

Final Project Report Guidelines

Executive Summary

This section of the report should contain a brief overview of the report, including problem statement, summary of relevant background information, brief description of methodology and objectives, and final outcome of the work.

Part 1: Introduction

This section of your report should include a summary description of the problem you are addressing, a specific and concise problem statement, a description of the scope of your investigation, and a summary of the methodology you have used to address the problem.

Part 2: Background and Problem Definition

This section of the report should include a discussion of the history and background information you have collected which relates to your problem, with *appropriate documentation* of all your information sources. A discussion of the problem stakeholders and their concerns should be included, along with the objectives you've developed for the problem, any assumptions you are making, and a review of existing solutions which have been tried for this problem. This section of the report should conclude by presenting a concise and detailed description of the problem and its scope as you've chosen to frame it for your investigation, in preparation for generating alternative solutions as discussed in Part 3.

Part 3: Generation of Alternatives

This section of the report should document the process you undertook to generate alternative solutions for your problem as defined in Part 2. The first part should be a presentation of the results of brainstorming about your problem, followed by a discussion of how and why you ruled out alternatives from the initial list of solutions, leading to the set of solutions you have decided to consider for analysis. The section should conclude with a description of each of the solutions you have selected for further investigation.

Part 4: Analysis of Alternatives

This section of the report should include a discussion of the results of your detailed development and analysis for each alternative. Analysis may include, but not be limited to, a detailed description of each prospective alternative, sketches, diagrams, maps, sample calculations, or whatever supporting information is necessary to give the reader a clear understanding of the nature of the alternative needed to proceed to the evaluation phase of the design (i.e., comparison in terms of initial objectives, economics, environmental impacts, and social/cultural impacts).

Part 5: Evaluation of Alternatives and Recommended Solution

This section of the report should include a comparative evaluation of the potential alternatives analyzed in Part 4, both in terms of sustainability and with respect to the initial objectives developed in Part 2. The section should begin with a reiteration of the initial objectives, and discuss the costs and benefits of each alternative in terms of economics, environment, and social/cultural impacts, as well as the technical feasibility of each potential solution. A recommended medium for performing the evaluation is a weighted objectives matrix comparing how well each solution meets each of the objectives. The section should conclude with a

recommend in Part 5. The section should include a discussion of the key players who will be involved in implementation, the roles they will play, the tasks necessary for implementation, the estimated resources and time requirements needed to complete each task, and potential barriers to implementation that are anticipated. This section should include an estimated conceptual budget and schedule for implementing your recommended solution.

Part 7: Evaluation of Project and Conclusions

This section of the report should serve to summarize the work you've done and identify for the reader any opportunities for future work which have resulted from your efforts. The section should contain a summary of the outcome of your design process, an overview of the anticipated impacts and benefits of your recommended solution, any comments you have about how effective the solution may be, and a discussion of areas for further work. It should end with a discussion of the conclusions you've drawn as a result of your project.

References

This section of your report should contain complete and correctly formatted citations for all material from other sources referenced in your report. ASCE format is recommended; however, you may use other standard citation formats as long as you are consistent and complete.

Attachments

This section of the report is optional. Attachments should be included to show detailed or repetitive calculations, raw data which are too big to be included directly in the report (but should be summarized in the appropriate section), specialized or unique information which supports the body of the report and cannot be easily obtained in a library, or other appropriate supporting information. Do *not* include material in the attachments just to "bulk up" your report, and be sure that any information you include as an attachment is referred to in the body of the report at least once.

Evaluation Considerations

In evaluating your report, we will be concerned mainly with understanding the process you followed in generating your recommended solution, and the clarity, logic, and completeness with which you present your results. Since you are all current or future engineering professionals, we expect you to be able to present your work in a coherent, readable format, without spelling or grammatical errors. We recommend that you follow the outline presented, and be careful to include all the information requested for each section. However, each of your projects is unique, and only you can determine the appropriate level of detail and information which should be included as a part of your report. As you are writing, imagine that you are competing with other design professionals in trying to convince the appropriate stakeholders that your recommended solution should be chosen. The better you present your work, the more likely it is that your solution will be understood and selected, and the better your final grade will be. We will be happy to review your work and provide comments over the next five weeks to help you improve the final product