



## CAPABILITY STATEMENT – STRUCTURES

### KEY STAFF

**Vice President – Civil Engineering Services**  
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**Structures Department Manager**  
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**Senior Project Manager**  
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### CORE COMPETENCIES & SERVICES

THE MARKOSKY ENGINEERING GROUP, INC. provides bridge rehabilitation, bridge replacements, culvert designs, sign structures, and retaining wall designs on large-scale highway projects to local municipal stream crossings. We understand that each project or client may require a different approach and we are agile and experienced enough to provide the appropriate level of detail required for each bridge.

Markosky's engineering professionals have the expertise to provide innovative, cost-effective, sustainable engineering solutions specifically tailored to meet the needs of our clients. Early identification of the optimum structure arrangement and type make the design process more efficient. We have completed projects using conventional design methods, ABC techniques, design-bid-build, and design-build methods.

#### Our core Structures services include the following:

- ❖ Conventional & Accelerated Designs
- ❖ Composite Steel Rolled Beam & Plate Girder Bridges
- ❖ Prestressed Concrete Bridges
- ❖ Integral Abutment Designs
- ❖ Shallow & Deep Foundation Systems
- ❖ Reinforced Concrete Retaining Walls
- ❖ Hydraulic Analysis of Structures
- ❖ MSE Retaining Walls & Abutments
- ❖ Soldier Pile & Lagging Walls
- ❖ Precast & Cast-in-Place Concrete Culverts
- ❖ Pedestrian & Timber Bridges
- ❖ Load Rating & Structural Analysis Including APRAS Loading & 3D Modeling

Markosky's Structural designs range from simple to complex structures requiring 2D grid analysis and 3D finite element analysis.



ECMS: PAUCP DBE (WBE)  
000243 2182

NAICS Codes:  
541620, 541330, 541990, 237110, 541720

UEI:  
EEMAGUCMLYG1

CAGE:  
50GY5

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# PAST PERFORMANCE

**New Kensington Bridge Preservation**  
**14 Span Bridge over Allegheny River & Norfolk Southern**  
Client: PennDOT District 11-0

## Services

- ❖ Inspection Services
- ❖ Traffic Control, Utility Coordination
- ❖ Public & Railroad Coordination
- ❖ Final Plans & Specifications
- ❖ Load Rating Updates / 3D Analysis
- ❖ Final Bid-Package Submission

**East Busway over North Braddock Avenue**  
**Superstructure Replacement & Substructure Rehabilitation using ABC**  
Client: Port Authority of Allegheny County

## Services

- ❖ Developed Accelerated Bridge Construction Cost Study
- ❖ Reviewed Constructability Issues & Developed Preliminary Design
- ❖ Structure Design for ABC Construction
- ❖ Technical Provisions / Reviewed RFI's

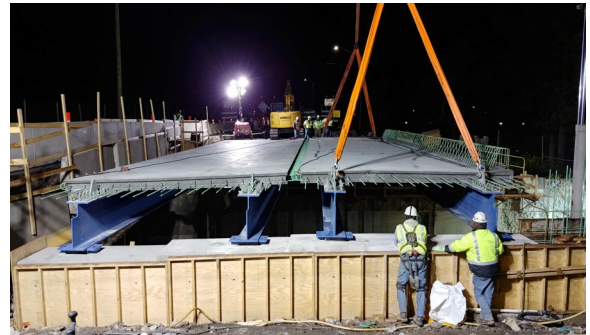
**Reidsburg Bridge No. 1 Replacement**  
**Slewed Single Span with Integral Abutments over Reids Run using Phased Construction**  
Client: PennDOT District 10-0

## Services

- ❖ TS&L Development
- ❖ Evaluation of Crane Placement
- ❖ Foundation Submission Report & Final Plans
- ❖ Coordination with Utility Relocations, Hydraulics & Traffic Control



**New Kensington Bridge**  
Allegheny County, PA



**East Busway over North Braddock**  
Allegheny County, PA



**Reidsburg Bridge**  
Clarion County, PA



**Reidsburg Bridge**  
Clarion County, PA