

REVIEW OF PORT SIDE SOLAR'S - REQUEST FOR SPECIAL USE PERMIT

By: Charles Koob – Fort Gratiot Township Planning Commission Member 11-8-2023

This Special Use Permit has driven an ugly wedge into the very heart of what was a peaceful and unified community.

This division between two very differing opinions has created great anger, tension and anxiety which gives me great concern for the Health, Safety and Welfare of all our citizens. The one most important responsibility as a Planning Commission Board Member is to protect and maintain the Health, Safety and Welfare of everyone in this Community as a whole.

I am no expert (trained in Health Care) but I think it is rather common knowledge that people who are in a Mental (Emotional) State of anger, tension and apprehension are also experiencing Physical Health Issues such as: Increased heart rate, elevated blood pressure, headache, stomach pain, nervousness and even exhaustion, which all can lead to more severe health problems.

For those of you who may have just rolled your eyes or gave a snicker under your breath I would like to say to you that Mental Health and related Physical Health are a real things. They go hand and hand and should not be ignored.

The very purpose of The Township Master Plan and The Code of Ordinances is based on a plan to promote and maintain the Public Health, Safety and General Welfare of our citizens. So far, it seems to me that this proposal has not promoted or has it maintained the Public Health, Safety or Welfare as a whole regarding Mental Health and subsequent Physical Health issues. A problem usually ignored, never mentioned and often turned away from.

Over the last four weeks or so - this proposed project has adversely affected the Mental Health, Physical Health and Welfare of this community. AND I do not see this problem ever going away.

The Township Master Plan and The Code of Ordinances are intended to guide township officials and citizens in making decisions about public facilities and the use of public and private land. Also, to encourage the use of lands in accordance with their character and adaptability and to limit the improper use of the land.

These are words directly out of the Master Plan and Ordinance.

1.) Is a Solar Energy Project a better alternative compared to a Coal Generated Power Plant? – Probably. Is a Solar Energy Project a better alternative for a fairly populated community with limited open space? Not necessarily.

2.) This project is proposed to be built on land classified as: Agricultural.

In the Zoning Ordinance under: DIVISION 2 Sec. 38-141. - AG AGRICULTURAL DISTRICTS – the Statement of Purpose – reads as follows:

AG agricultural districts are those open areas of the township where farming, dairying, forestry operations, and other rural activities are found. Vacant land, fallow land and wooded areas also would be Included where such areas are interspersed among farms. Gradually, (and I repeat gradually) and based upon a logical comprehensive development plan, AG agricultural districts may be converted to other land uses. (I would like to repeat Gradually and Logically) The AG agricultural district protects land needed for agricultural pursuits from encroachment by untimely and unplanned residential, commercial and industrial development. (Ord. No. 62, Section 7-05.01, August 11,1984). This has been in effect for nearly 40 years.

This 900 acre industrial project of solar panels, proposed to be installed in a very short period of time is not at all gradual nor is it logical. It is untimely and not in harmony with the Statement of Purpose as written. This project will adversely affect the current character and future orderly development of Fort Gratiot Twp.

People bought in Agricultural District to be in a country setting.

THE RULES ARE BEING SLANTTED, TWISTED, STRECHED AND LEANED TOWARDS A FAVORABLE RULING. “Better known as Puffing” – BE CAUTIOUS & SUSPICIOUS

STORMWATER DRAINAGE

I also, have Major Concerns with your Evaluation of the Storm Drainage on the project and the statement that no overall runoff from the site will be increased Post Development and that no storm water management will be necessary for this project.

I do not know how you would be able to say this without a complete project watershed drainage study.

1.) You say that you are going to smooth out the humps and dips. That is leveling the land, which increases runoff volume and increases runoff velocity. The time of concentration will not be the same. Water retention will be eliminated.

2.) The soil type classifications as listed by USDA and shown in the Fort Gratiot Township Special Land Use Review are:

Soil Class 2w: Moderate limitations that restrict choice of plants, wet soils that need to be drained, highwater table and/or flooding affect.

Soil Class 3w: Severe limitations that restrict choice of plants, wet soils that need to be drained, highwater table restricting plant growth.

Soil Class 4s: Very severe limitations that restrict choice of plants and require very careful management, wet soils that need drainage, Overcoming limitations are difficult.

Soil Class 5w: Limited plant choices, hard to cultivate, water on the surface interferes with plant growth, needs artificial drainage. High water table.

Soil Class 7s: Soils have very severe limitations, low water capacity, needs artificial Drainage, overcoming limitations is difficult.

Soil testing with soil borings should be required to determine the exact soil type, soil depth and water table elevation over the entire project to determine the rate of water infiltration which will help determine the impact to runoff.

The density of the soil will also need to be tested preconstruction and post construction to determine how much compaction to the soil has occurred during construction. With increased compaction from all the heavy equipment driving over the site you will have increased water runoff.

3.) What is the height of the solar panels off the ground? You need to know this to determine the energy of the rainwater running off the panels and hitting the ground. The higher the panels are off the ground, the greater the energy which will result in

greater scouring of the soil, thus increasing the runoff rate. And, if the drip lines of the panels are parallel with the direction of the slope of the ground, that will compound the problem even more.

4.) Field drainage tile lines will need to be located and designed around. Thousands of fence posts and solar rack support columns will be driven and/or augured into the ground. If any of these tiles are damaged, the ground will become more saturated and an increase in surface water sheet flow will occur. Also, this saturated ground would allow for the creation of wetlands. And at the end of the project a farmer would not be allowed to use their land for crop farming in these areas. Michigan Department of Environment, Great Lakes and Energy would restrict it.

Conclusion: Drainage for existing conditions compared to Post Construction conditions will not be the same. Overall runoff from the site will be increased. Permanent stormwater management measures will be necessary.

Project has eight (8) un-named water courses and four (4) major county drains noted in the development area. Galbraith Drain, Doe Creek & Extension, Brace Drain, Edie-Smiley Drain. Outlets for these drains are to Lake Huron to the East of the project.

When it rains many of these drains run at or near capacity.

Just a few years ago many homes and properties in this area had severe flooding in Fort Gratiot and Burtchville Townships. A small increase in runoff will jeopardize downstream properties.

Michigan Association of County Drain Commissioners – engineering review check list for Solar Farm Development recommends storm discharge calculations, composite site runoff (existing and proposed), show discharge locations, determine % of impervious surface.

The University of Minnesota has developed a Science Based software program called PV-smart Solar Site Runoff Calculator. To achieve PV-SMaRT's goal, the National Renewable Energy Laboratory (NREL) partnered with the University of Minnesota, Great Plains Institute, and Fresh Energy. The easy to use program estimates stormwater runoff from ground-mounted PV arrays. This calculator is based on research and hydrologic modeling conducted at a set of research sites featuring diverse climatic, topographic, and soil conditions, with either fixed or tracking solar arrays, and vegetation that included pollinators, grass, or cover crops.

They look at important factors such as: Type of Ground Cover, Soil Density, % of Ground Slope, Soil Type, Soil Depth, Type of Construction Equipment.

PV-smart Task Force members include:

- Jason Bernagros, U.S. Environmental Protection Agency (EPA) Office of Research and Development
- Seth Brown, National Municipal Stormwater Association
- Veronica Craw, Georgia Department of Natural Resources
- Dave Gasper, New York Department of Environmental Conservation
- Robert Goo, EPA Office of Wetlands, Watersheds
- Britta Hansen, Emmons Olivier Resources
- Greg Hoffman, Center for Watershed Protection
- Jake Janski, Minnesota Native Landscapes
- Gavin Chase Meinschein, Engie North America
- David Morley, American Planning Association
- Andrew Nelson, Westwood Professional Services
- Peter Parkinson, AES Distributed Energy
- Sybil Sharvelle, Colorado State InTERFEWS Director.

ESE Magazine – Ontario, Canada, Jason Sharp - 2017

Lessons learned: Solar projects present unique stormwater management challenges.

As it relates to the stormwater management component of the review process, these utility scale projects are approved based on a conceptual stormwater management report. These reports typically provided high-level information such as:

- of the site watersheds;
- Identification of internal drainage areas;
- Completion of high level calculations (typical reports rely on the rational method for calculating peak flows);
- Confirmation that stormwater management is or is not Delineation required for the site; and
- Estimation of the scale and locations to accommodate the required stormwater storage.

State of Virginia, April 2022 -The Virginia Department of Environmental Quality late this March abruptly rolled out several major changes to how Virginia will manage stormwater runoff from solar farms, saying prior policies may have underestimated water quality impacts.

Previously, Virginia had considered only the foundations or bases of solar panels to be impervious surfaces, or those unable to absorb runoff. But under Gov. Glenn Youngkin's administration, the solar panels themselves will begin to be classified as impervious surfaces.

ONSITE SAFETY ISSUES RELATING TO FIRE

A solar farm fire, as I understand, is very dangerous and much more hazardous to battle. Firefighters face serious danger from electrocution. The fire can cause the insulation on the wire to melt. If the whole system is not de-energized water cannot be used to put out the fire. Then what?? Stand back and let it burn and watch the clouds of toxic chemicals spread over our community.

Also, I have a problem with safety issues concerning the site access and access road layout. This project has a number of fenced and gated what I would call compounds and all of them only have one way in, leading to a dead-ends with a small limited turnaround. These look like death traps for our First Responders coming to fight a fire on the site. One way in and no way out if a fire circles around behind. And you have multiple vehicles responding. Pumpers, Tankers, Rescue Units, Police and Ambulance all trying to navigate a narrow 16' wide lane. Which by the way if they are built and maintained like the ones in Shiawassee County, which by the way are in very poor condition, will not be passable for heavy fire trucks. Probably couldn't even get a 4-wheel drive jeep down the lane. These conditions are not safe at all.

A ring road needs to be designed around the inside perimeter of each compound and a second gate added as well. Also, at least one cross access road needs to be added through the middle of each site which connects to the ring road. These lanes also need to have drainage swales designed along the sides of them so they are high and dry. This will allow the emergency crews to maneuver the compounds much more safely.

11 compounds, only 1 with thru access to 2 roads, 8 have only one access point and 2 compounds have no access road points.

AFFECT TO WILDLIFE

For the life of me I can not see how a locked gated compound with seven foot high fences is good or compatible for wildlife.

VEGETATIVE SCREENING

Non-existent. Poorly done.

FENCING -Limited Details

FARM SUPPLIERS

What is the economic impact to them?

MAINTENANCE

What is the Grounds Maintenance Program?

PANEL DIRECTION

Why are they facing east?

What are all the bearing and distance mean on the plans – 32 calls along one line of the Peters Farm property North of Carrigan, page 10.

True – yes or no. Solar Energy is terribly inefficient? And if it was not for our tax dollars being granted to you, you would not be here? What I have read It seems to be a for sure way to go broke.

Toby Valentino – Project Manager

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CONDITIONS - RECOMMENDATIONS

- 1.) Phase this project in over a 10-year period. Gradually and responsibly.
- 2.) Complete a detailed watershed drainage study. Require permanent stormwater management measures such as: check dams, retention ponds, wider buffers zones and implement methods to reduce soil compaction.
- 3.) Remove the salvage credit value from the decommissioning bond.
- 4.) Redesign access roads to include ring roads inside each compound with at least one access road cutting through the middle of the compound which would be connected to the ring road. Also require at least two access gates per compound.
- 5.) No construction during the winter months or spring thaw.

I make a motion to Deny the request by Portside Solar LLC for a Special Land use Permit for the proposed Large Principal-Use Solar System for the following reasons:

1.