

4

Corridor Improvement Plan

The study team developed improvement recommendations and concepts for the Route 305 study area that are consistent with the project goals and objectives for transportation and land use. The recommendations respond to the needs and deficiencies identified by advisory committee members, public comments, stakeholders and future traffic projections which were revealed through a thorough assessment of the corridor conditions. The concepts range from long-term improvements that will require significant time and capital funds to implement, to near-term improvements that can be accomplished in a relatively shorter time frame with lower capital investment. The improvement plan presented in this section details the transportation and land use improvement opportunities in the Route 305 corridor and suggests a strategy for implementation. Construction cost estimates for the improvements are also presented.

4.1 Plan Development Process

The transportation and land use recommendations that comprise the Corridor Improvement Plan were developed through an iterative process that involved the advisory committees for Bloomfield and Windsor, CRCOG, ConnDOT, the consultant study team, and public input. The iterative process consisted of conceptualizing improvement recommendations to address the needs and deficiencies of the corridor and refining these concepts through meetings and discussions with the advisory committees, ConnDOT, and other community stakeholders in an effort to build consensus for the improvement concepts that comprise the Plan.



4.2 Transportation Improvement Concepts

The transportation improvement concepts presented in the Plan are categorized into subsections for localized improvements, long term capacity improvements, roadway network modifications, and multimodal considerations. Each respective subsection defines the category of improvement and outlines the details of the specific improvement concepts and recommendations that comprise the category. Included in the discussion are the specific concerns and needs that each improvement concept aims to address; descriptions and figures detailing each concept; a summary of major constraints and impacts associated with the concept; and any other considerations regarding the development or implementation of the concept. A summary of estimated construction costs is provided at the end of each subsection.

4.2.1 Localized Improvement Concepts

For the purposes of this study, localized improvements are defined as those improvements intended to address safety and operational issues at specific locations in the corridor. Generally, these improvements are considered near-term improvements as they could be accomplished in a relatively short time frame, with relatively small capital investment, and with minimal corridor impacts. Each of the localized improvements developed by the study team considers the priorities of the Windsor and Bloomfield communities as they relate to corridor safety, mobility, and residential preservation.

4.2.1.a Interchange 37 to Brookview Road

The improvement concept in this area addresses a number of issues and needs relative to safety, operations, and aesthetics that were identified through the Windsor advisory committee and public input. The priority improvement within the overall concept is the provision for an exclusive westbound left turn lane and protected left turn phase on Route 305 at the signalized intersection with Mountain Road. Because the introduction of a new exclusive turn lane would require modifications to the overall roadway configuration and will result in some right-of-way and utility impacts, the study team recommends combining the left turn lane improvement with other improvements in the area so that all of the needs and deficiencies can be cost-effectively implemented while minimizing overall disruptions to traffic. Figures 4-1 and 4-2 illustrate the improvement concept in the Interchange 37 to Brookview Road area.



Identified Issues & Needs

- Unsafe for westbound vehicles to turn left from Route 305 to Mountain Road due to the lack of an exclusive left turn lane and protected left turn signal phase. Currently, left turns at this location must be made from the left travel lane across high volumes of opposing eastbound traffic, particularly during the afternoon peak period. This condition is complicated by limited sight lines to eastbound traffic caused by a crest vertical curve at the intersection.
- Unsafe and substandard westbound merge from two travel lanes to one. The abrupt merge, which is located too close to the Mountain Road intersection, reportedly causes vehicle backups through the Mountain Road intersection during the morning peak period. The backups can temporarily block access from Mountain Road.
- High travel speeds coming from interchange area and continuing through the residential section of the corridor.
- No crosswalks across Route 305 or side roads to enhance pedestrian visibility.
- Desire for enhanced beautification of interchange area and westbound “Gateway” to corridor.

Recommendations

- Provide an exclusive left turn lane and protected left turn signal phase to more safely accommodate westbound left turns to Mountain Road. In conjunction with this improvement, provide an opposing left turn lane from eastbound Route 305 to Mountain Road and extend the existing raised median from Dunfey Lane to Mountain Road. The left turn lane will accommodate eastbound access to the church; the median will serve to extend “Gateway” treatments further down the corridor and will also help calm traffic. The left turn lane and median improvements will require widening of the existing roadway and installation of new traffic signal equipment.
- Relocate westbound merge westerly and provide longer merge area.
- Provide a short segment of raised median just east of Brookview Drive to further extend “Gateway” and to accommodate additional landscaping for the purposes of traffic calming.
- Provide access management improvements at church property in conjunction with other Route 305 improvements. These improvements would require coordination with the property owner, but could include limiting access from Route 305 to ingress only; minimizing curb-cuts on Mountain Road and increasing distance between intersection and first driveway; and modifying parking lot circulation to accommodate access modifications.
- Close gap in median between southbound ramps and Dunfey Lane and provide eastbound left turn lane on Route 305 at Dunfey Lane to accommodate eastbound access to gas station and future development for property in the northeast corner of the intersection. Access to the gas station from Route 305 will be restricted to a right-in/right-out condition.
- Provide crosswalks on Route 305 at the signalized intersections of Mountain Road and Dunfey Lane. Textured and colored crosswalks, rather than painted crosswalks, should be provided in conjunction with other roadway and pavement improvements.
- Provide new landscaping in the interchange area and new destination signage to serve as “Gateway” treatments. Figure 4-2 illustrates such a plan.
- Provide a widened shoulder or bus pullout along eastbound Route 305 between Mountain Road and Targeting Center to improve safety at the existing bus stop in this area.

Other Considerations

- Traffic signal timings and phasings at all signalized intersections from the northbound ramps to Mountain Road should be monitored and adjusted as required to optimize the capacity and operations of these intersections during peak traffic periods.
- Work with ConnDOT to evaluate opportunities to incorporate crosswalks or locate new traffic signal equipment upon the replacement of old traffic signal equipment at the intersection of Mountain Road.

Summary of Impacts

- Right-of-way impacts are anticipated along both sides of Route 305 in the improvement area.

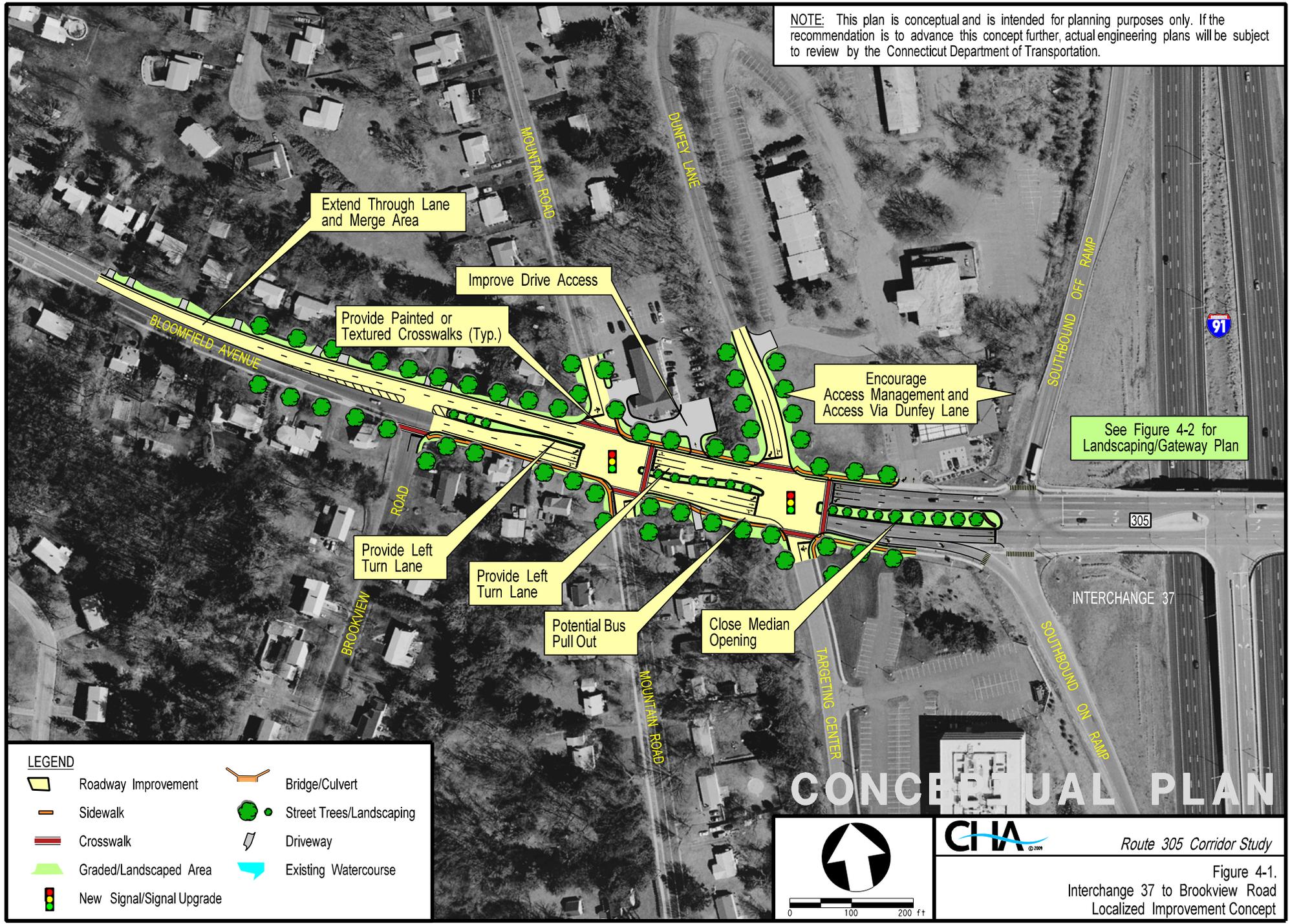
On the north side of Route 305:

- West of Mountain Road, three to four properties could require minor strip takings or grading rights along their frontages.
- Between Mountain Road and Dunfey Lane, two properties could require partial takings along their frontages.

On the south side of Route 305:

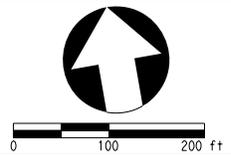
- Between Brookview Road and Mountain Road, three properties could require minor strip takings or grading rights along their frontages.
- Between Mountain Road and Targeting Center, two properties could require partial takings along their frontages.
- Relocation of approximately 1000 ft of overhead utility lines would be required along the north side of Route 305.
- Existing water valves and hydrants and sewer manholes could be impacted by the improvements.
- New traffic signal poles and equipment would be required at the Mountain Road and Dunfey Road intersections with Route 305.
- No significant environmental impacts are anticipated.

NOTE: This plan is conceptual and is intended for planning purposes only. If the recommendation is to advance this concept further, actual engineering plans will be subject to review by the Connecticut Department of Transportation.



LEGEND			
	Roadway Improvement		Bridge/Culvert
	Sidewalk		Street Trees/Landscaping
	Crosswalk		Driveway
	Graded/Landscaped Area		Existing Watercourse
	New Signal/Signal Upgrade		

CONCEPTUAL PLAN



CIA © 2009
 Route 305 Corridor Study
 Figure 4-1.
 Interchange 37 to Brookview Road
 Localized Improvement Concept

NOTE: This plan is conceptual and is intended for planning purposes only. If the recommendation is to advance this concept further, actual engineering plans will be subject to review by the Connecticut Department of Transportation.



CONCEPTUAL PLAN



0 100 200 ft



Route 305 Corridor Study

Figure 4-2.
Interchange 37 to Brookview Road:
Landscaping/Gateway Plan Concept

4.2.1.b Sheffield Drive and Brewster Road

The improvement concept in this area primarily addresses safety issues associated with vehicles turning to and from Sheffield Drive and Brewster Road, particularly vehicles turning left from Route 305 to these side roads. It is important to note that although long delays are also an issue on these side roads during peak periods, the study team concluded that neither the existing or forecasted traffic volumes at these intersections warrant signalization. The accident histories at these intersections also do not warrant signalization on the basis of safety. Figure 4-3 illustrates the improvement concept at Sheffield Drive and Brewster Road.



Identified Issues & Needs

- Unsafe for westbound vehicles to turn left from Route 305 to Brewster Road, particularly during the afternoon peak period, due to heavy opposing eastbound traffic volumes. This condition is complicated by limited sight lines to eastbound traffic caused by a crest vertical curve on Route 305 just east of the intersection.
- Unsafe for vehicles on Brewster Road to access Route 305 due to limited sight lines to the west caused by the proximity of an earth slope to the intersection on the south side of Route 305, and the crest vertical curve on Route 305 just west of the intersection.
- Unsafe for eastbound vehicles to turn left from Route 305 to Sheffield Drive, particularly during the morning peak period, due to heavy opposing westbound traffic volumes.
- Generally unsafe conditions for vehicles slowing or stopping in traffic to make left turns due to high traffic speeds and typically close following distances of other vehicles during peak periods.
- Left turning vehicles on Route 305 can impede through traffic progression due to limited or no potential for through vehicles to bypass turning vehicles.

Recommendations

- Widen Route 305 between Sheffield Drive and Brewster Road to provide left turn lanes at these intersections. Exclusive left turn lanes will more safely accommodate left turning vehicles by removing them from the through traffic stream and minimizing opportunities for rear-end and sideswipe collisions at these locations on Route 305.
- Improve sight lines to the west from Brewster Road by re-grading the earth slope in this area in conjunction with the turn lane improvements. Also, investigate opportunities to lower the crest vertical curve in this area in conjunction with the other improvements.
- Provide landscaped raised median island on Route 305 east of Sheffield Drive to serve as a traffic calming measure on the approach to the intersection. Consider providing a similar raised median island west of Brewster Road; this median island should only be provided if sight lines through the crest vertical curve can be improved such that the median would be visible to eastbound traffic on Route 305.

Other Considerations

- The study team considered two long-term options that would align Brewster Road and Sheffield Drive to create a single, four-legged intersection with Route 305. Option A would realign Brewster Road opposite existing Sheffield Drive. Option B would realign Sheffield Drive opposite existing Brewster Road. The primary benefit of aligning these side roads would be to minimize the number of side road access points in the corridor and to facilitate potential future signalization of the single intersection to reduce delays on the side roads. The study team notes that the combined intersection would not meet any of the volume warrants for signalization outlined in the Manual on Uniform Traffic Control Devices (MUTCD). It is possible that signalization could be justified on Warrant 6 – Coordinated Signal System if it can be demonstrated that access to Route 305 could be improved from side roads and residential drives in the corridor through better platooning of vehicles. The study team also notes that introducing a new signal in the corridor could create more safety issues than it resolves.

Both options would require a minimum of two full property acquisitions and significant right-of-way takings from numerous other properties. Additionally, both options pose sight line concerns that limit intersection sight distances along Route 305. Signalization would minimize sight line concerns, but at this time, the study team recommends maintaining Brewster Road and Sheffield Drive in their current locations.

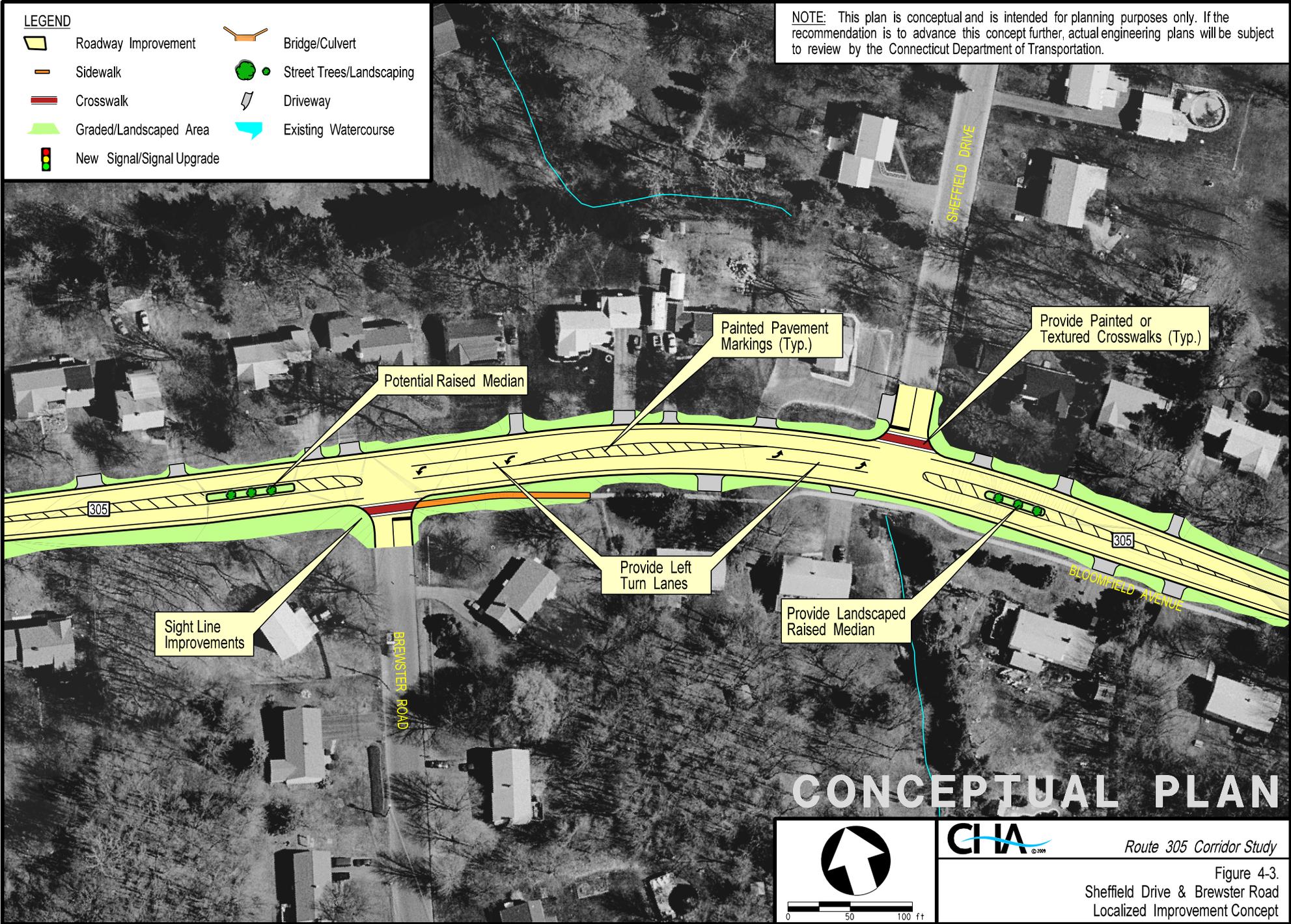
Summary of Impacts

- No major right-of-way impacts are anticipated along Route 305 in the improvement area. Minor grading rights could be required along the property frontages on the north side of the roadway. Minor strip takings could be required along two property frontages on the south side the roadway west of Brewster Road. The level of impact would be a function of the level of improvement to the crest vertical curve and grading required to improve sight lines in that area.
- Relocation of approximately 700 ft of overhead utility lines would be required along the north side of Route 305.
- Existing water valves and hydrants and sewer manholes could be impacted by the improvements.
- No significant environmental impacts are anticipated.

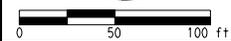
LEGEND

- Roadway Improvement
- Sidewalk
- Crosswalk
- Graded/Landscaped Area
- New Signal/Signal Upgrade
- Bridge/Culvert
- Street Trees/Landscaping
- Driveway
- Existing Watercourse

NOTE: This plan is conceptual and is intended for planning purposes only. If the recommendation is to advance this concept further, actual engineering plans will be subject to review by the Connecticut Department of Transportation.



CONCEPTUAL PLAN



Route 305 Corridor Study

Figure 4-3.
Sheffield Drive & Brewster Road
Localized Improvement Concept

4.2.1.c Addison Road

The improvement concept at the intersection of Route 305 and Addison Road is a near-term solution to long delays that can occur on the eastbound approach to the intersection during the morning peak period. The existing approach is a single lane with limited space available for through vehicles to bypass a vehicle stopped in traffic waiting to turn left to Addison Road. The situation is exacerbated when a large truck or multiple vehicles are waiting to turn left and virtually no space is available to bypass these vehicles. Currently, a short protected left turn phase is provided to move eastbound left turning vehicles through the intersection. Although left turns are permitted throughout the phase, heavy opposing westbound volumes limit the number of sufficient gaps to safely accommodate left turns. Figure 4-4 illustrates the improvement concept at Addison Road.



Identified Issues & Needs

- Eastbound left turning vehicles impede through traffic progression causing long delays and creating unsafe conditions for turning and bypassing vehicles.

Recommendations

- Provide an exclusive eastbound left turn lane and protected left turn signal phase to reduce delays and queues and more safely accommodate westbound left turns to Addison Road.

Summary of Impacts

- Minor right-of-way (ROW) impacts are anticipated along the south side of Route 305 west of Addison Road Extension. The level of impact would be a function of the level of grading and resulting slopes associated with widening for the left turn lane. Driveway easements are also anticipated in this area in order to match the roadway improvements to the existing driveway grades beyond the existing ROW.
- No relocation of overhead utility lines is anticipated.
- Modification of existing traffic signal equipment would be required at the intersection including relocation of the existing pedestrian push button located in the southwest quadrant of the intersection.
- No significant environmental impacts are anticipated.

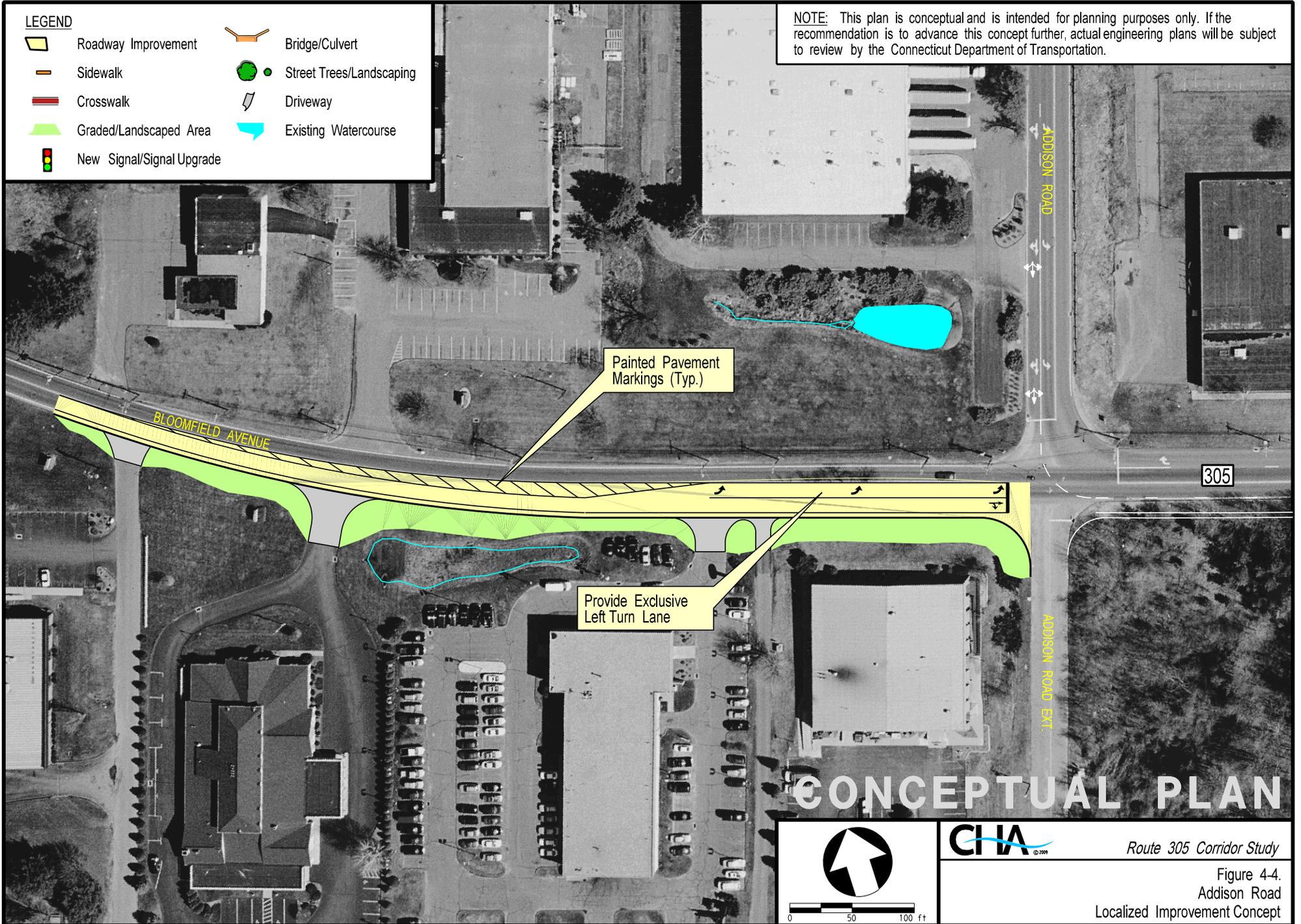
Other Considerations

- Incorporate profile improvements on Route 305 into the recommended left turn lane improvements to provide standard intersection sight distance from the potential future location of the shared access drive for Selig Ford and Carmon Funeral Home. See access management recommendations and Figure A4-16 in Appendix 4 for additional details.

LEGEND

- | | |
|---|--|
|  Roadway Improvement |  Bridge/Culvert |
|  Sidewalk |  Street Trees/Landscaping |
|  Crosswalk |  Driveway |
|  Graded/Landscaped Area |  Existing Watercourse |
|  New Signal/Signal Upgrade | |

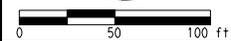
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Painted Pavement Markings (Typ.)

Provide Exclusive Left Turn Lane

CONCEPTUAL PLAN



Route 305 Corridor Study

Figure 4-4.
Addison Road
Localized Improvement Concept

4.2.1.d Marshall Phelps Road

The improvement concept at the intersection of Route 305 and Marshall Phelps Road primarily addresses issues associated with the turning movements of large trucks. The concept also incorporates design elements that serve to calm traffic and provide a “gateway” into Windsor for eastbound traffic. Figure 4-5 illustrates the improvement concept at this location.



Identified Issues & Needs

- Large trucks make frequent turns from eastbound Route 305 to Marshall Phelps Road and from Marshall Phelps Road to westbound Route 305. The slight skew of the intersection complicates some of these turning maneuvers and often requires large trucks to encroach on the opposing traffic lanes, particularly when making southbound right turns from Marshall Phelps Road to Route 305.
- Desire for eastbound “gateway” into Windsor for eastbound traffic.

Recommendations

- Provide channelizing island to facilitate the right turning movements of large trucks from Marshall Phelps Road to Route 305.
- Provide landscaped raised median island to provide “gateway” feature and to calm traffic.

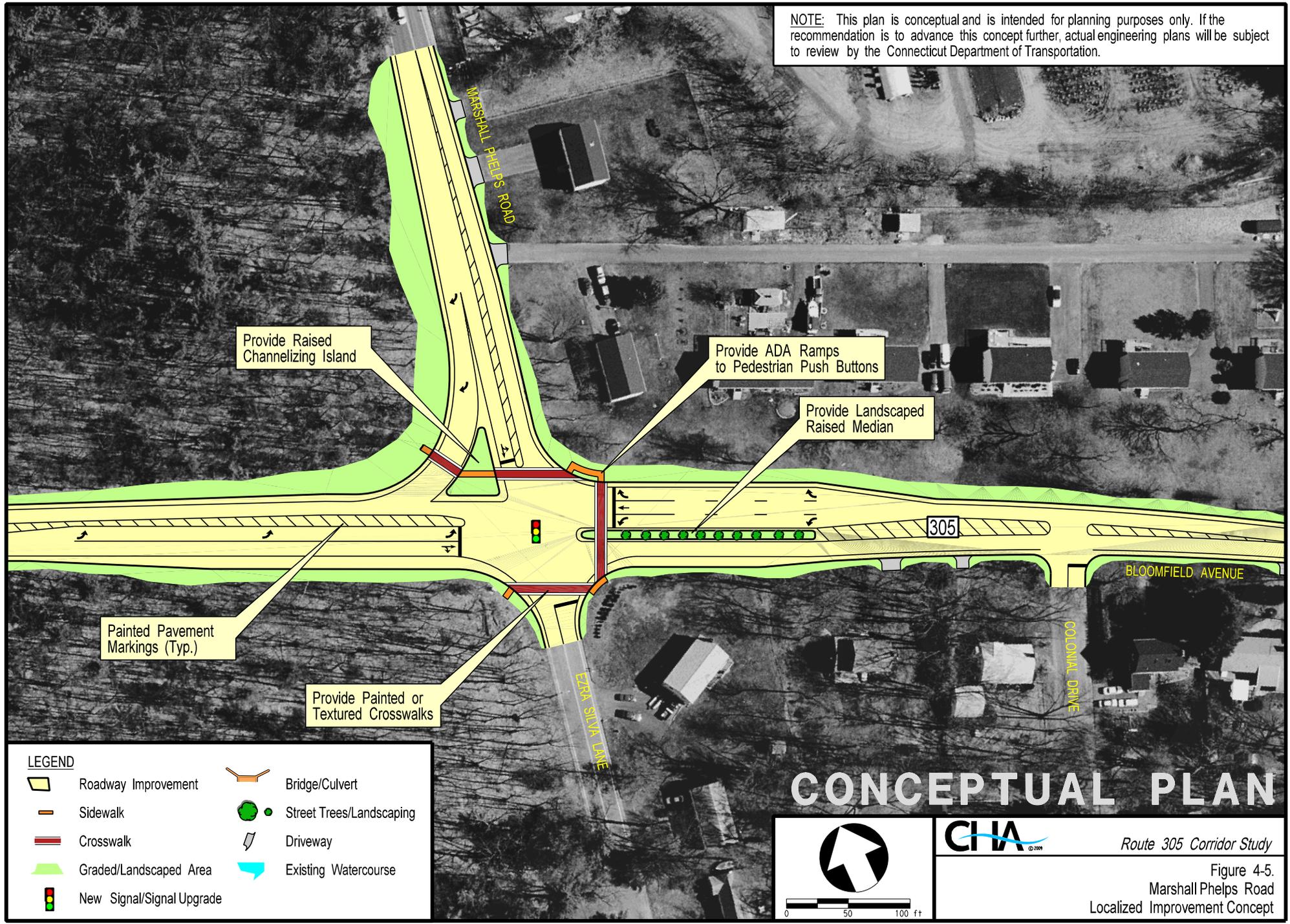
Other Considerations

- Channelizing island and landscaped raised median should be designed and constructed so that the improvements are consistent with the long term improvement concept at this intersection (see Figure 4-12).
- Provide painted or textured crosswalks and new curb-cuts and sidewalk ramps that conform to the current Americans with Disabilities Act Accessibility Guidelines (ADAAG) to improve pedestrian safety and accessibility to existing pedestrian push buttons. These recommendations are consistent with the near term pedestrian improvements discussed in Section 4.2.4.a.
- Provide textured and colored intersection pavement in addition to, or as an alternative “gateway” feature to providing landscaped raised median.

Summary of Impacts

- Right-of-way (ROW) impacts are anticipated in the northwest and northeast quadrants of the intersection.
- Potential relocation of approximately 1200 ft of overhead utility lines would be required along the north side of Route 305.
- No environmental impacts are anticipated.

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Provide Raised Channelizing Island

Provide ADA Ramps to Pedestrian Push Buttons

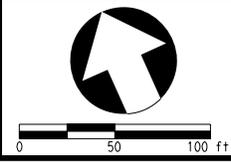
Provide Landscaped Raised Median

Painted Pavement Markings (Typ.)

Provide Painted or Textured Crosswalks

LEGEND			
	Roadway Improvement		Bridge/Culvert
	Sidewalk		Street Trees/Landscaping
	Crosswalk		Driveway
	Graded/Landscaped Area		Existing Watercourse
	New Signal/Signal Upgrade		

CONCEPTUAL PLAN



CIA © 2009 *Route 305 Corridor Study*

Figure 4-5.
Marshall Phelps Road
Localized Improvement Concept

4.2.1.e Route 305 (Old Windsor Road) at Mill Brook Crossing

Recent flooding over Route 305 at the Mill Brook culvert crossing in Fall 2008 highlighted concerns at the crossing relative to the hydraulic capacity of the culvert and its ability to convey heavy flows during major rain events. The roadway at the culvert crossing is also a concern due to the narrowed lanes and shoulders and the proximity of a commercial drive that experiences a significant volume of turning traffic. Figure 4-5 illustrates the improvement concept at the Mill Brook Crossing.



Identified Issues & Needs

- Roadway can flood during major rain events due to the limited hydraulic capacity of the Mill Brook culvert.
- Roadway narrows to less than 30 ft wide at the brook crossing, which precludes potential provisions for standard 11 ft travel lanes and 4 ft shoulders in this location.
- Narrow roadway and guardrail at the culvert restrict the ability of through vehicles to bypass westbound vehicles stopped in traffic waiting to turn left. The constriction can impede through traffic flow.

Recommendations

- Widen roadway in conjunction with future culvert replacement to provide westbound left turn lane to existing property or to provide widened westbound shoulder that would accommodate bypassing traffic.
- New culvert should be sized to accommodate 11 ft travel lanes, 5 ft shoulders (preferred width for bicycle travel), and widening for a left turn lane. It is also recommended that the new culvert and roadway section not preclude provisions for potential future sidewalks along Route 305.

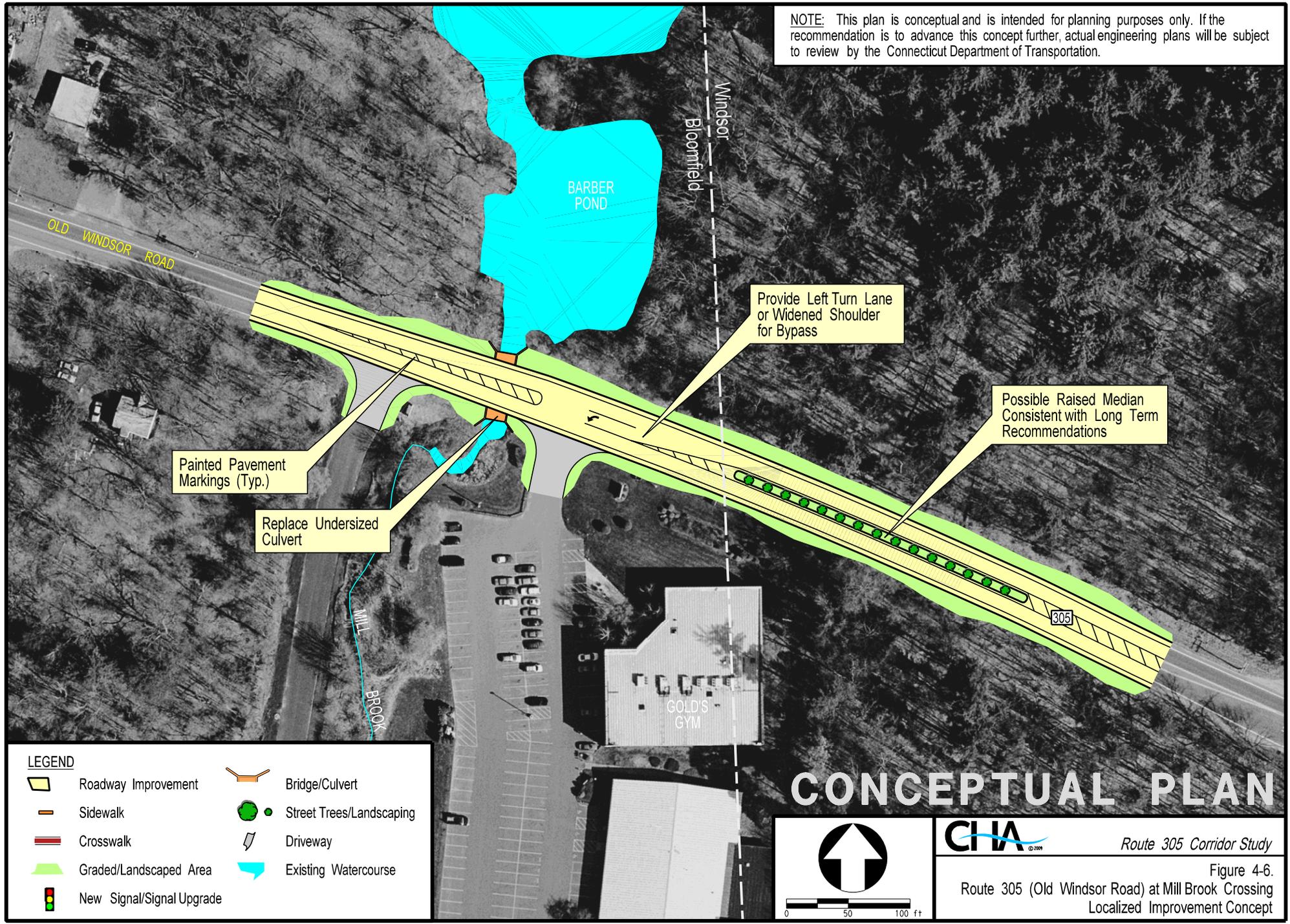
Other Considerations

- Consider providing 6 ft wide raised landscaped median at the eastern end of the widening consistent with the potential long-term capacity improvements near Marshall Phelps Road. Landscaped median would provide traffic calming benefits, would serve to signify the transition between Windsor and Bloomfield, and would be an extension of gateway treatments provided at the intersection of Marshall Phelps Road.

Summary of Impacts

- Minor right-of-way impacts associated with replacement of the culvert are anticipated on both sides of Route 305 in the improvement area. Minor grading rights could also be required along the property frontages on both sides of the roadway, particularly in Bloomfield where the ROW narrows to approximately 60 ft.
- Relocation of approximately 700 ft of overhead utility lines would be required along the north side of Route 305.
- Minor stream and floodplain impacts are anticipated near Mill Brook during construction.

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Painted Pavement Markings (Typ.)

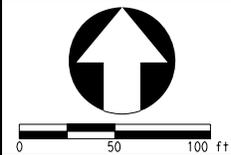
Replace Undersized Culvert

Provide Left Turn Lane or Widened Shoulder for Bypass

Possible Raised Median Consistent with Long Term Recommendations

LEGEND			
	Roadway Improvement		Bridge/Culvert
	Sidewalk		Street Trees/Landscaping
	Crosswalk		Driveway
	Graded/Landscaped Area		Existing Watercourse
	New Signal/Signal Upgrade		

CONCEPTUAL PLAN



CIA © 2009 *Route 305 Corridor Study*

Figure 4-6.
Route 305 (Old Windsor Road) at Mill Brook Crossing
Localized Improvement Concept

4.2.1.f East Newberry Road

The unsignalized intersection of East Newberry Road with Route 305 is a safety and operational concern due to poor intersection alignment and the location of the intersection on a sharp, non-standard horizontal curve. The study team developed two potential improvement concepts for this area that could be coordinated with other opportunities such as providing landscaping and gateway treatments along the frontage of the existing Kaman Corporation property, and exploring redevelopment potential of a portion of the Kaman property near the intersection of East Newberry Road. Discussions with Kaman Corporation indicate that one of the two alternatives is more feasible than the other, primarily because of their existing site usage. Figure 4.7 illustrates the most feasible improvement concept for East Newberry Road. The other alternative that was reviewed can be found in Appendix 4.



Identified Issues & Needs

- Non-standard curvature of Route 305 near intersection with East Newberry Road resulting in run-off-the-road accidents.
- Poor intersection alignment and skewed intersection approach of East Newberry Road to Route 305. Excess pavement within intersection results in poorly defined edge of roadway along Route 305 and poorly defined turning movements from East Newberry Road to Route 305.
- Unacceptable levels of service (LOS E and F) are expected on the East Newberry Road approach to Route 305 during the AM and PM peak hours under 2030 Baseline conditions.
- Existing Kaman Corporation property along Route 305 is lined with chain link fence and utility poles and is generally aesthetically unpleasing and stark. This area presents an opportunity to provide landscaping and gateway treatments that provide westbound travelers a first welcome to Bloomfield via Route 305.
- Openness and lack of trees along Kaman Corporation frontage result in unmitigated sun glare for westbound traffic during some times of the year.

Recommendations

- Provide standard roadway curvature along Route 305 while realigning roadway slightly north to avoid impacts to commercial developments located along the south side of Route 305 near the intersection. Realign East Newberry Road approach to Route 305 to provide a perpendicular and better-defined intersection.

- Provide gateway signing for westbound traffic and provide landscaping treatments along the Kaman Corporation property frontage to enhance aesthetics and to visually enclose roadway for traffic calming benefits. Figure 4-8 illustrates a conceptual landscaping plan for this area.



Artist rendering of potential aesthetic enhancements near East Newberry Road.

Other Considerations

- The study team investigated the feasibility of improving the curvature of Route 305 by shifting the alignment and the improvements to the south side of existing Route 305. Based on unavoidable impacts to existing commercial developments along the south side of the roadway in this area, the Advisory Committee deemed this alternative to be less desirable than the current alternative to shift the roadway to the north in order to improve the non-standard curvature.
- Estimated future traffic volumes under the 2030 Baseline and 2030 Baseline with Development conditions do not warrant signalization although delays could be significant and levels of service are anticipated to be unacceptable LOS E and F.
- Consider combining driveways along the southern properties to minimize curb cuts and providing access to Belden Road to encourage access management in conjunction with realigning Route 305 to the north.

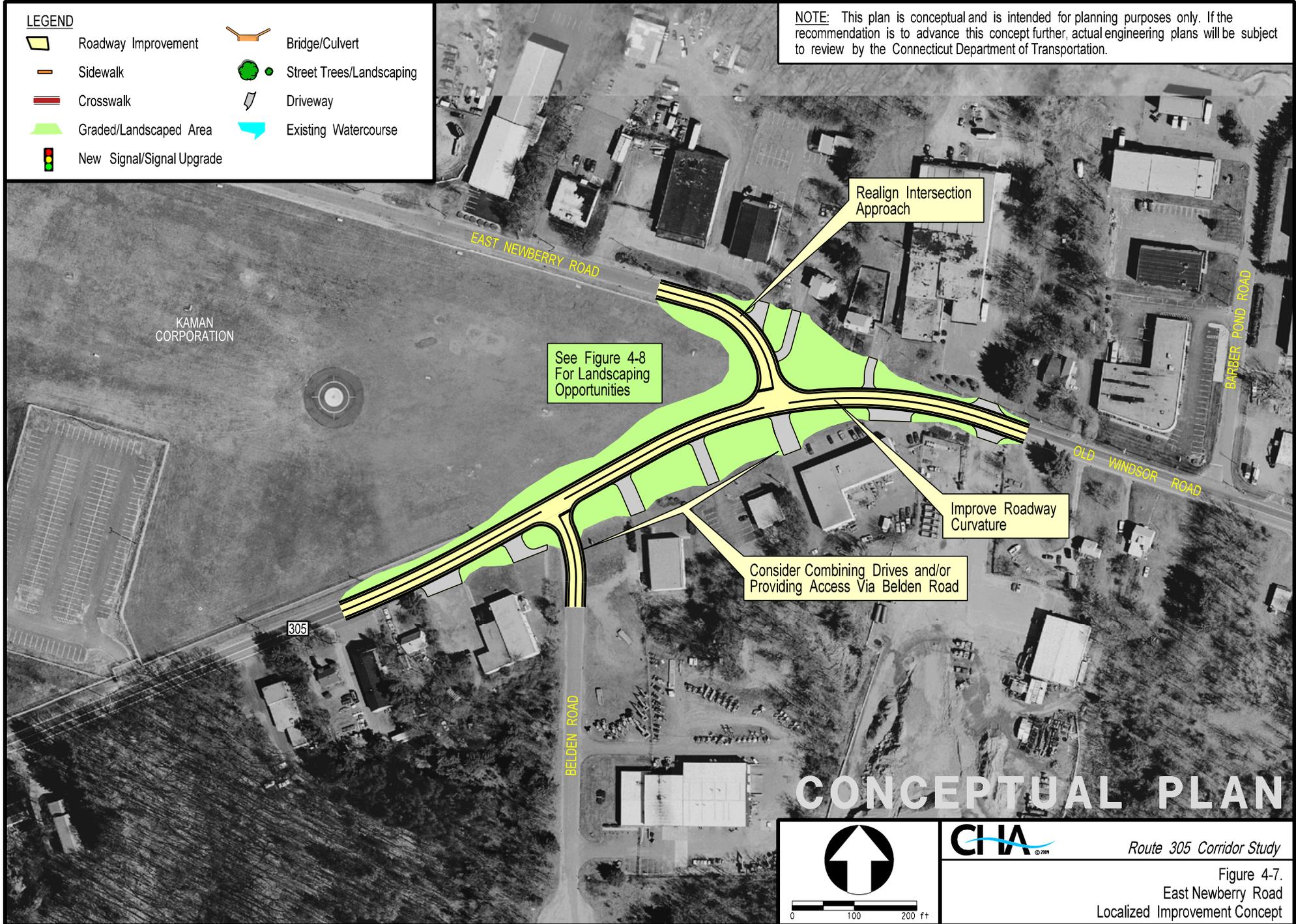
Summary of Impacts

- Right-of-way (ROW) impacts are anticipated along the existing Kaman Corporation property on the north side of Route 305 in the improvement area. No major ROW impacts to other properties are anticipated.
- Relocation of approximately 1000 ft of overhead utility lines would be required along the north side of Route 305. Relocation of 300 ft of overhead utility lines could potentially be required along the east side of East Newberry Road.
- No significant environmental impacts are anticipated; however, it is noted that the Kaman Corporation property was identified by the State Historic Preservation Office (SHPO) as potentially having engineering significance. As described in Section 2.4.1, SHPO would require additional analysis of the Kaman Corporation property as the recommendations are advanced beyond the study phase.

LEGEND

-  Roadway Improvement
-  Sidewalk
-  Crosswalk
-  Graded/Landscaped Area
-  New Signal/Signal Upgrade
-  Bridge/Culvert
-  Street Trees/Landscaping
-  Driveway
-  Existing Watercourse

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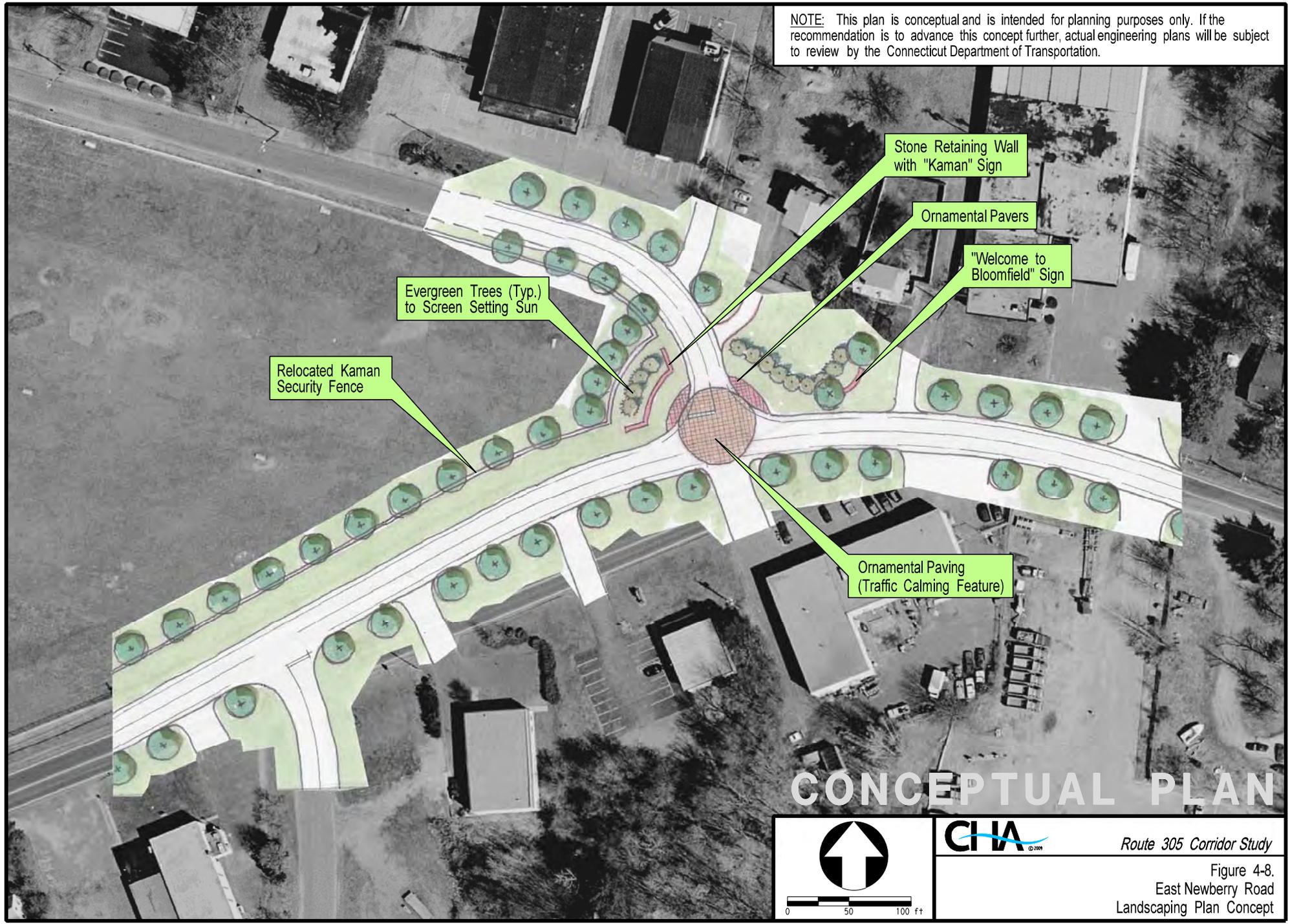
CONCEPTUAL PLAN



Route 305 Corridor Study

Figure 4-7.
East Newberry Road
Localized Improvement Concept

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Relocated Kaman Security Fence

Evergreen Trees (Typ.) to Screen Setting Sun

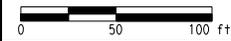
Stone Retaining Wall with "Kaman" Sign

Ornamental Pavers

"Welcome to Bloomfield" Sign

Ornamental Paving (Traffic Calming Feature)

CONCEPTUAL PLAN



Route 305 Corridor Study

Figure 4-8.
East Newberry Road
Landscaping Plan Concept

4.2.1.g Old Iron Ore Road

The unsignalized intersection of Old Iron Ore Road with Route 305 and the private driveway to the existing Kaman Corporation property was identified through the public outreach process as a safety concern due to the offset alignment of the side road and driveway intersections. Traffic delays resulting from relatively high volumes of traffic exiting the driveway to Route 305 during peak hours were also cited as concerns. Figure 4-9 illustrates the potential improvement concept at Old Iron Ore Road.



Identified Issues & Needs

- Slight offset between Old Iron Ore Road and private driveway intersections complicates turning movements and can contribute to driver confusion and delays.
- Pavement markings for a shared through-left lane on the private driveway approach align with the opposing left-through-right lane on Old Iron Ore Road, adding to driver confusion. Field observation indicates that the dedicated right turn lane on the private driveway approach is often used by motorists traveling through the intersection to Old Iron Ore Road.
- Large trucks entering and exiting Old Iron Ore Road often track off the existing pavement to avoid encroachment into opposing travel lanes, or encroach on the opposing travel lanes to avoid tracking over curbs.
- Old Iron Ore Road approach currently operates at LOS E during the AM peak hour. Private driveway approach (through-left movement) currently operates at LOS E and LOS F during the AM and PM peak hours, respectively.

Recommendations

- Realign private driveway and Old Iron Ore Road approaches to Route 305 to eliminate the existing offset between the intersections. Improve intersection turning radii in conjunction with this work to minimize encroachment of large trucks on opposing travel lanes during turning maneuvers.
- Provide wider shoulders if possible in the vicinity of the intersection to better accommodate turning maneuvers of large trucks and to provide opportunities for through traffic to bypass left turning traffic on Route 305.
- Monitor traffic conditions at the intersection for possible future signalization. A review of the signalization warrants for this intersection indicate that the Peak Hour Warrant (Warrant 3) is met during the PM peak hour only. Warrant 3 typically applies to office complexes, manufacturing plants, or facilities that attract or discharge large numbers of vehicles over a short time. Further analysis of the signalization warrants and coordination with ConnDOT would be required prior to signalization being approved for this intersection.

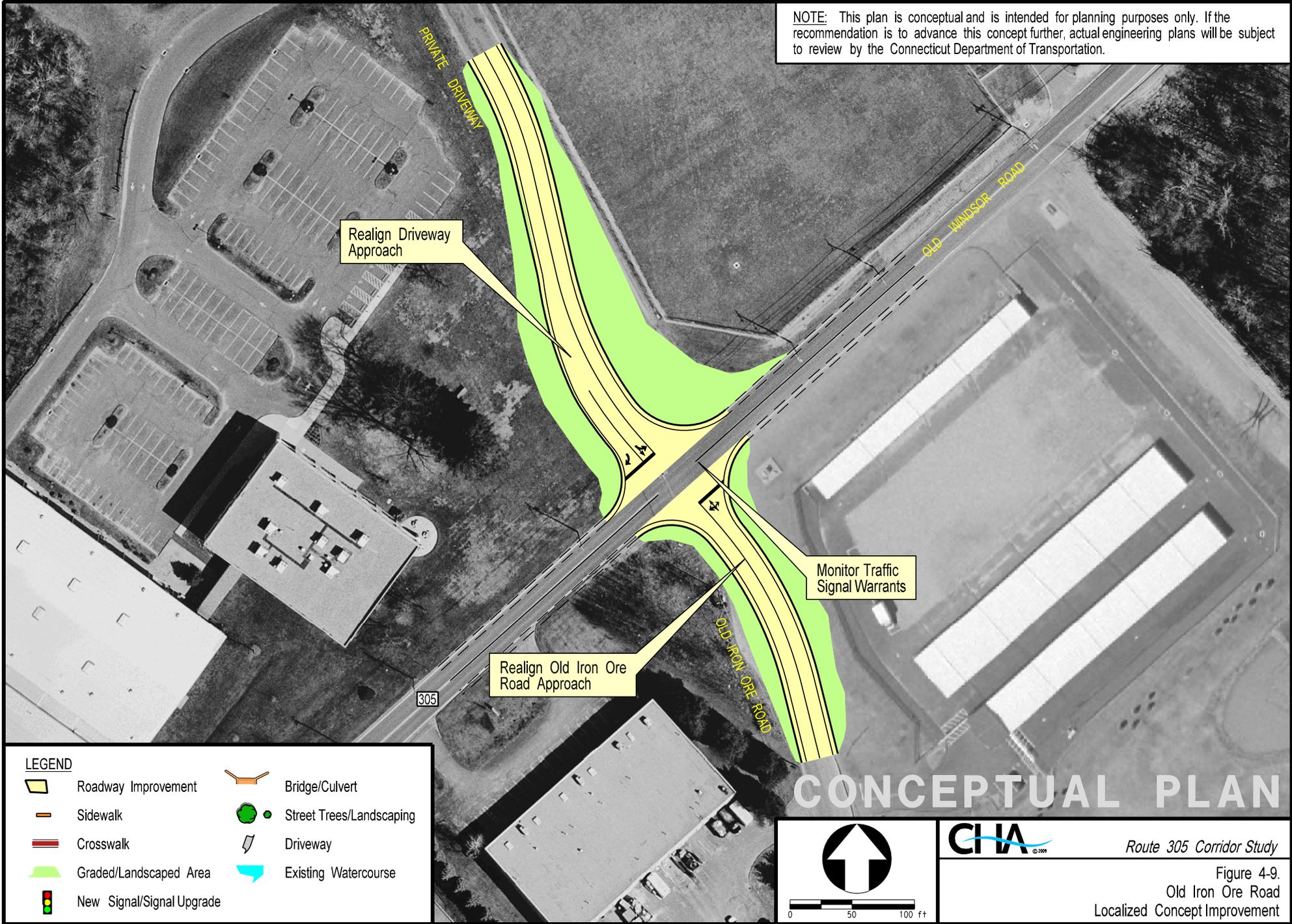
Other Considerations

- Improvements to the private driveway and Old Iron Ore Road intersection, including potential future signalization, would likely be privately funded by the property owner of the private driveway. These improvements would have to be coordinated and undertaken with cooperation from the Town of Bloomfield and ConnDOT.
- The existing private driveway approach could be re-striped in the near-term independently of the realignment of both approaches to provide a dedicated left turn lane and shared through-right lane. Currently, the driveway is striped to provide a shared through-left lane and dedicated right turn lane (as is recommended in the realignment concept); however, the study team’s field observation indicates that the dedicated right turn lane on the private drive approach is often used by motorists traveling through the intersection to Old Iron Ore Road. It is likely that the existing intersection alignment provides a more direct path across Route 305 from the private driveway to Old Iron Ore Road from the right lane on the private driveway.

Summary of Impacts

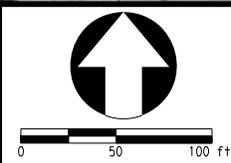
- Right-of-way (ROW) impacts are anticipated on the properties located in the northwest and southwest quadrants of the intersection.
- Relocation of at least one existing utility pole would be required on the north side of Route 305.
- No environmental impacts are anticipated.

NOTE: This plan is conceptual and is intended for planning purposes only. If the recommendation is to advance this concept further, actual engineering plans will be subject to review by the Connecticut Department of Transportation.



CONCEPTUAL PLAN

LEGEND			
	Roadway Improvement		Bridge/Culvert
	Sidewalk		Street Trees/Landscaping
	Crosswalk		Driveway
	Graded/Landscaped Area		Existing Watercourse
	New Signal/Signal Upgrade		



CMA © 2009
 Route 305 Corridor Study
 Figure 4-9.
 Old Iron Ore Road
 Localized Concept Improvement

4.2.1.h Route 187 (Blue Hills Avenue)

The improvement concept at the intersection of Route 305 and Blue Hills Avenue is representative of the near-term improvements to existing pedestrian accommodations that are recommended for all signalized intersections in the corridor as described in Section 4.2.4.a. In general, the improvements are targeted to improving accessibility to existing pedestrian push buttons and improving the awareness of motorists to potential pedestrian activity by providing crosswalks. The study team



believes that these measures are particularly important at the intersection of Blue Hills Avenue because of high traffic volumes, wide intersection approaches, and long pedestrian crossing distances that contribute to an unsafe and unfriendly pedestrian environment. Figure 4-10 illustrates the improvement concept at Blue Hills Avenue.

Identified Issues & Needs

- Lack of curb cuts and sidewalk ramps to existing pedestrian push buttons limit accessibility for disabled users.
- Lack of crosswalk markings provide no indication to motorists that pedestrian activity could be present in this intersection.
- Generally unsafe pedestrian environment in the intersection due to high traffic volumes, wide intersection approaches, and lack of appropriate pedestrian facilities.

Recommendations

- Install curb-cuts and sidewalk ramps that conform to the current Americans with Disabilities Act Accessibility Guidelines (ADAAG) to improve accessibility to existing pedestrian push buttons. Curb-cuts and ramps should be provided in all quadrants of the intersection to provide refuge off of the roadway surface for pedestrians waiting to cross.
- Provide painted crosswalk markings in the immediate near-term.
- Provide textured and colored crosswalks and intersection pavement in conjunction with next scheduled pavement maintenance at this intersection.

Other Considerations

- The recommendations generally apply to existing signalized intersections in the corridor.
- Additional enhancements to improve pedestrian safety and accessibility should be considered in conjunction with possible future redevelopment of the Blue Hills Avenue intersection area as discussed in Section 4.3.

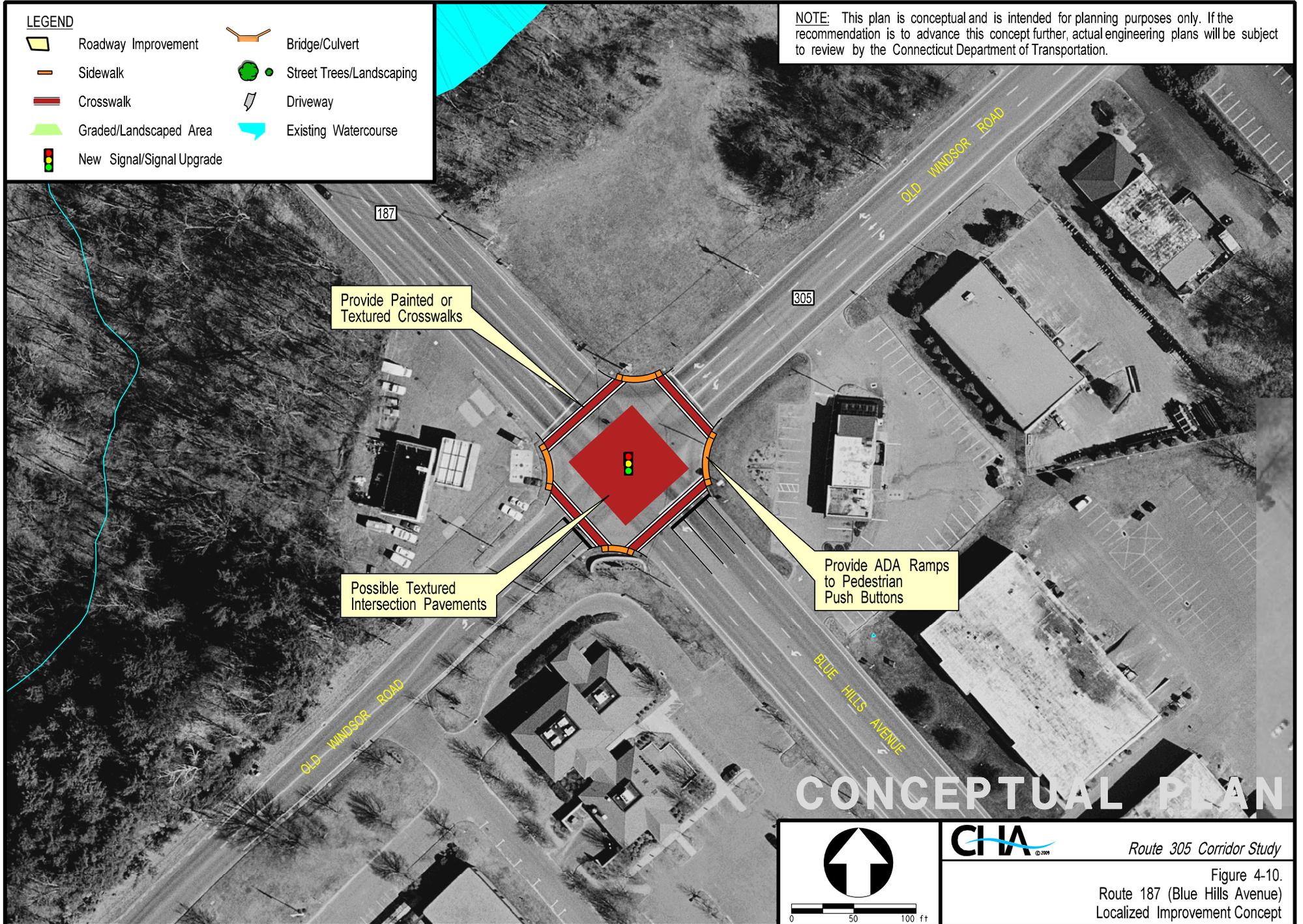
Summary of Impacts

- Minor grading impacts could result from installing sidewalk ramps in each of the four quadrants. No right-of-way impacts are anticipated.
- No environmental impacts are anticipated.

LEGEND

-  Roadway Improvement
-  Sidewalk
-  Crosswalk
-  Graded/Landscaped Area
-  New Signal/Signal Upgrade
-  Bridge/Culvert
-  Street Trees/Landscaping
-  Driveway
-  Existing Watercourse

NOTE: This plan is conceptual and is intended for planning purposes only. If the recommendation is to advance this concept further, actual engineering plans will be subject to review by the Connecticut Department of Transportation.

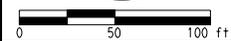


Provide Painted or Textured Crosswalks

Possible Textured Intersection Pavements

Provide ADA Ramps to Pedestrian Push Buttons

CONCEPTUAL PLAN



Route 305 Corridor Study

Figure 4-10.
Route 187 (Blue Hills Avenue)
Localized Improvement Concept

4.2.1.i Estimated Construction Costs for Localized Improvement Concepts

The study team developed planning-level construction cost estimates for the various improvement concepts presented in this section in accordance with the procedures and assumptions provided in ConnDOT's *Preliminary Cost Estimating Guidelines* dated January 2009. The cost estimates are intended to help guide the prioritization and programming of the improvement projects as the municipalities, CRCOG, and ConnDOT pursue improvements in the Route 305 corridor.

The construction cost estimates assume the following conditions:

- Roadway widening would be accomplished by providing a new, full-depth, bituminous concrete pavement structure beyond the limits of the existing pavement surface.
- Existing pavement surfaces adjacent to widened sections would be milled and repaved with new bituminous concrete pavement.
- Roadway and intersection realignments would be accomplished by reconstructing the entire existing roadway or intersection and providing a full-depth, bituminous concrete pavement structure.
- Estimated construction costs are based on estimates for major construction items (pavement, subbase, earthworks, bridge structures, drainage, curbing, etc.) with contingencies added for minor construction items and additional percentages for lump sum items such as maintenance and protection of traffic, mobilization, and construction staking.
- Cost allowances for right-of-way acquisitions, utility relocations, environmental mitigation, and engineering are not included in the cost estimates.

For planning purposes, the cost estimates are represented in 2009 dollars and 2014 dollars to illustrate the effect that compounding inflation has on the estimated construction cost values over an assumed implementation period of five years for the localized improvements. The estimated costs in 2014 dollars were determined using an annual inflation rate of 6% in accordance with ConnDOT guidelines.

Table 4-1. Planning-level Construction Cost Estimates for Localized Improvement Concepts

Improvement Location	Estimated Cost (2009 \$)	Estimated Cost (2014 \$)	Notes
Windsor			
<ul style="list-style-type: none"> • Interchange 37 to Brookview Road 	\$ 2.1 million	\$ 2.8 million	
<ul style="list-style-type: none"> • Sheffield Drive and Brewster Road 	\$ 820,000	\$ 1.1 million	
<ul style="list-style-type: none"> • Addison Road 	\$ 600,000	\$ 800,000	
<ul style="list-style-type: none"> • Marshall Phelps Road 	\$ 1.0 million	\$ 1.4 million	
Bloomfield			
<ul style="list-style-type: none"> • Route 305 (Old Windsor Road) at Mill Brook Crossing 	\$ 750,000	\$ 1.0 million	Excludes median treatment
<ul style="list-style-type: none"> • East Newberry Road 	\$ 1.8 million	\$ 2.4 million	
<ul style="list-style-type: none"> • Old Iron Ore Road 	\$ 480,000	\$ 640,000	
<ul style="list-style-type: none"> • Route 187 (Blue Hills Avenue) 	\$ 390,000	\$ 520,000	