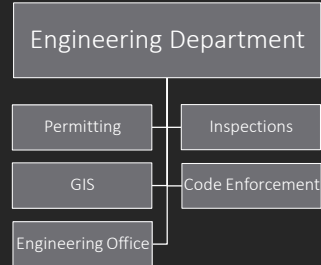


## Engineering - Responding to Growth

Seth Barkhimer, PE, Director of Engineering



## Organizational Structure



## Personnel

Engineering – 11 positions

- Administration: 2
- Permitting: 1
- Inspections: 4
- GIS: 1
- Code Enforcement: 3



## Engineering

### Managing the Built Environment of the City

- Ensuring the City's long-term goals and infrastructure can support citizens and private development in a cohesive and functional way
- Protecting the environment while developing it

### Clarification

- While the Engineering Department is responsible for improvement and expansion of public infrastructure, infrastructure maintenance or repair is the responsibility of Public Works



## Engineering Responsibilities

- Pursue federal, state and local funding for projects
- Oversees project planning and design
- Supervise construction of public works projects
- Ensures compliance building codes and laws
- Maintain official maps

## Compliance

- Shawnee Municipal Code
- Sanitary Sewer Specifications
- Water Main Specifications
- Subdivision Regulations
- And soon... the new **Unified Development Code**

## Permitting & Building Codes

"Building codes are a set of laws, regulations and ordinances adopted by a government legislative authority that governs the physical construction of a building. They set formal rules for the design of buildings - how they're to be built, the materials used and the design and overall performance of buildings."

### Goals

- Ensure public health and safety
- Avoid public and private financial losses due to natural disasters
- Reduce insurance premiums for property owners
- Stay up to date with the latest industry standards



## Permitting

### Processing New & Ongoing Permits

- Managing and scheduling Permitting Process from start to finish
- Working with contractors to provide clarity and steps to complete projects

### Clarification

- Permitting ensures a record of safety and compliance to codes and guidelines set by both State and Local Government

## Permitting (cont.)

• Accessory	• Demolition	• On-Site Sewage System
• Alarm	• Driveway	• Plumbing
• Boring/Paving	• Electrical	• Pool
• Business Occupancy	• Floodplain Permit	• Sign
• Building (Commercial/Residential)	• Land Disturbance	• Solar Panel
• Contractor Application (Licensing)	• Mechanical	• Solicitor
	• Medical Marijuana	• Water Well
	• Moving	

## Inspection Process

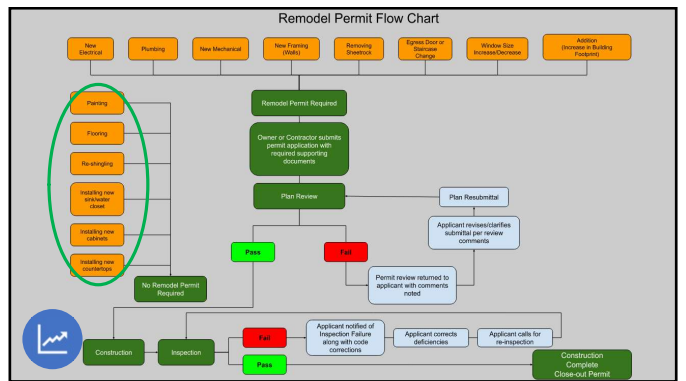
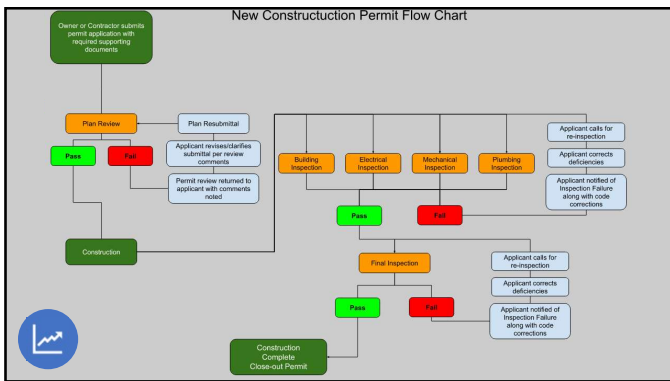
### Project Start to Finish

- Permit Submittal
- Plan Review
- Variety of Inspections
- Final Inspection



### Clarification

- Ensure the quality and compliance of constructed infrastructure, such as Road, Water, Sewer, etc.



## Capital Project Process

- Safe-guarding of Public Assets & Funds
- Process Steps

```

    graph TD
      Plan[Plan] --> Design[Design]
      Design --> Procure[Procure]
      Procure --> Construct[Construct]
      Construct --> Plan
  
```

- Plan**
  - Concept & Feasibility Study / Plan
- Design**
  - Detailed Design & Specifications
- Procure**
  - Bid Letting
  - Contractor Selection
- Construct**
  - Construction Mngt.
  - Change Orders
  - Project Acceptance

## Current & Near-term Projects

### Projects by Funding Source

- 2018 Half-Cent Sales Tax Capital Improvement
- Drinking Water State Revolving Fund (DWSRF)
- Clean Water State Revolving Fund (CWSRF)
- American Rescue Plan Act (ARPA)
- General Capital Funds

## Drinking Water State Revolving Fund

### Water Treatment Plant

- Construction started 2021
- Completed in Summer 2023
- Capacity increase from 5.7 to 10MGD, meeting 2060 projections
- Addition of a Polyaluminum Chloride system to reduce taste and odor issues
- Increase in clarifiers and filters, plus super pulsator will reduce downtime

## Clean Water State Revolving Fund

### Wastewater Treatment Plant

- South & North Wastewater Treatment Plants
- Project reduces discharge point to North Plant
- 9 miles of 24" main delivers wastewater to North
- South Plant redesign to function as a lift station
- North Plant expandable "Sequencing Batch Reactor" (SBR) process with initial 20-year capacity and expansion capability
- Bid in August 2022 – Completion Expected at the end of 2025

## American Rescue Plan Act (ARPA)

### Water & Wastewater Lines

- 33 HIGH PRIORITY locations, covering 7,500 ft of wastewater and 25,000 ft of water lines
- Multiple projects are currently underway

## Other Current Projects

- Kickapoo Widening (joint project with ODOT)
- Main Street Bridge
- And many others...
  - Twin Lakes Dam Repair
  - ... and more



Thank you! Questions?  
Engineering Department

