MacKay Sposito

ENERGY | PUBLIC WORKS | LAND DEVELOPMENT

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MEMORANDUM

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TO: Lisa Grueter, AICP, Berk Consulting

FROM: Paul Harmsen, P.E.

RE: 15867-Clark County Rural Industrial Lands Bank —Utility and Stormwater Analysis

DATE: May 26, 2015

Stormwater

Provider: Land owner:

Current Infrastructure: As identified in the Anchor QEA report on site critical areas existing conditions, opportunities and constraints report there are 7 potential wetlands that have been identified on the two properties. Additionally there is one large existing settling pond on the Lagler property and on both properties there are large areas with subsurface drainage tiles. Large areas of muck soil (USDA Natural Resources Conservation Service) are present on the property. Wetland and habitat protection will be required for any proposed improvements and management of the water quality and stormwater contributions must be taken into consideration (per CCC Chapters 13.26A and 40.385). Based on these requirements all contaminants to surface water, stormwater and groundwater will be treated prior to discharge to ensure protection of surface and groundwater quality for drinking water supply, recreation, fishing and other beneficial uses.

Improvements:

Based on our assessment a regional stormwater system is recommended. This will allow for development to maximize the available land, preserve wetlands, maintain existing drainage basins and create habitat corridors. To accomplish this, the stormwater solution should be developed adjacent to and integrated within the existing wetland buffers on the property. This will reduce impacts of the stormwater ponds and minimize impacts to the existing wetlands. Our rational is that the space between the wetlands will be difficult to use for development due to their proximity and associated buffers. As such, the land around the wetlands has been identified for stormwater treatment and detention facilities. Using the Western Washington Continuous Simulation stormwater model for preliminary analysis, and an estimated developed site impervious area, a total water quality treatment and detention pond surface area was determined. The total area is approximately 20% of the net developable land identified. The Land Use Analysis figure shows the anticipated areas for the stormwater facilities.

Sewer
Provider Clark Regional Wastewater District
Current Infrastructure Gravity sewer main is present in NE 124TH Avenue about 1000 feet south of the property (i e south of NE 119th Avenue, at the intersection of NE 124TH Avenue and NE 114th Street)
Improvements/Extensions Sewer service to this project would be provided through the construction of two sanitary lift stations On-site sanitary sewer would gravity drain to one of the two lift stations The northern lift station would pump to the southern pump lift station, the southern lift station would pump to the existing off-site sanitary sewer system in NE 124th Avenue

Electrical
Provider Clark Public Utilities
Current Infrastructure Electrical infrastructure in NE 119th Avenue and along Highway 503 (NE 117th Ave) Clark Public Utilities has an existing substation located at the southeast corner of the project site, along NE 119th Street This substation has some existing capacity to serve a portion of the proposed industrial properties development depending on electrical demand The existing substation has capacity to provide approximately 5 5 MW
Improvements/Extensions Electrical service to the industrial development would require installation of backbone electrical infrastructure to a central area of the project. Additional electrical infrastructure in the form of distribution conduits and conductor and distribution transformers would also be needed
If the project demand is greater, then a new substation would be needed somewhere in the project. This substation could be setup with a redundant transmission source and with redundant transformers to improve system reliability depending on the ultimate users' power needs
Electrical system upgrades are paid for by the developer.

Water System
Provider Clark Public Utilities
Current Infrastructure. Water Mains in NE 117th Ave (10"/12" Water Main), NE 119th Street (12" Water Main), and NE 144th Street (12" Water Main), NE 124th Street (12" Water Main)
Improvements/Extensions Water service to the project would need to be extended along the major roadways to provide water for processing, potable water needs, and fire protection It is anticipated that water main extensions would need to be at least 12" diameter and improvements to the existing off-site water system will likely be required to increase capacity to the site

Natural Gas
Provider NW Natural
Current Infrastructure 6" Main in NE 117th Ave (Hwy 503)

Improvements/Extensions . NW Natural is planning significant backbone infrastructure reinforcement in this area within the next few years that will exceed the 2,000-5,000 mcf/month demand usage load requirement identified in the utility scoping document.

Data/ Communications

Provider CenturyLink

Current infrastructure. Fiber optic data infrastructure is installed along Highway 503 (NE 117th Avenue), in NE 159th Street, and NE 119th Street. Copper data infrastructure is installed in various locations around the perimeter of the proposed industrial property, see Utility exhibit for locations

Improvements/Extensions Data and phone service to the project would need to be extended along the major roadways to provide data for future businesses