



ENVIRONMENTAL SERVICES

- Preliminary Cultural Resource Investigation (Ohio)
- Potential Roost Tree Investigations
- Threatened and Endangered Species Coordination with Government Agencies
 - US Fish and Wildlife Services
 - Ohio Department of Natural Resources
 - Pennsylvania Natural Diversity Inventory
 - West Virginia Department of Natural Resources
- Nationwide Permitting (Ohio and West Virginia)
- General Permit/Joint Permit if necessary (Pennsylvania)
- Water Sampling Coordination
- Water Management Plans
- Environmental Due Diligence for Land Acquisition

CONSTRUCTION & PROJECT MANAGEMENT

- Pre-Construction Services (Bid Package, Tabulation & Recommendation)
- Project Scheduling and Cost Accountability
- Erosion Control Oversight
- Maintenance of Traffic Implementation

*“CESO believes in our **safety program** as a **core value**. We nurture a behavior based system which encourages our employees and contractors to make safety a way of life. Through our combined efforts we continually strive to reach our objective, which is a safe and healthy, incident-free work environment.”*



CREATION TO COMPLETION

WELL TO WHEEL SERVICES PROVIDED

Our Oil and Gas team provides a wealth of services where no detail is too small and no permit too daunting.

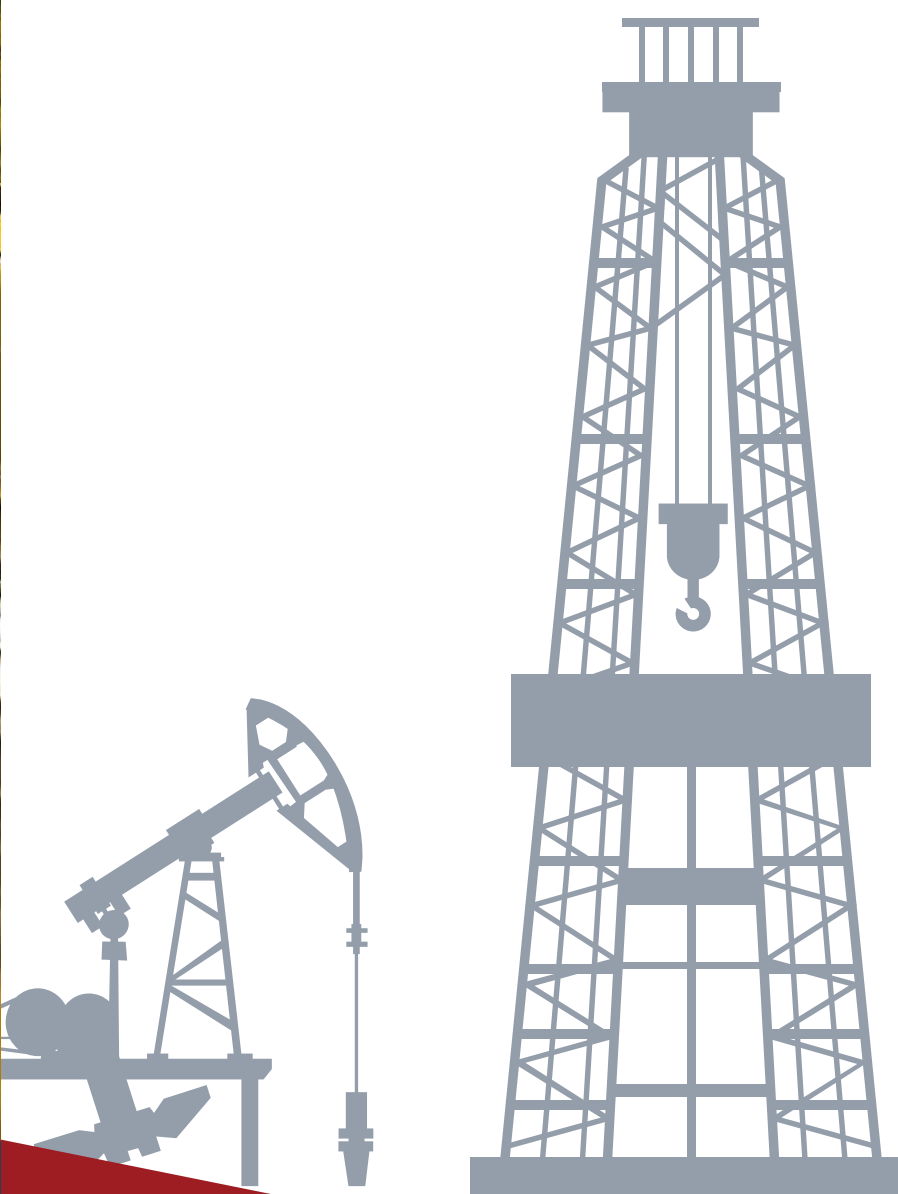


CESO's team of professionals provides engineering services to a wide variety of public and private sector clients. Services provided to these clients encompass many facets of the planning, design, construction administration, and inspection of new and retrofit projects. Our general areas of service include:

- OIL & GAS INDUSTRY-PLANNING
- DESIGN & CONSTRUCTION MANAGEMENT
- SURVEY SERVICES
- TRANSPORTATION ENGINEERING
- ENVIRONMENTAL SERVICE
- WATER QUALITY / SUSTAINABILITY MANAGEMENT
- STREAM ASSESSMENTS & RESTORATION PROJECT SERVICE
- GIS DATA SERVICES
- GOVERNMENT / UTILITY INFRASTRUCTURE
- ARCHITECTURAL SERVICES
- LAND / SITE DEVELOPMENT

*Engineering • Architecture • Survey
Construction Mgt • Environmental*

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OIL & GAS SERVICES

CESO uses its six (6) fully integrated offices to service all aspects of the oil and gas industry, including Upstream, Midstream and Downstream. CESO personnel utilize the latest in equipment and software for civil design, surveying, 3-dimensional modeling, GIS data management, as well as other systems, resulting in efficient and coordinated customer service to our clients.



ROADWAY USE MAINTENANCE AGREEMENTS (RUMAS), HIGHWAY OCCUPANCY PERMITS (HOPS), BONDING & OTHER PERMITS

- Application, Preparation, Governmental Submittal, & Approval Coordination
- Development of the RUMA to gain agreement based on the needs of the operator, risk allocation, and governing authority processes
- HOP for minimal use, and low, medium and high density locations and the supporting documentation
- Define the proposed haul roads, needs of the operator, and site constraints
Documentation of existing road conditions by video, survey, and report
- Determination of the jurisdictional and their requirements
- May include a maintenance bond - or other allocation of risk as agreed by the parties
- Design, construction, and maintenance approaches - may include road improvements, DOT aprons, culvert and bridges, access lanes, and maintenance of traffic
- Review and approval by Township, County, and DOT officials as required

ROADWAY PLANNING & DESIGN

- **Design Planning**
 - Field visits to determine most economical Haul Routes
 - Preparation of Visual Inspection Report (i.e. estimated construction cost, pavement condition, bridge structures, culvert crossings, sight distance, turning radius, etc.)
 - Complete Investigation Work (Surveys & Base Map Preparation; Geotechnical Analysis; Bridge & Culvert Inspections)
 - Conduct meetings with Governmental jurisdictions (i.e. County Engineer, Township Trustees, etc.) to discuss RUMA, roadway upgrades, construction schedule, etc.
- **Design Preparation**
 - Design Upgrades to Support Heavy Hauling including full depth replacement & overlays
 - Intersection Design Upgrades
 - Turning Radius Improvements
 - Road Widening
 - Multi-Lane Roadway Design
 - Signing & Striping Plans
 - Roadway Reconstruction with Horizontal & Vertical Improvements
 - Maintenance of Traffic / Construction Phasing Plans

WELL PAD PLANNING, DESIGN & PERMITTING

- Site Selection
- Permitting (Well / Access Drives)
- GIS & LIDAR Feasibility Planning
- Construction Surveys (Staking, As-Built & As-Drilled)
- 3D Pad Design Modeling
- Environmental Compliance & Geotechnical Coordination
- Erosion & Sediment Control Plans
- ESCGP2 Permits in Pennsylvania
- Bidding Documents / Quantities
- Topographical Surveys

WATER MANAGEMENT PLANNING, DESIGN & PERMITTING

- Impoundment Design & Permitting - Freshwater & Centralized
- Surface & Groundwater Source Feasibility Studies, Design & Permitting
- Regulatory Compliance
- Water Metering Plans
- Water Withdrawal Registration and Dam Permitting as needed in Ohio
- Water Sampling Coordination
- Water Management Plans
- Temporary Water Line Routing and Coordination

PIPELINE ROUTE PLANNING & DESIGN

- Route Development Survey & Mapping
- Initial Site Constraints Analysis Using GIS Mapping
- Initial Field Walk Reconnaissance & Field Constraints Analysis
- Geotechnical Report Coordination
- Evaluation of Corridors for Ease of Permitting
- Topographical Survey of Pipeline Route
- Horizontal Directional Drill Analysis
- Final Pipeline - Right-of-Way/Alignment Plans
- Evaluation of Temporary & Permanent Access Road Locations
- Local & State Permits for Proposed Drive Access Points
- Local & State Permits for Proposed Roadway Crossings
- Coordination for Crossings of Other Private Utilities
- Route Construction Staking
- Pipeline As-Built Surveys



"As a highly professional, customer-oriented and multi-disciplined engineering firm with strong core values and company culture, CESO, Inc. has continually added value to our business model through the consistent completion of critical projects that are on time and on budget."

James Pritt, CPA, MBA, PHR
Manager - Landowner Relations
Enervest Operating, L.L.C.

