

Grossmont Building Scheduling for HVAC Optimization Map Color Coded to Match the Grossmont HVAC MAP

Best Option for Off-Hours (outside of Monday-Friday) classes:

- Building 38B (53 seats)
- Building 38C (53 seats)
- These are ideal because they have manual thermostats which can be programmed in advance and also overridden by occupants to ensure comfort. They are package units so they use about \$1/hour as compared to running the central plant which costs \$120-160/hour

For Fall 2016 Only any class or event needing space on a Saturday between 8am-5pm should be scheduled in building 30

- Building 30 will run from 8am-5:30pm each Saturday during the Fall 2016 semester for chemistry classes.
- It is ideal to schedule all other Saturday events in building 30 so as to minimize other systems run times.
- Building 30 is on the central plant so the central plant will run each Saturday; if we must use a different building for an event, please schedule it for a building on the central plant.

Second Best Option (Or, best option if there are more than two classes occurring):

- Building 36, any classroom
- OR Building 53 or 55, any classroom (there are computer labs here)
- Building 36 is a great choice if there are several classes occurring during off times because building 36 and 41 can be run on a separate chiller. If there is a class which requires a computer lab, building 55 is a great choice because there are labs and there are classrooms in 53. It is important to schedule all classes in **either 53/55 or 36**, since scheduling both buildings would require two chillers to run instead of just one, negating possible savings.
- The benefit to running one of the chillers in 36 or 55 is that the chilled water is cycled in a smaller loop. Instead of pushing cold water throughout the entire campus, it is only pushed through the respective building, saving pump run time. The 500 and 36 chillers are both smaller tonnage than the central plant also, so there is savings there also.

If the central plant is running, it is ideal to keep all other classes scheduled in buildings on the central plant, and ideally, in the same building (or few buildings) so that the majority of buildings can be turned off while allowing the central plant to run. This is most important for night classes during the Fall and Spring semester when the central plant will run until 10pm each night.

Buildings on the Central Plant:

- 10, 20, 21, 23, 26, 27, 30, 36, 41, 60, 70 (tech mall and LTRC)
- Consolidating night classes into one or a few of these buildings would be helpful. For example, moving all night classes currently scheduled in the 500s to one of these buildings would allow us to turn off the 500s complex chillers earlier. Building 34 and 30 seem to have extra lecture hall classes every night and this building generally runs until 10pm throughout the fall and spring semesters.
- Each system/building (off the central plant) costs between \$100-\$150/hour to run. Limiting late night classes to a few buildings on the central plant would have a significant impact on the campus's energy consumption.