

# November 2019 ACEC/PA Meeting



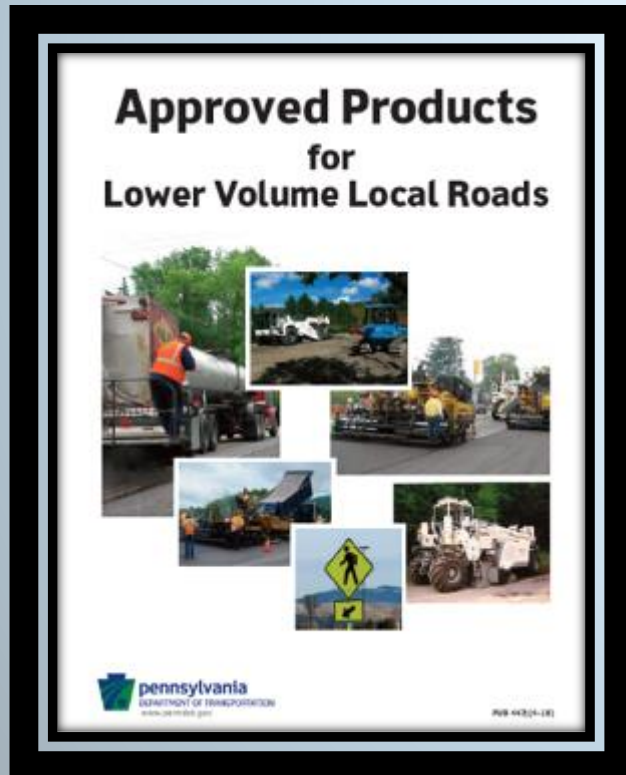
**Deputy Secretary for Highway  
Administration  
George W. McAuley Jr., P.E.**

# ► PennDOT - By the Numbers



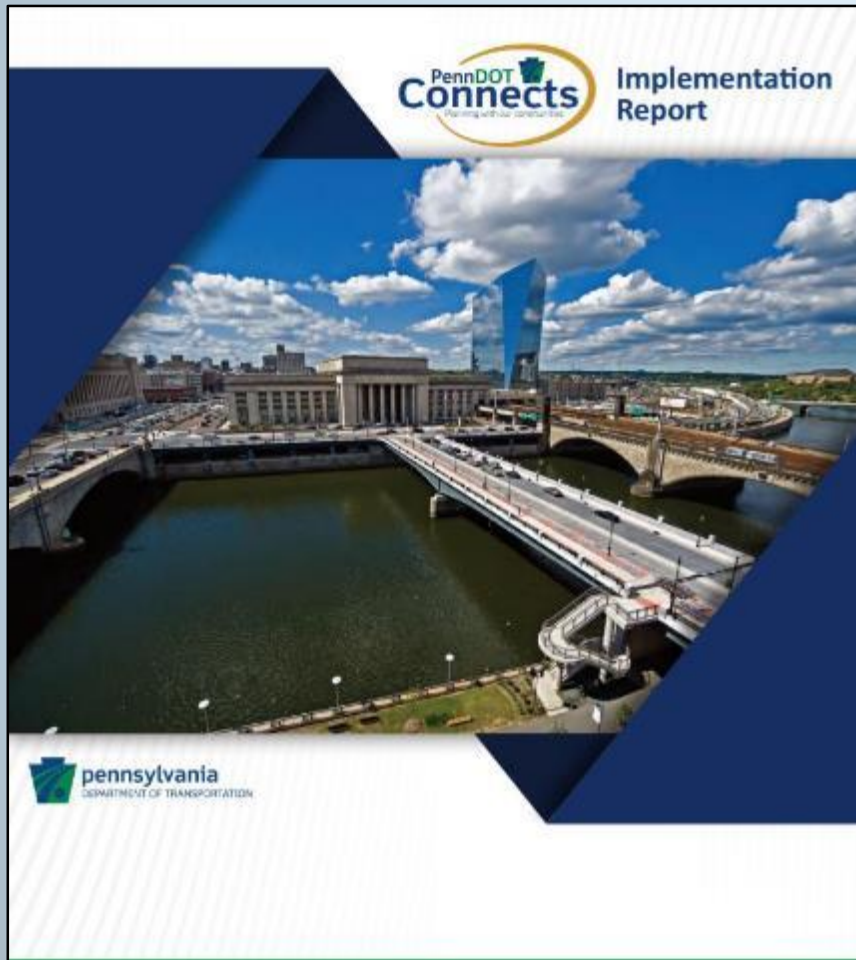
# Pennsylvania Local Networks

- Local Governments own over 78,000 miles
- Locally owned bridges just over 6,400
  - 29% poor condition (Jan 2015 was 34%)





# PennDOT Connects



- PennDOT Connects provides for local government outreach and collaboration.
- New projects must follow the PennDOT Connects collaborative planning process approach.

# ► Asset Management

## Lowest Life Cycle Cost (LLCC)

- Federally Mandated
- NHS Routes
- Risk-Based Prioritization
- Emphasis on Preservation
- Eliminates “Worst First” Approach

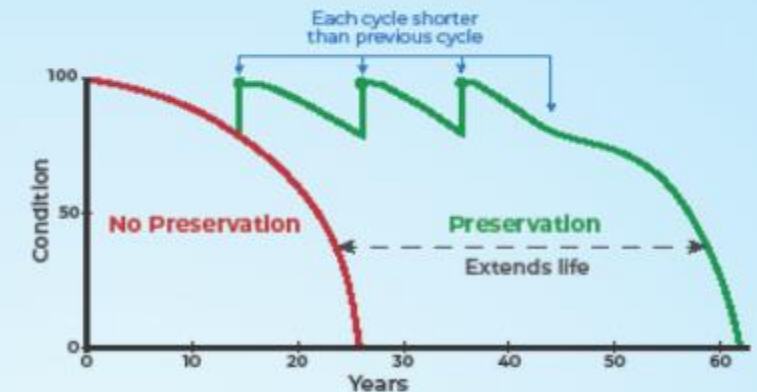
## Lowest Life Cycle Cost (LLCC)



### What is LLCC?

With the passing of MAP-21 and FAST ACT, states are now required to manage the NHS to the Lowest Life Cycle Cost (LLCC) and document this in their risk-based Transportation Asset Management Plans (TAMPs).

LLCC is a process designed to maximize the life of an asset at the lowest cost through a **risk-based prioritization of preservation, rehabilitation, and reconstruction**. It promotes the right treatment at the right time (with an emphasis on preservation) rather than focusing too heavily on assets in poor condition (e.g., worst-first).



No Preservation

VS



Preservation

A series of well-timed preservation activities extends life, maintains the asset at a higher performance level for longer, and lowers the total cost per year.

### Why is it Beneficial?



Extended life of



**pennsylvania**  
DEPARTMENT OF TRANSPORTATION

# Pennsylvania's Interstate System

## Annual Funding Need\*

**\$460M**

- Current Interstate Funding

**\$1.2B**

- Cyclic Asset Based Need
- Maintain existing highway and bridges

**\$1.5-\$3B**

- Address Reconstruction Needs
- Modernization
- Strategic Investments

\*Needs are based on current dollars, unadjusted for inflation



# ► Pennsylvania's National Highway System (non interstate)

## Annual Funding Need\*

**\$742M**

- Current NHS Funding
- Safety Projects

**\$2.2B**

- Safety & Cyclic Asset Based Need
- Maintain existing highway and bridges

**\$2.5B**

- Strategic Investments
- Safety Projects

\*Needs are based on current dollars, unadjusted for inflation

# ► RBR Construction Update

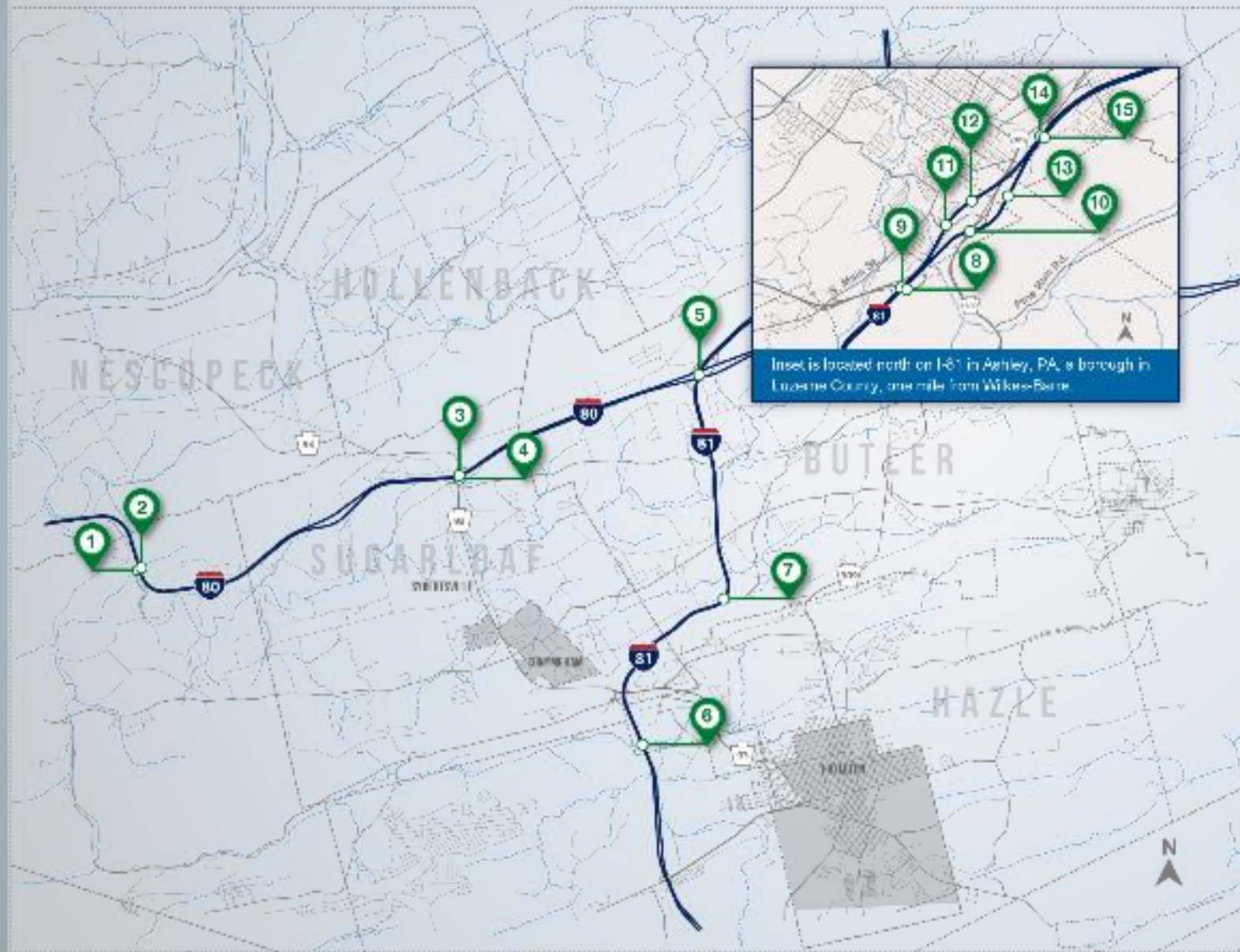


Construction Year	Bridges Completed
2015	44
2016	127
2017	217
2018	143
2019	23 (as of 11/15)





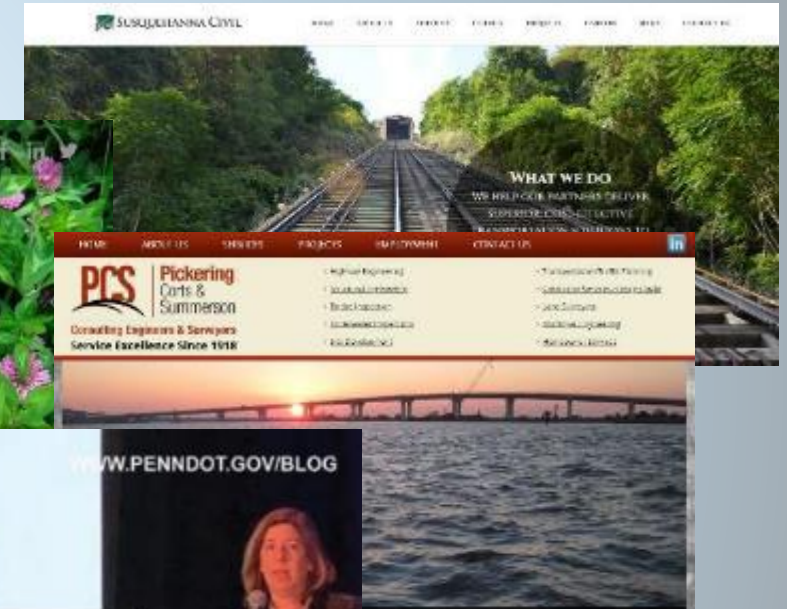
## ► Alternative Delivery



District 4-0  
Interstate  
Bridge  
Bundle

# ► Diversity and Inclusion

- ✓ 2019 – Third Year of Outreach Sessions
- ✓ Small/Diverse Businesses
- ✓ Training
- ✓ Industry efforts?



<https://www.penndot.gov/about-us/EqualEmployment/Pages/default.aspx>



## ► Small Business Set Aside

- Small Business Set Aside
  - Small Business Enterprises (SBE) compete as prime
  - Federally funded pilot
  - 1<sup>st</sup> pilot was Preliminary Engineering and Final Design Agreements
  - 7 pilot projects for non-complex box culverts and single span bridge replacement
    - Actively in design
  - 2<sup>nd</sup> pilot group is for Construction Inspection
  - 11 projects in this pilot



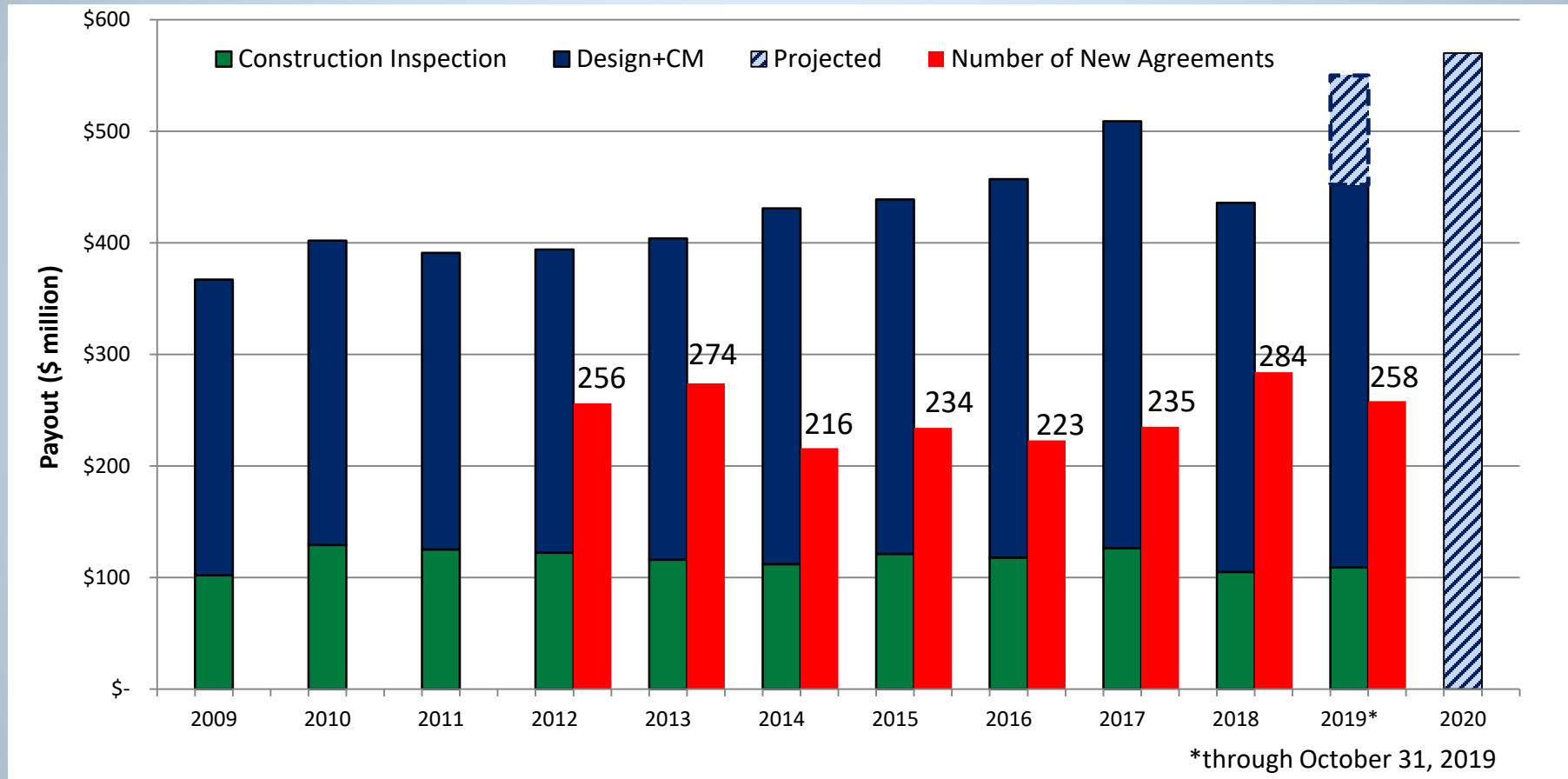
# ► Mutual Gains

- Mutual Gains
  - IT is developing Power BI software to extract ECMS invoiced hours for tasks
  - Groups will be developed to review structures, environmental and roadway tasks





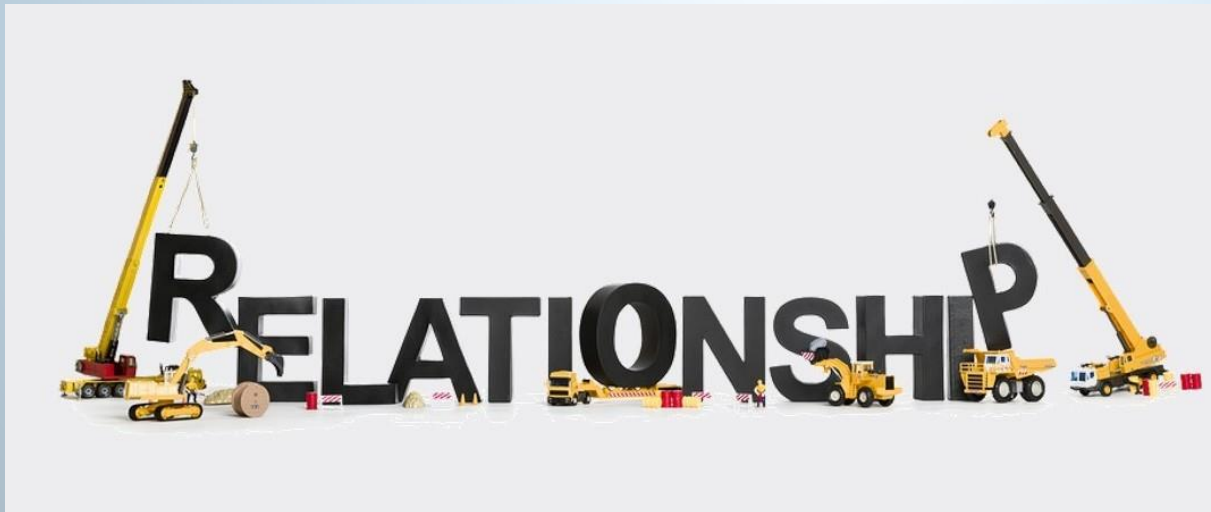
# ► Consultant Payouts & New Agreements



**Projection for 2020: \$570 Million**

# ► Relationships

- Quarterly meetings with ACEC
  - Quality Website Developed
  - Discuss various Construction Inspection Items
  - DBE issues
  - Prompt Payment





# A Culture Shift

**Are we progressively adapting our business to accept/support evolving innovations?**



**The significant problems we face cannot be solved at the same level of thinking we were at when we created them.”**

**– Dr. Albert Einstein**

# Innovation – Telling Your Story

Got Communications and Marketing?

What Can We Do as Innovators to  
Open the Lines of Communication?





# Mobile Applications (Apps)

## Currently Deployed



MC DOCs



PSA



Punchlist



Force Account



CMH Mobile



Visual Site  
Inspection Report

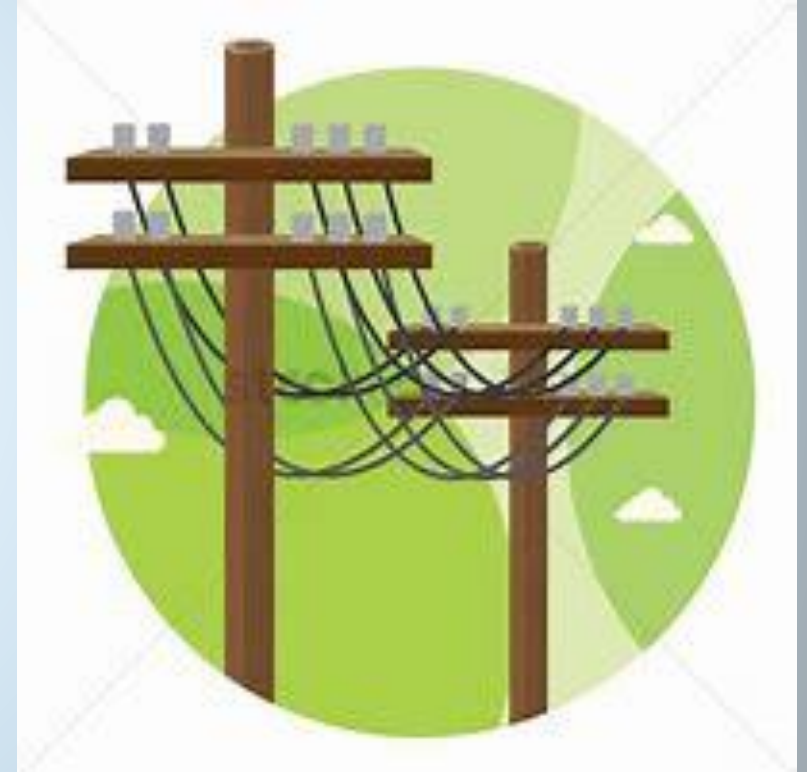


MPT



## ► Utility IT system/ SHRP 2

- Utility Relocation Management System(URMS)
  - Accessible web based application
  - Sole platform for utility coordination across all Department Projects
  - Process driven workflow
  - Integrated Utility Conflict Matrix (UCM)
  - Enterprise wide application integration
  - Training and Production System Launch March 2020



# ► Keystone Environmental ePermitting System (KEES)



- All GP permits are now functional in the system
- EX-9999 are currently functional in the system
- EX-9999 maintenance notifications are functional in the system
- 102 (earth disturbance activities) are being discussed
- Still need to work out how County Conservation District will be onboarded to review 102 permits



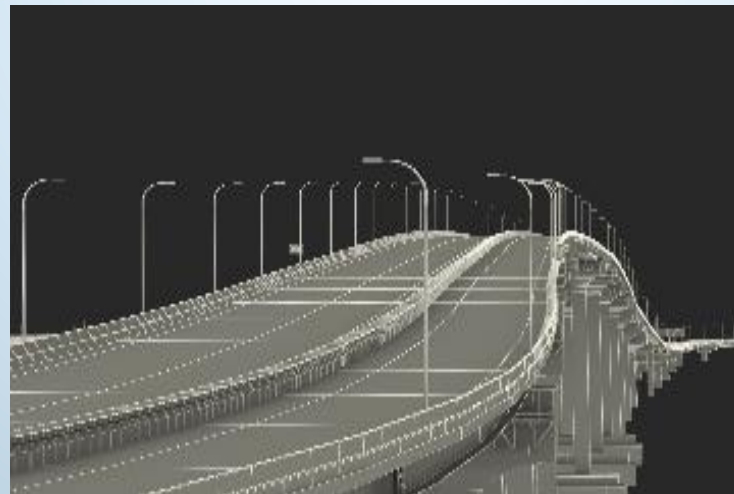
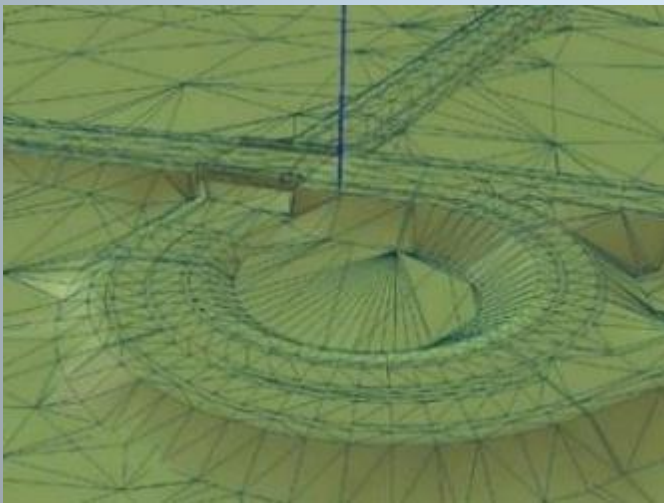


# ► Planless 2025

## **Vision Statement:**

**By 2025 construction projects will have the ability to be bid using 3D technology and no longer be in a traditional construction plan format. Projects such as guide rail, RPM's, crack sealing and bridge preservation, etc. will be exempt.**

**All Project elements including what would typically be shown on "also plans" will be contained within the CADD model. The 3D model will be the primary document of truth. As-builts will be a deliverable for the contractor and will be an accurate representation of the constructed project.**



# ► Census 2020

- National Census Day is April 1, 2020.
- Pennsylvania's census count will affect the next decade of federal spending, policy, and decision-making.
  - Federal spending on programs like highway planning and construction.
- Everyone counts. Be a good neighbor and spread awareness in your community.



**We Look Forward to Working with ACEC/PA in 2020!**



Any Questions?