



GEOTEK ENGINEERING  
& TESTING SERVICES, INC.  
501 East 52nd Street North  
Sioux Falls, South Dakota 57104  
605/335-5512

January 25, 1989

Ralph E. Lindner, P.E., and Garry Scholz, Principals

Spitznager, Inc.  
1112 West Ave. N.  
Sioux Falls, SD 57104

Attn: Mr. Doug Pedersen  
Mr. Phil Wagner

Subj: Soil Borings & Testing Services  
Grace Episcopal Church  
Madison, South Dakota

**COPY**

### Introduction

This proposal and cost estimate is being submitted in response to your recent request. The purpose of this proposal and estimate is to outline our understanding of the above referenced project and to provide you with a proposed scope of services and associated costs.

### Background Information

It is our understanding that the Grace Episcopal Church in Madison, South Dakota is considering some structural repair work. In anticipation of this, there is a need for some evaluation of the structural components of the church as well as a need for information on the subsurface conditions beneath the church foundations. The anticipated structural work will be addressed by you and your associates. However, you have requested us to provide services in connection with sampling five or six locations on the exterior walls. Additionally, three subsurface soil borings have been proposed near the building walls.

The sampling of the exterior walls will be through the natural quartzite and/or field stone which the walls are composed of. The sampling will only be done to the basic church building and not to the fellowship hall addition. The purpose of the sampling will be to document the type of wall construction as well as provide a general qualitative estimation of the condition of the components of the walls. The soil borings will address the supporting characteristics of the foundation soils that the church was built on.

### Scope of Service

We propose to sample the exterior walls at six different locations. One location would be on the south wall of the church, two locations will be on the bell tower, two locations on the east wall (one high and one low), and one location on the north wall. The sampling will remove an approximate 12" square area of the wall so that the interior of the wall can be viewed. Documentation as to the construction of the wall will be provided, as well as photographs of each sample location. The structural components of the wall will be measured for thickness and the walls themselves will be checked in at least one location for plumbness.

We also propose to drill three standard penetration borings and sample the soils encountered down to a depth of approximately 15'. The borings will be drilled near the exterior walls on the south side, east side, and north side. The samples obtained will be returned to our laboratory and will be tested for engineering characteristics. We would then issue a report which would document our field work as well as provide comments on the bearing and supporting characteristics of the soils.

### Fees

The fees for our services will be charged on a time and materials basis. The scope of services outlined above will result in estimated fees of approximately \$2000 to \$2200, plus any applicable sales tax. If the scope of services is altered, then the fees charged may be different. However, we will not exceed the above estimate without your express, prior authorization.

### Schedule

We anticipate that we could perform our work within one week after receiving authorization, weather permitting. The scope of services outlined above should result in approximately one to one and one-half days of field work, weather permitting. We anticipate that a report could be issued approximately one week after completion of our field work.

Conditions

We wish to note that the fees quoted to you include patching back the sampling holes in the walls. However, please be advised that we will not attempt to match the existing color of the walls during the patching process. Also, the drilling of the subsurface soil borings will result in some damage to the lawn area. Although this damage should be minimal since the ground is frozen, we will not be responsible for leaving tracks across the lawn with our equipment. Additionally, we will locate and be responsible for the public utilities. However, we will not be responsible for damaging any other underground structures or unknown items which are not part of public utilities. It will be the church's liability for any damage that may result from encountering unanticipated subsurface objects that are not public utilities.

Acceptance

If this proposal is acceptable to you, please indicate your acceptance by signing one of the enclosed copies and returning it to us.

Remarks

GeoTek Engineer and Testing Services, Inc. thanks you for the opportunity of submitting this proposal and cost estimate. Please feel free to contact us if you have any questions or comments.

Respectfully submitted,

Ralph E. Lindner, PE  
President

Garry L. Scholz  
Vice President

Acceptance:

Client:

Client Signature:

Date:

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\_\_\_\_\_  
\_\_\_\_\_

Spitznagel

Architects  
Engineers  
Planners

1112  
West Avenue  
North

Sioux Falls  
South Dakota  
57104

Telephone  
605  
336-1100

February 8, 1989

RE: Grace Episcopal Church  
Madison, South Dakota  
Project No. 0488204

Mr. Randy Reinartz  
200 West 18th Street  
Sioux Falls, South Dakota 57104

Dear Mr. Reinartz:

Attached please find an estimate for associated repairs to the above project.

Also attached is a proposal for soil borings and testing services from Geotek Engineering and Testing Services, Inc.

After visiting the site a second time, it became apparent the extent of wall restoration was somewhat dependant upon hidden conditions within the wall itself. In addition, we have been advised the original site was located in a traditionally wet and marshy area.

To better define the scope of a restoration project we recommend you consider the proposal from Geotek for on-site testing. As footnoted under Alternate No. 1 the extent of renovation may be reduced depending on the test results.

The very high renovation costs are reflective of the poor wall condition from the foundation up. The floor joists have settled at the perimeter because of a crumbling effect to the stone foundations and dryrotting of the floor joists. Although more pronounced in some areas it is concluded that the same condition exists throughout the entire foundation system.

For similar reasons, we have concluded that the stone walls should be rebuilt in their entirety. A possible exception may be the tower walls.

We realize you may have some questions about the above conclusions and associated estimates. We would be happy to sit down and discuss them with you at your earliest convenience.

Respectfully submitted,



Douglas A. Pederson  
Chief Structural Engineer

DAP/lj

# SPITZNAGEL, INC.

1112 West Avenue North . Sioux Falls, South Dakota 57104 . (605) 336-1160

## PRELIMINARY ESTIMATE

RE: Grace Episcopal Church Job No. 0488204 Date 2/1/89

### Renovation:

Interior Demolition.....	1,480.00
Temporary Power, Water, Heat and Toilet.....	By Owner
Excavating.....	2,210.00
Concrete (Ftg./Fdn.) .....	5,834.00
Reinforcing and Structural Steel/Shoring/Underpinning.....	44,700.00
Masonry (Cut Stone and F. Stone Work).....	80,275.00
Water and Sewer .....	No work
Supervision .....	3,700.00
Building Material and Millwork .....	8,800.00
Windows .....	8,000.00
Plumbing .....	No Work
Electrical Wiring - Misc. Allowance.....	2,000.00
Heating - Misc. Allowance.....	2,400.00
Flashings, Sheet Metal, Gutters and Downspouts .....	1,925.00
Roofing - (Tower - Cricket Repair Allowance .....	1,200.00
Gypsum Drywall, Lath & Plaster.....	3,000.00
Ceiling Insulation and Wall Ins. (Allowance).....	1,238.00
Painting, Staining.....	3,740.00
Misc. Trim Work and Pew Repair & Refin. ....	3,900.00
Floor Covering - Carpet (Allowance).....	2,926.00
Install Cut Stone at Original Ent. Arch .....	425.00
Landscaping = Re-Sod/Seed and Misc. Landscape Req.....	2,560.00
Dustproofing fine, Cleaning and Hauling & Dump Charges.....	800.00
Equipment Rental, Misc. Tools Etc. ....	<u>600.00</u>

**Subtotal..... 181,713.00**

Overhead..... 18,171.00

Profit..... 13,992.00

**Subtotal..... 213,876.00**

C.E. Tax..... 4,363.00

**\*Total Renovation Base Estimate .....\$218,200.00**

\*A/E fees not included but are estimated at \$27,300.00

**Alternates**

Alternate No. 1: Tuckpoint tower in lieu of removing and resetting stone.<sup>1</sup>  
Deduct \$21,700.00  
Total Renovation Alternate No. 1 ..... \$196,500.00

Alternate No. 2: Remove existing stone structure and replace with new construction.<sup>2</sup>  
Deduct \$93,000.00  
Total Renovation Alternate No. 2 ..... \$125,200.00

**Footnotes**

- 1 Alternate Number One is contingent upon favorable test results. See the attached proposal from Geoteck.
- 2 Alternate Number Two includes new unfinished basement area. Project cost based upon \$102.20 per square foot projected over 1225 square foot floor area.

**Other Options:**

To build a complete new church on another site the approximate cost would be \$81.74 per square foot; not including land or site improvements.