

# Public Works

3 Year Plan – James Moore, P.E. , Public Works Director

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## Executive Summary

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For the last two years, the City of Hendersonville Public Works Department has provided quality service and attention to the needs of citizens. This period is the first time the City has filed for grants and has been successful in appropriating approximately \$130,000 in additional funding for new programs. These new programs are expected to save the City over \$50,000 per year. The Public Works Department has filled all current positions, however, only one part-time position has been added in 15 years while the City has nearly doubled in size.

This document will provide a broad outline of what has been requested of Public Work and what additional personnel or resources would be necessary to provide those services while maintaining the necessary services required to serve the City interests.

### **Mission Statement**

The City of Hendersonville Public Works Department is committed to providing high quality essential services and infrastructure for a safe and healthy community. The Department strives to accomplish this goal through innovation and professionalism.

### **Keys to Success**

Our employees are our greatest asset. Communication and honesty are paramount within the department. The staff does its best to find solutions to issues brought to the department. Each member looks forward to how develop these solutions with a positive attitude of service.

## Public Works Services

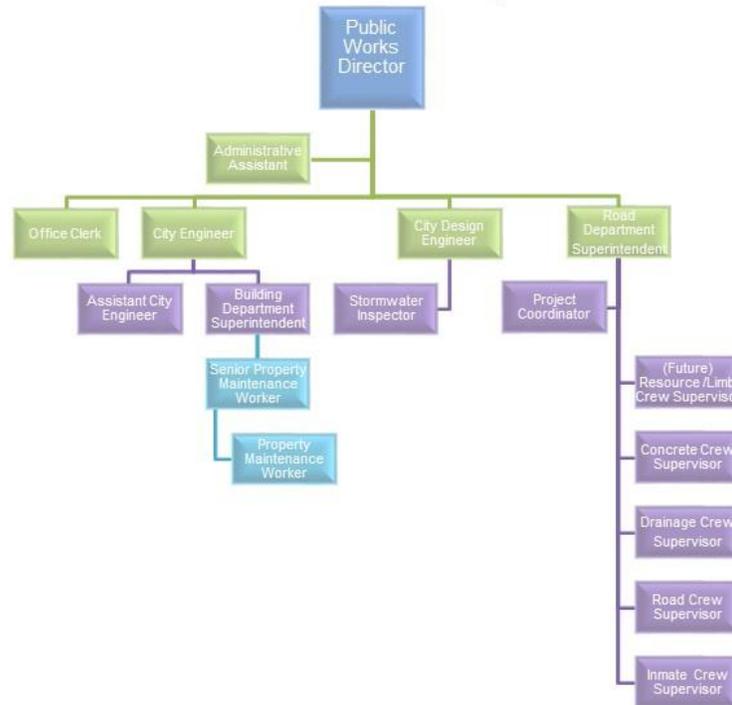
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Public Works currently provides the following services:

- 1) Development Plan Review
- 2) TEMA / FEMA, TDOT, and TDEC Coordination and Compliance
- 3) Limb Service and Right of Way maintenance
- 4) Twice a week trash collection
- 5) Paving and Street Maintenance
- 6) Right of Way Drainage improvements
- 7) Construction and management of various Public Projects
- 8) Produces Public Service Announcements, quarterly reports and monthly reports to the Public Works Committee as well as reports to the Capital Projects, and Finance Committees
- 9) Assists Citizens with city codes and private project development
- 10) City Facility Building Maintenance and Grounds

## Management

# Public Works Department



## Financial Management

The Public Works Budgets are divided up into 6 areas:

- 1) Public Works
- 2) State Street Aid
- 3) Central Services
- 4) Disposal
- 5) Grants - Bonds
- 6) Capital Projects

The Public Works Budget allows for payroll, maintenance, paving and drainage. State Street Aid must be kept separate as all this money must be used in the Right of Way. Central Services is for utilities, janitorial service and termite and pest control. Disposal covers landfill expenses, animal carcass removal and limb collection. Grants and Bonds are sureties taken by the City to finish projects while grants are provided by the State and other entities to allow the City to help fund various projects.

# Program Development

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Public Works will develop four areas over the next three years. These are Roads, Building Maintenance, Engineering, and Disposal. All years are Fiscal Year from July 1<sup>st</sup> to June 30<sup>th</sup> the following year.

## Roads

- A) Roads - As the City accepts more roads for maintenance as subdivisions develop, the budget for this area will need to increase accordingly for paving, striping, pothole repair, salting in winter, etc.

2016 – Pavement Management Program initiation; Review other road maintenance options for increasing pavement longevity; Review equipment for additions or maintenance

2017 – Funding for pavement asset management to be introduced at Budget Workshop; goal fund resurfacing 12 miles of roads; Fund replacement costs for equipment and purchase of new; implement pavement longevity measures

2018 – Goal fund resurfacing 16 miles of road; seal 5 miles of road

2019 – Goal fund resurfacing 22 miles of road; seal 10 miles of road

- B) Sidewalks – Public Works will work to repair and construct sidewalks near all of the schools. Sidewalk projects will be requested from the various wards to prioritize and construct. Most areas will require piping, access easements or purchasing right of way.

2016 – Review and prioritize sidewalk construction

2017 – Budget sidewalk construction

2018 – Evaluate program and budget accordingly

2019 – Review wards to find if any additions to the program need to be made and / or adjustments

- C) Street Lights – Public Works is currently working on a plan to take over street lights required in subdivisions by our current subdivision regulations. This will increase the electrical budget but will stream line and allow better public service when lights are in need of maintenance or additional lights requested. The current program is out of date and very confusing. It will be standardized and more efficient.

D) Capital Projects – Public Works oversees the construction of all Capital Projects. Capital Projects are construction projects in excess of \$250,000. Public Works manages the Capital Projects Committee meeting times and minutes.

Current Capital Projects totaling approximately \$22 million dollars include:

- New Shackle Island
- Volunteer Drive
- Drakes Creek at Stop 30
- Sanders Ferry Walking Trail
- City Wide Traffic Signal Synchronization
- Local Interchange Connector
- Intersection of Gallatin and Old Shackle Island and Walton Ferry Road
- Arrowhead Park Phase 1

Future Projects totaling an additional approximate \$11 million dollars Include:

- Arrowhead Park Phase 2 - 2017
- Walking Trail from Library to Station Camp -2018
- Saundersville Road from 386 north to county line realignment - 2017
- Forest Retreat from Andrews Run west to County line -2017
- Intersection of Volunteer and New Shackle Island Road - 2018

## **Building Maintenance**

Currently maintaining City Hall, Senior Citizens, Monthaven, Sander Ferry Shop, Free Hill Road Shop, and minor repairs to the library and golf course club house. Public Works will also assist Police and Fire if their buildings require assistance. This includes grounds keeping at City Hall, Monthaven, and Sanders Ferry Shop. Listed below are projects to work in with normal maintenance

2017 – Sanders Ferry Shop addition, Change lights in Police Department to LED, change City Hall Carpet, seal and restripe City Hall Parking lot, upgrades to Senior Citizen Center

2018 – Change lights in two fire halls; continue upgrades to Senior Citizen Center

2019 – Upgrade exterior lights at City Hall

## Engineering

Public Works reviews and assists with development and maintenance of development. Engineering is divided up into two areas

- New Construction / Development Review
  - 2017 – Traffic Engineer Position to develop, begin LIC Design, continue TSS change over, Sanders Ferry Walking Trail
  - 2018 – Traffic Signal Synchronization Full Implementation; Continue various TDOT projects; Begin NSI / Volunteer Interchange, Walton Ferry / Gallatin Road
  - 2019 – Review signal timings and adjust; Continue various TDOT projects
- Maintenance / Compliance
  - Stormwater Feasibility Study
    - 2017 – Review and fund
    - 2018 – Implement and begin drainage construction projects
    - 2019 – Continue drainage program
  - Stormwater Program ( see appendix)
  - Design and Construction of In – house projects (Duane)

## Disposal

Disposal currently falls into these categories:

- Landfill Maintenance / Resource Authority
- Limb – Leaf Collection and Disposal – This year the City is collecting leaves in order to keep trash rates lower. This will hopefully also produce a marketable product. Public Works is receiving guidance from prospective purchasers of mulch to make an appropriate product.
  - 2016 – Purchase and Develop site for mulch facility; Collect leaves
  - 2017 – Produce and market mulch product
  - 2018 – Produce and market 25,000 cubic yards of wood mulch annually as well as 3,000 cubic yards of leaf mulch annually, estimated return \$150,000 per year
  - 2019 – Review program for efficiency
- Garbage Collection
  - 2017 advertise for collection service change, advertise for new collection contract
  - 2018 begin new service
  - 2019 review and change service for efficiency

## **Promotion**

I will continue to provide quarterly reports on the progress of the Public Works Department and projects. Public Works will strive to continue to offer quality service and promote the safety and welfare of the citizens of Hendersonville.

## Appendix

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### 3-5 Year Plan – Stormwater and Internal Projects

Enormous blocks of time are consumed by the demands of the MS4 permit; Drainage rehabilitation needs; City projects; Capital Projects; Infrastructure rehabilitation projects; and Meeting with the public about all of the above.

The increasing work really highlights that hiring new employees is a priority need. To keep up with demands, a Construction and Engineering Inspector and a CAD operator is needed to free up my time for contracts administration for city projects, capital projects and grant projects; keeping up with certifications and training as are the conditions of most grants and the MS4 permit. There is also a need for an inspector to aid Helen. I would like to move her to a more administrative type role and to help with the educational requirements set forth by the State and Federal laws.

## MS4

The Clean Water Act demands that all States comply with the NPDES permit which is all about the cleaning up and protection of water. The State of Tennessee in-kind requires the local governments to obtain a MS4 permit. The short story is that there are 6 required actions that the City must take:

- Public Education and Outreach
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- **Post Construction Runoff Control**
- Pollution Prevention and Good Housekeeping for Municipal Operations

As everyone is aware, the City is a popular place and the population has doubled since Y2K to over 60,000 people. I have never known a time where construction wasn't taking place. The majority of our time complying with the MS4 permit is spent on **Construction Site Storm Water Runoff Control**. Currently we are working on rewriting the Storm Water Ordinance to include citations, fines and stop work orders. We are removing loop holes and time delaying language to help better protect Hendersonville water ways and wild life. As we are trying to write the ordinances the requirements of the permit are evolving which now require some specialized training in the area of drainage design and law enforcement. A new area of the permit which will need enforcement is a requirement for new development to capture and treatment of the first 1” of every rainfall. These

requirements will create the need for a STORM WATER program similar to the surrounding communities. Some of the things that are needed are:

Ordinance to be written to include:

1. Law enforcement language for:
  - Maintenance of Erosion Control Plans
  - No Littering for sites under construction
  - Grass Clipping not to be in the roads
2. Stop work
3. Fines
4. Advanced Education for Drainage and Development
5. Training for court interaction
6. As-built drainage prior to acceptance
7. Detention pond maintenance contract
8. Rain gauge for analysis purposes

## **City Projects, Contract Administration, Grant Administration**

As rehabilitation of infrastructure, equipment such as Computers, CAD, Survey gear and vehicles are necessary for us to perform our jobs. List of projects requiring the use of the equipment are below:

### **Current**

1. Moving Forward MS4 Program
2. Stop 30 Culvert
3. Weesington Cul-de-sac

### **Assigned**

1. Sanders Ferry Bike/Walking Trail
2. Indian Lake Swim/Tennis Sidewalk
3. Sink Holes Mediation

### **Future**

1. Approximately 30 drainage issues throughout city per citizen drainage meeting which will have a cost of about \$500,000. Cost will be about 25% higher if the design is hired out.
2. Senior Citizen Parking Lot
3. Rivera Dr. @ Rockland Road Turning Lane

4. Riverside drive culvert
5. CDBG road and drainage design
6. Road side ditch rehabilitation
7. Sidewalk from HUD to Gallatin Road
8. Old Shackle Island Road Box at R&R Paving

Below are things needed to aid in the production and rehabilitation of infrastructure:

**Software:**

Carlson Maintenance Agreement which allows for training  
AutoCad  
MicroStation

**Office Needs:**

Equipment  
Space for new inspectors  
Records keeper needed  
LIDAR

**Funding for Educational Needs:**

Contract administration classes needed {Law, contract creation )  
Surveying Classes {GPS, GIS, etc}  
Training on Carlson  
Lite structural class  
Advanced drainage class  
Continuing Education  
Training for Helen  
Environmental Educational Type

**Funding for Permits needed:**

ARAP  
General Construction Permit  
MS4 Annual Permit

**Personnel**

NEW Inspector position needed  
NEW Draftsman/CEI position needed  
Equipment for new personnel  
Certifications