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## EE/CprE/Se 492 WEEKLY REPORT 6

March 4, 2019- March 10, 2019

Group Number : sdmay19-17

Project Title: Substation Design

Client: Burns & McDonnell

Advisor: Manimaran Govindarasu

### Team Members:

Jacob Heiller- Controls Engineer

Rebecca Franzen- Studies Engineer

Connor Mislivec- Quality Control Specialist

Riley O'Donnell- Administrator

Tom Kelly- Project Manager

Wilson Pietruszewski- AutoCAD Engineer

Nicolaus Cory- AutoCAD Engineer

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### Weekly Summary:

This week we spent a majority of the time finalizing our first deliverables, AC and DC studies, and incorporating the comments that we received from Burns and McDonnell. We also began doing some research on 3D modeling and continuing to learn more about SolidWorks. After doing extensive research on 3D modeling, we had an extra meeting with our client to discuss our plans to ensure that our design would be feasible. This week we also had the opportunity to meet with our client face-to-face and receive feedback and discuss the future of our project. During this meeting we were given feedback on the one-line so we began incorporating some of those changes following the meeting. We also continued to work on transformer and breaker schematics briefly.

### Past Week Accomplishments:

- DC study and battery sizing- Becca
  - Consider comments and review notes from Burns & McDonnell
  - Make changes and updates to report based off of notes provided by Burns & McDonnell.
- AC Study - Nic
  - Review notes and comments from Client regarding small revisions for AC study
  - Adjust final AC study report based on client comments
- 3D modeling research- Riley, Wilson, and Tom

- Determined equipment that we wanted to 3D print
  - Determined best way to 3D print
- Work on DC transformer Schemes - Riley & Wilson
  - Backcheck transformer schematic with one-line sent to the client
- In person meeting with client- Everyone
  - Discussed 1st submittal comments (AC and DC Studies)
  - Discussed plans for 3D modeling
  - Discussed meeting to Burns and McDonnell
  - Discussed project schedule
  - Determined scope of breaker schematics
  - Looked at various drawings that will help with the completion of the project
- One-line modifications- Jake
  - Made minor changes after in-person meeting with client
    - Removed lines from relays to the PTs and properly formatted the connections
  - Sent finalized one-line to Burns and McDonnell for final approval

**Pending Issues:**

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**Individual Contributions:**

Name / Role	Individual Contribution	Hours this week	Cumulative Hours
Rebecca Franzen	DC Study and Battery Sizing	2	116
Jacob Heiller	One-line modifications	3	117
Tom Kelly	3D modeling research	2	113
Connor Mislivec	3D modeling research	2	111.5
Riley O'Donnell	3D Modeling and Transformer Schematics	4	118
Wilson Pietruszewski	3D Modeling and Transformer Schematics	4	119.5
Nicolaus Cory	AC Study	2	50.5

Comments and extended discussion:

Plan for the coming week:

- Finalize AC study report- Nic
  - Send AC study report to client after comments have been incorporated
  - Ensure client approves final AC study report
- Finalize DC study report- Becca
  - Send DC study report to client after comments have been incorporated
  - Ensure client approves final DC study report
- Create preliminary 3D model in SolidWorks- Tom, Riley, and Wilson
- Perform QC check on one-line- Connor and Jake
- Start researching the breaker schematics - Tom, Jake, and Connor

Weekly Advisor Meeting Summary:

- Nic gave presentation about methodology of AC study
- Discussed project timeline
- Discussed class deliverables