The engine, first the steam engine and then the internal combustion engine was crucial for the growth of the modern city. It allowed power to be harnessed in great quantities in a congested area where more traditional forms of energy, such as running water and horses were not practical. The first steam engines were so inefficient that they were only practical for use at coal mines. But as engines became more efficient, they became increasingly common in cities and allowed for the development of urban industry. Industrialization as a result of the engine, spurred the growth of cities and caused their populations to explode even as machines were taking the place of hand-laborers. The engine was not only used in factories. It was also employed in locomotives which allowed large quantities of goods to be shipped into cities from surrounding centers and from around the world. The application of the engine in trains was crucial for allowing goods to be shipped into cities in order to supply for the needs of their many residents. Without trains, it would have been extremely difficult to provide the goods that so many people living in congested areas would need.

Modern cities no longer rely on the railway for transport. Instead, the primary means of transportation and shipping is the automobile. This has created a new problem for many modern cities around the world—traffic and congestion. One popular effort to address this growing problem is to develop faster and more efficient public transportation systems. One example of this is Elon Musk’s Boring Company’s research efforts towards developing a hyperloop train to carry passengers between cities at speeds of several hundred miles per hour. The company is currently looking at cheaper means of digging long distance tunnels which can then be depressurized, to carry high-speed trains. 1 Another solution is to make existing public transport more efficient by streamlining the ticket process. Ford is currently working with several cities to develop a smart system that uses facial recognition to identify commuters and save time in purchasing transport passes. 2

1. <https://www.wired.com/story/great-elon-musk-building-hyperloop/>
2. <http://mashable.com/2017/09/18/city-of-tomorrow-vision/?utm_cid=mash-com-Tw-main-link#XJKanbBcOSqo>

Andrew, I like how you mentioned the importance of electricity in enabling refrigeration. Although refrigeration was not discussed very extensively in the readings, it is an important result of electricity. It made food abundantly more available by allowing it to be stored for greater amounts of time and transported over greater distances without spoiling. This greatly reduced the cost of produce and made the food available much fresher, leading to an increase in public health. Electric refrigeration is a small development of the era we studied this week that is often overlooked in favor of more glamorous technologies such as the railroads and telegraph lines.

Shelby, I did by discussion board post on a similar topic this week—the development of efficient engines, used for powering trains, driving machinery, and generating electricity. I think an important contribution of engines’ use in trains was not just the ability to transport people around more quickly, but the ability to transport goods more quickly, in greater quantities, and at a lower cost. That was important to the growth of cities because it allowed goods to be brought in to fill the needs of cities’ increasingly large and dense populations. Without trains, it would have been much more difficult to bring the goods from abroad needed to fill the needs of the people living in a city.

Paul, I think many of us thought that the improvements in transportation, especially the proliferation of railroad tracks and steam locomotives, were an important technological advancement that led to the modern city. I like how you note that the railroad led to the founding and growth of many new cities, especially in the western United States. Although, these cities may have been little more than outposts and frontier towns in the 19th Century, many of them have now grown to become major western cities. It all started with a small railroad station. As opposed to the founding of new cities, I primarily wrote about how the railroad allowed existing cities to grow by enabling large amounts of goods to be efficiently brought into a densely populated area.

Kory, transportation seems to be a very popular technology this week. I think many of us agree that it was one of the defining technologies of the modern city. I like how you wrote about the Erie Canal’s importance in bringing large quantities of goods from abroad into densely populated cities in order to fill the residents’ many and diverse needs. In my post, I wrote about how the railroad system had a similar effect. The improvements in transportation allowed food from rural areas as well as exotic goods from distant countries to be brought into the cities. Without these improvements in transportation, it would have been much more difficult to fill the needs of a city’s population.

Jeshua, I agree that developing public infrastructure was an important aspect of creating the modern city. I liked how they started building the road in the video before they realized that there was a giant hill in the way that was obscured by the buildings. I found it interesting how they started using surveying techniques after that in order to avoid further problems. This shows how doing some effort up front to better plan out a project can save a lot of time and money later on by heading off unforeseen difficulties. I would not have thought about the difficulty of finding old utility lines in old cities. I would have thought that they had records of where such lines were.

Brandon, I would not have thought about writing about city planning as a technology that contributed to the modern city. However, now that you bring it up, I think city planning was a new concept that became more prominent during the era we studied this week. The modern cities are definitely defined by the character of their infrastructure. Newer cities tend to have better planned streets for example, whereas older cities often have a complex web of small streets and limited highways. However, through modernizing efforts such as the introduction of public transportation, older cities can improve their older infrastructure.