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Koch Foods – Deboning Facility
Morristown, TN

Thesis Proposal

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THESIS PROPOSAL

EXECUTIVE SUMMARY:

In this proposal, I will investigate and analyze three different aspects relating to the Koch Foods Deboning Facility located in Morristown, Tennessee. The three analyses explained in this proposal are: long distance procurement issues, analysis of exterior wall systems, and an evaluation on FDA requirements. Some main objectives of my proposal are to show how my research areas affect the schedule, constructability, and value engineering on the project. This proposal will help the reader to better comprehend the different areas being analyzed. Moreover, it will show my methods of research and the different steps I need to take in order to complete a thorough analysis. Below is a weighted matrix that conveys how much emphasis will be distributed among my different analysis areas.

Weight Matrix

Description	Research	VE	Constructability Review	Schedule Reduction	Total
FDA Evaluation	15	5	5	5	**30**
Ext. Wall Systems	5	15	10	5	**35**
Diff. Procurement	15	5	7.5	7.5	**35**
Total	**35**	**25**	**22.5**	**17.5**	**100**

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ANALYSIS (1): <u>Long Distance Procurement Process</u>

Issue

United Insulated Structures Corporation (UISC) is a company whose specialty is in the cold storage industry. Their headquarters are in Chicago, Illinois. However, their jobs are located all over the country. Specifically, this Koch Foods project is located in Morristown, Tennessee. United Insulated Structures Corporation will manage the construction and procurement process on this job in Tennessee from their office in Chicago. The issue of how to manage the procurement process from a far distance is something UISC deals with on a daily basis. One immediate challenge is how to find subs for the job and how to find out which subs have good reputations. Another challenge in this procurement process can be to constantly keep the drawings updated.

Goal(s)

The goal of my research is to address the different issues that arise with a long distance procurement process and to provide some useful tools to help make this process smoother. I will come up with some different tactics that can be used to help find quality subcontractors in an unfamiliar area. Also, I will show how technology advancements have helped with the long distance procurement process.

Hopefully, this research could also be a useful tool for a project manager in a new location. Also, new employees with a company that are unfamiliar with the local subcontractors might find my research to be of significant value. As my fellow classmates and I will be graduating in the near future, I hope my findings with provide us with some extra tools for success.

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ANALYSIS (1): <u>Long Distance Procurement Process</u> (continued)

Research Steps

As previously mentioned, one immediate challenge encountered with a long distance procurement process is finding quality subcontractors. One possible area I will look further into is the use of plan rooms. Plan rooms function as libraries of drawings, where members can view the plans and determine if they want to bid the job. I will call up different plans rooms and also research them on the internet. Another area to look into for help in selecting quality subcontractors is to check with local supply houses. Also, calling manufacturers of specific specialty products found in the plans just might come in handy. Lastly, I will contact some different general contractors that I have good relationships with and ask them how they would handle a long distance procurement process.

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ANALYSIS (2): <u>Exterior Wall System Alternatives</u>

Issue

When building a cold storage warehouse, there are many special considerations to take into account. One initial problem that comes to mind is how to keep the building temperature regulated in the most economic manner. What wall systems will provide the best insulation? Also, what wall systems can be put up the quickest and what lead times are associated with these different wall systems? Originally, there were two exterior wall systems (either 5" metal insulated panels or precast concrete walls). I will look at why they didn't just use one type of wall system. Also, I will further analyze the heat loss associated with these wall systems. On top of that, I will come up with some other alternative wall systems. I will do a comparison of these different walls systems and talk about constructability, value engineering, and the impact on the schedule.

Goal(s)

Hopefully, I can come up with some good alternatives that may be used on future projects. Perhaps one of my alternatives might be a more aesthetically pleasing facade. Some other objectives of this research relate to time and money. I will find out which option will take the least amount of time to install. Also, I will try to justify which wall system will be the most cost efficient. This will involve looking at the initial cost of the wall systems and also any cost impacts relating to the insulation rating of the different wall systems.

ANALYSIS (2): <u>Exterior Wall System Alternatives</u> (continued)

Research Steps

First, I will research different wall systems online. Then, I will call the numerous contacts I have in the construction industry and gather their opinions. In addition, I can review some online journals to get some data specifications on the wall systems. After finalizing my list of different wall systems to compare, I will make a list of all the pros and cons for each system. To do these comparisons, I will primarily use R.S. Means. This will allow me to come up with some cost comparisons as well as some schedule comparisons. To find more information relating to the advantages and disadvantages of each wall system, I could speak with the manufacturers of the products. Specific areas that I should note are: cost, installation, schedule, and durability. Overall, my objective for this analysis is to conclude which wall system would be the best choice for the Koch Foods Deboning Facility.

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ANALYSIS (3): <u>FDA/USDA Evaluation</u>

Issue

One concern of building a chicken deboning facility is passing the FDA and USDA regulations. Some areas where USDA requirements might be noteworthy are: special flooring, special wall surfaces, stainless steel piping in the production area, stainless steel trench drains, and so on. These issues may require some coordination on the job. This could possibly be an area that affects the schedule of the project and could have an impact on the constructability as well.

Goal(s)

I would like to compile a list of different upgrades required in food processing jobs. Compiling a list of different requirements and the different options available should prove to be a useful area of research. It is important to plan for these FDA requirements ahead of time, as your building will not be operational without them. I will look further into which areas might be most beneficial to have some alternative options. For instance, I might look into some alternatives for the epoxy flooring system.

Research Steps

To find out more information on FDA requirements, I will have to do some literature research. Also, I will contact several people that are involved with FDA/USDA requirements on a daily basis. This involves both people in the construction industry as well as people that work for the FDA or USDA. After looking further into the FDA requirements, I should be able to provide some different alternatives available. When I find some different alternatives, I will contact the companies that make these products to get some more specific data. I will make comparisons of the different alternatives and conclude what option is most suitable on the Koch Foods Facility.