Date: 4/1/2017

Proposal to Create Native Prairie Landscapes at Various Solar Sites

A. Project Overview:

1. Establishing a native landscape in this area will provide a long term, low maintenance, ecologically sound landscape that is adapted to the existing conditions of the site. This native landscape will not require irrigation, black dirt or other soil amendments. The restoration will utilize prairie species that are native to the Project Areas area ensuring authenticity and long term success. This project also represents an opportunity to create a significant expanse of invaluable habitat for bees, butterflies and other pollinators.

2. Due to the height constraints presented by the panels, custom seed mixes are being designed using species that are generally not taller than 3 feet. In lieu of separate seed mixes, the same seed mix will be sown both within the array and in the perimeter areas.

3. Given these sites' histories of being in row crop production, it is unlikely that any herbicide applications will be needed to eradicate existing vegetation. However, if perennial, non-native weeds are present on site, it would be worthwhile to treat this vegetation with herbicide. These applications, if necessary, would ideally occur before construction begins.

4. Intense Management for the first 3 years of Establishment Period

B. Site preparation:

1. If necessary, the project area will be prepped with a disk/finisher in order to alleviate ruts and provide a smooth, seedable surface *(likely to be done by others).*

2. If necessary, in areas with actively growing perennial non-native vegetation, apply a glyphosate herbicide (Roundup® or equivalent) as per manufacturer's directions. Allow a minimum of 10 days before disturbing the vegetation with other procedures.

3. An oat cover crop can be sown prior to construction activities in order to control erosion and deter the establishment of weeds prior to the permanent seeding.

4. Prior to the permanent seeding, the soil will prepped using disks, tillers and harrows in order to create a viable seedbed.

C. Seed and Seeding:

1. Acceptable seeding dates for native species are in the spring or summer before August 10th or in the fall between September 20th and freeze-up. These projects, depending on their

construction schedule, would likely be seeded in both the summer and fall seeding windows.

2. In larger open area, grass seed will be applied with a seed drill designed for native seeding (Truax® or equivalent). In all other areas, grass seed will be applied via broadcasting.

3. All wildflower seed will be applied by broadcasting.

4. The seed mixes will consist of the following species and amounts:

Grass Seed	**lbs./acre**
Side oats grama (*Bouteloua curtipendula*)	3.5
Blue grama (*Bouteloua gracilis*)	1.0
June grass (*Koeleria macrantha*)	0.75
Little bluestem (*Schizachyrium scoparium*)	6.5
Prairie dropseed (*Sporobolus heterolepis*)	.0.25

Note: A cover crop will be sown along with the native grasses at a rate of approximately 25 lbs./acre. Cover crop is an annual grass species that germinates quickly and will reduce the risk of soil erosion on the site. Oats will be used for a spring or summer seeding, and winter wheat will be used for a fall seeding.

Wildflower Seed	**oz./acre**
Yarrow (*Achillea millefolium*)	1.5
Butterfly weed (*Asclepias tuberosa*)	0.5
Partridge pea (*Chamaecrista fasciculata*)	3
Purple prairie clover (*Dalea purpurea*)	13
Stiff tickseed (*Coreopsis palmata)*	2
Wild lupine (*Lupinus perenis*)	8
Prairie cinquefoil (*Potentilla arguta*)	1
Black-eyed Susan (*Rudbeckia hirta*)	4
Gray goldenrod (*Solidago nemoralis*)	1
Spiderwort (*Tradescantia ohiensis*)	3
Golden alexanders (*Zizia aurea*)	3
Total	**40**

D. Erosion Control:

1. Cover crop will be sown along with the native grasses.

2. Straw mulching and erosion blanket will not be used.

E. Management:

1. Management (maintenance) plays a vital role in the eventual success of any native landscape installation, especially during the establishment period. Active management of your native landscape is highly recommended to give the project the best opportunity for long term success.

2. During the germination year, the project area may need to be mowed to control annual weed development. If a "closed" canopy of weed cover develops, it should be mowed to aid in the growth of the prairie seedlings by reducing competition. Mowing may also be necessary if the weeds are about to set seed. Optimum cutting height, depending on the wildflower species present, is typically 4 to 6 inches. It is important that the clippings are finely mulched in order to prevent smothering.

3. In years following the first growing season, Integrated Plant Management (IPM) services are utilized to control annual, biennial and perennial weed species within the developing native landscape. Typical IPM services include spot herbicide spraying, spot mowing, and herbicide wicking. Large scale sites such as these are typically managed using ATVs mounted with the proper equipment.

4. Prescribed burning is an invaluable tool when it comes to managing native landscapes. However, given the nature of this project, fire management will not be utilized.

F. Anticipated Management:

The following table conveys the anticipated management procedures for your project during the first 3 growing seasons. Estimates for these procedures are provided in the cost section of this proposal.

Year	Projected Management Procedures
2017	Complete site mowings to control annual weed canopy (2 or 3 mowings as needed). Project monitoring
2018	Integrated Plant Management (IPM) – includes spot spraying, spot mowing, wicking, hand weeding, and other techniques to control weeds and invasive species (2 complete site visits) Project monitoring
2019	Integrated Plant Management (IPM) (2 complete site visits) Project monitoring