Northwest Conservation District
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Karen Nelson - Land Use Administrator
Cornwall Town Hall
Pine Street
Cornwall, CT 06753

July 15, 2010

Re: Wireless Communication Facility, 16 Bell Mountain Road Extension, Cornwall

Dear Karen,
This letter is in response to your request to have the Northwest Conservation District (NCD) perform an environmental review of the proposed access road to a cell tower compound. I reviewed the engineered design sheets (provided by Centek Engineering) and I visited the site on the afternoon of July 14, 2010. Please consider the following comments and recommendation when reviewing this proposal.

Background
The soils types in the areas proposed for construction activities are assigned an erosion hazard rating of "Severe" (source US Department of Agriculture Natural Resource Conservation Service Web Soil Survey, websoilsurvey.usda.nrcs.gov accessed on July 15th 2010). A severe rating indicates that "significant erosion is expected, and that the roads or trails (built in these soil types) require frequent maintenance, and that costly erosion-control measures are needed". In addition, the soil of most of the project area are underlain with dense glacial till and bedrock, minimizing the capability of the soil to absorb stormwater runoff. The soil types in the areas proposed for construction that have the "severe" or "very severe" erosion hazard rating include,

a) Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes
b) Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky
c) Canton and Charlton soils, 3 to 15 percent slopes, extremely stony
d) Timakwa and Natchaug soils

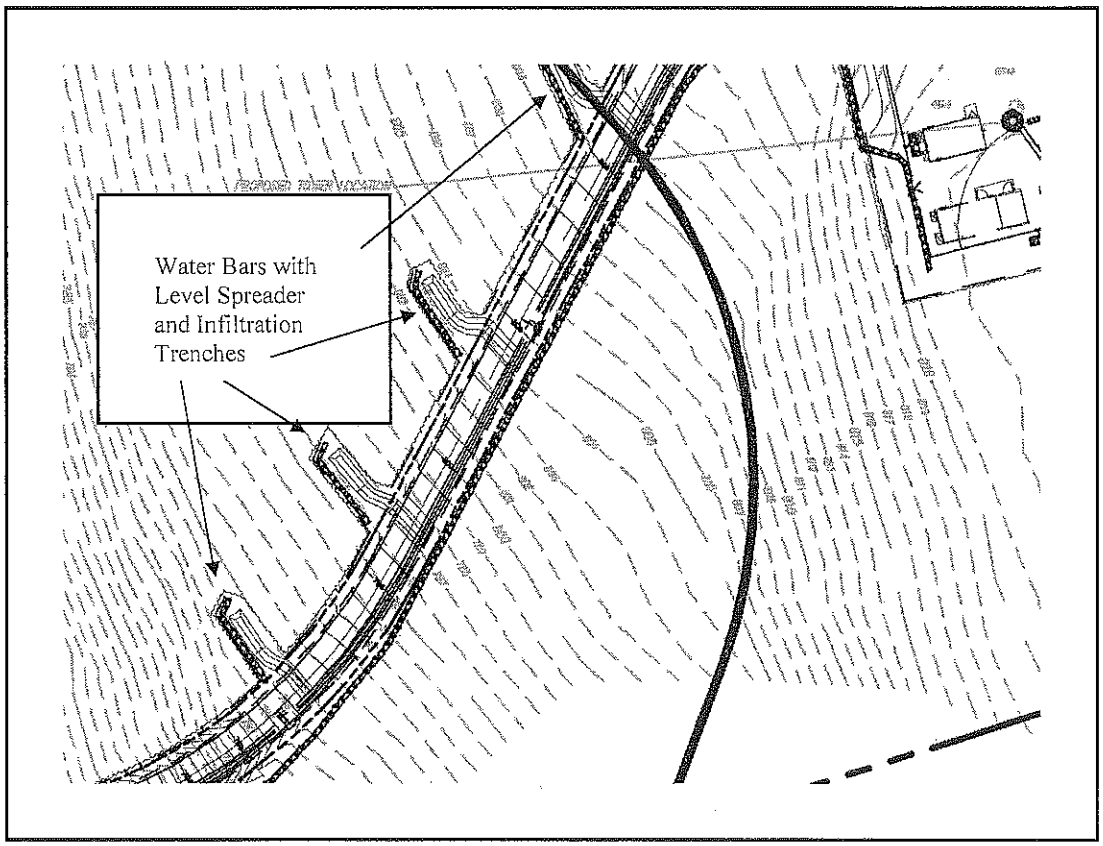
The Town should require that the engineered design sheets include soil classification information overlay so that the proposal reviewer can assess the environmental compatibility of the proposed project.

Wetlands
The value, quality and integrity of the wetland areas down gradient of the proposed project are highly ranked (Method for the Evaluation of Inland Wetlands In CT, CT DEP, Bulletin #9. 1991). The forested wetlands that exist down gradient of the site are extremely efficient at capturing infiltrating, filtering and slowly releasing stormwater runoff. Also, the forested wetland system adjacent to the project site contains a potential vernal pool, increasing the importance of this wetland as a resource supporting a diversity of plant and animal species.

Soil Erosion and Sediment Control

Given the highly erodible nature of the soils under the project site, the NCD has compared the site plan with the major concepts outlined the 2002 CT Guidelines for Soil Erosion and Sediment Control (CT DEP, 2002). As currently proposed the project is not in compliance with soil erosion and sediment control measures necessary to protect down gradient wetland and water resources.

1) On Page 5-7-6 of CT DEP, 2002 there is a table that describes water bar intervals on either a construction road or a gravel road. Roads with slopes greater than 15% should have a water bar every 50 feet or less. As currently proposed there are no water bars proposed on the design sheets. This will be an important measure to include because a crushed stone road, with or without a geo-grid layer, will compact and become impervious. Therefore, the proposed road will be generating much more stormwater runoff as compared to current conditions. In addition, each water bar should have an energy dissipater, and a measure to infiltrate at least some stormwater runoff. As currently designed stormwater runoff will be shunted off the road and onto the surrounding steep slopes that contain highly erodible soils. An example of how stormwater runoff is managed more effectively on a steep grade is pictured below.



2) The grading plan design sheet indicates that silt fences will run perpendicular to the contour lines. On page 5-11-36 of CT DEP, 2002 Figure GFS-2 indicates that "wings" are required to act as a silt barrier to captured silt laden runoff that is diverted by the silt fence. This is important because silt fences do not act as silt barriers when installed perpendicular to contour lines. Silt fences perpendicular to contour lines divert and concentrate flows, creating a host of erosion problems.

Conclusion

As currently designed this proposal is not environmentally compatible and will not be protective of the surrounding wetland and water resources. Until the grading plan/soil erosion and sediment control plan meet the major concepts outlined in CT DEP 2002, this proposal will not have the proper measures required to be protective of down gradient wetland and open water resources. In addition, once construction is complete, captured stormwater runoff should be treated and released using a measure(s) described in Chapter 11 of the 2004 Connecticut Stormwater Quality Manual (CT DEP, 2004).

The NCD appreciates this opportunity to assist the Town of Cornwall with wetland and water quality protection issues. If the plan of development is revised we would welcome the opportunity to update this review to ensure that the proposal is protective of Cornwall's valuable wetlands and open water resources. If you have any questions or need more information please do not hesitate to call me.

Sincerely,

Sean Hayden

Sean Hayden
Certified Soil Scientist - (Society of Soil Scientist of Southern New England)
Certified Professional in Erosion and Sediment Control - (CPESC # - 2181)