



# What Contractors Wish We Knew



USI Consultants, Inc.

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# SPEAKERS

- Natalie Parks, USI Consultants
- Dan Osborn, Indiana Constructors, Inc.
- John Agresta, The Hoosier Company
- Andrew Schouten, Phend Brown, Inc.
- JR Pitcock, Milestone Contractors



# PROJECT STAKEHOLDERS

- Project Owner
- Consultant
- Utilities
- Property Owners
- Environment
- ***Contractors***

# WHEN DESIGN MEETS CONSTRUCTION

- 105 IAC 13 assumes a CRADLE TO GRAVE mentality
- Utility Coordination does not end at Letting
- Collaboration and cooperation begins between design, work plan, and field work
- Communicate risks established in design to the Contractor
- Manage ongoing relocation efforts and risk mitigation
- Don't just hand off the utility coordination to the PE/S in the field...**STAY ENGAGED**

# WHEN DESIGN MEETS CONSTRUCTION

- Work Plan Review is critical
  - Combined relocation drawing
  - Gantt Charts
  - Constructability review

## RELOCATION PLAN REVIEW

### General Review Items:

- Station & Offset of Existing/Utilities Provided
- Utility shown on Cross Sections
- No Permanent Facilities in Temp R/W
- Review Traffic Signals
- Review Lighting
- Review Existing Facilities to Remain
- Review Proposed Facilities
- Review MOT
- Review Erosion Control
- Review Construction Limits
- Review Environmental Commitments

### Overhead Line Review:

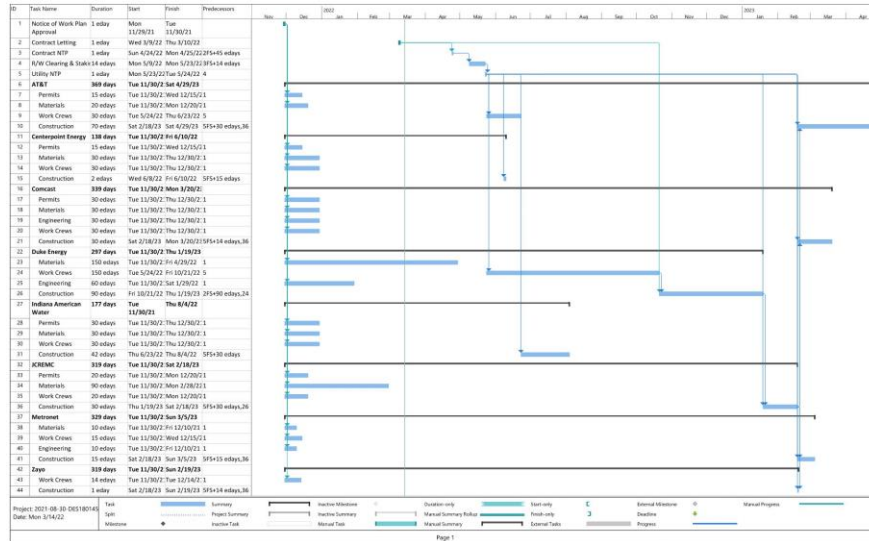
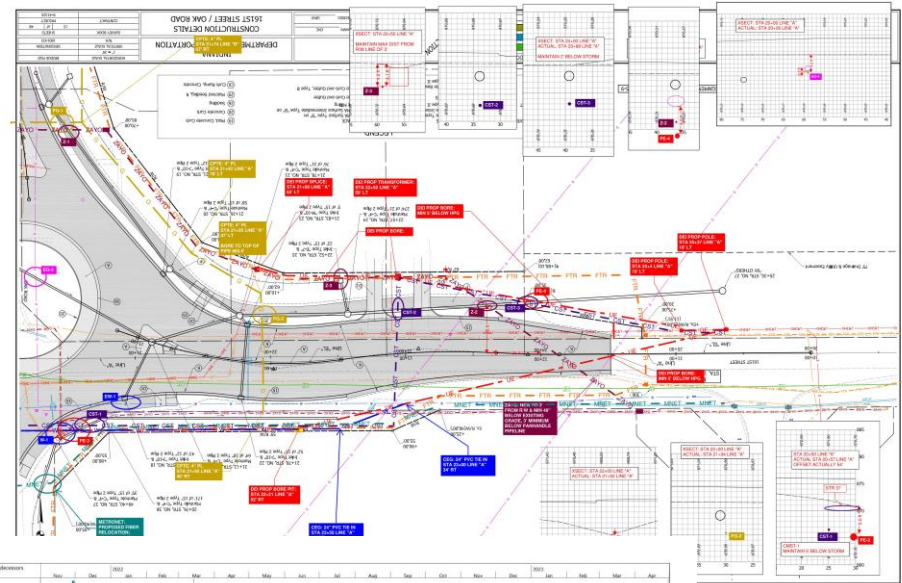
- Existing Facilities to Remain Identified
- Proposed Facilities Identified
- Retired Facilities Identified
- Review Clear Zone Requirements
- Review Drainage Structure Clearances
- Review Ditches
- Review ADA Requirements
- Minimum Overhead Clearances
- Review Overhang Encroachments
- Review Underbuild Relocations

### Underground Facility Review:

- Existing Facilities to Remain Identified
- Existing Facilities to be Retired Identified
- Proposed Facilities Identified
- Size and Material Information Provided
- Method of Installation Provided
- Proposed Elevation Provided
- Review Subgrade Requirements
- Review Drainage Structure Clearances
- Review Ditch Clearances
- Identified Manhole Cover to Be Adjusted
- Review Pile Driving Limits
- Review Encroachment Requirements

### Constructability Review:

- Reviewed Equipment Limitations
- Reviewed OSHA Clearances
- Reviewed Pile Driving/Crane Needs
- Reviewed Construction Phasing
- Reviewed Vehicle Access for Bridges
- Reviewed Contractor Access to Site
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# WHEN DESIGN MEETS CONSTRUCTION

- 105 IAC 13-3-4(a): Utility Coordinator Responsibility
  - Notice to proceed not less than 30 days before utility is required to begin work
  - Utility acknowledgement within 15 days of receipt
- 105 IAC 13-3-4(c): Contractor Responsibility
  - Good faith notice not less than 15 days before the work is expected to be complete
  - Follow up with confirmation no less than 5 days before work is expected to be complete
- 105 IAC 13-3-4(d): Utility Responsibility
  - Notify Department & Contractor at least 5 days prior to working within the R/W
  - Notify Department & Contractor when work is complete

# WHEN DESIGN MEETS CONSTRUCTION

- Post Design Expectations:
  - Follow up with utilities regarding relocation schedule
  - Attend meetings as required
  - Review revisions to the work plans
  - Coordinate unexpected conflicts or unknown facilities

# UTILITY COORDINATION IN THE CONSTRUCTION INDUSTRY

- Promotes feedback between stakeholders & industry
- Reduces delays
- Reduces construction cost inflation
- Improves work force efficiency
- Maintains plan conformance



# HIGHWAY FUNDING

- Contract awards have increased significantly since 2017
  - Local: 2016-2021 – 111% increase
  - INDOT: 2016-2021 – 54% increase

# UTILITIES IN THE FIELD

- Utility Coordination should occur before, during, and after design.



- Fiber line permit was not communicated to the City Engineer or utility coordinator
- Fiber line was not shown on design plans but located by 811
- 4 week delay to negotiate relocation

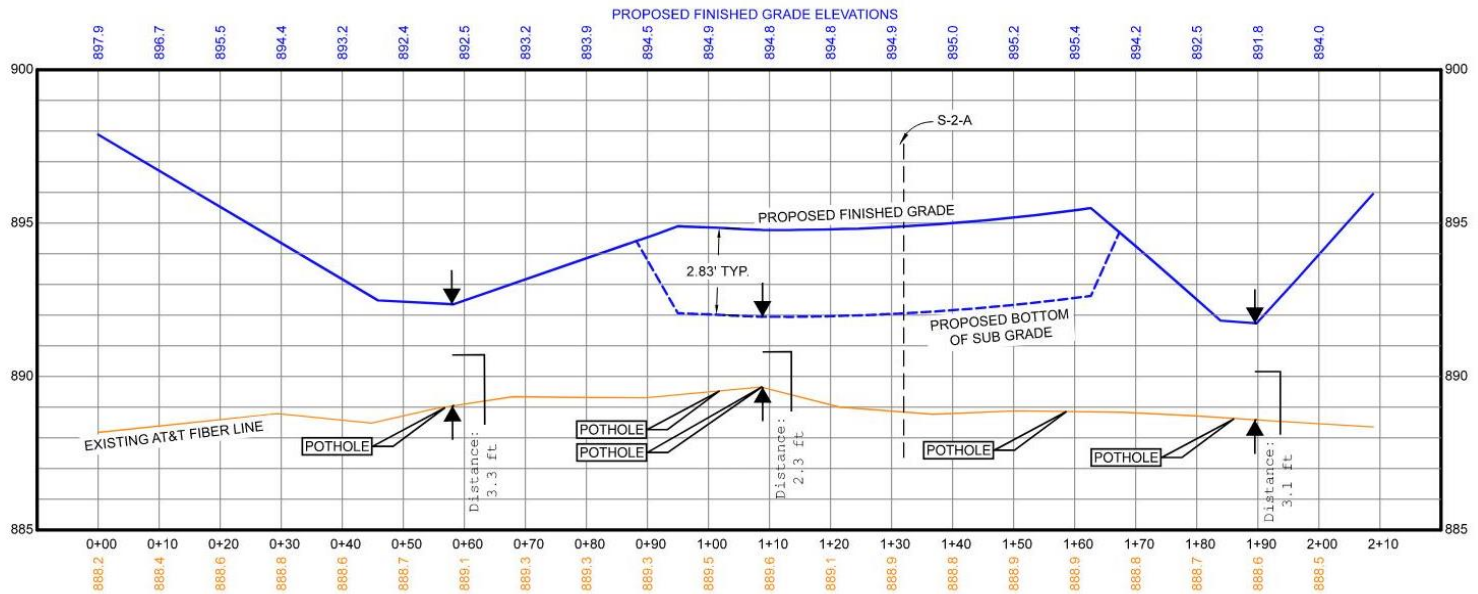
PHEND & BROWN, INC.



# UTILITIES IN THE FIELD

- Conduct a preconstruction utility walk through with project owner, utilities, utility coordinator, and contractor.
  - Allows for identification of issues prior to start of construction.
  - All stakeholders are present and able to work together right away to eliminate issues.
  - Investigate and verify geospatial location within project limits.

# UTILITIES IN THE FIELD



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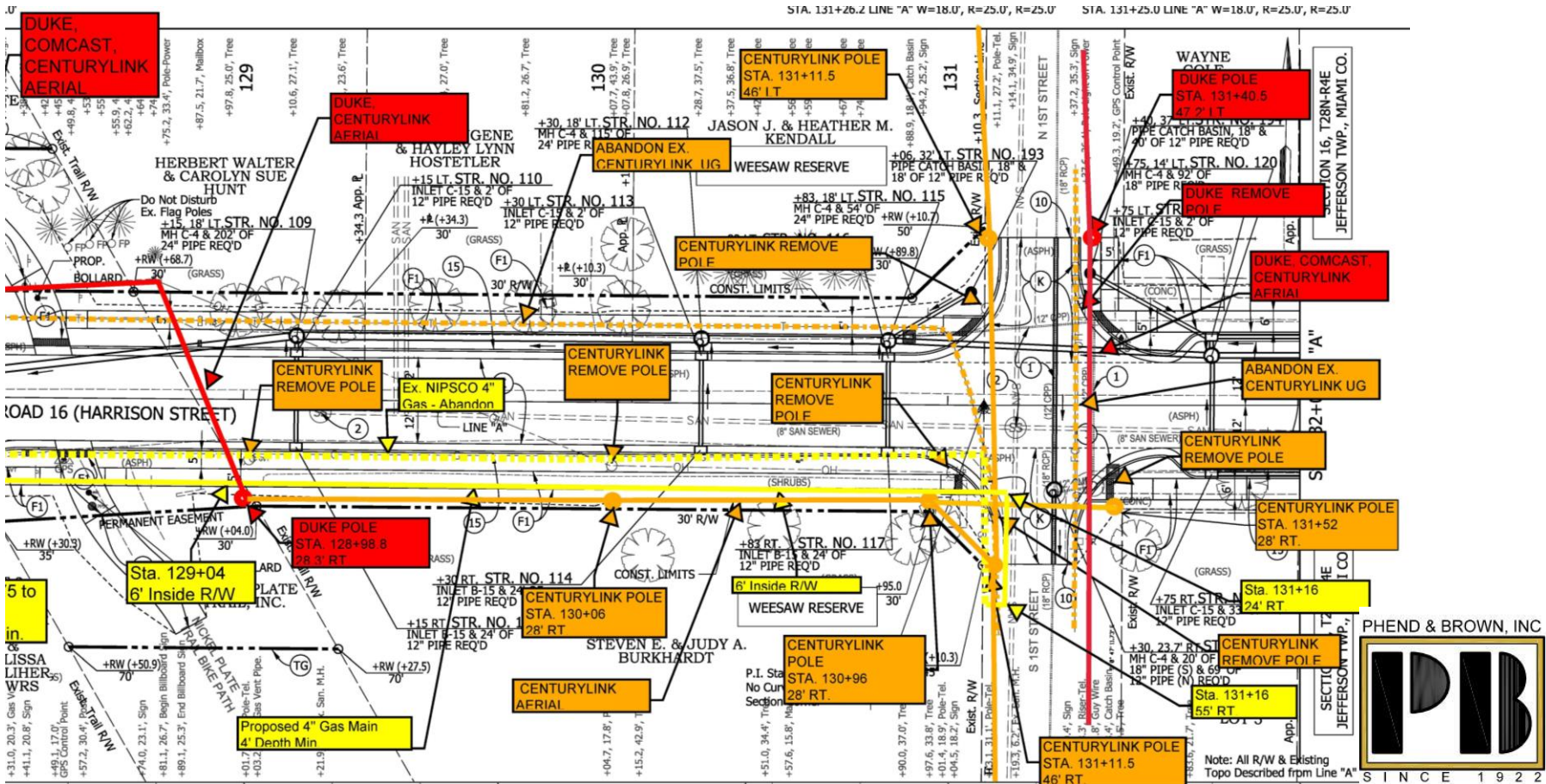


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# UTILITIES IN THE FIELD

- Utility relocation markups presented on one set of plans, prepared by the Utility Coordinator.







# UTILITIES IN THE FIELD

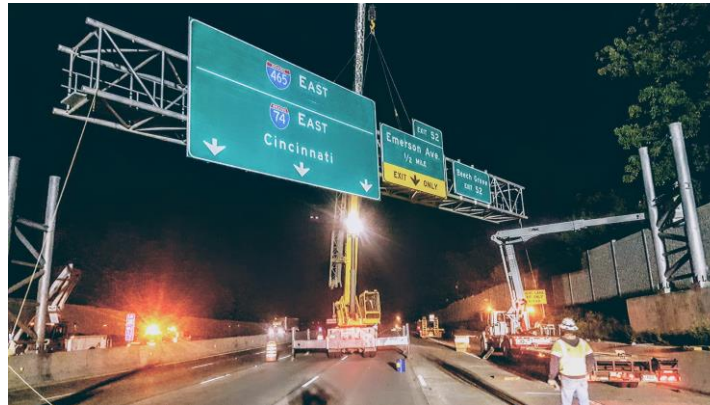
- Utility coordination is not just working through design conflicts with utilities
- Includes any utilities that need to be brought TO the project
- Delaying a project or adding work negatively affects bidding strategy





# UTILITIES IN THE FIELD

- Power supply planning crucial during project development & design
- Permanent facilities
  - Signals
  - Lighting
  - Its
- Temporary facilities
  - Signals
  - ITS
- Coordination during construction results in increased costs & potential for delays



# COMMON CHALLENGES

- Seasonal Timing is Critical
  - Lost time between Stage 3 design & Contractor NTP
  - Seasonal workforce
  - Seasonal site conditions
  - Seasonal letting months
  - Contract time sets
  - Reduce risk of changes, delays, disputes, costs



Milestone



# COMMON CHALLENGES

- When does utility coordinator participation stop?
  - Creates variability in workflows and information
  - Commonly occurs at project handoff to PE/S
- What would work better?
  - LPA using the same organization for PE/S as the Utility Coordinator



Milestone



# COMMON CHALLENGES

- Challenges to pre-cons
  - Compliance or planning & strategy meeting?
  - Time lapse between contract award & precon
  - Utilities present new information at pre-con
  - Coordination lapse between work plan approvals & award
- Suggestions
  - Pre-letting planning & verification for utilities
  - Pre-letting utility CPM schedule development
  - Planning & strategy meetings as soon as possible after the award



# COMMON CHALLENGES

- Quality Control issues with Utilities
  - Work plans change
  - MOT criteria conflicts
  - New/unknown utility installations
  - QC inspection during installation



# RED FLAGS

- Utilities require ROW clearing & staking
- NTP is not issued = material procurement not started
- Conflicting utility schedules & key ICD dates
- Pre-letting utility conversations conflict with CIB
- Seasonal bid due date timing
- CPM schedule for major activities



Milestone



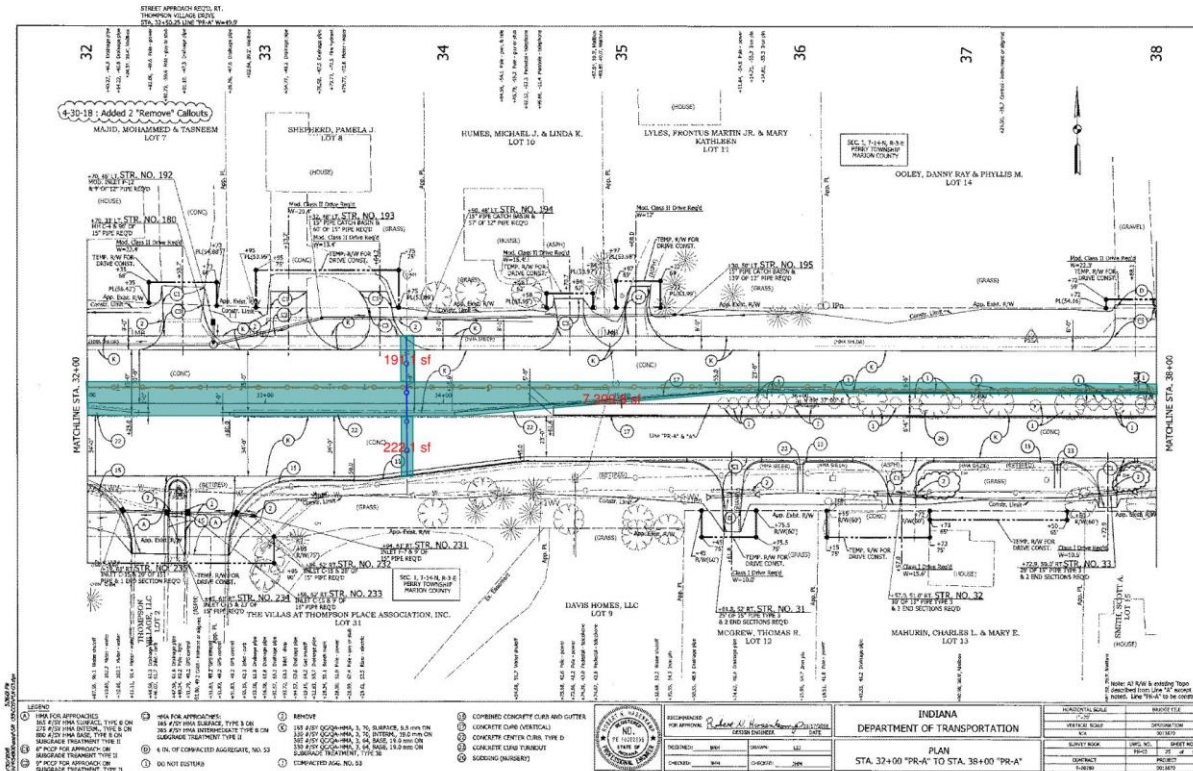
# Red Flags

- Contractor Means & Methods



# RED FLAGS

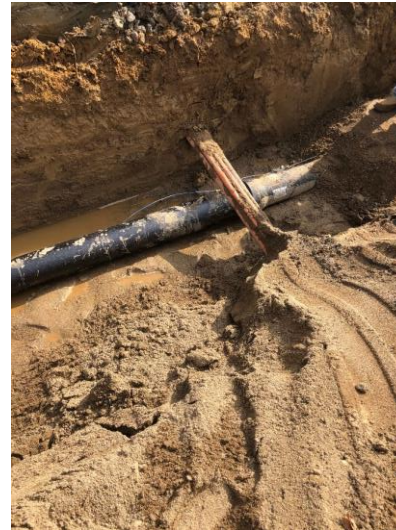
- Facilities under the proposed pavement & subgrade treatment





# OWNER & CONTRACTOR CONSEQUENCES

- Budget
- Schedule
- Construction acceleration
- Seasonal labor force employment
- Backlog & resource forecasts
- Reduced resource capacity



# OWNER & CONTRACTOR CONSEQUENCES

- Minimize bad PR & community information
- Minimize business, community & road user disruptions
- Maximize availability of resources
- Maximize budget & capital



A photograph of a construction site featuring a deep, narrow trench. Two large, cylindrical pipes are laid out in the trench, wrapped in white protective material. The trench walls are made of corrugated metal sheet piling. In the background, there are stacks of concrete blocks and other construction materials. The text "QUESTIONS???" is overlaid in white on the center of the image.

QUESTIONS???

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THANK YOU!!!