

## D15 Home Accessibility Modifications Necessary for a Man With a Cervical Spine Injury

*Robert Dale Lynch, BArch\*, Architectural Expert & Consultant, Haymarket, Prince William County, VA 20169-6203*

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**Learning Overview:** The goals of this presentation are to understand the: (1) consequences of high-level spinal injury; (2) accessibility inspection and analysis of residence; and (3) design of accessibility modifications to residence.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by providing knowledge on how, using data regarding the abilities of an injured and disabled client, to evaluate a residence and execute design modifications to make the residence accessible.

**Background:** The plaintiff was 38 years old at the time of his injury, was married, had two children, and considered himself fit and healthy. He developed pain in the neck and shoulders on November 28 after lifting at work. This failed to settle, and he was assessed by his doctor on December 2 and again on December 5. Physiotherapy was advised.

The plaintiff arranged to see a physiotherapist and during the session on December 7, while lying prone on the table under the therapist's manipulation, he felt an electric sensation going down the spine and into the legs, which then stopped, after which he had lost movement and sensation in both legs. The plaintiff suddenly became quadriplegic, with sensory loss and difficulty breathing. An ambulance was called, he was taken to the hospital, and Magnetic Resonance Imaging (MRI) showed a large, acute spinal disc prolapse at the C6/7 level with acute compression of the spinal cord. The plaintiff remains severely disabled, and will not recover the ability to walk effectively, nor regain bowel bladder or sexual function. He will be wheelchair-dependent permanently.

At the time of injury, the plaintiff's disability was complete loss of power in both legs and loss of sensation from the legs, trunk, and into the inner aspect of the arms. The plaintiff has undergone surgery and intensive, multidisciplinary rehabilitation as an inpatient at a rehabilitation facility. He has regained some sensation, though it remains abnormal. He has recovered some motor function, though still has severe weakness in both legs and remains permanently wheelchair dependent.

**Process:** (1) Review case documents from plaintiff's attorney to determine nature of plaintiff's spinal injuries and his consequent abilities; (2) discover that plaintiff's family currently lives in a geographic location that is conveniently central to the locations of plaintiff's several worksites and proximate to a private parochial school that is providing a good and thorough education for the children, a girl, aged 9, and boy, aged 7; (3) inspect, measure, photograph, and evaluate residence according to the man's accessibility needs; (4) accessibility analysis of residence proves that it cannot feasibly be modified; (5) undertake a search for an alternative home that can be modified to meet the accessibility, usability, and safety needs of the plaintiff and his family. Two are found in the region. One is too distant from the children's school; (6) accessibility analysis of alternate residence proves that it can feasibly be modified; and (7) design of accessibility modifications throughout alternate residence.

**Design of Modifications:** Photographs and drawings of floor plans of residence before and after modifications will be shown.

**Summary of Findings and Recommendations:** The existing residence cannot feasibly be modified to make it safe, accessible, and usable for the plaintiff, considering the consequences of his injury in December. Therefore, an alternative home site had to be found within a reasonable distance of the children's existing school that would be feasibly modifiable to the man's needs and would be conveniently located for him to travel to his several worksites, given the evidence that he is likely to continue to work, albeit on a part-time basis.

The alternate residence found that is available and located about six miles west of the plaintiff's home has been analyzed and found to be feasible to modify.

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### **Injury, Accessibility, Modifications**