

Abdulaziz Alzahrani

ECET 49300

7/23/20

Abstract: and sources for Ethical Analysis Term Paper

Background:

In 2018 at Florida International University (FIU), there were a collapse for pedestrian bridge that led for 5 deaths and many others injured due to wrong design of the bridge and calculations errors. This accident occurred because FIGG design engineers did not follow their engineering ethics.

How it Was Handled:

According to John Bacon "FIGG Bridge Engineers severely underestimated the demand on the bridge, significantly overestimated the bridge's capacity ... among other calculation errors," NTSB Chairman Robert Sumwalt said. "But another structure failed in this accident, the structure of public safety oversight." (2019) It clearly shows that the FIGG engineers who designed and made the bridge's calculation did not follow engineer's ethics and did not make the safety of people as a priority.

Own ethical analysis of how it should be handled:

According to NSPE.org “Engineers shall Hold paramount the safety, health, and welfare of the public.” (2019). This code illustrates that safety of the public is top priority for engineers before they start any projects whereas it had shown that FIGG engineers had not care about people’s safety because even the bridge collapsed when it was under constructions. The process of manufacturing the steel and joints of the bridge was the main part to be looked at thoroughly within the technical drawings and calculations to figure out where would the stress be concentrated, as well as conducting a simulation analysis via a computer aided 3D program. This project should have had been handled easily by engineers if they were to follow those steps, that way they could have had sorted out all the issues within the blue prints before they even start constructing the bridge.

References

- Viglucci, A., & Nehamas, N. (2018, June 14). FIU had grand plans for 'signature' bridge. But the design had a key mistake, experts say. Retrieved July 17, 2020, from <https://www.miamiherald.com/news/local/community/miami-dade/article212571434.html>
- Bacon, J. (2019, October 22). Design errors draw blame in collapse of FIU pedestrian bridge that killed 6. Retrieved July 23, 2020, from <https://www.usatoday.com/story/news/nation/2019/10/22/design-error-blamed-florida-international-university-pedestrian-bridge-collapse/2449316001/>
- NSPE, .. (2017). Code of Ethics. Retrieved July 24, 2020, from <https://www.nspe.org/resources/ethics/code-ethics>