Chapter 4: Infrastructure Issues

Utilities

The Town of Odessa does not directly provide or invoice for any utility services. However, electric, natural gas, phone, and sanitary sewer services are available. The residents and businesses in Odessa are provided electric service from Conectiv, natural gas from Chesapeake Utilities Corporation, and communication services are available from a variety of companies.

Sanitary Sewer

Sanitary sewer service is available in most of the town. A large transmission pipe for the New Castle County sanitary sewer system runs from Middletown to the bridge on the east end of Odessa. There, a pump station pushes the flow across the Appoquinimink River and on to the Water Farm #1 Wastewater Treatment Facility operated by New Castle County. The 1990 Census reported that 102 of the 146 housing units in Odessa (70%) are connected to the sanitary sewer and additional units have been connected during the 1990s. The remaining units utilize on-site septic systems.

It was reported that there is an area in Odessa where sewer service is not readily available due to the location of the transmission mains. That area is located on the northwest side of Odessa along Route 299 where the road sharply bends to the west. This is also an area where new development is likely to occur in the future. It is important that when development occurs in this area, the provision of sewer service to new development is secured from the provider, New Castle County.

RECOMMENDATION

1. The Plan recommends that Odessa discuss with New Castle County the provision of sanitary sewer service for new development and existing homes that are currently using septic systems. Discussions should include the capacity available to Odessa, the costs, and the determination of actions necessary to make sewer service available to all properties in town.

Public Water Supply

Currently, most of Odessa is not served by a public water supply system although a small water supplier, Cantwell Water Company provides water to some residences in and around the southern part of the town. The issue is whether a public water supply system should be developed for the entire Town. There are two basic uses served by a public water system. First, a water system provides potable water supply to residents and businesses to satisfy their daily needs and, second, a system provides a reliable source of water to combat fires through a constantly pressurized network of water mains and hydrants. Public water systems are highly regulated by federal
Potable water needs for most residents and businesses in Odessa are now met by the use of small private wells. In most instances, the cost for water supply is the installation cost for the well, the electricity used to run the pump, and perhaps the cost of operating a water conditioning unit. Comments offered by residents indicate that there have been some quantity or quality problems reported with these private wells during the last decade. When there is a problem, it is usually resolved by replacing the well.

The value of a public water system for fire protection has been recognized for decades by insurance companies that typically offer lower rates for structures located near a public water supply system. Odessa does not have a public water system, however there is a series of pipes and “dry hydrants” in Town that are used by the Odessa Volunteer Fire Company to fight fires. This system was installed in the mid-1970s and consists of several miles of ductile iron water mains, about a dozen fire hydrants, and a diesel-powered pump station on the eastern boundary of Odessa next to the Appoquinimink River. When water supply is needed at the hydrants, fire company personnel start the pump which withdraws water from the River and pumps it into the water mains for withdrawal at the hydrants. The Odessa Volunteer Fire Company has owned and maintained the dry hydrant system since it was constructed over 25 years ago.

A public water system is considered a necessary service for most towns, providing residents and businesses reliability concerning the quantity and quality of water it is using. A public water system would also increase the ability of the Odessa Fire Company to minimize damages to structures within the town from fire. The dry hydrant system currently in use is not as reliable as a continuously pressurized water system and is a maintenance issue for the operator. The availability of flow at the hydrant is dependent on the operation of the pump and the level of the water in the River. A continually pressurized hydrant system would provide a constant source of water for fighting fires and should reduce fire insurance premiums. With many of the valued historic structures in Odessa located so close to one another, a pressurized water system would reduce the possibility that a fire in one structure would spread to other structures.

The major negative for a public water system is the cost. There will be a one-time cost of installing the system and connecting the structure to the water main at the curb and the continual cost of service to the consumer from the provider. When a home is connected to a public water system, the well must be completely disconnected from the distribution system for the dwelling. The well can be maintained for outside watering as long as proof is provided that the well water is not interconnected with the public system.

It should be noted that the establishment of a public water system was recommended in Odessa’s 1969 Comprehensive Plan. If the Town decides to pursue the establishment of a system, there are several options that can be explored. Odessa could develop its own town system including
developing the water source, treatment, and distribution facilities and administrative mechanisms for billing and system repairs. This would be expensive for a town the size of Odessa. Odessa could approach Middletown and request that it extends its municipal water system across SR1 into Odessa. This option is also unlikely since the costs of extending service would be difficult to absorb by a system as small as Middletown and most of these costs would be passed to Odessa water customers, increasing their initial costs. As a third option, the Town could contract with a private water supplier to establish service. Two private suppliers, the Artesian Water Company and Tidewater Utilities operate in this area of New Castle County. A contract with a private supplier would be the most economical option for establishing a public water system in Odessa. A water supplier would have to get approval from the Odessa Town Council and a Certificate of Public Convenience and Necessity (CPCN) from the State before it would have the right to provide water supply to customers in Odessa. The CPCN is a State permit that grants exclusive rights to an entity to provide public water within a specific area.

**RECOMMENDATIONS**

1. The Plan recommends that the Town continue to investigate and review establishing a public water system in the future.

2. The Plan recommends that the reliability of the dry hydrant system be increased or maintained to ensure the availability of water for fighting fires.

**Transportation**

Most historic towns owe their existence to a fortuitous location along major transportation routes – Odessa is no exception. The Town developed on the banks of the Appoquinimink Creek and near a well traveled road which afforded residents and businesses easy access to the surrounding area. The landing on the creek and “Old Herman’s Cartway” represented two of the most significant pieces of transportation infrastructure in the region in the late 17th and early 18th century, and undoubtedly drew many early residents to settle in Odessa.

Today, Odessa remains a crossroads town bisected and impacted by major regional transportation facilities. River transportation is no longer a primary mode of travel, and the landing has been replaced by a recreational boat ramp. Old Herman’s Cartway has been replaced by three regional roads that define the Town. State Route 299, also named Main Street as it goes through the historic center of town, connects Odessa to Middletown. U.S. Route 13 was until recently the main north - south transportation artery in northern Delaware. It bisects the town, occupying what were once 5th and 6th streets. SR 1 is a limited access toll road that will also move traffic north and south through the state. It has been constructed just to the west of Odessa with one of the limited interchanges located on Route 299.

The main transportation issues facing Odessa concern the impact of these roadways on the town, the maintenance of the municipal streets serving the town, and the opportunities for alternative transportation like mass transit, bicycle and pedestrian routes.
There are mainly two public agencies that are involved in transportation matters in Delaware – the Delaware Department of Transportation (DelDOT) and the Wilmington Area Planning Council (WILMAPCO). DelDOT’s principal responsibility is to conduct and maintain roads but it also focuses resources on providing options to address transit, bicycle, pedestrian, and freight needs. WILMAPCO is the designated Metropolitan Planning Organization for the regional area that includes New Castle County, Delaware and Cecil County, Maryland and it is responsible for coordinating transportation plans of local government within this region including town, county, and state plans. It is important for Odessa to work with both of these agencies to address its transportation issues.

**Regional Traffic/Roadways**

For decades Odessa has been significantly impacted by traffic from what was the only major highway running north-south in Delaware, U.S. Route 13. Where it runs through Odessa, Route 13 is actually two two-lane highways running in opposite directions separated by a town block where homes and businesses are located. Impacts from this road includes the normal daily impact of vehicular noise and air pollution from the large number of vehicles passing north and south through the town and the ever-present chance for accidents. For years, residents have voiced concerns about the dirt and the vibrations from the steadily increasing traffic on Route 13. Perhaps even more important to the functioning of the town, the traffic makes it very dangerous for pedestrians to move across the town from east to west since they must cross Route 13 twice. Therefore, Route 13 has actually cut Odessa in half separating many residents within the town from their neighbors. Residents in the eastern portion of the town are also separated from the Odessa’s largest park, Memorial Park, and most residents find it difficult to access the town’s commercial area.

The State Department of Transportation has monitored and recorded the volume of traffic passing through Odessa for many years. The measurements of traffic volumes are expressed as the “Average Annual Daily Traffic,” or AADT. This measurement represents the average number of vehicles that pass through various locations on a given day. Because this is an average, there are some periods when traffic is much less, but also peak periods with greater traffic than the numbers reported below.

Table 7 shows the Average Annual Daily Traffic at various locations along Route 13 in the vicinity of Odessa:

<table>
<thead>
<tr>
<th>Between</th>
<th>And</th>
<th>AADT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pine Tree Corner</td>
<td>Southern Odessa Limits</td>
<td>41,310</td>
</tr>
<tr>
<td>Southern Odessa Limits</td>
<td>Route 299 Intersection</td>
<td>42,825</td>
</tr>
<tr>
<td>Route 299 Intersection</td>
<td>Northern Odessa Limits</td>
<td>51,791</td>
</tr>
</tbody>
</table>

*Source: 1998 Traffic Survey, Delaware Department of Transportation*
This data indicates that in 1998 there were about 50,000 vehicle trips a day that passed through Odessa on both Route 13 and, to a lesser extent, on Route 299. During the summer months, traffic can be expected to increase as much as 18% to 20% over this average figure resulting in as high as 60,000 vehicle trips per day.

Approximately 10,481 of the 51,791 trips either originated or ended within Odessa, or traveled through Odessa on Route 299. The average single family home generates 10 one way vehicle trips per day. Based upon the number of housing units in Odessa (146 in 1990), it can be expected that the Town’s residents generate approximately 1,460 trips. Therefore, as many as 9,021 of the 10,481 vehicle trips represent traffic which is passing through Odessa along Route 299.

Even though the 1998 data is the most recent available, it may not be adequate to describe the current and future traffic patterns through the town. The future impact of State Route 1 must be considered.

**State Route 1 and its Impact on Odessa**

Recently the Town experienced a reason to be optimistic that there may be some relief from the high number of cars and trucks passing through Odessa on Route 13. The newest section of the new major north-south toll highway, State Route 1 (SR1), was opened which provides a bypass to the west of town. It is the belief of the State that SR1 will be used as the preferred alternative to Route 13, particularly by regional traffic passing through the area. However, SR1 is not yet completed so the full impact of this roadway on reducing traffic on Route 13 will not be measurable until the last section of roadway between south Odessa and north Smyrna is completed. It was notable that during a brief trial period when SR1 was opened but tolls were not collected, it was observed that there was much less traffic passing through Odessa. When toll collection started, some of the traffic returned to Route 13 suggesting the decision on which road to use may be made based on the cost-benefit to the user, particularly for local users.

Presently, there are no reliable traffic counts that adequately characterize the impact of SR1 on Odessa. Whenever a new road is opened there is a period of six months to a year when commuters and other motorists are experimenting with their new travel options. DelDOT has reported that the few traffic counts that have been taken vary widely, showing that between 10% and 70% of the north-south traffic is using the new roadway. Once this unsettled period is over, DelDOT planners expect that 50% of the north-south traffic will use SR1. This effect may not fully be realized until the final section of SR1 is opened south of Odessa to Smyrna which is expected to be completed in 2002. In real numbers, this means that the traffic going through Odessa is expected to decrease from approximately 50,000 vehicle trips per day AADT to 25,000 vehicle trips per day AADT. Due to growth in the area it is expected that traffic on both roads will increase by 2% each year (or by about 500 trips, AADT).
DelDOT does not expect that the existence of SR1 will reduce the importance of Route 13 or Route 299 as regional transportation routes. It is expected that Routes 13 and 299 will function as the desired travel routes for trips with local origins and destinations, while SR1 will likely be used for longer distance trips. Those who live in Odessa, Middletown, or the areas east of the town are not likely to enter SR1 and pay the toll after traveling only a few miles. It is more likely that these commuters will continue their current travel patterns, using Route 299 and Route 13. Odessa will continue to be impacted by the population and commercial growth in the Middletown area, which will use Route 299 to access Route 13. The Town could also be negatively impacted in the future by new traffic generated by housing developments within the county to the east of the town. These new residents will likely travel along Route 299 (Main Street) to get to and from Route 13 and SR1. The Town is concerned that increased traffic along Route 299 will increasingly negatively impact their quality of life. Therefore, Odessa is opposed to any increase in traffic along this roadway, which is Odessa’s Main Street and a focal point for its residents.

Several residents have expressed concerns associated with SR1. This new highway is being built as part of a regional transportation system along with improvements to I-95 and the proposed U.S. Route 301 corridor improvements into Maryland. With all of these road improvements, there is a good probability that traffic on SR1 bypassing Odessa could significantly surpass the number of vehicles that Odessa has had to live with on Route 13. Although the traffic would be on the outskirts of the town, the impacts of noise and air pollution on Odessa could increase due to the increasing number of vehicles. It will be important for the Town to work with DelDOT to continually monitor traffic volume and the associated impact in and around the town as SR1 is completed. Also, it is important that potential opportunities to mitigate these impacts be included in any discussions of developing those properties to the Odessa-side of SR1. This includes comments on the type of development, the design and positioning of new structures adjacent to SR1, the construction of fencing or sound barrier walls, and the planting of trees and bushes as buffers.

A comment was received suggesting that in the future the Town might want to pursue the return of two-way traffic on 5th and 6th Streets (Route 13 north/south) when the last phase of SR1 is completed. With an improvement to the existing short connector road between Route 13 north and south on the northeast end of Odessa near the service station, a loop would be created for moving between the commercial and residential parts of the town, improving traffic flow within Odessa. However, DelDOT likely will not be receptive to reducing the roadway capacity that would result from this action.

**Municipal Roadways**

Odessa has a mix of State and municipal roadways. The larger roads, U.S. Route 13 and State Route 299, move traffic through the town and are maintained by the State. The smaller municipal roads facilitate the move-
Alternative Transportation

Currently there are some alternative transportation options available to Odessa. The Town is on a public bus route serviced by DART First State, Delaware’s bus, train, and intermodal transportation provider that operates as a division within the State Department of Transportation. DART Route 301 runs from Dover to Wilmington, traveling along SR1 and stopping at the Park-and-Ride facility located at the Route 299 interchange. A bus runs this route about eight times a day, but only on weekdays.

There are several Park-and-Ride facilities near Odessa, parking lots along major roadways that facilitates the transfer from single occupancy vehicles to higher occupancy vehicles, including buses, vanpools, and carpools. DelDOT also operates DART First State Paratransit. This door to door service is only available to Americans with Disabilities Act certified customers.

There are also some opportunities for Odessa to develop pedestrian and bike paths. Priority should be given to developing pathways for improving accessibility to Memorial Park. Pedestrian and bicycle paths should also be considered when the development of properties on the western side of Odessa are proposed, perhaps linking with efforts being considered in Middletown which has annexed land adjacent to the western side of SR1. Additionally, there may be opportunities for creating a pedestrian path along the Appoquinimink River. River walkways have been very successful in many areas in the region.
RECOMMENDATIONS

1. The Plan recommends that the Odessa Town Council work with the State DelDOT and WILMAPCO to develop a plan for monitoring vehicular traffic (including the vehicle mix of cars vs. trucks) and noise to track changes over the next decade. The plan should include an Annual Report from DelDOT to Odessa Town Council.

2. The Plan recommends that Odessa work with the State to establish a seasonal air quality-monitoring program in the vicinity of Route 13 to track change over time. Results should be included in the Annual Report to the Town from DelDOT.

3. The Plan recommends that discussions be initiated with the State DelDOT and WILMAPCO to evaluate options for calming traffic, improving aesthetics, and providing pedestrian and bicycle facilities along Route 13 through Odessa. This should include the design and installation of signalized pedestrian and bicycle crossings at the Route 13 and Route 299 intersections.

4. The Plan recommends Odessa coordinate with DelDOT and WILMAPCO to monitor traffic conditions on Main Street (Route 299). Traffic has increased partly from new development east of Odessa. The Town should discuss with these agencies methods of calming traffic through this historic area including diverting traffic to existing roads or constructing an alternative route.

5. The Plan recommends that Odessa develop a municipal road maintenance schedule to enable it to better plan for significant expenditures.

6. The Plan recommends Odessa periodically survey its residents to determine if their mass transit needs are being met and should forward results to DART First State.

7. Opportunities should be explored for developing bicycle and pedestrian pathways, particularly with new development projects. A designated pathway with signage throughout the town using existing roads and sidewalks would be relatively low-cost and could encourage non-vehicular movement within the town.