



## Waterford 2033

300 Years of Preservation & Conservation Through Innovation

### Waterford 2033 Update

The Waterford 2033 Committee, in collaboration with the Waterford Foundation (WF) and Waterford Citizen's Association (WCA) leadership, continue to make progress toward a comprehensive plan of infrastructure and other improvements for the National Historic Landmark. This communication is meant to serve as background for our newer neighbors and an update for those who have long been involved in related projects over the years.

In addition to this update, we will be holding an **Open House on Saturday, March 26<sup>th</sup> from 12:00 noon to 5:00 pm at the John Wesley Church**. There will be ongoing briefings in the chapel providing history and an overview of the 2033 project and in the basement, there will be storyboards showing the full detail of project elements and opportunities for questions, comment, and discussion.

### Project Overview

As background for our newer neighbors, Waterford has been the subject of numerous studies over the years, cataloguing infrastructure issues and needs. The 2033 Committee carefully reviewed all of the studies. The most important and relevant among those studies was completed in 2003 with support from the village, the WF, WCA, and Loudoun County. The study is titled "Bury the Wires and Tame the Traffic" (link provided at the end of this communication). The engineering firm of Kimley Horn conducted the study, made recommendations, gathered input from stakeholders, and articulated actions that were approved by villagers, The WF and WCA, and the County.

Despite the hard work of Waterford citizens, for a number of reasons, funding never came through. In 2009, dedicated WCA leaders were able to get support for additional warning signage, lowered speed limit, and several stop signs. However, the remainder of the approved improvements were not completed.

In July of 2021, we surveyed villagers to learn their priorities and ideas. The results of that survey were reported in a village-wide Zoom gathering on November 11, 2021 and can be viewed here: <https://www.waterfordcitizens.org/wp-content/uploads/Waterford-2033-2021-Nov-Presentation-and-Village-Survey.pdf>. From the survey results, it became clear that the issues that initiated the 2003 study were still on the minds of residents and viewed as priorities. We also learned more about other concerns villagers have.

One outcome of the survey that was interesting was how consistent villagers were in discussed the shared values of Waterford:

<b>2003 Core Values</b>	<b>2022 Core Values</b>
Historic Beautiful Old Buildings Preservation Respect for history/heritage Historic Ambiance Integrity of Architecture Spirit of Community Neighbors Family Safety/Security Bucolic Quiet Peaceful Rural Character Charm Quaint Original Green Healthy Trees Pedestrian friendly Consideration Tolerance Intrinsic Beauty Tranquil Peaceful Clean Welcoming Friendly Home	Sense of Community History Rural Beauty Quiet Peaceful Self-Contained Fairytale Village Architecture Beauty Friendly Welcoming Open Space Beautiful Buildings Walkability Wildlife Farm Animals Green Spaces Preserved Viewshed Community Activities Natural Environment Neighbors Preservation Common Good Small Town Living

Given the results of the survey, the WF and WCA agreed with the 2033 Committee’s suggestion that we pursue funding for the remaining improvements and identify additional improvements needed. The first step was to ask for funds to update the 2003 study given that 19 years have passed. That funding was approved in September of 2021 and work on the update began this month.

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To refresh memories and to brief our new neighbors, see the following pages for a series of images of improvements that are part of the 2003 study and were approved by villagers, the WF, the WCA, and the County and some new ideas inspired by your input:

## Burying the Wires

### POWER AND TELEPHONE WIRES

**BEFORE**

**AFTER**

**EXISTING**

- SINGLE PHASE B
- SINGLE PHASE C
- THREE PHASE

**PROPOSED**

- Possible Underground Duct Lines
- Existing Overhead

**Findings:**

- Electrification in Waterford began in the early 1920's
- Telephone service began as early as 1895
- Currently no cable service or high-speed Internet access
- Power and telephone usually follow same path

**Conclusions:**

- Burying the wires is feasible
- Service connections to existing structures feasible
- Approximately 30 above-ground transformers needed to distribute power

**Consensus recommendation:** Relocate overhead wires to underground ducts along the streets (under or adjacent to the pavement)

**BEFORE**

**AFTER**

Post Office

Transformers strategically placed, screened from view

## Lighting the Village

### LIGHTING

**EXISTING**

**Findings:**

- Minimal street lighting exists throughout the village
- Current fixtures beyond useful life
- Numerous options exist for public exist – not all consistent with character of village
- Pole heights possible:
  - Roadway lighting (30+ feet)
  - Pedestrian level lighting (8 to 12 feet)
  - Low level lighting (3 to 5 feet)
  - Lighting of building facades

**Conclusions:**

- Dominion Virginia Power has poles and fixtures that
- Other fixtures and poles in the marketplace better replicate historic lighting, such fixtures would need to
- All alternatives should be energy efficient, conform with "dark sky" requirements and minimize light trespass

**Consensus recommendation:** Coach-type fixture at pedestrian level, placed in appropriate areas in the village to enhance safety and provide security

the village at 4 AM

Historically correct pedestrian level light fixture and pole

Proposed pedestrian level light fixture and pole

## Slowing Traffic

### Measures recommended by consensus:

Pavers (1-foot wide) along roadway edges  
 Pavers (1 to 4-feet wide) in roadway center  
 Modified valley gutter  
 Pavers/stamped concrete on intersections  
 Speed tables  
 Hump back bridge  
 Lower roadway  
 Stone walls and steps near road  
 Trees in place of utility poles (appropriate places)  
 STOP sign (at corner by P.O. only)  
 Law enforcement of speed limits  
 Area-wide education

Motorists avoid rumble, slow when lane width narrowed  
 Acts like edge pavers, helps drainage  
 Variation in pavement alerts drivers to intersection, presence of pedestrians  
 Forces slower turning movements  
 Narrower street width, horizontal deflection slows motorists  
 Forces slowing with gradual vertical  
 Enhances vertical deflection, helps drainage, improves pedestrian safety  
 Reduced field-of-vision for motorist  
 Can force slowing effect if adjacent to roadway  
 Slows motorist due to narrowing effect, aesthetic appeal  
 Effective when obeyed  
 Sends message: speeding unacceptable

### MATERIALS

*Use native materials consistent with historic character of village*



## Improve Roads, Sidewalks, and Pavements

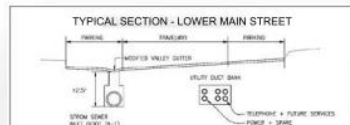
### ROADS, SIDEWALKS, AND PAVEMENTS

- Geometry of roads and sidewalks generally same as in past 60+ years
- Pavement widths range from 14 to 20 feet - Widths, horizontal and vertical curves not within modern standards
- Asphalt pavement not unusually thick—original crown of the road followed
- Drainage problems exacerbated by successive pavement layers
- Pedestrian access and parking difficult in some locations
- Citizens like variety of sidewalk pavement, want to see "clumsy" look continue

- Historic pattern of development over 250 years evident in the roads
- Lowering roads will enhance traffic calming measures, improve drainage, restore historic elevations
- Horizontal re-alignment will enhance historic structures
- Improving/extending sidewalks will enhance pedestrian safety and improve network of walking paths

### Consensus recommendations in support of measures:

- Minor horizontal re-alignment of roads at appropriate locations
- Lower pavement elevation of Main Street between Second Street and the Mill
- Lower pavement elevation of Corner Store intersection
- Modify/extend sidewalks to improve pedestrian safety and access



Lower pavement



Lower pavement, fix drainage, protect trees



Lower pavement, improve sidewalk



Lower pavement, fix drainage





BEFORE

Bridge over Tannery Creek



AFTER



Lower pavement



Lower pavement, fix drainage, protect trees



Lower pavement, improve sidewalk



Lower pavement, fix drainage

## Manage Stormwater



### STORMWATER MANAGEMENT

#### Findings:

- 7 outfalls in drainage system - all drain toward the South Fork Catoctin Creek
- Multiple roadside ditches have been eliminated to allow for additional parking
- Majority of culverts along the roads damaged or clogged
- Existing roadside ditches and storm sewers do not meet current VDOT standards
- Few best management practice (BMP) facilities exist to improve runoff water quality

#### Conclusions:

- Stormwater system needs repair/upgrade to adequately handle large storms
- Wide range of options exist to improve drainage

#### Consensus recommendations in support of traffic calming measures:

- Repair curbs and inlets
- Regrade ditches
- Replace existing and add new pipe culverts
- Clean out existing outfalls
- Reroute drainage away from historic structures
- Install best management practice (BMP) measures at Corner Store intersection to address stormwater quality:
  - Landscaping and infiltration practices
  - Bio-retention measures
  - Grass swales
  - Low-flow stream diversion
  - Expansion of pond



Kimby-Ham  
and Associates, Inc.

September 2003

## Other Possible Improvements

Based on survey input, feedback from the WF and WCA, and villagers' ideas, the following are some additional improvements we hope to explore as this project continues to be refined. This is not an exhaustive list and continues to grow. These and other ideas will be on view at the Open House on March 26 and additional ideas are welcome.

1. Enhanced walkability and better parking
2. Going beyond stormwater management to manage runoff through nature-based systems
3. Potable water for homes and Foundation buildings
4. Positioning Waterford Foundation buildings for adaptive reuse to increase their income
5. Exploring means to add alternative power sources to reduce the village's carbon footprint, reduce energy costs for villagers, and ensure consistent availability of power sources
6. Expanding use of open space, Foundation buildings, and the village more generally for social and cultural activities

Link to 2003 Study: <https://www.waterfordcitizens.org/wp-content/uploads/traffic-2003-bury-wires-entire-report.pdf>.