

444 Hebron Road Redevelopment Proposals

ENVIRONMENTAL STUDIES PRACTICUM
DENISON UNIVERSITY
NOVEMBER 20TH, 2019

Environmental Studies Practicum

Required class for junior ES majors at Denison

Integration of curriculum, theory-practice intersection

Real-world clients, real-world deadlines

Team-based consulting on relevant topics

Single project for an entire semester – every term is different

Skill development in research, problem solving, communication

Foundations for senior project, possible continuation(s)



MERITOR



Introductory Notes

Phase 1 (September): clear-blue-sky idea generation – five proposals
informal presentation to T&M, Heath Mayor

Phase 2 (Oct-Nov): Detailed examination of three “winning” ideas

Destination development tied to Earthworks

Solar manufacturing plant

Brownfield-based solar array (+ rooftop/parking)

Phase 3 (December): Deeper dive based on your feedback today...

Destination Site Proposal



Design Includes: Shopping center, museum, EarthWorks Visitors Center, green space, solar array, and reforested area

- To create a space to complement the anticipated World Heritage site of the Newark Earthworks.
- A space to recognize the importance of the Earthworks site and other World Heritage locations.



Solar for Mixed Use

Capacity: 10 MW

Generation: 24 MWh annually

Coverage: 50 acres of panels total

Brownfield: 21 acres

Rooftop: 17 acres

Parking canopy: 10 acres

Building needs: rooftop + canopy

Power for sale: 20+ acres (4+ MW)

(Denison solar array is 2.3 MW)



Engaging local and global communities



Recognizing significant Indigenous history



Economic driver for Licking County

Industrial Site Proposal



Design Includes: Solar manufacturing plant, reforested area, EarthWorks Visitors Center, solar array

- To create a solar manufacturing plant that will produce job opportunities for the citizens in Licking County.
- Powered by onsite solar array



Solar for Industrial Use

Capacity: 10 MW

Generation: 24 MWh annually

Coverage: 50 acres of panels total

Brownfield: 21 acres

Rooftop: 21 acres

Parking canopy: 6 acres

Building needs: canopy or less

Power for sale: up to 90% generated

Business Development and Planning



Demonstrate sustainable development on a brownfield site



Create ~375 new jobs in the Licking County community



Develop the solar market in Ohio with increased manufacturing competition



100% powered by solar energy produced on-site

Solar Implementation



Design Includes: Site specific ground mounted solar array, solar canopy, and rooftop panels

- To promote sustainable practices in Licking County, as well as install a solar array that best utilizes the space in need of environmental remediation.

Business Development and Planning



Creates carbon-neutral power base for any development on the site; To show commitment to sustainability



Increase in education about solar energy and its benefits



Follows trends of solar expansion in the Midwest

Destination

BENEFITS

- Genuine showcase of World Heritage Site and indigenous history
- Collaboration with schools, libraries, businesses, etc.
- Economic growth via tourism

CHALLENGES

- Implications of site (e.g., slab)
- Location
- Funding and support
- Potential single buyer

Industrial

BENEFITS

- Employment opportunities
- Continuation of site's current zoning classification
- Leaders in renewable energy
- Variety of grant and loan opportunities
- Location

CHALLENGES

- Lack of training
- Implications of slab (e.g., vapor intrusion)
- Potential buyer

Prospective Buyers

Destination:

- Land or real estate developer
 - Developers Diversified Realty Corporation

Industrial:

- Solar Panel Manufacturers
 - Heliene
 - Mission Solar
 - First Solar
 - Sun Spark



Solar Array:

- Solar Installers
 - Third Sun Solar
 - Public Service Enterprise Group
 - Amarenco

Remediation Options & Legal Constraints

- Vapor Intrusion:
 - Application of barrier beneath the slab
 - Sub slab vacuum system
- Landfills and Oil Plume
- Voluntary Action Program (VAP)



Acknowledgements

- Meritor Corporate Environmental Manager David O'Connor
- Jim Peeples and Scott Blanchard from T&M Associates
- Meritor plant manager Mike Deep
- Nate Strum from Grow Licking County
- Heath Director of Building and Zoning Eddie Hunt
- Heath Mayor Mark Johns
- Steve Krak and the Red Frame Lab



QUESTIONS ?