



November 21, 2017

Jerry Lein
North Dakota Public Service Commission
600 East Boulevard Avenue, Dept. 408
Bismarck, ND 58505-0480

RE: Reclamation Inspection
PU-14-031, Border Winds - Wind Energy Project

Dear Mr. Lein:

Carlson McCain, Inc. (CMI) conducted a reclamation inspection at the Border Winds – Wind Energy Project (Case No. PU-14-031) on November 1, 2017, on behalf of the North Dakota Public Service Commission (PSC). The project consists of installing 75 wind turbines totaling approximately 150 MW of generating capacity and associated facilities in Rolette County, North Dakota.

CMI Inspector, Todd Hartleben met Jayme Orrock, Xcel Energy Plant Superintendent, and John Bartunek, Xcel Energy Environmental Analysis at the facility office northeast of Rolla, ND. The facility has been operating since spring of 2016. Reclamation of the facility was completed in the fall of 2016 with some areas being re-worked in the spring of 2017. The facility was visually inspected for reclamation success with attention paid to certain areas noted in Carlson McCain's May 2016 inspection report. Figure 1 depicts the location(s) of photographs taken during the inspections.

Field Review

Weather conditions at the time of the field survey were cloudy with light snow present. The snow did not hamper evaluation of the reclamation efforts. All turbines and roads were accessible. The facility is located primarily in agricultural fields that, at the time of inspection, had been disced after harvest. The ground is mostly barren except for isolated wetlands and vegetation in road ditches. The turbine construction pads have all been reclaimed, which consisted of grading the surrounding fields to match existing contours and promote runoff. Some areas had been re-graded after the initial contouring at the landowner(s) request, to better suit the agricultural practices at that location.

A number of access roads have low-water crossings in order to allow runoff from one side of the road to the other. The original crossings consisted of a rock/cement mixture reinforced driving surface. These did not prove to be adequate and were replaced with revetment mats or a reinforced geo-grid.

Some county/township road intersections had been widened to allow better access for blade and structure transport trucks. These intersections have been restored to the original configuration and the roadside ditches have been re-seeded. Evidence of successful revegetation is present and no noxious weeds were noted. Roads traveled during the inspection were in good driving condition.

Conclusion

Overall reclamation at the Border Winds facility appears successful. On-going maintenance of access roads is anticipated but normal. There were no trees removed during construction; therefore, no monitoring of tree plantings is required.

Please contact me at 701-595-7001 if you have any questions or require additional information.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Todd Hartleben", with a long horizontal flourish extending to the right.

Todd Hartleben
Principal Engineer

cc: Jayme Orrock, Xcel Energy
John Bartunek, Xcel Energy

Attachment

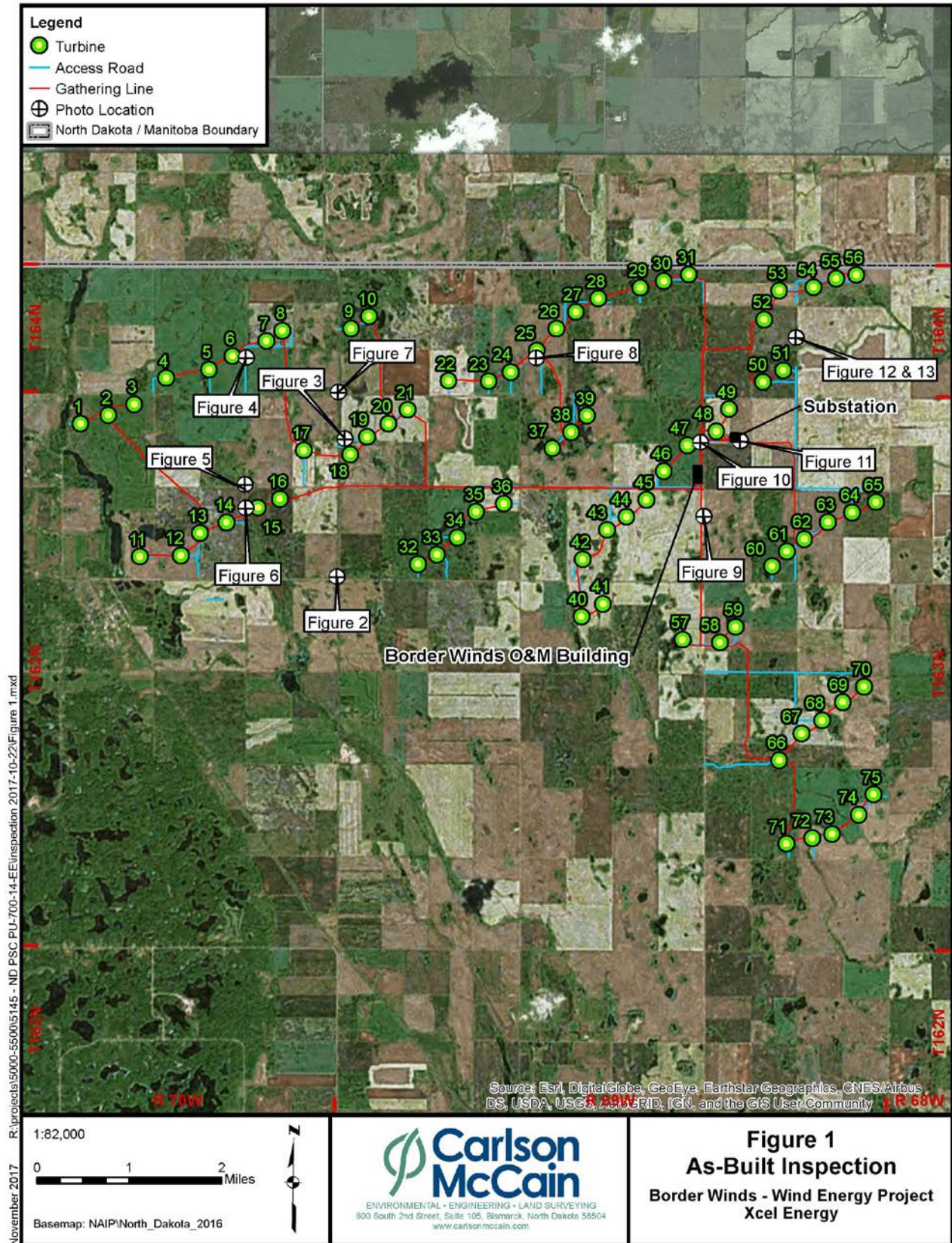




Figure 2. Photo taken facing north of Highway 43 and 48th Ave NE. Intersection was widened to facilitate transport trucks. Radius has been removed and intersection revegetated.



Figure 3. Photo of revetment mat at low water crossing to Turbine 19 (looking northeast).



Figure 4. Photo taken looking west towards Turbine 6. This location was noted in the May Construction Inspection report (Figure 4) as needing fixing. A revetment mat has been placed in the low-water crossing. Construction debris is due to generator replacement that occurred a few days prior.



Figure 5. Photo facing north at intersection of 107th St NE and 47th Ave NE. Intersection had been widened to facilitate transport trucks. Radius has been removed and road ditch has been revegetated.



Figure 6. Photo taken facing south at intersection of 47th Ave NE and access road to Turbine 15. Road ditch has been reclaimed and riprap placed at mouth of culvert.



Figure 7. Photo taken looking south at the intersection of 108th ST NE and 48th Ave NE. Intersection was widened to facilitate transport trucks. Radius has been removed and road ditch is revegetated.



Figure 8. Typical turbine pad. Photo taken facing north at Turbine 25. Turbine pad has been reduced from construction and surrounding area graded to match existing contours.



Figure 9. Photo taken facing west from Kyle Road, looking along collection line. Line route has been restored and matches surrounding contours.



Figure 10. Photo taken facing southwest from Kyle Road towards facility office. View is across laydown yard which has been restored to original condition.



Figure 11. Photo taken facing west along access road to substation. Area surrounding substation has been revegetated.



Figure 12. Photo taken facing west at 53rd Ave. The road at this location was identified in the May Construction Inspection report (Figure 14) as being impacted by construction traffic. Road has been restored and riprap was placed at culverts.



Figure 13. Photo taken facing north at same location as Figure 12. Road has been restored after construction.