

## **Grand Blanc Essay**

### **Flint Feasibility Study**

Located in mid-Michigan in 2195, Flint is a city which historically has had problems. In the twentieth century, Flint became the third largest city in Michigan with the development of the automotive industry including General Motors' facilities. Flint suffered economic downfall and increased crime. Our goal is to improve the quality of life for the "Flintstones."

To revitalize Flint, local colleges and universities were consolidated to form the University of Flint, which has become a world-renowned center for innovative medical technology. A new UF campus is being proposed for a level five-acre plot south of Hamilton Avenue. Once home to Buick City, this property is presently the site of an abandoned mini-mall, with a restaurant, grocers, and gas station. This feasibility study is considering soil analysis, water/sewage utilities, and transportation access for the construction of UF's future majestic buildings, including virtual classrooms, student center, and dormitories.

Flint depends on civil engineers to research this project. Engineers have designed road-surface materials, sewage disposal, water systems, and will supervise the construction of facilities. Civil engineers provide for a better environment by designing ways to reduce pollution, dispose of waste, create ways to harness renewable resources, and offer insights for economical and practical solutions to everyday problems.

On-site soils are Miami and Conover varieties, grayish-brownish loam that contains air, water, sand, silt, and clay. Soils are generally well-drained with moderate organic matter, water capacity, and permeability. Unfortunately, gasoline leaks have resulted in carcinogens, like benzene, seeping into the ground. Removed petroleum tanks leave fifty to eighty cubic yards of contaminated soil. Excavated soil will be treated with bioventilation. This bioremediation process decomposes organic materials absorbed in the soil by inducing oxygen and allowing microorganisms to clean it.

Water availability and sewer utilities are being considered. Flint obtains water from Saginaw Bay, a 1,143 square mile extension of Lake Huron. Water quality improvements are in place. Water enters Flint, flowing on a downhill grade, through underground mains and goes into various city districts. From there the water flows through submains and branch lines to its final destination.

Processing sewage has always been a problem. Implementing effluent guidelines, Flint's municipal system has been improved with recently installed multiple treatment plants using *Rhodoferax Ferrireducens*. These water-dwelling bacteria are enclosed in large underground tanks into which sewage is constantly pumped through clay pipes. RF's ingest the sewage,

reducing volume by 50% to 90%. Resulting sludge has various uses. Another by-product is electricity, which is drawn to metal anodes and cathodes and made available to Flintstones.

Transportation access was considered. Flint is centrally located and has a well-established and well-maintained macadam roadway system. Improved macadam cracks less and covers local highways and nearby interstates. Flint's personal and mass transportation, with many on-campus stops, depends on a network of magnetic accelerators and decelerators which propel spherical and cylindrical "cars." Magnetic propulsion fields provide energy, using and returning electricity to the power grid. The Mag-mover system coordinates vehicular movement with user-programmed requests. Traffic flow is steady as the system routes cars around congested areas and is safer because propellers are coordinated by the system.

Paramecium Crystals resemble such creatures and contain exotic salts, which absorb light from the sun in high intensity levels. They are recharged by solar reflectors, which concentrate the energy, holding power at the intensity at the sun's surface until used. Radio waves bombard each Crystal to get the absorbed light from the Crystal, discharging energy into vehicles, or anything electrical, becoming the new "Energizer Bunny."

This campus project contains a few risks. UF is a new venture, lacking a tradition of excellence. Students might be leery of Flint's reputation. But the advantages are numerous. The land will be put to a more attractive, productive, and prestigious use. Property values will increase. The economic impact will evolve as the university and Flint, as a world center for technological expertise, are recognized for exemplary contributions to society.

Clearly, the city is becoming cleaner, safer, and more prosperous for Flintstones. UF has contributed to a revived economy, provided educational opportunities for creative minds and empowered students to "take on the world." On the eve of the twenty-third century, Flint continues to preserve its history, while envisioning its future.

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