


# Untitled Map

Write a description for your map.

## Legend

 Santa Barbara, CA 93101



Google Earth

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60 ft



# Existing Operations and Electrical Area





# New MCC to Replace old Benjamin Panel



# Remove Existing MCC 1

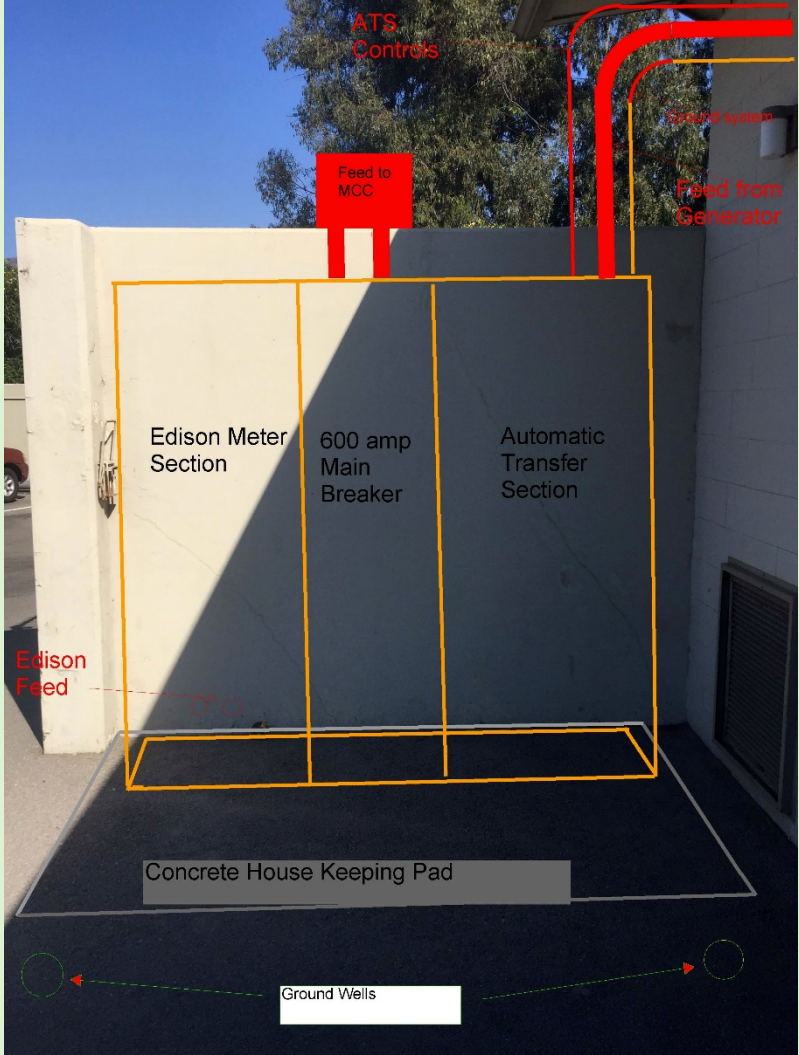
Ex. equipment electrical breakers/panels would be provided in new MCC



Ex. Automatic Transfer Switch (ATS)



# New Electrical Meter, Breaker, and ATS





# Intercept Conduit and Feed to New MCC







ELECTRICAL ENGINEERING  
LIGHTING DESIGN  
CA REGISTRATION NO E13083

December 20, 2020

MONTECITO SANITARY DISTRICT  
SWITCHBOARD AND MCC REPLACEMENT

ELECTRICAL CONSTRUCTION COST ESTIMATE **(Breakdown in red)**

Option #1: Remove existing switchboard and MCC complete.  
Operators control room will have no electrical panels.  
**(\$1,575,000) Total**

Pad & SCE: **(30,000)**

1. New 800-amp switchboard, ATS and Underground Pull Section (UGPS). **(\$220,000)**
2. New MCC-1 at shop (800A feeder). **(\$230,000)**
3. New feeder from MCC-1 to MCC-4 (200/3).
4. New feeder from MCC-1 to pullbox by old ATS to MCC-2 feeder (150A-3P). Splice in pull box. Trench and re-route.
5. Intercept MCC-3 feeder at pavement. Trench and reroute to MCC-1 (300A-3P). **(\$380,000)**
6. New Panel "A" feeder via existing transformer (60/3). (Panel "A" is in Operations Garage).
7. New Panel "B" feeder via existing transformer (60/3). (At end of Benjamin Switch Board).
8. New Panel "E" feeder at generator room via existing transformer.
9. New Panel "B" in administration offices.
10. Intercept Panel "B" circuits and route to new Panel "B" location.
11. New 15/3 and feeder to 5HP froth spray Pump 1.
12. New 15/3 and feeder to 5HP froth spray Pump 2.
13. New 40/3 and feeder to 15HP plant water Pump 1.
14. New 40/3 and feeder to 15HP plant water Pump 2.
15. New 150/3 and feeder to Panel "NP" via existing transformer.
16. New 20/3 and feeder to 10HP air compressor.
17. New 150/3 and feeder to 75HP Blower 1.
18. New 150/3 and feeder to 75HP Blower 2.
19. New 15/3 feeder to Grinder 1 (5HP).
20. New 15/3 feeder to Grinder 2 (5HP).
21. New 150/3 to feeder to 75HP Blower 3.

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22. New 15/3 to feeder to 1.5HP Chlorine Mixer 1. **(\$715,000)**
23. New 15/3 to feeder to 1.5HP Chlorine Mixer 2.
24. New 15/3 to feeder to 1.5HP Center Contact Mixer
25. Remove existing transfer switches complete.
26. Remove existing Panel "B" complete.
27. Grind down conduits at floor below switchboard and Panel "B". Repair floor.
28. New feeder from new ATS to generator, via trench.
29. Run generator. Provide temporary switchboard and starters to run electrical loads during change over.
30. Estimate long duration of change over. (7 days.)
31. SCE will remove their cables from existing conduits between the transformer yard and the Benjamin switchboard. These conduits will become available for new feeders.
32. Provide new PLC with programming for motor controls.
33. Provide new network wiring for PLC control.
34. Provide all new control wiring and conduits.

Option #2: Remove existing switchboard. New gutter and conduits at switchboard location. Panel "B" to remain next to gutter. Remove JCC-1 complete.  
**(\$860,000) Total**

Pad & SCE: **(\$30,000)**

1. New 800-amp switchboard, ATS and UGPS. **(\$220,000)**
2. New MMC-1 at shop (800A feeder). **(\$230,000)**
3. New feeder from MCC-1 to MCC-4 (200/3).
4. New feeder from MCC-1 to pullbox by old ATS to MCC-2 feeder (150A-3P). Splice in pullbox. Trench and reroute. **(\$380,000)**
5. Intercept MCC-3 feeder at pavement. Trench and reroute to MCC-1 (300A-3P).
6. New Panel "A" feeder via existing transformer (60/3).
7. New Panel "B" feeder via existing transformer (60/3).
8. New Panel "E" feeder at generator room via existing transformer.
9. New 15/3 and feeder to 5HP froth spray Pump 1.
10. New 15/3 and feeder to 5HP froth spray Pump 2.



11. New 40/3 and feeder to 15HP plant water Pump 1.
12. New 40/3 and feeder to 15HP plant water Pump 2.
13. New 150/3 and feeder to Panel "NP" via existing transformer.
14. New 20/3 and feeder to 10HP air compressor.
15. New 150/3 and feeder to 75HP Blower 1.
16. New 150/3 and feeder to 75HP Blower 2.
17. New 15/3 feeder to Grinder 1 (5HP).
18. New 15/3 feeder to Grinder 2 (1/3 HP).
19. New 150/3 to feeder to 75HP Blower 3.
20. New 15/3 to feeder to 1.5HP Chlorine Mixer 1.
21. New 15/3 to feeder to 1.5HP Chlorine Mixer 2.
22. New 15/3 to feeder to 1.5HP Center Contact Mixer.
23. Use existing 4" conduit along outside beam, MCC-1 top hat conduits and old SCE conduits to intercept circuits and re-route to new MCC-1. Remove both ATS's complete and remove old MCC1 complete.
24. SCE will remove their cables from existing conduits between the transformer yard and the Benjamin switchboard. These conduits will become available for new feeders.
25. Provide new PLC with programming for motor controls.
26. Provide new network wiring for PLC control.
27. Provide all new control wiring and conduits.

Option #3: Remove existing switchboard and MCC-1 complete. Provide new MCC at old switchboard location.  
**(\$480,000) Total**

Pad & SCE: **(\$30,000)**

1. New 800-amp switchboard, ATS and UGPS. **(\$220,000)**
2. New MCC at old switchboard location. **(\$230,000)**
3. Use (4) 4" conduits to be re-route MCC-1 circuits. Keep existing pullbox at ceiling.
4. Reconnect circuits below new MCC = old circuits from bottom of existing switchboard.
5. Intercept (2) 4" conduits behind new switchboard = old SCE conduits. Use these to feed new MCC at old switchboard location.
6. Panel "B" at current location with new panel circuit breakers and wiring.

7. Remove both existing ATS's complete. Remove existing MCC1 complete.
8. SCE will remove their cables from existing conduits between the transformer yard and the Benjamin switchboard. These conduits will become available for new feeders.
9. Provide new PLC with programming for motor controls.
10. Provide new network wiring for PLC control.
11. Provide all new control wiring and conduits.