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 tabluated. 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 |