

Madison Lakeview Water Tower Project

Public Feedback:

1. Can all the Cell Carriers and City Radio be combined into one building?

- After discussing this with a representative of the cell companies, it would be possible to combine all of the cell carriers and City Radio into one building.
- Combining them into a single structure would be a costly and complicated endeavor. Combining all of the carriers under one roof would require the construction of a new much larger building. To sustain service, the new building would need to be complete before the switchover takes place. Constructing a large building at the base of the tank would use up additional land area on the site and require significantly more grading and tree removal. Due to the topography of the area it is expected that a single large building would be worse than the current situation.
- Recommendation: No action, maintain the status quo

2. Can the antennas on the water tower be covered or shrouded?

- The antennas on the tower can be shrouded using structural framing and light weight fiberglass fabric. Shrouding requires a structural frame and shroud material in front of the antenna, requiring more projection space. Manufacturers have responded back to us that shrouding is typically used on building roof tops where space is available, but rarely on water towers.
- Typically antennas mounted on water towers are color matched with the water tower so they blend in with the structure. This in combination with shielding of the cables results in a less intrusive antenna configuration on the tower
- Recommendation: Color match the antenna on the tower with no shrouding.

3. Is it feasible to use Cor-ten steel to construct the reservoir and save on painting costs?

- Water Towers have been constructed using Cor-Ten steel. It is rare, it has a higher initial capital cost, and it is not recommended by major tank manufacturers.
- We have talked to the major water tower manufacturers and they have completed only a few Cor-ten tanks in the United States. The tank is painted on the inside due to water quality concerns and the exterior may be left unpainted. One tank built for a small town in Wisconsin incorporated Cor-ten steel. The water bearing exterior portion of the tank was painted. The Water Superintendent for that utility said he would be concerned about Cor-ten steel that is exposed to moisture from humidity. Highway departments use Cor-ten steel for some bridges, but they paint the ends of the steel where the steel is subject to higher moisture areas such as concrete abutments.
- Recommendation: Due to the increased initial cost and concern about wet conditions; the advantages do not seem to outweigh the disadvantages and questions.

4. **Is it feasible to add aluminum cladding to the outside of the reservoir to reduce the need for painting while improving aesthetics?**
- **Water Towers have been built with aluminum cladding on the exterior to improve aesthetics and reduce painting costs. It is rare and has been done in areas that have extreme visual impacts. We know of no water reservoirs in the upper Midwest that have attached aluminum cladding.**
 - One tower manufacturer stated the cost to add aluminum or stainless sheathing to this type of a structure will add \$3.8 Million to the project and that does not include the cost of polishing the material.
 - Recommendation: Due to the increased initial cost and structural concerns; the advantages do not seem to outweigh the disadvantages and questions.
5. **Can pervious asphalt be used for the parking area repaving?**
- Pervious pavement can be used to successfully reduce storm water runoff.
 - Conversations with City Engineering indicate that for porous asphalt pavement, over time the infiltration pores will plug and require maintenance and cleaning. Studies have shown that using porous concrete pavement is a much better application. Concrete has a significantly higher initial cost.
 - A better way of incorporating infiltration into the storm drain control system is to use rain gardens which are included in the proposed site plan.
 - An additional improvement would be to add curbing around the parking lot and back slope the drainage away from the curb to infiltrate in the grass area. Topography of the site limits the areas where back slopes can be used.
 - Recommendation: Continue to investigate and review design options as final plans are developed.