



Emergency Services Communications Center

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To: Bob Dominick, DSC Coordinator
Growth Management Department

October 11, 2007

From: Ted Ruffedt, Jr., Deputy Director
Pennington County – Rapid City ESCC/9-1-1

Subject: 11-6-19 Review Application - Site Improvement Plan for the Dino Hill Radio Tower Site

The Dino Hill equipment shelter and radio tower sits within the confines of Dinosaur Park (see attached maps and diagrams). The building and radio tower are owned by Black Hills Corporation. The City of Rapid City leases (attachment #1 is a copy of the lease) the site to Daksoft, Inc., a subsidiary of Black Hills Corporation, to maintain an equipment shelter and radio tower on the City property, with the requirement that local public safety entities be able to maintain radio equipment at the site. The Rapid City Fire and Police departments and Rapid City Public Works, maintain radio communication equipment at the site.

The ESCC, under the guidance of the Rapid City Fire Department, is partnering with BHP to make improvements to the site that will ensure the viability of this critical site for many years to come. The purpose of the project is to correct several deficiencies that have developed over the years as well as improve security at the site, improve redundancy at the site, and improve the appearance of the site.

Parking and access improvements are not required by municipal code since the project does not involve more than 20% expansion of the site.

Attachment #2 is a preliminary site plan showing the proposed exterior improvements. BHP will provide an engineered plan (if needed) prior to the Planning Commission meeting.

Specifically, the following tasks are planned as part of this joint improvement project:

1. **Replace Siding:** BHP will replace the existing corrugated steel siding with cement fiber siding of a neutral color. See attachment #3 for an example of the type and color of siding to be used..
2. **Build shell roof:** BHP will build a framed shell roof over the existing steel roofing covered with asphalt shingles. See attachment # 4 (2 pages) for an illustration of this improvement.
3. **Mud-jack foundation slab:** BHP will have the North West corner of the foundation slab mud-jacked. Earth under that corner has been eroded by run off over the years. See attachment #5 for pictures of this location.
4. **Prevent future water intrusion:** BHP will mitigate on-going water intrusion problems on the east side of the building. There is a small amount of earth against the east side of the building (estimated to be less than 1 cubic yard of dirt total). The BHP contractor will remove the dirt from the side of the building and will use that dirt to level the ground where the propane tank will be installed.

Douglas J. Pavel – Director

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BHP will then install drain tile along the east side of the building to divert run off to the north and south ends of the shelter building where the water will naturally drain away from the building to the west and south. The contractor will determine at that time if a small block retaining wall will also be needed along the east side of the building to help prevent water and eroded dirt from coming in contact with the side of the building. If needed, BHP will provide engineered plans for this work however the amount of dirt to be removed is very small, estimated at less than 1 cubic yard. See attachment #6 (3 pages), for a photograph of the area where dirt will need to be removed, and pictures of interior damage caused by water intrusion.

5. **Upgrade electrical:** BHP will replace all electrical inside the building. The existing service to the shelter building is adequate.
6. **Install a split heating & cooling unit:** BHP will install a split heating/cooling unit inside the equipment shelter building. An air conditioning condenser will be located outside the building. See attachment # 7 (3 pages) for a spec sheet on the condenser unit and an illustration of the proposed location of the condenser.
7. **Remove exterior storage cabinet:** BHP will remove the exterior steel cabinet located on the north-west corner of the building. See attachment # 5.
8. **Remove two wooden power poles:** BHP will remove the two wood power poles on the site as they are no longer needed to hang antennas. See attachment #8 for photographs of the poles to be removed.
9. **Install a backup power generator:** ESCC will install a new Coleman propane powered 11Kw generator. The generator will sit on a 45"x 35"x 30"x4" concrete pad. A new automatic transfer switch for the generator will be installed inside the shelter building. A 250 gallon above ground propane tank will be installed a minimum of 10' from the building per Rapid City Fire Department regulations. See attachments #2, 7, and 9 (3 pages), for proposed locations of the generator and propane tank, and spec sheets on the generator.
10. **Install security fence:** ESCC will install 50.75' of 6' tall heavy duty chain link fence topped with 1' of three strand barbed wire and a 4' gate. The fence would prevent access to the base of the radio tower, the generator, the propane tank and air conditioner condenser unit. According to municipal code, such fence is allowed in Park Forest zoning for utility sites. See attachment #10 (4 pages) for a fence footprint illustration and three site elevations showing the proposed fence..

The total cost of the planned improvements is \$42,127.00

Thank you.

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