The proposed scope of work is construction of an overland bypass High Density Polyethene (HDPE) pipe. The HDPE pipe will lay on the surface over the marshland areas but will be trenched as it makes the connections to the existing main. This HDPE would be a 12” DR11 approximately 3,000 ft. The construction method would be HDPE fusion welding, hence no joints for roots to intrude. This HDPE pipe is corrosion resistant, UV resistant, sturdy, and appropriate for the environmental conditions of the site. And even though the diameter is slightly smaller than the existing 14” transmission main, the HDPE is smoother and would provide similar hydraulic capacity.

Donn,
The existing 14" pipe made of steel pipe that has a rougher surface (120 C factor) is about 14" inside diameter pipe.
The proposed 12" HDPE pipe rated DR11 is a soother (150 C factor) that has about 10.29" inside diameter size. This is not an equal resistance for flow as stated above to the 14" steel pipe. The pump motor will have higher hp that may exceed the existing motor capability and the pump curve may not be able to meet the existing flow requirements.

It seems that a LARGER 16" DR 11 with a 12.9" inside diameter will be an equal with the smoother HDPE material.

Suggest we go out to get another bid price for this system that will be found to be more expensive than the budgeted estimated cost of the emergency repair of $300-400K.that Hartzell Construction has provided. Especially when the contractors will be properly compensated for their emergency response and repair.

Let me know if you have questions or comments on this information.

Much thanks,

Gordon Heinrichs
[redacted]