Technical Specifications:

Physical:

Client Height: 5ft 10inches
Client Weight: 250lbs
Client Mobility: Full upper body motion with limited to no lower body motion

Pool

Type of Material: Wood, aluminum, Cable (metal or rope)
Height of Deck to Ground: 103 cm
Pool Depth: 122 cm
Ramp: 1 inch/foot increments (2.54cm/30.48cm)
Width of Stairs(Ramp): 99.5cm

Hot Tub

Type of Material: Wood, aluminum, Cable(metal or rope)
Height of glass door of house to ground: 94cm
Dimensions of hot tub: Pentagonal Shape
195cm x 195cm x 138cm x 138cm x 92cm
Height of hot tub: 91.5 cm

Mechanical:

Lift for both Hot Tub and Pool:
Weight of Lift + Client

Speed: 1-3 mph

Electrical:

Power of hot tub: 220V
Power for Winch/Lift Control(Possible in Design)

Environmental:

Operating Temperature: 0 – 100 ºF
Operating Environment: (outdoors, dirt, rain, snow)

Software:

User Interfaces: Crank or Hydraulic Controls (Up/Down)

Safety:

Lift capable of sustaining Cable + Harness + Wet Client = At least 350 lb.
Ramps and Deck Built to State specifications.

Maintenance:

Cleaning, Waterproofing, Accessibility to Mowing, Lift Lubrication, UV Protection
**Other Data**

**Pool:** The pool is located on relatively level ground in the backyard of Ron Hiller’s Ashford home, approximately 15-20 yards from the house. It is an above ground, four foot deep pool. There is a fence/deck surrounding the entire pool. Half of the pool has only the fence part extending around the top of the pool while the other half has a wide deck next to the pool that will give room for Mr. Hiller’s wheelchair to be able to fit on the deck. The deck helps with creating a design for the pool lift. Rather than building a lift that must raise Mr. Hiller up, then turn over the edge of the pool and lift him back down into the pool, it allows the possibility to build a ramp up to the deck in place of the stairs that are currently there and then have a lift that only must lift Mr. Hiller down into the pool and back up out of it once he is finished. It is important that the lift designed will be easy enough to get in and out of that Mr. Hiller can access it by himself or with the help of another person. Because the lift will be in chemically treated water and will not be removed when the pool closes, it must be taken into consideration that whatever materials are used in building the lift must be durable in water, chemicals such as chlorine, and different types of weather. It also should not harm or cut the lining of the pool.

**Hot-tub:** The hot tub poses many more issues than the pool does for design and construction of the lift. It is currently located behind the house’s back porch on top of a wooden platform. To make use easier for Mr. Miller, he has requested that the hot-tub be moved around to the side of the house, adjacent to a sliding door. The land next to the sliding door is a hill with changing slope, so a platform must be built and held up by stilts or posts to make a level surface for the hot-tub. Alternatively, a solid cement porch could be built in place of stilts or posts. Also, the weight of the hot-tub is unknown as of now, so moving it may be more difficult or may require additional man-power or moving equipment.