# **BOARD OF COUNTY COMMISSIONERS OF DOUGLAS COUNTY, KANSAS**

Amended agenda

#### WEDNESDAY, OCTOBER 23, 2013

4:00 p.m.

-Consider approval of the minutes for August 28, September 11, September 25 and October 2, 2013

#### **CONSENT AGENDA**

(1) (a) Consider approval of Commission Orders;

## **REGULAR AGENDA**

- (2) Discussion of a comprehensive study on the impacts of urbanization on the Baldwin Creek Watershed (Craig Weinaug)
- (3) CUP-12-00099: Conditional Use Permit for Penny Sand Pit; N 1500 Rd and E 1850 Rd. Consider revision to Condition No. 19 to change the timing requirements for the commencement of earthwork and dredging activities related to road improvements. (Mary Miller)
- (4) Consider approving changing the scope of Project No. 2013-17, repairs to Bridge No. 11.86N-15.00E, which carries Route 1055 over the Wakarusa River approximately 1.1 miles south of 31<sup>st</sup> Street.
- (5) (a) Consider approval of Accounts Payable (if necessary)
  - (b) Appointments
    - Board of Zoning Appeals (2) positions 10/31/13 Building Code Board of Appeals (1) position 12/2013 Douglas County Senior Services Board (1) position 12/2013
  - (c) Public Comment
  - (d) Miscellaneous
- (6) Adjourn

#### WEDNESDAY, OCTOBER 30, 2013

#### WEDNESDAY, NOVEMBER 6, 2013 (4:00 p.m. only)

4:00 P.M.

Presentation by KDA/DWR of new flood insurance rating from CRS (Credit Rating System) for Douglas County property owners in the unincorporated areas (Linda Finger)

Study Session with County Zoning & Codes Dept. and the Planning & Development Services Dept. on planning issues related to the Zoning Regulations and amendments/revisions to these regulations.

#### WEDNESDAY, NOVEMBER 13, 2013 (light meeting)

**Note**: The Douglas County Commission meets regularly on Wednesdays at 4:00 P.M. for administrative items and 6:35 P.M. for public items at the Douglas County Courthouse. Specific regular meeting dates that are not listed above have not been cancelled unless specifically noted on this schedule.

College Borc

# **Douglas County Kaw Drainage District**

808 Massachusetts Street Lawrence, Kansas 66044 (785) 841-4700

October 1, 2013



Chairman Mike Gaughan
Commissioner Nancy Thellman
Commissioner Jim Flory
Board of Commissioners, Douglas County
Douglas County Courthouse
1100 Massachusetts Street
Lawrence, Kansas 66044

Re: Hydrologic/ Hydraulic Modeling Study of Baldwin Creek Watershed to Evaluate The Impacts of Development and Stormwater Management

**Policies** 

Dear Chairman Gaughan and Commissioners Thellman and Flory:

The Baldwin Creek Watershed encompasses over 7,600 acres, or approximately 12 square miles, on the west side of Lawrence north of Sixth Street and south of the Kansas River. Since 1988, the Watershed has gone from Five percent (5%) urbanized to currently at least Twenty-five percent (25%) urbanized. If the area between the Kansas Turnpike and Sixth Street continues to develop, as expected, the Watershed will become approximately Seventy-five percent (75%) urbanized. The lower portion of the Watershed is a part of the Douglas County Kaw Drainage District, where it merges with the Kansas River floodplain.

When natural landscapes are developed, the percentage of impervious surfaces increases substantially. The annual runoff from impervious surfaces is approximately twice that of natural grassland. When an area is developed, both the rate of stormwater runoff and the quantity of runoff increase substantially. The Douglas County Kaw Drainage District has authority over the water courses, drainage ways, and drainage structures within its boundaries; and it is responsible to maintain proper drainage and minimize flooding damages. The Drainage District Board is concerned that development of the Baldwin Creek Watershed will exacerbate flooding within their District, increasing property damage and maintenance costs. The Board believes that this is, or should be, a matter of concern for both Douglas County and the City of Lawrence, as well.

The Drainage District desires that development within the area of the Baldwin Creek Watershed proceed under a policy of 'no adverse impact' on the down stream drainage system in terms of both channel degradation and floodplain damages. To accomplish this goal, stormwater management practices will need to be implemented to control both the rate and volume of runoff from developed areas. Various types and combinations of stormwater management practices could be implemented.

The Drainage District proposes that a comprehensive study of stormwater runoff and drainage throughout the Baldwin Creek Watershed be commissioned, the cost of which would be shared by Douglas County and the City of Lawrence. If the County felt it was necessary for the Drainage District to participate in the study, the District would do so, but the members of the District are the owners of property either in Lawrence proper or in the rural areas of the County; and in their capacity as tax-paying property owners, they would be already as such participating in paying for the cost of the study.

The study would involve computer analysis and modeling of the hydrology and channel hydraulics of the watershed. The model should be capable of evaluating various scenarios regarding land use and stormwater management practices for individual parcels down to a few acres in size. Development of the Watershed could be assumed to proceed in accordance with the Horizon 2020 Comprehensive Plan for Lawrence and Unincorporated Douglas County. The starting point could be pre-development conditions, and the current land use condition could be modeled, along with various future scenarios. The 50%, 10% and 1% chance of annual occurrence storms (2 year, 10 year and 100 year recurrence interval) should be analyzed, as a minimum. At least for the 1% chance storm, the flood should be modeled both with the Kansas River at normal stage and at high water stage (bank full or greater).

The goal of the Study would be to arrive at the most beneficial, technically feasible, and economically efficient stormwater management polices and practices to be adopted by both the City and County Government. The City, County and District should cooperate in developing the parameters and criteria for the Watershed Study. The cost of the study is preliminarily estimated at \$50,000 to \$75,000.

The District Board is not only willing to meet with the County Commission; it looks forward to such a meeting. We are available at your convenience.

Thank you very much.

Very truly yours,

Charles Taylor

President, Douglas County Kaw Drainage District

# Memorandum City of Lawrence / Douglas County Planning & Development Services

TO: Board of County Commissioners

FROM: Mary Miller

CC: Scott McCullough, Planning and Development Services Director

Linda Finger, Zoning and Codes Director

Date: For October 23, 2013 meeting

**RE:** CUP-12-00099: Conditional Use Permit for Penny Sand Pit; N 1500 Rd and E 1850

Rd.

Consider revision to Condition No. 19 to change the timing requirements for the commencement of earthwork and dredging activities related to road improvements.

Attachment A: List of conditions with proposed revision

Condition 19 was drafted to insure the road improvements recommended by the Traffic Impact Study would be completed. The condition was revised at the August 28<sup>th</sup> meeting to include the timing requirements that linked earthmoving work on the site to the issuance of a contract for the road improvements, and dredging to the completion of the road improvements.

The County Engineer indicated that the plans could be sent out for bids shortly but that awarding the contract could take several weeks. It is his preference that road improvements not be carried out in the winter due to the possibility that bad weather might delay replacing removed pavement. Such a delay risks leaving the N 1500 Rd/Noria Road intersection closed for a significant amount of time, or leaving an unsafe dropoff along the edge of Route 442 at Route 1057.

Road improvement plans have been approved and the financing agreement establishing Penny's responsibility for funding the improvements has been accepted. The County Engineer indicated that these measures are adequate insurance that the roadwork will be completed.

The condition, as written, would require the earthmoving to be delayed until such time as the construction contract is in place and dredging could not occur until the road improvements were completed, which would be next spring. The revision will allow earthmoving and dredging to commence when the permit for the Conditional Use has been issued.

The revision would mean some hauling would occur prior to realigning the sand plant entrance onto N 1500 Road opposite the Noria Road intersection and prior to construction of an eastbound right turn lane on Route 442 at Route 1057, both of which are safety improvements. You will recall the TIS indicated truck traffic will not increase with the new sand pit because they are not able to dredge both in-river and off-river at the same time. So, allowing hauling to start prior to

the road improvements does not reduce the current level of safety, rather it delays safety improvements. Commencing construction during the winter could reduce the current level of safety if weather conditions significantly lengthen the amount of time an open excavation exists along the edge of a road.

The County Engineer indicated allowing trucks to haul on the current pavement in the N 1500 Rd/Noria Road intersection is not a large concern during the winter as subgrades are typically frozen resulting in increased load carrying capacity. The pavement would be replaced next spring as soon as weather allows. The intersection will need to be closed to traffic during pavement removal and replacement. The plan is to minimize the traffic interruption by requiring this work to occur over a weekend.

The proposed revision is below:

#### **REVISED CONDITION**

(deleted text struckthrough, new text in **bold**.

- 19. The road and intersection improvements listed below are required with this CUP. A permit for the Conditional Use may be issued when a road improvement contract for these improvements is in place and the County has accepted Penny's arrangements to finance the improvements. Dredging activities may not commence until after the road improvements are completed. The Conditional Use permit may be issued only after the plans for the road improvement are approved and the County has accepted Penny's arrangements to finance the improvements.
  - a. Realignment of the entrance to the sand facility so that it opposes the Noria Road intersection at N 1500 Road.
  - b. Pavement of a 100 ft long section of the site access drive just north of N 1500 Road, as recommended in the TIS.
  - c. Reconstruction of pavement in the Noria Road (E 1750 Road)/N 1500 Road intersection. The existing surfacing is likely a crushed rock base that has been chip sealed. This will not stand up to the increased truck traffic crossing N 1500 Road.
  - d. Construction of an eastbound right turn lane on Route 442 (N 1400 Road) at Route 1057 (E 1900 Road). This is mentioned as a desirable improvement in the TIS. Pavement on the existing shoulder at this location is not adequate for the projected amount of truck traffic.

#### STAFF RECOMMENDATION:

Approve the proposed revision to Condition 19 based on the County Engineer's recommendation.

# CONDITIONS AND RESTRICTIONS OF USE BOCC APPROVED ON AUGUST 28, 2013 CUP-12-00099: Penny Sand Pit NE of N 1500 and E 1850 Roads

#### CONTINGENT APPROVAL.

- a. If the Board of County Commissioners vote to contingently approve the CUP, this approval is contingent upon the evaluation of the results of the pre-dredging report to be prepared by an independent 3<sup>rd</sup> party consultant.
- b. The County Commission will contract with a 3<sup>rd</sup> party independent consultant, to conduct the necessary studies and prepare the pre-dredging report following the execution of an agreement between the property owner and the County Commission which specifies that the property owner shall reimburse the County Commission for the expense following completion of a pre-dredging report which is accepted by the County Engineer. This agreement shall be executed and recorded prior to the commencement of work on the pre-dredging report.
- c. The Conditional Use Permit will be returned to the County Commission following the completion of the pre-dredging report. Based on the results of the pre-dredging report and the recommendations of the consultant, the Commission may take one of the following actions:
  - 1) Approve the CUP with revised conditions,
  - 2) Approve the CUP with additional conditions,
  - 3) Withdraw the contingent approval of the CUP.

#### PRE-DREDGING REPORT.

- a. The independent 3<sup>rd</sup> party consultant shall provide a pre-dredging report to the County Engineer for review. The CUP will be placed back on the County Commission's agenda for discussion of the results of the pre-dredging report and recommendations provided by the 3<sup>rd</sup> party consultant. The County Commission may revise the conditions of the CUP based on the results of this report. The pre-dredging report shall:
- b. Determine the potential zone of influence through the following steps:
  - i. Take field measurements to determine the current groundwater table and flow direction.
  - ii. Determine the anticipated maximum dewatering influence from maximum rate of sand and water extraction, evaporation, and any other water consumption. The information provided should include the proposed rate of sand and water extraction or taking from the pond while recognizing the recycling of water. (Page 5 of Conestoga-Rovers Assoc.'s independent review report explains that this assessment could be completed based on existing information.)
  - iii. The results and an exhibit of the potential zone of influence shall be included with the pre-dredging report.

- c. Confirm existing groundwater and/or soil quality to ensure there is no significant contamination from existing site area and operations, including an initial environmental site assessment (ESA) of potential sources and existence of contamination (if an ESA has not already been conducted) through the following:
  - i. Installation and sampling of groundwater wells in down-gradient area in locations approved by the County Engineer.
  - ii. Soil assessment to determine suitability of soils for placement below water with reclamation.
  - iii. The results shall be included in the pre-dredging report.

The County Engineer will determine if further investigation and remedial actions are necessary based on the results. Should potential contaminant sources be identified during the ESA process, the test pits shall be installed and additional soil testing shall be conducted per the County Engineer's recommendation.

- d. Establish baseline water quality and quantity conditions within potential zone of influence through a private water well survey of both up-gradient and down-gradient wells. Such survey is subject to landowner access permission. This information shall be included in the pre-dredging report.
- e. Determine the location and number of groundwater monitoring wells to be installed by the applicant. The location of these wells must approved by the County Engineer and an exhibit showing their location included in the pre-dredging report.
- 3. The applicant shall prepare and submit a fuel/chemical handling and spill response plan for the County Engineer's approval.

#### Ongoing Conditions -

#### **Best Management Practices and Precautionary Measures:**

(these conditions are to be listed on the CUP plan)

- 4. Document the sand production levels and effective water consumption on an annual basis to aid in interpretation of monitoring data. Provide an annual report to the Zoning and Codes Department.
- 5. Monitor groundwater levels in adjacent private water supply wells (subject to property owner's permission) within the potential zone of influence on a quarterly basis. This information shall be provided to the Zoning and Codes Department in a quarterly report.
- 6. Monitoring of groundwater levels in monitoring wells on a quarterly basis. (In early years, monitoring while extraction is occurring in the NW part of the site will help confirm the zone of influence.) This information shall be provided to the Zoning and Codes Department in a quarterly report.

- a. If any changes are determined in the potential zone of influence, adjustments will be made to the monitoring wells as deemed necessary by the County Engineer.
- 7. Install berms along the perimeter of the pit to prevent runoff from entering the pit.
- 8. The Zoning and Codes Department shall be notified if any fill import is proposed throughout the operation of the pit. Any fill import must be sampled and analyzed for chemical suitability and the results provided to the Zoning and Codes Department for approval prior to installation.
- 9. Remediate/report any spills in accordance with the fuel/chemical handling and response plan.
- 10. Continue river bank monitoring along the east bank of the KS River. Extend monitoring points north to the point the river bends from north to east, and also extend monitoring points east from the river bend along the north side of applicant's property. The locations of these monitoring points shall allow for surveying the river bank along the west and north sides of applicant's property. The river bank along the west and north side of applicant's property shall be surveyed by a licensed land surveyor following all overbank flooding events lasting more than one week in duration, and the results of the survey shall be conveyed to County Engineer.
- 11. The applicant will be responsible for the cost of any mitigation measures needed, as determined by County Engineer, as a result of river bank movement on applicant's property. The cost of mitigation includes the cost of engineering design of the mitigation measures as well as the construction cost of the measures. Any mitigation measures are subject to USACE-KCD approval.
- 12. The revetment in the northwest portion of property breached in 1993 shall be studied by a competent engineer experienced in fluvial geomorphology hired by the applicant, and removed or modified and additional revetments on the east bank shall be installed following river engineering study if the County Engineer, the United States Army Corps of Engineers-Kansas City District (USACE-KCD), and other permitting agencies find the changes appropriate. The applicant shall hire the engineer, and the study shall be commenced, prior to any excavation for the sand pit.

#### Other Conditions:

- 13. The approval is contingent upon the issuance of all State and/or Federal permits which are required for this operation.
- 14. An affidavit designating responsibility for the ongoing maintenance of the berms and lake to the property owner and outlining the ongoing maintenance and protection measures shall be executed and recorded with the Register of Deeds prior to the release of the CUP plans to the Zoning and Codes Office. This affidavit shall note that the future use of the lake will be 'private recreation' and that no boats with larger than 10 horsepower engines will be permitted on the lake. The removal of these restrictions would require approval of a Conditional Use Permit. A copy of the affidavit shall be provided to the Planning Office for the file.

With the transfer of property ownership of any land containing the water feature or surrounding berms, the new owner shall file a maintenance bond, or similar protection means acceptable to the Board, to insure maintenance/protection of the berms and water feature.

- 15. A copy of the easement for the off-site access drive shall be provided to the Planning Office for the file prior to the release of the CUP plans to the Zoning and Codes Office.
- 16. The applicant shall obtain a Flood Plain Development Permit from the Director of Zoning and Codes prior to the release of the CUP plans.
- 17. The reclamation plan shall be revised with the following changes prior to release of the CUP plans:
  - a. The plan shall note the requirement that the lake that is being created will have a varied shoreline and will appear natural in appearance.
  - b. The plan shall note that the intended use of the lake, when mining and reclamation is complete, is to be a private recreational feature and note that boats with larger than 10 horsepower engines will not be permitted on the lake. The removal of these restrictions would require approval of a Conditional Use Permit.
  - c. The plan shall note the maximum slope of the lake shoreline for a specified depth to insure that the slopes are of a grade that it would be possible for a person or animal that accidentally entered the lake to exit.
  - d. The plan shall explain the sequential nature of the reclamation process; that overburden produced in one phase will be used to reclaim previously excavated areas.
  - e. The reclamation plan shall note that topsoil will be placed over the overburden in areas that are to be reclaimed as farmland, shoreline, or berms. If topsoil is to be stockpiled and stored it must be vegetated to prevent erosion.
  - f. The reclamation plan shall be revised to reflect the increased setback and vegetated riparian buffer required on the north/northwest side of the property and the reduced area on the south, with Phase 20 being the final phase.
- 18. The applicant shall submit a revised CUP plan with the following changes:
  - a. The additional setback and vegetated riparian buffer area shown on the north/northwest corner of the property per the County Engineer's approval.
    - i. The applicant will develop a general landscaping plan for the buffer area with assistance of the KS Forestry Service and/or the United States Army Corps of Engineers-Kansas City District (USACE-KCD) and provided with the CUP plan. The buffer area vegetation shall be planted and maintained per this plan.
    - ii. The general landscape plan must be approved prior to the release of the CUP to the Zoning and Codes Office.

- iii. Planting shall commence in accordance with the landscaping plan when the weather is appropriate and shall be completed within 1 year of the issuance of the Conditional Use permit.
- b. The sand pit will terminate at the area identified as the south boundary of Phase 19 on the August 13, 2013 revised CUP plan with no dredging activities to occur south of this phase. The CUP plan shall be revised to reflect the reduced area of the sand pit. The operation plans shall also be revised to reflect the reduced area of the sand pit and the additional buffer area.
- c. A detailed landscaping plan for the buffer area surrounding the McElwee house will be submitted.
- d. The Book and Page number of the recorded easement for the off-site access road shall be noted on the CUP plan.
- e. The ownership shall be noted as Van, LLC as well as Penny's Concrete Inc. on the CUP plan.
- f. The on-site residential structure on the east side of the property will be shown on the CUP plan as on the reclamation plan.
- g. If stockpiling of overburden is to occur on the subject property, the CUP or operation plan should note the maximum height and approximate location. The stockpiles should be placed as far from the existing residences as possible.
- h. List the following CUP conditions on the plan:
  - i. Hours of operation are 6:30 AM to 6:30 PM, Monday through Friday.
  - ii. A muffler system shall be installed, operated, and maintained on the dredge engine to reduce the noise levels associated with the dredging activity.
  - iii. The approval for this Conditional Use is valid for 30 years. An extension request for the CUP must be submitted prior to the expiration date or a new CUP application must be submitted. The Zoning and Codes office shall conduct 5 year administrative reviews to insure compliance with the CUP, operation, and reclamation plans.
  - iv. Only exterior lighting in the areas to be excavated will be the dredge lighting as required by the U.S. Coast Guard.
  - v. The scale house, processing plant, sediment pond, and stockpile area, approved with CUP-2-2-79, will be used to serve the subject property.
  - vi. Sales of overburden, topsoil, sand or aggregate products will occur only on the portion of the property that contains the scale house on the CUP plan.
  - vii. Truck traffic will utilize Noria Road (E 1750 Road), and is restricted from using N 1500 Road or E 1850 Road.

- viii. If any jurisdictional wetlands are located on the property, the applicant shall work with the Army Corps of Engineers to determine how the existing wetlands will be treated. The applicant will provide documentation to the Planning Office on the wetlands indicating whether the wetlands will be maintained on site or if they will be mitigated elsewhere. If the wetlands will be maintained on site, the operation plan will be revised to include the protection measures and the property owner shall submit a revised CUP plan for administrative review/approval of the wetland setbacks. If the wetlands are to be mitigated, a revised CUP plan shall be submitted to note the removal of the wetlands.
- 19. The road and intersection improvements listed below are required with this CUP. A permit for the Conditional Use may be issued when a road improvement contract for these improvements is in place and the County has accepted Penny's arrangements to finance the improvements. Dredging activities may not commence until after the road improvements are completed.

The road and intersection improvements listed below are required with this CUP. The Conditional Use permit may be issued only after the plans for the road improvements are approved and the County has accepted Penny's arrangements to finance the improvements.

- a. Realignment of the entrance to the sand facility so that it opposes the Noria Road intersection at N 1500 Road.
- b. Pavement of a 100 ft long section of the site access drive just north of N 1500 Road, as recommended in the TIS.
- c. Reconstruction of pavement in the Noria Road (E 1750 Road)/N 1500 Road intersection. The existing surfacing is likely a crushed rock base that has been chip sealed. This will not stand up to the increased truck traffic crossing N 1500 Road.
- d. Construction of an eastbound right turn lane on Route 442 (N 1400 Road) at Route 1057 (E 1900 Road). This is mentioned as a desirable improvement in the TIS. Pavement on the existing shoulder at this location is not adequate for the projected amount of truck traffic.
- 20. The applicant shall install monitoring wells as recommended by an independent 3<sup>rd</sup> party consultant in the pre-dredging report. These wells shall be installed prior to the release of the Conditional Use Permit. The City of Eudora shall be allowed to monitor those wells on an ongoing basis.
- 21. Dredging on the subject property shall not occur concurrently with dredging on the property to the north as approved with CUP-2-2-79.



## **DOUGLAS COUNTY PUBLIC WORKS**

1242 Massachusetts Street Lawrence, KS 66044-3350 (785) 832-5293 Fax (785) 841-0943 dgcopubw@douglas-county.com www.douglas-county.com

**Keith A. Browning, P.E.**Director of Public Works/County Engineer

#### **MEMORANDUM**

To : Board of County Commissioners

From: Keith A. Browning, P.E., Director of Public Works/County Engineer

Date: October 17, 2013

Re : Consider scope change for rehabilitation of Bridge No. 11.86N-15.00E

Project No. 2013-17; CIP Project No. 121

The referenced bridge was constructed in 1985 and carries Route 1055 over the Wakarusa River approximately 1.1 miles south of 31<sup>st</sup> Street. The Capital Improvement Plan (CIP) allocates \$100,000 towards the repair and rehabilitation of the concrete bridge deck. The concrete in the outside edges of the bottom of the bridge deck is deteriorating. Much of this concrete is missing with exposed reinforcing steel.

We contracted with the consulting engineering firm of Finney & Turnipseed Transportation & Civil Engineering, LLC (F&T) to design and prepare construction plans to remove and replace the deteriorated concrete. F&T estimates the concrete deck repair to cost approximately \$139,000.

We notified F&T of concerns with the deck at each end of the bridge and how it interacts with each bridge abutment. We have had problems with the asphalt buckling at each end of the bridge. We also had concerns about deterioration of the steel girder bearing plates and about the extensive rotation of rocker bearings during temperatures for which we would not expect such rotation. We asked them to make recommendations on measures to address these concerns and estimate the cost of such measures.

The following measures are recommended:

- At south abutment, remove backwall and reconstruct 3" further south, install strip seal expansion joint, reset and paint bearing devices, construct concrete approach slab
- At north abutment, repair sliding bridge deck slab, construct concrete approach slab, install neoprene seal

F&T estimates the additional cost of the above abutment repairs will be approximately \$132,000.

In addition to above abutment repairs, F&T recommends a polymer concrete overlay for the bridge deck. The deck is overall in good condition, and the overlay would help preserve the good condition. The estimated cost of a polymer concrete overlay is \$57,300.

If all recommended measures are constructed the estimated cost is approximately \$356,000, which includes 10% for contingencies. If the BOCC approves the additional work, the CIP will be updated in the next revision to reflect the increased scope and cost. There are adequate funds in the CIP to absorb the additional cost.

I recommend constructing the repairs to both deck and abutments, and overlaying the deck with polymer concrete. This is a fairly long (307') bridge carrying a county principal arterial roadway over the Wakarusa River. The bridge is in good condition other than the deck and abutment concerns noted above. This work will help preserve the bridge for several more decades.

Action Required: Consider approving changing the scope of Project No. 2013-17, repairs to Bridge No. 11.86N-15.00E, which carries Route 1055 over the Wakarusa River approximately 1.1 miles south of 31<sup>st</sup> Street.