

FINAL COMPLIANCE MONITORING REPORT
Minnkota Power Cooperative, Inc. Center to Grand Forks 345 kV Transmission Line
North Dakota Public Service Commission Case No. PU-09-670
Route Permit Number 144

Houston Engineering, Inc. (HEI) was selected by the North Dakota Public Service Commission (ND PSC) to provide permit compliance monitoring during construction of the Minnkota Power Cooperative (MPC) 345 kV Transmission Line from Center to Grand Forks (Case No. PU-09-670). Criteria established in North Dakota Administrative Code identify exclusion and avoidance areas, and specific selection and policy criteria for routing high voltage transmission lines. General permit compliance review activities performed included:

- The establishment of a GIS database for compliance information obtained during the field inspections that was accessible to the project team and the ND PSC project staff.
- Providing compliance monitoring along the entire 250-mile transmission line route. The compliance inspections were limited to the 150-foot wide right-of-way, and included the construction laydown areas.
- Coordination with MPC through the weekly construction activities reports provided throughout the 117-week construction period.
- Monitoring critical habitat areas, and checking for threatened and endangered species such as bald eagles, golden eagles and piping plover.
- Noting the locations of cultural sites, paleontological sites, archeological sites, historical sites or grave sites that were identified in the transmission line corridor.
- Verifying wetland boundaries and identifying impacts that may have occurred during construction.
- Verify and document the locations and any impacts to the USFWS wetland or grassland easements, and impacts to the wetland and conservation easements.

The design features of the 345 kV transmission line were inspected as part of the permit compliance monitoring. Plan and profile drawings were reviewed in terms of structure type, placement and general clearances. Following installation of the structures and conductors, the as-built conditions of the 345 kV transmission line was inspected for compliance with Route Permit Number 144, signed by the Commission on April 25, 2012.

Houston Engineering performed compliance monitoring on two separate occasions. The first environmental compliance inspection was scheduled for the fall 2012; however, it was postponed until the following spring to allow construction to progress. In the interim, weekly construction reports were

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monitored closely for notable incidents within the construction corridor that warranted greater scrutiny. The first environmental compliance monitoring occurred in the summer of 2013, and a summary of inspected areas was delivered to the PSC in a Progress Report. The second environmental compliance monitoring inspection occurred in the summer of 2014 following completion of all the transmission pole foundations.

MBN Engineering (MBN) provided the engineering compliance inspection associated with the CGF transmission line. The plan and profile drawings were reviewed with regards to the structure types, placement and general clearances. The initial engineering compliance inspection focused on the as-built conditions of the transmission line. The weekly construction reports preceding the inspection were monitored closely for notable incidents or discrepancies that may require greater scrutiny. The second engineering compliance inspection focused on structures No. 1292 through structure No. 1323 to verify compliance with FAA permits.

The entire 250-miles of the Center to Grand Forks transmission line was inspected for compliance with Route Permit 144 issued by the North Dakota Public Service Commission on April 25, 2012. The transmission structures were inspected for compliance with the conditions pertaining to threatened and endangered species; location to and avoidance of known historical resources; location to and avoidance of houses and family farmsteads and ranches; location to and avoidance of rivers, streams and drainage ways; and location to and avoidance of wetlands and US Fish and Wildlife Service easements. Further, permanent impacts to plant life, including tree removal, and impacts to agricultural lands was noted. In addition, the completed transmission line was inspected for compliance with engineering design and placement; and for compliance with the Federal Aviation Administration (FAA) permit regulations.

The information documented during the field inspections (Progress Reports) performed by HEI are included in **Attachment A**. The information documented during the field inspections performed by MBN are included in **Attachment B**. In general, pole placement and transmission line construction was found to be in substantial compliance with the route permit (Route Permit 144) and the record documents. The areas where discrepancies were found are noted in the progress reports and included in the data base information contained within **Attachment C** (disc). Also included within **Attachment C** (via disc) is the site photography taken during our site visits.

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APPENDIX A: HEI PROGRESS REPORTS

Minnkota Power Cooperative, Inc. 250 mile 345 kV line from Center to Grand Forks, North Dakota (PSC Case No. PU-09-670)

Permit Compliance Review

NDPUC Contract No.: PU-668-12

Reporting Period: October 10th, 2012 to March 19th, 2013Prepared By: Houston Engineering, Inc. / Emmy Baskerville, Environmental Scientist, Jeremy Bixby, GIS Project Manager, and Bart Schultz, Project Manager

General:

Houston Engineering, Inc. (HEI) and MBN Engineering (MBN) were contractually hired by the North Dakota Public Services Commission (NDPSC) to complete the construction inspection activities, as part of the Minnkota Center to Grand Forks 345 kV transmission line construction project (PU-09-670). The following is a summary of the work completed to date and the anticipated work plan for the coming spring and summer months. Three site visits are planned for the completion of the construction inspection work. As described in the Contract between HEI and the NDPSC, one permit compliance site visit was planned for the fall of 2012. This fall 2012 site visit was postponed until the spring of 2013, to maintain efficiency and allow for further construction of the line.

Summary of Activities / Items Completed to Date:

The following list summarizes the activities completed to date. A more detailed description of these activities follows in the next section.

1. Reviewed project details, Route locations and environmental concerns; identified exclusion areas, avoidance areas and selection criteria;
2. Geodatabase development;
 - collection of the relevant GIS data and developed an understanding of the site conditions
 - creation of a database for the purposes of monitoring and mapping the construction phases and the environmental and permitting characteristics of each construction location (**see Photo 1**)
 - Utilized the permit information, the weekly construction status reports from Minnkota to the NDPSC.
 - creation of a geodatabase of pole points for data collection, containing both spatial data for describing the physical location of each pole and attribute fields for describing whether and how each pole complies with environmental regulations (**see Photo's 2, 3, 4**). In the field, these attribute fields will be edited to describe compliance (**Photo 5**), which will automatically update the geodatabase to the server in real-time.
3. Uploaded databases to a GIS server, allowing the team to access and update these databases in the field, utilizing iOS products.

Description of Geodatabase and Data Collection Program

The project activities to date have included the preparation of a geodatabase (**Photo 1**) for the purposes of monitoring the construction progress and mapping the environmental and permitting characteristics of each construction point and laydown area.

Structure	Date of Report	Foundation	Work Progress	Date of Report Structure	Work Progress	Construction Stage	Load Cover	Water Resources
240	1/21/2013	Foundation installation complete				Foundation installation complete		
242	1/21/2013	Foundation installation complete				Foundation installation complete		
356	1/16/2013	Foundation installation complete				Foundation installation complete		
357	1/16/2013	Foundation installation complete				Foundation installation complete		
423								
698	1/21/2013	Foundation installation complete				Foundation installation complete		
701	1/21/2013	Foundation installation complete				Foundation installation complete		
703	1/16/2013	Foundation installation complete				Foundation installation complete		
704	1/16/2013	Foundation installation complete				Foundation installation complete		
705	1/16/2013	Foundation installation complete				Foundation installation complete		
706	1/16/2013	Foundation installation complete				Foundation installation complete		
707	1/16/2013	Foundation installation complete				Foundation installation complete		
708	1/16/2013	Foundation installation complete				Foundation installation complete		
709	1/16/2013	Foundation installation complete				Foundation installation complete		
710	1/16/2013	Foundation installation complete				Foundation installation complete		
711	1/16/2013	Foundation installation complete				Foundation installation complete		
712	1/21/2013	Foundation installation complete				Foundation installation complete		
713	1/21/2013	Foundation installation complete				Foundation installation complete		
714	1/21/2013	Foundation installation complete				Foundation installation complete		
715	1/21/2013	Foundation installation complete				Foundation installation complete		
716	1/21/2013	Foundation installation complete				Foundation installation complete		
717	1/21/2013	Foundation installation complete				Foundation installation complete		
718	1/21/2013	Foundation installation complete				Foundation installation complete		
719	1/21/2013	Foundation installation complete				Foundation installation complete		
720	1/21/2013	Foundation installation complete				Foundation installation complete		
725	1/21/2013	Foundation installation complete				Foundation installation complete		
746								
749								
788	7/24/2012	Foundation installation complete				Foundation installation complete	Cultivated Crops	
789	7/24/2012	Foundation installation complete				Foundation installation complete	Cultivated Crops	
790	7/24/2012	Foundation installation complete		8/23/2012	Set Structures	Set Structures	Pasture/Hay	
791	7/24/2012	Foundation installation complete		8/23/2012	Set Structures	Set Structures	Pasture/Hay	
792	7/31/2012	Foundation installation complete		8/23/2012	Set Structures	Set Structures	Cultivated Crops	
793	7/31/2012	Foundation installation complete				Foundation installation complete	Cultivated Crops	
794	7/31/2012	Foundation installation complete		8/23/2012	Set Structures	Set Structures	Pasture/Hay	
795	7/31/2012	Foundation installation complete		8/23/2012	Set Structures	Set Structures	Pasture/Hay (NDLD_Surface Tracts)	
796	7/31/2012	Foundation installation complete		8/23/2012	Set Structures	Set Structures	Pasture/Hay (NDLD_Surface Tracts)	
797	7/31/2012	Foundation installation complete		8/23/2012	Set Structures	Set Structures	Pasture/Hay (NDLD_Surface Tracts)	
799	8/8/2012	Foundation installation complete		12/10/2012	Set Structures	Set Structures	Emergent Herbaceous Wetlands	
800	8/8/2012	Foundation installation complete		12/10/2012	Set Structures	Set Structures	Pasture/Hay	
801	7/31/2012	Foundation installation complete		8/23/2012	Set Structures	Set Structures	Pasture/Hay	

Photo 1: Example screen shot of the database of points and structure information.

To complete this, we have accessed the permit information and the weekly status reports provided by Minnkota to the NDPSC. This geodatabase contains both spatial data for describing the physical location of each pole and environmental data that will allow HEI’s environmental scientists and MBN’s engineers to quickly gauge the status and needs of the inspection. This allows us to quickly and easily determine which poles are now constructed and are now ready for review by HEI and MBN to assess the environmental, permitting and construction compliance. **See Photos 2-5.**

Additionally, HEI’s geospatial and environmental staff have collaborated to produce a geodatabase of points for data collection. This data is published as a service and configured to run through a client app on iOS devices. By using iPads to manage the field collect, HEI and MBN’s environmental scientists and engineers will be enabled to take detailed notes and photos in the field (See **Photo 5** for an example screenshot) and these materials will then be sent immediately through the network back to HEI’s GIS servers, where progress can be monitored in real-time by staff engineers and project managers. This method for data collection will allow us to organize the field data efficiently and accurately, and the final deliverable narrative can be compiled and delivered to the PSC in a thorough and efficient manner.

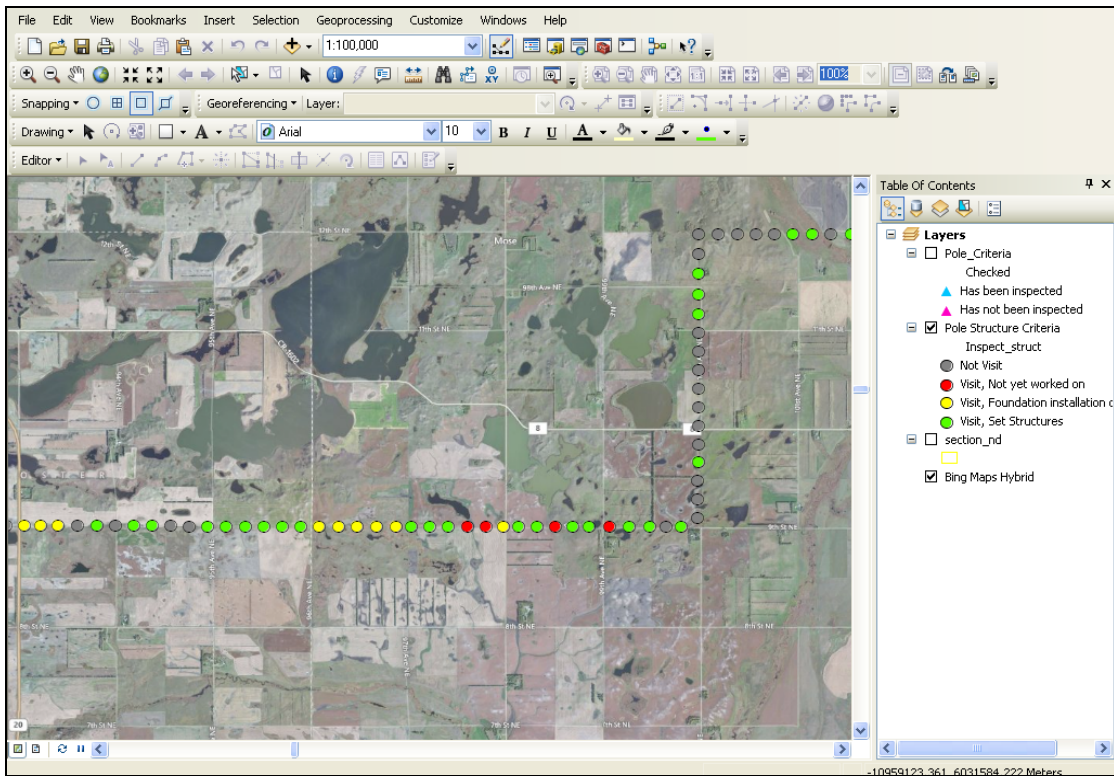
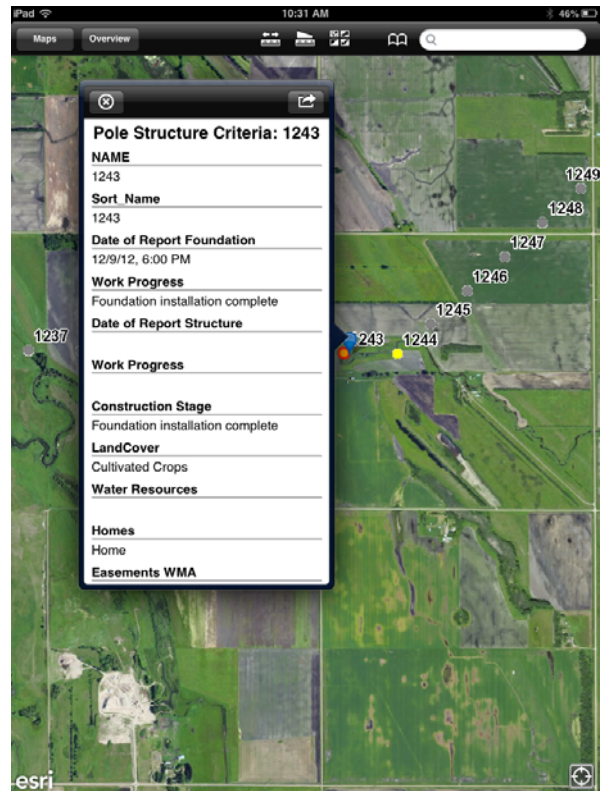
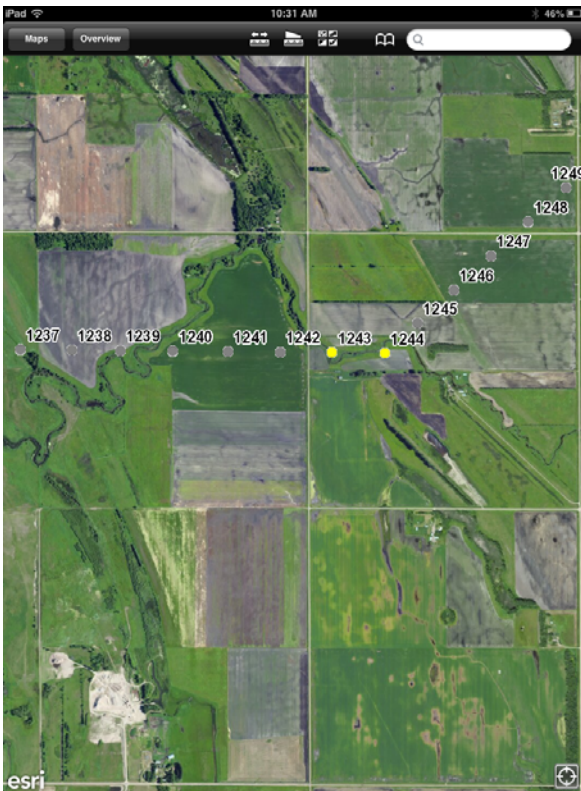


Photo 2: Example screen shot of the geodatabase of points and structure information, in ArcMap.



Photos 3 & 4 show the ArcGIS for iPad mapping application. In these example screenshots, the geodatabase that has been created allows us to map the location and track the environmental and permitting details that are specific to individual poles. The poles are color coded to indicate if they have been constructed and what stage of construction they are currently in.

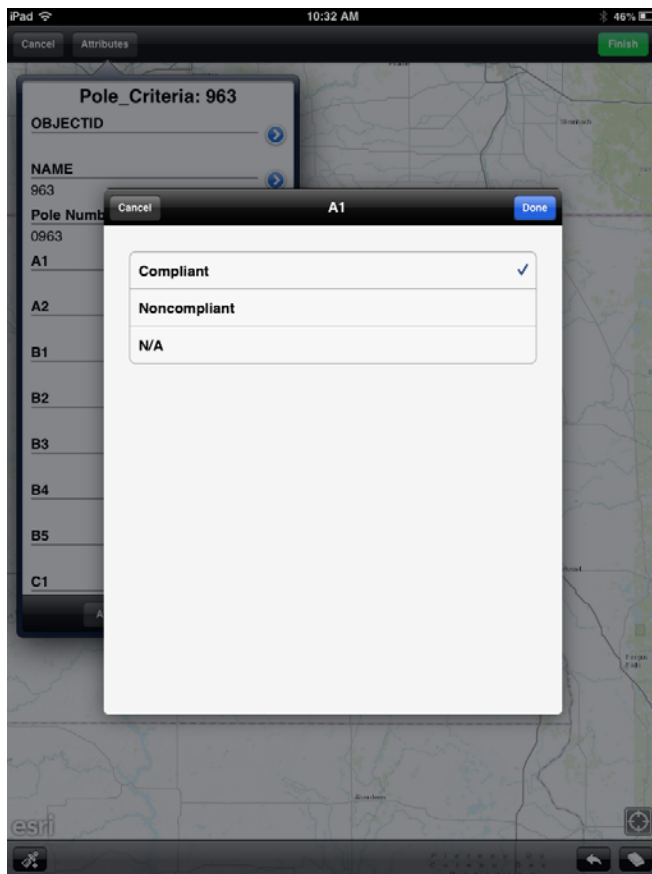


Photo 5: Example screen shot of the data collection feature of the geodatabase in ArcMap for iPad. This will allow us to travel to the pole, collect compliance data, take a photo and notes, and simultaneously update the database to the server in real-time.

Future Activities for the next reporting period:

Inspection will continue with the schedule as planned. The geodatabase and data collection program is now complete and ready to be implemented in the field. Three environmental compliance site visits are planned for 2013; the first environmental inspection will occur in mid to late May, as site conditions allow. This initial inspection will occur within Grid Index Areas 25-35, as depicted in Figure 1, Construction Overview. This equates to approximately Pole 965-1334, or roughly 100 miles of transmission line. Figures 2 and 3 show an example of the first inspection areas, and the information contained within our database. The next Progress Report will follow this first site visit. The first engineering inspection will occur later on in the summer, to allow construction to progress.

Fig 1: Construction Overview

- Not yet worked on
- Foundation installation complete
- Set Structures
- Strung
- Grid Index

N
1 in = 21 miles

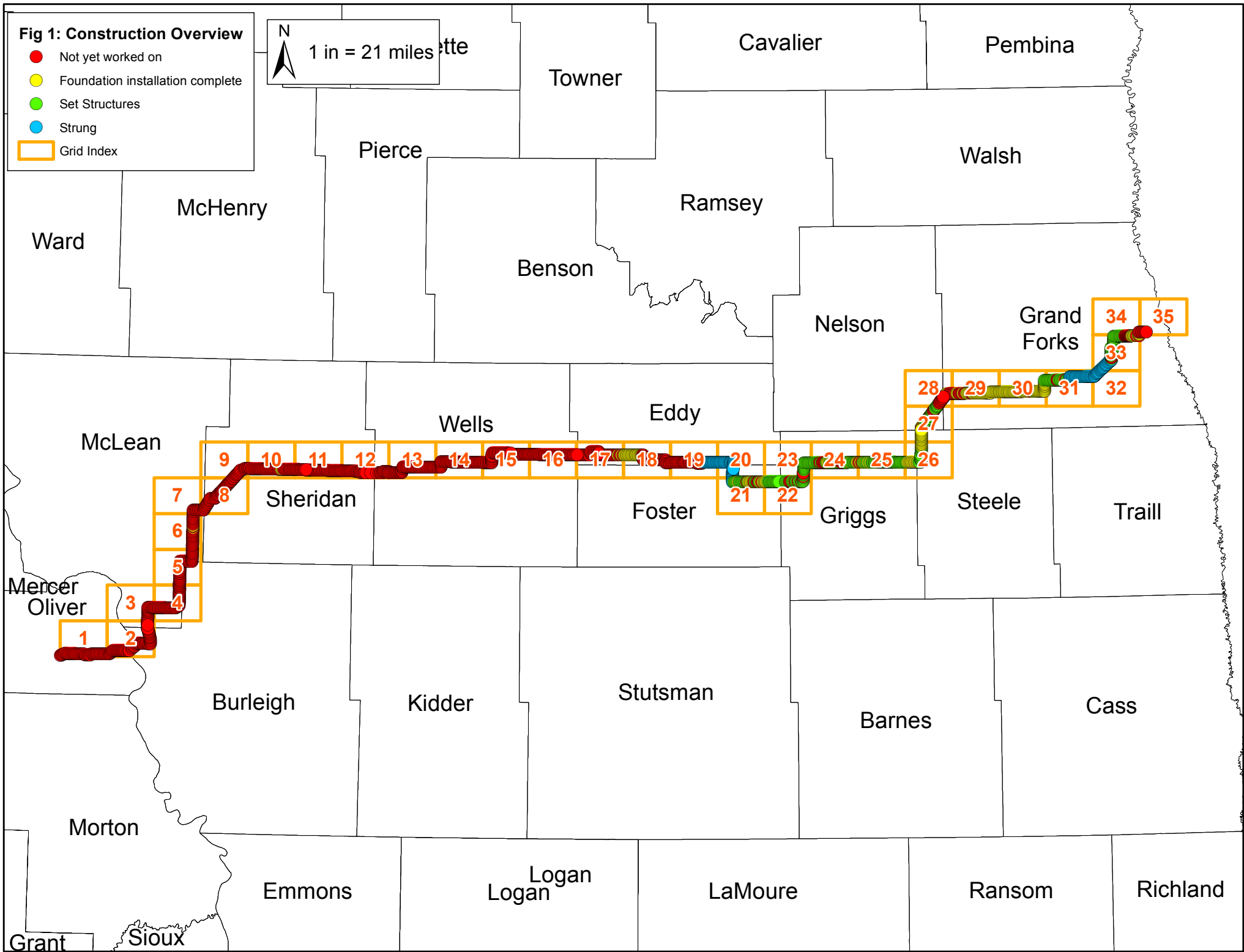


Figure 2
Construction Progress Overview

- Not yet worked on
 - Foundation installation complete
 - Set Structures
 - Strung
- 1 in = 1 miles
- Page: 33

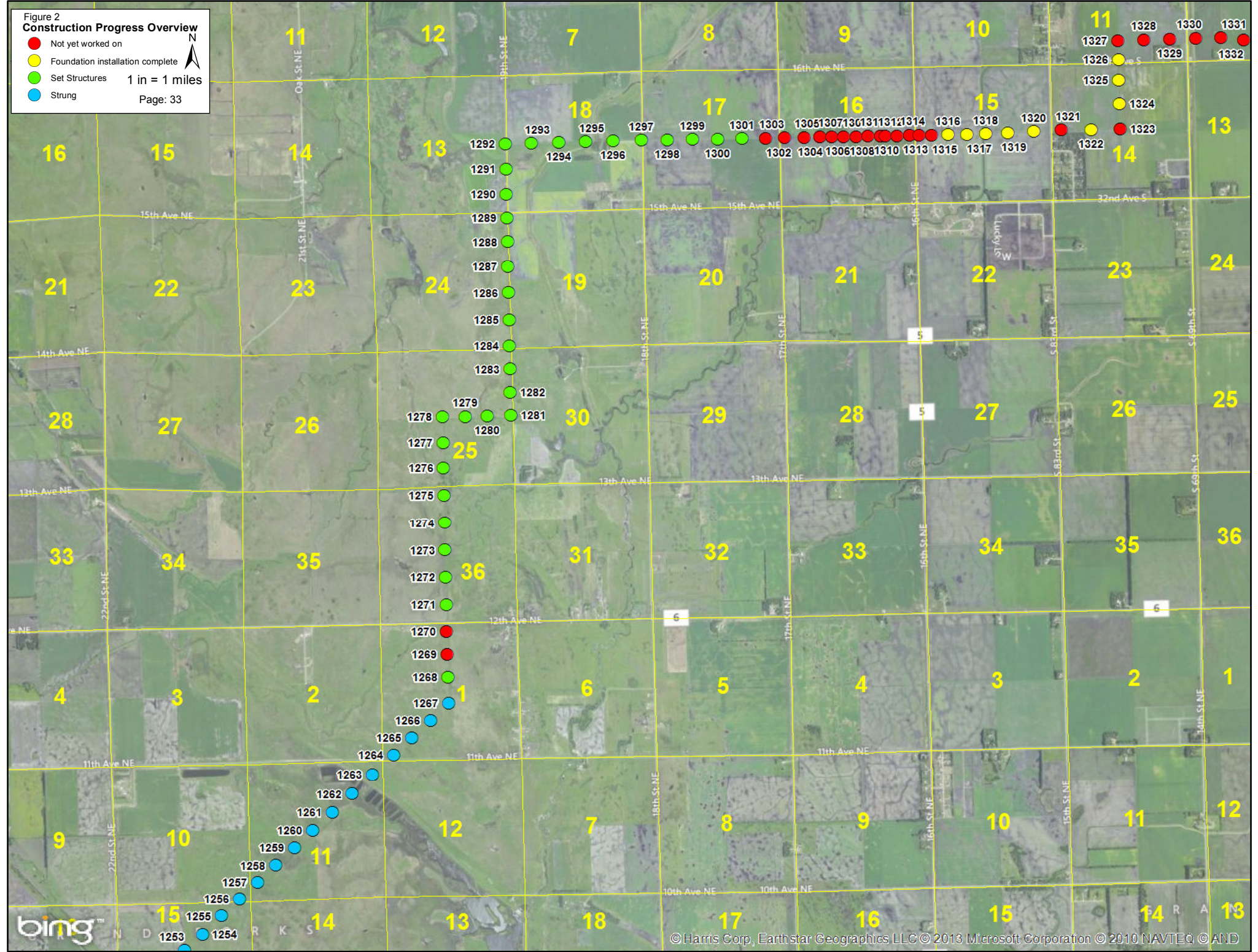
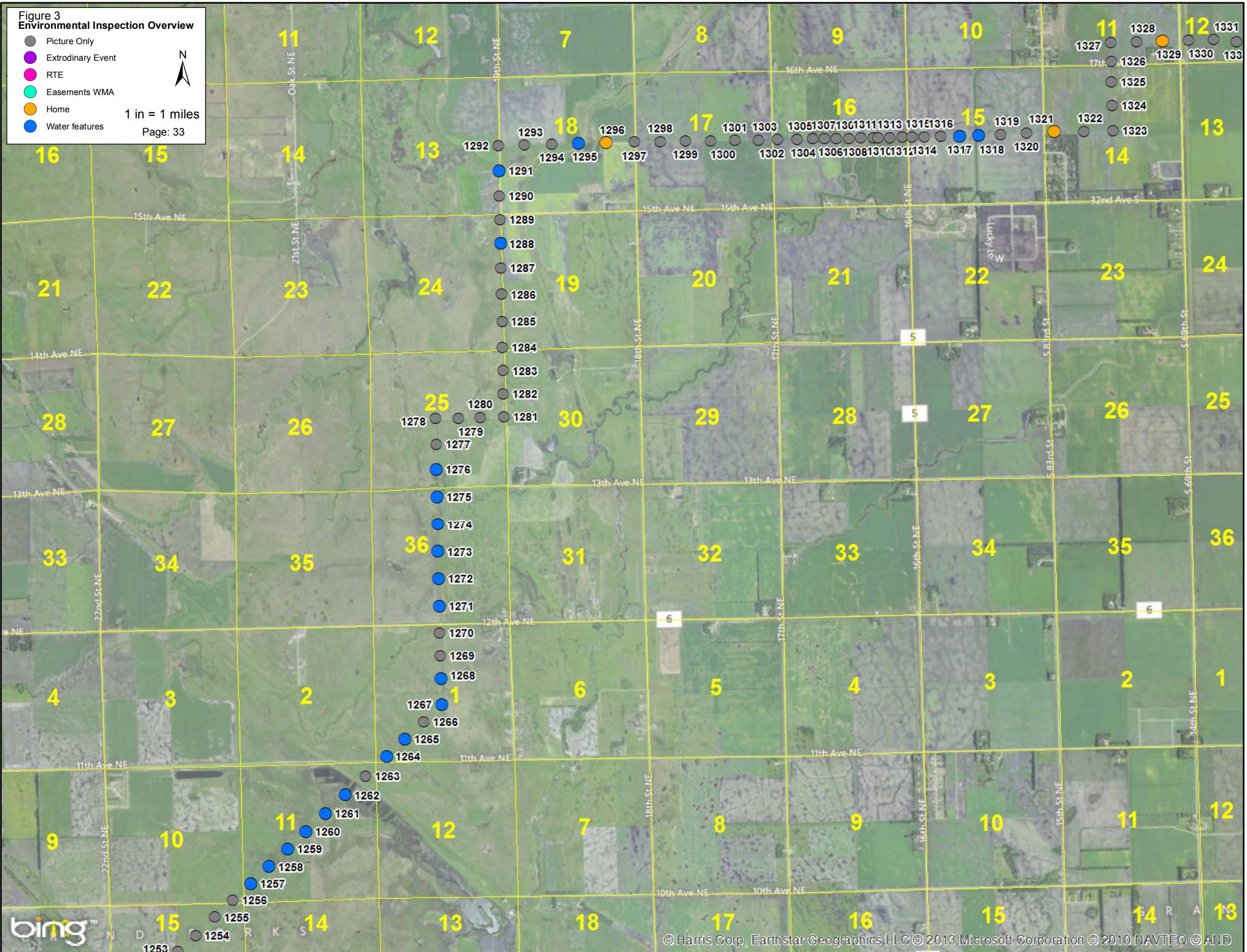


Figure 3
Environmental Inspection Overview

- Picture Only
 - Extrordinary Event
 - RTE
 - Easements WMA
 - Home
 - Water features
- 1 in = 1 miles
Page: 33



Minnkota Power Cooperative, Inc. 250 mile 345 kV line from Center to Grand Forks, North Dakota (PSC Case No. PU-09-670)

Permit Compliance Review

NDPUC Contract No.: PU-668-12

Reporting Period: March 20th, 2013 – August 16th, 2013

Prepared By: Houston Engineering, Inc. / Emmy Baskerville, Environmental Scientist and Bart Schultz, Project Manager

General:

Houston Engineering, Inc. (HEI) and MBN Engineering (MBN) were contractually hired by the North Dakota Public Services Commission (NDPSC) to complete the construction inspection activities, as part of the Minnkota Power Cooperative Center to Grand Forks 345 kV transmission line construction project (PU-09-670). The following is a summary of the work completed to date and the anticipated timeframe for the completion of the permit compliance review. One environmental compliance site visit has been completed, and one additional site visit is planned after construction of the Center to Grand Forks 345 kV transmission line is complete. This field inspection report is for the initial site visit, which occurred during June, from the 24th through 28th, 2013.

Summary of Activities / Items Completed to Date:

One site visit has been completed since the previous Status Report. The focus of this initial site visit was environmental compliance inspection on the eastern half of the transmission line. There were 527 poles inspected including poles 1334-822, and 804-791 (**Figure 1**). A total of 790 remain for environmental compliance inspections, and 1334 remain for engineering/construction compliance inspections. It is anticipated that these inspection visits will occur in the Spring of 2014.

The first environmental compliance visit targeted poles that were constructed in or within the vicinity of the exclusion, avoidance and selection criteria, as outlined within the permit. During the compliance site visit, we identified the following resources that were within and around the newly constructed poles: historical resources, homes/family farms and ranches, rivers/streams/drainage ways, wetlands and United States Fish and Wildlife easement wetlands, and plant life (tree clearing areas and agriculture). In addition, Extraordinary Events, as described within the construction weekly reports, were also targeted to identify and observe notable incidents within the construction corridor. The following summarizes the observations:

Historical Resources

GIS data received from the ND State Historical Preservation Office was utilized to identify the poles which may impact areas of known historic or archaeological significance. Poles that were placed in or within 500 feet of the areas identified as potentially significant sites were identified and spatially located with a handheld GPS on site to verify the pole location. These located pole points were then compared to the permitted pole location shapefile to verify they were placed as specified in the

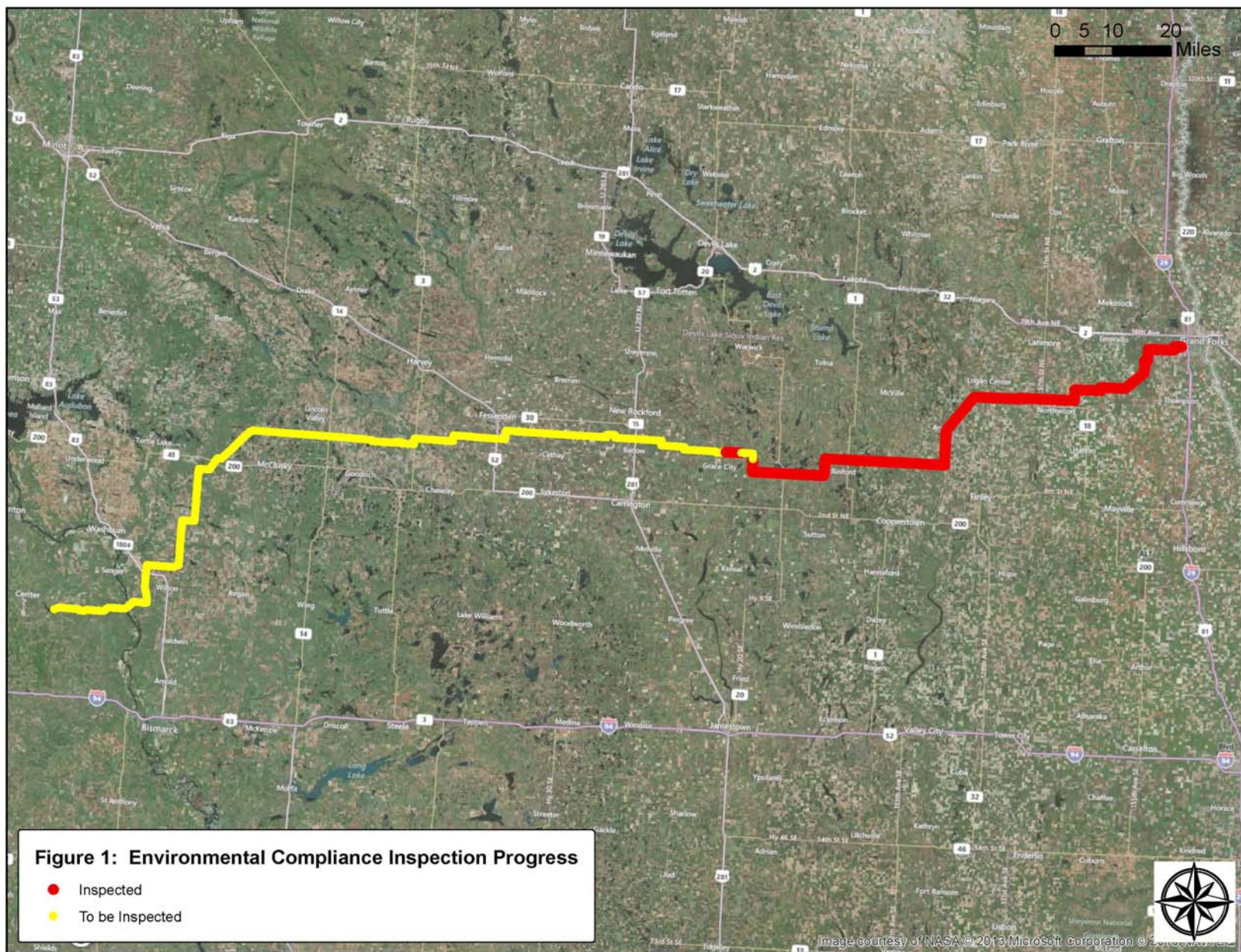


Figure 1: Environmental Inspection Progress (as of August 16th, 2013)

Permit. Seven poles were identified to be located within potentially known historic or archaeological sites, and each of these poles were constructed in the location outlined in the permit.

Houses/Family Farms and Ranches

GIS home location point data received from Minnkota was utilized to identify poles which may be placed within the 500 foot buffer of a residence, school or place of business (identified as an Avoidance Area within the permit). Using GIS, we identified all poles that were placed in or within 550 feet (to allow for a margin of error) of residences, schools or places of business. In the field, these poles were geo-located utilizing a handheld GPS unit to verify the constructed location. These located pole points were then compared to the permitted pole location shapefile to verify they were placed as specified in the permit. Thirteen poles were identified to be located within potentially known historic or archaeological sites, and each of these poles was constructed in the location outlined in the permit.

Rivers/Streams/Drainage ways

GIS location data was received from Minnkota and utilized to identify poles which may be constructed within a river, stream or drainage way, as outlined within the Selection Criteria of the permit. No poles were observed to be constructed directly within rivers/streams or drainage ways. Poles 1317, 1318 and 1244 are within the floodplains of the English Coulee. Poles 1295, 1272, 1174, 1130, 1093, 1092, 1007 and 1001 were constructed within the floodplains of intermittent streams. Pole 1159, 1153 and 1152 were constructed within the floodplains of the Little Goose River. Pole 1091 was constructed within the floodplain of Goose Creek. Pole 1045 was constructed within the floodplain of the Pickerel Lake Creek. Poles 993-991 were constructed within the floodplain of the Sheyenne River. Installations of the Stormwater Pollution Prevention Plan items were observed, including the placement of silt fences around water resources (See **Photo 1**). In-between Pole 996 and 997, erosion was present and siltation was observed in the intermittent stream (See **Photo 2**).

Wetlands and Easement Wetlands

Wetland delineation data was used to identify poles that were constructed within wetlands. US Fish and Wildlife Service easement parcel data was used to identify potential wetland impacts within easement parcels. A total of 160 poles were inspected to determine wetland impact compliance. Twelve poles were placed within wetlands, including 1272, 1264, 1261, 1204, 1087, 1086, 1077, 1058, 966, 965, 920, 880, 866, 863. Temporary impacts from construction rutting or bridge material was observed on poles 920, 1065, 1077, 1079, 1080, 1272 (see **Photo 3 and Photo 4** for example) and will need to be returned to pre-construction condition, as outlined within the Permit SWPPP implementation was observed on all construction close to and within wetland areas, including the installation of silt fencing. (See **Photo 1** for example).

Plant Life

Permanent impacts to plant life, which included tree clearing operations, were observed within several pole areas, including Poles 1313, 1312, 1311, 1310, 1309, 1308, 1214, 1155, 1117, and 968 (See **Photo 5** for example).

Agricultural Production

The majority of the observed poles were located within agricultural areas (See **Photo 6**). Cultivation and planting avoidance was observed in areas where poles were actively under construction. Agricultural areas were tilled and planted where construction of the poles had been completed.

Extraordinary Events

Six extraordinary events have been identified within the weekly construction progress reports. Inspection of these poles did not identify anything that would be out of permit compliance.

Table 1: Summary of resources observed, number of poles identified and pole compliance with the Permit.

Resource	# of Poles Checked	# of Poles Incompliant
Historical Sites	7	0
Vicinity to Residences, Schools, or Places of Business	13	0
Rivers/Streams/Drainage ways	19	1 (erosion / sedimentation)
Wetlands, woodlands, wooded areas	160	6 (temporary impacts from construction materials and rutting)
Plant Life	10	0
Agriculture lands	324	0
Extraordinary Events	11	0

Local Permit Compliance:

- Sovereign Land Permit No. S-1758: Permit to construct transmission line across the Sheyenne River in Griggs County.

Poles were inspected crossing the Sheyenne River. Three poles were observed (991-993, **Photo 7**), and are within compliance of the Sovereign Land Permit No. S-1758 and the PSC Permit.

- Conditional Use Permit Griggs County
Pole construction within Griggs County complies with the PSC Permit, Findings of Fact, and Conclusions of Law and Order, therefore is compliant with the Conditional use Permit.
- Conditional Use Permit Foster County
No conditions were identified within the Conditional use Permit for Foster County. Pole construction is in compliance of the Conditional Use Permit.
- Conditional Use Permit Nelson County
No conditions were identified within the Conditional use Permit for Nelson County. Pole construction is in compliance of the Conditional Use Permit.
- Special Use Permit Grand Forks County

Conditions identified within the Special Use Permit include receiving final approval from the PSC, and the roads and lands damaged during construction of the line shall be repaired. Equipment rutting, grading impacts and bridging material was observed within an intermittent stream by Pole 1273.

- Sharon Township (Steele County) Conditional Use Permit and Variance
Conditions identified within the Conditional Use Permit and Variance include: within Section 18, no pole should be 115 feet from the center of the road, and within Section 6, no pole placed more than 101 feet from the center of the road. Pole construction is compliant with the Conditional Use Permit.
- Loretta Township (Grand Forks County) Conditional Use Permit
Conditions identified within the Special Use Permit indicate to restore the area to pre-construction condition. Pole construction is compliant with this stipulation, no construction impacts were observed.
- Addie Township (Griggs County) Conditional Use Permit and Variance
No conditions were identified within the Zoning Variance or Conditional Use Permit.
- Eddy County Conditional Use Permit
No conditions are identified within the Conditional Use Permit.

Future Activities for the next reporting period:

HEI will perform the second permit compliance trip following completion of construction of the MPC 345 kV transmission line. Based on recent project update information from MPC, the projected in-service date of the line is February 28th, 2014. As such, HEI will likely schedule the compliance trip for Spring of 2014. In addition, the engineering compliance inspections will be completed by MBN following completion of construction. A final Construction Inspection Report will be provided to the Commission once construction is finished and the compliance visits have been completed. The Construction Inspection Report will include the data obtained during the compliance inspections, identification of any issues that were noted and resolution of such, and a conclusion whether the transmission is in compliance with the ND PSC Route Permit Number 144.

Photos



Photo 1: Example observed silt fencing around wetland resources (Pole 953)

Photo 2: Erosion and sedimentation within intermittent stream (Pole 996)





Photo 3: Example construction rutting (Pole 1272)



Photo 4: Example construction debris (Pole 1272)



Photo 5: Example tree clearing activities (Pole 1214)

Photo 6: Example agricultural land construction (Pole 955)





*Photo 7: Sheyenne River Pole Span.
(Poles 991-993)*

Field Data

	A	B	F	G	M	O	Q	R	S	T	U
1	POLE NAME	Sort Name	Historical / Archaeological Resources	Residence, school, business	Rivers, streams, drainageways	Wetlands, woodlands, wooded areas	Plant Life	Extraordinary Event	Photo Only	NOTES	Checked
792	791	0791							x	Photo on pole 796	Checked
793	792	0792							x	Photo on pole 796	Checked
794	793	0793							x	Photo on pole 796	Checked
795	794	0794							x	Photo on pole 796	Checked
796	795	0795							x	Photo on pole 796	Checked
797	796	0796							x		Checked
798	797	0797			Compliant	Compliant				No easement wetland impacts; pole placed in upland, not within the stream floodplain	Checked
799	798	0798				Compliant				No easement wetland impacts	Checked
800	799	0799				Compliant				No easement wetland impacts	Checked
801	800	0800							x		Checked
802	801	0801				Compliant				No wetland impacts observed	Checked
803	802	0802							x		Checked
804	803	0803							x		Checked
805	804	0804							x		Checked
823	822	0822							x		Checked
824	823	0823							x		Checked
825	824	0824				Compliant				No wetland impacts	Checked
826	825	0825				Compliant				No wetland impacts	Checked
827	826	0826							x		Checked
828	827	0827							x		Checked
829	828	0828							x		Checked
830	829	0829							x		Checked
831	830	0830							x		Checked
832	831	0831							x		Checked
833	832	0832							x		Checked
834	833	0833							x	Third pole in photo	Checked
835	834	0834							x	Second pole on photo on 835	Checked
836	835	0835							x		Checked
837	836	0836				Compliant				No easement wetland impacts	Checked
838	837	0837				Compliant				No easement wetland impacts	Checked
839	838	0838				Compliant				No easement wetland impacts	Checked
840	839	0839				Compliant				No easement wetland impacts	Checked
841	840	0840				Compliant				No easement wetland impacts	Checked
842	841	0841				Compliant				No easement wetland impacts	Checked
843	842	0842				Compliant				No easement wetland impacts	Checked
844	843	0843				Compliant				No easement wetland impacts	Checked
845	844	0844				Compliant				No easement wetland impacts	Checked
846	845	0845				Compliant				No easement wetland impacts	Checked
847	846	0846				Compliant				No easement wetland impacts	Checked
848	847	0847				Compliant				No easement wetland impacts	Checked
849	848	0848						x		Extraordinary event mentions stopping construction activities for a full evaluation. Area appears to be constructed and waiting to be strung	Checked
850	849	0849				Compliant				No easement wetland impacts	Checked
851	850	0850							x		Checked
852	851	0851							x		Checked
853	852	0852							x		Checked
854	853	0853							x		Checked
855	854	0854							x		Checked
856	855	0855							x		Checked
857	856	0856							x	Photo on pole 855	Checked
858	857	0857				Compliant				No easement wetland impacts	Checked
859	858	0858				Compliant				No easement wetland impacts	Checked
860	859	0859				Compliant				No easement wetland impacts	Checked
861	860	0860				Compliant					Checked
862	861	0861							x		Checked
863	862	0862				Compliant				No easement wetland impacts	Checked
864	863	0863				Compliant				Wetland impacts	Checked
865	864	0864				Compliant				No wetland impacts	Checked
866	865	0865				Compliant				No easement wetland impacts	Checked
867	866	0866				Compliant				Easement wetland impact	Checked
868	867	0867							x		Checked
869	868	0868				Compliant				No easement wetland impact	Checked
870	869	0869				Compliant		x		No easement wetland impacts. Extraordinary event noted, unknown. Everything appears compliant.	Checked
871	870	0870							x	Photo on 873	Checked
872	871	0871							x	Photo on 873	Checked
873	872	0872				Compliant				Photo on 873. No easement wetland impacts. Pole outside of boundary	Checked
874	873	0873				Compliant				No easement wetland impacts. Pole between two potholes	Checked
875	874	0874				Compliant				No easement wetland impacts	Checked
876	875	0875				Compliant				No easement wetland impacts	Checked
877	876	0876				Compliant				No easement wetland impacts	Checked
878	877	0877				Compliant				No easement wetland impacts	Checked
879	878	0878				Compliant				No easement wetland impacts	Checked
880	879	0879				Compliant				No easement wetland impacts	Checked
881	880	0880				Compliant				Wetland Impacts	Checked
882	881	0881				Compliant				No easement wetland impacts; pole constructed on hill	Checked
883	882	0882				Compliant				No easement wetland impacts	Checked
884	883	0883				Compliant				No easement wetland impacts	Checked
885	884	0884				Compliant				No easement wetland impacts	Checked
886	885	0885				Compliant				No easement wetland impacts	Checked
887	886	0886				Compliant				No easement wetland impacts	Checked
888	887	0887				Compliant				No easement wetland impacts	Checked
889	888	0888				Compliant				No easement wetland impacts	Checked
890	889	0889				Compliant				No easement wetland impacts	Checked
891	890	0890				Compliant				No easement wetland impacts	Checked
892	891	0891				Compliant				No easement wetland impacts	Checked
893	892	0892				Compliant				No easement wetland impacts	Checked
894	893	0893				Compliant				No easement wetland impacts	Checked
895	894	0894				Compliant				No easement wetland impacts	Checked
896	895	0895				Compliant				No easement wetland impacts	Checked
897	896	0896				Compliant				No easement wetland impact	Checked
898	897	0897							x		Checked
899	898	0898				Compliant				No wetland impacts	Checked
900	899	0899							x		Checked
901	900	0900							x		Checked
902	901	0901							x		Checked
903	902	0902				Compliant				No wetland impacts from pole	Checked
904	903	0903							x		Checked
905	904	0904							x	Photo poles 904-909	Checked
906	905	0905							x		Checked
907	906	0906							x		Checked
908	907	0907							x		Checked
909	908	0908							x		Checked
910	909	0909							x		Checked
911	910	0910				Compliant				No wetland impacts	Checked
912	911	0911				Compliant				No easement wetland impacts	Checked
913	912	0912			Compliant					Gpsd to verify vicinity to home	Checked
914	913	0913							x	Nearest pole in photo	Checked
915	914	0914							x	Photo on pole 913, farthest pole in photo	Checked
916	915	0915							x		Checked
917	916	0916							x		Checked
918	917	0917							x		Checked
919	918	0918							x		Checked
920	919	0919				Compliant		x		Pole appears to be outside of wetland bound. No wetland impacts. Temp impacts from construction bridge material	Checked
921	920	0920				Compliant				Wetland impacts from bridge material	Checked
922	921	0921							x		Checked
923	922	0922				Compliant				No easement wetland impacts	Checked
924	923	0923				Compliant				No easement wetland impacts	Checked
925	924	0924							x		Checked
926	925	0925							x		Checked
927	926	0926							x	Picture on pole 925	Checked
928	927	0927							x	Picture on pole 925	Checked
929	928	0928							x	Picture on pole 925	Checked
930	929	0929							x	Picture on pole 925	Checked
931	930	0930								Gpsd to verify vicinity to home	Checked
932	931	0931							x	Photo on pole 933	Checked
933	932	0932							x	Photo on pole 933	Checked
934	933	0933							x		Checked
935	934	0934							x		Checked
936	935	0935							x		Checked
937	936	0936				Compliant					Checked
938	937	0937				Compliant				No easement wetland impacts	Checked
939	938	0938				Compliant				No easement wetland impacts	Checked
940	939	0939				Compliant				No easement wetland impacts	Checked
941	940	0940				Compliant				No wetland impacts	Checked
942	941	0941							x		Checked
943	942	0942							x		Checked
944	943	0943								Gpsd to verify vicinity to home	Checked
945	944	0944				Compliant				No wetland impacts	Checked
946	945	0945				Compliant				No easement wetland impacts	Checked
947	946	0946				Compliant				No easement wetland impacts	Checked
948	947	0947				Compliant				No easement wetland impacts	Checked
949	948	0948							x		Checked
950	949	0949								Gpsd to verify vicinity to home	Checked
951	950	0950				Compliant				No wetland impacts, pole not within floodplain	Checked
952	951	0951							x		Checked
953	952	0952							x		Checked
954	953	0953				Compliant				No wetland impacts	Checked
955	954	0954							x		Checked
956	955	0955							x		Checked
957	956	0956							x		Checked
958	957	0957							x		Checked
959	958	0958							x		Checked
960	959	0959							x		Checked
961	960	0960								Gpsd to verify vicinity to home	Checked
962	961	0961							x		Checked
963	962	0962							x		Checked
964	963	0963							x		Checked
965	964	0964				Compliant				No wetland impacts	Checked
966	965	0965				Compliant				Wetland impacts observed	Checked
967	966	0966				Compliant				Wetland impacts observed. Potential easement wetlands	Checked
968	967	0967				Compliant				No easement wetlands impacts	Checked
969	968	0968								Tree clearing operations observed.	Checked
970	969	0969				Compliant		Compliant		No easement wetland impacts	Checked
971	970	0970				Compliant					

	A	B	F	G	M	O	Q	R	S	T	U
1	POLE NAME	Sort Name	Historical / Archaeological Resources	Residence, school, business	Rivers, streams, drainageways	Wetlands, woodlands, wooded areas	Plant Life	Extrordinary Event	Photo Only	NOTES	Checked
1002	1001	1001			Compliant				x	Pole likely not within floodplain	Checked
1003	1002	1002							x		Checked
1004	1003	1003							x		Checked
1005	1004	1004							x		Checked
1006	1005	1005							x		Checked
1007	1006	1006							x		Checked
1008	1007	1007			Compliant					No wetland impacts, likely within floodplain, photo of stream	Checked
1009	1008	1008							x		Checked
1010	1009	1009							x		Checked
1011	1010	1010							x		Checked
1012	1011	1011							x		Checked
1013	1012	1012							x		Checked
1014	1013	1013							x		Checked
1015	1014	1014							x		Checked
1016	1015	1015							x	First pole in photo	Checked
1017	1016	1016							x	Second pole in photo	Checked
1018	1017	1017							x	Third pole in photo	Checked
1019	1018	1018							x	Fourth pole in photo	Checked
1020	1019	1019							x	Fifth pole in photo	Checked
1021	1020	1020							x		Checked
1022	1021	1021							x		Checked
1023	1022	1022		Compliant						Gpsd to verify vicinity to home	Checked
1024	1023	1023							x		Checked
1025	1024	1024							x	Left pole in photo	Checked
1026	1025	1025							x	Middle pole in photo	Checked
1027	1026	1026							x	Right pole in photo	Checked
1028	1027	1027			Compliant					No wetland impacts	Checked
1029	1028	1028							x		Checked
1030	1029	1029							x		Checked
1031	1030	1030							x		Checked
1032	1031	1031			Compliant					No wetland impacts	Checked
1033	1032	1032			Compliant					No wetland impacts. Pole constructed on cultivated lands	Checked
1034	1033	1033			Compliant					No wetland impacts. Pole constructed on cultivated lands	Checked
1035	1034	1034							x	Photo on 1036	Checked
1036	1035	1035							x	Photo on 1036	Checked
1037	1036	1036							x		Checked
1038	1037	1037			Compliant					No easement wetland impacts	Checked
1039	1038	1038			Compliant					No wetland impacts	Checked
1040	1039	1039							x		Checked
1041	1040	1040							x	Add photo on pole 1039	Checked
1042	1041	1041							x	Add photo on pole 1039	Checked
1043	1042	1042							x		Checked
1044	1043	1043							x		Checked
1045	1044	1044			Compliant					No wetland impacts	Checked
1046	1045	1045			Compliant					Adjacent to stream, possibly within floodplain	Checked
1047	1046	1046						x		Extraordinary event noted, unable to determine what that is. Everything appears to be compliant. No wetland impacts	Checked
1048	1047	1047							x		Checked
1049	1048	1048			Compliant					No wetland impacts	Checked
1050	1049	1049			Compliant					No wetland impacts, pole constructed close to but not within wetland.	Checked
1051	1050	1050			Compliant					No wetland impacts	Checked
1052	1051	1051			Compliant					No wetland impacts, pole constructed on high spot	Checked
1053	1052	1052							x		Checked
1054	1053	1053			Compliant					No wetland impacts	Checked
1055	1054	1054			Compliant					No wetland impacts	Checked
1056	1055	1055							x		Checked
1057	1056	1056							x		Checked
1058	1057	1057							x		Checked
1059	1058	1058			Compliant	Compliant				Wetland impacts, pole likely within floodplain	Checked
1060	1059	1059			Compliant					No wetland impacts	Checked
1061	1060	1060			Compliant					No wetland impacts	Checked
1062	1061	1061		Complaint	Compliant					Gpsd to verify vicinity to home. No wetland impacts	Checked
1063	1062	1062							x		Checked
1064	1063	1063			Compliant					No wetland impacts.	Checked
1065	1064	1064			Compliant					No wetland impacts	Checked
1066	1065	1065			Noncompliant			x		No wetland impacts from pole, rutting in easement wetlands.	Checked
1067	1066	1066			Compliant					No wetland impacts	Checked
1068	1067	1067			Compliant					No wetland impacts	Checked
1069	1068	1068							x		Checked
1070	1069	1069							x		Checked
1071	1070	1070			Compliant					Extrordinary event noted, unable to determine what that is... Rock pile/wetland? Everything appears compliant.	Checked
1072	1071	1071			Compliant					No wetland impacts	Checked
1073	1072	1072			Compliant					No wetland impacts	Checked
1074	1073	1073			Compliant					No wetland impacts, pole placed between potholes in upland	Checked
1075	1074	1074							x		Checked
1076	1075	1075							x		Checked
1077	1076	1076							x		Checked
1078	1077	1077			Compliant			x		Temp wetland impacts from construction bridges, no permanent impacts	Checked
1079	1078	1078			Compliant						Checked
1080	1079	1079						x		No wetland impacts from pole, rutting from construction equipment observed	Checked
1081	1080	1080			Noncompliant			x		No wetland impacts from pole, potential easement wetland impacts from construction equipment rutting (picture)	Checked
1082	1081	1081			Compliant					No wetland impacts	Checked
1083	1082	1082			Compliant					No wetland impact	Checked
1084	1083	1083							x		Checked
1085	1084	1084							x		Checked
1086	1085	1085							x		Checked
1087	1086	1086			Compliant					Wetland impacts	Checked
1088	1087	1087			Compliant					Wetland impacts	Checked
1089	1088	1088							x		Checked
1090	1089	1089							x		Checked
1091	1090	1090							x		Checked
1092	1091	1091								No wetland impacts	Checked
1093	1092	1092			Compliant					No wetland impacts, pole placed on hill. Photo on pole 1093	Checked
1094	1093	1093			Compliant					No wetland impacts. Pole potentially in floodplain of intermittent stream	Checked
1095	1094	1094							x		Checked
1096	1095	1095							x		Checked
1097	1096	1096			Compliant					No wetland impacts	Checked
1098	1097	1097							x		Checked
1099	1098	1098			Compliant					No wetland impacts	Checked
1100	1099	1099							x		Checked
1101	1100	1100		Compliant						Gpsd to verify vicinity to home	Checked
1102	1101	1101							x		Checked
1103	1102	1102			Compliant					No wetland impacts	Checked
1104	1103	1103							x		Checked
1105	1104	1104							x		Checked
1106	1105	1105			Compliant					No wetland impacts	Checked
1107	1106	1106							x		Checked
1108	1107	1107							x		Checked
1109	1108	1108							x		Checked
1110	1109	1109							x		Checked
1111	1110	1110							x		Checked
1112	1111	1111							x		Checked
1113	1112	1112							x		Checked
1114	1113	1113							x		Checked
1115	1114	1114							x		Checked
1116	1115	1115							x		Checked
1117	1116	1116			Compliant					No wetland impacts	Checked
1118	1117	1117					Compliant			Tree clearing ops observed	Checked
1119	1118	1118							x		Checked
1120	1119	1119			Compliant					No wetland impacts	Checked
1121	1120	1120							x		Checked
1122	1121	1121							x		Checked
1123	1122	1122			Compliant					No wetland impacts	Checked
1124	1123	1123							x		Checked
1125	1124	1124							x		Checked
1126	1125	1125			Compliant					No wetland impacts	Checked
1127	1126	1126			Compliant					No wetland impacts	Checked
1128	1127	1127			Compliant					No wetland impacts	Checked
1129	1128	1128							x		Checked
1130	1129	1129							x		Checked
1131	1130	1130			Compliant					Pole placed high on hill, likely not within floodplain of stream	Checked
1132	1131	1131			Compliant					Intermittent stream in foreground of photo. Pole possibly in floodplain	Checked
1133	1132	1132							x		Checked
1134	1133	1133			Compliant					No wetland impacts	Checked
1135	1134	1134			Compliant					No wetland impacts	Checked
1136	1135	1135							x		Checked
1137	1136	1136							x		Checked
1138	1137	1137							x		Checked
1139	1138	1138							x		Checked
1140	1139	1139							x		Checked
1141	1140	1140							x		Checked
1142	1141	1141			Compliant					No wetland impacts	Checked
1143	1142	1142			Compliant			x		No wetland impacts, extraordinary event noted, unknown	Checked
1144	1143	1143			Compliant					No wetland impacts	Checked
1145	1144	1144							x		Checked
1146	1145	1145							x		Checked
1147	1146	1146							x		Checked
1148	1147	1147							x	Extrordinary event noted, unknown...rock pile?	Checked
1149	1148	1148									Checked
1150	1149	1149			Compliant					No wetland impact	Checked
1151	1150	1150							x		Checked
1152	1151	1151							x		Checked
1153	1152	1152			Compliant					Stream observed, pole potentially within floodplain	Checked
1154	1153	1153			Compliant					Stream observed, pole potentially within floodplain	Checked
1155	1154	1154							x		Checked
1156	1155	1155					Compliant			Tree clearing ops observed	Checked
1157	1156	1156							x		Checked
1158	1157	1157							x		Checked
1159	1158	1158							x		Checked
1160	1159	1159			Compliant					No wetland impacts, stream observed, pole potentially within floodplain	Checked
1161	1160	1160							x		Checked
1162	1161	1161							x		

	A	B	F	G	M	O	Q	R	S	T	U
1	POLE NAME	Sort Name	Historical / Archaeological Resources	Residence, school, business	Rivers, streams, drainageways	Wetlands, woodlands, wooded areas	Plant Life	Extrordinary Event	Photo Only	NOTES	Checked
1195	1194	1194							x		Checked
1196	1195	1195							x		Checked
1197	1196	1196							x		Checked
1198	1197	1197							x		Checked
1199	1198	1198							x		Checked
1200	1199	1199							x		Checked
1201	1200	1200							x		Checked
1202	1201	1201							x		Checked
1203	1202	1202							x		Checked
1204	1203	1203							x		Checked
1205	1204	1204				Compliant				Wetland impacts, gpsd for historic resources	Checked
1206	1205	1205	Compliant							Gpsd for historical resources	Checked
1207	1206	1206	Compliant			Compliant				Gpsd for historical resources, no wetland impacts	Checked
1208	1207	1207							x		Checked
1209	1208	1208							x		Checked
1210	1209	1209							x		Checked
1211	1210	1210							x		Checked
1212	1211	1211							x		Checked
1213	1212	1212							x		Checked
1214	1213	1213							x		Checked
1215	1214	1214					Compliant			Tree clearing operations	Checked
1216	1215	1215							x		Checked
1217	1216	1216							x		Checked
1218	1217	1217							x		Checked
1219	1218	1218							x		Checked
1220	1219	1219							x		Checked
1221	1220	1220							x		Checked
1222	1221	1221							x		Checked
1223	1222	1222							x		Checked
1224	1223	1223							x		Checked
1225	1224	1224							x		Checked
1226	1225	1225							x		Checked
1227	1226	1226							x		Checked
1228	1227	1227							x		Checked
1229	1228	1228							x		Checked
1230	1229	1229							x		Checked
1231	1230	1230							x		Checked
1232	1231	1231							x		Checked
1233	1232	1232							x		Checked
1234	1233	1233	Compliant							Gpsd to verify location for historical res	Checked
1235	1234	1234	Compliant							Gpsd to verify location for historical res	Checked
1236	1235	1235	Compliant							Gpsd to verify location for historical res	Checked
1237	1236	1236				Compliant				No wetland impacts	Checked
1238	1237	1237	Compliant							Gpsd to verify location for historic res	Checked
1239	1238	1238							x		Checked
1240	1239	1239							x		Checked
1241	1240	1240							x		Checked
1242	1241	1241							x		Checked
1243	1242	1242							x		Checked
1244	1243	1243		Compliant						Gpsd to verify distance from home	Checked
1245	1244	1244								Appears to be outside of floodplain	Checked
1246	1245	1245			Compliant				x		Checked
1247	1246	1246							x		Checked
1248	1247	1247							x		Checked
1249	1248	1248							x		Checked
1250	1249	1249							x		Checked
1251	1250	1250			Compliant					No wetland impacts	Checked
1252	1251	1251							x		Checked
1253	1252	1252							x		Checked
1254	1253	1253							x		Checked
1255	1254	1254							x		Checked
1256	1255	1255							x		Checked
1257	1256	1256							x		Checked
1258	1257	1257				Compliant				Photo on 1260, no wetland impacts	Checked
1259	1258	1258			Compliant	Compliant				Photo on 1260, no wetland impacts, pole within floodplain	Checked
1260	1259	1259			Compliant	Compliant				Photo on 1260, no wetland impacts, pole within floodplain	Checked
1261	1260	1260				Compliant				No wetland impacts	Checked
1262	1261	1261				Compliant				Wetland impacts	Checked
1263	1262	1262							x		Checked
1264	1263	1263							x		Checked
1265	1264	1264				Compliant				Wetland impacts	Checked
1266	1265	1265							x		Checked
1267	1266	1266							x		Checked
1268	1267	1267				Compliant				No wetland impacts	Checked
1269	1268	1268				Compliant				No wetland impacts	Checked
1270	1269	1269							x		Checked
1271	1270	1270							x		Checked
1272	1271	1271				Compliant				No wetland impacts	Checked
1273	1272	1272				Compliant				Photo of intermittent stream. Minor grading impacts within intermittent stream. Pole outside if intermittent stream, but within wetland. Bridgematerialk in stream. Tire tracks, exposed soil in intermittent stream	Checked
1274	1273	1273				Compliant				No wetland impacts	Checked
1275	1274	1274				Compliant				No wetland impacts	Checked
1276	1275	1275				Compliant				No wetland impacts	Checked
1277	1276	1276				Compliant				No wetland impacts	Checked
1278	1277	1277							x		Checked
1279	1278	1278							x		Checked
1280	1279	1279							x		Checked
1281	1280	1280							x		Checked
1282	1281	1281							x		Checked
1283	1282	1282							x		Checked
1284	1283	1283							x		Checked
1285	1284	1284							x		Checked
1286	1285	1285							x		Checked
1287	1286	1286							x		Checked
1288	1287	1287							x		Checked
1289	1288	1288				Compliant				No wetland impacts	Checked
1290	1289	1289							x		Checked
1291	1290	1290							x		Checked
1292	1291	1291				Compliant				No wetland impact	Checked
1293	1292	1292							x		Checked
1294	1293	1293							x		Checked
1295	1294	1294							x		Checked
1296	1295	1295			Compliant	Compliant				No wetland impact	Checked
1297	1296	1296								Gpsd to verify vicinity to home	Checked
1298	1297	1297							x		Checked
1299	1298	1298							x		Checked
1300	1299	1299							x		Checked
1301	1300	1300							x		Checked
1302	1301	1301							x		Checked
1303	1302	1302							x		Checked
1304	1303	1303							x		Checked
1305	1304	1304							x		Checked
1306	1305	1305							x		Checked
1307	1306	1306							x		Checked
1308	1307	1307							x		Checked
1309	1308	1308						Compliant		Tree clearing observed	Checked
1310	1309	1309						Compliant		Tree clearing observed	Checked
1311	1310	1310						Compliant		Tree clearing observed	Checked
1312	1311	1311						Compliant		Tree clearing observed	Checked
1313	1312	1312						Compliant		Tree clearing observed	Checked
1314	1313	1313						Compliant		Tree clearing observed	Checked
1315	1314	1314							x		Checked
1316	1315	1315							x		Checked
1317	1316	1316							x		Checked
1318	1317	1317			Compliant					Pole within floodplain	Checked
1319	1318	1318			Compliant	Compliant				No wetland impacts observed, pole likely placed within floodplain.	Checked
1320	1319	1319							x		Checked
1321	1320	1320							x		Checked
1322	1321	1321			Compliant					Gpsd to check vicinity to home	Checked
1323	1322	1322							x		Checked
1324	1323	1323							x		Checked
1325	1324	1324							x		Checked
1326	1325	1325							x		Checked
1327	1326	1326							x		Checked
1328	1327	1327							x		Checked
1329	1328	1328							x		Checked
1330	1329	1329								Pole gpsd for home vicinity check	Checked
1331	1330	1330							x		Checked
1332	1331	1331							x		Checked
1333	1332	1332							x		Checked
1334	1333	1333							x		Checked
1335	1334	1334							x		Checked

Minnkota Power Cooperative, Inc. 250 mile 345 kV line from Center to Grand Forks, North Dakota (PSC Case No. PU-09-670)

Permit Compliance Review

NDPUC Contract No.: PU-668-12

Reporting Period: August 16th, 2013 – August 21th, 2014

Prepared By: Houston Engineering, Inc. / Emmy Baskerville, Environmental Scientist and Bart Schultz, Project Manager

General:

Houston Engineering, Inc. (HEI) and MBN Engineering (MBN) are under contract with the North Dakota Public Services Commission (NDPSC) to complete permit compliance review and inspection of construction activities, as part of the Minnkota Power Cooperative, Center to Grand Forks 345 kV transmission line project (PU-09-670). The following is a summary of the work completed to date and the anticipated timeframe for the completion of the permit compliance review. Two environmental compliance site visits have been completed, and the engineering / construction compliance site visits are underway. This field inspection report is for the second environmental compliance site visit, which occurred on July 22-25, 2014.

Summary of Activities / Items Completed to Date:

Two site visits have been completed since the previous Status Report. The focus of these site visits were to assess environmental and siting compliance, as well as engineering and construction compliance inspections.

Environmental / Siting:

There were 806 poles inspected including poles 1-790, and 805-821. The environmental compliance inspections targeted poles that were constructed in or within the vicinity of the exclusion, avoidance and selection criteria outlined within the permit. During the compliance site visits, the following resources that were within and around the constructed poles were located to assure compliance: T & E critical habitat, historical resources, homes/family farms and ranches, rivers/streams/drainage ways and floodplains, wetlands, United States Fish and Wildlife easement areas, recreational areas and trails, and tree clearing areas and agriculture. In addition, Extraordinary Events, as described within the construction weekly reports, were also targeted to identify and observe notable incidents within the construction corridor. The following summarizes the observations:

T & E Critical Habitat

The Missouri River crossing is critical habitat for the federally listed Piping Plover. As identified within the construction progress reports, the poles adjacent to the Missouri River were constructed in and around the fall of 2013 and the winter of 2014, which is outside of the Piping Plover breeding season (mid-April through August), per the permit. Wire shields were observed in the span of the Missouri River (**Photo 1**). Pole construction within these critical habitats has been found to be compliant with the permit.

Historical Resources

GIS data received from the ND State Historical Preservation Office was used to identify areas of known historic or archaeological significance and pinpoint the poles which may encroach on these sites for field review. Poles that were placed in or within 500 feet of the areas identified as potentially significant sites were identified and spatially located with a handheld GPS on site to verify the pole location. These located pole points were then compared to the permitted pole location shapefile to verify they were placed as specified in the Permit. Two (2) poles were identified to be located within 500 feet of potentially known historic or archaeological sites, and each of these poles were constructed in the location outlined in the permit (see **Photo 2**).

Houses/Family Farms and Ranches

GIS residential structure location point data from Minnkota was utilized to identify poles which may be placed within the 500 foot buffer of a residence, school or place of business (identified as an Avoidance Area within the permit). Using GIS, we identified all poles that were placed in or within 550 feet (to allow for a margin of error) of residences, schools or places of business. In the field, these poles were geo-located utilizing a handheld GPS unit to verify the constructed location. These located pole points were then compared to the permitted pole location shapefile to verify they were placed as specified in the permit. Fourteen (14) poles were identified within the 550 foot buffer. These poles were found to be constructed in the location outlined in the permit and are compliant.

One land owner discussed with us during the site visit that his field access road was damaged and was expecting further restoration activities. This was in and around the area of pole 552.

Rivers/Streams/Drainage ways

GIS location data was received from Minnkota and utilized to identify poles which may be constructed within a river, stream or drainage way, as outlined within the Selection Criteria of the permit. Twenty-eight (28) poles were observed, and no poles were observed to be constructed directly within rivers/streams or drainage ways and no poles were observed within floodplains. Installations of the Stormwater Pollution Prevention Plan (SWPPP) items were observed, including the placement of silt fences around water resources. Poles were observed adjacent to, but not within the McClusky Canal (220, 221, 352, and 353).

Wetlands and Easement Wetlands

Wetland delineation data was used to identify poles that were constructed within wetlands. US Fish and Wildlife Service easement parcel data was used to identify potential wetland impacts within easement parcels. A total of 198 poles were inspected to determine wetland compliance. Thirty-five (35) poles were placed within wetlands, including 109, 140, 178, 207, 212, 217, 222, 223, 225, 250, 282, 319, 374, 385, 398, 428, 433, 439, 442, 455, 501, 540, 555, 559, 650, 658, 662, 669, 675, 678, 387, 698, 701, 702, 723, and 766. Temporary impacts from construction rutting or bridge material was observed on poles 65 & 68 (see **Photo 3** for example) and will need to be returned to pre-construction condition, as outlined within the permit. Evidence of SWPPP implementation was observed on all construction sites close to and within wetland areas, including the installation of silt

fencing. Other construction matting was observed in other wetlands, however it was obvious that restoration activities were ongoing or had not yet been completed on all sites.

Plant Life

Permanent impacts to plant life, which included tree clearing operations, were observed within several pole areas, including Poles 503, 504, 522, 553, 554, 555, 562, 631, 633, 634, 647, 648, 658 (See **Photo 4** for example).

Agricultural Production

The majority of the observed poles were located within agricultural areas (See **Photo 5**). Cultivation and planting avoidance was observed in areas where poles were actively under construction. Agricultural areas were tilled and planted where construction of the poles had been completed.

Extraordinary Events

One (1) extraordinary event was identified within the weekly construction progress reports. Inspection of this pole did not identify anything that would be out of permit compliance.

Table 1: Summary of resources observed, number of poles identified and pole non-compliance with the Permit.

Resource	# of Poles Checked	# of Poles Incompliant
Critical Habitat	4	0
Historical Sites	2	0
Vicinity to Residences, Schools, or Places of Business	14	0
Rivers/Streams/Drainage ways	28	0
Wetlands, woodlands, wooded areas	198	2 (temporary impacts from construction materials and rutting)
Plant Life	13	1 (landowner discussions, see text above)
Agriculture lands	Throughout	0
Extraordinary Events	1	0

Local Permit Compliance:

- Sheridan County Conditional Use Permit
No conditions were identified within the Conditional use Permit for Sheridan County. Pole construction is in compliance of the Conditional Use Permit.

Future Activities for the next reporting period:

MBN Engineering will submit their progress report to discuss and summarize their engineering / construction compliance site visits, which have taken place August 4-6, 2014. One additional site visit by MBN is expected soon. HEI will prepare one final Construction Inspection Report that will include the data obtained during the compliance inspections, identification of any issues that were noted and resolution of such, and a conclusion whether the transmission is in compliance with the ND PSC Route Permit Number144.

Photo



Photo 1: Pole 69 on the west side of the Missouri River. Shield markers have been installed, and can be seen in this photo.



Photo 2: Pole 119, showing avoidance of an archaeological / historic site. Posting of archaeological / historic site can be faintly observed in the foreground.



Photo 3: Adjacent to pole 68, showing rutting from recently removed construction matting within a wetland. This area will require further restoration.



Photo 4: Pole 552, showing tree clearing areas and remnant debris.



Photo 5: Typical photo of a pole constructed in agriculture land. Pole 86.



Photo 6: Pole 8, showing avoidance of a Wildlife Management Area (WMA). The Wilbur Boldt WMA is on the left side of this photograph.



Photo 7: Road restoration activities as observed adjacent to Pole 31.



Photo 8: Several areas were identified as USFWS easement lands, however upon field inspection it was clear that these areas had been removed from easement, as shown in this photo of poles 186-188.

Field Data

Pole Name	Sort Name	Critical habitat for T&E	Unique/Rare plant and animal species	Wildlife Management Area (WMA)	Historical / Archaeological Resources	Residence, school, business	Water sources (McClusky Canal)	National Scenic Trail, Historical Trail, McClusky Canal	Floodplain	Wetlands, woodlands, wooded areas	Animal health and safety	Plant Life	NOTES
1	0001								Compliant				Not in floodplain.
2	0002												
3	0003												
4	0004												
5	0005												
6	0006			Compliant									Outside of wma
7	0007			Compliant									Outside of wma
8	0008			Compliant									Outside of wma
9	0009					Compliant							GPS'd pole location
10	0010												
11	0011												
12	0012												
13	0013												
14	0014												
15	0015												
16	0016												
17	0017									Compliant			Not in wetland.
18	0018												
19	0019												
20	0020												
21	0021												
22	0022												State trust
23	0023												
24	0024												
25	0025									Compliant			Not in wetland
26	0026												
27	0027												Gpsd archeological site observed outside of pole location
28	0028												
29	0029												
30	0030												
31	0031												Road repair occurring.
32	0032												
33	0033												
34	0034												
35	0035												
36	0036					Compliant							GPS'd; compliant with vicinity to home
37	0037												
38	0038												
39	0039												
40	0040												
41	0041												
42	0042												
43	0043												
44	0044												
45	0045												
46	0046												
47	0047												
48	0048												
49	0049												
50	0050												
51	0051									Compliant			Not in wetland.
52	0052												
53	0053												
54	0054												
55	0055												
56	0056												
57	0057												
58	0058												
59	0059												
60	0060									Compliant	Compliant		Not in wetland Outside of floodplain
61	0061												
62	0062												
63	0063												
64	0064									Compliant			Not in wetland.
65	0065												Restoration needed in wetland from construction mats. INCOMPLIANT
66	0066												
67	0067					Compliant							GPS'd; compliant with vicinity to home
68	0068	Compliant	Compliant						Compliant			Compliant	Pole in wetland, rutting from mat removal observed, restoration needed. INCOMPLIANT
69	0069	Compliant	Compliant						N/A	Compliant	Compliant		Constructed in ag, shield wires observed. Pole constructed outside of Piping Plover nesting
70	0070	Compliant	Compliant										Pole constructed outside of Piping Plover nesting, shield wires observed
71	0071												
72	0072												
73	0073												
74	0074												
75	0075												
76	0076												
77	0077												
78	0078												
79	0079												
80	0080												
81	0081												
82	0082								Compliant				
83	0083												
84	0084												
85	0085												
86	0086												
87	0087												
88	0088												
89	0089												
90	0090												
91	0091												
92	0092												
93	0093												
94	0094												
95	0095												
96	0096												
97	0097												
98	0098												
99	0099												
100	0100												
101	0101												
102	0102												
103	0103												
104	0104												
105	0105												Archaeological site avoided
106	0106												Archaeological site avoided
107	0107												
108	0108												
109	0109									Compliant			In wetland.
110	0110												
111	0111												
112	0112												
113	0113												
114	0114												
115	0115												
116	0116												
117	0117												
118	0118												
119	0119				Compliant				Compliant				Outside of archaeological site, and floodplain.
120	0120												
121	0121												
122	0122												
123	0123												
124	0124												
125	0125												
126	0126												
127	0127												
128	0128												
129	0129												
130	0130												
131	0131								Compliant				Ag only, not in floodplain
132	0132								Compliant	Compliant			Outside of wetland, likely in floodplain
133	0133									Compliant			pasture.
134	0134												135 in wetland
135	0135												GPS'd; compliant with vicinity to home
136	0136					Compliant							
137	0137												
138	0138												
139	0139												
140	0140									Compliant			In wetland.
141	0141												
142	0142												
143	0143									Compliant			Out of wetland
144	0144												
145	0145												
146	0146												
147	0147									Compliant			Outside of wetland.
148	0148												
149	0149								Compliant	Compliant			Out of wetland / floodplain
150	0150												
151	0151												
152	0152								Compliant				Not in floodplain
153	0153					Compliant							Compliant with vicinity to home
154	0154												Second pole
155	0155												Construction debris observed
156	0156												
157	0157												
158	0158												
159	0159												
160	0160												
161	0161												Construction debris adjacent to road
162	0162												
163	0163												
164	0164									Compliant			Edge of wetland, not in wetland
165	0165									Compliant			Not in wetland, snow fence present, not silt fence
166	0166												
167	0167												
168	0168												
169	0169								Compliant				Outside of floodplain
170	0170		</										

FINAL COMPLIANCE MONITORING REPORT

Minnkota Power Cooperative, Inc. Center to Grand Forks 345 kV Transmission Line

North Dakota Public Service Commission Case No. PU-09-670

Route Permit Number 144

APPENDIX B: MBN PROGRESS REPORTS

NORTH DAKOTA PUBLIC SERVICE COMMISSION
CENTER-GRAND FORKS 345KV TRANSMISSION LINE INSPECTION
DATE: 8-12-2014

PRELIMINARY INSPECTION REPORT

DATES OF INSPECTION: AUGUST 4 THRU AUG 6, 2014
INSPECTOR: KEVIN J. BERRETH, MBN ENGINEERING, INC.

Houston Engineering, Inc. and MBN Engineering were contractually hired by the North Dakota Public Service Commission to complete the construction inspection activities, as part of the Minnkota Power Cooperative Center-Grand Forks 345kV transmission line construction project(PU-09-670). The following is a summary of the work completed to date by MBN Engineering.

On August 4-6, 2014, Kevin Berreth of MBN Engineering started at the west end of this transmission line just east of the Milton R. Young Generating Station and continued east toward Grand Forks, ND. Due to time and budget constraints, and due to limited access, not all structures were inspected.

SOVEREIGN LAND PERMIT NO. S-1755 - Permit to construct transmission line across the Missouri River in Oliver and Burleigh Counties.

Poles 68 and 69 were inspected on the west side of the river. Construction activities were complete in this area. See picture "STR 69 BASE LOOKING EAST MISSOURI RIVER.JPG". It appears that all material excavated for the drilled pier foundations has been removed from the site. The drilled piers were backfilled by rip-rap just above normal grade, and the area seems to be graded uniformly. See picture "STR 70 LOOKING EAST ACROSS MISSOURI RIVER.JPG". Marker balls were installed on the shield wires. It appears spacers were installed on the conductors. Plan and profile drawing state that they are maintaining 30' of clearance over the river above the 100 year flood elevation. This could not be verified as would require extensive survey. The west side of the river appears to be in compliance with the sovereign land permit No. S-1755. The east side of the river was not inspected at close range due to access.

SOVEREIGN LAND PERMIT NO. S-1758 - Permit to cross the Sheyenne River in Griggs County.

Did not inspect this river crossing at close range as Houston Engineering had already done so. See Status Summary Report #2 from Houston Engineering.

SOVEREIGN LAND PERMIT NO. S-1756 - Permit to cross the James River in Wells County: Poles 501-503 were inspected and did not identify anything that would be out of compliance with this permit.

SOVEREIGN LAND PERMIT NO. S-1757 - Permit to cross the James River in Eddy County: Poles 740-741 were inspected and did not identify anything that would be out of compliance with this permit.

Special Use Permit 12-LM-60-1076: Permit to cross the Mcklusky Canal

The permit granted permission to cross the canal in two locations. These are between Str #220-221 and #352-353.

Item 3 of the "Special Conditions" states that the overhead wires across the canal ROW shall have a minimum clearance of 40' above ground at 120 deg F. This could not be field verified without additional survey. However, between Str 220-221, the plan and profile drawings show about 36' of clearance on the south side of the canal and about 40' of ground clearance on the north side with conductors plotted at what I believe to be 212 deg F. The clearance over the water in the canal at time of survey appears to be about 48' with conductors at 212 deg F. At crossing between #352-353, the plan and profile scales at about 40' of ground clearance over both high sides of the canal. Also, there appears to be about 80+ feet of clearance over the water in the canal.

Item 4 of "Special Conditions" states that MPC shall install and maintain fence grounding. Verified that fence is grounded by structure #220. At structure #221, the fence posts were installed but no wires were installed hence no need for fence grounding until wires installed. At Str #352, it was verified that the fence is grounded on both sides of a new gate that was probably installed for construction purposes.

Item 5 of "Special Conditions" states that "Overhead warning signs must be installed facing traffic that show the clearance and electrical line voltage". I DID NOT SEE ANY SUCH SIGNS AT BOTH CROSSINGS

Item 6 of "Special Conditions" states that electrical lines shall cross perpendicular to the centerline of the canal. Both crossings verified that they are crossing perpendicular, or very close to perpendicular, to the canal.

Item 7 of "Special Conditions" states that avian avoidance and visibility enhancement devices are to be installed. Verified that bird flight diverters were installed on the shield wires guessing about every 150-200' but no avian avoidance devices were installed on any of the conductors.

Item 8 of "Special Conditions" states that disturbed areas are to be repaired and seeded. It appeared that all areas within the transmission right of way were in good condition.

STRUCTURE #256: See picture "STR 256 JUST NORTH OF-CONSTR MATTING LOOK E.JPG". Just north of structure #256 on the east west minimum maintenance road, construction matting is still layed out in the low areas of the road and some is stacked up along side the road.

STRUCTURE #753; See picture "STR 753 LOOK E CONSTR MATTING.JPG"; On both sides of the road in the ditches, there still remains construction matting.

GENERAL INSPECTION NOTES: A lot of other structures were inspected along this entire route. General clearances to ground, other power lines, and other aerial obstacles was inspected(not measured) and appear to be in compliance with National Electrical Safety Code. In order to verify that the entire line is in compliance with NESC it would require extensive survey. I can elaborate on the structures that were visited at close range, or from a distance, in the final report if required.

FURTHER INSPECTION; Another field inspection is required to verify compliance with the FAA permits around the Grand Forks Airport. This inspection is planned for the week of Aug 18. Will provide field report after inspection.



Photo 1: Pole 69 base, looking east across the Missouri River.



Photo 2: Pole 70, looking east across Missouri River.



Photo 3: Pole 256 showing construction matting, looking east.



Photo 4: Pole 753, showing construction matting, looking east.

CENTER-GRAND FORKS 345KV TRANSMISSION LINE
 MBN INSPECTION REPORT
 DATE: 09/05/2014

DATE OF INSPECTION: 8/27/2014
 INSPECTOR: KEVIN J. BERRETH

MBN Engineering(Kevin J. Berreth) did an on site inspection of structures #1292-1323 to verify compliance with FAA permits. MBN was provided with "For Construction" plan and profile drawings, coordinates of the structures, and elevation at ground level for each structure.

The first thing that was noticed as the inspection progressed is that the structure numbers that are listed on the FAA permit are not the same as the as-built structure numbers. As shown below, the structure number listed on Aeronautical Study No. 2012-AGL-2215-OE is #1293 and the actual structure in the field is #1292. This is the same for all structures in that the structure number listed on the permit is one more than the as-built structure number. Note that the as-built structure numbers match the For Construction plan and profile. This was verified in the field.

The only other thing to note is on the table below. The data from each aeronautical study was tabulated along with the elevation at the ground level at each structure location. From this data, the elevation at the top of each pole was tabulated. The last column shows the difference from the top of each pole to the maximum elevation shown on the permit. The numbers in red text show the calculated amount of pole that is above the maximum elevation allowed on the permit. The worse case is as-built structure 1308 which calculates as being 0.95' above max. allowed elevation.

AERONAUTICAL STUDY NO.	STR NUMBER ON PERMIT	AS-BUILT STR #	PERMITTED STRUCTURE HEIGHT MAXIMUM(FT)-THIS IS THE SAME AS ACTUAL STRUCTURE HEIGHTS IN FIELD.	PERMITTED MAXIMUM STRUCTURE TOP ELEVATION(FT)	ELEVATION AT GROUND LEVEL	ELEVATION AT TOP OF POLE	DISTANCE FROM TOP OF POLE TO MAX. PERMITTED ELEV.
2012-AGL-2215-OE	1293	1292	126	985	858.85	984.85	-0.15
2012-AGL-2216-OE	1294	1293	126	984	857.56	983.56	-0.44
2012-AGL-2217-OE	1295	1294	126	981	855.08	981.08	0.08
2012-AGL-2218-OE	1296	1295	126	978	851.3	977.3	-0.7
2012-AGL-2219-OE	1297	1296	131	990	857.19	988.19	-1.81
2012-AGL-2220-OE	1298	1297	141	996	855.1	996.1	0.1
2012-AGL-2221-OE	1299	1298	131	985	853.95	984.95	-0.05
2012-AGL-2222-OE	1300	1299	131	985	853.78	984.78	-0.22
2012-AGL-2223-OE	1301	1300	126	978	852.45	978.45	0.45
2012-AGL-2224-OE	1302	1301	126	978	851.99	977.99	-0.01
2012-AGL-2225-OE	1303	1302	80	931	850.81	930.81	-0.19
2012-AGL-2226-OE	1304	1303	80	931	851.18	931.18	0.18
2012-AGL-2227-OE	1305	1304	80	930	850.15	930.15	0.15
2012-AGL-2228-OE	1306	1305	60	910	849.87	909.87	-0.13
2012-AGL-2229-OE	1307	1306	60	910	849.81	909.81	-0.19
2012-AGL-2230-OE	1308	1307	60	909	849.25	909.25	0.25
2012-AGL-2231-OE	1309	1308	60	908	848.95	908.95	0.95
2012-AGL-2232-OE	1310	1309	60	908	847.96	907.96	-0.04
2012-AGL-2233-OE	1311	1310	60	908	847.91	907.91	-0.09
2012-AGL-2234-OE	1312	1311	60	908	848.19	908.19	0.19
2012-AGL-2235-OE	1313	1312	60	908	848.09	908.09	0.09
2012-AGL-2236-OE	1314	1313	60	907	847.17	907.17	0.17
2012-AGL-2237-OE	1315	1314	60	907	846.78	906.78	-0.22
2012-AGL-2238-OE	1316	1315	60	906	846.24	906.24	0.24
2012-AGL-2239-OE	1317	1316	80	925	845.29	925.29	0.29
2012-AGL-2240-OE	1318	1317	80	926	845.67	925.67	-0.33
2012-AGL-2241-OE	1319	1318	80	925	845.1	925.1	0.1
2012-AGL-2242-OE	1320	1319	131	975	844.44	975.44	0.44
2012-AGL-2243-OE	1321	1320	131	974	842.75	973.75	-0.25
2012-AGL-2244-OE	1322	1321	131	973	842.04	973.04	0.04
2012-AGL-2245-OE	1323	1322	141	982	840.58	981.58	-0.42
2012-AGL-2246-OE	1324	1323	141	982	840.93	981.93	-0.07

FINAL COMPLIANCE MONITORING REPORT

Minnkota Power Cooperative, Inc. Center to Grand Forks 345 kV Transmission Line

North Dakota Public Service Commission Case No. PU-09-670

Route Permit Number 144

APPENDIX C: DATABASE AND SITE PHOTOGRAPHY

Data transmitted via CD.