

PLANNING COMMISSION REPORT
Regular Agenda – Public Hearing Item:

PC Staff Report
05/24/10

**ITEM NO. 1 SPECIAL USE PERMIT FOR NORTH BOWERSOCK MILLS &
POWERHOUSE; 1000 POWERHOUSE NORTH RD (AMB)**

SUP-3-4-10: Consider a Special Use Permit for the construction of the North Bowersock Mills & Powerhouse, Utility and Service, Major, located at 1000 Powerhouse North Road. Submitted by Bowersock Mills & Power Company and the City of Lawrence, property owners of record.

STAFF RECOMMENDATION: Staff recommends approval of SUP-3-4-10, a Special Use Permit for the construction of the North Bowersock Mills & Powerhouse, Utility and Service, Major, based upon the findings presented in the body of the staff report and subject to the following conditions:

1. Publication of an ordinance per Section 20-1306(j).
2. Approval of a Floodplain Development Permit, including submission of a no-rise certificate and HEC-RAS or equivalent hydraulic model as requested by the Stormwater Engineer, prior to release of Special Use Permit for building permits.
3. Approval of a lease agreement with the City of Lawrence for the use of city-owned property.
4. Submission of a photometric plan showing the location, size and wattage of fixtures.
5. Applicant shall provide a revised site plan with the following changes:
 - a. Correctly show the location of the access road on the southernmost edge of the levee under the Kansas River bridge.
 - b. Move the stand pipe on the south wall as close as possible to the stair door.
 - c. Show location of fire hydrant that meets 2006 IFC C105.1.
 - d. Show location of Fire Department Connection (FDC) on west wall of building next to main door.
 - e. Revision of the surface summary to add square footage amounts for building and pavement.
 - f. Add material notation for canoe portages and fishing deck.
 - g. Add the following notes:
Proposed Use: "Utility and Service, Major"
 - h. Add City of Lawrence as property owner:
City of Lawrence, KS
PO Box 708
Lawrence, Kansas 66044
785.832.3000

Applicant's Reason for Request: *"The Bowersock Mills and Power Company (BMPC) requests a Special Use Permit to construct a hydroelectric powerhouse at the north end of the Bowersock Dam. The area is currently zoned open space. The use of the building is for the production of electricity and would qualify for Open Space under 'Utility and Service, Major'. BMPC anticipates operating this plant in this area into the next century and beyond. The company wants to be assured through the Special Use Permit that operation of*

the plant under the requirements of a granted Special Use Permit would continue unchanged through the life of the operation.”

KEY POINTS

- The BMPC North Powerhouse is a “Utility and Service, Major” which requires a special use permit in the OS zoning district.

FACTORS TO CONSIDER

- Procedural requirements of Section 20-1306; Special Use Permits.

ASSOCIATED CASES/OTHER ACTION REQUIRED

Previous Action

- Variance [B-2-2-10] from Article 12, Section 20-1204(e)(3)(i) of the City Code as it pertains to standards for non-residential development within the floodplain overlay district. Approved by the Board of Zoning Appeals March 4, 2010.

Future Action

- Approval of a lease agreement with the City of use of city-owned land.
- City Commission approval of Special Use Permit and publication of ordinance.
- Administrative review and approval of floodplain development permit.

PUBLIC COMMENT RECEIVED PRIOR TO PRINTING

None have been received.

GENERAL INFORMATION

Current Zoning and Land Use:

OS (Open Space) and Floodplain Overlay Districts; property is located in the Kansas River and also contains a dam.

Surrounding Zoning and Land Use:

To the north, east, and west: OS (Open Space) and Floodplain Overlay Districts; property contains the Kansas River, a dam, a levee, and park land.

To the south: CD (Commercial Downtown), CS (Commercial Strip), and Floodplain Overlay Districts; City parkland, existing hydroelectric plant, existing development.

Summary of Special Use

Currently, Bowersock Mills and Power Company (BMPC) operates a hydroelectric plant on the south side of the Kansas River, just east of the Kansas River bridge. This proposal is for the construction of a new hydroelectric plant on the north side of the river.

The hydroelectric plant is defined as a *utility and services, major* in Section 20-1764 of the Development Code:

UTILITIES AND SERVICES, MAJOR. Services and utilities that have substantial impacts. Such uses may be permitted when the public interest supersedes the usual limitations placed on land use and transcends the usual restraints of the district for reason of necessary location and community-wide interest. Typical uses include: water and wastewater treatment facilities, major water storage facilities, airports, power generation plants and detention and correction institutions.

SITE SUMMARY

	Existing	Proposed	Change
Property Area (sq ft):	174,983	174,983	-
Total Impervious Area (sq ft):	26,232	24,988	-1,244
Total Pervious Area (sq ft):	148,752	149,996	+1,244

Site Plan Review

The site plan shows the proposed location of the hydroelectric plant on the north side of the Kansas River, east of the Kansas River bridge. The plan also shows the access road, and necessary improvements to the existing dam.

The applicant is also proposing to construct a canoe take-out west of the Kansas River Bridge, a canoe put-in east of the proposed hydroelectric plant, and the construction of a new fishing deck. The applicant will place a sign at the canoe take-out warning boaters of the downstream hazard.

Off-street parking for "utility and service, major" is required at a ratio of 1 parking space per 1.5 employees. This hydroelectric plant will only be manned during the day, but the majority of activities will take place at the south powerhouse facility. The site will be accessed by BMPC trucks for routine maintenance and these will park on the access road or in the garage area.

Review and Decision-Making Criteria (20-1306(i))

1. WHETHER THE PROPOSED USE COMPLIES WITH ALL APPLICABLE PROVISIONS OF THIS DEVELOPMENT CODE

Applicant's Response: *"The hydroelectric plant is a 'Utility and Service, Major' which is an allowed use in the OS zoning district with a special use permit according to Section 20-401 of the Development Code."*

Staff Finding – The site plan complies with the requirements set out in the Development Code. The proposed use is an allowed use in the proposed OS (Open Space) District subject to Special Use Permit approval. A Floodplain Development Permit is required per Section 20-1203 and must be approved prior to the release of building permits. In addition, the applicant will need to enter into a lease agreement with the City for the use of city-owned property.

2. WHETHER THE PROPOSED USE IS COMPATIBLE WITH ADJACENT USES IN TERMS OF SCALE, SITE DESIGN, AND OPERATING CHARACTERISTICS, INCLUDING HOURS OF OPERATION, TRAFFIC GENERATION, LIGHTING, NOISE, ODOR, DUST AND OTHER EXTERNAL IMPACTS

Applicant's Response: "BMPC has worked with a local architect and the North Lawrence Improvement Association to design a plant such that is keeping with the character of the neighborhood. The Bowersock Dam and the associated BMPC South Powerhouse have been fixtures in Lawrence, Kansas since 1874 and 1905 respectively. Both the dam and BMPC South Powerhouse are eligible for the state historic register and their industrial purpose and nature are characteristic of both downtown and North Lawrence. In particular, North Lawrence has historically been an industrial and agricultural center for the community. Key features in the area include large grain elevators, significant industry such as a chemical plant, and a major rail line with heavy railroad traffic, alongside large residential lots, many of which have productive truck gardens. With the purpose of reflecting the character of the area, the proposed BMPC North Powerhouse will have simple, industrial lines. The architect for the project chose not to mimic the exact historic style of the BMPC South Powerhouse, but rather use a more modern style with key elements of the existing powerhouse such as the clerestory and exposed concrete. Because of the structure's near constant exposure to moisture, durable precast concrete was selected to serve as exterior wall cladding instead of brick masonry which is also a material characteristic of the area, given the difficulty BMPC has had maintaining the South Powerhouse brick masonry walls. A large glass clerestory will provide daylight illumination of the interior, and operable glass openings placed adjacent to the generators will provide BMPC's staff with the ability to ventilate the interior passively, provide views up and down river for BMPC staff, and provide vehicular travelers, bike travelers and walkers with glimpses of the operating generators from the bridge and levee. BMPC has provided amenities for the public in the project, including a canoe portage from upstream to the downstream side of the dam, a fishing deck on the downstream side of the powerhouse, and improved and safer access to the fishing deck and the river. **Scale:** the building will be tall. Due to federal, state, and local regulations, the top floor of the powerhouse must be above Base Flood Elevation (BEF), which is ELEV. 826.5. The top story has to be tall enough to house a 50-ton crane and allow for the placement and removal of powerhouse turbines and generators. The tallest point of the powerhouse will be above the Massachusetts and Vermont Street Bridges, well below the toe of City Hall, and significantly below the grain elevators in the background. BMPC has worked to bring the height of the building down as much as possible. **Operating Characteristics:** The BMPC North Powerhouse will operate 24/7. The proposed building will be located in the Kansas River on the north end of the Bowersock Dam. The building will house four hydroelectric turbine/generator sets. The energy produced on the site will be transmitted via buried transmission to the Massachusetts Street Bridge. It will run in conduit under the bridge to join existing BMPC transmission on the south side of the Kansas River. The Powerhouse is designed to operate unmanned, with periodic staff checks. With the exception of the construction period, there will be limited additional traffic. The operation of the plant will not impede recreation on the river or on the levee. Periodically, operations of the plant will require heavy equipment such as backhoes in order to keep the site maintained and debris-free. Operations on the Bowersock Dam will continue much as they have over the last 100 years, as BMPC staff will access the Bowersock Dam to repair and raise flashboards on a continual basis. **Lighting:** The lighting plan for the project is designed to make the project safe and attractive. BMPC worked with the North Lawrence Improvement Association, and their requests including limiting overhead lighting that could reach the North Lawrence Neighborhood into account. The North Lawrence Improvement Association will review the lighting design. **Noise:** The noise of the plant is not anticipated to be an issue. All generators in the South Plant will be either brand new or newly-rewound. Hydroelectric power plants do produce noise, but it is well within the range of the ambient traffic noise of North Lawrence. Warranties on the equipment will ensure that the generators will not make excessive noise. **Odor:** None. **Dust:** None additional. BMPC feels that the replacement of the existing spillway with the proposed BMPC Powerhouse will improve the aesthetic

aspects of the project and the surrounding area, as well as make the area surrounding the project a safer, more appealing place to recreate. ”

The proposed hydroelectric plant is similar in operation to the existing one that is located on the south side of the river. Interior lights will only operate when the structure is occupied. Exterior lighting will consist of cut-off lights to minimize light pollution. Wall-mounted LED lights will be installed on the east and west facades to illuminate the building facade and be controlled with photocell sensors so that they may be automatically turned on at dusk and off at dawn. Also, there will be wall mounted fixtures on the north and west of the structure for safety. In total, there will be 14 exterior light fixtures. BMPC has indicated that there will be no additional amounts of odor, dust or other external impacts associated with this project.

Staff Finding – The proposed hydroelectric plant will be compatible with adjacent uses.

3. WHETHER THE PROPOSED USE WILL CAUSE SUBSTANTIAL DIMINUTION IN VALUE OF OTHER PROPERTY IN THE NEIGHBORHOOD IN WHICH IT IS TO BE LOCATED

Applicant's Response: *"BMPC believes that the construction of the North Powerhouse will be an improvement on the current aesthetic appeal of the site. Historically, the north end of the Bowersock dam has been the least aesthetically-pleasing area of the project. BMPC has been required by FERC to block access to the existing spillway with barbed wire and other fencing. The spillway itself is not particularly attractive, and BMPC has had to work diligently to keep graffiti covered, both on the spillway itself and on any other concrete surface in the area. The area has posed a safety hazard, as members of the community ignore the multitude of posted signs and fencing, access the dam, and place themselves in danger. The proposed North Powerhouse will be an single monolithic structure, and serve as an attractive impediment to the dangerous areas of the dam. Plans for the project include improved and safer access to areas downstream of the powerhouse which will be appropriate for fishing and other river activities. BMPC feels confident that the project will make the north end of the Bowersock Dam a safer and more attractive area. It is our hope that the addition of this modern facility will improve property values in the area."*

Staff Finding – The addition of a hydroelectric plant in this location is not anticipated to result in any diminution of value of other property in the neighborhood.

4. WHETHER PUBLIC SAFETY, TRANSPORTATION AND UTILITY FACILITIES AND SERVICES WILL BE AVAILABLE TO SERVE THE SUBJECT PROPERTY WHILE MAINTAINING SUFFICIENT LEVELS OF SERVICE FOR EXISTING DEVELOPMENT

The proposed hydroelectric plant will not be serviced by any public utilities, except for electric. The applicant is proposing to use alternative means of servicing the building including bringing in potable water, off-site disposal of grey water, and the use of an incinerating or composting toilet. For fire protection, the applicant will be using water pumped out of the Kansas River. Access to the site will generally be limited to BMPC workers, city workers needing to access the dam, and public safety officials.

Staff Finding – The proposed use, a 'Utility and Service, Major', is a service which serves the community. Sufficient safety, transportation and utility facilities will be available to serve the subject property.

5. WHETHER ADEQUATE ASSURANCES OF CONTINUING MAINTENANCE HAVE BEEN PROVIDED

Staff Finding – The site plan will function as the enforcement document to assure that maintenance and use of the property is consistent with the approval. In addition, BMPC will need to enter into a lease agreement with the City for the use of city-owned property.

6. WHETHER THE USE WILL CAUSE SIGNIFICANT ADVERSE IMPACTS ON THE NATURAL ENVIRONMENT

Applicant's Response: *"No. The project is replacing an existing development, and will actually have a smaller concrete footprint than the existing structure. Two separate studies have been conducted to confirm that the project will not increase any chance of flooding upstream of the project. The project has received approval from the U.S. Fish and Wildlife Service and the Kansas Department of Wildlife and Parks."*

Staff Finding – The proposed use, with the protection measures required by Federal, State and Local governments, should not cause significant adverse impacts on the natural environment. In addition, the applicant will need to successfully complete a floodplain development permit, including submission of a "No-rise Certificate".

7. WHETHER IT IS APPROPRIATE TO PLACE A TIME LIMIT ON THE PERIOD OF TIME THE PROPOSED USE IS TO BE ALLOWED BY SPECIAL USE PERMIT AND, IF SO WHAT THAT TIME PERIOD SHOULD BE.

Time limits are established on Special Use Permits to permit a periodic review to determine if the use remains compliant with the area or if a rezoning would be appropriate. However, time limits have not typically been imposed on utility services through the special use permit process. The Special Use Permit process allows for review at any time by the City Commission according to Section 20-1306 (I), which provides for protection for the public.

Staff Finding – The project provides infrastructure for the community; therefore, it would not be appropriate to place a time limit on this use.

Conclusion

The proposed hydroelectric plant will have a positive impact on the community by providing alternative energy production. The use is compatible with, and appropriate for, this location and staff recommends approval of the Special Use Permit with the conditions noted.