

COMPLETE STREETS EVALUATION MATRIX

The treatments shown in this matrix are most likely to be considered in full depth construction projects that serve to reconstruct or construct new infrastructure. These projects often contain changes to the horizontal and vertical alignments, extensive earthworks, and impacts to adjacent resources and landowners. Examples of this work include; bridge replacement, roadway reconstruction, and intersection reconstruction. On other projects with a more limited scope, designers are expected to consider treatments to the extent feasible within that scope.

Land Use Context/Roadway Functional Class	Shoulder	Median	Bike Lane*	Sidewalk / Shared Use Path	Transit	Intersections
Limited Access	Shoulders for all limited access roadways should be paved and delineated using appropriate pavement markings. The shoulders should be widened to comply with the State of VT Design Standards as well as the guidance found in HSDEI 11-004.	Medians are common on limited access roadways. Improvements to medians may include; curb work, signage, and landscaping.	Not applicable, bike lanes are not installed on limited access roadways.	Sidewalks and shared use paths are typically not installed on limited access roadways. Associated ramps may intersect with state or local roads. Work at these locations may include; sidewalk repair, curb repair, installation of appropriate sidewalk ramps, and installation of a crosswalk and detectable warning surfaces. Pedestrian paths may cross limited access roadways as an overpass or underpass. These facilities should be upgraded to comply with the American with Disabilities Act (ADA). Proper drainage and facility cross slope must be installed/constructed to prevent ponding water and the potential for freezing. These facilities must be adequately protected from errant vehicles, as well as debris and snow removal. The limited access roadway in these locations must also be protected from debris and snow removal from the pedestrian facility.	While transit providers may use limited access roads as part of their routes, transit stops would not be permitted on a limited access roadway.	Most limited access roads intersect with other roads via interchanges that include a system of ramps on and off the roadway. Where Complete Streets principles apply to the intersecting road, the design of those intersections should consider use by all users. Free flowing off-ramps (slip ramps) may be problematic for bicyclists or pedestrians because of the higher vehicle speeds that are achieved.
Rural Arterials & Collectors	Shoulders for all rural arterials and collectors should be paved and delineated using appropriate pavement markings. The shoulders should be widened to comply with the State of VT Design Standards as well as the guidance found in HSDEI 11-004. Additional widening of shoulders should be considered in locations identified as primary corridors for bicyclists as well as those locations where the Town or Regional Plan indicate a future use. The roadway horizontal alignment, vertical alignment, and superelevation should meet the requirements of the AASHTO "A Policy on Geometric Design of Highways and Streets." All drainage structure grates located within the shoulder shall be "bicycle-safe."	Medians are not generally provided on rural stretches of roadway.	Not applicable, bike lanes are not installed on rural arterials & collectors.	Truly rural roads typically do not include sidewalks as there is unlikely to be significant pedestrian demand to justify their installation. If there are clear origins and destinations within project limits or a defined Town/Regional Plan and a shared use path is sought by the community to connect those origins and destinations, designers should consider the inclusion of the shared use path in the project.	It is possible that public transit routes travel over rural roadways. A transit stop on a rural road would most likely consist solely of a sign, with no changes to the roadway typical section.	Rural roadway intersections should be designed to ensure that adequate sight distance from side roads is provided. If the side road has a bicycle or pedestrian facility on it, the intersection design should consider the interaction of the bike or ped facility with the roadway being designed. If intersections are signalized and there are pedestrian facilities on the side roads, appropriate pedestrian signals should be included.
Transitional Zone Arterials & Collectors	Shoulders for transitional zone arterials and collectors should be paved and delineated using appropriate pavement markings. The shoulders should be widened to comply with the State of VT Design Standards as well as the guidance found in HSDEI 11-004. Additional widening of shoulders should be considered in locations identified as primary corridors for bicyclists as well as those locations where the town or regional plan indicate a future use. The roadway horizontal alignment, vertical alignment, and superelevation should meet the requirements of the AASHTO "A Policy on Geometric Design of Highways and Streets." All drainage structure grates located within the shoulder shall be "bicycle-safe."	Medians should be considered for certain situations on arterials and collectors in transition zones. If a more "suburban" land use pattern is present where there may be some demand for pedestrian crossings, a median refuge can be used to make this safer.	Designers may consider the use of a bike lane on a transitional zone roadway as the zone approaches a more urban/village center context. This would be most appropriate in areas where the speed limit is transitioning to a lower speed. In the more rural character areas, bike lanes would not typically be appropriate.	Generally, sidewalks would not be found in transitional zones, except where the speed limit is lower and on the outskirts of more densely developed urban/village centers. If there are clear origins and destinations within project limits or a defined Town/Regional Plan and a shared use path is sought by the community to connect those origins and destinations, designers should consider the inclusion of the shared use path in the project. A shared use path may be more appropriate along higher speed, lower land use density areas within transitional zones.	It is possible that public transit routes travel over roadways in transitional zones. A transit stop on a transitional road would most likely consist solely of a sign, with no changes to the roadway typical section. A shelter may be applicable for this situation.	Transitional roadway intersections should be designed to ensure that adequate sight distance from side roads is provided. If the side road has a bicycle or pedestrian facility on it, the intersection design should consider the interaction of the bike or ped facility with the roadway being designed. If intersections are signalized and there are pedestrian facilities on the side roads, appropriate pedestrian signals should be included.
Urban/Village Arterials & Collectors (Downtowns, village centers, growth centers)	Shoulders for all urban/village arterials and collectors should be paved and delineated using appropriate pavement markings. The shoulders should be widened to comply with the State of VT Design Standards as well as the guidance found in HSDEI 11-004. Additional widening of shoulders should be considered in locations with heavy bicycle volumes as well as those locations where the town or regional plan indicates a future use. Additional widening should also be provided in urban and village settings that contain on-street parking. The roadway horizontal alignment, vertical alignment, and superelevation should meet the requirements of the AASHTO "A Policy on Geometric Design of Highways and Streets." All drainage structure grates located within the shoulder shall be "bicycle-safe."	Median improvements should be considered on projects with existing sidewalks and crosswalks, or projects with high bicycle traffic. Median improvements may include; curb repair, signage, landscaping, and refuge island curb openings. New medians may be considered at or near intersections to provide refuge islands for pedestrians. New medians may also be applicable where access management is required. Existing crash data and safety reviews should be utilized to determine applicability.	Existing bike lanes should be repaved, and delineated using appropriate pavement markings. Bike lanes should be considered in downtown/village center locations. Paved shoulders would be utilized by bicyclists in all other instances. With existing and proposed bike lanes, signage can be upgraded to designate the presence of a bike lane in addition to the required pavement markings. On roads where a "shared lane" is used because of limitations of space, consider the use of shared lane markings to show where bicyclists should ride and to indicate to drivers that they should expect bicycle traffic.	For projects with existing sidewalk or shared use path, the design team should include widened sidewalks where necessary to comply with ADA or increased demand. Additional work at these locations may include; sidewalk repair, curb repair, installation of appropriate sidewalk ramps, installation of crosswalks and detectable warning surfaces, access management, improved signage, and clearing to improve sight distance and visibility at crossings. Proper drainage and facility cross slope must be installed/constructed to prevent ponding water and the potential for freezing. New sidewalks should be considered in all urban and village settings. Pedestrian counts as well as the Town and Regional Plan will provide an estimate of current and future use. Existing crash data and safety reviews should be studied to identify safety concerns. Discontinuous pedestrian facilities are discouraged, however if future installation is possible including the future sidewalk in the project footprint is recommended.	Urban/village projects have the highest likelihood that provisions for transit providers will be applicable. This may include bus pullouts, bus shelters or other features. There should be close integration with adjacent pedestrian features.	Intersection design in urban/village centers must balance the needs of all users. If pedestrian facilities are present, then signals or roundabouts must include adequate crossing opportunities. This includes the timing of signalized crossings and the consideration of the use of pedestrian refuge islands for multi-lane cross-sections. Designers should also consider the use of leading pedestrian intervals and advanced stop bars for bicyclists. Video detection can make the signal more responsive to pedestrians waiting to cross and can add time to the pedestrian phase by detecting pedestrians in a crosswalk.

* "Bike Lane" refers to a portion of the roadway that has been designated by signs and pavement markings for preferential or exclusive use by bicyclists.