

Abstract

New York City Infrastructure, with the oldest dating back to 1864, is very vast and complex. These infrastructure range from utility lines (gas, electric, sewer, water, telecommunications, etc.) and transit facilities (Metropolitan Transit Authority facilities – tunnels and stations). While New York City is not an earthquake active zone, there were minor earthquakes over the past 5 years from the range of 1.5 to 2.1 magnitude. A concern that can be brought up is, what if the City of New York experiences an earthquake of a catastrophic magnitude and will its current infrastructure hold up? In this thesis, a typical New York City water main and sewer will be subjected to an historical earthquake in the United States and evaluate the potential result it can cause on New York City's infrastructure.