

# ***Severance Corners Bicycle and Pedestrian Circulation System Plan***

*DRAFT April 16, 2007*



***Chittenden County  
Metropolitan Planning  
Organization***

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*Communities working together  
to meet Chittenden County's  
transportation needs*



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Submitted by: Wilbur Smith Associates

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## A. Overview

### **Purpose of Study**

The purpose of the study is to develop an overall master plan for a pedestrian and bicycle circulation system that will allow the Town to assemble a complete circulation system from the various pieces it may require of developers or develop as part of its own projects.

### **Study Area**

A map of the study area, Figure A, is included in Appendix B.

### **Pedestrian and Bicycle Facilities**

The pedestrian and bicycle circulation system being considered for this study includes sidewalks, shared use paths, crosswalks and on road bicycle facilities with the following configurations. Unless otherwise indicated, the facilities recommended in this report should meet these descriptions:

- Sidewalks are five feet wide and constructed of concrete. They are designed for pedestrian use;
- Shared Use Paths are ten feet wide and typically surfaced with asphalt or finely crushed stone. They are designed to be used by pedestrians, bicyclists, in-line skaters, and other non-motorized forms of transportation; and
- Crosswalks, as defined in this study, are considered to be marked on the pavement in some form. They may or may not have a pedestrian signal associated with them.

If environmental or physical constraints make the construction of a 10-foot wide shared use path difficult, they can be constructed at only eight to nine feet wide and still meet current federal and State recommended widths. Paths designed at less than eight feet wide would require design exceptions to be eligible for federal funding.

### **Study Process**

The Town of Colchester, working with the Chittenden County Metropolitan Planning Organization, contracted with Wilbur Smith Associates to undertake the development of a bicycle and pedestrian Master Plan for the Severance Corners Growth Center (Severance Corners). After meeting with the Town and the MPO to discuss the specific issues and needs associated with the project, WSA inventoried existing conditions and constraints, land use, zoning, and proposed development in Severance Corners. WSA then, working with the Town staff, identified origins and destinations for pedestrians and bicyclists in and around Severance Corners. WSA developed a set of alternative linkages which they reviewed and refined with the assistance of the Town and MPO staff. After two rounds of public input, one from the property owners in Severance Corners and another from the general public, WSA finalized the recommendations for bicycle and pedestrian circulation in Severance Corners. WSA continually refined the recommendations after each of the reviews or meetings in consideration of the relevant comments received.

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## ***B. Existing Conditions and Future Developments***

### ***Environmental***

**Wetlands** – There are few significant wetlands close to the edges of existing right-of-ways within the Severance Corners Study Area. Figure B shows the limits of mapped wetland areas. The only significant wetland area crossing a highway right-of-way is located where Roosevelt Highway (Route 7) crosses Sunderland Brook along the southern border of the Severance Corners Growth Center Area. Outside the highway right-of-way there are several mapped and un-mapped wetlands in the northeast and southeast quadrants of Severance Corners; these wetlands should have minimal impacts on the public bicycle and pedestrian circulation system being proposed with this plan. Other unmapped wetlands lie west of the study area to the south of Blakely Road, which may impact the development of the system because they lie close to the public right-of-way.

**Topography** – The study area is characterized by very gently rolling terrain north of Severance and Blakely Roads and relatively level terrain south of these roads to the edge of Sunny Hollow, a valley which runs east and west approximately 750 feet south of Severance and Blakely Roads. The terrain is relatively level east and west along the Severance and Blakely Roads right-of-ways, but the land drops away by 15 to 20 feet north of the right-of-way in the northeast quadrant.

Roosevelt Highway is also relatively level north of the intersection with Severance and Blakely Roads, but again the grade drops away from the edge of the road approximately 600 feet north of the intersection. Roosevelt Highway begins to drop in elevation as it descends into Sunny Hollow, approximately 600 feet south of the intersection.

**Vegetation** – The areas close to the roadways are generally open in the northeast, southeast and southwest quadrants close to the Roosevelt Highway/Blakely Road/Severance Road intersection, as Figure B shows. The northwest quadrant has the least amount of open area and is mostly forested adjacent to the roadways further from the intersection. The other three quadrants are also forested close to the edge of the right-of-way further away from the intersection.

### ***Cultural***

There are no important historical structures close to the right-of-way that may be affected by the development of a bicycle and pedestrian circulation system in the public right-of-way. Archeological resources were not examined, but it is assumed that the presence of archeological resources will need to be examined in more detail prior to the construction of portions of the system. In general however, archeological resources that may have existed adjacent to a roadway have already been disturbed due to the construction of the roadway. Additionally, it is often possible to preserve archeological resources when constructing a bicycle and pedestrian circulation system by going over the resources and leaving them in place undisturbed.

### ***Infrastructure***

**Roadways** – Roosevelt Highway runs north and south through the center of the study area. The right-of-way is approximately 66 feet wide. In general, Roosevelt Highway has four to seven-foot wide shoulders south of Severance Corners and two-foot wide shoulders north of the intersection. The road has a slight bend to the west in the northern portion of the study area. The speed limit on Roosevelt Highway is 50 miles per hour (mph).

Severance and Blakely Roads have 49.5-foot wide right-of-ways that expand to 66 feet close to Severance Corners. Pavement width on Blakely Road is 28 feet and 27 feet on Severance Road. The shoulders are approximately four feet wide on most of Severance Road. Shoulders are approximately three feet wide on Blakely Road. The speed limit on Blakely Road and Severance Road is 35 mph.

The Severance Corners intersection is currently signalized. The Severance Road approach to the intersection contains three lanes and, including the departing lane, is approximately 66 feet wide from one side of the roadway to the other as measured at the stop bar, which is not perpendicular to the right-of-way. The particularly wide cross section is due to the acute angle of the intersection in the southeast corner and a wider than normal pavement radius. The southern Roosevelt Highway approach to the intersection includes a through lane, a left turn lane and a right turn lane. Including the departing lane, it is approximately 63 feet wide at the intersection as measured at the stop bar. The northern Roosevelt Highway approach to the intersection includes a through/right turn lane and a left turn lane. When combined with the departing lane and shoulders, the roadway is approximately 46 feet wide at the intersection, as measured at the stop bar. The Blakely Road approach to the intersection currently has left turn, right turn and through lanes and along with the departing lane and shoulders is approximately 60 feet wide at the stop bar of the intersection. The signal is equipped with a pre-emption system to allow quick passage of emergency vehicles.

***Bicycle Pedestrian System*** – There are no sidewalks now in the Study Area. Adjacent subdivisions to the east, west and south outside of the Study Area currently include sidewalks along at least one side of their roadways.

A pedestrian bridge crosses Interstate 89 adjacent to the south side of the Blakely Road bridge, approximately 1.2 miles west of the Study Area.

***Utilities*** – Water and sewer lines cross the roadways in several areas. Near the intersection overhead utility poles also line the west side of Roosevelt Highway, the south side of Severance Road and cross to the north side of Blakely Road. The poles are located at various distances from the roadway, with the closest, along Roosevelt Highway being approximately six feet away from the edge of the pavement.

### ***Existing Development***

Several single family residential homes lie along the east side of Roosevelt Highway north of the Severance Corners. The buildings are located approximately 40 feet away from the edge of the highway. A small building housing a medical practice sits on the northwest corner of the Roosevelt Highway-Blakely Road intersection; the parking area access is from Roosevelt Highway. The building lies approximately 32 feet away from the edge of the pavement. Clausen's, a commercial greenhouse and nursery lies south of Severance Corners in the southeast quadrant, approximately 110 feet east of the Roosevelt Highway intersection. (This building is proposed to be removed within five years as part of new development described in the next section.) Several single-family residential units also lie to the west of Roosevelt Highway, further to the north and farther away from the roadway.

A new mixed-use development is being built in the southwest quadrant, which will include both commercial space and multi-family housing. The main access to the development is from Blakely Road, with a secondary partial access to Roosevelt Highway. This development will include the construction of a shared use path along its frontage on Blakely Road and Roosevelt Highway.

## ***Proposed Development***

The right-of-way of the proposed Circumferential Highway runs diagonally through the Study Area; all of the map figures show the alignment of the right-of-way. The highway is proposed to go under Severance Road, with a full access interchange. It is proposed to go over Roosevelt Highway south of Severance Corners. The Town anticipates an Environmental Impact Study (EIS) will be necessary before the proposed highway is constructed. The EIS may result in changes to the current highway alignment. The recommendations in this circulation plan would need to be adjusted if significant changes are made to the existing Circumferential Highway plans and right of way.

Another mixed-use development is currently proposed in the vicinity of the Clausen's Nursery in the southeast quadrant of the intersection just north of Sunny Hollow. This development will include retail and office space mixed with multi-family units. Access to the development will be from Severance Road, east of the Circumferential Highway right-of-way. The current plans for this development include the construction of a shared use path along the south side of Severance Road on the property, as well as an internal sidewalk and bicycle circulation system. Figure C shows the proposed new development roads as dashed gray lines.

A single and multi-family residential development is proposed for the northeast quadrant, with access from Roosevelt Highway at the bend in the road north of Severance Corners. The construction of a shared use path from the southern end of the development to Severance Corners near its southern boundary adjacent to Severance Road, as well as an internal shared use path are currently included as part of the development proposal.

There are no current plans for development in the northwest quadrant of the Severance Corners area, but it is likely this area will also see additional growth in the future.

The Chittenden County Bicycle and Pedestrian Plan includes the future development of an east west shared use path in the vicinity of Severance and Blakely Roads. It also calls for the eventual development of an on-road bicycle facility on Roosevelt Highway.

## ***Existing Zoning***

The Study is currently in the General Development Three District, which allows typical "village" uses, such as single and multi-family residential units, offices, retail without drive-through facilities, restaurants, services and public facilities.

## ***Origins and Destinations***

Based on the existing and proposed development in the Study Area, as well as the types of development allowed by the current zoning designation, each quadrant should ideally have easy pedestrian and bicycle access internally as well as to the other three quadrants. The proposed alignment of the Circumferential Highway complicates the bicycle and pedestrian access that might be possible to the proposed development in the eastern portion of the southeast quadrant.

Additionally, each quadrant should have easy access to both the north-south and east-west bicycle facilities planned along Roosevelt Highway, Blakely Road and Severance Road.

## ***Issues to Be Addressed***

The existing conditions and the proposed future development of the Severance Corners Study Area show that the following issues are of particular concern for the development of a bicycle and pedestrian system:

- Providing pedestrian facilities at the signalized intersection of Roosevelt Highway/Blakely Road/Severance Road to facilitate movement between the four different quadrants;
- Providing pedestrian crossings between the quadrants away from the signalized intersection to eliminate the potential for unsanctioned crossings of the major roadways;
- Providing multiple crossings of the Circumferential Highway to facilitate interconnections between the two sides of the right-of-way;
- Providing a shared use path link to the Stonebridge subdivision and to the west of the Study Area to promote inter-neighborhood non-motorized connections; and,
- Providing bicycle facilities for both long distance experienced bicyclists and younger inexperienced bicyclists.

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## ***C. Recommended Master Plan***

### ***Alternatives***

Several different alternatives were considered as part of the development of the proposed Severance Corners Pedestrian and Bicycle Master Plan. Comments from the Town Staff, the local landowners in the Study Area and/or the general public helped to refine these alternatives into the Master Plan described in the next section. It includes recommendations for both a shared use path system and an accompanying sidewalk system, both interconnected with crosswalks.

### ***Recommended Shared Use Path System***

The recommended shared use path system builds on the shared use paths to be built as part of the current development being constructed in the southwest quadrant. Figure C shows the layout of the facilities proposed to be constructed along with developments in the growth center area along with an indication of the party responsible for the path. This includes the initial portions of the path network along the south side of Severance and Blakely Roads and the west side of Roosevelt Highway south of the intersection.

Ultimately, a shared use path would extend across and beyond the entire study area from the east to the west along the outer edge of the south side of Blakely and Severance Roads right-of-ways as well as the west side of the Roosevelt Highway right-of-way. Beyond the limits of the Study Area, the paths could be reduced to either six to eight feet wide for short distances to limit impacts on adjacent buildings or wetlands. Reductions less than eight feet wide would need to be justified and receive a design exception to be eligible for federal funding.

Figure D shows the extent of the completed shared use path system within the growth center area and Figure E shows the completed system in the growth center as well as the connections to regional facilities outside of the growth center. A long distance shared use path would line the northern edge of the Circumferential Highway right-of-way through the growth center area north of Severance Road and west of Roosevelt Highway. This path would be linked to the local system via a shared use path along the north side of Severance Road between the intersection and the Circumferential Highway and the shared use path along the west side of Roosevelt Highway south of the intersection. The crosswalks at the signalized intersection would bring bicyclists traveling on the Circumferential Highway shared use path across both Severance Road and Roosevelt Highway at the same time. If at some point a signal is

installed at the entrance/exit ramps to the Circumferential Highway on Severance Roads, a cross walk could be added to allow crossing of Severance Road at this location.

Two shared use path linkages could also connect the Circumferential Highway shared use path to the new development in the southeast quadrant and the Stonebridge Subdivision. The new development includes a walking path in the southern portion of the site, and this could be linked to the Circumferential Highway path. The specific alignment of the path would need to be more closely considered, due to existing wetlands and steep slopes in the far southern portions of the development parcel. The link to the Stonebridge subdivision could be made across a portion of the open space land preserved in the subdivision.

Paved shoulders on Severance and Blakely Roads, as well as along Roosevelt Highway could also carry on-road bicyclists east/west and north/south through the Study Area. To provide an adequate width for bicyclists, the shoulder would need to be widened to meet State Standards in place at the time that the creation of the on road facilities is done. Current standards call for a shoulder that is at least five feet wide.

### ***Recommended Sidewalk System***

A system of sidewalks compliments the shared use path system providing additional access to the different quadrants of the Study Area. Figures C, D, and E show these sidewalk facilities. The sidewalks would extend to the north and west from Severance Corners to the entrance roads of the existing or proposed developments. Crosswalks at these entrances would carry pedestrians across the roadway.

### ***Crosswalks***

The crosswalks at the Severance Corners intersection should be signalized. They would be run in tandem with the green lights and not set up as an exclusive phase of the signal (when traffic in all four directions stops so pedestrians can cross). As long as the signals are not exclusive, the addition of pedestrian signals to the intersection's signal system will not reduce the overall efficiency of the intersection in handling vehicular traffic. It is not anticipated that there would be sufficient pedestrian traffic through the intersection to require exclusive pedestrian phases for the signal.

A crosswalk is also proposed on Blakely Road at the intersections with the entrance roads to developments on the northwest and southwest quadrants. This crosswalk would ideally be equipped with a pedestrian activated signal, stopping vehicular traffic on Blakely Road when the signal is activated by a button pushed by a pedestrian. If the crosswalk is not signalized, clear warning signs should be posted along Blakely Road in both directions to alert motorists to the presence of the crosswalk. At this time, traffic studies do not show the need for a full traffic signal at this intersection.

An additional crosswalk should be considered on Severance Road in the vicinity of the west side of the Circumferential Highway right-of-way. This crosswalk should be treated in the same manner as the crosswalk on Blakely Road.

Crosswalks on Roosevelt Highway are also desirable both north and south of Severance Corners. Because this is a State Highway which carries more traffic than Blakely or Severance Road, the installation of a crosswalk must be carefully planned. Ideally, a crosswalk should be located on Roosevelt Highway at the entrance to the proposed subdivision in the northeast quadrant. This location provides adequate sight distance in both directions and places the crosswalk in close proximity to an intersection. Due to the existing speed limit on Roosevelt Highway, the crosswalk should, at a minimum, be marked with a flashing warning light, activated by pedestrians prior to crossing. The crosswalk itself must be clearly marked on the pavement. State requirements for crosswalks will mean that it may take several

years for the need for the crosswalk to be demonstrated, especially if there are crosswalks located at Severance Corners itself.

South of Severance Corners the topography presents a greater challenge to finding a safe crosswalk location. A crosswalk at the access point to the new development on the southwest corner of the intersection may be appropriate, but it is most likely too close to the signalized intersection to allow the crosswalk itself to be signalized at any time in the near future. Further south of this location, there is limited sight distance for a crosswalk until south of the proposed crossing of Roosevelt Highway by the Circumferential Highway. This location may be too far south to be of use to the pedestrians passing from one quadrant of Severance Corners to another. A crosswalk on Roosevelt Highway south of Severance Corners should be considered in more detail as development occurs, but would not be among the first locations prioritized for bicycle and pedestrian crossings.

Crosswalks should be clearly marked with either a different pavement material or highly visible stripes on the roadway. As possible, the crosswalk should also be raised slightly above the elevation of the adjacent roadway.

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#### *D. Phasing*

The initial portions of the bicycle and pedestrian system in Severance Corners will be constructed by the development currently under construction in the southeast quadrant. Other portions of the system will be constructed as development occurs in the southeast and northeast quadrants. Figure C shows the extent of the system that is anticipated to be installed as part of these existing or proposed developments.

Subsequent expansion of the system will be either completed by other developments still to be planned or proposed, or by the Town itself as part of its capital budget.

Subsequent portions of the overall system can be implemented in a number of ways. The Circumferential Highway path can be developed as part of the construction of the Highway, or as a stand alone facility if the highway is indefinitely delayed. The sidewalk or shared use path extensions can be developed either by individual landowners or the Town, using local or State administered funds.

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## *Appendix A – January 8, 2007 Public Meeting Notes*

### **Severance Corners Pedestrian and Bicycle Circulation Study Public Meeting January 8, 2007**

After the presentation of the short term, mid term and long term layouts, the comments focused primarily on the shared use path along Blakely and Severance Roads. More specifically:

- Consider only a sidewalk along Blakely Road so as not to impact the houses close to the road; place the shared use path along the Circumferential Highway right-of-way.
- Consider continuing the shared use path further west along Blakely Road to connect with the pedestrian Bridge over the Interstate.
- If the development of the shared use path would limit the creation of wider paved shoulders for bicycle commuters, then a narrower path or a sidewalk should be considered in conjunction with wider paved shoulders. If the right-of-way allows the development of a full shared use path and wider shoulders, that would be the best option.
- If a sidewalk is added instead of a shared use path, consider making an asphalt sidewalk.
- A narrower shared use path or sidewalk would make it difficult for a bicyclist to pass a pedestrian.
- Wider shoulders rather than a shared use path along the side of the road would work more easily further to the east and west of the area shown on the map and would join up with existing wider shoulders on Kellogg Road in Essex.

Other comments included:

- Add bicycle detection loops at the intersection, especially if wider shoulders will be added.
- Check accident data to see if there is age information associated with the different types of on road and off road accidents.
- The sidewalks and shared use paths should be built out concurrently with the residential and commercial development in Severance Corners.