



1. EXECUTIVE SUMMARY

The thesis report for Shaare Tefila Congregation consists of a project background description, three areas of research and analysis, a conclusion and an appendix of charts and calculations. Analysis I is a research study on the Spanish-English language barrier in construction. Analysis II is an acoustical analysis of the worship space. Analysis III is a life-cycle analysis of the ground source heat pump system.

Project Background

This section describes the project background and history of Shaare Tefila Congregation. Details include detailed information on client information, project delivery, staffing plan, local conditions, building system descriptions, project schedule summary, and cost evaluation. The purpose of this section is to better acquaint the reader with the project from the perspective of the owner, architect, engineers and general contractor.

Analysis I: Research: *Spanish-English Language Barrier in Construction*

This section investigates the Spanish-English language barrier as an issue with several innovative solutions. Research will focus on construction professionals, construction workers of varying experience levels, construction management students, and building construction professors. In addition this research will be applied to the Shaare Tefila Congregation worksite in terms of constructability and project acceleration.

Analysis II: Acoustical Breadth: *Worship Space Acoustical Analysis*

This section analyzes the sound quality in the worship space of Shaare Tefila Congregation in terms of intelligible speech and reverberance. Different finish materials, as well as sound systems will be analyzed for optimum affect. This analysis focuses mostly on value engineering.

Analysis III: Mechanical Breadth: *Geothermal Life-Cycle Analysis*

This section analyzes the life-cycle cost associated with the building's geothermal system, including ground source heat pump and geothermal wells. This analysis will focus on value engineering, as well constructability.

Conclusions

This section summarizes the research and analyses from the previous sections. The intention is to make an overall comment on the thesis study, including lessons learned and any additional notes.

Appendix

This section consists of all supplementary materials including schedule, charts, calculations and preliminary presentation slides.