Observatory Subsystems

Facilities:
- Road
- Pad
- Pier
- Base of dome
  - M2/3 maintenance, coating
  - M1 staging and storage
- Support building
  - Utilities, telescope bearing & instrument cooling
  - Shipping/receiving & machine shop
  - M1 maintenance, coating
  - Computer room
  - Offices, kitchen, rest rooms, conference room
  - Laboratory
  - Visitor’s gallery
  - Control room

Enclosure - Calotte
- Pointing by two rotations
  - Azimuth rotation of dome on fixed base ring
  - Rotation of cap structure on tilted bearing ring
- Minimal size round aperture protects telescope in high-wind conditions
- Shutter, vents and deployable flaps
  - Round shutter rotates out of the aperture
  - 88 large (e.g., 4 x 5 m) vents can be individually controlled
  - Aerodynamically designed aperture flaps direct air flow over the aperture

Telescope
- F/15 Ritchey-Chrétien optical design
- Single azimuth track
- Central pinte bearing for lateral resistance
- Elevation axis 3.5m above M1 vertex
- 21.5m diameter elevation journals
- On both axes:
  - Hydrostatic bearings
  - Direct drive motors
  - Tape encoders
- Reconfigurable science instruments
- Maintenance features:
  - Aerial service platform in azimuth assembly
  - M1 segment handling system in elevation assembly
  - Cleaning wands for primary mirror