

**On-site, interactive, education/learning activities for the proposals from the final report.**

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Introduction:

\_\_\_\_\_ There are many ways for the site proposals of 444 Hebron Road, Heath, Ohio to utilize educational initiatives in an effective and impactful way. Having interactive, educational/learning activities at the site would be helpful for the communities of Heath and Newark, especially the students of the surrounding area. This site will provide opportunities for year round educational practices and for one-off educational initiatives and activities. With the large student population, Heath and Newark is a perfect place for this site to have these educational aspects. This is because a student population of that size should have access to education of the surrounding area (history of the EarthWorks site and the Meritor site) as well as sustainability (solar panels, etc.). Focusing on students with these types of educational practices will help create future environmentalism in generations to come. A site like the Meritor site, along with the interactive, educational/learning activities, helps the students to question their preconceptions, and motivates them to learn, by putting them in a situation in which they come to see themselves as the authors of sustainable answers, and as the agents of responsibility for change.

Industrial:

The industrial site has the implication of less visits and direct interaction with the public, being an industrial zoned site. Yet, I think this proposal has the potential to offer highly engaging and effective educational practices and activities for students of all ages. There are two main educational initiatives for this proposal that I believe will work well with the preferences and values of the surrounding community.

The first idea (which both the industrial and the destination sites will have) is an educational demonstration of the history of the site. I think the history will only be about the site itself and not the EarthWorks across the street as there will already be a lot of information on its history in the visitors center/museum. There will be a display board(s) by the main entrance of the manufacturing plant. This entrance will probably be facing where most of the parking is on the site.<sup>1</sup> I think it is important to have it here because it will be viewed more by the workers of the plant as well as visitors. For the workers of the site, it is important for them to have a sophisticated knowledge and understand the history of the site/company because it is one of the most powerful tools out there for shaping the future. The history of the site could potentially install a sense of identity and purpose for employees. If a new and sustainable solar manufacturing plant could rise from the ashes of an abandoned brownfield, which could be inspiring and uplifting, then imagine what could happen with other brownfield sites and perhaps even more large scale sites - perhaps cities and towns undergoing deindustrialization. That's why having this information public and exposed to people is important.

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<sup>1</sup> For our proposal, the southern side of the building.

Having the display board(s) by the main entrance of the plant is also an ideal location because it will also be in close proximity to the visitors center of the EarthWorks, allowing tourists to understand and appreciate the history of the plant and the site as a whole. I believe this is something that can be easily placed on the site without many obstacles.

The second educational initiative for the industrial proposal is educating the public and students about the process of a manufacturing plant. This is an important initiative to add because the going-ons in manufacturing plants is often unknown to many people. Having tours or some kind of activity with the proposed solar manufacturing plant would be something that is quite impactful for learning and understanding the thought, time, labor, and resources needed to produce a certain good - a kind of cradle-to-grave demonstration perhaps. This is something that the buyer of the site would have to be on board with. Today, work in manufacturing plants are largely done by machines. There is a strong demand for individuals that are able to program the computers that run those machines, there is a short supply of personnel with those skills.<sup>2</sup> In the Deloitte-Manufacturing Institute study, 70 percent of manufacturing executives said their current employees didn't have the right technology and computer skills.<sup>3</sup> With more education on manufacturing processes and attempts to get students interested in these processes, the site could be used as a tool for students to pursue jobs in manufacturing and programming of machines in those manufacturing plants.

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<sup>2</sup> Delece, Smith-Barrow. "Colleges are adding programs in a once-decimated industry — manufacturing." *The Hechinger Report*

<sup>3</sup> Ibid.

Destination:

Unlike the industrial site proposal, the destination proposal has a much more direct interaction with the public. With the community and tourists already being the primary target for this site proposal there can be greater strides to adding to educational activities/initiatives. Like the industrial proposal, there are two primary educational initiatives that I believe will truly have the most benefit for the community.

Just like the industry site, this site will also implement a historical representation of the site. The same, or a very similar display board(s) could be placed on the site for viewers to understand the history of the mixed-use development that would be in place. As the site is designed around tourists and community members interested in the EarthWorks site, learning more history about the site across the street may be of interest to them. The display board(s) should be placed in the entrance to the mixed-use development that is estimated to have the most use. As our graphic of the development proposal shows, there will be parking on three of the four sides of the development. Choosing one of the entrances for the display board(s) should not be a substantial challenge.

The other educational initiative for the site has already been described in the original Final Report for the Meritor site.<sup>4</sup> This initiative is the museum, within the mixed-use development that has a direct relation to the EarthWorks across the street. The Earthworks Museum will have a substantial amount of artifacts and archaeological discoveries from the mounds and that are relevant to the history of the EarthWorks. There will also be interactive

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<sup>4</sup> Brinson, Traeona, Dickerson, Libby, et al. "Sustainable Redevelopment of 444 Hebron Rd. Heath, OH: Denison University Environmental Practicum." Denison University. November 20, 2019. Pg: 4-5.

collections and modules that can add a more hands-on and interactive aspect to education in the museum. Because the museum is directly correlated to the EarthWorks, this will encourage visitors of the mounds to come across the street to visit the museum and the restaurants and shops that make up the rest of the mixed-use development. As most of the parking for the EarthWorks will be on the newly developed site, visitors will already know about the museum and the other developments because they will have to walk past them. Some visitors may even choose to visit the museum first, before visiting the mounds.

With the museum and the EarthWorks site itself, there will be plenty of reason for students to receive tours of both. Hopefully, with the World Heritage Site nomination and economic profit from and growth in tourists, the EarthWorks site and the museum could afford tour guides so that students are able to truly understand and immerse themselves in the history of both sites.

#### Solar:

The solar array on both proposals of the site has the potential to provide exceptional opportunities for education of all ages and levels of photovoltaic knowledge. One of the main educational initiatives was proposed in the Final Report of the proposed sites and would be a very important attraction for educational purposes on the site. This is the interactive solar component and demonstration of the solar array.<sup>5</sup> This interactive solar demonstration solves one of the necessities of people in the community, especially the students and the younger individuals. It gets them thinking about green energy and how we can implement sustainable

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<sup>5</sup> Brinson, Traeona, Dickerson, Libby, et al. "Sustainable Redevelopment of 444 Hebron Rd. Heath, OH: Denison University Environmental Practicum." Denison University. November 20, 2019. Pg: 17

technologies into our lives and into the next generation. This environmental initiative would feature a few (2 or 3) solar panels near the actual solar array for the site. These few panels can be manipulated in various ways to alter the energy production and the efficiencies of the panels. These panels can basically be used like hands-on experiments for students. These manipulations by the users will be seen through the lights that get brighter or dimmer based on how much energy the panels are producing and/or a meter that gives the amount of energy being produced. Perhaps users would be able to angle the panels in a certain way, adjust the amount of light hitting the panels by placing different materials over the panels (ie. snow, dirt, etc.) and compare the efficiencies of different panels through time. There will also be a infographic/sign/display board(s) that explain the process at different levels. But, by having a hands-on demonstration that students get to do allows for looking into curiosities about solar power and how photovoltaic panels function. The infographic/sign/display board(s) would complement the experiments and provide more information on what can't necessarily be seen with the naked eye. They will be for understanding the nuances of the solar energy processes, yet the main idea behind this interactive component is to let the users simulate and play with the panels to learn about such an important topic in a fun and meaningful way.

If the industrial proposal is pursued, this component can also be used for potential buyers of the manufacturers panels to test and see if they would be interested in buying their solar panels. Individuals or businesses interested in investing in solar at their own residence or business should consider all the factors such as panel location, size and cost, available incentives, permits, the amount of energy they need, application (space heating, water heating, power

generation) and more. The experimental panels may not be able to provide all of that information, but it could give prospective buyers an idea of the manufacturer's product.

Another environmental education initiative is the placing of a pollinator habitat as part of the solar array. This has already been done with Denison University's solar array and is very unique in the state of Ohio.<sup>6</sup> Solar panels may not always be very pleasant to look at and not aesthetically pleasing, but the addition of a pollinator habitat would change that and make it quite beautiful. Along with its beauty, a pollinator habitat is a perfect opportunity to educate students and those interested about pollinator plants and pollinators. There could be more display boards about the habitat and why it is important. A possible activity for students could be learning about different pollinators and then taking a few seed packets of pollinator friendly plants back home with them to plant in their home garden, lawn, etc. This not only teaches students about the importance of pollinators, but also helps pollinator populations by distributing and spursing plants over the community that pollinators can utilize.

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<sup>6</sup> "Pollinator-friendly solar habitat first of its kind in Ohio." Denison University: Featured News. 16 July, 2019.

Sources:

- Brinson, Traeona, Dickerson, Libby, et al. "Sustainable Redevelopment of 444 Hebron Rd. Heath, OH: Denison University Environmental Practicum." Denison University. November 20, 2019.
- Smith-Barrow, Delece. "Colleges are adding programs in a once-decimated industry — manufacturing." *The Hechinger Report*. Accessed at: <https://hechingerreport.org/colleges-are-adding-programs-in-a-once-decimated-industry-manufacturing/>
- "Pollinator-friendly solar habitat first of its kind in Ohio." Denison University: Featured News. 16 July, 2019. <https://denison.edu/news-events/featured/131013>