



Pennsylvania Pipelines Panel

Planning & Design

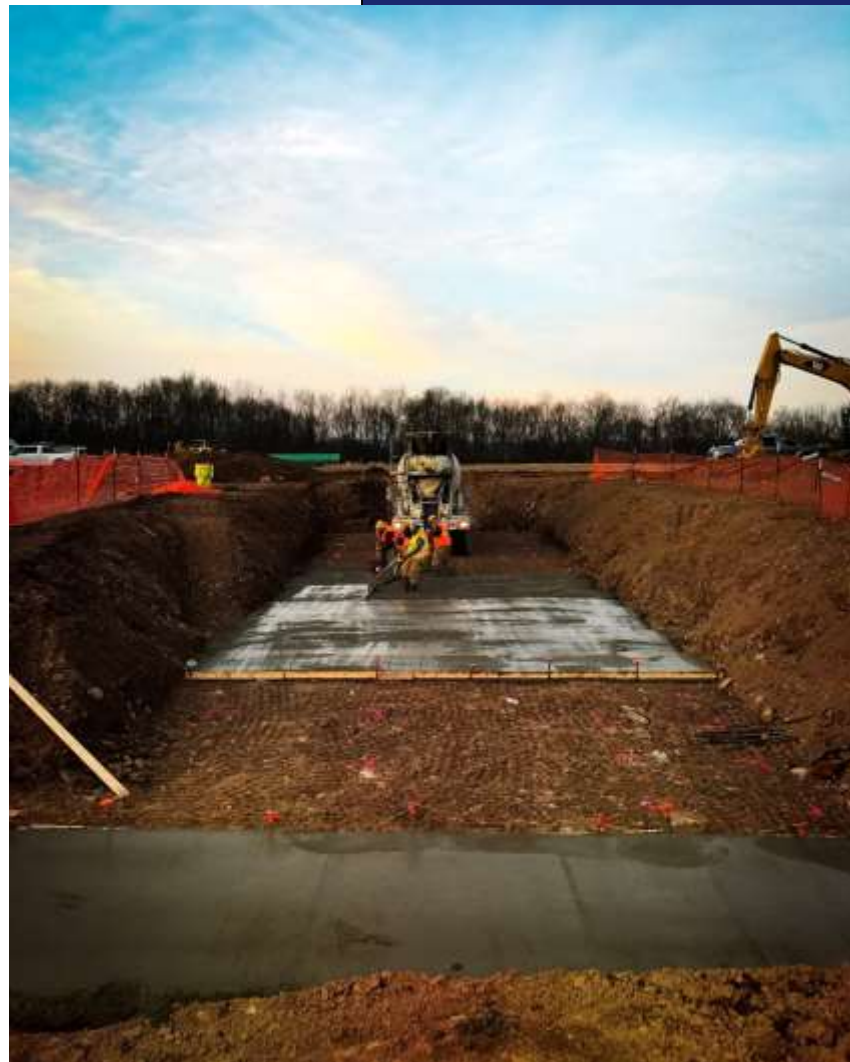
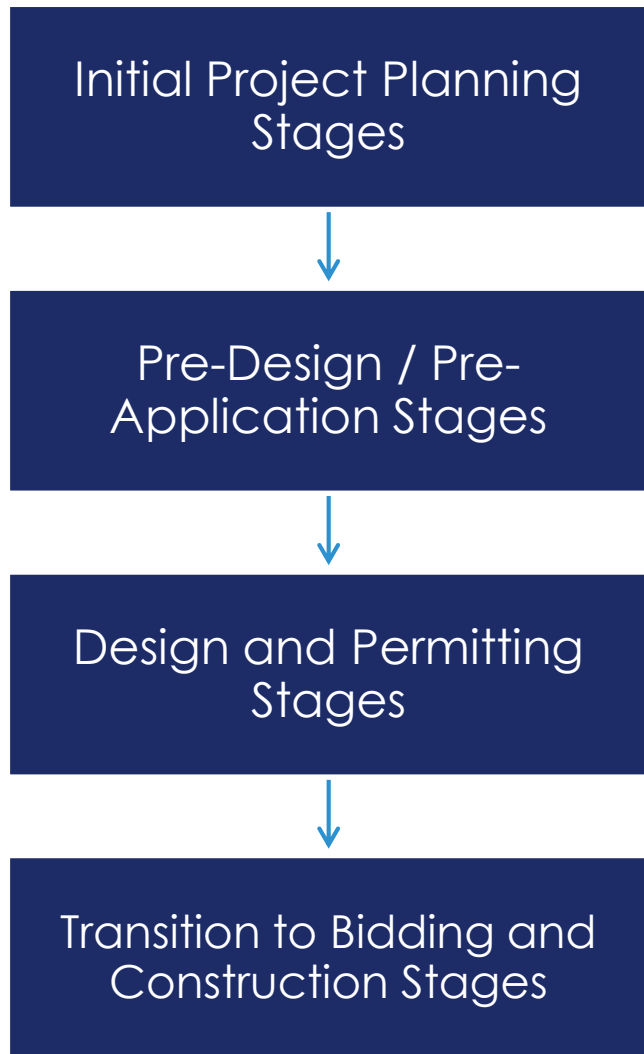
Presented by: Terri Delo, Project Manager | BL Companies

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Pipeline Planning and Design Stages



Initial Project Planning Stages

- **Developer establishes project need**
- **Project Type**
 - Product
 - Gathering Line
 - Transmission Line
 - Distribution Line
 - Well Connect
 - Well Pad or other Facilities
- **Location**
 - County / Municipality
 - Watershed
 - Intrastate & Interstate



Pre-Design / Pre-Application Stages

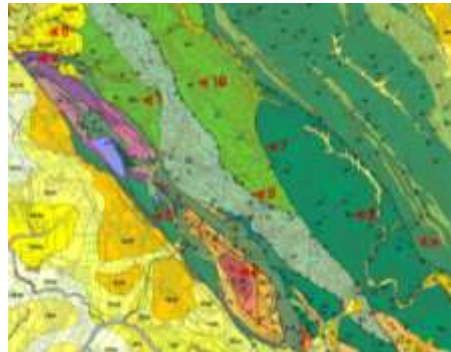
- **Desktop Studies Used to Determine Initial Schedules and Budgets**
 - Aerial Photographs / USGS Mapping
 - Co-location / Population Centers
 - GIS Databases
 - Landowner Research
 - ▶ Private
 - ▶ State / Federal
 - ▶ Utility
 - ▶ Transportation
 - Land Use Research
 - ▶ Agricultural
 - ▶ Residential
 - ▶ Industrial
 - ▶ Transportation



Pre-Design / Pre-Application Stages

■ Desktop Studies

- Identify Project Corridor and Exclusion Zones
- Environmental / Cultural Resource Desktop Studies
 - ▶ NWI Mapping
 - ▶ Geologic Mapping
 - ▶ PNDI
 - ▶ GIS Databases



Pre-Design / Pre-Application Stages

■ Field Studies

- “Windshield” Tours
- Initial Field Recon
 - ▶ Constructability
 - ▶ Resource “verification”
 - ▶ New Areas of Concern
- Field Surveys
 - ▶ Boundary and Topographic
 - ▶ Wetland and Waterbodies
 - ▶ Cultural
 - ▶ T&E
 - ▶ Geophysical



Pre-Design / Pre-Application Stages

■ Initial Design

- Initial ROW, Workspaces, and Contractor Staging Areas Identified
- Plans and Exhibits
 - ▶ Conceptual Site Plans
 - ▶ Details
- Stakeholder Meetings
 - ▶ Agencies
 - ▶ Municipalities
 - ▶ Special Interest Groups
 - ▶ Landowners



Design and Permitting Stages

■ Design

- Permitting Requirements
- Constructability Requirements
- Developer / Operator Requirements
- Schedule Requirements

■ Permitting

- FERC
- E&S
- PCSM / Restoration
- Environmental Resource Impacts
- T&E / Cultural Impacts
- Hydrostatic Testing
- Air Quality



Design and Permitting Stages

- **Iterative Redesign / Resubmissions**
 - Permitting Agencies' Comment Resolution
 - Stakeholders' Comment Resolution
 - Developer Changes
- **Route Realignment - Reset Permitting and Design Process**
 - Field Studies
 - Design
 - Submissions and Comment Resolution
- **Permit Issuance!**

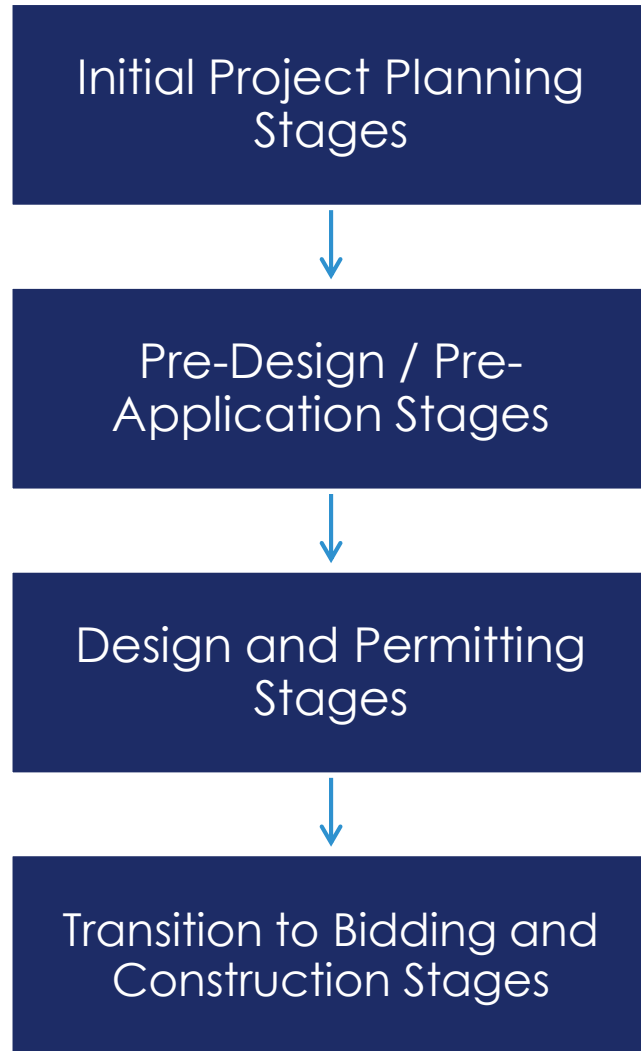


Transition to Bidding and Construction Stages

- **Bid Evaluation / Construction Administration Assistance**
 - Quantity Takeoffs
 - RFI's
- **Training**
 - Developer Training
 - Contractor Training
 - Compliance Training
- **Pre-Construction Meetings and Project Kick-offs**



Summary





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Thank you!

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