

July 21, 2018

**FROM:** Tim Waid  
2014 Bluff Pointe Drive  
Columbia, MO 65201

**TO:** Scott Novack, Senior Developer  
Cypress Creek Renewables  
18 S. Michigan Ave, Suite 1200  
Chicago, IL 60603

Makibi Takagi  
Project Manager – Development  
Cypress Creek Renewables  
Santa Monica, CA 90405

Rusty Palmer  
City of Columbia Planner - Community Development  
701 E. Broadway 65205

Rusty, Scott, and Makibi:

It was nice to meet everyone at the July 19, 2018 Planning and Zoning Commission meeting. Let's continue to have an ongoing dialogue!

I own 109 acres on East Richland Road (Parcel 17-303-11-00-002.00 01) in Boone County. That parcel is directly south of 140 acres owned by Dunlop Development LLC and the proposed 93.8-acre Truman Solar Farm (Case #18-115) to be operated by Cypress Creek Renewables.

### **Issue 1: Impervious Surface of Solar Farm and Catchment Technologies under each Solar Panel**

A significant concern is the impervious surface of the Solar Farm and the subsequent storm water runoff that will occur over the life cycle of its operation. My parcel is lower in elevation and a natural drainage area for that project. A flood plain exists within this area and the North Fork of the Grindstone Creek will be impacted by drainage from the Solar Farm. The North Fork of the Grindstone Creek collects water into the Hinkson Creek and Perche Creek which collects water into the Missouri River.

The bulk of our conversations, internally, have been about the stormwater mitigation needed on this site. Our Stormwater Utility engineers have reviewed the proposed plan, along with our Building and Site Development Division, and determined that no mitigation measures are required in addition to what's already proposed on the plan. The plan needs to be more clear as to what is being proposed, however, and additional maintenance agreements and covenants will be required and reviewed at such time as the applicant is ready to submit the final plat and construction plans.

I do not believe that adequate engineering design has been detailed to account for storm water runoff directly below each Solar Panel. How will storm water be mitigated directly below or along each

Solar Panel. What technologies will be used for that? I understand that grass is a pervious surface. A Solar Panel creates an impervious surface.

Basically, the entire disturbed area is to act as a BMP (best management practice) to negate/diffuse any stormwater runoff by utilizing replanted vegetation. A seed mix will be employed that includes sun and shade tolerant plants across the entire disturbed area of the site; both beneath and between the solar panels. The runoff from the solar panels will drip from the lower edge of the panel directly onto the plant material, which will slow and diffuse runoff to allow for the highest level of absorption. Runoff will be equal-to or less-than current levels.

## **Issue 2: Storm Water Runoff of Solar Farm into neighboring parcel**

I do not believe that adequate engineering design has been designed to account for storm water runoff into my parcel along the southern boundary of the Solar Farm and into my parcel from its northern boundary, especially its northwest boundary where Solar Panels are peered. A drainage swale, or a French drain, needs to be created along the southern boundary of the project. I recommend a 25-foot swale or drain with a combination of large stones and small rocks ranging from 3" to 12". That swale or drain needs to run along the southern border of the project and divert runoff away from my parcel and into the North Fork of the Grindstone Creek.

See my responses above. The solar panels, while being impervious, behave much like a level spreader, in the sense that runoff will drip along the bottom edge and fall onto a vegetated surface. Therefore, runoff is immediately returned to sheet flow, and runoff levels are anticipated to be at or below that of current existing conditions on the site.

## **Issue 3: Landscaping Needs to be designed into the Solar Farm perimeter**

The project suggests 0% landscaping. However, the Solar Farm is being placed on cleared land and then enclosed by a security fence. Landscaping is needed. The project needs significant landscaping around its perimeter so that it will not affect the comfort and convenience of the public or residents in the vicinity and so that it will not negatively impact property values of neighboring parcels.

We are working with Cypress Creek to meet an agreeable landscape design. There is an overall 15% requirement stating that 15% of any newly developed site shall be landscaped. This is inclusive of all street frontage and property edge buffering landscaping required.

## **Issue 4: Vegetation Needs to be protected then increased along the southern boundary**

The project suggests 52% vegetation. That vegetation likely accounts for the western boundary of forested land. Over the life cycle of this project a contract should be established that preserves that 52% vegetation of forested land so that it will not affect the comfort and convenience of the public or residents in the vicinity and so that it will not negatively impact property values of neighboring parcels. I suggest that a line of large trees be planted above the swale or drain outlined in Issue 2. The line of trees would be between the Solar Farm and the swale or drain which runs along the southern boundary.

The highest level of screening will be required on the southern property boundary since that portion of your property is zoned for single-family residential. This type of screening requires a 10' landscaped buffer with an 8' tall 'screening device' to 80% opacity. The screening device, "... can be constructed of wood, masonry, brick, stone, wrought iron, compact evergreen hedging, an earth berm, or some combination..." thereof.

### **Issue 5: Trail Amenities Needs to be allowed**

In 2008, I allowed a 100' easement to the City of Columbia and Boone County Public Works to run a sewer along the North Fork of the Grindstone Creek. A swath of land was cleared of trees and natural grasses were re-planted. There was an understanding that the City trail system would utilize that swath as an MKT trail connector. Current trails within the City reach out to this area and should be connected there. The Grindstone Creek Trail runs along the North Fork of the Grindstone Creek as far north as Lemone Industrial Park. The Hominy Creek Trail runs nearby and north of Interstate 70 into the Indian Hills subdivision. The project needs to account for trail amenities so that the MKT trail can continue to connect neighborhoods.

Parks and Rec requested a trail easement, "...on the west side of the creek." The Truman Solar property deliberately avoids encroaching on the stream corridor, and thus leaves a swath of land between the solar farm boundary and the creek. Much of the easement requested by Parks can be facilitated outside of the solar farm property boundary. Some easement may be required to limit creek crossings on the trail, however. I've asked Cypress Creek to depict the trail that may lie within their boundary. The easement itself will be a matter handled as a part of the final platting process.

### **Issue 6: Environmental Impact Reports are missing**

There is a reference to environmental consultation reports for field investigations, literature reviews, agency consultations, and assessing environmental conditions. Where are those studies? Additionally, has the impact on wildlife been studied? Can the impact on soil be studied with regards to the impervious surface of Solar Panels above grass?

My parcel to the south has abundant wildlife and useful farming soil that may be impacted, not just by construction but by ongoing operations. I use that land for primitive farming and natural gardening. It exists as a wildlife refuge and I provide ecological tours for recreation and education. The project needs to present environmental impact reports as stated.

### **Issue 7: Site Parking Needs to be accounted for**

The project has no parking space for engineers and maintenance staff, or, for mowing companies to off-load large equipment. The project needs to account for a minimal parking area to relieve neighboring subdivisions from absorbing off-site parking.

There is no parking requirement in the City Code for this use, because parking requirements are based upon gross floor area. Also, given that the site is private, and only maintenance staff will be allowed on the property, the value of providing parking is outweighed by the negative impacts of the additional impervious area that parking would require. It is anticipated that the access drives will be sufficient for site functions.

### **Issue 8: Planned Development (PD) zoning is not appropriate; General Industrial (IG) is appropriate zoning**

This project is not Planned Development but instead is General Industrial. It needs to be resubmitted under this zoning. PD zoning allows too many rules to be changed. A project of this magnitude and for this duration needs to have certainty. It is a utility. IG zoning provides security. IG zoning is more sensible for a Solar Farm that produces energy.

City Staff expressly advised the applicant to seek PD zoning to limit the use to that being proposed. Open industrial zoning on this property is inappropriate due to the proximity to residential areas. The City does not typically support single-use planned districts, however, in this instance, that is what we've requested. Limiting the PD to only the solar farm use protects neighboring properties by requiring a rezoning process, and the required public notification and public hearing, upon any change of use. If the solar farm becomes defunct at any time in the future, redevelopment of the property will require either a PD development plan amendment or a complete rezoning.

**Other issues:** The Cypress Creek reports had a number of contradictions as well as statements made with no data or findings. The following points highlight those contradictions or statements. (There may be redundancy in these statements and the issues outlined above - this is my working list of items in linear order (page number order) found in the reports:

- Where will the engineers and maintenance workers (mowing, etc.) be able to park? The site needs a small lot or driveway. Driveway and entrance has been added on the PD plan.
- The acres referenced is 80 in one report and 70.7 in another report and 93.8 in another? What is the accurate acreage? Upon completion of the boundary survey, the total area was determined to be 93.8 acres.
- The investment is referenced as \$23.8M and \$16.8M and \$10.58M. What is the accurate investment and how is that defined in detail?
- Is the project too close to a flood plain? According to City Code, development is allowed within the floodplain, the solar farm avoids the floodplain completely.
- There is a reference to environmental consultant reports/analysis for field investigations, literature reviews, agency consultations, assessing environmental conditions. Where are those studies? Has the impact on wildlife and soil been studied? The neighboring property to the south has abundance wildlife and useful farming soil that may be impacted by construction and ongoing operations.
- There is a statement that the project "will not negatively impact property values of neighboring parcels". Can that argument be objectively presented somehow? This is a significant concern.
- There is a statement that the project "will not affect comfort and convenience of public or residents in vicinity". Can that argument be qualified somehow? Please explain this.
- What is meant by the fact that the site was chosen due to the "lack of environmental constraints"?
- Who is the landscaping manager if there is 0% landscaping?
- Describe best practices for preventing runoff? Can that be detailed please?
- Mowing 6 times annual may be conservative.
- The statement is made "minor visual impact". How is this qualified?
- Why is this PD and not Industrial? PD may allow many too many rules changes for a project that will endure for 25 years. That makes many folks uncomfortable. How will these changes be marketed and approved? Any deviation from general UDC provisions, or specific provisions for industrial uses, will be detailed as a part of the staff report to the PZC, and will be up for

debate/discussion at the public hearing. At this time, the applicant is not seeking relief from any aspect of the Code.

- Do the tax considerations need to be revised now based on the City-County tax changes?
- Has Cypress Creek/Truman Solar used fencing before?