

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Application of)	
Angelina Solar I, LLC)	
for a Certificate of Environmental)	Case No. 18-1579-EL-BGN
Compatibility and Public Need)	

DIRECT TESTIMONY OF

Kyle Cross

On behalf of

Preble County Engineer & Preble County Soil & Water District

May 10, 2019

1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

2 **Q: Please state your name, title and business address.**

3 A: My name is R. Kyle Cross. I am the Preble County Engineer. My business address is 1000
4 Preble Drive, Eaton, OH 45320.

5 **Q: What is your educational and professional background?**

6 A: I have a Bachelors of Science in Civil Engineering from Ohio Northern University. I have been
7 a registered Professional Engineer in Ohio for 13 years and a registered Professional Surveyor in
8 Ohio for eight years. I have been practicing engineering for 18 years with a background in
9 geotechnical and materials engineering prior to being employed at the Preble County
10 Engineer's Office in 2007. I have been the Preble County Engineer since 2012.

11 **Q: Have you previously testified before a regulatory agency?**

12 A: No, I have not.

13 **Q: What are your duties as the County Engineer?**

14 A: The duties of the county engineer are statutory in nature and are defined in section 315.08
15 of the Ohio Revised Code. To summarize, though, I have been charged to maintain and repair
16 all bridges, culverts, roads, drains, ditches, roads on county fairgrounds, and any other public
17 improvements, except buildings, constructed under the authority of any board within and for
18 the county.

19 **Q: On whose behalf are you offering testimony?**

20 A: I am testifying on behalf of myself as the Preble County Engineer and also on behalf of the
21 Preble County Soil and Water Conservation District.

22 **Q: What is the purpose of your testimony?**

A: The purpose of my testimony is to convey the importance of proper drainage and drainage structure protection in an agricultural community, as well as the importance of properly maintained infrastructure, such as roads and bridges for the safety of the traveling public.

II. ANGELINA SOLAR PROJECT'S IMPACT ON DRAINAGE TILE

Q: Does the term "drainage ditch" encompass just a ditch?

A: No, it does not. Often the term "drainage ditch" is a generic term that refers to any drainage improvement made by petition as outlined in Section 6131 of the Ohio Revised Code. Prior to 1957 any ditch that was petitioned through this process is referred to as a "repair ditch" and any ditch petitioned after 1957 is referred to as a "maintenance ditch." The reason for this is that there was a change in statute at that time as many of the older ditches were being petitioned again as the tile systems had not been properly maintained. A fund was then set up that any ditch petitioned would have any necessary repairs or routine maintenance made to it be paid out of this fund. Property owners benefitting from this system shall be assessed to ensure that the necessary funds are available.

Q: Please describe drainage ditches?

A: As mentioned, a drainage ditch can refer to any drainage improvement. When we think of the term ditch it is most often associated with large wide channels such as you would see along the road or traversing through properties to outlet into, most often, a naturally occurring watercourse. However, in rural agricultural communities a drainage ditch can also include grassed waterways and subsurface drainage tile. Surface water is easily addressed when proper slope is present to allow water to naturally dissipate into lakes, streams and rivers

44 through grassed waterways and open ditches. Subsurface tile, unlike open ditches and grassed
45 waterways, address the issues with subsurface water. Subsurface tile is often installed where
46 isolated pockets of land exist that has a low point or other obstructions to prevent natural
47 drainage of surface water. When the water cannot drain the area becomes oversaturated and
48 is not suitable for agricultural uses and can also pose health issues. Subsurface tile allows the
49 water that has saturated the ground as either excess surface water or naturally occurring, such
50 as a spring a path that will outlet to either an open ditch or naturally occurring watercourse, to
51 prevent and aid in the soils being oversaturated.

52 **Q: Please describe how drainage ditches may be impacted by the Angelina Solar Field.**

53 A: The Angelina Solar Project has the potential, if not properly monitored, to be detrimental to
54 primarily subsurface tile. Any time that construction activity occurs in the proximity of
55 subsurface tile there exists risk to the tile system being damaged by several different
56 possibilities. The most prevalent in the case of the Angelina Solar Project by the subsurface tile
57 being penetrated with the number of support post and perimeter fencing post being installed
58 either by being driven or holes drilled. Another possible way that the subsurface tile could be
59 damaged would be during the installation of collection lines by either open trenching or being
60 plowed in. Lastly, and the least likely, would be the possibility of subsurface tile being crushed
61 due to heavy or repetitious loads being applied directly above the subsurface tile.

62 **Q: Please describe the impact to drainage ditches if a tile were broken.**

63 A: If a tile were to be cut or crushed there would be significant impact to the area being
64 drained, most notably upstream of where the damage occurred. A couple of the most common
65 indications that damage has occurred would be the area would drain at either a slower rate or

66 not at all. The other would be "blow holes" developing in close proximity to the damage as soil
67 above the tile would begin to migrate into, and ultimately block, the flow of water through the
68 tile. If tile were broken there would be significant adverse effects on the areas adjacent to the
69 damage.

70 **Q: Does a person immediately know if a tile is broken?**

71 A: The amount of time taken to discover if a subsurface tile has been damaged can range from
72 being identified immediately or as long as several years. A tile system works to an extent like a
73 path of least resistance allowing water to flow from one location to another. If there would be
74 a large disruption to the system, such as being cut during an open excavation, there would
75 most likely be water filling or flowing into the excavation and remnants of the subsurface tile
76 would be visible in the excavation spoils such as plastic or clay fragments. Subsurface tile, to be
77 maintained properly, would have proper granular material around the tile as well as tight joints.
78 In the instance of a post being driven through the tile it would take the longest time for the
79 damage to be visible. While the penetration would restrict the flow depending on the location
80 of the tile damaged (i.e. through the center versus an offset or at an edge) it may not be
81 identified because it would create a relatively tight seal around the penetration. We have seen
82 that this type of damage can take two years or more before some of the more visible signs of
83 failure occur.

84 **Q: Does the application adequately address the issue of a broken tile?**

85 A: In my opinion the applicant does adequately address the issue of repairing broken tile to the
86 extent that it can be visually identified at the time of the damage. The applicant, however,

87 does not provide for a process and remediation for tile damages as a result of their
88 construction that may not be identified until after the completion of the construction.

89 **Q:** Does the application adequately address the issue of a clogged ditch?

90 **A:** The applicant does not explicitly address a clogged ditch. The applicant only addresses
91 subsurface tile directly. Due to the size of this project a Storm Water Prevention Plan will most
92 likely be required. If the SWPP is followed it should adequately address clogged ditches as they
93 would have protection by silt fence or similar measures to minimize silt migration. In the event
94 that a culvert pipe is clogged it would most likely fall under the Road Use Maintenance
95 Agreement.

96 **Q: Do you have any responsibilities related to any drainage ditches located in Preble County?**

97 **A:** Yes, I do as a matter of statute.

98 **Q: If so, what are those responsibilities?**

99 **A:** Section 6131 of the Ohio Revised Code establishes that any ditch petitioned have
100 maintenance funds available in perpetuity in addition to the initial construction cost. Once a
101 petition ditch is established by petition, there are extensive measures in place to ensure it
102 functions properly. Ditch inspections are required annually which is a visual examination of
103 each ditch. A report of findings is submitted to the Board of County Commissioners that
104 includes any noted deficiencies and anticipated work to be performed. Following the
105 inspection report is an assessment report which breaks down the total estimated funds
106 required to perform the anticipated work. The total assessment is broken down to each
107 property owner in the area benefitted by the improvement. The total cost per parcel is
108 proportionate to the amount of benefit received. Reviews on these ditches are performed

every six years to ensure the accuracy of the assessments and adjustments are made as necessary. In addition to the annual inspection, repairs made to the ditches can vary. They can range from spraying open ditches to prevent noxious weed or excavating to remove silt deposits. Repairing damaged and failed tile are common as well.

III. ANGELINA SOLAR PROJECT'S IMPACT ON ROADWAYS

Q: Please describe road right-of-way.

A: Through a petition process when a road is established there is a strip of land that goes along with it for maintenance purposes called right-of-way. Within this right-of way, in addition to the roadway itself, guardrail, drainage ditches, and public utilities exist and are maintained by either state, county, or township forces depending on whom has jurisdiction of the roadway.

Q: Please describe setback.

A: A setback is a minimum prescribed distance from an existing feature that a new feature may be constructed.

Q: Does it matter where the road right-of-way is measured for this project?

A: The road right-of-way is recorded distance that is memorialized and can be found in the applicable Road Records that are stored and maintained in the Preble County Engineer's Office. The right-of-way distances associated with the roads affected by this project are previously established and are not subject to change due to the Angelina Solar Project.

Q: Does the application adequately address setbacks by the road right-of-way?

A: Yes, it does. In the matter of this case the applicant has referenced setback distances from the edge of roadway. Right-of-way widths can vary greatly depending on the maintenance

jurisdiction of the road, and the date which the roadway is established. Without proper research, arbitrarily assigning a setback distance from the edge of the roadway there is the potential that the perimeter fencing could be constructed within the road right-of-way. An additional concern with the setback being from the edge of road that the potential for drifting snow is increased exponentially. The area in which the applicant is proposing to construct the Angelina Solar Project is relatively flat and open. Once you would add obstructions to disrupt the blowing of snow, drifting will occur. It is our experience from other areas throughout the county that when obstructions are present on both sides the likelihood of drifting increases and the closer these obstructions are to each other on both sides intensifies it even more. Measuring the setbacks from the edge of the right-of-way as opposed to the edge of the roadway will push the fences farther apart to reduce the drifting potential and allow for additional capacity for snow storage as it is plowed from the roadway allowing the full right-of-way to be used.

IV. CONCLUSION

Q: Do you have any additional comments?

A: Yes, I do. The applicant and I have been rigorously and extensively negotiating a Road Use Maintenance Agreement or RUMA for this project. While this agreement is explicit in terms of responsibilities of all parties, I do have concern for a discrepancy with the project area as described in section 4906-4-03(A)(1) of page six of application for Case No. 18-1579-EL-BGN. Based on all graphic information the project area is well defined to be bound by Stateline Road to the West, State Route 725 to the South, County Highway 41 also know as College Corner-

151 Fairhaven Road to the east, and State Route 177 to the north. However, in the description
152 listed in application in the section previously referenced the project location "is located east of
153 State Line Road, west of State Route 177 and north of the Camden College-Corner Road. State
154 Route 725 bisects the project area from east to west." Based on this discrepancy the project
155 area in words encompasses an area that is roughly three times the total footprint of the project
156 area as identified in all other references to the project area. It is my concern that if the project
157 area as referenced in section 4906-4-03(A)(1) that the RUMA would not have addressed the
158 additional roads associated with the larger footprint.

159 **Q: Does this conclude your testimony?**

160 A: Yes, it does at this time, but I reserve the right to offer additional testimony in support of any
161 stipulation reached in this case, or if necessary, in rebuttal.

CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to this case. In addition, the undersigned certifies that a curtesy copy of the foregoing document is also being served upon the persons below via electronic mail this 10th day of May 2019.

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Summary: Testimony Testimony of Kyle Cross electronically filed by Ms. Kathryn West on behalf of Cross, Kyle and Preble Soil & Water Conservation District, Preble County, Ohio