 6D to 6C
  - Reduce kerning between letters, a minimum of 80%
  - Reduce font to 5C
- Call out use of 12 inch brackets for top-of-post mounted signs with 12 inch blades. Four inch brackets may be used for eight inch blades.
- Specify double sided signs unless two back-to-back signs are intended. Do not assume the fabricator will make the sign double sided because it is a street name sign.
- Signs shall be flat sheet aluminum 0.125 inches thick, or extruded aluminum with a 0.25 inch flange and a 0.090 inch web.
- At signalized intersections, overhead street name signs are recommended. For span wire signals or mast arms not designed for the sign loads, the signs may be installed on the signal poles.

#### **Community Wayfinding Signs**

Most community wayfinding signs (see MUTCD 2D-50) are installed by municipalities on roads under local jurisdiction, including Class 1 town highways. There are some communities that have Section 1111 permits to install these signs on state highways (such as VT 15 in Johnson). The municipality is responsible for these signs. In accordance with the MUTCD, these are the lowest priority traffic control signs, and must be relocated or removed if the space is needed for higher priority signs.

### **Recreational Directional Assemblies**

Recreation Directional assemblies may be installed in advance of parking areas for trail heads and other public recreation accesses, where the parking area is either directly accessed from the state highway, or is within close proximity to the state highway (within 500 feet, or as approved on a site specific basis), only when the on-premise signs are not visible from an adequate distance to provide safe turning movements.

A Recreation Directional assembly is made up of a brown 24x24 Parking symbol sign (RS-034), and an appropriate arrow. A 24x24 symbol showing the primary recreational use, and/or a 12x24 text plaque may be added to the assembly. For example:

- RL-90 Bicycle
- RL-100 Hikers
- RM-120 Picnic Area
- RW-80 Boat Launch
- RW-130 Swimming
- RW-170 Hand Launch

See the MUTCD Standard Highway Signs recreational and cultural interest signs for other allowable symbols.



## **TEI 18 - 200** Page 15 of 15

### Implementation:

The content of TEI 18 - 200 is to be implemented beginning immediately for all signs installed on State Highways. This will include sign work orders, projects constructed via Utilities permits and all VTrans sponsored projects. For Town Highway projects, other MUTCD options may be applied per the Town's request.