

PUT A LID ON IT



WHAT IS THE PROBLEM?

The City of Birmingham has discovered a major problem involving City stormwater inlet tops. Inlet tops are frequently damaged throughout the city and in constant need of replacing. More than 1,000 inlet tops are manufactured and replaced annually by our Department of Public Works, at an estimated cost of \$576,982.80 per year. Continuous disrepair of inlet tops and blocked drains do not allow stormwater to flow properly, resulting in flooding issues and standing waters. Drains without the proper covering are a public safety concern that is hazardous to the communities and can contribute to neighborhood neglect.



Theta Ave. & Omega St. S

WHY WE SHOULD "PUT A LID ON IT?"

- Less expensive Operation & Maintenance Costs
- Potential partnership with UAB and others
- Eliminate neighborhood eye-sores
- Better output of Public Works employees' time
- Prevent potential hazards and improve public safety
- Reduce flooding in neighborhoods
- Educate public on stormwater
- Potential incubator business opportunity in economic development for the City
- Less strenuous process for Public Works employees
- Reduce debris, sedimentation, and trash from entering the stream
- Allow drainage information to be entered directly into the database by using a "QR Code Reader"



FIGURE 1



FIGURE 2

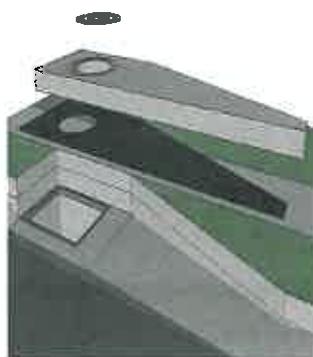


FIGURE 4

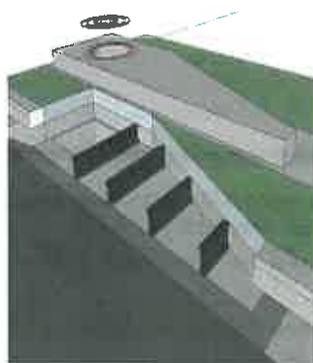


FIGURE 5

WHAT IS THE SOLUTION?

To partner with The University of Alabama at Birmingham (UAB) to redesign an innovative, state of the art pilot project with the potential to develop an incubator business opportunity with the City of Birmingham. This

proposal will improve drainage, enhance public workers safety, com-

munity safety and reduce long term O&M costs.



FIGURE 3

“PUT A LID ON IT” MANY POSSIBILITIES...

Figure 1: The inlet top design with the “No Dumping Drains to Stream” logo that will educate citizens about pollution. Will be made out of a high strength FRP with a locking mechanism to keep the cover in place.

Figure 2: A “QR Code Reader” that will be placed on the inlet top to help keep track of maintenance of the inlet.

Figure 3: A diagram of the newly designed

slab made of bendable materials that will not break, only bend.

Figure 4: An alternative design to Figure 3. It adds a carbon/glass fabric wrap middle layer to the design that will add rigidity to the inlet cover, will increase the strength tension zone in the concrete cover to make it stronger.

Figure 5: Is an illustration of the beams that can be placed in the system to block

trash, debris, and sediment from entering into the storm drain. This will reduce the efforts of future cleaning and drainage issues.

Figure 6: Bottles and other plastic materials that can be recycled to produce the beams.



FIGURE 6