

**SPECIAL CALLED MEETING**  
**March 22<sup>nd</sup>, 2016, 5:30 p.m.**

**CITY COUNCIL OF THE CITY OF ABILENE, TEXAS,**  
**CITY COUNCIL CHAMBERS OF CITY HALL**

The City Council of the City of Abilene, Texas, met in a Special Called Meeting to hear an presentation regarding infrastructure in Public Works. Mayor Norm Archibald was present and presiding with Councilmen Shane Price, Jay Hardaway, Steve Savage, Anthony Williams, Kyle McAlister, and Bruce Kreitler. Also present were City Manager Robert Hanna, Interim City Attorney Stanley Smith, City Secretary Danette Dunlap, and various other members of staff.

Councilman Kyle McAlister gave the invocation.

The Mayor led the pledge to the United States Flag and the Texas Flag.

Michael Rice Director of Public Works presented the following information regarding Traffic, Stormwater and Streets Services.

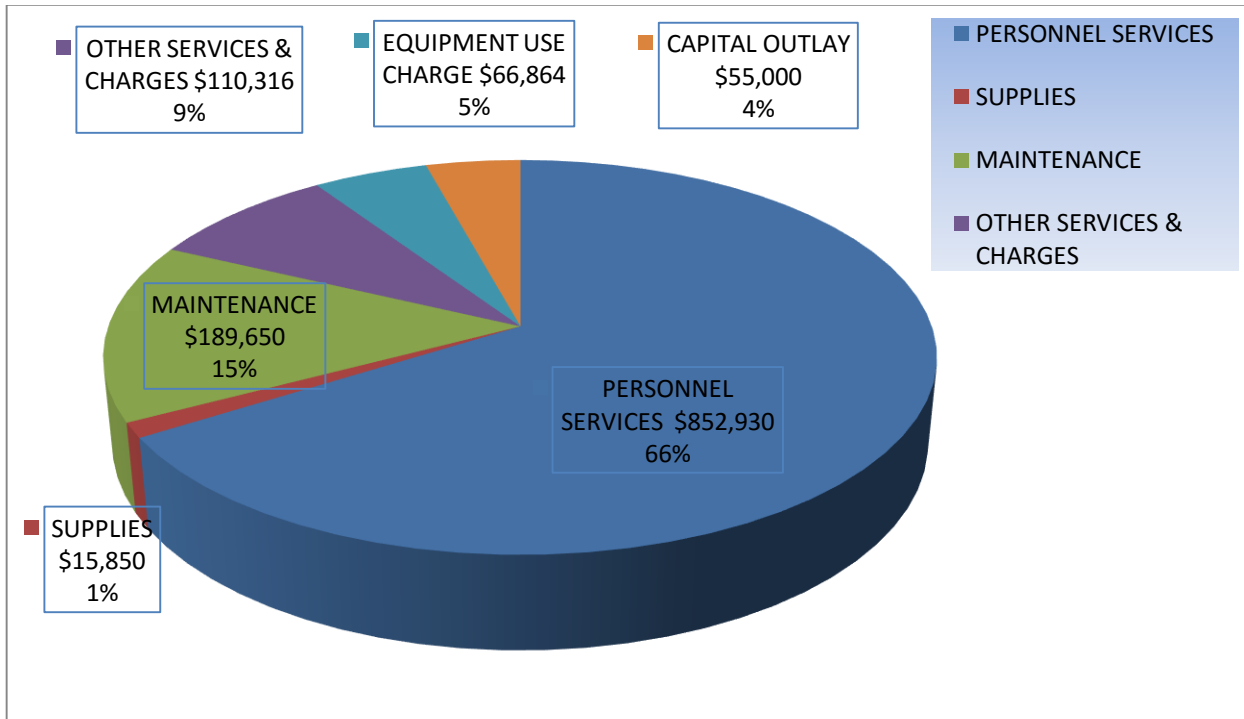
Traffic Services

The Traffic Services Division is responsible for the safe and efficient movement of ALL traffic on public streets. This is accomplished through good engineering and planning, and by operating, managing, repairing, and improving:

- Traffic Signs (~ 17,000), Street Name Signs (9,000) & Pavement Markings (paint, thermoplastic, buttons)
- Signalized Intersections (171 intersections), School Zone Flashers (26 locations)
- City Owned Street Lights
- Crossings Guard Program (17 elementary school locations)
- Site Plan Review Process, Traffic Studies, Traffic Control Requests, Hazard Abatement
- Downtown Parking (there are approximately 600 time regulated spaces)

Traffic Services Staffing & Budget

- Traffic Engineering – 2 Full Time
- Traffic Signals – 5 Full Time
- Traffic Signs & Markings – 7 Full Time
- Crossing Guard Program - 20 Part Time
- Parking Enforcement – 2 Part Time
- 2016 Budget - \$1,290,610.00



### Traffic Services Challenges

- Aging Infrastructure – There are around 170 signalized intersections currently utilizing outdated equipment. Many replacement parts are not available. As equipment is replaced and intersections are improved, Abilene MUST comply with the Texas Manual on Uniform Traffic Control Devices (TxMUTCD) standards and with Americans with Disability Act (ADA) requirements.
- Ability to respond to damaged infrastructure and accomplish timely repairs.
- Staffing, both retention & training, to maintain growing system.
- Equipment Support

### Traffic Services Current Improvements

- The 2015 Voter Approved bonds for streets improvements include plans to upgrade over 60 intersections with improved communications, vehicle detection, cabinets, controllers, switches, and pedestrian heads and pedestrian buttons.
- Consultant design and support (approx. \$580,000)
- Staff installation (est. equip./material costs - \$2.5 Million)

### Traffic Services Future Goals

- Replace all controllers that have exceeded their service life & develop a program to replace controllers as they reach their service life.
- Create a Preventative Maintenance Schedule to manage all Major Traffic Infrastructure Components.

Council and Staff discussion included: 1) traffic signals that have gone out in the city..

## **STORMWATER INFRASTRUCTURE**

### **GOALS & OBJECTIVES**

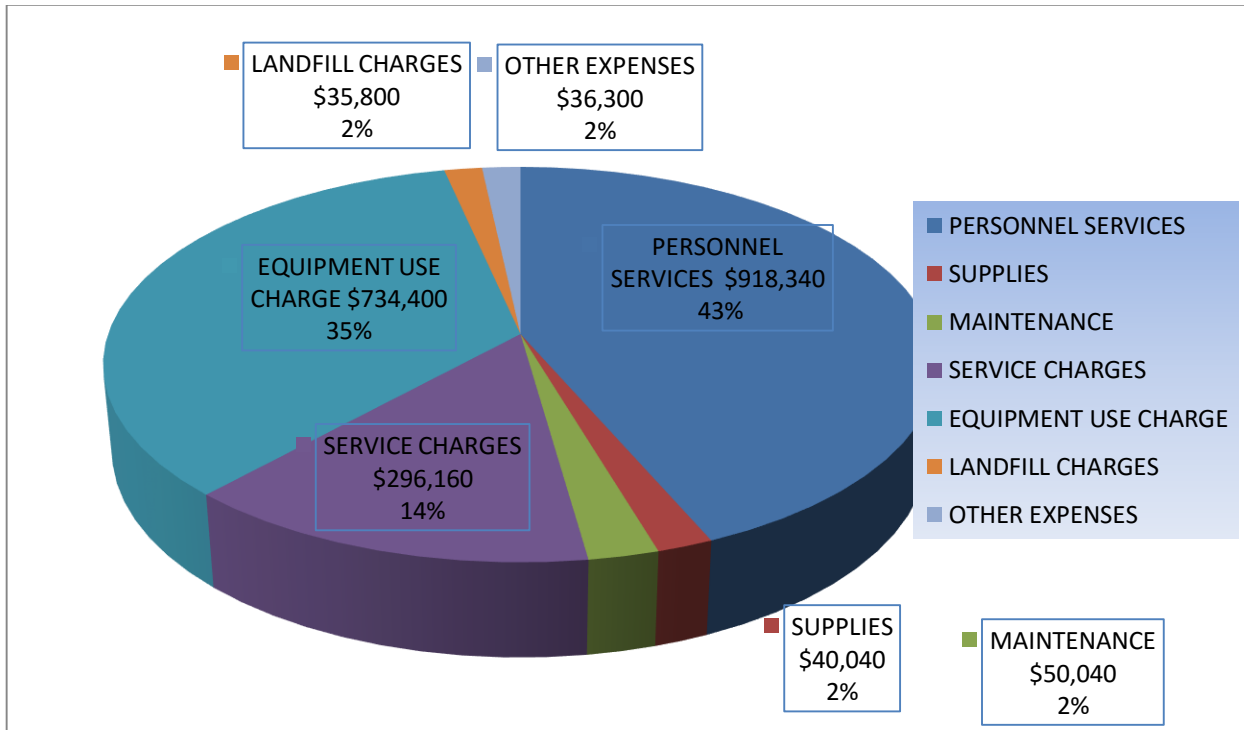
- Improve water quality by reducing the introduction of pollutants that enter Abilene's watersheds through stormwater runoff and/or illicit discharges.
- Improve flood prevention by effectively maintaining drainage of local creeks and water conveyances.
- Implement National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit and stormwater management plan effectively & efficiently.
- Coordination with Keep Abilene Beautiful and Other Stakeholders

#### Quick Stormwater History

- National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit for City's Municipal Separate Storm Sewer System (MS4) was issued in September 1998
- Abilene's Stormwater Utility was established in October 2003
  - To mitigate flooding potential
  - To Reduce pollutant runoff and improve water quality
  - To comply with Clean Water Act & Federal, State and Local Regulations
- NO stormwater fee increase since creation of Stormwater Division
- Expenses exceeding Revenue with current operations

#### Stormwater Staffing & Budget

- 22 Full Time Staff
- 2016 Budget = \$2,111,080
- Enterprise Fund



### Stormwater Inventory

- 1 NPDES MS4 Phase I Discharge Permit, Stormwater Management Plan (SWMP)
- 100 Industrial Sites, NPDES Industrial Permit, 5 City Industrial Stormwater Pollution Prevention Plans (SWPPPs)
- 260 Construction Sites, NPDES Construction Permit
- 58 Miles of creek, 5 Major Watersheds, 110 Square Miles
- 14 Miles of piping
- 804 Stormwater Drains/Segments, 600 Stormwater Outfalls
- 3 Street Underpasses with Pumps, 12 Stormwater Pumps
- 41 City Owned/Operated Ponds, 300 Private Ponds
- 1,750 Lane Miles of Streets to Sweep
- 1,200 Acres of Mowing
- 41,000 Customers

### Stormwater Services Most Immediate Need

- Stormwater Rate Increase
- Stormwater Enterprise Fund depletion
- Increased costs due to City Growth, Inflation, Aging Infrastructure
- Capital Improvement Projects
- Additional programs required by MS4 permit compliance
- Reserve fund for rainy day

### Stormwater Future Goals

- Incorporation of water quality concepts within the overall design
- Stormwater Infrastructure Retrofits
- Integration of Stormwater Management with GIS Mapping
- Adaptation of Drainage in linear projects
- Improve methods of Data Collection, Implement Integrated Management Software
- Enhance Stormwater Data Collection and Data Verification
- Enhance Industrial Site Plan Review & Construction Inspection programs to match State requirements
- Improve existing operations and build new programs
- Increase resources for public education
- Proactive vs. Reactive approach to citizen concerns
- Build closer relationships with community leaders and neighborhood associations
- Inter-departmental coordination, develop synergies, and collaborate to share resources

Council and Staff discussion included: 1) pumps at Pine Street underpass; 2) electrical issues with the Pine Street pumps; 3) standby pumps are on hand; 4) detention ponds; 5) creek cleaning; 6) storm damage from heavy rain events in the past; 7) new programs under Stormwater; 8) nationwide programs; 9) rates have not changed since the city implemented this program; and 10) Education.

## **STREETS & ALLEYS INFRASTRUCTURE**

### Street Services Division

- The primary responsibility of the Street Division is maintenance of the city's streets and alleys.
- Maintenance is accomplished through various tools such as filling potholes, sealing cracks, repairing utility trenches in the streets and alleys, applying various types of asphalt surface treatments, and street and alley reconstruction.
- Proper Maintenance, both Preventive and Corrective, provides for longer asset life, lower life cycle costs, and an improved overall street quality. Proper Maintenance promotes increased transportation safety and a higher quality of life.

### 5 Common Street Services Myths

1. Street Services is responsible for Sidewalk installation and Maintenance.
2. Street Services is responsible for Curb & Gutter maintenance.
3. Street Services is responsible for City owned Parking Lot maintenance.
4. Street Services is responsible for Street Sweeping.
5. All Streets in Abilene are the Responsibility of Street Services

### Streets & Alleys Inventory

- Streets – around 1,750 lane miles of paved and gravel streets
- Alleys – over 200 miles of alleys

### Street Services Staff & Budget

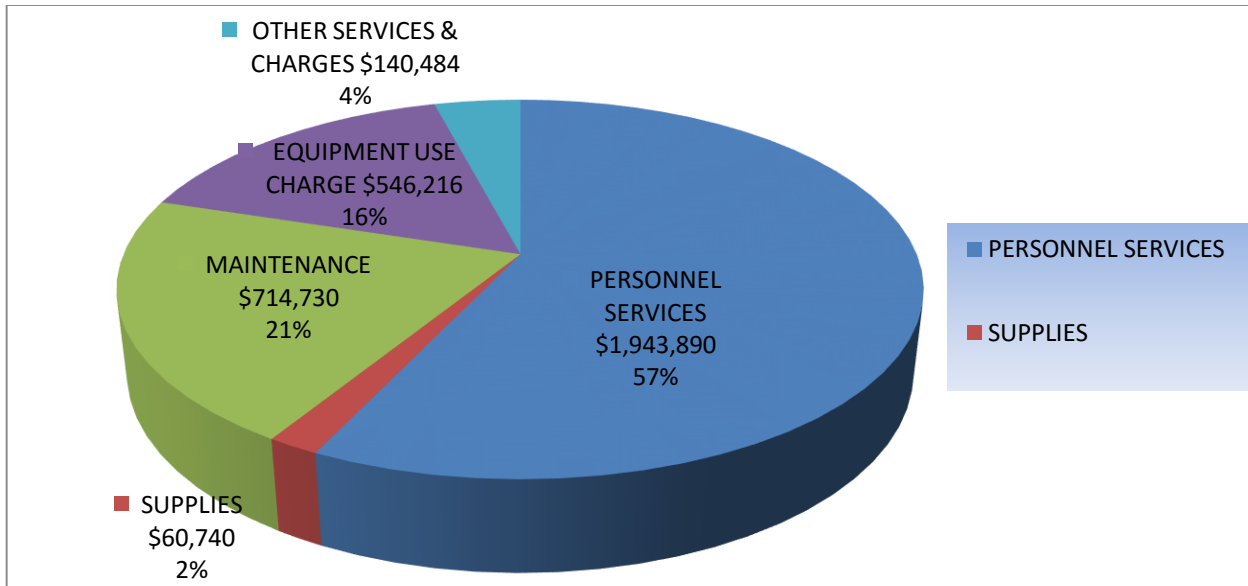
#### 50 Budgeted Full Time Positions

37 Total Positions Filled, (16 currently filled positions <1 year of service)

39 Attempts to hire a new staff person since July 2015

2016 Budget = \$3,406,060

Street Services Maintenance (Materials) Budget  
**\$692,870 = <\$365/lane mile**



#### Common Process to Prioritize Maintenance

- Loudest
- Worst-first
- Who lives where, Who does street serve? (Business, School, Church, ...)
- Always done it this way, Availability of Resources (\$\$, Materials, Staff, ...)

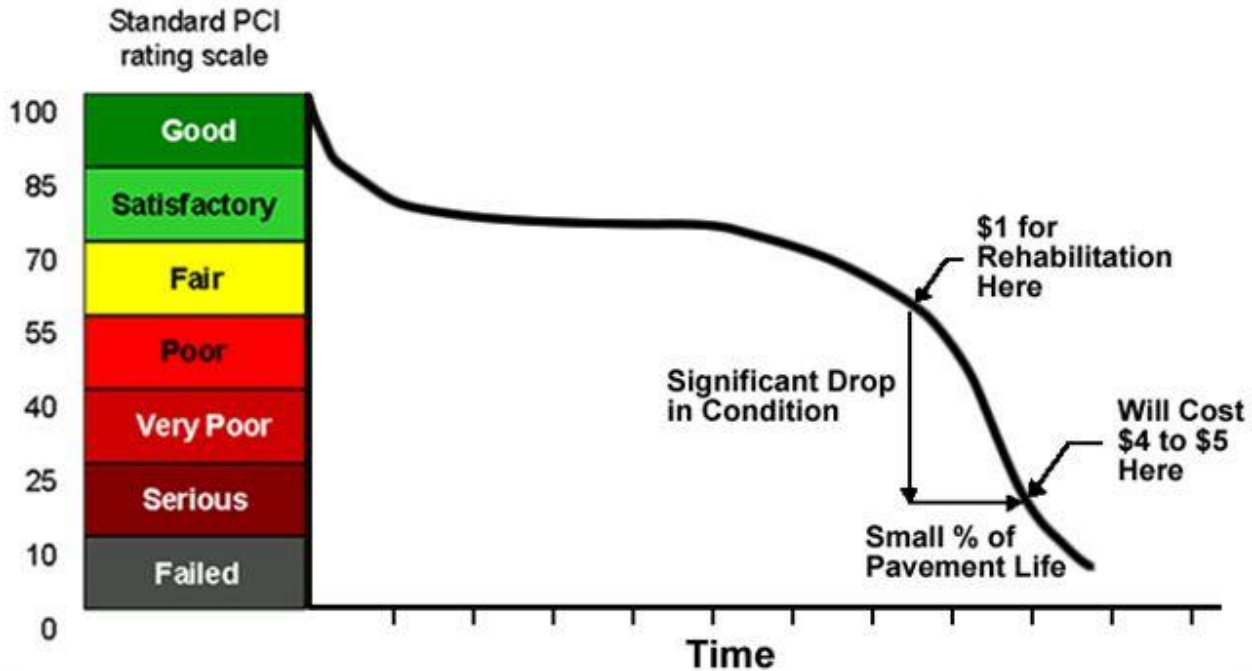
#### Proposed Process to Prioritize Maintenance

- Analyze pavement condition
- Analyze cost effective means for maintenance
- Development plan for systematic maintenance
- Aid decision makers to determine proper expenditure of funds

#### Critical Elements of a Pavement Management Program

- Condition Surveys
  - Needs to be done in a uniform manner
  - Complete in the shortest time frame possible
  - Must be able to repeat process in future
- Software
- GIS/Mapping Tie-in
- Management of New Development (Standards, Inspection)
- Regular Data Updates – There must be an In-House data Mgr.
- Development of Maintenance Cost Database

#### Pavement Condition Index (PCI)



**Three Primary Causes of Deterioration:**

Weather (water, temperature)

Traffic

Age

**DATA COLLECTION**

- Pavement Surface Type
- Pavement Length & Width
- From Street / To Street
- Pavement Condition Assessment
- Street Type (Arterial, Collector, Residential, etc.)
  - Average Daily Traffic based on Type
  - Actual Counts can be input
- Construction Date and/or last Maintenance Performed
- Pictures

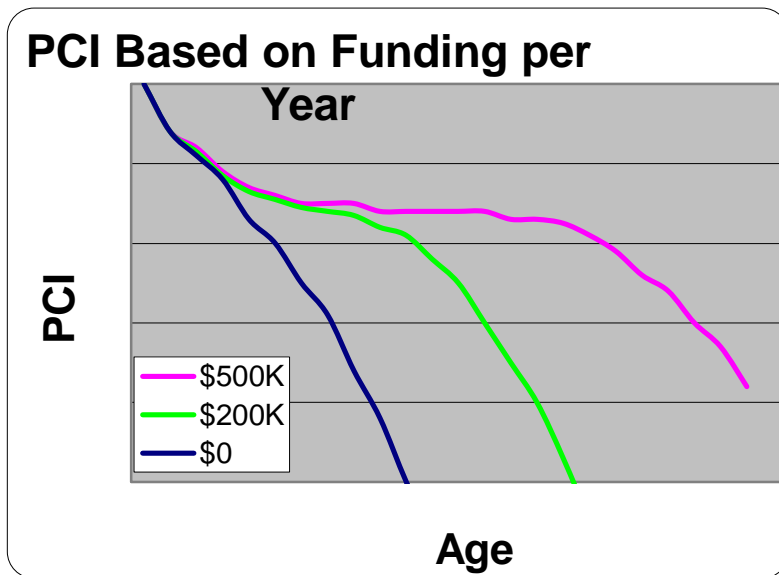
**Distress Types**

- **Asphalt**
  - Alligator Cracking
  - Block Cracking
  - Bumps and Sags
  - Edge Cracking
  - Joint Reflection Cracking
  - Long & Transverse Cracking
  - Patching & Utility Cut Patching
  - Potholes
  - Rutting
  - Shoving
  - Slippage Cracking

- **Concrete**
  - **Blow Up/Buckling**
  - **Corner Break**
  - **Divided Slab**
  - **Faulting**
  - **Joint Seal Damage**
  - **Linear Cracking**
  - **Patching & Utility Cut Patching**
  - **Pumping**
  - **Shrinkage Cracks**
  - **Spalling Corner**
  - **Spalling Joint**

#### PREDICTION MODELING

- Predict Future Pavement Conditions Based on Funding Limits
- Determine Funding Required to Maintain desired Average PCI rating



#### Benefits - Pavement Management Systems

- Creates a plan for Maintenance & Repairs, Set Priorities
- Maximize the return on investment from available Maintenance & Replacement Budgets
- Provides an Objective way to distribute funds
- Aids in CIP Programming required with Annexations
- Reduces the “Politics”, Provides Clarity for the Public
- Provides a Performance Standard for Staff
- GASB 34

Council and Staff discussion included: 1) funding; 2) pothole patcher; 3) street indexing; 4) training; 5) raising revenues through sale of city owned assets; and 6) need real numbers for future priority projects.

Mayor Archibald opened a public comment period for those citizens that would like to speak.



- Chad Carter – spoke on Public Works Department spending
- Crystal King – spoke on a request for the city to require a performance bond on each contractor
- Henry Flint – spoke on a performance bond issue with contractors

Mayor closed the public comment period.

There being no further business, the meeting was adjourned at 7:19 p.m.

---

Danette Dunlap  
City Secretary

---

Norm Archibald  
Mayor