

Proposal for Structural Design Services

Replacement of Existing Creosote Posts 40' x 26' Picnic Shelter

Prepared for:

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Project No.: 040062600001

1. Project Understanding

This proposal is for structural engineering services associated with the replacement of **six (6) existing 12-inch diameter creosote timber posts** supporting the roof structure of an existing **40-foot by 26-foot picnic shelter**.

The existing structure consists of a metal roof supported by beams bearing on timber posts. The project includes removal of the existing creosote posts and installation of new **12-inch by 12-inch timber posts**, including all required connections and foundation elements.

All work will be designed in accordance with the **North Carolina State Building Code**, including referenced standards such as:

- International Building Code (IBC)
 - ASCE 7
 - National Design Specification (NDS) for Wood Construction
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2. Scope of Services

[Your Company Name] will provide structural design services as outlined below:

A. Existing Conditions Review

- Perform a site visit to observe existing conditions and verify structural configuration.
 - Document post sizes, spacing, beam conditions, and visible connections.
 - Identify structural elements affected by the proposed work.
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B. Demolition Plan

Provide demolition notes and guidance for removal of the existing creosote posts, including:

- Recommended sequence of post removal.
- Requirements to protect the existing roof and structural framing.
- Identification of structural elements to remain.
- Contractor verification of field conditions prior to demolition.

Note: Demolition means and methods shall be the responsibility of the Contractor in accordance with applicable OSHA requirements and North Carolina regulations.

C. Temporary Shoring Plan

Provide a conceptual temporary shoring plan to support the existing roof during construction, including:

- Suggested locations for temporary shoring.
- Design criteria and assumed loads for shoring.
- Recommended sequencing for load transfer, removal, and replacement.

North Carolina Requirement:

- The Contractor shall be solely responsible for **means, methods, techniques, sequences, and procedures**, including the design, installation, and maintenance of temporary shoring systems.

- Shoring shall comply with applicable provisions of the **North Carolina State Building Code** and **OSHA standards**.
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D. Structural Design for Replacement Posts

Provide structural design and details for new **12" x 12" timber posts**, including:

- Material specifications (pressure-treated or naturally durable wood as required for exterior exposure per code)
- Axial load design and stability considerations
- Post sizing confirmation based on tributary loading

Foundation / Footing Design:

- Concrete footing or pier design based on presumed soil bearing capacity (typically 1,500–2,000 psf unless otherwise provided)
- Reinforcement requirements (if applicable)
- Frost depth compliance (minimum 12 inches below finished grade per NC practice, unless local jurisdiction requires otherwise)

Post Base Connection:

- Embedded post or post base connector design
- Corrosion-resistant anchors and hardware per exterior exposure requirements
- Uplift and lateral restraint considerations

Post-to-Beam Connection:

- Mechanical connection design (bolts, straps, or engineered connectors)
 - Bearing requirements and load transfer details
 - Lateral bracing and stability provisions
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E. Structural Details and Notes

Prepare construction drawings including:

- Demolition plan

- Temporary shoring plan (conceptual)
- Foundation and pedestal details
- Post base anchorage details
- Post-to-beam connection details
- General structural notes

All drawings will be prepared in accordance with the **North Carolina Board of Examiners for Engineers and Surveyors** requirements.

3. Deliverables

- Structural drawings suitable for permitting and construction
- PDF format (sealed set provided upon request)

As required by local jurisdiction, drawings will be:

- **Signed and sealed by a North Carolina Licensed Professional Engineer (PE)**
 - In compliance with **NCGS §89C (Engineering Practice Act)**
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4. Code and Regulatory Compliance

The design will comply with:

- **North Carolina State Building Code**
 - Applicable local jurisdiction amendments
 - Wind load requirements per **ASCE 7** (typical Risk Category I or II structure—final classification to be confirmed)
 - Exposure category and wind speed per project location within North Carolina
 - All applicable provisions for wood construction per **NDS for Wood Construction**
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5. Assumptions

- Existing beams and roof framing are structurally adequate unless otherwise noted during site review.

- No geotechnical report is provided; foundation design will use presumptive soil values per the NC Building Code.
 - The structure is considered an **open-air accessory structure** (picnic shelter).
 - No lateral system upgrades are included beyond local post replacement stability.
 - Hidden deterioration or undocumented modifications may require additional services.
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6. Exclusions

This proposal does not include:

- Geotechnical investigation or soil testing
 - Environmental or hazardous material evaluation (including creosote handling/disposal)
 - Civil/site design or drainage
 - Architectural restoration
 - Special inspections (may be required by local jurisdiction)
 - Construction administration beyond limited responses to RFIs
 - Contractor means and methods design
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7. Additional Services

Available upon request:

- Construction observation/site visits
 - Sealed calculations package
 - RFI responses and shop drawing review
 - Revisions due to unforeseen conditions
 - Coordination with local permitting authorities
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8. Fee

Lump Sum Fee: \$5000.00

(50% Deposit Required To Begin Design)

Deposit: \$2500.00

Additional services billed hourly:

- Professional Engineer: \$250/hr
 - Designer/Drafting: \$100/hr
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9. Schedule

- Site Visit: Completed
 - Draft Drawings: Within 7 business days after acceptance of this proposal
 - Final Sealed Drawings: Within 7 business days after review
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10. Client Responsibilities

The Client shall:

- Provide site access
 - Provide any existing drawings or documentation
 - Coordinate permitting with local jurisdiction
 - Retain a qualified contractor
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11. Acceptance

Sincerely,

Timothy Peppers

Owner/Design Consultant

Tim Peppers Design Consulting LLC

Accepted By:

Client Name: _____

Signature: _____

Date: _____