

# CAPITAL IMPROVEMENT PLAN FOR THE



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**Village of Barker  
Capital Improvement Plan  
September 2011**

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**Village of Barker  
Capital Improvement Plan  
October 2005  
Updated September 8, 2011**

***Preface: This document is provided as an update to the October 2005 Capital Improvement Plan, and reflects changes that have occurred since October 2005, a 2011 field evaluation, recent discussions with Village staff, revised unit pricing on construction items and an updated photo documentation of all above ground features of the Village's infrastructure.***

I. Introduction

A. Purpose and Scope

The purpose of this study is to examine and evaluate the existing conditions of the Village of Barker's infrastructure. This study outlines general and specific recommendations to assist the Village in planning of capital improvements. This study concentrates on the following four areas of the Village's infrastructure: water system, streets and roadways, drainage, and buildings and grounds.

A detailed evaluation of the Village's water system was completed and a report, entitled Engineering Report For The Village of Barker Water System Improvements, was completed in March 2005, and then updated in 2010. Although the background information from that report will not be repeated here, its recommendations and updated cost estimates are included so that Village officials will have a complete listing of infrastructure needs in a single document. Accordingly, this report also reflects water system improvements that have been implemented since 2005 in addition to revised resultant water system modeling calculations which were redone in 2010.

The Village's sanitary sewer system will not be addressed here. The sanitary sewer system is part of the Somerset-Barker Sewer District, which is operated and maintained by the Town of Somerset. Consequently, costs associated with any required upgrades are not the responsibility of the Village of Barker. We have, however, noted some drainage features and clean-out defects that may present the potential for infiltration / inflow (I/I) to the sanitary system.

Based upon review of past reports and recommendations, renewed 2011 field investigations and conferences with Village personnel, the infrastructure has been re-evaluated, previous cost estimates have been revised and an updated recommended plan has been established. It should be noted that this capital improvement plan has always been intended to be a dynamic working document that will need revision and adjustment over time. The level of urgency for specific improvements may change due to unforeseen conditions, natural disasters or pressure from other interested parties. Subsequent to new findings, changed conditions or other needs as may develop, timely meetings should be scheduled as needed between the Village Board, Department of Public Works Superintendent, and Village Engineer to





reestablish priorities, review financial capabilities and update timelines. Upon consensus, an updated capital improvement plan should be formally submitted to the Village Board for approval.

## B. Background

The Village of Barker is located just south of Lake Ontario in the Town of Somerset, in the northeastern portion of Niagara County. The Village currently has a population of approximately 577 people. The Village owns and operates a water system, streets and roadway system, drainage systems, and various buildings and grounds to serve its population. Providing modern, efficient and reliable services is vital to the quality of life for the Village residents. Appendix A contains a location map of the Village of Barker, as well as a map showing the roads, water mains and storm sewers.

# II. Investigation of Existing Conditions

## A. General

Infrastructure in the Village of Barker consists of a Public Water Supply System, a Street and Roadway System, a Storm Water Drainage System, a Village Hall, two Village Department of Public Works Buildings, two Village Parks and a seven (7) acre parcel of land on East Avenue formerly owned by the Birdseye Company. Chatfield Engineers addressed the general condition of the Public Water Supply System in the referenced 2005 report that included a recommended phased approach to implementation of the suggested improvements.

As a component of the Capital Improvement Plan, the Village's Street and Roadway System was evaluated. Physical street surveys were conducted to assess the condition of streets and roadways. Traffic accident statistics were also reviewed to determine if any areas exhibited a higher rate of accidents that might be related street, intersection or access/egress design. Current conditions have been further documented within a photo inventory of all Village streets and sidewalks that was performed in July and August of 2011.

The Village of Barker did not possess any mapping of its Storm Water Drainage System. On August 2, 2005, Chatfield Engineers, with the assistance of Village Department of Public Works personnel, conducted smoke testing of the Storm Water Drainage System. A map was created and problem areas were identified. Although this mapping is as accurate as current information allows, it is recommended that efforts to further evaluate the existing storm system be continued as Village resources may allow in order to provide enhanced detail and accuracy to the drainage system mapping.

Buildings and Grounds at the Village Hall and Department of Public Works Headquarters were reviewed to assess existing conditions and identify needs and concerns. Finally, an assessment of site conditions and facilities at the two Village Parks was conducted, with a list of recommended improvements provided.



## B. Water System

The Village of Barker Water System serves a population of approximately 577 people. The Village purchases all of its water from the Niagara County Water District (NCWD) via two pressure reducing valve/meter vaults. Following is a summary of recommended improvements, as described in Engineering Report For The Village of Barker Water System Improvements, March 2005; detailed cost estimates, as well as potential financing scenarios are outlined in the Report. The above engineering report was revised and reissued in June of 2010. Cost estimates associated with the Phase II recommendations within that report have been revised accordingly while utilizing Chatfield Engineers' experiences with bidding results and practices for similar municipal projects in this region.

The following Phase I recommended improvements were completed in 2010, and were financed through a NYS Office of Small Cities Grant:

### Phase 1 - Completed

- 1,950 L.F. of 8" main on Coleman Rd. from Quaker Rd. to the Village Line.
- 2,100 L.F. of 8" main on East Ave. from Main St. to High St.
- 1,850 L.F. of 8" main on High St. from Quaker Rd. to the Village Line.
- 960 L.F. of 8" main on Pallister Ave. from Coleman Rd. to the South.
- 800 L.F. of 8" main on West Somerset Rd. from Quaker Rd. to the West.
- Improvements to meter pits for increase in pressure, 12" main from meter pit on Quaker Road to High Street.
- 337 L.F. of 12" main on Quaker from W. Sommerset south.

**Total Phase 1 Actual Project Costs = \$749,000.**

The following Phase II recommended improvements are currently under design, and are scheduled to begin in mid 2012. It is anticipated that these improvements will be funded by a USDA Rural Development low interest loan.

### Phase 2 – Scheduled for 2012-2013

- 1,200 L.F. of 8" main on Main St. from Quaker Rd. to East Ave.
- 1,100 L.F. of 8" main on Church St. from Quaker Rd. to East Ave.



- 450 L.F. of 6" main on Woodward Ave. from Quaker Road to the West.
- 5,000 L.F. of 12" main on Quaker Rd. within the Village Limits.

**Total Phase 2 Estimated Project Costs = \$1,015,000**

C. Streets and Roadway System

1. General

There are approximately 3.35 miles (17,680 L.F.) of streets and highways in the Village of Barker. Approximately 1.68 miles (8,870 L.F.) are village streets and approximately 1.67 miles (8,810 L.F.) are county highways. These roads are of various age, construction and condition. Table 1 summarizes the many details of the roads within the Village. Included in Table 1 is a rating system that rates the streets on their physical conditions and level of service and safety in order to reflect priorities of the streets most in need of reconstruction or other improvements. Typically, streets with higher volumes of traffic would take priority over a street with similar physical conditions. In general, many of basic rating parameters for individual streets still apply and therefore most priorities established within the evaluation matrix of Table 1 remain similar to what they were in 2005.

2. Inventory of Existing Conditions

Based upon Table 1, Church Street, East Avenue and Pallister Avenue were found to be the most critical Village-owned streets in need of attention. These streets have low to moderate traffic volumes, poor to fair pavement conditions, and for the most part poor drainage facilities. Although Coleman Road, Quaker Road, and West Somerset Road have similar overall ratings, they are County-owned and, therefore, the responsibility of the Niagara County Highway Department.

3. Road Condition Evaluation

a. Coleman Road

Coleman Road is a county highway. It was found to have moderate traffic volume, fair pavement conditions, and drainage in need of improvement. There is concrete curbing on both sides of the roadway between East Avenue and Quaker Road. Portions of this curbing on the south side between Pallister and East Avenues have no curb reveal. If the roadway were to be repaved, it would be best to mill and resurface the area.



b. Church Street

Church Street was found to have low traffic volume. Although Church Street was provided topcoat repaving in 2006, it possesses only fair pavement conditions with evidence of edge cracking on both sides of the street, and drainage still in need of significant improvement. In consideration of the need for improvement to the facilities which are appurtenant to the roadway itself, i.e. gutters, catch basins, storm sewers, shoulders, curbs, etc., it is recommended that the full length of Church Street be scheduled for full upgrades, including milling and resurfacing within the next eight to ten years.

c. East Avenue

East Avenue was found to have low to moderate traffic volume, good to fair pavement conditions but no defined shoulders between Church and High Streets, and drainage in need of significant improvement throughout the entire length. Pavement surfaces between Church Street and Coleman Road were significantly improved through a Niagara County – Village paving improvement project in 2010. However, it is recommended that those sections between Main and Church Streets, and Coleman Road and High Street being scheduled for milling and resurfacing.

d. High Street

High Street was found to have low traffic volume, good pavement conditions but no defined shoulders from East Avenue to Quaker Road. Drainage characteristics of this road are generally good, with swales and ditches on the south side of the road.

e. Main Street

Main Street was found to have moderate traffic volume, fair to poor pavement, and drainage in significant need of improvement. The entire length of Main Street between Quaker Road and East Avenue exhibits extensive cracking and uneven grading. If this section of Main Street were to be repaved, however, it would be best to mill and resurface the area since the concrete curbing located on the north side of the roadway has only about 2" of reveal. There is granite curbing on the south side of the roadway with approximately 4" of reveal. No curbing or gutters exist between Pallister and East Avenues.

f. Pallister Avenue

Pallister Avenue was found to have low to moderate traffic volume, good to fair pavement conditions, and drainage in need of significant improvement. A few sections of the roadway between Coleman Road and Church Street appear to have curbing; however, there is no reveal left on the curb line. The catch basins along this area have large drops adjacent to the roadway and are a dangerous situation.





Some of the pavement improvements previously recommended have been accomplished when the section from Coleman Road to the southern dead end of the street was repaved in 2010 in a project coordinated between the village and the Niagara County Highway Department. Additionally, it is recommended that the section from Main Street to Coleman Road be scheduled for milling and resurfacing in the near future.

g. Quaker Road

Quaker Road is a county highway. It was found to have high traffic volume, good pavement conditions with 8' paved shoulders on both sides of the roadway, and drainage in need of improvement.

h. West Somerset Road

West Somerset Road is a county highway. It was found to have low to moderate traffic volume, fair pavement conditions but with deteriorating shoulders, and drainage in need of improvement. The Niagara County Highway Department is scheduled to reconstruct shoulders and repave West Somerset Road this summer.

i. Woodward Avenue

Woodward Avenue was found to have low traffic volume, good to fair pavement conditions but with portions of the north shoulder breaking away, and drainage in need of significant improvement.

4. Safety Considerations

Village of Barker Police Department and Niagara County Sheriff's Department Traffic Accident Reports for a five year period between 2000 and 2005 were previously reviewed to arrive at the ultimate rating of the Village streets. In general, those conditions were found to be typical and still are applicable in helping to ascertain overall impacts as may relate to any need for street improvements. Review of the traffic accident reports illustrates the following general conditions:

- a. During the period of review, 56 traffic accidents were investigated by one or both police agencies. Of that total, 14 (25.0%) occurred in parking lots, usually involving one moving vehicle and one parked vehicle. Thirty-five (62.5%) accidents occurred along a street or road, sometimes involving a single vehicle leaving the driving lane and hitting a stationary object such as a parked vehicle or tree. The remaining 7 (12.5%) accidents occurred at Village intersections.
- b. During the period of review, the intersection of Quaker and Haight Roads recorded one traffic accident in 2001, and again in 2004. The intersection of Quaker Road and



Coleman Road (2003) and Quaker Road and West Somerset Road (2003) also recorded two traffic accidents during that time period. The remaining Village intersections where traffic accidents occurred each recorded only a single traffic accident: Church Street and East Avenue (2003), Church Street and Pallister Avenue (2001), and Quaker Road and Main Street (2005). Of the 61 accidents, 38 (62.3%) occurred on Quaker Road. Almost half (45.7%) of all Quaker Road accidents occurred at either 1628 or 1651 Quaker Road; eight accidents occurred at each location.

- c. The majority of traffic accidents throughout the Village (37, or 66.1%) occur on, or adjacent to, Quaker Road. As a County highway and the main thoroughfare in the Village, it is the most heavily traveled roadway in the Village. Other than the traffic accidents associated with the parking lots at Barker Central School and Nice & Easy, however, most of the other Quaker Road accidents occurred at separate locations along Quaker Road. Also, the relative infrequent occurrence of traffic accidents at Quaker Road intersections (four in five and one-half years) would indicate the road is well designed from a traffic safety standpoint.
- d. The second greatest number of accidents (6, or 10.7%) occurred along East Avenue; however, all were at different locations.
- e. Six accidents occurred in parking lots. These usually involved moving vehicles hitting parked cars; and are not associated with street and entrance design.
- f. Scattered accidents are reported at the entrances of various residential homes and commercial businesses.

## 5. Sidewalks

Although sometimes overlooked by communities when considering the need for basic infrastructure improvements, sidewalks can be important elements that affect quality of life and public safety in the community. A well-planned and adequately maintained sidewalk system is not only an attractive community asset; more importantly, it allows residents to walk safely from point to point throughout the community. This is especially true in small villages such as the Village of Barker.

At present, sidewalks are located along approximately 45% of the roadsides in the Village of Barker. The older sidewalks are predominately 3' in width, with the newer sidewalks usually being 4' wide. Most of the existing sidewalks are in fair condition, with cracks and/or upheaval evident in several locations. In general, Village personnel can correct many of these problems, however, where major road and/or utility



construction is taking place, installation of new sidewalks should take place as part of these projects. The sidewalk along the south side of Church Street was found to be in poor condition and was recommended for replacement in the 2005 report. The Village was able to partially accomplish replacement of the Church Street sidewalk when they completed installation of that section between Quaker Road and Pallister Avenue within the past several years. The sidewalks that were found to be in generally good condition are located on: both the east and west sides of East Avenue, between Church Street and Coleman Road; the west side of Pallister Avenue, between Church Street and the Barker Village Hall; the east side of Pallister Avenue, between Church Street and Coleman Road; the west side of Pallister Avenue, between High Street and Coleman Road; the south side of High Street, between Quaker Road and Pallister Avenue; the south side of Coleman Road, between Quaker Road and Pallister Avenue; and a portion of the west side of Quaker Road, between Church Street and the North Village Line at Haight Road.

There are several locations within the Village of Barker where presently there are no sidewalks. It is acknowledged that, where sidewalks do not exist, some residents may prefer not to have sidewalks installed. In addition to budgetary concerns, the overall community benefits of providing sidewalks need to be considered when making such decisions. To enhance resident safety, facilitate access to the Village's commercial areas, and promote healthier lifestyles by making walking a more attractive option, it is recommended that sidewalks be installed as follows:

Coleman Road - Due to the fact that Coleman Road is a County Road with a moderate traffic volume, it is recommended that a section of sidewalk be added on the north side of Coleman Road, between Pallister Avenue and the short sidewalk section that presently exists near Quaker Road. It would also be desirable for a sidewalk to be installed along the south side of Coleman Road, between the eastern Village line and East Avenue.

West Somerset Road -Due to the fact that West Somerset Road is also a County Road with a moderate traffic volume, it is recommended that a sidewalk be installed on the south side of West Somerset Road, between the western Village line and Quaker Road.

East Avenue - It is recommended that sidewalks be installed on both sides of East Avenue, between Church and Main Streets. In addition, on the west side of East Avenue, the sidewalk should be extended from where it presently ends (House No. 1712) to Coleman Road. It is also recommended that a sidewalk be installed on the east side of East Avenue, between Coleman Road and High Street.



High Street – It is recommended that a sidewalk be installed on the north side of High Street, between the eastern Village line and Pallister Avenue.

Quaker Road – Quaker Road is a County Road that carries the greatest traffic volume within the Village of Barker. It is recommended that sidewalks be installed in two areas. First, due to the number of residences in this area, it is recommended that a sidewalk be installed on the west side of Quaker Road, between the southern Village line and West Somerset Road. The second area where it is recommended that a sidewalk be installed is on the east side of Quaker Road, between the end of the existing sidewalk at the rear of #8671 Main Street (The Barker Store) and the northern Village line at Haight Road.

Pallister Avenue – It is recommended that sidewalks be installed on the east side of Pallister Avenue, between Main and Church Streets and between Coleman Road and High Street.

Main Street – It is recommended that a sidewalk be installed on the south side of Main Street, from the existing sidewalk on the east side of Quaker Road to the Village Hall parking lot. This would allow pedestrians coming to the Village Hall and Barker Free Library from the north and west to travel a safer path, especially in the winter. It is also recommended that a sidewalk be installed on the south side of Main Street, between East and Pallister Avenues. In addition, there should be handicap access improvements made at the northeast corner of Main Street and Quaker Road.

## 6. Parking Requirements

In general, parking appears to be adequate in the Village of Barker. On-street parking exists in much of the commercial area. In addition, a number of businesses provide for customer parking on their properties. The only municipally owned parking lot in the Village is located at the Village Hall. This area, between the front of the building and Main Street, provides 29 marked spaces that are shared by the Village Hall and the Barker Free Library. A few more spaces are available, although not marked, in the paved area along the eastern end of the building. In the rear of the building there is an area approximately 50' X 60' that could be paved for additional parking. The Village also owns a small parking area, currently with unmarked spaces, at Barker Bicentennial Park on Lake Ontario. Due to the small size of the park, parking here also appears to be adequate.





7. Special Problems Noted

No other special problems were noted with the Village Streets and Roadway System.

8. State Highways

There are no State highways in the Village of Barker.

D. Drainage

1. General

Drainage problems are attributable to several sources. Among these are permeability of soils, terrain and ground cover condition. In general, the low lying areas of the Village surrounding Golden Hill Creek, its tributaries, and other low lying areas of the Village exhibit the most problems.

Due to the fact that the Village of Barker had no accurate mapping of its storm drainage system, the Village authorized Chatfield Engineers to conduct smoke testing of the storm drainage system. The results of that testing allowed the preparation of a storm drainage system map that is included as a part of this Report. This map may be found in Appendix A. As resources allow, the Village should continue their efforts to identify, evaluate and fully document existing conditions through a comprehensive mapping of all storm sewers and other features of the Village drainage system.

Drainage problems have been divided into two types; road related drainage and non-road related isolated problems.

2. Evaluation of Problem Areas

Road related drainage problems are attributable to several sources. Among these are: slope and condition of gutters, ditches or swales, and road shoulders; location, slope, size, material and condition of drainage pipes and catch basins in the storm drainage system; and pavement conditions. Based upon a review of the areas found to be problematic, the following road related concerns have been identified:

Church Street – There is no storm drainage system on Church Street. Only three catch basins are present: one at either end of Church Street, and one on the south side of Church Street approximately 150' east of Quaker Road. Only the latter catch basin is functional. Smoke testing indicated that the other two catch basins discharged to crushed, broken, or plugged storm sewers. In addition, no positive measures such as roadside swales, gutters, curbing or defined shoulders exist to adequately address road drainage. As a result, in a number of



areas edges of pavement have broken away and road shoulder material has washed onto sidewalks and lawns.

East Avenue – East Avenue exhibits most of the same problems as Church Street. Although slightly over half of East Avenue appears to have storm sewers, smoke testing revealed a major portion has crushed, broken or plugged piping. Also, almost all of the catch basins are on the west side of the road. Additionally, no positive measures such as roadside swales, gutters, curbing or defined shoulders exist to adequately address road drainage. In a number of areas edges of pavement have broken away and shoulder material has washed into lawn areas.

Pallister Avenue – Similar problems that were found on Church Street and East Avenue were found to exist on Pallister Avenue. Only slightly less than half of this street appears to have a storm sewer system. In one area (House Nos. 1701-1713), however, catch basins are located on both sides of the street. The point(s) of discharge from the Pallister Avenue storm sewers is, however, unknown. As was found with Church Street and East Avenue, major portions of the Pallister Avenue storm sewers have, or discharge to, crushed, broken, or plugged storm sewers. Some curbing sections exist between Coleman Road and Church Street; however, no reveal is left to this curbing. Also, no other positive measures such as roadside swales, gutters, or defined shoulders exist to adequately address road drainage. In a number of areas edges of pavement have broken away and shoulder material has washed into lawn areas.

Main Street – Approximately one half of Main Street appears to have a storm sewer system. Smoke testing indicated that several sections have, or discharge to, crushed, broken, or plugged storm sewers. During heavy rainfall events, the area of Main Street at the intersection of East Avenue routinely fills with several inches of water. No curbs or gutters are present on Main Street between East and Pallister Avenues. Between Pallister Avenue and Quaker Road there are, however, granite curbs with 4" reveal on the south and concrete curbs with approximately 2" reveal on the north sides of Main Street.

Other Road Related Drainage Problems – The three county roads (Coleman, Quaker, and West Somerset Roads) were all determined to have fair drainage conditions. Coleman Road has some well-defined gravel shoulders and roadside ditches, effective curbing along about half its length, and a small amount of storm sewer. Quaker Road appears to have storm sewers along approximately 70% of its length and well-defined, 8' wide shoulders along its entire length. West Somerset Road has a storm sewer along approximately 10% of its length and defined roadside ditches along its entire length. In all but one instance, the in-place drainage facilities appear to be



functioning to the extent whereby drainage is not having a significant detrimental impact on the pavement. The one exception is West Somerset Road where a deteriorating shoulder exists along the south side of the road.

Major non-road related drainage problems were identified in two specific areas.

The first is in back yard areas between Quaker Road and Pallister Avenue, from Coleman Road to Main Street. There is system of drainage piping of various diameters (6"-36"), types, and ages, much of which is within a few inches of the ground surface. The system probably dates back to the time before the Village of Barker had a Sanitary Sewer System, and may have been used, in part, to deal with failing septic systems. This section of piping, at least at one point, is also connected to and receives storm water from portions of the Quaker Road storm drainage system. During smoke testing, most of the pipe joints south of Church Street were found to be leaking. Although this condition may be somewhat helpful to homeowners in draining their back yards following heavy rainfall events, it is not a positive solution to the drainage problems of this area. It is, in fact, a dangerous situation, especially for children and pets.

The other non-road related drainage problem is related to Golden Hill Creek. The entire Village ultimately drains to Golden Hill Creek. Approximately 1600' of the creek traverses the northwest section of the Village. This section of Golden Hill Creek is quite sluggish. Cleaning this section of the creek would enhance drainage throughout the Village of Barker. A NYS Department of Environmental Conservation permit should be obtained prior to undertaking this work as the area is reportedly in a flood plain.

### 3. Review of Previous Studies

No previous drainage studies have been conducted for the Village of Barker.

## E. Buildings and Grounds

### 1. Village Hall

The Village Hall is located in a 3,275 sq. ft., 1-1/2 story, wood-framed structure located at 8708 Main Street. The Village of Barker owns the building; however, a major portion is leased to the Barker Free Library. Reportedly, construction of the original building dates to the 1800s when it served as a train station. The Village of Barker purchased the building in 1961. The Barker Free Library renovated and began using a part of the building in 1968. The Village of Barker began using the building as its Village Hall in 1970.



The Village Hall contains the offices of the Village Clerk-Treasurer, Deputy Clerk-Treasurer and the Village Board Meeting Room.

Upon examination of the Village Hall portion of the building, and considering the needs of the Village Staff and Elected Officials, the following needs/concerns were identified:

- The existing electrical service to Village Hall is 100 amps. Although considered adequate at this time, some consideration should be given to increasing the service capacity, if necessary.
- The pavement in the parking area in front of the building is in fair to poor condition. This area should be top-coated and striped to prevent further deterioration.
- Consideration should be given to paving the approximate 50' by 60' area directly behind the Village Hall portion of the building.
- Presently, the Village Hall does not have stand-by power for activation during a storm-related or other emergency. Consideration should be given installing a permanent emergency generator so that normal Village Office, Barker Police Department, and Barker Free Library operations can be conducted during an extended power outage.

## 2. Department of Public Works Headquarters

The Department of Public Works Headquarters is located on an approximately 0.6 acre parcel, just north of the western end of Woodward Avenue within the Village of Barker. Normal access is from Woodward Avenue, although there is a secondary access point from the east through the school bus garage property (Ridge Road Express – 1692 Quaker Road).

The Department of Public Works property contains two buildings. The main building, which serves as the DPW Office, is a 30' wide by 60' deep concrete block main building with a 12' wide by 36' deep metal salt storage enclosure on the north side of the building. A second, newer (10 years old) storage building is also located on the property. The latter building is a 40' wide by 30' deep metal pole barn building containing a 12' wide by 10' high garage door and a 3' wide by 6'-8" metal door.

Upon examination of the buildings and the property, as well as discussions with Mark Remington, Superintendent of Public Works, the following needs/concerns were identified:





- The DPW Office in the main building should be connected to the Village Sanitary Sewer System and have bathroom facilities installed.
- The existing electrical service to the main building is 100 amps. Although considered adequate at this time, consideration should be given to increasing the service capacity, when necessary.
- During a power outage, the garage door cannot be opened, as it is too large and heavy to open manually without the aid of the electric door opener. Mark Remington recently purchased a small portable household generator that will provide temporary power. During an emergency, however, that generator will also be needed at other locations in the Village. Consideration should be given installing a permanent emergency generator at this site.
- Three windows (rough openings = 48-3/4" H by 20-1/2" W) in the main building should be replaced with new energy-efficient windows.
- A security system should be installed for both buildings. *(Also a Village Board Recommendation)*
- An exhaust fan should be installed in the main building.
- The metal salt storage portion of the main building is not high enough for dump trucks to deposit salt directly into the building. Consequently, salt is dumped in the parking lot in an area with little gravel, and then village personnel use a tractor with a bucket to push the salt into the building. Since it does not appear that the building can be easily modified, either paving of the parking lot to make salt transfer easier or construction of a new salt storage building should be considered.
- The newer building is currently not insulated and unheated. Insulation and a heater should be installed.
- The Village does not currently own a backhoe, which severely limits the types of work Village DPW personnel can perform. A backhoe should be acquired. (This type of equipment can be leased, or "packaged" along with other needed equipment and bonded.)
- The street sweeper also needs to be replaced. Based on usage it is recommended that a trailer mounted sweeper or pickup bed placement model be considered.



- The dump truck is old enough that it should also be replaced. This truck, although in fair to good condition, could be sold at auction. Proceeds from that sale could be used, in part, to offset the cost of the new truck.
- The two Kubota tractors are in good condition; however, with the acquisition of a backhoe, one tractor could also be sold or taken to the auction. The proceeds could be used to, in part, offset the cost of the new backhoe.
- A level crushed stone base has been installed by Village forces, but the portion of the DPW property that is used by vehicles should be paved. That area is approximately 1,367 sq. yd. If the Village provides the materials, it has been reported that the Niagara County Highway Department will do the paving. *(Also a Village Board Recommendation)*

### 3. Village Parks

There are two Village-owned parks; "Village Park" is adjacent to the Village Hall on Main Street and "Barker Bicentennial Park" is located north of the village on the shore of Lake Ontario. Improvements could be made at both parks that would increase recreational opportunities for Village residents. The improvements needed at Barker Bicentennial Park, however, are of a more immediate concern. After an examination of both properties, the following needs/concerns were identified:

- Improvements to the skating area at Village Park would allow basketball to be played in the summer months. *(Also a Village Board Recommendation)*
- The Village Park gazebo needs to be made handicap accessible.
- The electrical service breaker box should be replaced at the Village Park gazebo.
- Broken granite curbing in front of Village Park should be repaired.
- At Barker Bicentennial Park, shoreline erosion protection should be evaluated by a qualified marine engineer, and necessary improvements implemented. *(Also a Village Board Recommendation)*
- At Barker Bicentennial Park, "sink holes" need to be repaired. *(Also a Village Board Recommendation)*



### III. Future Needs and Projected Growth

#### A. Future Population and Anticipated Growth

The Village of Barker is fairly well developed, and additional development potential within the Village is limited. More than likely, development surrounding the Village will have a greater impact on the Village's infrastructure than development within the Village. Therefore, these outside impacts must be considered when improvements to the Village infrastructure are planned. These influences will readily be observed in the increases in traffic through the Village, increases in water demand in the Village water system, and increases in sanitary sewage flows from outside the Village.

A more subtle, but important impact may be in contributions of storm water to the various drainage ways and storm sewers running through the Village. Development to the east, south or west will be likely to increase flooding in the low lying portions of the Village to which these areas drain.

Notwithstanding, some additional development within the Village is certain to occur. The few remaining parcels on Quaker Road will likely be developed as commercial parcels. Only a few areas remain in the Village that would support residential development. Reportedly, at one time there had been some interest by a local property owner (Gordon property - #8489 West Somerset Road) in developing residential lots, if Woodward Avenue were extended south to West Somerset Road. To date, there have been no other proposals for development.

Projected water demands within the Village water system are not anticipated to increase greatly.

Any increase in sewage flows would most likely be in direct proportion to that of the water demand.

Future traffic on the streets and roads within the Village can be expected to increase only if additional development occurs.

### IV. Evaluation of Needs

#### A. Water System Needs

As mentioned earlier, Chatfield Engineers evaluated the condition of the Village of Barker Water System in 2005 and recommended a number of improvements. The recommended improvements were described in detail in Engineering Report For The Village of Barker Water System Improvements, March 2005, which has since been revised and reissued in 2010. Detailed cost estimates, as well as potential financing scenarios are included in the Report. That report



provided the basis for the implementation of the Phase I Water System Improvements which consisted of approximately 8,000 linear feet of new water mains that was installed in 2010. This project was entirely funded by a \$749,000 NYS Office of Small Cities Grant. The 2005 Report also concluded, in part, that although the entire Water Distribution needs eventual replacement, residents needed a schedule of replacement they can afford to live with. Consequently, a two phased schedule of replacements has been proposed. A summary of the recommended improvements within this two phased approach, appears on Pages 3 and 4 of this Report.

#### B. Street and Roadway System Needs

Based on Table 1, improvements are being recommended for the four Village streets found to be in most need of repair. Estimated project costs are contained in Table 2. Project descriptions are as follows:

Church Street – Although the 2006 paving improvements on Church Street extended the useful life of the roadway surface, this street is still recommended for milling and resurfacing, and overall upgrade. The project consists of milling and resurfacing of pavement, and installing new concrete curbing and new storm sewer piping from Quaker Road to East Avenue. Also, the project includes the removal of the existing four foot wide sidewalks on the south side of Church Street between Pallister Avenue and East Avenue, and the installation of a new four foot wide sidewalk. Since the original 2005 report sidewalks have already been replaced on Church Street between Pallister Avenue and Quaker Road.

East Avenue – In the 2005 CIP Report, most of the entire length of East Avenue was determined to be in need of improvement. Addressing this concern as a priority, the Village, in partnership with the Niagara County Highway Department, provided new paving in 2010 for the section between Church Street and Coleman Road. To supplement these improvements, the following additional items are recommended: new concrete curbing from Main Street to High Street; new storm sewer piping from Main Street to High Street; milling and resurfacing of pavement from Main Street to Church Street and from Coleman Road to High Street; new 4' concrete sidewalks on both sides of East Avenue between Main and Church Streets, on the west side of East Avenue from where the sidewalk presently ends at 1712 East Avenue to Coleman Road, and on the east side of East Avenue between Coleman Road and High Street. All required water system improvements for East Avenue were completed as part of the 2010 Phase I Water System Improvements.

Pallister Avenue – In 2005 Pallister Avenue was also determined to have significant need for improvements to pavement roadway facilities. Based on the identification of these needs the Village performed repaving of the street from Coleman Road to the southern dead end. Although these surface improvements will suffice over the short term, it is still recommended that the following items remain within the capital improvement recommendations: milling and





resurfacing from Main St. to Coleman Road, new concrete curbing; new storm sewer piping throughout; and a new 4' concrete sidewalk on the east side of Pallister Avenue. Drainage improvements proposed for other portions of Pallister Avenue, as outlined in Table 4, will also improve roadway characteristics of this important Village street.

Main Street – Due to its high visibility, high vehicle and pedestrian use, all in conjunction with some easily observed pavement and surface deficiencies; Main Street remains one of the Village's top priorities for improvement. Recommended improvements from the 2005 CIP, and further supported by 2011 observations include: milling and resurfacing of pavement between Quaker Road and East Avenue; new storm sewer piping between Quaker Road and East Avenue; new concrete curbing from Pallister to East Avenues; and new 4' concrete sidewalks along the south side of Main Street in front of Village Park and between Pallister and East Avenues.

Sidewalks – Recommended sidewalk improvements have been summarized in Table 3. Each of the above projects includes either new or replacement sidewalks. In addition, installation of sidewalks is recommended in the following areas where no sidewalks presently exist: Coleman Road, on the north side between Quaker Road and Pallister Avenue, and on the south side between East Avenue and the eastern Village line; West Somerset Road, on the south side between Quaker Road and the western Village line; High Street, on the north side between Pallister Avenue and the eastern Village line; and Quaker Road, on the west side between the southern Village line and West Somerset Road, and on the east side from Haight Road and the existing sidewalk near Main Street.

CHIPS - The Consolidated Local Street and Highway Improvement Program (CHIPS) provides State funds annually to municipalities to support the construction and repair of roads, bridges, and other similar facilities that are not State highways. Projects must be highway-related, and have a service life of at least 10 years.

#### C. Drainage System Needs

Inadequate drainage is one of the major problems facing the Village of Barker. Several projects are being recommended to improve and enhance the surface water drainage characteristics within the Village. A summary of estimated project costs is shown in Table 4. Project descriptions are as follows:

Quaker Road/Pallister Avenue To Golden Hill Creek – It is proposed to replace the old system of varying sizes and types of drainage piping that currently traverses the rear yards between Quaker Road and Pallister Avenue, crosses Church Street, continues across properties along the east side of Quaker Road to the intersection of Quaker Road and Main Street. The new piping will then connect to the existing storm sewer on the east side of Quaker Road that discharges to Golden Hill Creek.



Pallister Avenue/Church Street – A new storm sewer is proposed for installation along Pallister Avenue, between Coleman Road and Church Street. This sewer will discharge into a new storm sewer on Church Street. The new Church Street storm sewer will discharge into the new storm sewer traversing the rear yards between Quaker Road and Pallister Avenue where it crosses Church Street.

Pallister Avenue/Coleman Road/East Avenue – It is proposed to replace the existing inadequate storm sewer piping system that presently exists along the east side of Pallister Avenue between High Street And Coleman Road, along the rear yards on the south side of Coleman Road between Pallister and East Avenues, along the west side of East Avenue to the current point of discharge to a tributary of Golden Hill Creek in the rear of the Barker Lions Community Center.

No. 1694 Quaker Road to Barker Fire Department – A portion of storm sewer on the west side of Quaker Road, between the Barker Fire Department and 1694 Quaker Road appears to be crushed, broken, or plugged. This project proposes replacing that section of storm sewer.

Golden Hill Creek – This project consists of the dredging, cleaning, and stream bank restoration measures associated with the section of Golden Hill Creek that is located in the Village of Barker.

#### D. Buildings and Grounds Needs

Village Hall needs have been identified as Interior, Exterior, or Equipment:

Interior – Significant interior improvements to the Clerk's Office and Board Meeting Room have been recently accomplished through operating funds and implemented by Village staff. Ventilation and occasional odor problems associated with the building being closed overnight or longer should be further evaluated, and appropriate remediation measures instituted if necessary.

Exterior – At the entrance to the building, the concrete steps should be repaired or replaced. Also, the carpeting on the handicap access ramp should be replaced. It is recommended that the parking area in front of the building be top coated and new striping applied. It is also recommended that consideration be given to paving the area in the rear of the Village Office portion of the building.

Equipment - Consideration should be given to installing a permanent emergency generator to service the entire building.

Department of Public Works Headquarters needs were identified relating to the Main Building, Storage Building, Exterior, and Equipment:

Main Building – This building should be connected to the Sanitary Sewer System. Three windows should be replaced with new energy-efficient windows. The standard wooden door should be replaced with



an industrial-grade metal door. An exhaust fan should be installed. A building security system should be installed. Consideration should be given to increasing the capacity of the existing electrical service.

Storage Building – Consideration should be given to insulating and heating this building to free up some of the cramped working spaces in the Main Building. A building security system should be installed.

Exterior – The area of the property that is routinely used by vehicles should be paved. Based on deteriorating structural condition the salt storage facility building should be rehabilitated or reconstructed. Although the property area has been recently fenced with new 8' high chain link fencing, consideration should be given to further secure the site by installing three strands of barbed wire at the top.

Equipment – Consideration should be given to installing a permanent emergency generator to service at least the Main Building. A backhoe should be purchased for the Department. Proceeds from selling one of the Village's two Kubota tractors at the annual municipal equipment auction could partially offset the backhoe cost. A new salt box and spreader should be acquired. The street sweeper should be replaced, possibly with a smaller trailer or pickup bed installed unit. The existing dump truck should be sold at the annual municipal equipment auction, and the proceeds used to partially offset the cost of a new dump truck.

#### E. Village Parks Needs

Village Park needs have been identified for each park:

Village Park – It is recommended that the two areas that are flooded and used for ice skating in winter be paved so that they can be used as basketball courts during the other seasons. The gazebo should be made handicap accessible. Also at the gazebo, the electrical service breaker box should be replaced.

Bicentennial Park – Shoreline erosion protection should be further evaluated, and designed and constructed if necessary. Also, several "sink holes" should be repaired.

#### V. Cost Estimates

Total estimated capital costs of recommended improvements to Village infrastructure are summarized and shown below. For individual cost breakdowns, please refer to the detailed cost estimates that are provided in Tables 3-5.

##### A. Water System

Recommended improvements to the Water System, including improvements to meter pits and replacement of water mains throughout the Village, are described in Engineering Report For The Village of Barker Water System



Improvements, March 2005, revised and reissued by Chatfield Engineers in June, 2010.

Total Estimated Capital Costs (Phase I and Phase II) = \$1,764,000 \*

\* It should be noted that \$749,000 of these improvements has been completed during the Phase I Water Improvements of 2010.

#### B. Streets and Roadway System

Street and Roadway System projects are being recommended for Church Street, East Avenue, Pallister Avenue, and Main Street. All projects involve milling and resurfacing of pavement, and the installation of storm sewers and catch basins, concrete curbing, and sidewalks on at least portions of each project. Detailed estimated costs may be found in Table 2.

Total Estimated Capital Costs = \$1,409,486

#### C. Sidewalks

New 4' wide concrete sidewalks are being recommended for portions of East Avenue, Pallister Avenue, Main Street, Coleman Road, High Street, Quaker Road, and West Somerset Road, and for all of Church Street. Sidewalk projects that can be completed as part of one of the above Street and Roadway System projects are listed both in Table 2 and Table 3. Although sidewalks are usually considered only as a component of Street and Roadway Systems, they have been shown separately to facilitate the possible submission of a Grant or Member Item application.

Total Estimated Capital Costs = \$284,427

#### D. Drainage System

Drainage projects are being recommended for several locations within the Village. A severely inadequate drainage system that extends from the rear yards between Quaker Road and Pallister Avenue and eventually discharges to Golden Hill Creek is recommended for replacement. Also recommended to be replaced is the inadequate drainage system which begins near the intersection of Pallister Avenue and High Street, and then extends along portions of Pallister Avenue, the rear yards on the south side of Coleman Road, East Avenue, and to a point of discharge in a tributary of Golden Hill Creek. Replacement of a portion of the existing storm sewer along the west side of Quaker Road between 1694 Quaker Road and the Barker Fire Department is recommended. It is recommended that a new storm sewer be installed along Pallister Avenue between Coleman Road and Church Street, and also along a portion of Church Street. It is also recommended that Golden Hill Creek be dredged and cleaned for the section located in the Village of Barker, but only if the Town of Somerset or Niagara County will do similar work downstream. Detailed estimated costs may be found in Table 4.

Total Estimated Capital Costs = \$1,185,808





## E. Buildings and Grounds

Several projects are being recommended to address needs at the Village Hall, Department of Public Works Headquarters, and the two Village Parks. Also a number of equipment purchases are being recommended for the Village Hall and the Department of Public Works. Building improvements at both facilities, as well as paving at the Department of Public Works, are seen as the most needed items. Of the Village Park improvements being recommended, the most needed is the installation of shoreline erosion protection measures at Barker Bicentennial Park. Detailed estimated costs may be found in Table 5.

Total Estimated Capital Costs = \$498,802

## VI. Summary and Recommendations

Village Clerk-Treasurer Kathie Smith, Superintendent of Public Works Mark Remington and all Village Administration and staff were extremely helpful in providing information and assistance in the preparation of the Capital Improvement Plan. Each is doing an excellent job in their respective roles, in spite of the needed improvements identified herein.

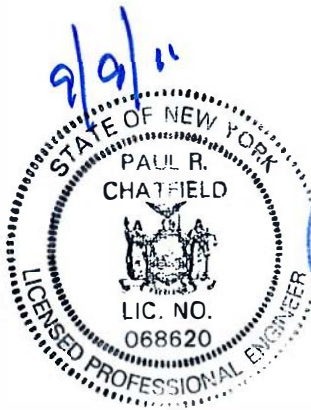
Review of the problem areas identified above shows that many areas require a large scope of improvements. Therefore, work in common locations should be integrated to avoid unnecessary repetitions, and to be most cost effective and least obtrusive. Areas such as Church Street and East Avenue have a host of problems. Comprehensive improvement projects incorporating the replacement of water mains, improvements to storm sewers and drainage, and the reconstruction of roads and sidewalks should be considered at locations such as these. Isolated problems should be handled on a case-by-case basis.

The following lists provide a tentative suggested scope of work. The work has been broken into comprehensive and individual projects.

- A. Comprehensive Projects - These comprehensive projects have been listed from highest to least priority.
  - 1. Quaker/Pallister and Pallister/Church Drainage = \$676,572
  - 2. Church Street Reconstruction = \$265,187
  - 3. East Avenue Reconstruction = \$531,182
  - 4. Main Street Reconstruction = \$285,610
- B. Individual Projects - These individual projects are not listed by any priority, but should be reviewed annually and completed depending on the availability of funds.



1. Pallister Avenue Reconstruction = \$326,807
  2. Pallister/Coleman/East Drainage\* = \$371,436
  3. Quaker Road Drainage = \$75,400
  4. Golden Hill Creek Cleaning = \$62,400.00
  5. Village Hall Improvements/Equipment = \$26,625
  6. Dept. of Public Works Improvements/Equipment = \$298,978
  7. Village Park Improvements = \$173,200
  8. All Sidewalk Projects\*\* = \$284,427
- \*A major portion of this project is included in A. 2., above.  
\*\*Portions of this total project are included in A. 1. - A. 4., above.



**Evaluation Prepared By,**

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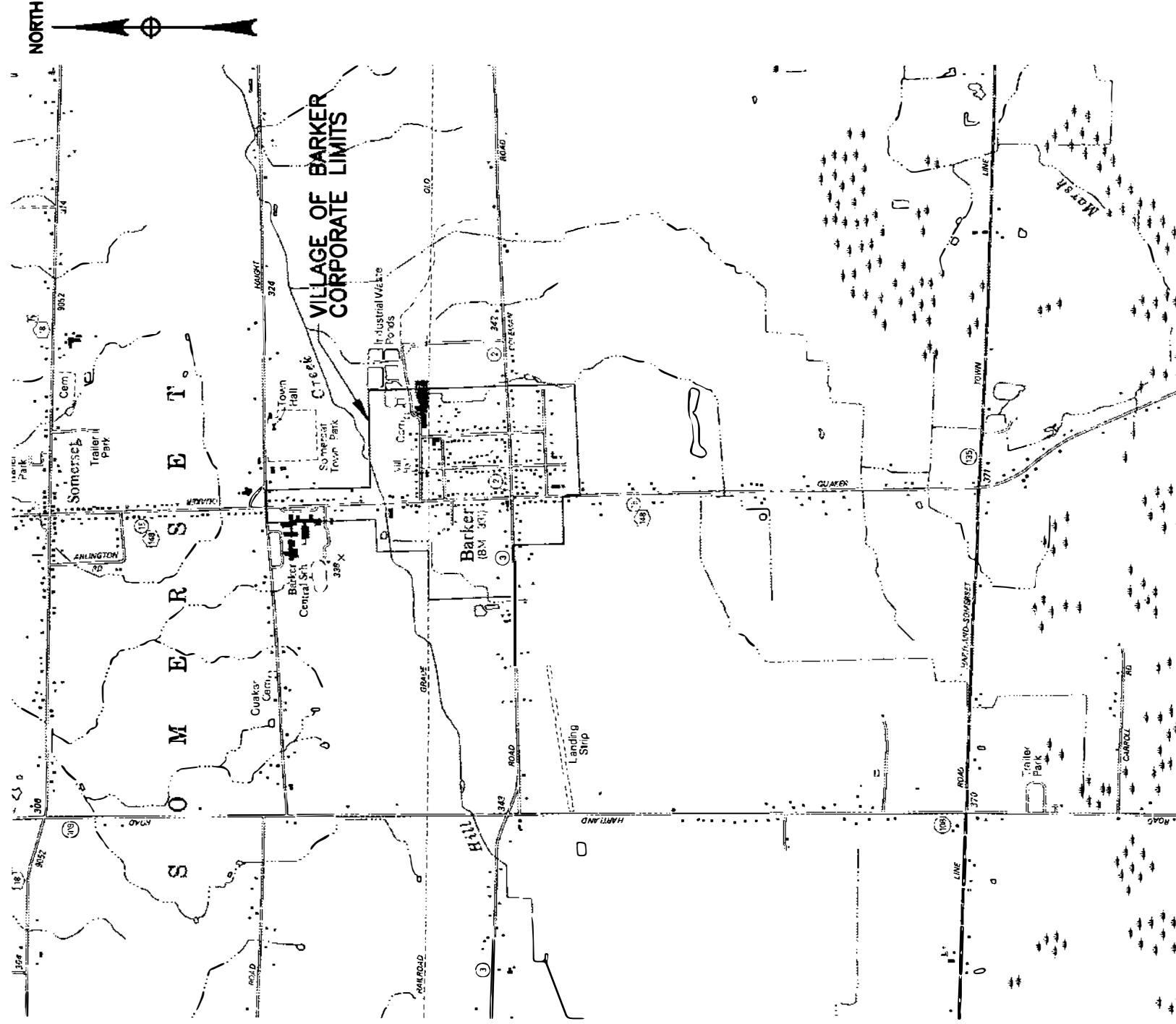
Email: paulchatfield@chatfieldengineers.com



## Appendix A – Maps

Figure 1 Location Map

Figure 2 Drainage Map

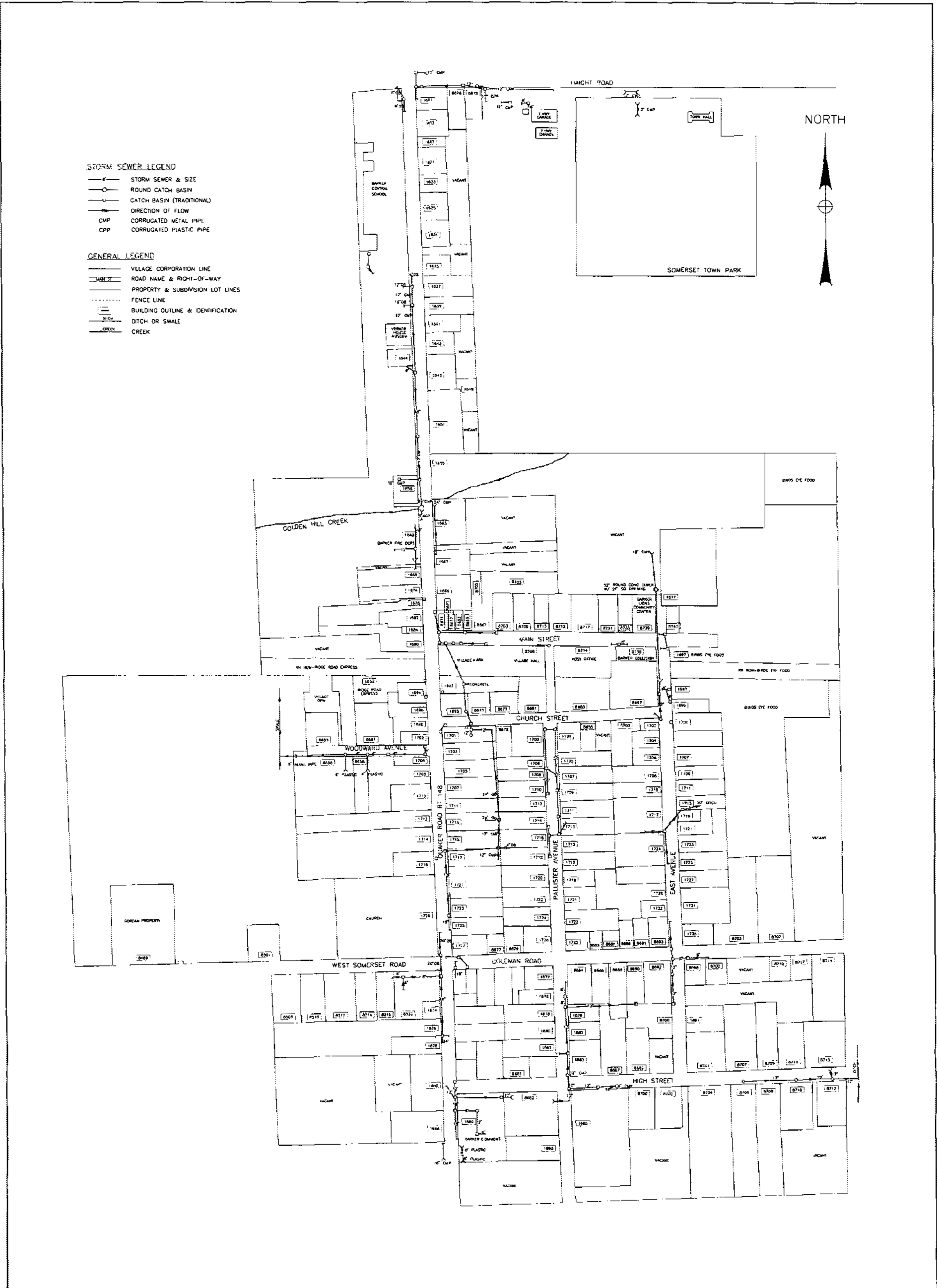


## Figure 1

## Village of Barker Location Map

**N.T.S.**





|                      |                       |                                                          |                                                                                                                                                                                                           |                          |                |                 |     |           |    |      |                                          |                     |
|----------------------|-----------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------|-----------------|-----|-----------|----|------|------------------------------------------|---------------------|
| DRAWING NO.<br><br>1 | PROJECT NO.<br>05-662 | PROJECT<br>VILLAGE OF BARKER<br>CAPITAL IMPROVEMENT PLAN |  <div>CHATFIELD ENGINEERS<br/>8800 English Road<br/>Rochester, New York, 14626<br/>(585) 227-6040 • FAX 227-4233</div> | PROJECT ENGINEER:<br>TWW | FIRM PRINCIPAL | PROJECT MANAGER | NO. | REVISIONS | BY | DATE | NO. 10-10-2005<br>PROJECT MANAGER<br>TWW |                     |
|                      |                       | TITLE<br>DRAINAGE MAP<br>APPENDIX A, FIGURE 2            |                                                                                                                                                                                                           | DRAFTED BY:<br>BTJ       |                |                 |     |           |    |      |                                          | SCALE:<br>1" = 200' |
|                      |                       |                                                          |                                                                                                                                                                                                           | CHECKED BY:<br>PRC       |                |                 |     |           |    |      |                                          |                     |
|                      |                       |                                                          |                                                                                                                                                                                                           | DATE:<br>OCT. 2005       |                |                 |     |           |    |      |                                          |                     |
|                      |                       |                                                          |                                                                                                                                                                                                           |                          |                |                 |     |           |    |      |                                          |                     |
|                      |                       |                                                          |                                                                                                                                                                                                           |                          |                |                 |     |           |    |      |                                          |                     |
|                      |                       |                                                          |                                                                                                                                                                                                           |                          |                |                 |     |           |    |      |                                          |                     |
|                      |                       |                                                          |                                                                                                                                                                                                           |                          |                |                 |     |           |    |      |                                          |                     |

## Appendix B – Tables

Table 1 – Street System Inventory

Table 2 – Street and Roadway System Improvements

Table 3 – Sidewalk Improvements

Table 4 – Drainage System Improvements

Table 5 – Buildings and Grounds Improvements

**TABLE 1  
VILLAGE OF BARKER  
STREET SYSTEM INVENTORY**

| <b>Name</b>      | <b>Length<br/>(feet)</b> | <b>Ditch</b> | <b>Curb</b> | <b>Piped</b> | <b>Sidewalk</b> | <b>Traffic<br/>(A)</b> | <b>Pavement<br/>(B)</b> | <b>Drainage<br/>(C)</b> | <b>Safety<br/>(D)</b> | <b>Rating<br/>(E)</b> |
|------------------|--------------------------|--------------|-------------|--------------|-----------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| Coleman Road*    | 1,880                    | 20%          | 60%         | 5%           | 40%             | 2                      | 2                       | 2                       | 1                     | 7                     |
| Church Street    | 1,060                    |              |             |              | 50%             | 1                      | 2.5                     | 3                       | 1                     | 7.5                   |
| East Avenue      | 2,070                    |              |             | 55%          | 35%             | 1.5                    | 1.5                     | 2.5                     | 1.5                   | 7                     |
| High Street      | 1,800                    | 35%          |             | 70%          | 15%             | 1                      | 1                       | 1                       | 1                     | 4                     |
| Main Street      | 1,080                    |              | 50%         | 50%          | 50%             | 2                      | 1.5                     | 1.5                     | 1                     | 6                     |
| Pallister Avenue | 2,440                    |              | 30%         | 45%          | 60%             | 1.5                    | 1.5                     | 2.5                     | 1                     | 6.5                   |
| Quaker Road*     | 5,280                    |              |             | 70%          | 65%             | 3                      | 1                       | 1.5                     | 2                     | 7.5                   |
| West Somerset*   | 1,650                    | 100%         |             | 10%          |                 | 1.5                    | 2                       | 2                       | 1                     | 6.5                   |
| Woodward Avenue  | 420                      |              |             |              | 50%             | 1                      | 1.5                     | 2                       | 1                     | 5.5                   |

**Total Length = 17,680**

(A) 1 denotes low traffic volume, 2 denotes moderate traffic volume, 3 denotes high traffic volume.

(B) 1 denotes good pavement condition, 2 denotes fair pavement condition, 3 denotes poor pavement condition.

(C) 1 denotes good drainage conditions, 2 denotes fair drainage conditions, 3 denotes poor drainage conditions.

(D) 1 denotes low number of accidents, 2 denotes moderate number of accidents, 3 denotes high number of accidents.

(E) Overall rating is the sum of A + B + C + D, lowest rating denotes road with lowest priority, highest rating denotes road with highest priority.

\*Denotes a County Road

**TABLE 2  
VILLAGE OF BARKER  
STREET AND ROADWAY SYSTEM IMPROVEMENTS  
PRELIMINARY COST ESTIMATE  
SEPTEMBER 2011**

**Church Street (Quaker Road to East Avenue)**

| Description                               | Quantity | Units | Unit Price | Amount      |
|-------------------------------------------|----------|-------|------------|-------------|
| Mill and Resurface Pavement               | 2,400    | SY    | \$20.00    | \$48,000.00 |
| 12" SICPP Storm Sewer                     | 500      | LF    | \$45.00    | \$22,500.00 |
| 18" SICPP Storm Sewer*                    | 400      | LF    | \$50.00    | \$20,000.00 |
| 36" SICPP Storm Sewer*                    | 100      | LF    | \$70.00    | \$7,000.00  |
| Type A Catch Basins*                      | 14       | Ea.   | \$1,500.00 | \$21,000.00 |
| Concrete Curbing                          | 2,060    | LF    | \$36.00    | \$74,160.00 |
| 48" Concrete Sidewalk (East to Pallister) | 515      | LF    | \$22.00    | \$11,330.00 |

\*Portions Also Listed In Table 4

**Sub-total Estimated Construction Amount = \$203,990.00**

Plus 10% Contingency = \$20,399.00

Plus Design and Construction Phase Engineering = \$20,399.00

Plus Legal and Administration = \$20,399.00

**Total Estimated Capital Cost = \$265,187.00**

Note: Church St was repaved in 2006 but full milling and resurfacing in conjunction with drainage improvements should be scheduled in next 10 years.

**East Avenue (Church Street to High Street)**

| Description                                       | Quantity | Units | Unit Price | Amount       |
|---------------------------------------------------|----------|-------|------------|--------------|
| Mill and Resurface Pvmnt (Cole to High, 600 LF)   | 1,333    | SY    | \$20.00    | \$26,660.00  |
| Mill and Resurface Pvmnt (Church to Main, 340 LF) | 756      | SY    | \$20.00    | \$15,120.00  |
| 12" SICPP Storm Sewer*                            | 1,440    | LF    | \$45.00    | \$64,800.00  |
| 18" SICPP Storm Sewer*                            | 1,500    | LF    | \$50.00    | \$75,000.00  |
| Type A Catch Basins*                              | 28       | Ea.   | \$1,500.00 | \$42,000.00  |
| Concrete Curbing (Main to High)*                  | 4,020    | LF    | \$36.00    | \$144,720.00 |
| Road Crossing (Main Street)*                      | 1        | Ea.   | \$1,500.00 | \$1,500.00   |
| Road Crossing (Church Street)*                    | 1        | Ea.   | \$1,500.00 | \$1,500.00   |
| 48" Concrete Sidewalk (Various Locations)         | 1,720    | LF    | \$22.00    | \$37,840.00  |

\*Portions Also Listed In Table 4

**Sub-total Estimated Construction Amount = \$409,140.00**

Plus 10% Contingency = \$40,914.00

Plus Design and Construction Phase Engineering = \$40,914.00

Plus Legal and Administration = \$40,914.00

**Total Estimated Capital Cost = \$531,882.00**

Note: East Avenue was repaved in 2010 between Church and Coleman. Table includes comprehensive drainage improvements for entire street which should be coordinated with full milling and resurfacing.

**TABLE 2, CONT.****Pallister Avenue (Main Street to Coleman Road)**

| Description                            | Quantity | Units | Unit Price * | Amount      |
|----------------------------------------|----------|-------|--------------|-------------|
| Mill and Resurface Pavement (1,430 LF) | 3,178    | SY    | \$20.00      | \$63,560.00 |
| 12" SICPP Storm Sewer*                 | 2,050    | LF    | \$45.00      | \$92,250.00 |
| Type A Catch Basins*                   | 28       | Ea.   | \$1,500.00   | \$42,000.00 |
| Concrete Curbing                       | 1,140    | LF    | \$36.00      | \$41,040.00 |
| 48" Concrete Sidewalk (East Side Only) | 570      | LF    | \$22.00      | \$12,540.00 |

\*Portions Also Listed In Table 4

**Sub-total Estimated Construction Amount = \$251,390.00**

Plus 10% Contingency = \$25,139.00

Plus Design and Construction Phase Engineering = \$25,139.00

Plus Legal and Administration = \$25,139.00

**Total Estimated Capital Cost = \$326,807.00**

Note: Pallister Avenue was repaved from Coleman to the DE in 2010. Table includes comprehensive drainage improvements for entire street which should be coordinated with full milling and resurfacing.

**Main Street (Quaker Road to East Avenue)**

| Description                                      | Quantity | Units | Unit Price * | Amount       |
|--------------------------------------------------|----------|-------|--------------|--------------|
| Mill and Resurface Pavement                      | 5,030    | SY    | \$20.00      | \$100,600.00 |
| 18" SICPP Storm Sewer                            | 1,050    | LF    | \$50.00      | \$52,500.00  |
| Type A Catch Basins                              | 8        | Ea.   | \$1,500.00   | \$12,000.00  |
| 48" Concrete Sidewalk (Park + Pallister to East) | 780      | LF    | \$22.00      | \$17,160.00  |
| Concrete Curbing (Pallister to East Only)        | 1,040    | LF    | \$36.00      | \$37,440.00  |

**Sub-total Estimated Construction Amount = \$219,700.00**

Plus 10% Contingency = \$21,970.00

Plus Design and Construction Phase Engineering = \$21,970.00

Plus Legal and Administration = \$21,970.00

**Total Estimated Capital Cost = \$285,610.00**



**TABLE 3  
VILLAGE OF BARKER  
SIDEWALK IMPROVEMENTS  
PRELIMINARY COST ESTIMATE  
SEPTEMBER 2011**

| <b>Description</b>               | <b>Quantity</b> | <b>Units</b> | <b>Unit Price</b> | <b>Amount</b> |
|----------------------------------|-----------------|--------------|-------------------|---------------|
| Church Street*(Church-Pallister) | 515             | LF           | \$22.00           | \$11,330.00   |
| East Avenue*                     | 1,720           | LF           | \$22.00           | \$37,840.00   |
| Pallister Avenue*                | 850             | LF           | \$22.00           | \$18,700.00   |
| Main Street*                     | 780             | LF           | \$22.00           | \$17,160.00   |
| Coleman Road                     | 800             | LF           | \$22.00           | \$17,600.00   |
| High Street                      | 1,280           | LF           | \$22.00           | \$28,160.00   |
| Quaker Road                      | 3,200           | LF           | \$22.00           | \$70,400.00   |
| West Somerset Road               | 800             | LF           | \$22.00           | \$17,600.00   |

|                                                  |                     |
|--------------------------------------------------|---------------------|
| <b>Sub-total Estimated Construction Amount =</b> | <b>\$218,790.00</b> |
| Plus 10% Contingency =                           | \$21,879.00         |
| Plus Design and Construction Phase Engineering = | \$21,879.00         |
| Plus Legal and Administration =                  | \$21,879.00         |
| <b>Total Estimated Capital Cost =</b>            | <b>\$284,427.00</b> |

\*These sidewalk improvements are also listed in Table 2.

**TABLE 4**  
**VILLAGE OF BARKER**  
**DRAINAGE SYSTEM IMPROVEMENTS**  
**PRELIMINARY COST ESTIMATE**  
**SEPTEMBER 2011**

**Quaker Road/Pallister Avenue To Golden Hill Creek**

| Description                   | Quantity | Units | Unit Price | Amount      |
|-------------------------------|----------|-------|------------|-------------|
| 24" SICPP Storm Sewer         | 940      | LF    | \$55.00    | \$51,700.00 |
| 36" SICPP Storm Sewer         | 1,200    | LF    | \$70.00    | \$84,000.00 |
| Type A Catch Basins           | 11       | EA    | \$1,500.00 | \$16,500.00 |
| Road Crossing (Church Street) | 1        | EA    | \$1,500.00 | \$1,500.00  |
| Road Crossing (Main Street)   | 1        | EA    | \$1,500.00 | \$1,500.00  |

**Sub-total Estimated Construction Amount = \$155,200.00**  
 Plus 10% Contingency = \$15,520.00  
 Plus Design and Construction Phase Engineering = \$15,520.00  
 Plus Legal and Administration = \$15,520.00  
**Total Estimated Capital Cost = \$201,760.00**

**Pallister Avenue/Church Street**

| Description                      | Quantity | Units | Unit Price | Amount       |
|----------------------------------|----------|-------|------------|--------------|
| 12" SICPP Storm Sewer            | 2,000    | LF    | \$45.00    | \$90,000.00  |
| 18" SICPP Storm Sewer            | 1,570    | LF    | \$50.00    | \$78,500.00  |
| Type A Catch Basins              | 38       | EA    | \$1,500.00 | \$57,000.00  |
| Concrete Curbing                 | 3,840    | LF    | \$36.00    | \$138,240.00 |
| Road Crossing (Pallister Avenue) | 1        | EA    | \$1,500.00 | \$1,500.00   |

**Sub-total Estimated Construction Amount = \$365,240.00**  
 Plus 10% Contingency = \$36,524.00  
 Plus Design and Construction Phase Engineering = \$36,524.00  
 Plus Legal and Administration = \$36,524.00  
**Total Estimated Capital Cost = \$474,812.00**

**Pallister Avenue/Coleman Road/East Avenue**

| Description                   | Quantity | Units | Unit Price | Amount      |
|-------------------------------|----------|-------|------------|-------------|
| 12" SICPP Storm Sewer         | 1,440    | LF    | \$45.00    | \$64,800.00 |
| 18" SICPP Storm Sewer         | 1,500    | LF    | \$50.00    | \$75,000.00 |
| Type A Catch Basins           | 28       | EA    | \$1,500.00 | \$42,000.00 |
| Concrete Curbing              | 2,720    | LF    | \$36.00    | \$97,920.00 |
| Road Crossing (High Street)   | 1        | EA    | \$1,500.00 | \$1,500.00  |
| Road Crossing (Coleman Road)  | 1        | EA    | \$1,500.00 | \$1,500.00  |
| Road Crossing (Church Street) | 1        | EA    | \$1,500.00 | \$1,500.00  |
| Road Crossing (Main Street)   | 1        | EA    | \$1,500.00 | \$1,500.00  |

**Sub-total Estimated Construction Amount = \$285,720.00**  
 Plus 10% Contingency = \$28,572.00  
 Plus Design and Construction Phase Engineering = \$28,572.00  
 Plus Legal and Administration = \$28,572.00  
**Total Estimated Capital Cost = \$371,436.00**

**TABLE 4, CONT.****1694 Quaker Road To Barker Fire Department**

| <b>Description</b>                               | <b>Quantity</b> | <b>Units</b> | <b>Unit Price</b> | <b>Amount</b>      |
|--------------------------------------------------|-----------------|--------------|-------------------|--------------------|
| 18" SICPP Storm Sewer                            | 980             | LF           | \$50.00           | \$49,000.00        |
| Type A Catch Basins                              | 6               | EA           | \$1,500.00        | \$9,000.00         |
| <b>Sub-total Estimated Construction Amount =</b> |                 |              |                   | <b>\$58,000.00</b> |
| Plus 10% Contingency =                           |                 |              |                   | \$5,800.00         |
| Plus Design and Construction Phase Engineering = |                 |              |                   | \$5,800.00         |
| Plus Legal and Administration =                  |                 |              |                   | \$5,800.00         |
| <b>Total Estimated Capital Cost =</b>            |                 |              |                   | <b>\$75,400.00</b> |

**Golden Hill Creek**

| <b>Description</b>                               | <b>Quantity</b> | <b>Units</b> | <b>Unit Price</b> | <b>Amount</b>      |
|--------------------------------------------------|-----------------|--------------|-------------------|--------------------|
| Dredging and Cleaning                            | 1,600           | LF           | \$20.00           | \$32,000.00        |
| Streambank Restoration                           | 3,200           | LF           | \$5.00            | \$16,000.00        |
| <b>Sub-total Estimated Construction Amount =</b> |                 |              |                   | <b>\$48,000.00</b> |
| Plus 10% Contingency =                           |                 |              |                   | \$4,800.00         |
| Plus Design and Construction Phase Engineering = |                 |              |                   | \$4,800.00         |
| Plus Legal and Administration =                  |                 |              |                   | \$4,800.00         |
| <b>Total Estimated Capital Cost =</b>            |                 |              |                   | <b>\$62,400.00</b> |

**TABLE 5  
VILLAGE OF BARKER  
BUILDINGS AND GROUNDS IMPROVEMENTS  
PRELIMINARY COST ESTIMATE  
SEPTEMBER 2011**

**Village Hall**

| Description                     | Quantity | Units | Unit Price | Amount     |
|---------------------------------|----------|-------|------------|------------|
| Upgrade Lighting                | 1        | LS    | \$2,000.00 | \$2,000.00 |
| Upgrade Electrical Service      | 1        | LS    | \$2,300.00 | \$2,300.00 |
| Top Coat and Stripe Parking Lot | 1        | LS    | \$6,900.00 | \$6,900.00 |
| Install New Rear Parking Lot    | 1        | LS    | \$2,587.50 | \$2,587.50 |
| Permanent Emergency Generator   | 1        | LS    | \$8,400.00 | \$8,400.00 |

**Sub-total Estimated Construction Amount = \$22,187.50**  
 Plus 10% Contingency = \$2,218.75  
 Plus Design and Construction Phase Engineering = \$1,109.38  
 Plus Legal and Administration = \$1,109.38  
**Total Estimated Capital Cost = \$26,625.00**

**Department of Public Works Headquarters**

| Description                            | Quantity | Units | Unit Price  | Amount      |
|----------------------------------------|----------|-------|-------------|-------------|
| Sanitary Sewer Connection/Bathroom     | 1        | LS    | \$12,600.00 | \$12,600.00 |
| Upgrade Electrical Service             | 1        | LS    | \$2,300.00  | \$2,300.00  |
| Permanent Emergency Generator          | 1        | LS    | \$8,400.00  | \$8,400.00  |
| Replace Windows and Door               | 1        | LS    | \$6,090.00  | \$6,090.00  |
| Security System - Both Buildings       | 1        | LS    | \$10,500.00 | \$10,500.00 |
| Exhaust Fan - Main Building            | 1        | EA    | \$2,100.00  | \$2,100.00  |
| Heater - New Building                  | 1        | EA    | \$3,675.00  | \$3,675.00  |
| Repair / Upgrade Salt Storage Building | 1        | EA    | \$12,000.00 | \$12,000.00 |
| Backhoe                                | 1        | EA    | \$63,000.00 | \$63,000.00 |
| 4-Ton Dump Truck w/Salt Box, Plow      | 1        | EA    | \$94,500.00 | \$94,500.00 |
| Trailer Mounted Street Sweeper         | 1        | EA    | \$18,775.00 | \$18,775.00 |
| Rapid Feed Wood Chipper                | 1        | EA    | \$4,600.00  | \$4,600.00  |
| Pavement                               | 1,367    | SY    | \$7.76      | \$10,607.92 |

**Sub-total Estimated Construction Amount = \$249,147.92**  
 Plus 10% Contingency = \$24,914.79  
 Plus Design and Construction Phase Engineering = \$12,457.40  
 Plus Legal and Administration = \$12,457.40  
**Total Estimated Capital Cost = \$298,977.50**

**TABLE 5, CONT.****Village Parks**

| <b>Description</b>                        | <b>Quantity</b> | <b>Units</b> | <b>Unit Price</b> | <b>Amount</b> |
|-------------------------------------------|-----------------|--------------|-------------------|---------------|
| Pavement - Ice Rinks/Basketball           | 1               | LS           | \$37,500.00       | \$37,500.00   |
| Gazebo - Handicap Accessible Improvements | 1               | LS           | \$1,050.00        | \$1,050.00    |
| Granite Curb Repair                       | 1               | LS           | \$210.00          | \$210.00      |
| Install Shoreline Erosion Control         | 1               | LS           | \$98,175.00       | \$98,175.00   |
| Sink Hole Repair                          | 1               | LS           | \$525.00          | \$525.00      |

**Sub-total Estimated Construction Amount = \$137,460.00**

Plus 10% Contingency = \$13,746.00

Plus Design and Construction Phase Engineering = \$10,996.80

Plus Legal and Administration = \$10,996.80

**Total Estimated Capital Cost = \$173,199.60**



**Village of Barker**  
**Capital Improvement Plan**  
**August 2011**

**Selected Photos**



**Village Park**

Gazebo in need of handicap access  
Ice Rink area to be paved for summer basketball use





DPW's Maintenance Garage & Auxiliary Equipment Building



Salt storage facility in need of rehabilitation







Village Hall Building & Rear side view showing need for parking improvements.



Village Clerk's office area & Village Board Meeting Room, with both areas refurbished by Village staff.





Seven (7) Acre parcel  
(formerly Birdseye) property  
on East Avenue acquired by  
Village.

Building currently being  
used by Village Police as  
staging site.







Easterly views of Main Street near intersection of Quaker Road showing uneven pavement, cracking, and curb and drainage deficiencies.







North side of Main Street near Pallister showing broken, uneven pavement sections, lack of curbing and insufficient drainage.



Broken catch basins along Main Street in front of Village Park, HSBC Bank and corner of East Avenue serving for ineffective drainage and difficulty of maintenance.







New Sidewalk on South side of Church St. / Yard drain on Church St near Quaker St.



Pallister Avenue near Church Street

Pallister Avenue between Church and Coleman / Poorly situated CB in front of Funeral Home.







Pallister Avenue between Church and Coleman.

High Street viewing easterly—good pavement and drainage character-



Eastern end of High Street and creek drainage.

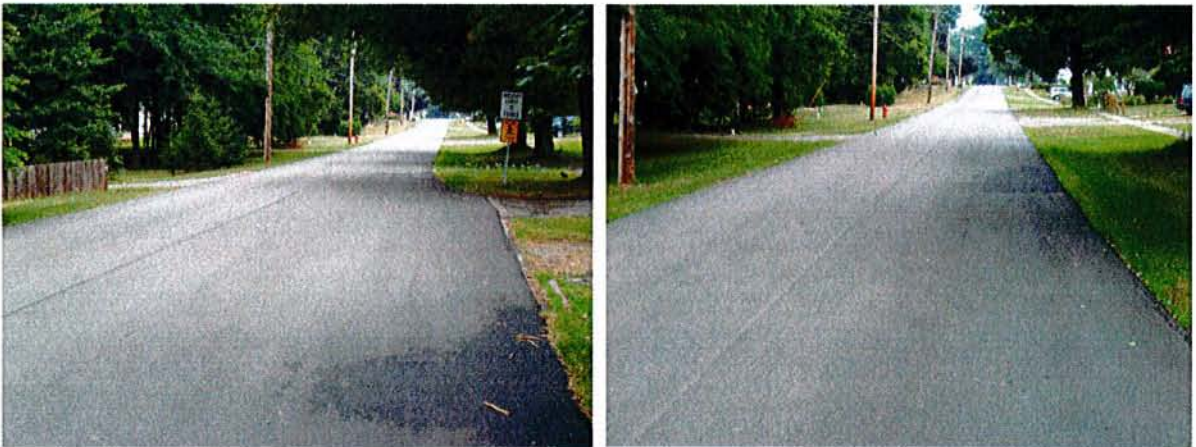




East Avenue viewing northerly between High and Coleman.



East Avenue viewing northerly viewing new (2010) paved sections.



Badly cracked sidewalk on Quaker near High St / High St viewing east from Quaker.







Woodward Avenue viewing westerly from Quaker, and easterly from deadend.

Views of Coleman Road — County Highway.





### **Barker Bi-Centennial Park**

Beach and embankment area in need of evaluation and likely design of shoreline erosion protection features.







**Barker Bi-**  
**Centennial Park**

Viewing eastern  
shoreline from pier.

Viewing eastern  
shoreline from pier.



Viewing western  
shoreline from pier.

