PROJECT DESIGN CONSTRAINTS

Economy:

- Budget limitations
- Cost of similar or related products, if any, on the market.
- Maintenance cost

Environment:

- Power consumption
- Electromagnetic radiation issues
- Environment friendly power sources
- Noise pollution

Society:

- Assisted living for the disabled and elderly
- Information security, privacy
- Social networking and communication

Politics:

- Designs that promote gender and race equality
- Products that help national security
- Designs that help solve common international and national problems

Ethics:

- Designs that do not violate safety and health issues.
- Designs that respect patents and intellectual rights.
- Privacy issues.
- Honesty, truthfulness, and openness in the design and the report.

Health and Safety:

- Public safety
- Safety of the consumers of the product.
- Safety of workers.

Manufacturability:

- Designs that suit to current manufacturing technology.
- Designs that can be physically implemented.

Sustainability:

- Reliability and durability of the design (water-proof, dust-proof, etc.)
- Designs that support future upgrades
- Designs that are resilient to a range of environmental conditions.

WEB SITES FOR PUBLIC CODES AND STANDARDS

DoE Status of State Energy Codes (HVAC):
http://www.energycodes.gov/implement/state_codes/index.stm

EPA (health):
http://www.epa.gov/

Noise Control Codes:
http://www.portlandonline.com/bds/index.cfm?&a=18493&c=38052

Thermal Pollution (environment):
http://www.esmagazine.com/CDA/ArticleInformation/features/BNP__Features__Item/0,2503,132219,00.html

US Government web portal:
http://www.firstgov.gov/

Occupational Safety & Health Administration (U.S. Department of Labor):
http://www.osha.gov/

U.S. Consumer Product Safety Commission:
http://cpsc.gov/

American National Standards Institute:
http://www.ansi.org/

A National Resource for Global Standards:
http://www.nssn.org/

National Institute of Standards and Technology:
http://www.nist.gov/

ASME Codes & Standards:
http://www.asme.org/Codes/