NY 7/NY 146 Land Use and Transportation Study
Rotterdam, New York

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NY 7 / NY 146 Land Use and Transportation Study

Project Team

Town of Rotterdam, NY
   Steven A. Tommasone, Town Supervisor
   Peter Comenzo, Town Planner

Capital District Transportation Committee
   Deb Stacey, Senior Transportation Planner

Schenectady County Economic Development and Planning
   Steve Feeney

NYDOT- Region 1
   Mike Wyatt
   Susan Olsen

NYSTA- Albany Division
   Phil Serafino

Synthesis LLP
   Richard Eats, RLA, ASLA, Principal
   Ian Law, RLA, Project Manager

Creighton Manning Engineering
   Mark Sargeant, Project manager
   Denise Doran, Traffic Engineer
# NY 7 / NY 146 Land Use and Transportation Study

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Executive Summary

The NY 7/ NY 146 Land Use and Transportation Study Area focuses on an area in the Town of Rotterdam, New York, which includes approximately 768 acres along Hamburg Street, Carman Road, and Curry Road. The study area currently contains a mix of commercial, residential and civic uses along the primary arteries with large residential neighborhoods located behind the state road network. Due to the study areas direct connection to I-890, I-90 and its link to Schenectady, as well as the vast neighborhood populations within the study area there are excellent opportunities for development and redevelopment that can give this area of Rotterdam a new identity and opportunities for economic development.

The intent of this study is to compliment the Town of Rotterdam’s Comprehensive Plan and to ensure that future commercial and industrial growth is appropriately located within the study area. The goals of the Town are to ensure that the future growth in the study area:

- Attracts appropriate development;
- Is planned to minimize impacts to the transportation system;
- Compliments the surrounding residential neighborhoods; and
- Provides a new and inspired identity to the Hamburg Street Commercial District

Consequently, the Town of Rotterdam with assistance of the Capital District Transportation Committee (CDTC) has undertaken this study to examine future land use options for the area and examine the implications and opportunities for the local transportation system and surrounding land uses.

Work on the study began by with a comprehensive inventory of the existing conditions, which included a detailed analysis of the study areas existing land-uses, zoning, utilities and overall transportation system. The following are the key findings of the inventory of existing conditions:

- Zoning: The majority of the NY 7/ NY 146 corridor is zoned “Retail Business”, with the majority of the land surrounding the primary corridors zoned “One-Family Residential”

- Land-use: The existing land-uses along the Hamburg Street corridor demonstrate a “mixing of incompatible uses” where single family dwellings are intermingled with auto-oriented commercial establishments.

- Utilities: The study area is entirely within the town water district. Noticeably absent however is the existence of a sewer line along the Hamburg Street commercial corridor, perhaps the study areas greatest deficiency with regard to economic development.
• Transportation System: The primary characteristics of the existing transportation system are as follows:
  
  o Typically Two-lane roadways
  o Bicycle accommodations exist in some locations but are inadequate and unsafe
  o Numerous uncontrolled driveways and an overall lack of access management
  o The existing sidewalks are either discontinuous or missing
  o Two bus routes currently serve the study area but are expected to be underutilized because the existing sidewalk system does not effectively or safely connect to them.
  o There is some peak hour delay especially at the NY7/ NY 146 intersection
  o Some midblock sections of the NY 146 and NY route 7 experience crash rates somewhat above the state average.
  o The NY 7/ NY 146 intersection and the Carman Road/ NY thruway entrance and exit experience crash rates above the state average.
  o The proposed NYSDOT Round-about project could significantly reduce the peak hour delay and overall traffic flow.

Following the existing conditions inventory an assessment of the study area’s assets and liabilities was conducted to gain insight and understanding of opportunities, and constraints within the project area. The key assets in the study area are as follows:

  o The study areas direct connection to I-890, I-90 and the City of Schenectady
  o The dense residential neighborhoods surrounding the primary corridors
  o Two parks within the study area provide areas for active recreation.
  o Vacant land in key locations offers excellent opportunities for future development.
  o Civic and cultural land uses such as several churches and the Senior Center exist within the study area.

The study areas key liabilities are as follows:

  o Lack of Gateways entering the study area
  o The mixing of “incompatible uses” along the commercial corridors within the study area has led to a “confused identity”.
  o The lack of a sewer line along the Hamburg Street Corridor limits economic development opportunities.
The lack of continuous sidewalks throughout the study area has created a vehicular dependent community that is unsafe to walk. Lack of access management along Hamburg Street. The architectural quality along the Hamburg Street corridor is lacking and provides opportunity for improvement.

Following the assessment of existing conditions the project team conducted a public “Visioning Workshop” to elicit community input on major issues, concerns, and potential alternatives/opportunities for land use and transportation improvements within the study area.

The design phase of the project resulted in the development of the following four recommended zoning districts:

1) **Main Street/Neighborhood Center District**: This district is recommended to be located in the heart of the Hamburg Street commercial corridor and specifically utilize the vacant Grand Union site to create a small pedestrian friendly Mixed-use Core.

2) **Corridor Commercial Zone**: The Corridor Commercial Zone (CORR) is intended to support infill and redevelopment along existing commercial corridors.

3) **Commercial Planned Unit Development**: The Commercial Planned Unit Development Zone (C-PUD) is located to serve a community or regional market area.

4) **Professional Office Residential**: The Professional Office Residential District is intended to allow commercial non-retail uses while maintaining a residential character.

The first step in implementing the recommendations summarized above would be consideration of an amendment to the Town’s Comprehensive Plan to outline the goals and objectives of the new zoning districts. The next step would be to initiate the procedures necessary to adopt the zoning amendments.

Upon adoption of the recommended zoning amendments the Town could immediately pursue many of the available grants outlined in this document to expand upon the study areas sidewalk system to improve connectivity and overall pedestrian safety, as well as many other programs to foster economic development and smart growth.

In addition, once the revised zoning code and district boundaries are in place the Town’s Planning Commission can use the document as a tool to consistently enforce the zoning requirements and make clear to developers planning new development within the study area that they must not only meet the performance measures but will in some instances be expected to improve or expand elements outside of their parcel lines, such as sidewalks, due to the fact that their project will or should encourage safe pedestrian and vehicular movement from the surrounding neighborhoods and adjacent commercial properties.
I. Introduction

A. Overview

The NY 7/ NY 146 Land Use and Transportation Study Area focuses on an area in the Town of Rotterdam, New York, which includes approximately 768 acres along Hamburg Street, Carman Road, and Curry Road. The study area currently contains a mix of commercial, residential and civic uses along the primary arteries with large residential neighborhoods located behind the state road network. Due to the study area's direct connection to I-890, I-90 and its link to Schenectady, as well as the vast neighborhood populations within the study area there are excellent opportunities for development and redevelopment that can give this area of Rotterdam a new identity and opportunities for economic development.

The intent of this study is to compliment the Town of Rotterdam’s Comprehensive Plan and to ensure that future commercial and industrial growth is appropriately located within the study area. Future development opportunities will be enhanced from a traffic flow standpoint by the new roundabout that NYSDOT will be constructing at the NY-7 / NY 146 intersection. As part of the Town’s future plans to bring sewer lines to the Hamburg Street Commercial District the proposed roundabout will stub-out sewer lines in planning for the future expansion of the Town’s sewer line system. If and when the sewer lines are expanded to the Hamburg Street Commercial District it will significantly increase the development pressure in the area.

The goals of the Town are to ensure that the future growth in the study area:

- Attracts appropriate development;
- Is planned to minimize impacts to the transportation system;
- Compliments the surrounding residential neighborhoods; and
- Provides a new and inspired identity to the Hamburg Street Commercial District

Consequently, the Town of Rotterdam with assistance of the Capital District Transportation Committee (CDTC) has undertaken this study to examine future land use options for the area and examine the implications and opportunities for the local transportation system and surrounding land uses.

To provide the town with a clear framework for the future development in this area, new land uses have been proposed to offer flexibility through the mix of uses, but at the same time develop clear Performance Standards and Design Guidelines have been designed to ensure architectural quality, pedestrian and vehicular safety, and improve the area’s sense of place.
Study Area

The NY 7/ NY 146 Study Area is located within the Town of Rotterdam surrounding the NY 7/ NY 146 intersection. As Map 1 illustrates, The Study area stretches northbound along Hamburg Street until it reaches 4th Street. The northern boundary extends to the East along 4th Street to 3rd Avenue and west along Roberta Road where it follows the eastern limits of the neighborhood until it intersects Curry Road and Ft. Hunter Road. The eastern limits of the study area are defined by I-890 and a line extending from 3rd Avenue southward. Ft. Hunter Road and Carman Road define the southern and western borders of the study area.
B. Study Organization

In addition to this INTRODUCTION, there are two remaining sections of the report, along with attached mapping and appendices, which are described as follows:

Section II. RECOMMENDATIONS discusses the alternative land-use development options that resulted from this study. The section includes descriptions of the proposed land-use development districts, which highlight the general intent of each land-use, defining new land-uses and/or zoning districts that may be required, and the potential impacts to the existing transportation system and surrounding neighborhoods.

Section III. IMPLEMENTATION provides information on the recommended course of action to implement the proposed land-use, zoning, and performance standards.

The Appendices provide detailed information on background conditions, the process of conducting the study and other information used to complete the study.

C. Study Approach

The Town and the CDTC selected the Synthesis LLP team, which includes Creighton Manning Engineering, to assist them in the preparation of the Study. They also assembled a Study Advisory Committee (SAC) to help direct the Study and provide input from other agencies. In addition to representatives from the Town and CDTC, the SAC included representatives from the New York State Department of Transportation, the New York State Thruway Authority, and Schenectady County Planning Department.

Work on the study began with a comprehensive inventory of the existing conditions. The SAC supplemented the Synthesis Team’s document research and field analysis at the first working committee meeting, at which time Synthesis and Creighton Manning Engineering presented the existing conditions data for verification and possible correction.

Following the assessment of existing conditions the project team conducted a public “Visioning Workshop” to elicit community input on major issues, concerns, and potential alternatives/opportunities for land use and transportation improvements within the study area. Appendix A contains a copy of the PowerPoint Presentation conducted at the visioning workshop, which reviews the existing conditions as well as the study areas assets, liabilities and potential opportunities for future development improvements. Map 2 is a graphic compilation of ideas for future development within the study area that were generated at the workshop by the participating citizens.

The project team then met with the SAC to review the public workshop and transition into the production phase of the study. The Synthesis Team then developed a draft proposed Land-Use Map as illustrated in Map 3A. Appendix B contains the draft zoning language for the corresponding land-use and zoning districts.
The Synthesis Team conducted a second public workshop to present the proposed land-uses and corresponding draft zoning language. A copy of the PowerPoint presentation is contained in Appendix C. The project team reviewed the public comments and input from the workshop with the SAC to achieve consensus on the approach for an implementation strategy and production of the Draft Final Report.

Appendix D contains the final recommended Land-Use mapping along with prototypical development diagrams for several of the proposed zoning districts. The final recommended Land-Use mapping is also referred to as Map 3 in the Maps section of the report. The revised draft zoning language and performance standards are contained in Appendix E.

Prior to the Town Board Presentation and Final Report the project team submitted the final presentation and Final Report to the SAC. The presentation to the Town Board included the identification of existing conditions, the presentation of the Conceptual Land-Use Plan including suggested zoning revisions, and identification of transportation impacts of the plan. A copy of the final presentation to the Town Board is contained in Appendix F.
Existing Conditions

1. Overview
The existing conditions in the study area will continue to influence future development potential if current regulations are maintained. However, if changing the current development pattern to a traditional development pattern is deemed appropriate, which would create a stronger relationship to both the surrounding residential neighborhoods as well as to I-890 and I-87, it would provide the opportunity for other types of viable development within the study area. Map 1 is an aerial photograph of the study area and includes the study area boundary, road names, and parcel lines. The physical understanding of the current development pattern of roads, pedestrian system, housing, and commercial structures in conjunction with the existing land use, zoning, and utilities provide the framework for a professional analysis of the study area’s assets and liabilities which provides direction for positive change in the Town. (See Appendix A for additional existing conditions analysis)

2. Land Use / Zoning / Utilities

a. Zoning
The study area currently contains a variety of zoning districts. The majority of the NY 7/NY 146 corridor is zoned “Retail Business,” with a few large parcels zoned “Multi-Family Residential” and a few isolated parcels zoned “General Business.” The majority of the remaining lands surrounding the primary corridors are zoned “One-Family Residential,” with several large areas zoned “Agricultural.” (See Map 4)

Much of the zoning districts within the study area conflicts with the existing land-uses and as a result creates the mix of incompatible uses along the corridor. This situation is particularly prevalent along Hamburg Street where single family dwellings are intermingled with auto-oriented commercial establishments.

b. Land-use
The Land-use Map (Map 5) demonstrates the “mixing of incompatible uses” along the corridor, included as previously mentioned the Hamburg Street section. The context of land-uses surrounding Hamburg Street is consistent with the zoning map and is dominated by single-family residential neighborhoods.

c. Utilities

The study area is entirely within the town water district. Noticeably absent however is the existence of a sewer line along the Hamburg Street commercial corridor, perhaps the study areas greatest deficiency with regard to economic development. As part of the D.O.T. proposed round-a-bout project for the NY 7/NY 146 intersection, the Town will “piggyback” the construction and add sewer line stub-outs for the future expansion of the sewer line connection to Schenectady. Extending sewer service would expectedly increase the development pressure.
along Hamburg Street and likewise increase opportunities for economic development within the study area.

3. Transportation System

a. Roadways and Characteristics

The study area consists of three primary roadways – 1) NY Route 146 (Hamburg Street / Carman Road) which extends in a north-south direction; 2) NY Route 7 (Curry Road) which extends in a general east-west direction, and 3) County Road 71 (Fort Hunter Road), which extends between Carman Road and Curry Road in the southwest portion of the study area.

All of the roadways are two-lane roadways, meaning there is a single travel lane in each direction. The roadway segments are characterized by numerous intersecting driveways and streets. This is relevant because the number and frequency of driveways is related to traffic operations and safety. The following graph is an excerpt from the 2003 Access Management Manual, published by the Transportation Research Board. It shows the relationship between accidents rates, signal density and unsignalized access points per mile and that accident rates increase with increased driveways. The study area roadways have 2 or fewer traffic signals per mile, with driveway densities on the order of 60 to 65 driveways per mile. One of the goals of this study is insure that sufficient mechanisms exist to aide the Town and the NYSDOT to preserve and improve roadway safety and operations, by minimizing the negative affect of new driveways and traffic signals.

Chart 1.0 – Accident Rates versus Access Points
b. Bicycle and Pedestrian Accommodation

Relatively narrow shoulders exist on both sides of all three of the primary study area roadways. The shoulders generally measure 2 to 3 feet in width. State Bike Route 5 is designated along the shoulder of NY Route 146 (Hamburg Street/Carman Road).

Sidewalks are intermittent and discontinuous. Portions of sidewalk exist on the north side of Curry Road, and along both sides of Hamburg Street, with notable gaps in the network. There are no sidewalks on Carman Road or at the NY7/NY146 intersection. The shoulders along Fort Hunter Road are 3 feet wide and offer some accommodation for pedestrians.

Pedestrian crosswalks exist at a few locations and are absent altogether at some of the traffic signals. Crosswalks exist on Hamburg Street near the churches close to Curry Rd, at Arlene Street, and at East Campbell Street. Crosswalks also exist on Curry Road at Fort Hunter Road, and near the driveway to the church on corner of Hamburg Street. Sidewalks are not present at all transit stops as described below. There is a need to improve the continuity and connectivity of the pedestrian system with state of the practice pedestrian crossing opportunities compliant with the latest guidance from the American’s with Disabilities Act.

c. Existing Traffic Volumes

Average Daily Traffic (ADT) volumes on NY Route 146 and NY Route 7 range from 10,500 vehicles per day to 13,500 vehicles per day depending on the specific location.

Peak hour volumes are fairly balanced north-south, but are highly directional east-west along Curry Road with predominant flow directions being eastbound in the morning and westbound in the evening.

The following table summarizes the traffic volume characteristics of the study area roadways.
Table 1.1 – Study Area Traffic Volume Characteristics

<table>
<thead>
<tr>
<th>Segment</th>
<th>AADT (vpd)</th>
<th>AM Peak</th>
<th>K</th>
<th>PM Peak</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D1</td>
<td>D2</td>
<td>Total</td>
<td>D1</td>
<td>D2</td>
</tr>
<tr>
<td>Hamburg St. (NY 146) – 4th St. to Curry Rd. (NY 7)</td>
<td>10,441</td>
<td>352</td>
<td>319</td>
<td>671</td>
<td>0.06</td>
</tr>
<tr>
<td>Carman Rd. (NY 146) – Curry Rd. (NY 7) to Ft. Hunter Rd.</td>
<td>13,075</td>
<td>550</td>
<td>610</td>
<td>1160</td>
<td>0.09</td>
</tr>
<tr>
<td>Curry Rd. (NY 7) – Ft. Hunter Rd. to NY 146</td>
<td>13,245</td>
<td>645</td>
<td>358</td>
<td>1003</td>
<td>0.08</td>
</tr>
<tr>
<td>Curry Rd. (NY 7) – NY 146 to I-890</td>
<td>13,572</td>
<td>692</td>
<td>379</td>
<td>1071</td>
<td>0.08</td>
</tr>
</tbody>
</table>

D1 = northbound or eastbound, D2 = southbound or westbound
K = Peak hour traffic as a percent of the daily traffic.

d. Existing Traffic Operations (Levels of Service)

Levels of Service (LOS) at intersections is a measure of the quality of traffic flow and is expressed in terms of average delay per vehicle. LOS ranges from LOS A (little or no delay) to LOS F (excessive delay, greater than 80 seconds). The following table summarizes the existing PM peak hour levels of service at the study area intersections as representative of worse case conditions.

Table 1.2 – Overall 2006 Level of Service Summary

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Overall Intersection (LOS)</th>
<th>PM Peak Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curry Rd. (NY 7)/Carman Rd. (NY 146)/Hamburg St. (NY 146)</td>
<td>F</td>
<td>5-6 min westbound</td>
</tr>
<tr>
<td>Ft. Hunter Rd./Carman Rd (NY 146)</td>
<td>F</td>
<td>3-4 min eastbound</td>
</tr>
<tr>
<td>Carman Rd. (NY 146)/NYSTA Entrance/Exit</td>
<td>E</td>
<td>2-3 min westbound</td>
</tr>
<tr>
<td>Curry Rd. (NY 7)/Ft. Hunter Rd.</td>
<td>B</td>
<td>&lt; 1 min.</td>
</tr>
<tr>
<td>Hamburg St. / East Campbell Rd</td>
<td>B</td>
<td>&lt; 1 min.</td>
</tr>
</tbody>
</table>

The table shows that three of the study area intersections currently experience LOS E or F during the peak hour with worst case delays of two (2) to six (6) minutes. The long delay at the Curry Road / Hamburg Street/Carman Road intersection corresponds to the peak commuter travel direction. The long eastbound delay at the Carman Road / Fort Hunter Road intersection occurs during the PM peak hour because Fort Hunter Road is used as a “short-cut” for those traveling from Curry Road to the NYS Thruway.
e. Existing Vehicular Safety

Vehicular crash data was reviewed based on the most recent three years of available data. The crash data is summarized in the following tables for both intersection and non-intersection (midblock) accidents and expressed in terms of an accident rate. The rate is compared to average rates to see if the study area locations are above or below statewide averages for similar facilities. For segments, the rate is expressed as the number of accidents per million vehicle miles traveled (MVM), and for intersections, the rate is expressed in terms accidents per million vehicles entering (MVE).

These tables show that some midblock sections of NY Route 146 and NY Route 7 experience crash rates somewhat above the statewide average. Only Fort Hunter Road is below the statewide average. Two intersections experience rates above the statewide average. These are the Curry Road/Hamburg Street/Carman Road intersection, and the Carman Road/NYS Thruway entrance/exit intersection.

Contributing factors were primarily driver inattention, following too closely, and failure to yield the ROW.

It should be noted that the NYSDOT is in the final design stages of a safety improvement at the Curry Road/Hamburg Street/Carman Road intersection. The project involves replacing the existing traffic signal with a single lane roundabout. Pedestrian accommodations, to include sidewalks and crosswalks, will be provided in all intersection quadrants where there are none today.
Table 1.3 – Midblock Accident Rates.

<table>
<thead>
<tr>
<th>Segment</th>
<th>AADT (vpd)</th>
<th>Segment Length (mi.)</th>
<th>No. of Accidents</th>
<th>Accident Rate (Acc/MVM)</th>
<th>Statewide Avg. Accident Rate (Acc/MVM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburg St. (NY 146) – 4th St. to Curry Rd. (NY 7)</td>
<td>10,441</td>
<td>1.0</td>
<td>124</td>
<td>5.63</td>
<td>3.66</td>
</tr>
<tr>
<td>Carman Rd. (NY 146) – Curry Rd. (NY 7) to Ft. Hunter Rd.</td>
<td>13,075</td>
<td>0.45</td>
<td>56</td>
<td>4.51</td>
<td>3.66</td>
</tr>
<tr>
<td>Curry Rd. (NY 7) – Ft. Hunter Rd. to NY 146</td>
<td>13,245</td>
<td>0.7</td>
<td>89</td>
<td>3.68</td>
<td>3.66</td>
</tr>
<tr>
<td>Curry Rd. (NY 7) – NY 146 to I-890</td>
<td>13,572</td>
<td>0.45</td>
<td>69</td>
<td>4.11</td>
<td>3.66</td>
</tr>
<tr>
<td>Ft. Hunter Rd. – Curry Rd. (NY 7) to Carman Rd. (NY 146)</td>
<td>4,150</td>
<td>0.95</td>
<td>19</td>
<td>2.28</td>
<td>3.66</td>
</tr>
</tbody>
</table>

Table 1.4 – Intersection Accident Rates

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AADT (vpd)</th>
<th>No. of Accidents</th>
<th>Accident Rate (Acc/MEV)</th>
<th>Statewide Avg. Accident Rate (Acc/MEV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carman Rd. (NY 146) &amp; Ft. Hunter Rd</td>
<td>18,500</td>
<td>6</td>
<td>0.15</td>
<td>0.16</td>
</tr>
<tr>
<td>Carman Rd. (NY 146) &amp; Thruway Entrance</td>
<td>15,630</td>
<td>16</td>
<td>0.49</td>
<td>0.35</td>
</tr>
<tr>
<td>Carman Rd. (NY 146) &amp; Curry Rd. (NY 7)</td>
<td>21,230</td>
<td>53</td>
<td>1.18</td>
<td>0.60</td>
</tr>
<tr>
<td>Curry Rd. (NY 7) &amp; Ft. Hunter Rd.</td>
<td>15,990</td>
<td>7</td>
<td>0.21</td>
<td>0.60</td>
</tr>
</tbody>
</table>
f. Existing Transit Operations
The study area is served by two existing CDTA routes – Route 53, and Route 63. Route 53 serves a loop around Hamburg Street and Curry Road throughout the day. Route 63 runs between downtown Schenectady and downtown Albany, and only operates during the morning and afternoon commuter periods.

Bus stops exist on both sides of NY-7 and NY-146 within the study boundary; however in many instances sidewalks are only on one side of the street or missing altogether resulting in a lack of connectivity and safety for transit users. Only one bus stop has a shelter for transit riders - on the northeast corner of East Campbell Road.

Transit routes throughout the study area are subject to change as CDTA is revising and restructuring their transit routes throughout the Capital District. CDTA’s current plans involve:
- Creating two major trunk routes and connect new bus lines servicing neighborhoods
- Increase frequency of service to Route 20; terminating at Crossgates Mall.
- Eliminate the loops that change direction (Route 53)

D. Existing Assets and Liabilities

1. Overview
Following the existing conditions inventory an assessment of the study area’s assets and liabilities was conducted to gain insight and understanding of the strengths, weaknesses, opportunities, and constraints within the project area. A visual representation of the study area’s assets and liabilities is provided in the first visioning workshop Power Point presentation, included herewith. (See Appendix A)

2. Assets
The study area’s spatial relationship to I-890, I-90 and the City of Schenectady provides excellent accessibility, which in turn makes the area attractive for future commercial, residential, and light industrial development. Perhaps the greatest asset of the NY 7 / NY 146 study area is the dense residential neighborhoods within close proximity of the primary road network. This neighborhood fabric is the foundation of the overall community and provides the study area’s commercial district the opportunity to reinvent itself since many of the neighborhood residents are within a 5-10 minute walk of the Central Business District on northern Hamburg Street. An aerial image included in the PowerPoint Presentation conducted at the visioning workshop illustrates the study area with five (5) and ten (10) minute walking distance circles.

In addition to its strong neighborhood fabric the study area also includes two parks. Esposito Park is located to the south of the study area off of Curry Road in close proximity to the NY 7 / NY 146 intersection and includes many active recreation uses such as softball and playground areas. Carman Park is located to the north of the study area in the neighborhood just east of Hamburg St. This park includes playgrounds, basketball courts and a competitive Little League Field. Features of some of the local parks are illustrated in the following group of photos.
Summary of Assets:
- Highway Access
- Nearby Residential Density
- Parks
- Civic and Cultural Land Uses
- Available Land
Although vacant land can in some cases be deemed as a community liability, in this case it is a valuable asset. Throughout the corridor there are large parcels of undeveloped land that could be very appropriate for a variety of uses that would contribute to the community fabric and economic base of the Town. In addition, there are a few key commercial parcels within the Hamburg Street commercial corridor that are currently vacant that offer excellent opportunities for redevelopment.

Below are photographs of some existing vacant parcels, including the now vacant Grand Union, a second site located nearby the NY 7/NY 146 intersection, and a third located along Curry Road nearby the I-890 off-ramp.
Additional assets within the corridor include civic and cultural land uses. Examples of such uses include the many places of worship, public school and senior center. Such uses are an important component of the community, where citizens from various streets and neighborhoods gather to share their common needs and interests. Below are images of a former school turned senior center and a local church that exist within the study area.
3. Liabilities
The study area’s direct link to I-890 and I-90 is tremendous asset, however the lack of a gateway into the study area is a missed opportunity to welcome visitors and establish community identity and sense of place.

Another apparent weakness is the random changing of uses within the ‘transition zones’ of the study area. Random changes of use from residential to strip commercial have led to a “confused state of identity” which weakens property values, navigability and the community aesthetic.

It has been well documented that one of the greatest limitations to the redevelopment of the Hamburg Street commercial corridor is the lack of sewer service throughout the corridor. This is a topic about which the Town is taking all necessary steps to fully understand and address through proper planning. This is evidenced by the Town’s plan to install dry sewers as part of the proposed Roundabout infrastructure construction for the intersection of NY 7 / NY 146. It is understood that development pressure would significantly increase along Hamburg Street if sewer lines were installed.

Given the strong neighborhood fabric and existing commercial zones, the lack of continuous sidewalks throughout the study area is a liability. Sidewalks are largely missing throughout the study area and the sidewalks that are in place have significant gaps between important segments of the corridor. This condition has created a vehicular dependent community that is unsafe to walk, and given the adjacent residential neighborhoods, parks, and community services, an improved pedestrian circulation system would provide an opportunity to enhance safety, connectivity, local commerce and the overall sense of place within the community. The images below illustrate two locations where sidewalks are either lacking or missing altogether.
In conjunction with the lack of sidewalks another area of concern, particularly along the Hamburg Street corridor, is the lack of access management. Continuous paved access from one property line to the next is a consistent theme throughout the commercial corridor. This creates a potentially dangerous situation for both pedestrians and vehicles for many reasons. First, it provides the driver the opportunity to ‘randomly’ stop and cross traffic at unanticipated points along the corridor, which can surprise other drivers. Also, due to the lack of sidewalks in this area there are large stretches of pavement that pedestrians must cross to enter a commercial establishment or simply walk the corridor, which create numerous opportunities for pedestrian and vehicular conflicts. In addition, the ability for vehicles to randomly stop leads to ‘rear ending’ and sudden lane changes. The large stretches of pavement and endless access points are more than just safety considerations, they have an impact to the aesthetic quality of the corridor. The lack of street trees, landscaping, lighting and other site amenities contribute to an unappealing corridor and make the commercial zone feel harsh and uninviting.
The architectural quality within the Hamburg Street commercial corridor is also an area that provides great opportunities for improvement. The buildings are dated, poorly maintained, single use, and do not contribute to the overall architectural fabric of the corridor. This lack of quality is also reflected in the signage throughout the corridor. The many opportunities for future development along the corridor and throughout the study area offer the Town the chance to re-define its architectural quality which will have positive impact on the community’s identity.
Summary of Liabilities:

- Random changing of uses
- Lack of sewer service
- Lack of continuous sidewalks
- Lack of access management
- Lack of street trees, landscaping, lighting, and other site amenities
- Architectural quality

II. RECOMMENDATIONS

A. Overview

The general purpose of this study is to provide the Town of Rotterdam the tools needed to shape the direction of growth within the Study Area by identifying appropriate land-use and transportation corridor improvements. The land-use and transportation corridor improvement recommendations are based on an analysis of existing conditions and comments received from both the SAC, which included a public “visioning” workshop and draft recommendations workshop.

The following recommendations are the result of extensive analysis of Study Area development, land-use patterns and transportation corridors, combined with the SAC and public feedback. The recommendations involve a range of land-use and transportation improvements, which are designed to enhance the overall community character, aesthetics, connectivity, safety and economic vitality. The mix of public and private land-use and corridor improvements are based on the following design considerations:

- Gateways/Entry Features create a “Sense of Place”
- Transition Zones create a distinction between land uses
- Architecture and Signage improve aesthetics & marketability
- Site Design/Landscaping improve aesthetics & marketability
- Mixed-use Commercial Center provides a sense of “downtown”
- Walkability/Pedestrian Safety improves connectivity between and within commercial and residential zones
- Curb-cut Control/Access Management improves the relationship between automobiles and pedestrians and improves traffic flow and safety
- Traffic Control features calm traffic and improve pedestrian safety
- Linkages improve vehicular movements and intermodality between various land uses
- Community Open Space/Parks improve quality of life
B. Proposed Land Use / Zoning District Designations

1. Overview

The study area contains, and is immediately adjacent to, significant residential districts that could be considered “traditional neighborhoods.” It is important therefore, to consider the impacts of non-residential uses on the residential areas. At the same time, improved pedestrian linkages and traffic circulation, combined with good site design, can reduce vehicular dependency and create a beneficial link between commercial areas and residential neighborhoods. The existing zoning code has allowed for, the mixing of residential and commercial land uses which has blurred the lines where historical and contemporary land uses intermingle and where contrasting commercial uses compete for space. A clear Zoning Ordinance with well defined district boundaries will benefit both the commercial and residential districts by creating distinct land use areas that will provide a greater sense of place, as well as improve vehicular navigation resulting in a safer vehicular and pedestrian environment.

Design Guidelines are a tool that can be incorporated into the zoning regulations to shape new commercial development and re-development sites. Controlling the manner in which sites are developed through the use of Design Guidelines, including parking layout, lighting, signage and architectural standards, curb cut control and pedestrian friendly layout, minimizes the impact on existing land owners, particularly residential.

Performance measures and Design Guidelines are incorporated into the new zoning districts recommended herein. Performance measures address the specific intent of each zoning district, and the means to minimize potential impacts on adjoining land uses, particularly residential, and include such things as setbacks, building heights, lot coverage and parking capacity. Design Guidelines address such things as façade treatments, landscape buffers, parking layout, signage and pedestrian amenities. Map 3 highlights the proposed land-uses in the study area. Included herewith are images and prototypical development diagrams that support the goals and objectives of the proposed districts. The final draft zoning language for the proposed zoning districts outlined herein are contained in Appendix E.

2. Main Street/Neighborhood Center District

Purpose

The purpose of the Main Street / Neighborhood Center District is to:

1. Allow a mixture of complimentary land uses that includes housing, retail, offices, commercial services, and civic uses, to create economic and social vitality and to encourage the linking of trips
2. Develop commercial and mixed-use areas that are safe, comfortable and attractive to pedestrians
3. Provide flexibility in the siting and design of new developments and redevelopment to anticipate changes in the marketplace
4. Reinforce streets as public places that encourage pedestrian and bicycle travel

__________________________
Synthesis, LLP/Creighton Manning Engineering/Capital District Transportation Committee 24
5. Provide roadway and pedestrian connections to residential areas
6. Encourage efficient land use by facilitating compact, high-density development and minimizing the amount of land that is needed for surface parking
7. Facilitate development (land use mix, density and design) that supports public transit, where applicable
8. Maintain mobility along traffic corridors and state highways

General Description

Main Street / Neighborhood Center District (MS/NC) is designated for the central business district, and or main street area, and adjacent areas that have, or are planned to have, commercial and/or mixed-use development with a storefront character. MS/NC should be adjacent and connected to the residential districts they are intended to serve.

The new MS/NC District includes Design Guidelines that help ensure compatibility with adjoining residential areas. The Design Guidelines address facade treatments, building heights, entrance characteristics, pedestrian amenities, parking and landscaping. The Guidelines encourage pedestrian access from the main street and adjoining neighborhoods, include pedestrian amenities such as outdoor seating, trash receptacles, sidewalk displays, etc. (Figure 2), facade treatments including window trim, cornice treatment, awnings, etc. (Figure 3) and on-street and rear parking areas (Figure 4).

The Performance Measures would regulate building heights adjacent to residential areas (Figure 1). There are no minimum lot sizes and zero front and side yard setbacks, although a minimum 25 foot rear yard setback applies. The Performance Measures and Design Guidelines will together create a streetscape condition that is palatable to local residents and inviting to passers-by.
FIGURE 2

STREETSCAPE WITH BUILDING ENTRANCES, WINDOWS, WEATHER PROTECTION, STREET FURNISHINGS AND TREES.

FIGURE 3

CORNICES
FIGURE 4

MAIN STREET PROTOTYPE DIAGRAM

- Shared Access Drive
- Pedestrian Connection
- Shared Access and Parking
- Mixed Use Building
- Mixed Use Building
- Crosswalks with color & textures
- On-Street Parking
- Street Trees
- "Main Street"
- Generous Sidewalk to accommodate outdoor seating
- Landscape Screen
- Banked Parking Greenspace Area
- Stormwater Basin
The MS/NC District would prohibit drive-thru restaurants, vehicle sales and service facilities, large scale wholesalers, manufacturing and production, warehousing, government offices and public works facilities and transportation, freight and distribution facilities. Permitted uses are generally of a smaller scale and include a mix of retail, commercial, office, residential, lodging, entertainment public service, parks and open space. Figure 5 below is a photograph of an area that would be appropriately included in the MS/NC District.

Figure 5: Former Grand Union & Car Wash Site with exiting conditions aerial and conceptual site plan
Figure 5: Former Grand Union & Car Wash Site with exiting conditions aerial and conceptual site plan
Figure 5a: Example images of the Main Street/Neighborhood Center Development
3. Corridor Commercial Zone

Purpose

The purpose of the Corridor Commercial Zone is to:

1. Allow a mixture of automobile dependent commercial services to create economic vitality and commercial areas that are safe, comfortable, and attractive for both vehicles and pedestrians; and
2. Provide flexibility in the siting and design of new developments and redevelopment to anticipate changes in the marketplace; and
3. Provide appropriate locations and design standards for automobile and truck dependent uses; and
4. Maintain mobility along traffic corridors and state highways

General Description

The Corridor Commercial Zone (CORR) is intended to support infill and redevelopment along existing commercial corridors. Given the relationship of the CORR Zone to heavily traveled roadways, shared parking is encouraged to reduce vehicular trips and related impacts on the primary road network. Opportunities for redevelopment exist within the study area corridor. Figure 7 illustrates a group of sites along Hamburg Street that would be appropriately included in the COOR District.

Figure 7: Sites along Hamburg Street
Figure 7: Cont. – Typical strip commercial along Hamburg Street.
The new CORR District includes zoning requirements that must be met to ensure compatibility with adjoining commercial or residential areas. A 25 foot minimum and 100 foot maximum front yard setback and 15 foot side yard setback applies along with a minimum 25 foot rear yard setback. Potential visual impacts are addressed with a maximum 24 foot building height. The Design Guidelines address building alignment, entrance characteristics, lighting, parking layout and landscaping. Figure 8 is a group of photographs that illustrate the design intent of the CORR District.

Figure 8: Example CORR District Development

![Example CORR District Development](image)

The Design Guidelines would encourage sidewalks, landscaped buffers including street tree plantings and lighted pedestrian zones for safety and aesthetics, and include pedestrian connections to existing sidewalks or new sidewalk along the primary street. Curb cut management with controlled access and shared parking would be encouraged wherever practical between adjoining commercial uses and would include pedestrian friendly connections (Figure 9). Adjoining sidewalks would be buffered and shared access points would be encouraged. The Performance Standards and Design Guidelines will create a streetscape condition that is pedestrian friendly while providing convenient accessibility for vehicular dependent land uses.
COMMERCIAL COORIDOR PROTOTYPE
4. Commercial Planned Unit Development

Purpose

The Commercial Planned Unit Development Zone (C-PUD) is located to serve a community or regional market area, and provide access to transit where available and beneficial, compatible and harmonious with the surrounding land uses. The intent of the district is to allow larger scaled commercial uses that have large set-backs and require larger parking areas but that are designed to include commercial out-parcels along the primary road network that in combination with landscape improvements, effectively screen the “big box” establishments.

General Description

The C-PUD Zone does not occupy a specific area or district on the Zoning Map. Landowners/Project Sponsors would be required to apply for a zoning change in accordance with the procedural requirements of the Zoning Code. Where the Town Board, having received a recommendation from the Planning Commission, determines that the C-PUD zone change is appropriately applied to the underlying District, the permitted uses would be established within the parameters of the Zoning Code. Figure 10 below is a photograph of a potential site along Curry Road near I-890 to which the C-PUD District could be applied. Figure 10a is an illustrative C-PUD development scenario.

Figure 10: Potential C-PUD site along Curry Road
The C-PUD District, when approved, could include a mix of retail, commercial office, residential and civic uses, with applicable limitations. Certain land uses would be prohibited within the C-PUD District, including the processing of raw materials, government buildings, manufacturing, warehousing and distribution. Out-parcel building heights would comply with the CORR District criteria, while the maximum allowable primary building height would be fifty (50) feet. The setbacks would be consistent with the CORR District criteria, but internal setbacks would be discretionary through site plan review. The Design Guidelines are comparable in many respects to the CORR District, emphasizing shared parking and signage, landscape buffers and pedestrian access.
Figure 11 below is a set of photographs that illustrate the manner in which a C-PUD District parcel would be appropriately developed.

**Figure 11: Examples of Planned Unit Development**

Local example of commercial access road with big box located to rear of site.

Local example of Commercial out-parcel that meet corr-commercial requirements and effectively screen ‘big-box’ from primary commercial artery.
5. Professional Office Residential

Purpose

The Professional Office Residential District is intended to create aesthetic and functional commercial transition zones between residential and more intensely oriented commercial districts that maintain the architectural character and scale of a residential dwelling.

General Description

Permitted uses in the Professional Office Residential District (POR) include professional office such as medical/dental, law and accounting, architectural/engineering, personal care businesses, such as hair and skin care, massage, etc., as well as tailoring, art gallery and photography studios. Residential is also permitted, but can not exceed 50% of ground floor per lot/parcel. Automobile oriented commercial retail establishments would be prohibited.

The intent of the POR District is to maintain visual character of the residential neighborhood in which it is situated. Off-street parking would be permitted in the rear of establishments. Landscaping that is reflective of residential treatments would be encouraged to preserve the neighborhood aesthetic.

Figures 12 and 13 on next page illustrate both the proper and improper manner in which the POR District would appear once developed.
Figure 12: Configuration is inconsistent with the POR District Standards

Figure 13: Configuration is consistent with the POR District Standards
C. Potential Impacts / Benefits

Zoning

The new zoning districts, combined with Design Guidelines, will enable the Planning Commission to more effectively shape the future of development within the study area. In addition to creating a more attractive and marketable streetscape, the Performance Measures and Design Guidelines will help facilitate project review and approvals and reduce the number of re-zoning requests. The new PUD standards would help facilitate those requests that do arise within the appropriate segments of the study area.

Land Use

The new zoning districts are designed to be compatible with surrounding land uses. Performance Measures and Design Guidelines are intended to not only minimize impacts on existing residential areas, but also encourage pedestrian linkages and improve vehicular circulation and access. The “step down” concept ensures compatibility of land uses within and between existing and new zoning districts.

Vehicular Circulation

The curb-cut controls, parking layouts and sidewalks will improve vehicular and pedestrian safety. The impending round-a-bout at Curry Road and Hamburg Street will significantly improve the existing traffic flow and relieve mid-block congestion, thereby improving the ingress/egress conditions at nearby parcels, as well as allow for increased vehicular trips that may result from prospective development along the commercial corridors in the study area. Below is a character sketch of a typical round-a-bout in a similar setting to that of the NY-7 / NY-146 intersection.
Bicycle Circulation

The mixed-use concept for the town center, combined with improved pedestrian amenities will improve bicycle safety and circulation. Since bicycles typically use the road edge or shoulder along major roadways, curb cut control will significantly improve bicycle safety, by reducing substantially the unpredictable turning movements in and out of highway commercial areas. Improved connections between the neighborhood commercial centers and residential areas will also serve to improve bicycle safety.

Image (above) depicts a pedestrian friendly street that includes a bike lane.

Pedestrian Circulation

Improved linkages between residential areas and the neighborhood and other commercial centers will encourage walking, which in turn reduces the number of vehicles, improving congestion and increasing pedestrian safety and quality of life. Automobile dependent land uses would, if the Design Guidelines are followed, include pedestrian amenities that increase safety of movement within and between the various uses and parking areas. The following images demonstrate the pedestrian friendly nature that the proposed zoning districts intend to generate throughout the study area.
Environmental Impacts

Performance Measures and Design Guidelines will help reduce or eliminate the potential adverse environmental impacts of new development. Land owners interested in developing a vacant parcel or redeveloping and existing developed parcel will expedite their SEQRA review procedures when complying with the underlying zoning, associated Performance Standards and Design Guidelines.

Traffic / Highways

The potential impact of the proposed zoning was tested by comparing the total traffic volume and the expected intersection delays under the existing and proposed zoning alternatives. The following charts summarize the results of this analysis.

![Chart C-1: Intersection Volumes - Hamburg/Curry/Carman](chart1)

![Chart C-2: Intersection Delay](chart2)
Chart 1 shows the total number of vehicle entering the NY 7 / NY 146 intersection during the PM peak hour for existing and proposed conditions. The chart shows that the estimated build-out under the proposed zoning changes will result in less traffic at this critical intersection as compared to the estimated build-out under the existing zoning. For comparison purposes, the chart also shows the total traffic projected at the intersection during the 2018 design year for the NYSDOT roundabout project.

Similarly, Chart 2 shows that the delays at the study area signalized intersection under the proposed zoning will be comparable to or less than they would under the current zoning.

A case study in North Carolina\(^1\) demonstrated that developments with a good mix and density of uses (including business, retail and residential) reduced total trips by about 10 percent. It also showed that while there was a comparable amount of time spent traveling, walking trips often replaced vehicle trips. More than two (2) times as many walking trips were observed. External vehicular trips were reduced by 24 percent. The case study shows how the proposed zoning changes in Rotterdam including the neighborhood center and pedestrian linkage has the potential to reduce overall vehicular traffic.

The basic conclusions from this impact assessment are that the zoning change will not impact the NYSDOT roundabout project, nor will it create a negative impact other nearby intersection. The zoning change will benefit the area by reducing vehicular traffic, and improving accessibility and walkability in the area.

Economics

Attractive development options and available utilities will likely increase the commercial land use activity and accordingly increase the tax base. The infill and redevelopment possibilities are such that the increased tax base is potentially significant.

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\(^1\) Travel behavior in neo-traditional neighborhood developments: A case study in USA, Asad J. Khattak, Daniel Rodriguea; Carolina Transportation Program, Department of City and Regional Planning, University of North Carolina, Chapel Hill, NC
III. IMPLEMENTATION

A. Land Use / Zoning Modifications

1. New Zoning Districts and Performance Measures

   There are several new zoning districts suggested as part of these recommendations. If the
   Town elects to adopt and incorporate the suggested zoning districts into the existing zoning
   regulations, an examination of existing districts would necessarily occur. All or a portion of
   certain zoning districts may be eliminated and replaced. Other adjoining districts not modified or
   replaced, should be examined for potential changes or additions to ensure consistency and
   continued applicability. Consistent enforcement of the zoning requirements is necessary to
   achieve incremental changes in the study areas environment. The review of existing zoning
   language can occur concurrently with the adoption of new districts.

2. On-Site Mitigation

   New development proposals within the study area should consider the existing impacts of
   the proposed land use on adjoining properties and the transportation system. This is particularly
   important for established residential neighborhoods in or adjacent to the mixed-use or
   commercial districts respectively. Mitigation measures designed to reduce or eliminate potential
   noise and visual impacts from nearby non-residential uses is an important consideration.
   Likewise, new commercial development would necessarily consider the impacts on existing or
   proposed residential development and implement appropriate mitigation measures.

3. Draft Zoning Language

   The changes/amendments to the current zoning are summarized above and detailed in the
   Draft Zoning Language. The Draft Zoning Language has been prepared in a manner that is
   consistent with the existing Zoning Code format. Implementation of the Zoning Code
   amendments/modifications can be accomplished using standard procedures, having already
   established the basis for prospective changes.
B. Pedestrian / Vehicular Circulation Modifications

The first priority of the sidewalk plan is to fill the gaps in the existing sidewalk system. This will include 730 linear feet of sidewalk extensions near the NY 7/NY 146 intersection as part of the NYSDOT roundabout project, and linkages along Hamburg Street. The Hamburg Street sidewalk linkages include 1750 linear feet between Stoodley Place to East Campbell Road, as well as a direct connection from Hamburg Street to the Bradt School drop-off. This important connection would create a safe pedestrian route between the school and the senior center through the heart of the Hamburg street commercial area and is an ideal candidate for the Safe Routes to School Grant. The gaps identified as part of priority one account for approximately 2480 linear feet of new sidewalk which could range from $80.00/LF to $100.00/LF depending on the degree of excavation or utility interruption resulting in a total estimated cost for phase one sidewalk improvements of $198,400.00 to $248,000.00. This estimate of potential construction cost does not include selective curbing, drainage systems, design services and construction administration services.
As a second priority, the Town should pursue sidewalks on both sides of the primary study area roadways with improved ADA compliant crossings. The south-west and south-east corners of NY 7 & NY 146 should be constructed to provide access to existing bus stops. Both sidewalks would continue along NY 146, where the easterly sidewalk would end at the Thruway ramp and westerly sidewalk would end at Fort Hunter Road. Crosswalks should be added at the Thruway intersection to allow pedestrians to cross in designated areas between the two sidewalk segments. These sidewalk segments would also provide access to the multi use trails that have been proposed. The sidewalks identified as second priority account for approximately 9,950 linear feet and would have estimated cost of $796,000 to $995,500.00. This area does not include the area described below in the proposed Commercial Planned Unit Development area.

In the event that a development is added in the Commercial Planned Unit Development area, the developer should provide new sidewalks that extend from proposed access drives along both NY 7 and NY 146 to the limits of sidewalk expansion planned as part of the NYSDOT roundabout project at the NY-7/NY-146 intersection. The section of sidewalk along the north side of Route 7 from its beginning near I-890 to the NY-7 / NY-146 intersection could be a wider multi-use path type of facility to make a strong connection to the proposed multi-use path along the Eastern border of the study area.

Overall circulation in the study area will remain the same. Vehicular and pedestrian linkages should be provided between neighborhoods and the commercial areas with appropriate buffers to allow people to travel between uses without entering onto the primary street system. This is specifically recommended along Hamburg Street as part of the redevelopment of the Main Street / Neighborhood Center, and onto Knox Drive and Eugene Drive as part of the Commercial Planned Unit Development.

Three locations for the access driveways for the Commercial PUD parcel have been identified (subject to further engineering study). One would be on NY 7, one on Hamburg Street (right turn in and out only) and one on Knox Street (full-access). There is also a potential location for a pedestrian path along Eugene Drive that would allow people from the adjoining neighborhood to walk to the development.
Typical Sections for Hamburg Street:

According to the NYS Highway Sufficiency Ratings, the existing pavement widths on Hamburg Street range from 30 to 38 feet. The idea of providing on-street parking in the area should be pursued as part of the development of the Main Street / Neighborhood center district. The image below shows the desirable widths necessary for a roadway with one shared travel lane (bicycle use + cars) in each direction and parking lane on one side of the street. In addition, the cross section shows a tree lawn/maintenance strip and standard 5’ wide sidewalks on the side of the street without the on-street parking and a curbed edge and adjacent 12’ min. sidewalk that would extend to the proposed building face and would include street trees and other site furnishings on the side with on-street parking.

C. Phasing

The first step would be consideration of an amendment to the Town’s Comprehensive Plan to outline the goals and objectives of the new zoning districts.

The next step would be to initiate the procedures necessary to adopt the zoning amendments. This may be limited to the adoption of the new districts, or may include the overall modifications of the existing regulations that would ensure consistency with the recommendations contained herein. The Town would consider the parameters of the Performance Measures and Design Guidelines and as determined appropriate, incorporate them within the zoning language. The Town would follow normal procedures for modifying the existing zoning code.
Upon adoption of the recommended zoning amendments the Town could immediately pursue many of the available grants outlined in this document to expand upon the study areas sidewalk system to improve connectivity and overall pedestrian safety, as well as many other programs to foster economic development and smart growth.

In addition, once the revised zoning code and district boundaries are in place the Town’s Planning Commission can use the document as a tool to consistently enforce the zoning requirements and make clear to developers planning new development within the study area that they must not only meet the performance measures but will in some instances be expected to improve or expand elements outside of their parcel lines, such as sidewalks, due to the fact that their project will or should encourage safe pedestrian and vehicular movement from the surrounding neighborhoods and adjacent commercial properties.

**D. Implementation Matrix**

<table>
<thead>
<tr>
<th>Funding Target: Sidewalk Crossing Improvements</th>
<th>Involved Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Funding Source</td>
<td></td>
</tr>
<tr>
<td>NYS DOT</td>
<td>NYS DOT/Town of Rotterdam</td>
</tr>
<tr>
<td>CDTC Spot Improvement Program or TEP</td>
<td>Town of Rotterdam and Private Developer</td>
</tr>
<tr>
<td>CDTC Safe Routes to School Program</td>
<td>Town of Rotterdam, CDTC, and NYS DOT Region 1</td>
</tr>
<tr>
<td>Private Developer <em>Developing projects in the C-PUD district</em></td>
<td>Town of Rotterdam and Private Developer</td>
</tr>
</tbody>
</table>

**Funding Target: Modification of Hamburg Street Section Through MS/NC District Including Sidewalk Amenities**

<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS DOT or locally administered federal aid program</td>
<td></td>
</tr>
</tbody>
</table>

**Funding Target: Curb Cut Management**

<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Entity <em>Vehicular access management along the Hamburg Street commercial corridor</em></td>
<td>Town of Rotterdam to enforce design guidelines during site plan approval</td>
</tr>
</tbody>
</table>

**Funding Target: Trail/Park Development**

<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivers, Trails, and Conservation Assistance (RTCA) <em>To establish trails and recreational opportunities</em></td>
<td>Town of Rotterdam in conjunction with the U.S. Department of Interior</td>
</tr>
<tr>
<td>Transportation Equity Act (TEA 21) <em>Provides funding for recreational trail program</em></td>
<td>Town of Rotterdam in conjunction with the U.S. Department of Transportation</td>
</tr>
</tbody>
</table>
### Funding Target: Parks, Recreation, and Historic Preservation

<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
</tr>
</thead>
</table>
| Environmental Protection Fund 1996 Clean Water/Clean Air Bond Act (EPF)  
Sponsor: OPRHP  
www.nysparks.state.ny.us/grants  
*The EPF provides funds for:  
A. The acquisition and development of parklands and playgrounds.  
B. The preservation and restoration of historic properties.  
C. The ongoing development of NYS Heritage Areas System.* | Town of Rotterdam in conjunction with D.E.C. |

### Funding Target: Planning and Design

<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
</tr>
</thead>
</table>
| Architecture, Planning, and design program  
Sponsor: NYSCA  
*The ADP programs to stimulate and promote excellence in design and planning in the public realm.* | Town of Rotterdam in conjunction with NYSCA |

### Funding Target: Economic Development

<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
</tr>
</thead>
</table>
| Public Works and Development Facilities Program  
Sponsor: U.S. Department of Commerce Economic Development Administration  
*To assist distressed communities and provide infrastructure such as water and sewer lines to promote economic development* | Town of Rotterdam in conjunction with U.S. Department of Commerce Economic Development Administration |

<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
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<tbody>
<tr>
<td>Schenectady Metroplex Facade Improvement Grant (50/50 Match)</td>
<td>Town of Rotterdam in conjunction and coordination with Schenectady Metroplex and private entity</td>
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</table>

<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
</tr>
</thead>
</table>
| Industrial Access Program  
Sponsor: NYSDOT  
*This economic development program provides funds to improve or construct roads to industrial or agricultural businesses in order to create/retain jobs* | Town of Rotterdam in conjunction with NYSDOT |
<table>
<thead>
<tr>
<th>Potential Funding Source</th>
<th>Involved Entity</th>
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</thead>
<tbody>
<tr>
<td>Commercial Area Development Financing</td>
<td>Town of Rotterdam in conjunction and coordination with NYS Department of Economic Development and private entity</td>
</tr>
<tr>
<td><em>Provides funds for projects to improve commercial buildings, commercial strips, downtown areas, and business districts</em></td>
<td></td>
</tr>
<tr>
<td>Minority and Women Business Development and Lending Program:</td>
<td>Town of Rotterdam in conjunction and coordination with NYS Department of Economic Development and private entity</td>
</tr>
<tr>
<td>Franchise Loan Program and Minority and Women Development and Lending Program:</td>
<td></td>
</tr>
<tr>
<td>Micro-Enterprise loan fund provides financing assistance and funds for MWBE business development</td>
<td></td>
</tr>
<tr>
<td>Economic Development Initiative (EDI)</td>
<td>Town of Rotterdam to follow HUD regulations in working with private entity</td>
</tr>
<tr>
<td>Sponsor: HUD</td>
<td></td>
</tr>
<tr>
<td>Brownfield’s Economic Development Initiative Grants (BEDI)</td>
<td>Town of Rotterdam to follow HUD regulations in working with private entity</td>
</tr>
<tr>
<td>Sponsor: HUD</td>
<td></td>
</tr>
<tr>
<td><em>Many brown fields are also available for CDBG Funding</em></td>
<td></td>
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<tr>
<td>Section 108 Guarantee Program</td>
<td></td>
</tr>
<tr>
<td>Sponsor: U.S. Department of Housing and Urban development (HUD)</td>
<td></td>
</tr>
<tr>
<td>7(a) Guaranteed Loans</td>
<td>Private entity in coordination with town of Rotterdam</td>
</tr>
<tr>
<td>Sponsor: Small Business Development Center at Mid-Hudson</td>
<td></td>
</tr>
<tr>
<td><a href="http://www.sba.gov/ny">www.sba.gov/ny</a></td>
<td></td>
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<tr>
<td><em>Provides loans to small businesses that are unable to obtain funding through private entity</em></td>
<td></td>
</tr>
<tr>
<td>Certified Development Company Loans (504 Loans)</td>
<td>Private entity in coordination with town of Rotterdam</td>
</tr>
<tr>
<td>Sponsor: Small Business Association</td>
<td></td>
</tr>
<tr>
<td><em>Provides long term fixed financing at reasonable rates for small businesses</em></td>
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</tr>
<tr>
<td>Potential Funding Source</td>
<td>Involved Entity</td>
</tr>
<tr>
<td>-------------------------</td>
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</tr>
<tr>
<td>Section 504 Grants</td>
<td>Private entity in coordination with Town of Rotterdam</td>
</tr>
<tr>
<td><a href="http://www.rurdev.usda.gov/ny">www.rurdev.usda.gov/ny</a></td>
<td></td>
</tr>
<tr>
<td>Up to $7500.00 for senior citizens to make repairs on their homes to correct health and safety hazards</td>
<td></td>
</tr>
</tbody>
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<thead>
<tr>
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<tr>
<td>7(a) Guaranteed Loans</td>
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<tbody>
<tr>
<td>The Community Development Block Grant (CDBG)</td>
<td>Town of Rotterdam in conjunction with the Governors Office for Small Cities</td>
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<td><strong>Sponsor:</strong> Governors Office for Small Cities</td>
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<td><em>Provides funding for housing, business development, and economic development</em></td>
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