



# Capital Improvement Projects Project Process Overview

Presented

February 28, 2017

# Project Overview

**Purpose:** To provide an overview of the three (3) major phases of a Capital Improvement Program project. The phases include:

- **Project Initiation**
- **Feasibility Study**
- **Delivery**

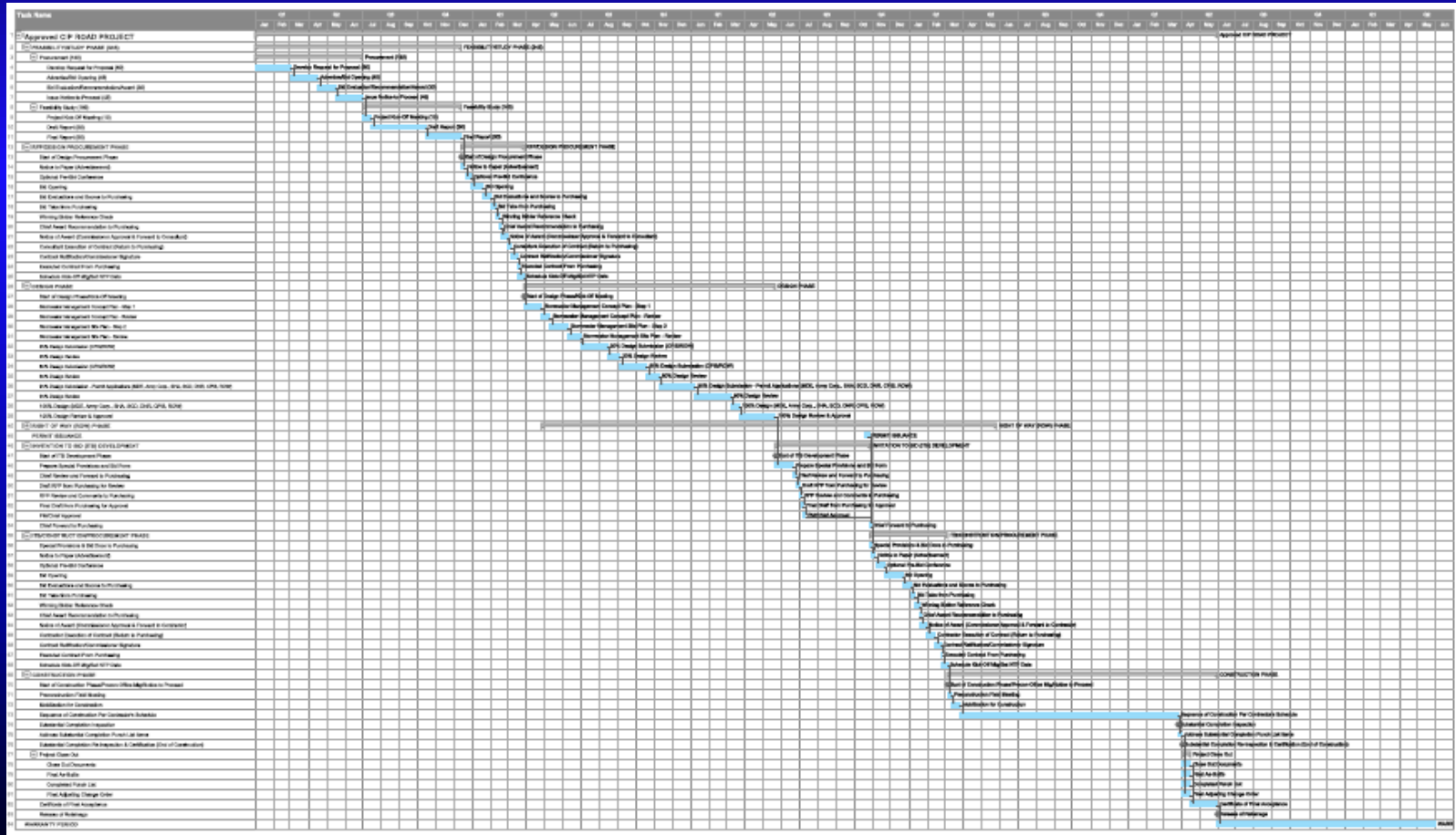
# Project Overview

## Baseline Schedule

- A baseline schedule is created at the beginning of each project. Every project is unique and follows a different path.
- The baseline schedule is a fair estimate of durations at the onset of a project and is based on limited information available at that time.
- The baseline schedule exists in a vacuum prior to being subjected to external factors throughout the project's life cycle.

# Project Overview

## Project Baseline Gantt Chart

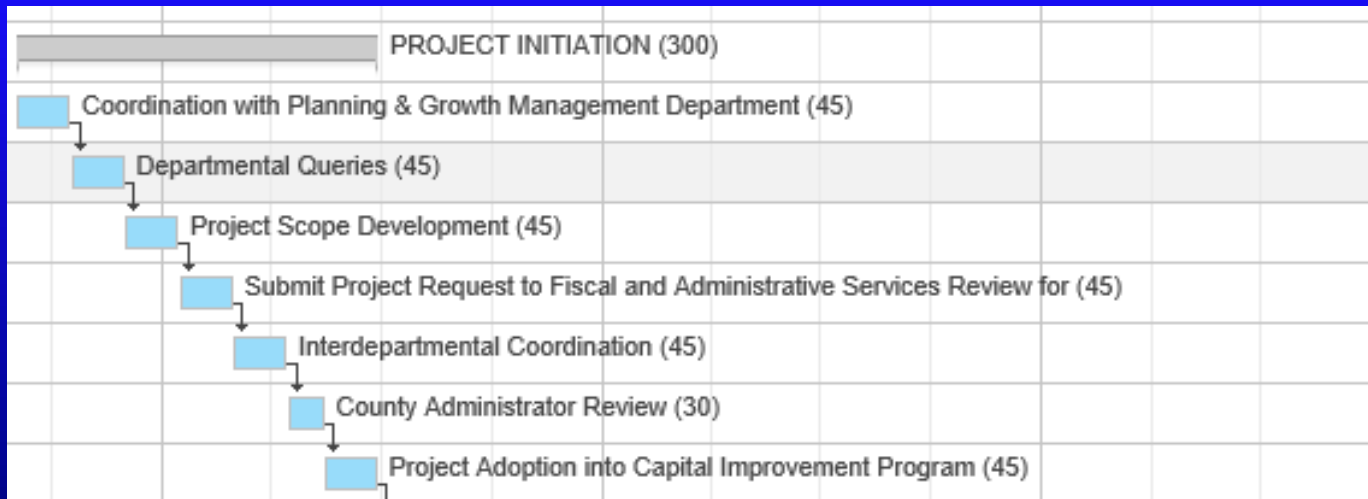


# **Project Initiation Phase**

- **Comprehensive Plan Coordination**
- **Departmental Queries for Program Needs**
- **Project Scope Development**
- **Submit Project Request to Fiscal and Administrative Services (FAS) for Review**
- **Interdepartmental Coordination**
- **County Administrator Review**
- **Project Adoption into Capital Improvement Program (CIP)**

# Project Initiation Phase

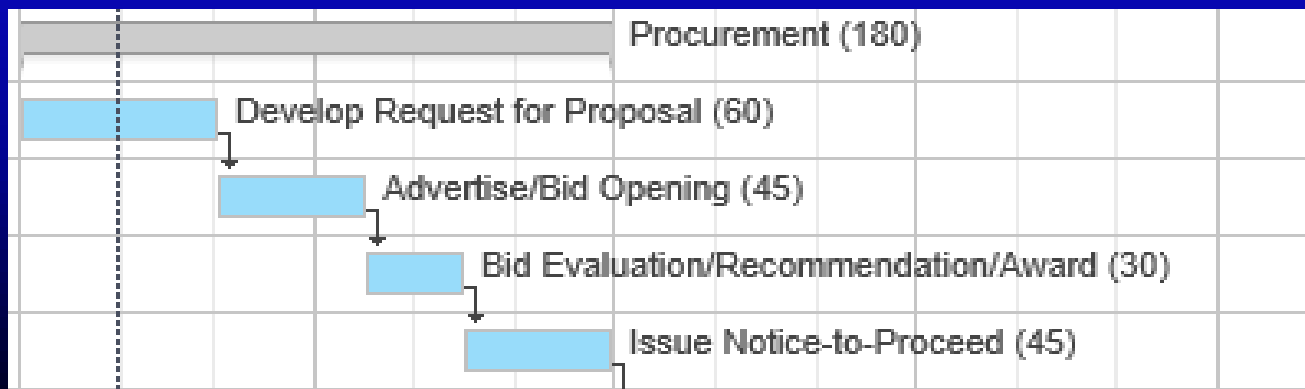
## Project Initiation Gantt Chart



# Feasibility/Study Phase

- **Procurement (180 Days)**
  - Develop Request for Proposal (RFP)
  - Advertise/Bid Opening
  - Bid Evaluation/Recommendation/Award
  - Notice-to-Proceed

## Design Procurement Gantt Chart

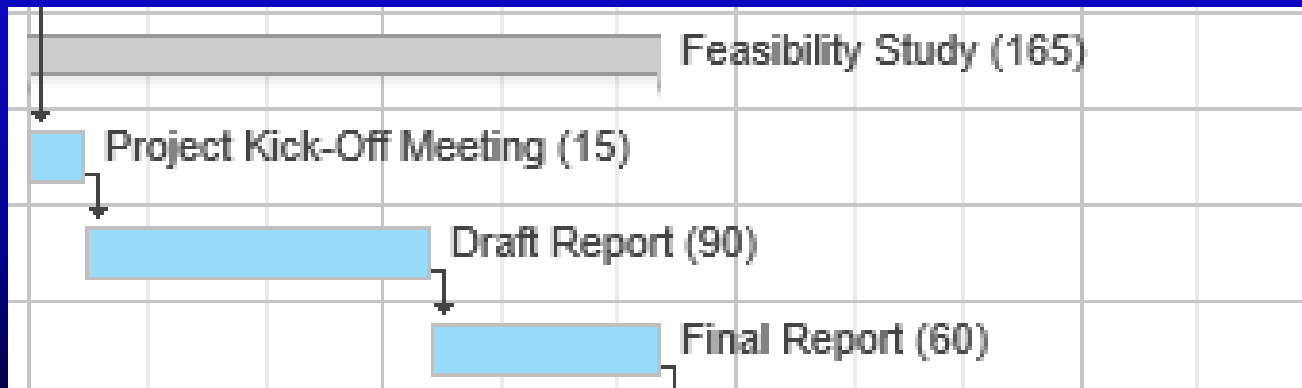


# Feasibility/Study Phase

- **Feasibility Study (165 Days)**

- Project Kick-Off Meeting
- Draft Report
- Final Report

## Feasibility Study Gantt Chart



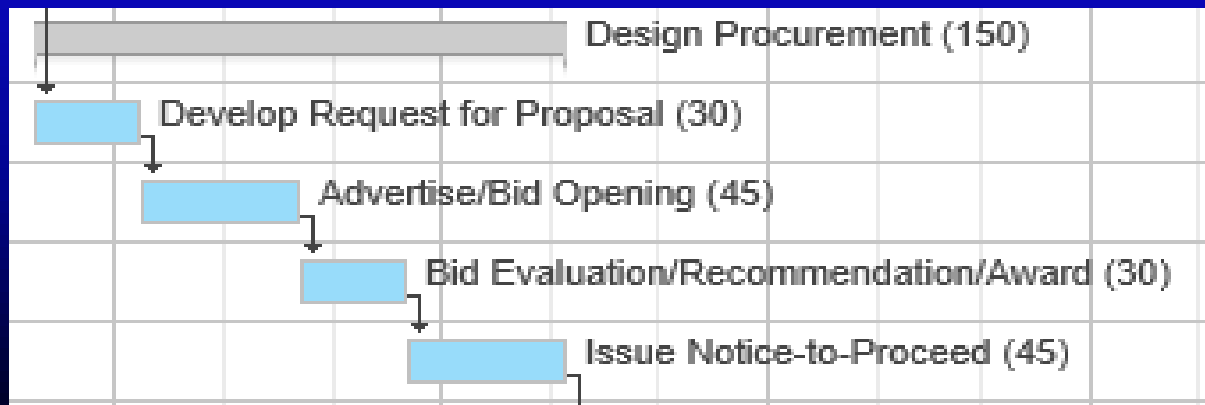
# Project Delivery

- Procurement (Design) – 150 days
  - Design Services/Permitting – 360 days
  - Property Acquisition – 105 days
  - Procurement (Construction) – 150 days
  - Construction – 540 days
- 
- Overlapping

# Project Delivery

- **Design Procurement (150 Days)**
  - Develop Request for Proposal
  - Advertise/Bid Opening
  - Bid Evaluation/Recommendation/Award
  - Notice-to-Proceed

## Design Procurement Gantt Chart

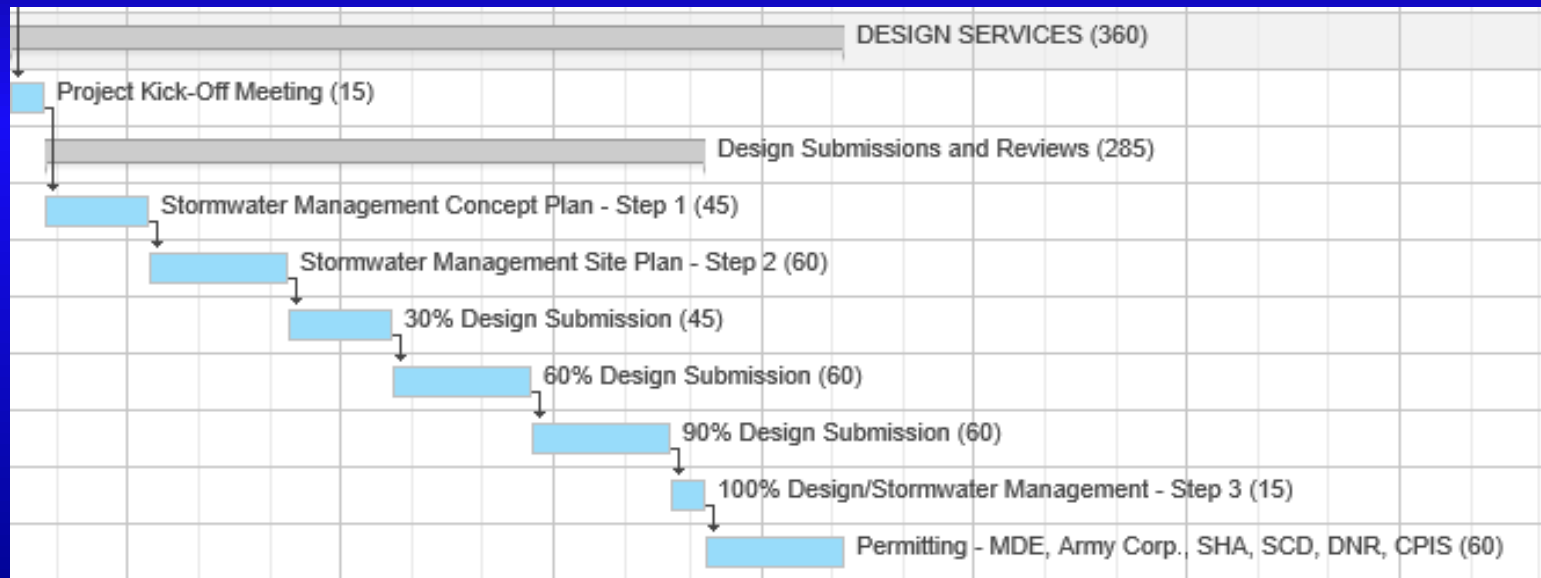


# Project Delivery

- **Design/Permitting Services (360 Days)**
  - Project Kick-Off and Progress Meetings
  - Design Submissions and Reviews
    - Step 1 Stormwater Management (SWM) Concept
    - Step 2 Site Stormwater Management (SWM)
    - 30% Progress Design
    - 60% Progress Design
    - 90% Progress Design
    - Step 3 SWM/100% Progress Design
  - Permitting (MDE, USACOE, SHA, SCD, DNR, CPIS)

# Project Delivery

## Design Services Gantt Chart

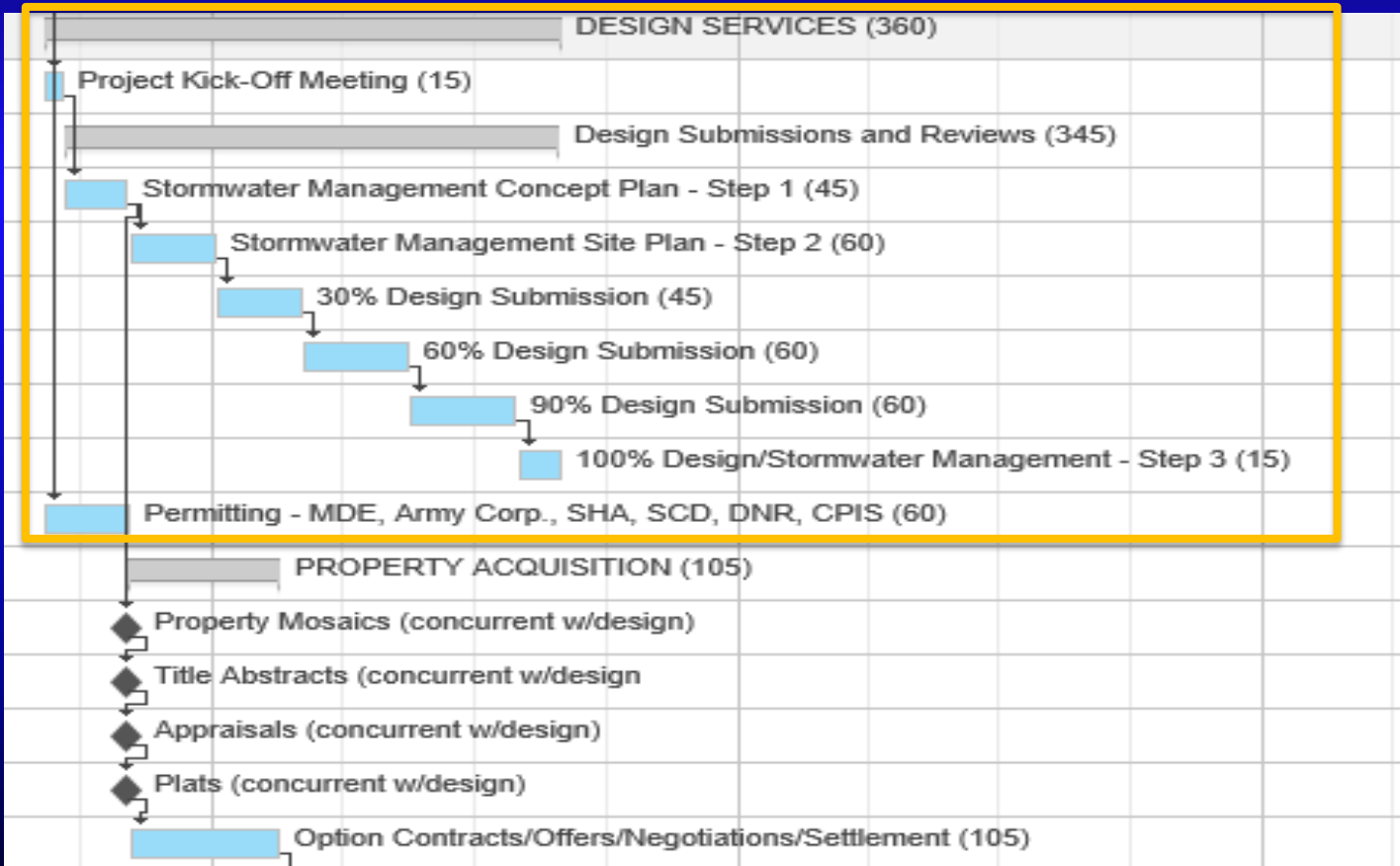


# Project Delivery

- **Property Acquisitions (105 Days)**
  - **During Design**
    - **Property Mosaic Review**
    - **Title Abstracts**
    - **Access Notification Letter**
    - **Right of Entries**
    - **Progress Right-of-Way Plat Review**
    - **Appraisals**
  - **Post Design (105 Days)**
    - **Option Contracts/Offer**
    - **Negotiations**
    - **Settlements**
    - **Recordation**

# Project Delivery

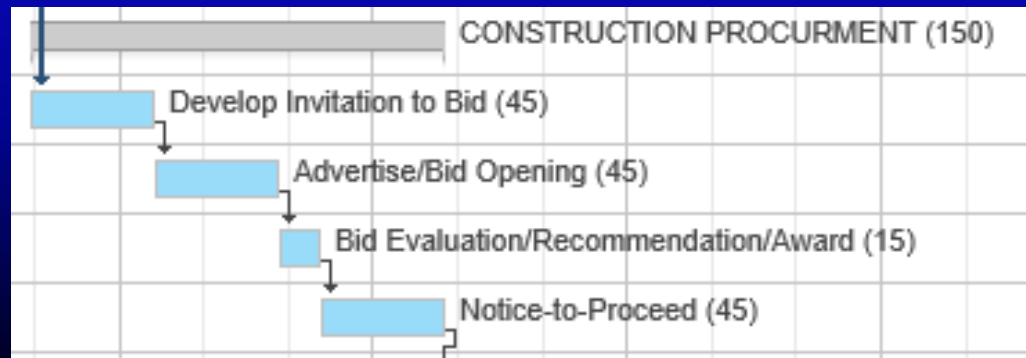
## Property Acquisition Gantt Chart



# Project Delivery

- **Construction Procurement (150 Days)**
  - Develop Invitation-to-Bid (ITB)
  - Advertise/Bid Opening
  - Bid Evaluation/Recommendation/Award
  - Notice-to-Proceed

## Construction Procurement Gantt Chart

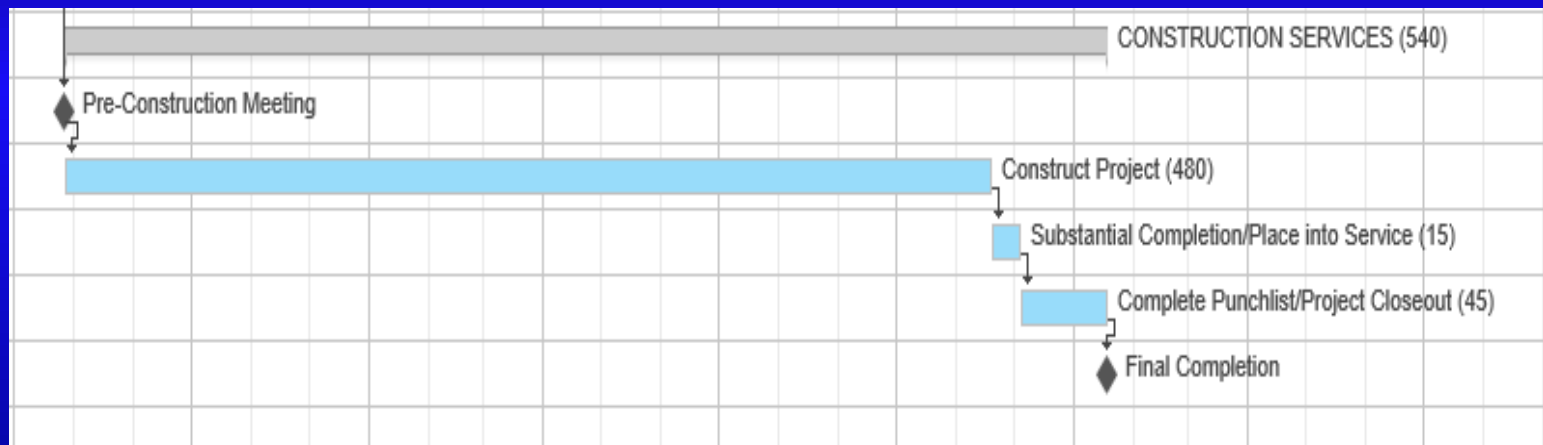


# Project Delivery

- **Construction Services (540 Days)**
  - Construction Management
    - Project Kick-Off and Progress Meetings
    - Project Schedule/Progress
    - Budget/Invoices
    - Project Inspection
    - Project Coordination
    - Documentation
    - Change Orders
  - Project Closeout
    - Start Up Testing and O&M Manuals
    - Substantial Completion (Project Placed into Service)
    - As-built Drawings/Punchlist
    - Final Acceptance
    - Closeout Documents
    - Final Adjusting Change Order
    - Start of 1-Year Warranty Period

# Project Delivery

## Construction Services Gantt Chart



# Schedule Impacts

## Premise

CIP projects are subject to an array of external factors that can impact the baseline schedule and delay the projected delivery date.



# Schedule Impacts



# **Schedule Impacts**

## **Procurement Delays**

- Bid extensions (if necessary)
- Contested Bids
- County has no direct control over the duration of the vetting process
- County has no direct control over the duration of the contractor's execution of the contract (bonding, insurance, etc.)

# Schedule Impacts

## Procurement Delays

- **Grant Funded Projects:**

Projects that are grant funded are subject to MDE grant requirements which add additional time to the procurement process.



# Schedule Impacts

## Property Acquisition Delays

- Negotiations with home owners can be very lengthy ...



- ... and may end in **condemnation which could take an additional 6 months to a year.....or more**

# **Schedule Impacts**

## **Stakeholders**

- Stakeholders are all parties that are impacted by the project. Some stakeholders have a stronger voice than other.

**Individual Homeowners**

**The General Public**

**The Commissioners**

**End User**

**Developers**

**Special Interest Groups**

# Schedule Impacts

## Stakeholder Involvement

End users attend design workshops and progress meetings and may introduce new information that could impact the design process.



Public comment process provides opportunity for opposing viewpoints or interests that must be addressed and could potentially prolong or derail a project.

# Schedule Impacts

## Stakeholder Involvement

- A tug of war can occur among stakeholders in regards to scope, schedule, quality, and money. Working through these differences can consume project time.



# Schedule Impacts

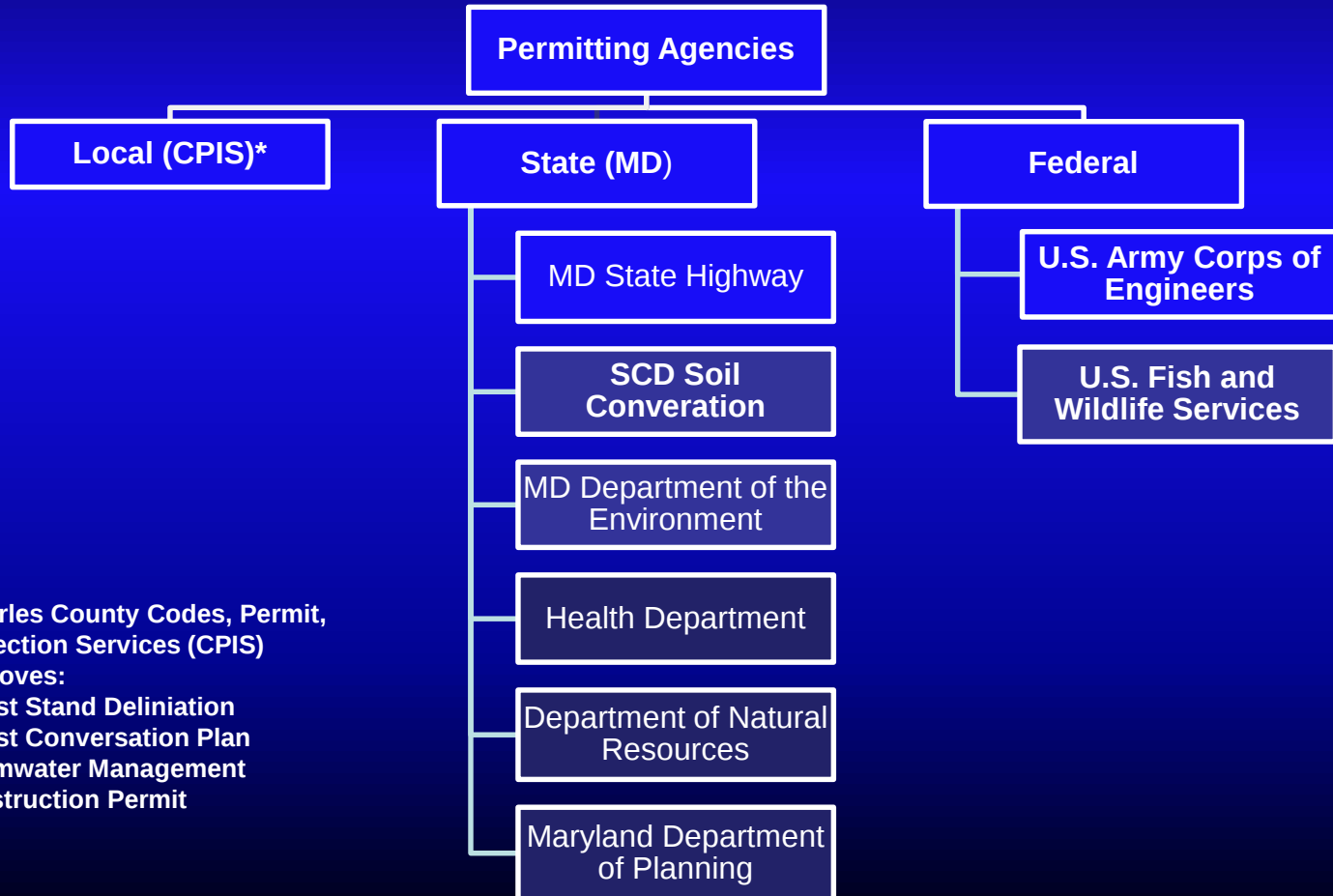
## Permitting Process

- CIP projects have to be reviewed and approved by various local, state, and federal agencies.



# Schedule Impacts

## Permitting Process



\*Charles County Codes, Permit, Inspection Services (CPIS)  
Approves:  
Forest Stand Deliniation  
Forest Conversation Plan  
Stormwater Management  
Construction Permit

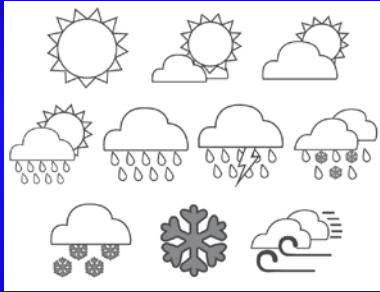
# Schedule Impacts

## Permit Delays

- **Conflicting code and ordinance interpretation.**
- **Backlog within state and/or federal permitting agencies.**
- **Changing codes and regulations.**
- **Public comments during the permit review process.**
- **Permit comments can require the consultants to redesign minor or major components of the project.**

# Schedule Impacts

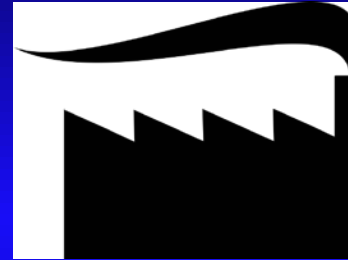
## Construction Delays



**Weather**



**Unforeseen Field  
Conditions**



**Fabrication  
Issues**



**Archeological  
Finds**



**Unforeseen  
Design  
Issues**



**Resource  
Shortage**

# Closing Comments

- CIP projects exist in a dynamic environment. Baseline schedules could change as a result of external factors that can be anticipated but not predicted. The CIP team is in constant contact with the stakeholders, the designers, consultants, permit authorities, contractors, homeowners, and other County departments. CIP provides a steady lead from design procurement through completion of construction and the warranty period.



**Presented By:**

**Charles County Government**  
**Public Works**

**10430 Audie Lane, La Plata, Maryland 20646**  
**MD Relay Service: 7-1-1**

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