

EE 491 WEEKLY REPORT

Date: 02/27/2017

Group number: Dec1702B

Project title: Re-Conductor or New Construction Transmission Line

Client: Musctine Power and Water

Advisor: Anne Kimber

Team Members & Role:

1. Bob Cohoon (Team Leader)
2. Abdelmagieed Ibrahim (Kay Concept Holder)
3. Jinan Li (Web Master)
4. Chang Sun (Communication Leader)

Weekly Summary

This week we had a significant development on our new project. We:

- Had our first Skype meeting with our client on 24th Feb.
- Got some crucial fundamental data of Line 98 (which is the line we are dealing with for this project) in order to continue with our research since we did not have our NDA forms back from our client yet.
- Had a deep discussion on the work we should do about the project with our advisor Anne Kimber after the client meeting.
- Had identified our major steps of finishing the construction plan of Line 98 (the senior design project)
- The research we are doing for the transmission line, poles and calculation method keeps moving and parameters are organized.

Past week accomplishments

- Robert Cohoon:**
- Did more preliminary research on transmission lines
 - Developed a question list for the client Skype meeting
- Abdelmagieed Ibrahim:**
- Participated with the team in Skype meeting with the client
 - Researched on pole types and pole loads
 - Summarized the features of all types of conductors that the client mentioned on the project description.
- Jinan Li:**
- Participated with the team in Skype meeting with the client
 - Researched on parameters of different conductors.
- Chang Sun:**
- Participated with the team in Skype meeting with the client
 - Wrote the meeting record for the first Skype meeting with our client

- Researched on the method of calculating ampacity for ACSR and ACSS conductors

Pending issues

Robert Cohoon: Needs to be caught up on the meeting with the client (did not attend the meeting with our client because of time conflict with conference)

Abdelmagieed Ibrahim: Analysis on the type of conductor that will be used in this project.

Jinan Li: NA

Chang Sun:

- Get NDA forms from the client
- Developing a timeline chart for the project.

Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>Hours cumulative</u>
Robert Cohoon	Research on transmission lines; Question list for the client	3	13
Abdelmagieed Ibrahim	Meeting with client; Poles load calculation	5	18
Jinan Li	Join the meeting with client	3	13
Chang Sun	Meeting with the client; Ampacity calculation; Meeting record	5	17

Comments and extended discussion

After we had the meeting with our client, we had an in-group discussion with our advisor Anne about the features we should include for evaluating the most appropriate type of conductor to use. Some confirmed parameters are listed as shown as below:

- Detailed conductor comparison:
- Seg criteria
 - Pole distance
 - Pole height
 - Loading criteria
 - Price per km
 - Lifetime
 - Use the same pole or new poles:
 - Foundation
 - Costs

Plan for coming week

- **Robert Cohoon:**
 - Read through the materials from the client and do relative research on pole distance and pole height
 - Do relative research on the costs of changing poles
- **Abdelmagieed Ibrahim:**
 - Continue research on the transmission line poles
 - Read through the material provided by the client relative to poles and analyze the information together with the research result
- **Jinan Li:**
 - Research and develop the on sag/tension charts for each conductor
- **Chang Sun:**
 - Get NDA Forms from the client
 - Get full materials of the transmission line (Line 98) from the client
 - Develop a timeline chart for the whole project
 - Analyze the ampacity calculation for Line 98

Summary of weekly advisor meeting

Since we had our first Skype meeting with our client this week, we did not have a proper meeting with our advisor Anne Kimber. However, she did attend the meeting with our team and we had a further discussion about the project right after the meeting with our client.

We came out with a list of features that we need to pay attention to about different types of conductors. Shown in section Comments and Extended Discussion.

After we figured out the contents of comparison, we also divided our work for the next week. And going to develop a timeline chart for the whole project in order to get better time control.