

# TOWN OF ORANGE, VIRGINIA



## 2011-2016 CAPITAL IMPROVEMENTS PROGRAM

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### FINAL

ADOPTED BY THE TOWN OF ORANGE PLANNING  
COMMISSION  
AUGUST 22, 2011

## 1. Introduction: Town of Orange CIP: 2011-2016

Capital improvement planning is one of several tools a locality uses to implement its comprehensive plan, which generally outlines the future the locality desires for itself through the goals, objectives and implementation strategies contained therein. The purpose of the Capital Improvement Program (CIP) is to allow a locality to examine its current resources and to determine what future resources it needs. This is helpful for determining not only how much funding is needed to satisfy public facility needs but also when such funding is needed.

Typically, the CIP covers a five-year period, with the first year adopted as the capital budget. Funding shown in subsequent years is not immediately committed but instead reflects an estimate of funding levels needed in the future for various facilities, equipment, etc. This plan was developed in the summer of 2011, and thus covers the FY 2011-2012 capital budget as well as capital facilities cost projections for FY 2012-2013, FY 2013-2014, FY 2014-2015, and FY 2015-2016.

## 2. Planning Commission CIP Preparation

State statute designates the Planning Commission as the body generally responsible for the preparation and annual update of a locality's CIP. Section 15.2-2239 of the Code of Virginia, 1950, as amended, states the following:

*A local planning commission may, and at the direction of the governing body shall, prepare and revise annually a capital improvement program based on the comprehensive plan of the locality for a period not to exceed the ensuing five years. The commission shall submit the program annually to the governing body, or to the chief administrative officer or other official charged with preparation of the budget for the locality, at such time as it or he shall direct. The capital improvement program shall include the commission's recommendation, and estimates of cost of the facilities and the means of financing them, to be undertaken in the ensuing fiscal year and in a period not to exceed the next four years, as the basis of the capital budget for the locality. In the preparation of its capital budget recommendations, the commission shall consult with the chief administrative officer or other executive head of the government of the locality, the heads of departments and interested citizens and organizations and shall hold such public hearings as it deems necessary.*

The Town of Orange Planning Commission has prepared this Capital Improvement Program with assistance from Town of Orange staff. The committee members for the preparation of this CIP were:

Benjamin Sherman	Chairman
Robert Langford	Vice Chairman
David Hoffman	Commissioner
Richard Langford	Commissioner

Page Sullenberger  
Henry Lee Carter

Commissioner  
Ex-Officio

Staff Support was provided by:

Greg Woods  
Jeff Dodson  
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James Fenwick

Wendy J. Chewning  
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Town Manager  
Director of Public Works  
Chief Wastewater Plant Operator  
Chief Water Plant Operator  
Chief of Police  
Director of Community Development  
Town Clerk  
Deputy Town Clerk  
Director of Finance

### **3. 2011-2016 Requests**

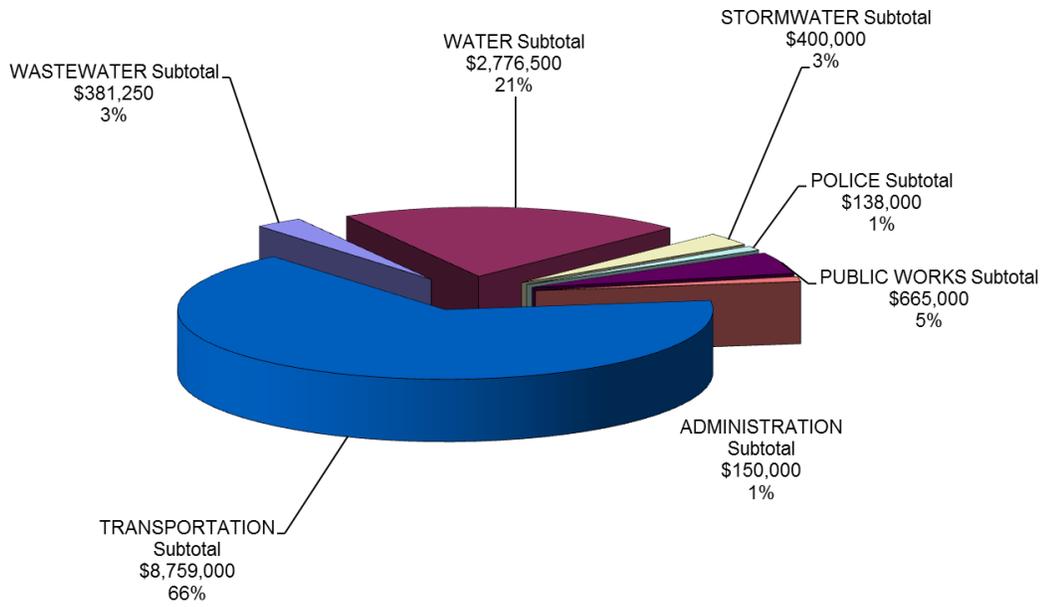
Department Directors were asked to submit capital project requests. This information was subsequently reviewed and discussed by the committee members. Those departments and agencies represented were:

Police  
Water  
Wastewater  
Public Works  
Administration

Figure 1 illustrates the percentage of funding requested by each department.

**Figure 1**

**TOWN OF ORANGE CAPITAL IMPROVEMENTS PLAN 2011-2016**  
Total: \$13,269,750



Town staff developed a prioritization matrix including four CIP criteria; Health and Safety, Regulatory Compliance, Percent of Population Served, and Cost/Benefit or Avoided Costs, and Availability of Funds. For each request submitted, a weight, rating, and total score were computed. Weights for each of the four criteria are as follows:

	<u>Weight</u>	<u>Rating Range</u>
Health and Safety	10	1-10
Regulatory Compliance	5	1-10
Percent of Population Served	6	1-10
Cost/Benefit or Avoided Costs	7	1-10
Availability of Funds	10	1-10

Ranking results, implementation timeline, and funding sources are shown in the attached Appendices. The enclosed Plan includes other essential elements of Capital Improvements Planning:

- Funding Source
- Rank
- Relationship to Comprehensive Plan

Using the enclosed criteria, the #1 ranked item has the greatest priority for funding. There are a total of 28 projects ranked.

#### **4. Funding Recommendations**

Upon review of the CIP projects requested and consideration of public comment received at a public hearing conducted on August 22, 2011, the Planning Commission approved \$13,023,750.00 in capital projects to be funded over the next five years, with \$665,000.00 of that requested for funding in FY2011-2012. In the following pages, each requested capital project and specific funding source is briefly outlined.

## **Inflow and Infiltration Correction Program**

### Description:

This project will begin to correct I&I problems in the Town's sewer system.

### Relationship to 2006 Comprehensive Plan:

**Goal I6:** Upgrade the Town's wastewater treatment system to meet long-term community demands and state and federal effluent standards.

**Action I6.5:** Reduce infiltration and inflow.

Total Cost                      \$100,000.00

Funding Source:              Local funds (General Fund, Enterprise Fund)

Ranking:                          #14 (tie)

## WTP Improvements

### Description:

An engineering study of the plant was completed in 2007 by Draper-Aden Associates. The following improvements were recommended to maintain the plant's present capacity:

- Structural testing
- Application for Intake Permit
- Raw Water Mixing System
- Critical structural repairs
- Filter control valves
- Chemical feed control
- SCADA controls
- Flash Mix Basin and Mixer
- Pinch Valve Controller
- Motor Control Center Replacement
- Storage Site Modifications
- Backwash Redundancy
- Ventilation Improvements
- Flocculation Tank Piping
- Liquid Chemical Storage Building
- Intake Screen Cleaners
- Settling Basin Tube Settlers
- Oxidation Chemical
- Raw Water Pump Change-out
- Window Replacements
- Air Conditioning
- Plant Lighting
- Unit Heaters
- Structural and Architectural Cosmetic Repairs

The following items are considered the most urgent repairs and/or upgrades. These are incorporated into the five-year plan as prescribed below:

None.

Year Two: Filter control valves.

Year Three: Upgrade plant lighting, unit heaters, ventilation, and air conditioning, and install replacement windows.

Year Four: Chemical feed control (streaming current monitor)

Year Five: Structural improvements, repair of deteriorating concrete in certain localized areas of the plant.

Relationship to 2006 Comprehensive Plan:

**Goal I1:** Provide safe and clean drinking water for all residents of the Town of Orange

**Action I1.1:** Convert powder chemical feed to liquid feed.

**Action I1.2:** Construct SCADA communications system.

**Action I1.3:** Pre-disinfect water using alternative method to chlorine.

**Action I1.4** Repair concrete at water treatment plant.

Total Cost: \$703,000.00

Funding Source: Local funds (Enterprise Fund)

Ranking: #4

## **Byrd Street Force Main Replacement**

### Description:

The project will replace the entire sewer line on Byrd Street from Selma Road to Church Street. There have been repeated breaks in this pipeline over the past several years, resulting in discharge of untreated sewage onto the ground. There have been 14 breaks along this line in last five years. A replacement of the entire force main will reduce maintenance costs and allow the Town to re-allocate resources where they are most needed. Replacement will reduce risk and liability to the public and personnel by minimizing exposure to untreated biological waste.

### Relationship to 2006 Comprehensive Plan:

**Goal I7:** Upgrade existing wastewater conveyance system

**Action I7.1:** Replace Byrd Street Force Main.

Total Cost: \$50,000.00

Funding Source: Local funds

Ranking: #2

## **New Police Vehicles and Equipment**

### Description:

This item funds the replacement of the patrol fleet, at a rate of 1 vehicle every two years. The Department will need to replace at least three vehicles over the next five years. This is based on mid-level mileage and newer cars gaining mileage each year. This replacement rate can be reduced once all substandard vehicles are replaced.

### Relationship to 2006 Comprehensive Plan:

**Goal PS2:** Improve Police infrastructure.

**Action PS2.1:** Update communications and vehicle quality.

Total Cost: \$90,000.00

Funding Source: Local funds

Ranking: #1

## **Byrd Street Bicycle/Pedestrian Safety Project**

### Description:

This project will add curb and gutter, sidewalks, lighting, stormwater improvements, and landscaping to Byrd Street from Church Street to Rt. 20.

### Relationship to 2006 Comprehensive Plan:

**Goal T2:** Improve existing roads and transportation systems in a manner consistent with the Transportation Vision.

**Action T2.3:** Upgrade Byrd Street from East Main Street to Berry Hill Road.

**Goal T3:** Promote safer and more efficient truck access to in-Town industrial sites.

**Action T1.2:** Extend Spicer's Mill Road and May Fray to Montebello Road.

**Action T2.3:** Upgrade Byrd Street from East Main Street to Berry Hill Road.

**Action T2.5:** Upgrade Berry Hill Road from Byrd Street to east corporate limits.

Total Cost: \$1,100,000.00

Funding Source: State (VDOT) grant

Ranking: #10

## Rt. 15 Roundabouts

### Description

This intersection improvement is planned as a single lane roundabout with an inscribed diameter of approximately 130', requiring about a 150' diameter circle of right of way to accommodate pedestrians, lighting, and signage.

Three (3) roundabouts are planned for the major entrances to the Round Hill project:

- Kirkwall Road/Glebe Road
- Radney Road

### Relationship to 2006 Comprehensive Plan:

**Goal T1:** Create an expanded grid vehicular transportation system consistent with the Transportation Vision.

**Action T1.8:** Construct two (2) Roundabouts at intersection of Radney Road and Rt. 15 and at intersection of new street to be constructed with proposed Round Hill Farm project and Rt. 15 north of the Holiday Inn Express.

Total Cost            \$2,789,000.00

Funding Source:    Local funds (private)

Ranking                #13

## Water Distribution Improvements

### Description:

This project will build finished water storage and upgrade water transmission lines to accommodate existing and future growth in demand. The 2008 water system engineering study prepared by Draper-Aden Associates identifies and prioritizes water distribution capital items.

### Relationship to 2006 Comprehensive Plan:

**Goal I2:** Provide adequate additional water source and storage for future growth and emergency needs.

**Action I2.1:** Complete water storage and location study (Preliminary Engineering Report).

**Action I2.2:** Design and construct new water storage tank.

**Action I3.3:** Conduct water conveyance system long-term capital needs study.

Total Cost: \$1,800,000.00

Funding Source: State grant(s), local funds

Ranking: #7

## **Phase II Waterline Prospect to Spicer's Mill Road**

### Description:

The water line from Prospect Heights will be extended to Spicers Mill Road to provide for adequate water pressure to customers at higher elevations on the west side of Town. This 12" pipeline will allow for better transmission of water from the new Prospect Heights water storage tank to the Porterfield Heights subdivision. It will also increase fire flows to fire hydrants along West Main Street, at Orange Elementary School, and in Porterfield Heights. Sufficient water pressure for domestic use and for fire protection is a mandatory requirement of health, fire and building codes.

### Relationship to 2006 Comprehensive Plan:

**Goal I3:** Upgrade failing and obsolete water transmission lines.

**Action I3.1:** Replace obsolete water lines on Rt. 20 extending from the Presbyterian Church to west corporate limits.

**Action I3.2:** Create new transmission loops to improve reliability.

Total Cost: \$150,000.00

Funding Source: Local funds

Ranking: #16

## **Back-up Generator**

### Description

This item provides standby power generators to power telephones and equipment in the event of a power outage.

### Relationship to 2006 Comprehensive Plan

**Goal PS16:** Ensure that public facilities are constructed to meet Levels of Service standards for different Planning Sectors in Town as articulated through specific Planning Sector plans.

**Action PS16.5:** Adequately fund Water Plant, Wastewater Plant, Public Works, Police, and Administrative Capital needs to maintain Levels of Service standards.

Total Cost: \$12,000.00

Funding Source: Local funds

Ranking: #8

## **North Street Connection/Extension**

### Description:

This street will connect North Street to Radney Road through construction of a 500-foot street segment across the Oakbrook Terrace Apartments property adjacent to the existing clubhouse. This segment will connect to a proposed 730-foot segment of North Street to be constructed by the owner of the Round Hill Meadows subdivision/development. The street will be built to accommodate two-way traffic with on-street parking and sidewalks.

### Relationship to 2006 Comprehensive Plan:

**Action T1.13:** Extend North Street to meet Radney Road.

Total Cost: \$330,000.00

Funding Source: Local (private) funds

Ranking: #19

## Orange Transportation Center Streetscape Enhancements

### Description:

This project covers sidewalks, lighting and utility improvements in the vicinity of the Orange Train Depot within the Orange Commercial Historic District.

### Relationship to 2006 Comprehensive Plan:

**Action T4.2:** Construct biking and pedestrian infrastructure in existing (already developed) parts of Town.

Total Cost: \$1,030,000.00

Funding Source: State (VDOT) grant, local matching funds

Ranking: #17

## **Pedestrian and Sidewalk Improvements**

### Description:

This item includes construction of sidewalks in Town.

### Relationship to 2006 Comprehensive Plan:

**Goal T4:** Encourage alternatives to vehicular use to increase pedestrian-friendliness of Orange.

**Action T4.2:** Construct biking and pedestrian infrastructure in existing (already developed) parts of Town.

Total Cost:           \$100,000.00

Funding Source:    State (VDOT) grant, local funds

Ranking:             #20

## **May Fray Avenue Connector/Extension, Phase I Washington Street to Woodmark Avenue**

### Description:

The May Fray Avenue Extension will provide an alternative route for local and through traffic within this proposed future transportation corridor. This extension is a component of a larger transportation network that will alleviate traffic congestion on North Madison Road.

### Relationship to 2006 Comprehensive Plan:

**Action T1.2** Construct Byrd Street Extended (May Fray) and Spicers Mill Extended roads using the following design criteria.

Total Cost: \$2,000,000.00

Funding Source: State (VDOT) grants, local matching funds, private funds

Ranking: #11

## **Spicers Mill Road Bridge and Culvert Replacement**

### Description:

Replacement of culvert and construction of new road where Spicers Mill Road crosses Baylor Creek.

### Relationship to 2006 Comprehensive Plan

#### **Action I11.4** Reconstruct Spicers Mill Culvert

Total Cost:           \$400,000.00

Funding Source:    State grants

Ranking:             #18

## **Radney Road Extension to Spicers Mill Road**

### Description:

The extension of Radney Road will provide an alternative access route connecting Route 15 North to Spicers Mill Road in order to accommodate projected future traffic within the area of Uptown Orange. This project involves extending Radney Road 1,500 feet from its planned terminus at the property boundary of the Round Hill Subdivision to Spicers Mill Road. The extension of Radney Road is the first stage of a planned future road network that will connect Route 15 North to Route 15 South. The road is envisioned as two lanes with bike lanes east and west and on-street parking.

### Relationship to 2006 Comprehensive Plan:

#### **Action T1.7** Extend Radney Road to Spicers Mill Road

Total Cost:           \$750,000.00

Funding Source:    Local funds

Ranking:             #22

## Public Works Department Vehicles and Equipment

### Description:

The Department of Public Works operates a fleet of vehicles and equipment in order to fulfill its core mission to maintain public infrastructure within the Town. As vehicles and equipment become worn or outdated, they must be replaced according to a schedule developed by the department in order to maintain existing levels of service. The priorities for new and used vehicle and equipment purchases during the ensuing five-year period covered by this CIP include:

- Streetsweeper
- Ditch Compactor
- Backhoe/Loader
- Salt Spreader
- Snowplow
- Dump Trucks
- Pickup Trucks
- Sewer Machine
- Flatbed Truck
- Trash Truck

### Relationship to 2006 Comprehensive Plan:

**Goal PS16:** Ensure that public facilities are constructed and maintained to meet Levels of Service standards for different Planning Sectors in Town as articulated through specific Planning Sector plans.

**Action PS16.5:** Adequately fund Water Plant, Wastewater Plant, Public Works, Police, and Administrative Capital Needs to maintain Levels of Service Standards (Capital Items 2006 CIP).

Total Cost: \$605,000.00

Funding Source: Local funds

Ranking: #6

## **Glebe Road Realignment**

### Description:

The relocation of Glebe Road approximately 300 feet to the south is necessitated by the proposed Round Hill Subdivision, Orange Baptist Church development and installation of the middle roundabout on North Madison Road. This street will be built to accommodate two-way traffic and involve abandonment of the existing Glebe Road right-of way between North Madison Road and Fox Meadow Lane.

### Relationship to 2006 Comprehensive Plan:

**Goal T1:** Create an expanded grid vehicular transportation system consistent with the Transportation Vision.

**Action T1.8:** Construct two (2) Roundabouts at intersection of Radney Road and Rt. 15 and at intersection of new street to be constructed with proposed Round Hill Farm project and Rt. 15 north of the Holiday Inn Express.

Total Cost:           \$275,000.00

Funding Source:    Local funds

Ranking:             #23

## Radney Road Sewer Line Extension

### Description:

This project is necessitated by planned development in the Round Hill/Uptown Orange Planning Sector. Construction of a gravity sewer line within the right-of-way of the proposed Radney Road Extension will enable better wastewater collection service to serve this growing area of Town and reduce the need for a pumping station, force mains, and an exceptionally deep gravity sewer line to provide sewer to certain sections of Round Hill. Acquisition of a public right-of-way or easement across private property to the west is needed in order to construct this improvement.

### Relationship to 2006 Comprehensive Plan:

**Goal I8:** Expand wastewater conveyance system.

**Action I8.5:** Expand gravity system to the Northwest, West, and Southwest of Town per the Joint Planning Area Master Plans.

Total Cost: \$206,250.00

Funding Source: Local funds

Ranking: #5

## Radney Road Water Line Extension

### Description:

This project is necessitated by planned development in the Round Hill/Uptown Orange Planning Sector. Construction of water main within the right-of-way of the proposed Radney Road Extension will enable better flow and pressure to serve this growing area of Town without depriving remaining areas of Town of adequate water delivery. Acquisition of a public right-of-way or easement across private property to the west is needed in order to construct this improvement.

### Relationship to 2006 Comprehensive Plan:

**Action I3.2:** Create new transmission loops to improve reliability.

Total Cost: \$123,500.00

Funding Source: Local funds

Ranking: #14 (tie)

## **Miller Road/Hilltop Drive/Porterfield Drive/Harper Drive Connection**

### Description:

Extensions of Miller Road, Hilltop Drive, Porterfield Drive and Harper Drive are proposed in order to connect these existing dead-end streets at the western edge of Town. The route will enable local traffic to travel between Route 20 South (Constitution Highway) and Spicers Mill Road without having to utilize Montavista/Peliso or Route 15 (North Madison Road). The rights-of-way for these proposed streets were previously dedicated to public use as part of the Porterfield Heights Subdivision. These streets will be built to accommodate two-way traffic with on-street parking and sidewalks.

### Relationship to 2006 Comprehensive Plan:

**Action T1.3:** Extend Harper-Miller-Hilltop Roads to Spicers Mill Road.

Total Cost:           \$385,000.00

Funding Source:    Local funds

Ranking:             #21

## **Digital In-Car Camera Systems for Police Cars**

### Description:

This Police Department intends to replace the camera system in the Town police cars with the latest digital technology.

### Relationship to 2006 Comprehensive Plan:

**Goal PS2:** Improve police infrastructure.

Total Cost:           \$36,000.00

Funding Source:    Local funds

Ranking:             #3

## **Replacement Water Meters**

### Description:

The Public Works Department plans to replace about six-hundred aging water meters in Town in order to ensure more accurate readings, measure water loss and better gauge overall water consumption.

### Relationship to 2006 Comprehensive Plan:

**Goal I3:** Upgrade failing and obsolete water transmission lines.

Total Cost:           \$60,000.00

Funding Source:    Local funds

Ranking:             #9

## **Accounting Software**

### Description:

The Finance Department intends to replace its existing accounting software with the latest version of the software used by Orange County in order to improve the compatibility of data shared by the Town and County.

### Relationship to 2006 Comprehensive Plan:

**Action PS16.5:** Adequately fund Water Plant, Wastewater Plant, Public Works, Police, and Administrative Capital Needs to maintain Level of Service Standards.

Total Cost:           \$150,000.00

Funding Source:    Local funds

Ranking:             #12