

The auditor's work papers F2.4-F2.8 which contained excerpts from billing statements from Polsinelli PC were removed. Mr. Fritzel claims the documents are protected by the attorney-client privilege.

**McDonald & Associates, Inc.**  
**Work Plan**  
**Lawrence Kansas Rock Chalk Park Infrastructure**

**I. Scope & Objectives**

Through this Professional Services Agreement, the City has engaged Consultant, as an independent contractor with experience reviewing construction projects and related costs, to review, with respect to Rock Chalk Park, the construction site and the City's infrastructure expenditures in order to determine:

1. Whether the construction work was delivered in accordance with the Development Agreement; and
2. Whether the City's expenditures for infrastructure (hard and soft costs) were in compliance with the Development Agreement.

**II. Contract Analysis & Request for Information**

Task Description	By	Ref	Comments
Analyze the Development Agreement & Prepare a RFI	WCH	A2.1-A2.5	
Analyze the A103 and A201 and develop a RFI	WCH	A2.1-A2.5	→ Const. Agreement at 2/2/15
Obtain the accounting for the infrastructure costs	WCH	B2.1-B2.5	
Validate the response to the RFIs and determine completeness and request any additional data	WCH	A2.1-A2.5	DATA incorporated into work papers
Modify this Work Plan as made necessary by the Contract review and RFI response	WCH	See Workplan	VA. W/ cleared 2/5/15
Meet with the City Auditor to reach agreement on the Work Plan and any potential modifications	WCH	See Workplan	VA. updated through Email 2/5/15

**III. Infrastructure Physical Inspection and Cost Review**

Task Description	By	Ref	Comments
Interview City personnel who performed inspections of the work as it progressed, review the inspection reports and review the as-built drawings (or what is available) to gain perspective and to determine what items should be physically inspected	WCH	B1.2	Some information also contained in work papers
With assistance of the City personnel perform a site inspection of selected portions of the infrastructure, noting exceptions or portions that do not agree with expectations. Record and evaluate the results. This test may significantly cause a change to the approach and the Work Plan. If so this must be brought to the City Auditor's attention and a resolution obtained.	WCH	C1.1	Log Book are in Section G of the Workpapers
Determine which cost estimating software or methodology the City wishes to use and become familiar with it unless it isn't necessary.	WCH	Utilized previous project cost data	
Select a sample of infrastructure items for testing. Unless there is an overriding reason to do otherwise, the items sampled should be judgmentally selected based up value.	WCH	C2.1-C2.2 C3.1-C3.5	Concrete and soft costs tested
Test amounts paid by the general contractor for services performed (if available)—compare against city payments and determine if proper economic value was reasonably received.	WCH	E1.1-E2.5	
Conduct the testing on the sampled items and determine that the	WCH	C2.1-C2.2	Looked at soft costs and most major hard cost contracts

Task Description	By	Ref	Comments
sample was adequate to reach a conclusion. If not discuss with the City Auditor and determine the next step.		E1.1-E2.5	
Analyze the test result and summarize	WCA	See Report AND WORK PAPERS	

#### IV. Payment Examination

Task Description	By	Ref	Comments
Determine the payment allocation of the Development Agreement—what does the city owe on which project (cap on infrastructure vs. recreation center project).	WCA	E2.1-E2.2	
Obtain the infrastructure project accounting. Analyze and document (at the contractually appropriate level) either large subcontracts (and payments) or large soft cost expenditures, any that appear unusual or non-standard so these items may be tested	WCA	E2.1-E2.2 E1.1-E1.2	
With the City Attorney perform on-site testing of attorney charges to conclude charge accuracy	WCA	F1.1-F1.2	Tested legal fees
Review payments made for the infrastructure in total to evaluate the adequacy of the supporting detail.	WCA	E2.1-E2.2	Payments verified exceeded City on Dev. Agreement
Sample items judgmentally selected to confirm that the supporting documentation agrees with the requirements found in the Agreements. Note and evaluate any exceptions	WCA	F2.1-F2.8	some Architectural/Design Agreements were not in writing
Summarize Exceptions/Recommendations/Lessons Learned	WCA	See Report At	Front Section

#### V. Report

Discuss the results of the testing with the City Auditor and others as necessary and draft a report. Have the report reviewed.

Present the written report and provide response to any questions or inquiries raised.

McDonald & Associates, Inc.  
Infrastructure Cost Audit City of Lawrence, Kansas

The City of Lawrence (City) engaged McDonald & Associates, Inc, (M&A) to audit the Rock Chalk Park (RCP) Infrastructure Project to determine:

1. Whether the construction work was delivered in accordance with the Development Agreement; and
2. Whether the City's expenditures for infrastructure (hard and soft costs) were in compliance with the Development Agreement.

Based on audit work, M&A determined that the construction work delivered met or exceeded the established specifications and the costs were compliant with the terms and conditions found in the Development Agreement.

The audit process included examination of project drawings, City Department of Public Works inspection logs and reports, expenditure detail as well as contract and subcontract agreements. City personnel were interviewed as were the principle parties of the Development Agreement and service providers. The audit also included physical inspection. Information requested during the audit process was available and provided in a timely manner. M&A appreciates the cooperation received from all parties involved including the City, Kansas University Endowment and Bliss Sports II.

The following analysis is based upon the Development Agreement dated July 10, 2013 by and between the City of Lawrence, Kansas, - RCP, LLC, - Bliss Sports and Bliss Sports II. Infrastructure payments made by the City of Lawrence are less than the authorized amount and less than the cost of the work. First, the amount available to pay for Infrastructure Improvements is calculated based upon the Development Agreement terms:

<b>Maximum of Development Agreement</b>	\$ 22,500,000 <sup>1</sup>
<b>Less:</b>	
<b>Total Recreation Center Construction</b>	10,550,630 <sup>2</sup>
<b>Purchase Price</b>	784,333 <sup>2</sup>
<b>Recreation Center Architect's Fee</b>	941,408 <sup>2</sup>
<b>SUBTOTAL OF BALANCE REMAINING</b>	<u>\$ 10,223,628</u>
Assist Foundation Contribution	<u>1,000,000<sup>1</sup></u>
<b>Subtotal</b>	<u>\$ 11,223,628</u>
<b>Additional funds appropriated through change orders approved by the City Commission</b>	<u>161,654<sup>3</sup></u>
<b>Total Available for Infrastructure Costs</b>	<u>\$ 11,385,282</u>

D1.4  
D1.3  
D1.2  
  
E2.1 + A2.5  
Tennis Courts  
AND walking Trails

<sup>1</sup> Article XI and again in Article XII of the Development Agreement limits the city's infrastructure cost liability to \$22,500,000 plus any additional contribution.

<sup>2</sup> The data was compiled from the City of Lawrence Accounting records: the actual amounts paid confirmed by City personnel.

<sup>3</sup> Changes to the infrastructure were not processed in a formal written change order. The City Auditor's January 8, 2014 memo concerning Interim Recommendations on changes to the work outlined this issue. As described in a Memo to the City Manager dated November 11, 2014 the City Commissioners approved \$161,654 in increases to the development agreement cap.

Infrastructure Cost Audit City of Lawrence, Kansas

The following schedule presents the attested Infrastructure construction costs and shows the Development Agreement Cap less payments made by the City. See the following:

<b>TOTAL ATTESTED COSTS</b>	<b>\$ 13,211,798</b>	
<b>Construction Management Fee – 2% of \$11,350,317.65</b>	<b>\$ 283,758</b>	<i>From Dev. Agreement</i>
<b>TOTAL PROJECT COST (Exhibit A)</b>	<b>\$ 13,495,556</b>	
Total Available for Infrastructure Cost	\$ 11,385,282	
City Payments	\$ 10,359,633	<i>← From City Memorandum A2.5</i>
Pending Payment Remaining	\$ 1,025,649	

The City of Lawrence reduced payment of reimbursable costs by \$1,480,978 (Exhibit A) due to examination of physical quantities installed and compliance with specification. In addition, the audit identified \$114,149 (Exhibit A) in costs as non-reimbursable. These exceptions less the total project costs of \$13,495,556 are \$11,900,432. Adjusted attested costs still exceed the Development Agreement Cap by \$515,149. Based on the infrastructure cap and payments made to date, the city has a remaining balance owed on the Development Agreement of \$1,025,649.

DELIVERY OF INFRASTRUCTURE WORK				
Criteria	Condition	Cause	Effect	Recommendation
<p>1. <b>Article X - Final Acceptance of Infrastructure Improvements</b> - "Upon the occurrence of Substantial Completion of the Infrastructure Improvements, RCP shall cause Bliss Sports II, pursuant to the Construction Contract, to submit to the City a Certificate of Completion... in the form attached [in] Exhibit J, and within thirty (30) days the City...will issue a certificate of acceptance for the Infrastructure Improvements...or state in a writing delivered to RCP and Bliss Sports II any alleged deficiency from the Infrastructure Improvement Plans. Any disagreement ...concerning the deficiency will be resolved in accordance with Article XIV hereof...."</p>	<p>The City Manager indicated that the City did not execute the Article X Final Acceptance. The city relied on a letter from the City Engineer indicating substantial completion and indicating punch list items needing completion.</p>	<p>The contract makes provisions concerning a specific process for accepting and turning over the final project. This City has issued a conditional acceptance via Commission meeting notes and official memorandum.</p>	<p>The method for accepting and turning over the project based upon the Development Agreement was not followed. Based on testing, the contract requirements (less any minor punch list items) were fulfilled.</p>	<p>Execute the Final Acceptance document as described in the agreement.</p> <p style="color: red; font-size: 24px; text-align: center;">A24</p> <p style="color: black; font-size: 18px;">We were not provided with a City executed exhibit J</p>
<p>2. <b>Section 9.02</b> Infrastructure Improvements Site Access. Bliss Sports II agrees to permit the City...access to inspect the construction...to ascertain and determine that the requirements of the City and the terms of this agreement have been met and that the infrastructure improvements are being constructed in accordance with the infrastructure improvements construction documents ...</p>	<p>City Engineers and inspectors performed continuous reviews of the construction process. In addition, testing firms provided sample analysis showing concrete and other construction processes conformed to specifications.</p> <p style="color: red; font-size: 24px; text-align: center;"><u>SECTION G</u> : Copies of Daily Reports</p>	<p>Engineering log books and testing reports were provided to the City of Lawrence and reviewed by Engineering personnel.</p>	<p>Engineering reports identified areas where construction was not completed to specifications. In these instances, the City withheld reimbursement for the estimated cost of the work not meeting specifications.</p> <p style="color: black; font-size: 24px; text-align: center;">⊗ specifications</p>	<p>Along with audit exceptions and withheld amounts from the City—the cost Cap on project expenditures was exceeded. The city still owes the remainder of the cap on the development agreement.</p>
<p>3. <b>Section 9.03 Reports.</b> In this section Bliss Sports and Bliss Sports II agrees to provide the City monthly progress reports promptly after completion. These reports are to include: project status, construction issues, and</p>	<p>There were weekly and monthly meetings of the City, RCP and Bliss Sports II. Monthly status reports were formalized and weekly status reports were not. However, multiple testing firms validated</p>	<p>The City was provided testing reports from independent engineers.</p>	<p>City Engineering was able to make determinations concerning the quality of the work performed and whether or not the work was completed to</p>	<p>None.</p> <p style="color: red; font-size: 24px; text-align: center;">LAST Project Report in Section C3</p>

DELIVERY OF INFRASTRUCTURE WORK				
Criteria	Condition	Cause	Effect	Recommendation
schedule compliance. Bliss Sports II is to provide a line item budget with percent completion, budget expended, material submittal information, concrete weight/batch tickets, and line items out of budget.	completion of the work and compliance with specifications as well as daily City Engineering reports.		satisfaction of city specifications.	
4. Article IX - City Oversight of Construction of Infrastructure Improvements - "Section 9.01 Infrastructure Improvements Updates and Team. The City shall have the right to...attend an Infrastructure Improvement team meeting...to review the development and construction...to determine that the Infrastructure Improvements are being developed and constructed in accordance with this Agreement, the Infrastructure Improvement Documents and all Applicable Laws and Requirements."	Because concrete was the majority of infrastructure expense, Penny's Concrete delivery tickets were examined and the totaled independently. City employees observed quantities installed during construction and prepared inspection reports documenting their observations, which when summed provide a total amount of concrete delivered. Schedule I of the Development Agreement provides an estimate of the quantity of concrete required to fulfill the specifications.  <i>D2.2 and D3.4</i>	The quantities determined independently and by the City Inspection Reports were compared to the Schedule I estimate.	Schedule I estimate was 7,276 cubic yards of concrete. The delivery tickets total 7,171 cubic yards and the City Inspection reports total 7,081 cubic yards. The percentage variance from the Schedule I estimate is 98.6% delivery tickets and 97.3% City Inspection Reports.  The amount of concrete delivered is 1.4% under the estimate or may be 2.7% under the estimate if the City Inspection Reports are used.	According to information provided by the National Organization of Professional Estimators, a 3% waste variance is an acceptable tolerance for concrete poured on grade. These variances are within this percentage and therefore no adjustment is recommended.
5. The audit requested access to as-built drawings of the Infrastructure Development for the purpose of testing compliance to specifications.  <i>Direct Reportable - No party required as-built - City</i>	As-built drawing could not be viewed as none were prepared.	Based on discussions with the City Manager and City Engineer, a decision was made to save money by not requiring as-built drawings of the infrastructure.	As-built drawings could not be used to calculate delivered quantities and to confirm receipt of all items specified. However, the Public Works Department was able to provide logs of inspections performed. The records provided by the Public Works Department	Consider obtaining as-built drawings (record drawings) so that the record of what was installed and the location of same can be more easily ascertained should there be a need for this information in the future.

*Engineering and Inspection reports provided acceptable information on materials installed.*

DELIVERY OF INFRASTRUCTURE WORK				
Criteria	Condition	Cause	Effect	Recommendation
			and interviews with employees of that department provided evidence that inspections were performed and the work was completed. A site visit by the auditor was also performed and certain parts of the Infrastructure were confirmed as being in place.	

EXPENDITURE COMPLIANCE				
Criteria	Condition	Cause	Effect	Recommendation
6. Based on Exhibit I and terms of the Development Agreement (section 11 and 12). The City negotiated prices for the infrastructure and agreed on quantities and costs.	Quantities were compared against unit costs for some of the infrastructure items with comparable City projects.	Prices negotiated in the Development Agreement and Negotiated by the City were reasonable.	Comparison against comparable unit price totals for similar material showed that the costs per specified quantity (whether percentage of total costs or installed cost of a specific commodity) appear normal or comparable to similar project costs.	None.
7. Article XI Infrastructure Payment Section 11.01 Payment of the Infrastructure Development. This section provides the formula the City uses to pay for Infrastructure Improvements. The total of \$24,500,000 less any amount not received from a donation of \$2,000,000 described in Section 12.02(b). The payments by the city	The City provided \$22,500,000 and received a contribution from Assist Foundation of \$1,000,000. Therefore the total amount available for the project was \$23,500,000. Expenditures were: Architectural \$941,408.23, Land Cost \$784,333.00 and Recreation Center Construction \$10,550,630.13 for a total of	The contractor incurred more cost than was anticipated. In addition, the City questioned all or aspects of the presented construction costs and has not made full payment.	All appropriated funds have not yet been dispersed.  The contractor's expenditures are high enough that even the exceptions noted by the City and the audit do not affect the total owed by the City in the Development	The City should consider paying an amount up to the total described in the Development Agreement plus additive change orders.  D1,1



EXPENDITURE COMPLIANCE				
Criteria	Condition	Cause	Effect	Recommendation
are to be applied in the following order: 1) Recreation Center Construction Contract amount, all Recreation Center Construction Contract change orders, 2) the Recreation Center Architect's fee up to \$925,000 and 3) the Purchase Price (which is the purchase of 26.135 acres of land valued at \$30,000/acre or \$784,050), with the remainder available to pay for the Infrastructure Improvement.	\$12,276,371.36 expended, leaving a total of \$11,223,628.64 for Infrastructure. Infrastructure costs presented were \$11,598,439.03 plus change orders of \$161,654.00 for a total of \$11,760,093.03. The amount available was therefore short of the infrastructure cost \$536,464.39.		Agreement.	
<p><b>8. Section 11.02 Infrastructure Improvements Cost.</b> Exhibit I is described as a...good faith estimate of costs and elements are valid and should be included. This section requires Bliss Sports II to provide RCP and the City copies of books and records which validates costs incurred and payments made by Bliss Sports II. This section states, "Without limitation..." soft cost included are: interest in financing, loan origination, design and legal fees, compliance and other professional services attributable to preconstruction costs, Recreation Center Site permitting, Infrastructure Improvements and negotiation of the development and land purchase agreement and infrastructure construction contract.</p>	<p>Bliss Sports II accumulated costs and presented attestations for payment but could not provide a formal job cost ledger. However, Bliss Sports II provided cancelled checks, and subcontracts/service agreements.</p> <p style="color: red; font-size: 2em; font-weight: bold;">E.I.I</p>	The Work began before all agreements were in place and Bliss Sports II did not provide a complete accounting for the project. To make up for the lack of accounting attestations were requested and received.	<p>Bliss Sports II could not provide a job cost ledger. In order to evaluate all costs, the audit created an estimated job cost ledger for purposes of testing.</p> <p>Bliss Sports II made payments in excess of the Development Agreement's infrastructure cap.</p>	<p>Although there was no formal job cost, the backup provided was sufficient to support costs in excess of the Development Agreement cap.</p> <p>If the City wants transparency, job cost should be required in all future projects.</p>
<p><b>9. Development Agreement contract type.</b> Section 12.02 says that the city will pay a maximum of \$22,500,000. However, Section 11.02 says that</p>	The City of Lawrence interprets the agreement as cost reimbursable. However, RCP and Bliss Sports II see the contract as a lump sum	Full agreement as to the contract type was not reached.	Contractual ambiguity leads to mixed expectations among parties. This could present needless or	In the future, if transparency is desired throughout the construction process, specific audit language should be

EXPENDITURE COMPLIANCE				
Criteria	Condition	Cause	Effect	Recommendation
costs incurred (hard and soft) will be auditable.	agreement.  Although the costs are auditable an audit was not a requirement assigned to RCP or the City.		additional costs to the parties involved.	added to construction contracts to examine all records proving cost and installed quantities.  In addition, steps should be taken to assure the contract is fully understood and that task assignment is addressed.
10. Based on contract law standards, construction contracts should be clear, unambiguous, unmistakable and conspicuous in order to be enforceable.	Alpha Omega Geotech performed inspection work and Gould Evans performed site plans, zoning and preconstruction up-front work for both the stadium and infrastructure projects without formal subcontracts.	Some preconstruction and testing services were performed under verbal authorization from the Developer. There is no specific scope of work or costs applied between projects.	Alpha Omega provided a division of costs between the stadium and infrastructure. This division appeared reasonable.  The lack of agreements makes it difficult to determine if costs were properly applied between the stadium and infrastructure project.  There was no evidence that Gould Evans worked on any other scope of work other than the city infrastructure project. Payments to Gould Evans were validated by cancelled check and a vendor attestation of costs.	An adjustment to project cost is not recommended. Evidence was sufficient to indicate work in these areas was delivered. In addition, even removal of these expenses from project cost would not affect the remaining amounts owed on the project.  On future projects assurance should be gained that all Work is contracted.

Alpha Omega

↓  
Gould Evans  
Conceptual site plans,  
Zoning and platting  
\*performed all up-front work  
No evidence they worked on  
anything else

**EXHIBIT A**

Cost attestation was determined through a review of vendor/subcontractor affidavits. These verifications were provided on the City website. The following table shows the vendor detail for attested costs:

	<b>Attested Cost</b>
Kings Construction	\$ 9,104,318.00
DFC Company	\$ 1,403,716.33
Emprise Bank	\$ 713,064.34
Mid America Court Works	\$ 526,600.00
Qualite	\$ 325,000.00
Earnies Mechanical	\$ 305,530.00
Paul Werner Architects	\$ 250,000.00
Poisinelli (Legal Fees per Development Agreement)	\$ 212,535.81
Gould Evans	\$ 100,000.00
Alpha Omega Geotech	\$ 84,242.72
Landplan Engineering	\$ 76,955.98
Hoss & Brown	\$ 44,000.00
Black Hills Energy	\$ 39,750.00
Approved Paving	\$ 26,085.00
<b>TOTAL ATTESTED COST</b>	<b>\$ 13,211,798.18</b>
<b>Construction Management Fee – 2% of \$11,350,317.65</b>	<b>\$ 283,758.00</b>
<b>TOTAL PROJECT COST</b>	<b>\$ 13,495,556.18</b>

The following table shows amounts that the City of Lawrence claimed were not to specification or in excess of specification:

Kings Construction	\$ 807,826.15
DFC Company	\$ 471,965.20
Earnies Mechanical	\$ 127,701.24
Mid-America Court Works, Qualite, Earnie's Mechanical	\$ 63,600.00
Approved Paving	\$ 9,885.00
<b>TOTAL CITY ADJUSTMENTS</b>	<b>\$ 1,480,977.59</b>

The audit examined legal service timesheets. The timesheets and corresponding cost detail identified services occurring prior to the creation of Bliss Sports II (soft costs were defined as those incurred under Bliss Sports II). In addition, the audit identified non-Development Agreement Bliss Sports II business activities. The following table shows amounts questioned through the audit process:

Infrastructure Cost Audit City of Lawrence, Kansas

Legal Fees Outside Development Agreement Timing	\$	79,611.08
Legal Fees Not Related to Development Agreement	\$	24,367.89
Interest Outside Development Agreement Period	\$	10,167.59
<b>TOTAL AUDIT ADJUSTMENTS</b>	\$	<b>114,148.56</b>

*F1.1-F1.2  
F2.1-F2.8*

**Development Agreement  
CONTRACT REVIEW AND AUDIT WORK PLAN BASIS**

**Scope:** Perform an analysis of the development agreement determine the auditable aspects to work into the project work plan.

**Work Performed:** We reviewed the development agreement, discussed key concepts with City Personnel, and ask for interpretations' from all parties involved.

**Observations:**

**Article III:** The city engaged an architect to design the recreation center. Under article IV Section 4.01—the contract says that Gene Fritzel Construction Company (a related entity to Bliss Sports II) was awarded the project by competitive bid. The contract states the recreation center contract was \$10,500,000.

Based on **Article XI:** The infrastructure is estimated **not to exceed** \$12,261,426.65 (there is an anticipated donation of \$1 million under Section 12.02(b)).

**Section 11.01:** Fees are based on Exhibit I estimates of 2.5% on all hard and soft out of pocket costs. This includes legal fees per the development agreement, loan origination fees for project financing and loan interest for project financing.

**Section 11.02:** Costs include interest carry costs incurred in financing (hard and soft) such costs, loan origination fees, compliance costs, engineering and architectural fees, legal fees and other professional services costs attributable to the zoning, platting, plan approval and permitting of the recreation center site and the infrastructure improvements to the negotiation of this agreement, the purchase agreement and the infrastructure improvements construction contract. Any allocated costs will be based on relative acreage of the recreation center versus stadium site.

**Section 12.02:** Part (a) says the maximum cost to the city will be \$22,500,000. The order of those payments shall be as follows:

- 1) Recreation center architectural fees
- 2) The land purchase price (purchase agreement)
- 3) Recreation Center Costs
- 4) Infrastructure costs

Architectural Fees	\$	941,208.23
Land Purchase Price	\$	784,333.00
Recreation Center Costs	\$	10,550,630.13
<b>TOTAL:</b>	<b>\$</b>	<b>12,276,171.36</b>
Capped Costs	\$	22,500,000.00
<b>Difference</b>	<b>\$</b>	<b>10,223,828.64</b>
Assist Foundation Grant	\$	1,000,000.00
	<b>\$</b>	<b>11,223,828.64</b>

See detailed Analysis of project cost sheet for backup and calculations.

WJH 2/25/15  
A1.1

**Development Agreement  
CONTRACT REVIEW AND AUDIT WORK PLAN BASIS**

**NOTE:** Based on our review of the contract, we can see different interpretations of the agreement. For this reason, we asked for input from City personnel and KU endowment.

Kansas University Endowment gave us this interpretation of the development agreement:

“Because if the significant amount of dirt that had to be moved to create the four large pad sites for these sports and recreation center venues, Bliss II was moving direct on all sites as part of the KAL project before any agreement was reached with the City. As the agreement progressed and it became apparent that Bliss II could contract for the infrastructure and improvements it only made sense from an economy of scale and coordination perspective that the same earthwork contractor and many of the same subcontractors and consultants. . .

The vast majority of the contracts were lump sum contracts, not unit cost contracts. As constructability and scope changes were made to the design, Bliss II rarely asked for a change order unless the magnitude of the change was significant, all the time knowing that there was a cap to the amount that Bliss II would be compensated.”

**David Corliss (City Manager)** gave us the following interpretation of the contract:

I believe the [contract] is governed by the Development Agreement and the Development Agreement doesn't exactly fall within a specific construction contract label. I do not believe the Development Agreement was a time and materials agreement. The Development Agreement does have elements of a cost reimbursement agreement. The agreement does have a cap on City expenditures as set forth in the agreement, that if certain requirements in the Development Agreement are met, the City is obligated to pay the amounts for the infrastructure costs up to the cap.

**CONCLUSION:**

Our assumption is that construction costs are auditable and up to scrutiny—until the construction cap is reached. As long as the costs of the project are directly related to specifications—these are acceptable costs. Our review will focus on the direct construction costs first and then soft costs (i.e. if direct construction costs meet the cap—the soft costs are immaterial as they don't calculate into the reimbursable costs).

WJ 2/25/15  
A1.2

**McDonald and Associates**  
**Request for Information**

January 23, 2015

**Request for information**

After an initial review of the documents provided I wanted to update our request for information. This is not a complete listing of items needed for the audit, but these items will help form the basis of the overall financial review of project costs and control procedures.

- 1) **Access to Drawings and Inspection logs:** we will need to see the detail behind construction inspections, concrete pours and other "witness points" of construction activity.
- 2) **Job Cost Ledger:** the final accounting which should be a combination of King Construction Transaction costs justifying the 11 schedule of value billings presented on the project (invoice detail, subcontract draws, allocations, payroll and any other detailed costs that comprised the amount billed). Bliss Sports should have this documentation and it contractually should have been reviewed by RCP. The transaction detail that supports the final accounting of cost is what we need to review.
- 3) **Change Orders:** if changes were made on a subcontract or prime contract level, we need access to the actual change order pricing methodology, contractual language supporting the pricing and payment detail (which should be in the **Job Cost Ledger**).
- 4) **Subcontracts:** We need access to subcontract files (agreements—terms and conditions, payments and change orders). We need to ensure the scope of the subcontract matches the scope of the building specifications and that costs (in a cost reimbursable contract) matched contractual terms.
- 5) **Ancillary Agreements and Allocations:** The review of the final accounting and the Kings Construction Company billings shows a gap in cost. These are most likely made up of ancillary agreements (legal agreements, engineering, etc.) and allocations such as interest and fees. All of this should be in the Job Cost Ledger as a project costs with invoice, payment or GL reference. We need access to these agreements (anything applied to the project cost outside Kings Construction) and allocations (along with the methodology for allocation).

*WAF 2/25/15*  
*A2.1*

**McDonald and Associates  
Legal Request Clarification**

January 27, 2015

Toni,

In response to Polsinelli's PC concerns to the original request for information:

From the standpoint of the audit, we need to be able to validate the expenses incurred and charged to the City of Lawrence for legal fees. In order to perform the review we need to see the engagement letter for the client outlining the scope of work performed.

Our review is not to ascertain specific legal advice given to the client. We want to see the underlying agreement (supporting the billings) to ensure the scope applies to the project and that accounting controls related to time cards and billings are adequate. Specifically, we want to view time card, transaction and invoice level detail for the amounts listed on the memo dated November 5, 2014.

Invoice copies are not necessary—we may utilize a computer/spreadsheet to manually capture hours charged and to recalculate billed amounts. There is no desire to assess the means and methods utilized by the firm to deliver the contracted service just that the backup matches the agreed upon scope and rates/costs quoted.

I hope this helps clarify the request for information.

WMS 2/25/15  
422



I will see you first thing Tuesday. I put together a listing of information/clarification necessary to get me jump started this week.

**REQUEST FOR INFORMATION 2/1/15**

- 1) Estimated installed quantity of poured concrete. The audit is looking for city based inspection information on installed quantities, not estimates from Exhibit I.
- 2) Based on the transaction reports from the city, the city paid \$939,528.23 for architectural fees, \$784,333 in land costs and \$10,556,048.81 for the recreation center. Can someone verify these are the amounts actually paid by the city?
- 3) Does the city contend that the Development Agreement is a cost reimbursable agreement or time and material? Although audit rights exist under Section 11.02—the overall price for the project appears to be \$22,500,000 (recreation center, infrastructure and general conditions).
- 4) Data concerning costs for CY of concrete installation (and other hard/soft costs) for other city projects and other municipalities (if available). We need the raw data, and we can conduct the analysis.

**ANSWER**

- 1) Data was provided via installed quantity logs (observation)
- 2) I pulled up the Purchase Order 009212 with the description, "Recreation Center at Rock Chalk Park - Architectural renderings needed to sell advertising space in the facility after it is build (billed hourly)". I called Karen Risner in Parks and Recreation who indicated the department hired Gould Evans to determine potential locations for advertising spaces located inside the building once construction was complete. The department is trying to find ways to generate revenue. I don't believe this was intended to be part of the cap on the cost of the recreation center.

Let me know if you have questions or need other information.

Thanks, Casey

- 3) I believe the answer to #3 is governed by the Development Agreement and the Development Agreement doesn't exactly fall within a specific construction contract label. I do not believe the Development Agreement was a time and materials agreement. The Development Agreement does have elements of a cost reimbursement agreement. The agreement does have a cap on City expenditures as set forth in the agreement, that if certain requirements in the Development Agreement are met, the City is obligated to pay the amounts for the infrastructure costs up to the cap. Let me know of additional questions, thanks, Dave.

**David L. Corliss**

- 4) Data was provided and included in the bid tab analysis.

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Request for information 4

2/9/15

Looking back through the documentation and the Development Agreement. Under article 10 and Exhibit J--final acceptance is approved through this form. I don't see where the City has accepted the project under this article.

Answer:

I have checked with Chuck Soules, Public Works Director. The City did not execute the Article X Final Acceptance, instead we relied on the letter from Soules indicating substantial completion and indicating punch list items which needed completion. Let me know of questions, thanks, Dave.

**David L. Corliss** City Manager

Report Item #1

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**Request for Information 3**

**2/11/15**

Bob and I were going through my notes and summarizing the project accounting for the report. When I tied back to the ledger amounts (from the City's ledger print outs) I compared it against the 11/11/14 memo and I came up with \$67,321.36 less than you guys have (made up of minor differences in each of the three main categories). Since this does conflict with the memo amounts I wanted to give you guys one last shot to tell me if these are correct or not. When I was there I had these amounts validated by Casey Toomay.

Cap On City Agreement	\$ 22,500,000.00
Architectural Agreements	\$ (941,408.23)
Land Cost	\$ (784,333.00)
Recreation Center Construction	\$ (10,550,630.13)
SUBTOTAL OF BALANCE REMAINING	\$ <b>10,223,628.64</b>

Nevertheless, my question concerns the \$161,654 referenced in the same memo as additive changes to the project. Was there an official amendment or change order to the development agreement? If not, what is the final document showing approval of this amount?

Answer:

At the Commission meeting on November 18, 2014 the attached memo addressing the infrastructure payment was discussed

[https://www.lawrenceks.org/assets/agendas/cc/2014/11-18-14/pw\\_pw1315\\_rcp\\_infrastructure\\_completion\\_memo.html](https://www.lawrenceks.org/assets/agendas/cc/2014/11-18-14/pw_pw1315_rcp_infrastructure_completion_memo.html)

The Commission (exert from CC minutes) **Moved by Schumm, seconded by Riordan**, to place the balance of infrastructure payment less soft cost on next week's City Commission agenda for review and approval. The motion passed .

The memo provides an explanation of 3 change orders and the Action requested of the Commission was pending the Commission's approval of the infrastructure costs and supporting documentation to approve the requested payment.

The Change orders and costs were specifically itemized for the Commission to approve with the approval of the amount requested.

Please let me know if you have any additional questions.

Thanks,

**Charles F. Soules, P.E.**

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A2.5

**MCDONALD AND ASSOCIATES  
CITY OF LAWRENCE INDIVIDUAL INTERVIEWS AND KU ENDOWMENT**

**NOTE:** The following are notes taken during interviews with these individuals and their related organizations/titles.

David Corliss, City of Lawrence, City Manager

Mike Amyx, City of Lawrence, Mayor

Charles (Chuck) Soules, City of Lawrence, Public Works Director

Dale Seufferling, Kansas University Endowment, President

Monte Soukup, Kansas University Endowment, Senior Vice President of Development

**David Corliss:**

The main issues needing to be addressed is whether or not Bliss Sports II did work for the stadium and charged those costs to the City of Lawrence through the infrastructure project.

Mr. Corliss's biggest concerns have to be with verification of installed quantities and a review of the payments made to ensure reasonableness for items received.

*History: The project was initially a development deal put together through KU Endowment by Thomas Fritzel. According to the city, his intention was to do the development for both the stadium and recreation center and lease these back to the interested entities (KU Athletics and the City of Lawrence). Mr. Corliss wanted the city to own the land and have a greater stake in the property (he envisioned fewer problems and felt the city would have greater control over their facility and more transparency over the project). David's intent was to own the property and competitively bid the project. The recreation center was competitively bid (9 bids were accepted) and DFC (a Fritzel entity) won the project.*

*This project was structured under a \$22.5 million dollar cap defined in the development agreement. This the calculation for this cap is shown in the work paper outlining the contract.*

*Bill Self contributed to the project and Gould Evans was the design firm. KU Athletics Contracted with Bliss Sports to build a \$39 million stadium and lease it for \$1.3 million per year for 30 years.*

Look at the following:

- Installed quantities
- Professional Fees
- Contracts (subcontracts if available)

**Mike Amyx:**

The City of Lawrence expected KU Endowment to perform an extensive audit of project costs as part of the development agreement. Without this level of scrutiny, the City has concerns in the following areas:

- Attorney Fees
- Emprise Bank (Loan Origination and Interest)
- Review of any financing arrangement in county records related to the project

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R11

- Examination of batch tickets for concrete (why is Bliss Sports II referenced as the customer and not King Construction?)
- Determine why Checks from Thomas Fritzel, DFC and Bliss Sports and Bliss Sports II are paying for this project's costs. Is this reasonable?

**Chuck Soules:**

The engineering department's understanding of the project is that they purchased a finished product—not a cost reimbursable project with fee. In addition, City Engineers were on site measuring installed quantities each day of construction.

One of the City Engineers ran the inspection staff and the following information was captured every day on the project:

- Log of activities and site conditions
- Installed quantities
- Alpha Omega Reports (Bliss II testing firm)
- Geotechnology—performed soil and concrete testing
- BG: Provided engineering consulting and oversight for the Bank
- Gould Evans and Paul Warner—additional engineering consulting for Bliss II

Chuck indicated that the City rejected payment for the fire road on the side of the stadium (originally considered part of the infrastructure). This road, although private, was not built to City Specifications utilizing durable (granite) aggregate

**SEE LOG BOOK FOR ADDITIONAL PROBLEM AREAS DURING CONSTRUCTION**

For Engineering, soft costs on the project (as defined in the development agreement 11.02) are the biggest concern. Engineering feels comfortable with installed quantities and that controls were in place to ensure what was specified was provided.

This fact is well documented concerning Rock Chalk Drive and GWW intersection. Saw cut depth and stabilizer depths were in adequate. The city required the contractor to remove and replace this section at no costs to ensure the road specified was built.

City Utilities looked at water and sewer line installation. They maintained logbooks and had inspectors on hand. Between the public and private firms reviewing construction, this project was monitored throughout the construction process.

However, there is concern that bleed-over occurred between the stadium and City of Lawrence projects.

**KU ENDOWMENT**

The city, athletics and a couple of developers were working on another site west of the city. KU Endowment eventually purchased the site to enable KU athletics to afford new facilities required under title 9. Mr. Fritzel (prior to planning) had to obtain a permit from the city and permission from the University.

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The city had a lot 10-12 acres to develop a recreation center. Mr. Fritzel got an option on the land near the proposed development site, setup the development plan and pitched the University Endowment/Athletics and the city with the idea of building out this project.

KU Feels that Thomas Fritzel was shorted in three main areas:

1. Fire Road (the city wouldn't pay for this road—claimed it was not built to city specifications)
2. Landscaping (Fritzel put in much more landscaping than originally specified).
3. Extensions to the sprinkler systems (into medians and throughout the property)

The project costs were \$22.5 million—after all contractual items were paid the amount remaining for infrastructure was \$10.5 million. The Assist Foundation kicked in another \$1 million bringing the total up to \$11.5 million for infrastructure.

There were minor changes to the recreation center—

- 1) Performance and payment bond—city paid \$50k
- 2) Tennis courts were built to higher specifications (cost was \$107k and the city paid \$53k)
- 3) Conduit was run for fiber optics (asked for \$200k but the city would only pay \$50k).

Costs that were difficult to allocate were either split according to acreage (31/69%) or the vendor was requested to attest to the amounts for the KU and City projects.

See KU Response letter 1/28/2015 for a full listing/detailing of issues.

**McDonald and Associates**  
**Bliss Sports II Testing and Interview**

**Scope:** Test amounts paid by the general contractor for services performed (if available)—compare against city payments and determine if proper economic value was reasonably received.

**Work Performed:** We tested all the billings and payments from Thomas Fritzel related companies and recreated a project job cost. This was checked against the vendor/subcontractor attestation. Then we compared those attested totals against amounts paid by one of the Fritzel based companies. In addition, if backup was minimal or lacking we sat in the office of Thomas Fritzel and examined documentation related to the issues. Bliss Sports II provided documents requested with the agreement that no copies of documentation were made. Some of these invoices contained information not related to the audit and not within the scope of the development agreement.

**Observations:**

The table below is a summary of the audit created project job cost. I just put all the project related transactions together and bumped it up against your payments.

Vendor/Subcontractor	Sum of Total Attested	PAID	
		Sum of Amount	No Check Backup
Alpha Omega Geotech	\$ 84,242.72		\$ 84,242.72
Approved Paving	\$ 26,085.00	\$ 26,085.00	\$ -
Black Hills Energy	\$ 39,750.00	\$ 39,750.00	\$ -
DFC Company	\$ 1,403,716.33		\$ 1,403,716.33
Earnies Mechanical	\$ 305,530.00	\$ 305,530.00	\$ -
Emprise Bank	\$ 713,064.34		\$ 713,064.34
Gould Evans	\$ 100,000.00	\$ 100,000.00	\$ -
Hoss & Brown	\$ 44,000.00	\$ 44,000.00	\$ -
Kings Construction	\$ 9,104,318.00	\$ 9,132,568.74	\$ -
Landplan Engineering Mid America	\$ 76,955.98	\$ 77,513.49	
Courtworks	\$ 526,600.00	\$ 526,600.00	\$ -
Paul Werner Architects	\$ 250,000.00	\$ 250,000.00	\$ -
Poisinelli	\$ 212,535.81		\$ 212,535.81
Qualite	\$ 325,000.00	\$ 325,500.00	\$ -
<b>Grand Total</b>	<b>\$ 13,211,798.18</b>	<b>\$ 10,827,547.23</b>	<b>\$ 2,413,559.20</b>

The items marked in yellow are tested in a separate document—these were omitted from this working paper.

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**McDonald and Associates**  
**Bliss Sports II Testing and Interview**

**Questions:**

Based on the information provided and documentation available to the city, we made inquiries about the following transactions:

- 1) For Alpha Omega Geotech—no invoice support or contract was available to the city to understand the nature of the cost and how it was derived.

**Answer:** This was a third party testing firm hired by Bliss Sports II to validate that construction by the subcontractors was occurring to specifications. Alpha Omega was performing the testing on the vertical structure—since they were on site, Thomas Fritzel requested that they do the testing on the infrastructure work as well. This was done without a formal agreement (verbal agreement).

The total billing was in excess of \$250,000 for both the stadium and infrastructure. There are provisions in the development agreement to account for a split in shared costs based on acreage (31% City 69% KU Endowment).

Thomas Fritzel asked Blake Bennett at Alpha Geotech to provide his estimate of the amount just related to the infrastructure. Mr. Bennett came up with \$84,272 as the infrastructure portion—based on the extensive amount of concrete testing and boring. Following the formula in the contract, the amount would have been roughly \$77,500. Mr. Bennett was within \$6000-\$7000 of this number and attested (for the purposes of the City and KU Foundation) to the \$84,272.

The cancelled check and invoice were not provided because the service was paid for through the stadium project under one payment— and no breakout was provided other than that by Mr. Bennett.

**Conclusion:** Based on the amount of concrete work performed, the amount of testing necessary and verification of physical reports and payments the \$84,272 appears reasonable. A lack of formal agreement, scope of work defined and costs per scope—it is not possible to extrapolate to arrive at a better number. This is within reason, close to the defined percentage split and payment was verified. No issues noted.

- 2) Since DFC is a related party transaction and a physical check was not cut between Bliss and DFC, we would like to see the journal entries supporting that the amounts claimed/attested were in fact paid by Bliss Sports II.

Also, some of the King Construction payments were made out of DFC Company 5/6/13 \$223,365.74; 5/9/13 \$4,323.60 and 6/13/13 \$233,977.44. The audit wants to ensure these costs were properly handled.

**Answer:** We were provided the GL entries for review. Based on the information provided, the amounts attested to in the project documentation were paid through intercompany transfer to

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**McDonald and Associates**  
**Bliss Sports II Testing and Interview**

DFC. The concern was amounts paid to King Construction by DFC (reference checks and amounts above). Since the King Construction scope of work was paid for by several Fritzel entities and the DFC payments were included in the King Construction Costs—we wanted to ensure that the city was not charged twice for the same scope of work through DFC and Kings.

We validated that journal entries were made to reimburse DFC Company (Through Bliss Sports II) for the amounts paid. No issues were noted. Internal Memorandum existed (dated 9/18/14) to support DFC charges on the infrastructure side of the project. These expenses were comprised of the following:

- Sprinklers/Irrigation
- Sodding
- Landscaping and Bushes (DFC also guarantees the survival of the trees and bushes).

DFC won the competitive bid on the recreation center.

**Conclusion:** No issues were noted.

3) Service agreement or scopes of work for the following vendors or subcontractors:

- Earnies Mechanical: Provided design work for lighting. Worked in conjunction with Qualite for design and installation
- Gould Evans: Thomas Fritzel did not have a formal subcontract in place—the scope of their work was conceptual site plans, zoning and platting—they were responsible for all the up-front work prior to turning dirt.
- Hoss & Brown: They provided electrical Engineering expertise on the junction boxes for the parking and tennis court lighting.
- Mid America Courtworks: Subcontract for 8 tennis courts. This was a lump sum agreement.
- Paul Werner Architects: Worked with Land Plan to design sewer and water lines. Paul Werner designed the line and Land Plan did the site drawings
- Qualite: Vendor chosen for parking and tennis court lighting
  1. Parking Lot Lights: \$172,500
  2. Parking Lot Light Labor and Misc: \$60,000
  3. Tennis Court Lights: \$153,000
  4. Tennis Court Light Labor and Misc: \$24,000
  5. **TOTAL \$409,500—Difference from paid \$104,000 (amount attested was less than amount contracted)**

4) Requested documentation that increases the King Construction contract from \$8,506,947.65 to the \$9,104,317.81.

**Answer:** Change Order #1—3/31/14 Nature Walking Trails \$401,805 and Change Order #2—5/22/14 Tennis Courts \$213,565

**Conclusion:** The city has already removed \$63,600 and \$43,565 from the payment for these items. Any pricing concerns of the audit are covered through these withheld amounts.

**McDonald and Associates**  
**Bliss Sports II Testing and Interview**

- 5) Through county records, the audit discovered a filing for a Construction Mortgage related to title number 3123092 for \$17,150,000. Did this have anything to do with the infrastructure project?

**Answer:** This amount was purely for the stadium site. Emprise Bank only filed a mortgage on the Stadium (real property financed back to KU through Bliss Sports). This is a long-term lending arrangement. The construction financing was on a separate signatory note and due to Federal banking laws remained separate from the mortgaged property.

- 6) How were payments worked out and why was money flowing from Emprise Bank, Bank of Oklahoma and Sunflower Bank?

**Answer:** The project was financed through Industrial Revenue Bonds (IRB) in order to qualify for tax exemption. Emprise handled the construction draws, but the Bank of Oklahoma was the Trustee for the IRBs. Although it was a movement of paper, the Bank of Oklahoma was required to “put their hands” on the transaction prior to passing the money back to Emprise Bank. The whole flow of payments and money was to ensure sales and property tax exemption for the projects.

- 7) The concrete delivery tickets—why is Bliss Sports II on the majority of the delivery tickets and not King Construction?

**Answer:** Bill Penny asked Thomas Fritzel to guarantee the purchase of the concrete. King Construction paid for the concrete. This provided Penny with greater assurance for payment in the event King defaulted.

**General Notes:** There is no direct contractual relationship between the City of Lawrence and Bliss Sports II or any Fritzel entity. Bliss Sports II is contracted with KU Endowment under Rock Chalk Park (RCP). In turn, the city is purchasing the infrastructure from RCP. The contract (as long as the city got the material specified in the original drawing) had a contractual cap of \$22,500,000. This included a recreation center, tennis courts, parking and roads.

The audit responsibility to validate these costs (in our interpretation) rests on KU Endowment. Since the city is not directly contracted with Bliss Sports II—the city would owe no interest to Bliss Sports II or any expense derived from KU Endowment’s lack of third party review (audit) of the costs presented.

**Conclusion:** We were able to validate the costs supplied by Bliss Sports II. After we test installed quantities—we can validate the information structure paid for in the specification was received. At this point, we identified no material issues.

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**McDonald and Associates**  
**Bliss Sports II Testing and Interview**

**ISSUE:** Thomas Fritzel lacked formal agreements with Gould Evans and Alpha Geotech—although the transactions are within reason, the lack of agreements are counter to best business practices.

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January 28, 2015

Warren Hudson, MBA, CIA, CFE, CCA, CRMA  
Capital Development Consulting/Auditing

Dear Warren:

Following our meeting on Tuesday of this week, RCP LLC, a wholly owned entity of KU Endowment, is pleased to cooperate with you to verify the value of the completed work in accordance with the terms of the Development Agreement and to confirm adherence to processes by which the project was accomplished. This letter and the attachment will provide some historical context for the development of the project.

As early as June 30, 2011, the Lawrence Journal-World reported that the Assists Foundation was contemplating a donation of a \$1 million to support the development of a City of Lawrence recreation and wellness center which at that time, then Mayor Aron Cromwell estimated to be a \$15 million building. Concurrently, Kansas Athletics began to explore options to develop a new sports complex to include facilities for intercollegiate track and field, soccer and softball. The size, scope and required parking for such a complex would require a development outside of the existing KU campus. It is our understanding that in 2012, and perhaps earlier, the City and Kansas Athletics were exploring with private developers on an opportunity to develop a joint complex, however those plans failed to materialize.

Bliss Sports proposed a plan and location by where both facilities could share some of the common amenities needed for peak capacity days that would sit empty much of the time if built on separate sites, primarily in the form of parking and roads. Kansas Athletics and Bliss Sports requested KU Endowment's assistance to purchase a 100 acre parcel of land which was contiguous to 45 acres of city-owned land to make possible such a joint development. As talks progressed it became apparent that there would be three projects on the site, the KAI project for

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the stadiums, the City project for the rec center and the shared Infrastructure project. As such, the Development Agreement was structured to complete the infrastructure improvements concurrently as the City's recreation center and Kansas Athletics stadiums were being constructed to increase efficiencies in costs and time.

Because of the significant amount of dirt that had to be moved to create the four, large pad sites for these sports and recreation venues, Bliss was moving dirt on all sites as part of the KAI project before any agreement was reached with the City. As the agreement progressed and it became apparent that Bliss II could contract for the infrastructure and improvements it only made sense from an economy of scale and coordination perspective that the same earthwork contractor and many of the same subcontractors and consultants would be concurrently but separately contracted for the infrastructure and in some cases the recreation center. Ultimately, three separate but related entities contracted for the three projects.

The vast majority of the contracts were lump sum contracts, not unit cost contracts. As constructability and scope changes were made to the design, Bliss II rarely asked for a change order unless the magnitude of the change was significant, all the time knowing that there was a cap to the amount that Bliss II would be compensated. It is our opinion that in the City Engineers review of the costs, as compared to Schedule I, he routinely recognized reductions in scope but rarely recognized additions to the scope. Some of the more significant examples of this are as follows.

1. The original scope for the tennis courts included eight lighted asphalt courts with an estimated value of \$810,000. After the Development Agreement was in place the City requested post-tension concrete courts, additional paving around the courts for bleachers, and electricity to several of the courts for ball throwers. Bliss II provided all of these upgrades and documented expenditures of \$917,000; however, the City Engineer recommended payment of \$868,765.
2. The Development Agreement clearly states that the cost of financing this project is to be included as indicated in Schedule I. To date, none of these costs have been approved and unfortunately due to non-payment of some portions of the work, continue to accrue. The

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total cost of financing the project as of November 21, 2014 is \$713,064.34 as evidenced by the November 21, 2014 letter from Emprise Bank and the supporting account transaction statement.

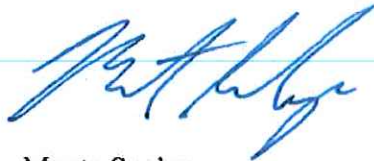
3. Clearly indicated in the Infrastructure Improvements Plans is a fire loop road the runs around the south, west and north sides of the track stadium. As such, the City has no obligation to maintain this private road. The purpose of the road is to provide fire truck access around the stadium. The road has been accepted by the fire department and codes officials as evidenced by the Certificate of Occupancy that was issued. A portion of the road was constructed using cast in place concrete with a limestone aggregate and other portions with granite aggregate. In his analysis, the City Engineer chose to give no credit to Bliss II for the limestone aggregate portion of the road even though there is no requirement to provide something other than this type of surface or other surface that will allow for all weather truck access
4. Professional Engineering Fees were also to be included as indicated in Schedule I. The actual cost of the professional engineering fees was \$470,955.98. However, in addition to the engineering fees, the City specifically requested that Bliss II pay for all of the special inspection fees, which are traditionally paid for by the owner and were not included in the good faith estimate Exhibit I. The cost of the special inspections for the Infrastructure site was \$84,272.72, none of which has been paid to date.
5. The Infrastructure Improvement Plans called for approximately one half mile of county road E902 to receive a chip and seal treatment. In order to accomplish this, the road required additional grading and because it had to be complete to obtain an occupancy permit for the Kansas Relays to occur in of April 2014, Bliss II paid a premium to get the contractor there when needed. Schedule I reflected an anticipated cost of \$18,000. Bliss II incurred an actual expense of \$26,085 and the City Engineer recommended payment of \$16,200.
6. A landscape plan for all three sites was submitted to, and approved by, the City. In consideration of the large expanse of parking surfaces and open space, Bliss II increased the number of plantings by over 200 trees and 1000 shrubs and bushes and added irrigation to all of the parking lot islands to keep the plant stock alive. In addition the caliper of the trees was generally double that required by City approved plan. Bliss II

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also provided sod in several areas around the tennis courts and Recreation Center that were not required by the plan. The added value of these improvements is estimated to be approximately \$375,000. The City Engineer failed to recognize the added value of extras and did not recommend payment for anything that was not on the original plan.

RCP, LLC appreciates the opportunity to provide this additional information and input with respect to the City audit process. We recognize that this was a complex development agreement but one that was necessary to achieve this project on this site. We believe that the documentation in total will bear out that the City received a good product and value, if not exceptional value, for the City's investment in the project. If we can be of further assistance, please do not hesitate to contact us.

Respectfully submitted,



Monte Soukup  
Sr. VP Property

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## ROCK CHALK PARK UPDATE

January 27, 2015

In October, 2012, Kansas Athletics requested that KU Endowment work with Kansas Athletics, the City of Lawrence and local developer Thomas Fritzel to develop a new track, soccer and softball complex for the University (the "*KU Stadium Facilities*"). For at least several months before seeking KU Endowment's assistance, Kansas Athletics, the City and Fritzel had discussed the possibility of jointly developing a complex that would include a City recreation center, as well as the new KU Stadium Facilities, at a location on the west side of Highway K-10 in west Lawrence. By the time Kansas Athletics asked for KU Endowment's assistance, the other parties had identified a tract of land located east of Highway K-10, north of 6<sup>th</sup> Street and west of George Williams Way as the preferred site for the joint athletics complex.

KU Endowment formed a wholly owned subsidiary, RCP, LLC ("*RCP*") to participate in the project named "Rock Chalk Park." RCP purchased two parcels of land bisected by a City owned 45-acre parcel at the preferred location in December, 2012.

Both parcels were annexed into the City and the larger, south parcel was platted and subsequently sub divided into two lots: an approximately 57-acre southern lot (the "*Stadium Site*") and an approximately 26 acre northern lot (the "*City Recreation Center Site*"). (The other approximately 19.2-acre parcel, north of the City's property, is owned by RCP free and clear of any liens or leases, but is subject to an agreement between RCP and the City which permits the City to maintain walking trails on it for period of 5 years and thereafter until cancelled by RCP on 180-days notice.)

### Ground Lease of Stadium Site

In February, 2013, RCP entered into a Ground Lease of the Stadium Site with a Fritzel owned entity, Bliss Sports LC ("*Bliss Sports I*"). The Ground Lease permitted Bliss Sports I to build on the Stadium Site only the KU Stadium Facilities and a portion of the parking lots and other infrastructure needed for the KU Stadium Facilities and, if built on the north lot, a City recreation center (the "*Infrastructure Improvements*"). The Ground Lease only permits Bliss Sports I to build other improvements if they are approved in advance by RCP. Except with the prior consent of RCP, only KU and other athletics events can be held on the Stadium Site.

### Kansas Athletics Sublease

Kansas Athletics and Bliss Sports I had entered into a series of development, operating and sublease agreements even before the Ground Lease was finalized. Those agreements set forth the terms by which Bliss Sports I would construct the KU Stadium Facilities and provide for a long term sublease of them to Kansas Athletics. Many of Bliss Sports I's obligations under the Ground Lease are passed through to Kansas Athletics in the sublease.



### Industrial Revenue Bonds

In order to obtain a sales tax exemption for materials and a property tax exemption for the Stadium Site and the KU Stadium Facilities for the first 10 years after construction, RCP, Bliss Sports and Kansas Athletics worked with the City to have industrial revenue bonds issued to finance the construction of the KU Stadium Facilities and the portion of the Infrastructure Improvements located on the Stadium Site. Due to the existence of the bonds, technically the City owns the Stadium Site and leases it to RCP until such time as the bonds are paid off or, if there is a default in payment, the City forecloses.

### Development Agreement

Even before RCP's involvement in the project, the City, Kansas Athletics and Fritzel discussed the possibilities of a City recreation center being constructed as part of the project and of the City paying for at least some of the Infrastructure Improvements (principally the parking lot, drives and utility lines serving the KU Stadium Facilities and City recreation center) even if there was no City recreation center included in the project. In order to have the new KU Stadium Facilities completed in time for the 2014 Kansas Relays, the Ground Lease had to be signed before completion of negotiations among RCP, the City, KU Athletics and Fritzel concerning the City Recreation Center and Infrastructure Improvements. Fritzel formed another entity, Bliss Sports II LC ("*Bliss Sports II*"), to commence work on the Infrastructure Improvements while discussions continued with the City (again in order to meet the Kansas Relays schedule).

Eventually, the City, RCP, Kansas Athletics, Bliss Sports I and Bliss Sports II entered into a Rock Chalk Park Development Agreement dated July 10, 2013 (the "*Development Agreement*"). By the terms of it and other contracts executed pursuant to it, the City agreed to buy the 26 acre City Recreation Center Site from RCP for the per acre price that RCP had paid for it (with RCP retaining a right of first offer and a right of first refusal on the property and improvements on it).

In addition, under the terms of the Development Agreement, RCP agreed to contract with Bliss Sports II to build the Infrastructure Improvements and the City agreed to pay RCP for the Infrastructure Improvements whatever balance of \$22.5 million that was not spent by the City on (a) the purchase of the City Recreation Center Site from RCP or (b) the construction of a new recreation center on that land. (The Development Agreement also provided that the amount to be paid for the Infrastructure Improvements would be increased by the portion, if any, of a donation for that purpose from Coach Self's Assists Foundation, which eventually made a \$1 million donation toward the infrastructure improvements costs.) Lastly, the amount to be paid for the Infrastructure Improvements by the City was also capped at the sum of (a) the hard and soft costs incurred and paid by Bliss Sports II for construction of the Infrastructure Improvements plus (b) 2.5% as a construction management fee (which was determined by KU Endowment staff to be at or below a going rate for construction management of a project like the installation of the Infrastructure Improvements).

In Exhibit I to the Development Agreement ("*Exhibit I*") the parties to the Development Agreement set forth a consensus "good faith estimate of the fair market value costs to be incurred in connection with the completion" of the Infrastructure Improvements. The four page

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B3.6

schedule describes line item quantities for materials and work required to complete the Infrastructure Improvements. The consensus estimate at the time the Development Agreement was signed was that the costs for constructing the Infrastructure Improvements would be approximately \$12,261,426.65.

Pursuant to the Development Agreement, RCP signed a contract with Bliss Sports II (which already had started construction of the Infrastructure Improvements to meet the 2014 Kansas Relays deadline) (the "*Infrastructure Improvements Construction Contract*") to perform all of RCP's obligations under the Development Agreement for the Infrastructure Improvements. The Infrastructure Improvements Construction Contract provides that Bliss Sports II will not be paid more than the amount, if any, that the City pays RCP for the Infrastructure Improvements. It also provides that Bliss Sports II will be paid *less* than the amount the City pays RCP if the City pays more than the out of pocket costs incurred to third parties by Bliss Sports II and any other Fritzel entity plus 2.5%. RCP has the right to conduct a full audit of Bliss Sports II with respect to the Infrastructure Improvements. Under the Development Agreement the City has no third party or other rights under the Infrastructure Improvements Construction Contract.

Although in early negotiations for the Development Agreement the City wanted RCP to build the City's recreation center in addition to the Infrastructure Improvements, eventually the City decided to take public bids for construction of a recreation center on the City Recreation Center Site, in May, 2013. The low bidder was a Fritzel related entity, Gene Fritzel Construction, and contracts were awarded for the recreation center to it contingent upon execution of the Development Agreement.

### Completion of Improvements

Once the Development Agreement was signed, representatives of the City, Bliss Sports II and RCP began a series of bi-weekly meetings to track progress on the Infrastructure Improvements. These meeting continued until completion.

Progress of the Infrastructure Improvements was also tracked by (a) on-site City inspectors; (b) inspectors hired by Emprise Bank (which had issued a separate construction loan to Bliss Sports II for construction of the Infrastructure Improvements); and (c) third party inspectors that Bliss Sports I and Bliss Sports II jointly used to inspect construction of the KU Stadium Facilities and the Infrastructure Improvements.

The track portions of the KU Stadium Facilities and a sufficient portion of the Infrastructure Improvements were completed in time for the 2014 Kansas Relays to be held when scheduled in April, 2014.

By September, 2014, the rest of the KU Stadium Facilities, the Infrastructure Improvements and the City recreation center were all substantially completed. In September, 2014, the City held a grand opening for the new recreation center.

WJW 2/26/15  
B3.7

### Recent Issues

On October 1, 2014, RCP presented to the City a statement for the hard and soft costs incurred and paid by Bliss Sports II for (or in the case of reimbursing other Fritzel entities remains liable and has an account payable for) the Infrastructure Improvements. RCP also furnished to the City documentation obtained from Bliss Sports II which indicated that Bliss Sports II's out of pocket costs (some of which amounts still need to be paid to other Fritzel entities when the City payment is received) exceeded both (a) the estimated costs set forth in Exhibit I to the Development Agreement and (b) the maximum amount that the City is obligated to pay for the Infrastructure Improvements under the Development Agreement. The amount presented by Bliss Sports II as its costs to RCP and in turn presented to the City totals over \$13.2 million (including agreed upon amounts for some change orders the City requested in the Infrastructure Improvements). The maximum amount that the City is obligated to pay for Infrastructure Improvements under the formula in the Development Agreement (after being adjusted for agreed upon amounts for change orders the City requested in the Infrastructure Improvements and for the \$1 million donation from the Assists Foundation) is approximately \$11.45 million. (The consensus estimate of Infrastructure Improvements costs in Exhibit I of the Development Agreement, \$12,261,426.65, is less than the amount Bliss Sports II spent constructing the Infrastructure Improvements but more than the amount the City is obligated to pay for them.)

To date, the City Commission has authorized paying, and the City has paid RCP (which in turn has paid Bliss Sports II), approximately \$10.36 million. However to date the City has withheld about \$1.1 million of the maximum payment.

MC DONA ASSOCIATES  
TESTING OF INSTALLED QUANTITIES

**SCOPE:** With assistance of the City personnel perform a site inspection of selected portions of the infrastructure, note exceptions or portions that do not agree with specifications. expectations. Record and evaluate the results.

**WORK PERFORMED:** The auditor and representatives from City Engineering walked through the RCP site and reviewed the infrastructure development. Afterward, audit testing was performed on site in the evening and selected items were checked against specified quantities.

**Observations:**

	Specified	Tested
Trees	450	515 *
Lights and Poles	30	30
Tennis Court Lights	12	12
Tennis Court	8	8
Concrete	<i>See concrete delivery ticket analysis</i>	

\*\*Gas lines, water lines and Sewer were documented in log books from the City and City Utilities. Installation was verified by City Personnel.

**NOTES**

\* : The trees specified were exceeded. More trees were identified than specified.

**CONCLUSION:** Testing of installed quantities showed no deviation from plans. As a matter of fact, testing indicated that quantities installed may have exceeded specified quantities.

C1.1  
MWH-2/20/15

SCOPE: Review quantities installed of major construction components (either from subcontract proof or third party data).

WORK PERFORMED: The audit obtained and logged every concrete delivery ticket--for the purposes of the analysis, we did not distinguish between grades of concrete--we just examined total installed quantity. The amounts from the delivery tickets were compared to the estimates in Exhibit 1 as well as the documentation provided in city inspection reports. Normal calculation error or waste can account for as much as a 3% variance.

Observations

The following data comes from the concrete delivery tickets. We electronically and manually examined the data to ensure we were "capturing" only those items that would constitute the final delivery on an order (a concrete order may have multiple deliveries and multiple tickets--we only were concerned with the final delivered amount for an order).

AREA	Plant	Date	Order	Account	Truck	Driver	Ticket	Application	Qty	Description	Ordered	Unit	Delivered
Surface	1	1/31/2014	5	Bliss	139	Kevin Tolbert	1091940	Footing	10	30-S64F1 3K PSI NO AE FA	90	Cubic Yards	90
Surface	1	12/13/2013	11	Bliss	174	Shawn Cool	1091311	Footing	10	30-S64F1 3K PSI NO AE FA	150	Cubic Yards	110
Surface	1	12/13/2013	11	Bliss	139	Kevin Tolbert	1091300	Footing	10	30-S64F1 3K PSI NO AE FA	175	Cubic Yards	30
Surface	1	3/17/2014	29	Bliss	184	Shawn Cool	1092560	Footing	10	30-S64F1 3K PSI NO AE FA	40	Cubic Yards	30
Surface	1	12/16/2013	34	Bliss	139	Kevin Tolbert	1091341	Footing	10	30-S64F1 3K PSI NO AE FA	40	Cubic Yards	10
Surface	1	3/17/2014	46	Bliss	192	RL Henley	1092557	Footing	10	30-S64F1 3K PSI NO AE FA	40	Cubic Yards	20
Surface	1	5/16/2014	51	Bliss	122	Travis Mooney	1093996	Footing	10	30-S64F1 3K PSI NO AE FA	120	Cubic Yards	120
Surface	1	1/16/2014	67	Bliss	184	Shawn Cool	1091719	Footing	10	30-S64F1 3K PSI NO AE FA	50	Cubic Yards	20
Surface	1	3/19/2014	97	Bliss	184	Shawn Cool	1092647	Footing	10	30-S64F1 3K PSI NO AE FA	40	Cubic Yards	30
Surface	1	8/13/2013	100	Bliss	184	Wayne Grammer	1097729	Footing	10	30-S64F1 3K PSI NO AE FA	200	Cubic Yards	60
Surface	1	12/18/2013	2	Bliss	118	David Casier	1091416	Wall	10	40-S40 4000 PSI NO AE	270	Cubic Yards	210
Surface	1	12/4/2013	3	Bliss	157	John Beley	1091181	Tileup	10	40-S40 4000 PSI NO AE	290	Cubic Yards	250
Surface	1	12/20/2013	10	Bliss	159	Doug Berg	1091546	Tileup	10	40-S40 4000 PSI NO AE	230	Cubic Yards	200
Surface	1	3/26/2014	4	Bliss	139	Kevin Tolbert	1092889	EXTFW	10	40-S64 4000 PSI no AE	110	Cubic Yards	40
Surface	1	3/8/2014	15	Bliss	194	Wayne Grammer	1091633	Wall	10	40-S64 4000 PSI no AE	4	Cubic Yards	4
Water	1	9/14/2013	18	Bliss	139	Kevin Tolbert	1087773	KICKERS	2.5	40-S64 4000 PSI no AE	2.5	Cubic Yards	2.5
Surface	1	3/26/2014	21	Bliss	184	Shawn Cool	1092864	SOG	10	40-S64 4000 PSI no AE	190	Cubic Yards	110
Surface	1	3/26/2014	57	Bliss	194	Wayne Grammer	1092910	ESTEPS	6	40-S64 4000 PSI no AE	11	Cubic Yards	6
Surface	1	1/20/2014	78	Bliss	194	Wayne Grammer	1091762	INT-FW	10	40-S64 4000 PSI no AE	10	Cubic Yards	10
Surface	1	12/13/2013	3	Bliss	174	Shawn Cool	1091287	Wall	10	40-S90R 4K NO-AE 44 CA5	90	Cubic Yards	90
Surface	1	2/24/2014	6	Bliss	192	RL Henley	1092192	Wall	10	40-A564 4000 PSI AE	90	Cubic Yards	90
Surface	1	3/14/2014	6	Bliss	194	Wayne Grammer	1092529	Sidewalk	10	40-A564 4000 PSI AE	350	Cubic Yards	200
Surface	1	2/22/2014	11	Bliss	194	Wayne Grammer	1092153	INT-FW	2	40-A564 4000 PSI AE	2	Cubic Yards	2
Surface	1	1/3/2014	15	Bliss	194	Wayne Grammer	1091625	Wall	10	40-A564 4000 PSI AE	130	Cubic Yards	100
Surface	1	1/15/2014	20	Bliss	139	Kevin Tolbert	1091703	Wall	10	40-A564 4000 PSI AE	130	Cubic Yards	100
Surface	1	3/17/2014	23	Bliss	193	Robert Crosby	5200112	Mainline	10	40-A564 4000 PSI AE	250	Cubic Yards	240
Surface	1	3/17/2014	23	Bliss	171	Greg Mohr	1092582	Mainline	10	40-A564 4000 PSI AE	300	Cubic Yards	160
Surface	1	1/24/2014	32	Bliss	194	Wayne Grammer	1091778	EXTFW	10	40-A564 4000 PSI AE	10	Cubic Yards	10
Surface	1	12/16/2013	32	Bliss	114	Brian Undelof	1091324	Esteps	10	40-A564 4000 PSI AE	25	Cubic Yards	20
Surface	1	1/24/2014	39	Bliss	139	Kevin Tolbert	1091789	Wall	10	40-A564 4000 PSI AE	130	Cubic Yards	110
Surface	1	2/28/2014	59	Bliss	154	Kevin Bellie	1092235	EXTFW	10	40-A564 4000 PSI AE	20	Cubic Yards	16
Surface	1	12/2/2013	60	Bliss	146	Glynn Tipton	1091100	Mainline	10	40-A564 4000 PSI AE	30	Cubic Yards	20
Surface	1	12/12/2013	72	Bliss	160	Joseph Tate	1091261	Wall	10	40-A564 4000 PSI AE	25	Cubic Yards	20
Surface	1	5/29/2014	119	Bliss	123	Timothy Belton	1094216	Sidewalk	9	40-A564 4000 PSI AE	9	Cubic Yards	9
Surface	1	4/22/2014	138	Bliss	113	Tony Richeson	1099521	Wall	6	40-A564 4000 PSI AE	16	Cubic Yards	16
Surface	1	12/4/2013	5	Bliss	159	Doug Berg	1091194	Wall	10	4K NO-AE 44 CA5	90	Cubic Yards	20
Surface	1	4/12/2014	32	Bliss	170	Michael Youngber	1093364	Mainline	10	50-A705 5K AE	200	Cubic Yards	190
Surface	1	4/11/2014	54	Bliss	112	Lance Atkins	1093343	Mainline	10	50-A705 5K AE	420	Cubic Yards	420
Surface	1	3/20/2014	129	Bliss	195	Marty Trumble	1092702	STRATCH	10	50-A705 5K AE	30	Cubic Yards	30
Surface	1	10/15/2013	3	Bliss	192	RL Henley	1089343	Mainline	10	AS6425G4 KCMMB 4K 25% .42	300	Cubic Yards	300
Surface	1	3/13/2014	44	Bliss	195	Marty Trumble	1092456	Machine	10	AS6425G4 KCMMB 4K 25% .42	30	Cubic Yards	20
Surface	1	3/13/2014	44	Bliss	160	Joseph Tate	1092467	Machine	8	AS6425G4 KCMMB 4K 25% .42	43	Cubic Yards	43
Water	1	9/9/2013	45	Kings	195	Marty Trumble	1087434	INVERTS	1	AS6425G4 KCMMB 4K 25% .42	1	Cubic Yards	1
Water	1	8/9/2013	67	Kings	195	Marty Trumble	1086434	INVERTS	2.5	AS6425G4 KCMMB 4K 25% .42	2.5	Cubic Yards	2.5
Water	1	8/16/2013	79	Kings	146	Glynn Tipton	1086652	EXTFW	1.5	AS6425G4 KCMMB 4K 25% .42	1.5	Cubic Yards	1.5
Water	1	8/26/2013	85	Kings	194	Mark Ice	1086907	Collars	1	AS6425G4 KCMMB 4K 25% .42	1	Cubic Yards	1
Water	1	8/1/2013	100	Kings	95	Brian Undelof	1086373	INVERTS	8	AS6425G4 KCMMB 4K 25% .42	8	Cubic Yards	8
Water	1	8/23/2013	106	Kings	174	Shawn Cool	1086850	INVERTS	2.5	AS6425G4 KCMMB 4K 25% .42	2.5	Cubic Yards	2.5
Water	1	10/7/2013	108	Kings	184	Wayne Grammer	1089054	INVERTS	1.5	AS6425G4 KCMMB 4K 25% .42	1.5	Cubic Yards	1.5
SEWER	1	6/27/2013	111	Kings	184	Wayne Grammer	1085263	INVERTS	1.5	AS6425G4 KCMMB 4K 25% .42	1.5	Cubic Yards	1.5
Water	1	9/26/2013	123	Kings	118	David Casier	1088419	KICKERS	1.5	AS6425G4 KCMMB 4K 25% .42	1.5	Cubic Yards	1.5
Water	1	7/26/2013	140	Kings	123	Timothy Belton	1086286	INVERTS	1	AS6425G4 KCMMB 4K 25% .42	1	Cubic Yards	1
Water	1	8/14/2013	161	Kings	115	Kevin Foerschler	1086600	KICKERS	1.5	AS6425G4 KCMMB 4K 25% .42	1.5	Cubic Yards	1.5
Surface	1	3/26/2014	9	Bliss	133	Lance Day	1092901	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	160	Cubic Yards	120
Surface	1	5/8/2014	12	Bliss	206	Wayne Grammer	1093800	Mainline	10	AS6425G4 KCMMB 4K 25% .44	180	Cubic Yards	140
Surface	1	12/17/2013	13	Bliss	114	Brian Undelof	1091370	Mainline	10	AS6425G4 KCMMB 4K 25% .44	300	Cubic Yards	150
Surface	1	3/15/2014	14	Bliss	139	Kevin Tolbert	1092549	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	70	Cubic Yards	70
Surface	1	3/25/2014	16	Bliss	193	Robert Crosby	1092834	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	120	Cubic Yards	60
Surface	1	3/26/2014	21	Bliss	194	Wayne Grammer	1092862	SOG	10	AS6425G4 KCMMB 4K 25% .44	190	Cubic Yards	100
Surface	1	3/26/2014	24	Bliss	113	Travis Mooney	1092996	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	30	Cubic Yards	20
Surface	1	3/25/2014	26	Bliss	193	Robert Crosby	1092824	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	90	Cubic Yards	60
Surface	1	11/20/2013	34	Bliss	195	Marty Trumble	1096916	Mainline	10	AS6425G4 KCMMB 4K 25% .44	300	Cubic Yards	290
Surface	1	12/19/2013	34	Bliss	159	Doug Berg	1091507	Handpaw	10	AS6425G4 KCMMB 4K 25% .44	250	Cubic Yards	200
Surface	1	3/20/2014	38	Bliss	139	Kevin Tolbert	1092665	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	40	Cubic Yards	40
Surface	1	3/18/2014	38	Bliss	194	Wayne Grammer	1092605	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	60	Cubic Yards	40
Surface	1	3/20/2014	38	Bliss	139	Kevin Tolbert	5200121	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	100	Cubic Yards	70

work 2/20/15  
2015

Surface	1	3/20/2014	38	Bliss	129	Thomas Ohm	1092686	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	110	Cubic Yards	110
Surface	1	12/2/2013	46	Bliss	135	Kenneth Nichols	1091113	Handpav	10	AS6425G4 KCMMB 4K 25% .44	40	Cubic Yards	30
Surface	1	3/19/2014	47	Bliss	194	Wayne Grammer	1092649	Machine	10	AS6425G4 KCMMB 4K 25% .44	18	Cubic Yards	9
Surface	1	3/26/2014	47	Bliss	139	Kevin Tolbert	1092915	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	60	Cubic Yards	30
Surface	1	3/26/2014	51	Bliss	194	Wayne Grammer	1093035	Sidewalk	8	AS6425G4 KCMMB 4K 25% .44	27	Cubic Yards	9
Surface	1	3/26/2014	53	Bliss	195	Marty Trumble	1092895	Handcurb	8	AS6425G4 KCMMB 4K 25% .44	24	Cubic Yards	16
Surface	1	3/14/2014	53	Bliss	194	Wayne Grammer	1092496	Handcurb	10	AS6425G4 KCMMB 4K 25% .44	64	Cubic Yards	26
Surface	1	3/10/2014	56	Bliss	157	John Boley	1092349	Handpav	10	AS6425G4 KCMMB 4K 25% .44	60	Cubic Yards	40
Surface	1	3/26/2014	56	Bliss	152	Bryan Reeves	1092962	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	80	Cubic Yards	20
Surface	1	12/4/2013	57	Bliss	159	Doug Berg	1091175	Mainline	10	AS6425G4 KCMMB 4K 25% .44	60	Cubic Yards	40
Surface	1	3/21/2014	66	Bliss	195	Marty Trumble	1092734	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	100	Cubic Yards	60
Surface	1	2/24/2014	72	Bliss	173	Marty Trumble	1092224	Handpav	10	AS6425G4 KCMMB 4K 25% .44	60	Cubic Yards	60
Surface	1	12/3/2013	73	Bliss	174	Shawn Cool	1091141	Mainline	10	AS6425G4 KCMMB 4K 25% .44	90	Cubic Yards	20
Surface	1	12/18/2013	75	Bliss	133	Lance Day	1091472	EXTFW	10	AS6425G4 KCMMB 4K 25% .44	400	Cubic Yards	356
Surface	1	3/31/2014	76	Bliss	113	Travis Mooney	1093042	C&G	8	AS6425G4 KCMMB 4K 25% .44	26	Cubic Yards	26
Surface	1	5/9/2014	78	Bliss	195	Marty Trumble	1093833	Mainline	1	AS6425G4 KCMMB 4K 25% .44	101	Cubic Yards	101
Surface	1	5/9/2014	79	Bliss	139	Kevin Tolbert	1093861	Mainline	10	AS6425G4 KCMMB 4K 25% .44	120	Cubic Yards	120
Surface	1	10/25/2013	85	Bliss	157	John Boley	1090001	Handpav	10	AS6425G4 KCMMB 4K 25% .44	100	Cubic Yards	80
Surface	1	5/5/2014	104	Bliss	122	Travis Mooney	1093691	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	40	Cubic Yards	10
Water	1	11/20/2013	107	Kings	139	Kevin Tolbert	1090918	EXTFW	2	AS6425G4 KCMMB 4K 25% .44	2	Cubic Yards	2
Surface	1	3/26/2014	108	Bliss	194	Christopher Dieh	1092984	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	40	Cubic Yards	40
Surface	1	3/14/2014	116	Bliss	145	Steve Wilson	1092540	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	60	Cubic Yards	50
SEWER	1	6/26/2013	124	Kings	159	Doug Berg	1085234	INVERTS	1.5	AS6425G4 KCMMB 4K 25% .44	1.5	Cubic Yards	1.5
Water	1	11/19/2013	131	Kings	152	Bryan Reeves	1090855		2.5	AS6425G4 KCMMB 4K 25% .44	2.5	Cubic Yards	2.5
Surface	1	11/19/2013	134	Bliss	174	Shawn Cool	1090856	Mainline	10	AS6425G4 KCMMB 4K 25% .44	60	Cubic Yards	20
Surface	1	5/2/2014	142	Bliss	122	Travis Mooney	1093662	Sidewalk	10	AS6425G4 KCMMB 4K 25% .44	80	Cubic Yards	80
SEWER	1	7/2/2013	154	Kings	119	Carl Muller	1085519	INVERTS	1.5	AS6425G4 KCMMB 4K 25% .44	1.5	Cubic Yards	1.5
Water	1	7/24/2013	161	Kings	110	Randall Page	1086209		1.5	AS6425G4 KCMMB 4K 25% .44	1.5	Cubic Yards	1.5
Surface	1	4/4/2014	45	Bliss	192	RL Henley	1093123	RAMP	10	AS6525G4 KCMMB 5K 25% .40	200	Cubic Yards	140
Surface	1	4/4/2014	45	Bliss	149	Kevin Blask	1093131	RAMP	5	AS6525G4 KCMMB 5K 25% .40	215	Cubic Yards	175
Surface	1	4/30/2014	79	Bliss	184	Shawn Cool	1093591	RipRap	1	AG811G Grout 2 to 1 San	1	Yd	1
Surface	1	5/2/2014	121	Bliss	122	Travis Mooney	1093634	Columns	1	AG811G Grout 2 to 1 San	1	Yd	1

7171

The following data came from Exhibit I in the contract. Some assumptions were made in converting linear feet to cubic yards. We were attempting to determine if the estimated quantities are comparable to delivery ticket totals for poured concrete.

Sanitary Sanita Sanitary Sewer	Flowable Mortar Backfill	CY	403	\$	70.00	\$	28,210.00	403
Rock Chi Rock ( Rod Chalk Drive & George Williams	10' NRD Portland cement concrete pave	SY	9758	\$	55.00	\$	536,690.00	1084.222 * Calculated
Rock Chi Rock ( Rod Chalk Drive & George Williams	Type CG-1 Concrete curb & gutter	LF	6257	\$	16.00	\$	100,112.00	77.24691 * Assumption is that LF is 1 ft wide
Rock Chi Rock ( Rod Chalk Drive & George Williams	4" x 5' Concrete sidewalk	SY	40	\$	30.00	\$	1,200.00	4.444444
Rock Chi Rock ( Rod Chalk Drive & George Williams	6" x 10' Fiber reinforced cone Sidewalk	SY	4078	\$	40.00	\$	163,120.00	453.1111
Overflow Overfl Overflow Parking Lot	Concrete access ramps	SY	464	\$	50.00	\$	23,200.00	51.55556
Parking I Parkin Parking Lot / Access Drives	Concrete Parking Lot	SY	44,356	\$	44.00	\$	1,951,664.00	4928.444 * Calculated
Parking I Parkin Parking Lot / Access Drives	CG-1 curb and gutter	LF	15,338	\$	18.00	\$	276,084.00	189.358 * Assumption is that LF is 1 ft wide
Rock Chi Rock ( Rod Chalk Lane and Rod Chalk Parkway	CG-1 curb and gutter	LF	5,109	\$	16.00	\$	81,744.00	63.07407 * Assumption is that LF is 1 ft wide
Rock Chi Rock ( Rod Chalk Lane and Rod Chalk Parkway	4" x 5' Sidewalk	SY	195	\$	30.00	\$	5,850.00	21.66667 * Calculated
								7276.123

The following information came from the City's Engineering and Inspection reports of installed quantities. All values given in SY--we converted to cubic Yards

		Converted	
		CY	
34 Concrete Easement	20 LF	0.25	
47 Concrete Easement	45 LF	0.56	
82 Sidewalk	40 SY	4.44	
83 Sidewalk	4078 SY	453.11	
95 Access Ramps	464 SY	51.56	
Street, Drainage, Water Crossings	3450 SY	383.33	
98 Parking Lot	42662 SY	4740.22	
99 Gutters	11515.5 LF	142.17	
100 Concrete Parking and Bus Lane	3492 SY	388.00	
101 8" Portland Cement	8254 SY	917.11	
<b>UNITS IN SQUARE YARDS</b>		<b>7080.75</b>	
<b>Source</b>	<b>CY Installed</b>	<b>% From Delivered</b>	<b>Variance</b>
Delivery Ticket Amount	7171	100.00%	0.00%
Schedule   Estimates	7276	98.56%	1.44%
Engineering Dept. Estimates	7081	98.74%	1.26%

*Report Issue #4*

*DB.4 Reference on WASTE FACTOR*

CONCLUSION: The quantities of installed concrete are within acceptable variances of the estimate and delivered amounts. No issue noted with installed concrete in the infrastructure.

*Waste Factor*

*0.22*

*Page 3 of 2*

Note: FINAL Status Update - Monthly Report

## Rock Chalk Park - Infrastructure Report

July 2014

Report issue #3

The following report is the twelfth monthly report for the construction of infrastructure at Rock Chalk Park. The format follows the sections outlined in the development agreement with status updates and notable items complete. Attached is a copy of the spreadsheet city staff is using to track monthly quantities and totals which can be compared to the amounts approved in the development agreement. Green highlighted items on the spreadsheet have been measured by city inspection staff and yellow highlighted items on the spreadsheet are estimated quantities complete for lump sum and grading items that will not be measurable until the project is complete. The percent complete column is based on measured versus plan quantities. The blue highlighted items are complete - plan quantity (100%), under plan quantity (<100%) or over plan quantity (>100%).

City Staff has been meeting with Bliss Sports bi-weekly about infrastructure throughout the project. The majority of work completed has been inspected and installed to City specifications. Quantities of work completed have been measured by the City and provided to Bliss Sports. There have been no major changes to the design, scope, functionality or amenities of the infrastructure plans. There have been some minor changes to work items and they are outlined in the change order section. Infrastructure improvements are almost complete and staff has been working on providing punch list items. At the end of July \$9,394,550.25 of the \$12,265,168.65 total cost of infrastructure work was complete, approximately 77%.

July 25th & August 6th Public Works staff, KU Endowment and Bliss Sports conducted two walkthroughs to generate a punch list for items to be complete for acceptance of the infrastructure work. The areas on the two walkthroughs covered all of the streets and parking lots except for the lots and drives just south of the city recreation facility, where equipment and materials are still being stored. The punch lists are attached at the end of the report.

### General

- No additional staking costs have been submitted by Bliss Sports.

### Site Grading

- 100% of site strip, site excavation, compaction and rock excavation work is complete; all quantities are assumed to be plan quantity.
- Additional site grading was complete in July. The only remaining site grading work is to complete fine grading around recreation center and nearby parking islands.

WMA 2/26/15

C3.1

### **Retention Ponds**

- Work to complete the detention ponds is 100% complete as of July 2013.
- Summary of Costs:
  - Cost per development agreement: \$156,250
  - Final construction cost: \$156,250

### **Natural Trails and Eight Lighted Tennis Courts**

- The post-tension concrete for the tennis courts was completed in July.
- Work on the asphalt milling and concrete trails continued in July and is being inspected by Parks & Recreation Department.

### **Waterline**

- Work to complete Waterline is 100% complete as of November 2013
- Summary of Costs:
  - Cost per development agreement: \$468,061.65
  - Final construction cost: \$462,522.49
- Two overruns on quantities:
  - 12" C900 DR14 Waterline: 12 extra feet, cost = \$442.44
  - 8" PVC C900 DR14 Waterline: 14 extra feet, cost = \$406
  - Fire Hydrant Assembly: 1 extra, cost = \$3300
- One underrun on quantities:
  - Flowable fill - an estimated 384.5 CY was assumed based on the unit price provided for the Sanitary Sewer flowable fill (\$70/CY). The 247 CY of flowable fill used for waterline the total cost would be \$17,290; an underrun cost of \$9620
- All other items were installed at 100% of plan quantities

### **Sanitary Sewer**

- Work to complete Sanitary Sewer is 100% complete as of October 2013
- Summary of Costs:
  - Cost per development agreement: \$162,842.50
  - Final construction cost: \$174,312.50
- Two overruns on quantities:
  - Extra Depth manhole: 6.2 extra feet, cost = \$620
  - Flowable Fill - 155 CY extra, cost = \$10,850
- All other items were installed at 100% of plan quantities

### **Storm Sewer**

- Work to complete Storm Sewer is 100% complete as of November 2013
- Summary of Costs:

*WWT 2/26/15  
C3.2*



- Cost per development agreement: \$82,688.75
- Final construction cost: \$82,688.75
- One additional 12" pipe and end section was installed to alleviate a drainage concern along Rock Chalk Drive; because there are no 12" pipe quantities in the plans, the item has been added to the Change Order section at the end.

### **Parking Lot Lights**

- Parking lot lights were completed in July.

### **Landscaping**

- 606 trees and 620 shrubs have been planted on the site through July. Additional landscape work will occur in August around the rec center building.
- The construction of the site entry sign began in July and was 50% complete at the end of the month.

### **Rock Chalk Drive & George Williams**

- All work is complete on Rock Chalk Drive and George Williams Way, with the exception of a section corner monument box. Quantities measured for concrete pavement, curb and gutter, and sidewalk are less than plan quantity per the development agreement.
- Treatment of subgrade is measured to be 97% complete. The development agreement had 12" fly ash & 4" AB3 for this work item. A change was made to 9" fly ash as recommended by the city - already on the approved public improvement plans. No unit cost has been provided by Bliss for this work, the quantity has been added to the Change Order section.

### **Overflow Parking Lot**

- The overflow parking lot was graded and access pavement was installed in July.
- Work to complete Overflow Parking Lot is 100% complete as of July 2014
- Summary of Costs:
  - Cost per development agreement: \$68,200.00
  - Final construction cost: \$65,400.00

### **Parking Lot/Access Drives**

- Work to complete Parking Lot/Access Drives is 100% complete as of July 2014
- All of the measured quantities were less than plan quantity from development agreement.
- Due to cold weather the parking lot north of the KU track facility was not treated with fly ash before paving. The City and Bliss Sports agreed to use 12" crushed concrete thickness instead of fly ash. This quantity will be split out and listed as Change Order 6.

*WJK 2/24/15  
C3-3*

- Summary of Costs:
  - Cost per development agreement: \$3,821,846.50
  - Final construction cost: \$3,269,960.15

### **Rock Chalk Lane and Rock Chalk Parkway**

- 818 SY of 6" x 10' fiber rec path was installed in July.
- 41 SY of 4" sidewalk and 1 access ramp was installed in July.
- The remaining work for this section is around the recreation center.

### **Chip and Seal County Road**

- The chip and seal of E. 902 Rd was done in July and measured at 9000 SY.
- Work to complete Chip and Seal County Road is 100% complete as of July 2014
- Summary of Costs:
  - Cost per development agreement: \$18,000.00
  - Final construction cost: \$16,200.00

### **Rec Center Pad**

- Work to complete the rec center pad is 100% complete as of July 2013.
- Summary of Costs:
  - Cost per development agreement: \$432,500
  - Final construction cost: \$432,500

### **Change Orders**

- Change Order 1: Installed additional 1352 LF of 4" conduit for fiber
- Change Order 2: 600 LF of 3" conduit for security cameras (complete in August)
- Change Order 3: Treatment of subgrade 9" flyash on Rock Chalk Drive and George Williams Way
- Change Order 4: 12" HDPE storm sewer pipe
- Change Order 5: 12" CMP End Section.
- Change Order 6: 5998 SY 12" Subgrade Crushed Concrete in Parking Lot
- Unit costs for change orders items 1 through 6 have not yet been approved; a copy was provided to Bliss Sports on February 11, 2014.

*WAT 2/26/15  
C3.4*

DATE: July 31, 2014

ESTIMATE No.: 12

PROJECT LOCATION: Rock Chalk Site Work

ESTIMATE OF ' K COMPLETE

FOR PERIOD: July 2014

MEASURED  
ESTIMATE ON ITEMS  
ITEM COMPLETE

ITEM	DESCRIPTION	UNIT	QUANTITY	CONTRACTED		COMPLETED TO DATE		Percent Complete	COMPLETED THIS PAY PERIOD	
				UNIT PRICE	AMOUNT	UNIT	AMOUNT		UNIT	AMOUNT
	General	Unit	Quantity	Unit cost	Total					
1	Mobilization	LS	1	\$ 400,000.00	\$ 400,000.00	1.00	\$ 400,000.00	100%		\$ -
2	Construction Staking	LS	1	\$ 225,000.00	\$ 225,000.00	0.25	\$ 58,200.00	25%		\$ -
3	Seeding, Mulching & Fertilizing	AC	20	\$ 1,500.00	\$ 30,000.00	13.34	\$ 20,010.00	67%		\$ -
4	Utilities Connection fees and expenses	LS	1	\$ 55,000.00	\$ 55,000.00		\$ -	0%		\$ -
5	Traffic Control	LS	1	\$ 5,000.00	\$ 5,000.00	1.00	\$ 5,000.00	100%		\$ -
6	Erosion & Sediment Control	LS	1	\$ 40,000.00	\$ 40,000.00	1.00	\$ 40,000.00	100%		\$ -
7	Legal Fees per Development Agreement	LS	1	\$ 167,836.00	\$ 167,836.00		\$ -	0%		\$ -
8	Loan origination fees for project financing	LS	1	\$ 150,000.00	\$ 150,000.00		\$ -	0%		\$ -
9	Loan interest for project financing	LS	1	\$ 309,515.00	\$ 309,515.00		\$ -	0%		\$ -
10	Construction Management fee 2.5% on \$11.5M	LS	1	\$ 287,500.00	\$ 287,500.00		\$ -	0%		\$ -
11	Professional Fees	LS	1	\$ 525,000.00	\$ 525,000.00		\$ -	0%		\$ -
	<b>General Sub Total</b>				\$ 2,194,851.00		\$ 523,210.00	24%		\$ -

	Site Grading	Unit	Quantity	Unit cost	Total					
12	Site strip	CY	32,000	\$ 2.25	\$ 72,000.00	32,000.00	\$ 72,000.00	100%		\$ -
13	Site Excavation	CY	180,000	\$ 2.25	\$ 405,000.00	180,000.00	\$ 405,000.00	100%		\$ -
14	Compaction	CY	160,000	\$ 1.10	\$ 176,000.00	160,000.00	\$ 176,000.00	100%		\$ -
15	Topsoil Replacement/fine grade	CY	10,000	\$ 10.00	\$ 100,000.00	9,000.00	\$ 90,000.00	90%	1,500.00	\$ 15,000.00
16	Rock Excavation	CY	9,750	\$ 10.00	\$ 97,500.00	9,750.00	\$ 97,500.00	100%		\$ -
	<b>Site Grading Sub Total</b>				\$ 850,500.00		\$ 840,500.00	99%		\$ 15,000.00

	Retention Ponds	Unit	Quantity	Unit cost	Total					
17	Rock Excavation	CY	10,000	\$ 10.00	\$ 100,000.00	10,000.00	\$ 100,000.00	100%		\$ -
18	Dirt Excavation	CY	5,000	\$ 2.25	\$ 11,250.00	5,000.00	\$ 11,250.00	100%		\$ -
19	Faircloth skimmers	LS	3	\$ 10,000.00	\$ 30,000.00	3.00	\$ 30,000.00	100%		\$ -
20	Storm structure	LS	3	\$ 5,000.00	\$ 15,000.00	3.00	\$ 15,000.00	100%		\$ -
	<b>Retention Ponds Sub Total</b>				\$ 156,250.00		\$ 156,250.00	100%		\$ -

	Natural Trails and Eight Lighted Tennis Courts	Unit	Quantity	Unit cost	Total					
21	Tennis Courts	LS	1	\$ 640,000.00	\$ 640,000.00	0.80	\$ 512,000.00	80%	0.70	\$ 448,000.00
22	Retaining Walls at Tennis Courts	LS	1	\$ 170,000.00	\$ 170,000.00	1.00	\$ 170,000.00	100%		\$ -
23	Natural trail 10' Approx. 5 = miles	SY	33,710	\$ 12.00	\$ 404,520.00	23,500.00	\$ 282,000.00	70%	22,272.00	\$ 267,264.00
	<b>Trails and Tennis Courts Sub Total</b>				\$ 1,214,520.00		\$ 964,000.00	79%		\$ 715,264.00

03/15  
2/12/14

DATE: July 31, 2014

ESTIMATE No.: 12

PROJECT LOCATION: Rock Chalk Site Work

ESTIMATE OF WORK COMPLETE

FOR PERIOD: July 2014

MEASURED

ESTIMATE ON ITEMS

ITEM COMPLETE

ITEM	DESCRIPTION	UNIT	QUANTITY	CONTRACTED		COMPLETED TO DATE		Percent Complete	COMPLETED THIS PAY PERIOD	
				UNIT PRICE	AMOUNT	UNIT	AMOUNT		UNIT	AMOUNT

	Waterline	Unit	Quantity	Unit cost	Total					
22	Connect to Existing water line	1	1	\$ 750.00	\$ 750.00	1.00	\$ 750.00	100%		\$ -
23	12" C900 DR14 Water line	LF	7,642	\$ 36.87	\$ 281,760.54	7,654.00	\$ 282,202.98	100%		\$ -
24	8" PVC C900 DR14 Water line	LF	472	\$ 29.00	\$ 13,688.00	486.00	\$ 14,094.00	103%		\$ -
25	3" M.J. Gate Valve	EACH	2	\$ 500.00	\$ 1,000.00	2.00	\$ 1,000.00	100%		\$ -
26	6" M.J. Gate Valve	EACH	2	\$ 825.00	\$ 1,650.00	2.00	\$ 1,650.00	100%		\$ -
27	8" M.J. Gate Valve	EACH	2	\$ 1,300.00	\$ 2,600.00	2.00	\$ 2,600.00	100%		\$ -
28	12" MJ Gate Valve	EACH	33	\$ 1,500.00	\$ 49,500.00	33.00	\$ 49,500.00	100%		\$ -
29	Fire Hydrant Assembly	EACH	17	\$ 3,300.00	\$ 56,100.00	18.00	\$ 59,400.00	106%		\$ -
30	Private Fire Hydrant Assembly (Painted Red)	EACH	2	\$ 3,300.00	\$ 6,600.00	2.00	\$ 6,600.00	100%		\$ -
31	Flowable Fill	LS	1	\$ 26,910.00	\$ 26,910.00	0.64	\$ 17,222.40	64%		\$ -
32	2" Curb Stop with Auto Flusher and RIPRAP	LS	1	\$ 6,000.00	\$ 6,000.00	1.00	\$ 6,000.00	100%		\$ -
33	Water Meter Pits	LS	1	\$ 20,303.11	\$ 20,303.11	1.00	\$ 20,303.11	100%		\$ -
34	Concrete Encasement	LF	20	\$ 60.00	\$ 1,200.00	20.00	\$ 1,200.00	100%		\$ -
	<b>Waterline Sub Total</b>				\$ 468,061.65		\$ 462,522.49	99%		\$ -

	Sanitary Sewer	Unit	Quantity	Unit cost	Total					
35	8" SDR26 PVC granular embedment	LF	2,019	\$ 44.00	\$ 88,836.00	2,019.00	\$ 88,836.00	100%		\$ -
36	STD Manhole 4' DIA, 6' Depth	EACH	8	\$ 2,000.00	\$ 16,000.00	8.00	\$ 16,000.00	100%		\$ -
37	Extra Depth 4' DIA Manhole	VF	12.46	\$ 100.00	\$ 1,246.00	16.05	\$ 1,605.00	129%		\$ -
38	Drop Manhole 5' DIA 6' Depth	EACH	1	\$ 2,970.00	\$ 2,970.00	1.00	\$ 2,970.00	100%		\$ -
39	Extra Depth 5' DIA Manhole	VF	6.3	\$ 110.00	\$ 693.00	6.30	\$ 693.00	100%		\$ -
40	6" Service Line	EACH	4	\$ 500.00	\$ 2,000.00	4.00	\$ 2,000.00	100%		\$ -
41	Connect to Existing Manhole	EACH	1	\$ 500.00	\$ 500.00	1.00	\$ 500.00	100%		\$ -
42	Concrete Collars	EACH	7	\$ 570.00	\$ 3,990.00	7.00	\$ 3,990.00	100%		\$ -
43	Flowable Mortar Backfill	CY	403	\$ 70.00	\$ 28,210.00	560.00	\$ 39,200.00	139%		\$ -
44	Seed, Fertilize, Mulch and Erosion Netting	LS	1	\$ 5,500.00	\$ 5,500.00	1.00	\$ 5,500.00	100%		\$ -
45	Construction Staking	No Bid	No Bid	No Bid	No Bid					
46	Rip Rap Erosion Protection	LS	1	\$ 2,500.00	\$ 2,500.00	1.00	\$ 2,500.00	100%		\$ -
47	Concrete Encasement	LF	45	\$ 50.00	\$ 2,250.00	45.00	\$ 2,250.00	100%		\$ -
48	Impervious Ditch Check	LS	1	\$ 750.00	\$ 750.00	1.00	\$ 750.00	100%		\$ -
49	Polyurethane Manhole Lining	LS	1	\$ 7,397.50	\$ 7,397.50	1.00	\$ 7,397.50	100%		\$ -
	<b>Sanitary Sewer Sub Total</b>				\$ 162,842.50		\$ 174,191.50	107%		\$ -

12/31/14  
12/21/14

**ESTIMATE OF K COMPLETE**

DATE: July 31, 2014

FOR PERIOD: July 2014

ESTIMATE No.: 12

MEASURED

PROJECT LOCATION: Rock Chalk Site Work

ESTIMATE ON ITEMS

ITEM COMPLETE

ITEM	DESCRIPTION	UNIT	QUANTITY	CONTRACTED		COMPLETED TO DATE		Percent Complete	COMPLETED THIS PAY PERIOD	
				UNIT PRICE	AMOUNT	UNIT	AMOUNT		UNIT	AMOUNT

Storm Sewer		Unit	Quantity	Unit cost	Total					
50	15" HDPE	LF	38	\$ 23.75	\$ 902.50	38.00	\$ 902.50	100%		\$ -
51	15" Reinforced Concrete Pipe	LF	79	\$ 24.75	\$ 1,955.25	79.00	\$ 1,955.25	100%		\$ -
52	18" HDPE	LF	87	\$ 24.00	\$ 2,088.00	87.00	\$ 2,088.00	100%		\$ -
53	18" Reinforced Concrete Pipe	LF	76	\$ 25.00	\$ 1,900.00	76.00	\$ 1,900.00	100%		\$ -
54	24" HDPE	LF	706	\$ 30.00	\$ 21,180.00	706.00	\$ 21,180.00	100%		\$ -
55	24" Reinforced Concrete Pipe	LF	38	\$ 32.00	\$ 1,216.00	38.00	\$ 1,216.00	100%		\$ -
56	30" HDPE	LF	19	\$ 39.00	\$ 741.00	19.00	\$ 741.00	100%		\$ -
57	48" Reinforced Concrete Pipe	LF	103	\$ 105.00	\$ 10,815.00	103.00	\$ 10,815.00	100%		\$ -
58	15" RCP End Section	EACH	1	\$ 450.00	\$ 450.00	1.00	\$ 450.00	100%		\$ -
59	30" RCP End Section	EACH	1	\$ 450.00	\$ 450.00	1.00	\$ 450.00	100%		\$ -
60	48" RCP End Section	EACH	2	\$ 1,900.00	\$ 3,800.00	2.00	\$ 3,800.00	100%		\$ -
61	5'x4' Curb Inlet	EACH	6	\$ 2,025.00	\$ 12,150.00	6.00	\$ 12,150.00	100%		\$ -
62	10'x4' Curb Inlet	EACH	3	\$ 3,252.00	\$ 9,756.00	3.00	\$ 9,756.00	100%		\$ -
63	4'x4' Junction Box	EACH	1	\$ 2,185.00	\$ 2,185.00	1.00	\$ 2,185.00	100%		\$ -
64	18" NOM DIA Rip Rap	SY	84	\$ 25.00	\$ 2,100.00	84.00	\$ 2,100.00	100%		\$ -
65	Flowable fill	LS	1	\$ 11,000.00	\$ 11,000.00	1.00	\$ 11,000.00	100%		\$ -
<b>Storm Sewer Sub Total</b>							\$ 82,688.75	100%		\$ -

Parking Lot Lights		Unit	Quantity	Unit cost	Total					
66	LED - Dual Fixtures	LS	1	\$ 120,000.00	\$ 120,000.00	1.00	\$ 120,000.00	100%	0.31	\$ 37,200.00
67	Pole Bases	LS	1	\$ 25,000.00	\$ 25,000.00	1.00	\$ 25,000.00	100%	0.31	\$ 7,750.00
68	Conduit	LS	1	\$ 40,000.00	\$ 40,000.00	1.00	\$ 40,000.00	100%	0.20	\$ 8,000.00
69	Conduit Westar	LS	1	\$ 25,000.00	\$ 25,000.00	1.00	\$ 25,000.00	100%	0.50	\$ 12,500.00
70	Conduit for Fiber	LF	1	\$ -	\$ -		\$ -	0%		\$ -
71	Electric Service - labor	LS	1	\$ 30,000.00	\$ 30,000.00		\$ -	0%		\$ -
<b>Parking Lot Lights Sub Total</b>							\$ 210,000.00	88%		\$ 65,450.00

Landscaping		Unit	Quantity	Unit cost	Total					
72	Trees	EACH	450	\$ 425.00	\$ 191,250.00	606.00	\$ 257,550.00	135%	190.00	\$ 80,750.00
73	Shrubs	EACH	710	\$ 60.00	\$ 42,600.00	620.00	\$ 37,200.00	87%	204.00	\$ 12,240.00
74	Site Entry signs	LS	1	\$ 150,000.00	\$ 150,000.00	0.50	\$ 75,000.00	50%	0.50	\$ 75,000.00
75	Irrigation	LS	1	\$ 100,000.00	\$ 100,000.00	0.90	\$ 90,000.00	90%	0.10	\$ 10,000.00

0317  
2/19/14  
M

DATE: July 31, 2014

ESTIMATE No.: 12

PROJECT LOCATION: Rock Chalk Site Work

ESTIMATE OF WORK COMPLETE

FOR PERIOD: July 2014

MEASURED

ESTIMATE ON ITEMS

ITEM COMPLETE

ITEM	DESCRIPTION	UNIT	QUANTITY	CONTRACTED		COMPLETED TO DATE		Percent Complete	COMPLETED THIS PAY PERIOD	
				UNIT PRICE	AMOUNT	UNIT	AMOUNT		UNIT	AMOUNT
76	Misc	LS	1	\$ 100,000.00	\$ 100,000.00		\$ -	0%		\$ -
<b>Landscaping Sub Total</b>					\$ 583,850.00		\$ 459,750.00	79%		\$ 177,990.00

Rock Chalk Drive & George Williams		Unit	Quantity	Unit cost	Total					
77	Unclassified excavation	CY	15,934	\$ 5.00	\$ 79,670.00	15,934.00	\$ 79,670.00	100%		\$ -
78	Compacted fill	CY	1,790	\$ 1.00	\$ 1,790.00	1,790.00	\$ 1,790.00	100%		\$ -
79	Site restoration	LS	1	\$ 5,000.00	\$ 5,000.00	1.00	\$ 5,000.00	100%	0.10	\$ 500.00
80	10" NRDJ Portland cement conc pave	SY	9,758	\$ 55.00	\$ 536,690.00	9,493.00	\$ 522,115.00	97%		\$ -
81	Type CG-1 Concrete curb & gutter	LF	6,257	\$ 16.00	\$ 100,112.00	6,005.00	\$ 96,080.00	96%		\$ -
82	4" x 5' Concrete sidewalk	SY	40	\$ 30.00	\$ 1,200.00	17.00	\$ 510.00	43%		\$ -
83	6" x 10' Fiber reinforced conc sdwk	SY	4,078	\$ 40.00	\$ 163,120.00	3,993.00	\$ 159,720.00	98%		\$ -
84	Access ramps	EACH	13	\$ 1,000.00	\$ 13,000.00	14.00	\$ 14,000.00	108%	1.00	\$ 1,000.00
85	Compaction tests street	LS	5	\$ 100.00	\$ 500.00	5.00	\$ 500.00	100%		\$ -
86	Construction Staking	No Bid	No Bid	No Bid	No Bid					
87	Seed, Fertilize & Mulch	LS	1	\$ 4,000.00	\$ 4,000.00	1.00	\$ 4,000.00	100%		\$ -
88	Clearing, Grubbing & Tree Removal	LS	1	\$ 1,250.00	\$ 1,250.00	1.00	\$ 1,250.00	100%		\$ -
89	Treatment of subgrade 12" fly ash & 4" AB3	SY	11,825	\$ 9.33	\$ 110,327.25	-	\$ -	0%		\$ -
90	Erosion Control	LS	1	\$ 2,670.00	\$ 2,670.00	1.00	\$ 2,670.00	100%		\$ -
91	Section Corner Monument Box	LS	1	\$ 1,000.00	\$ 1,000.00		\$ -	0%		\$ -
92	2" Conduit	LF	1,701	\$ 2.00	\$ 3,402.00		\$ -	0%		\$ -
93	4" Conduit	LF	997	\$ 2.00	\$ 1,994.00		\$ -	0%		\$ -
94	Traffic Control Signage	LS	1	\$ 500.00	\$ 500.00	1.00	\$ 500.00	100%		\$ -
					\$ 1,026,225.25		\$ 887,805.00	87%		\$ 1,500.00

Overflow Parking Lot		Unit	Quantity	Unit cost	Total					
95	Concrete access ramps	SY	464	\$ 50.00	\$ 23,200.00	408.00	\$ 20,400.00	88%	127.00	\$ 6,350.00
96	Lot Grading	LS	1	\$ 25,000.00	\$ 25,000.00	1.00	\$ 25,000.00	100%	0.25	\$ 6,250.00
97	Temporary Gravel Laydown	LS	1	\$ 20,000.00	\$ 20,000.00	1.00	\$ 20,000.00	100%		\$ -
<b>Overflow Parking Lot Sub Total</b>					\$ 68,200.00		\$ 65,400.00	96%		\$ 12,600.00

Parking Lot/ Access Drives		Unit	Quantity	Unit cost	Total					
98	Concrete parking lot	SY	44,356	\$ 44.00	\$ 1,951,664.00	42,662.00	\$ 1,877,128.00	96%		\$ -
99	CG-1 curb and gutter	LF	15,338	\$ 18.00	\$ 276,084.00	14,549.00	\$ 261,882.00	95%		\$ -
100	Concrete parking and Bus lane	SY	7,337	\$ 50.00	\$ 366,850.00	6,645.00	\$ 332,250.00	91%		\$ -

03-2  
7/29/14  
LUCAS

DATE: July 31, 2014

ESTIMATE No.: 12

PROJECT LOCATION: Rock Chalk Site Work

ESTIMATE OF WORK COMPLETE

FOR PERIOD: July 2014

MEASURED

ESTIMATE ON ITEMS

ITEM COMPLETE

ITEM	DESCRIPTION	UNIT	QUANTITY	CONTRACTED		COMPLETED TO DATE		Percent Complete	COMPLETED THIS PAY PERIOD	
				UNIT PRICE	AMOUNT	UNIT	AMOUNT		UNIT	AMOUNT
101	Fire lane / Access roads	SY	8,593	\$ 44.00	\$ 378,092.00	3,445.00	\$ 151,580.00	40%		\$ -
102	Storm Sewer	LS	1	\$ 157,000.00	\$ 157,000.00	0.66	\$ 104,232.30	66%	0.04	\$ 6,892.30
103	Trim Subgrade	SY	65,393	\$ 1.25	\$ 81,741.25	63,760.00	\$ 79,700.00	98%		\$ -
104	Treatment of subgrade - 12" Fly ash & 4" AB3	SY	65,425	\$ 9.33	\$ 610,415.25	49,645.00	\$ 463,187.85	76%		\$ -
<b>Parking Lot/ Access Drives Sub Total</b>						\$ 3,821,846.50		\$ 3,269,960.15	86%	\$ 6,892.30

Rock Chalk Lane and Rock Chalk Parkway		Unit	Quantity	Unit cost	Total					
105	Unclassified excavation	CY	3,017	\$ 5.00	\$ 15,085.00	3,017.00	\$ 15,085.00	100%		\$ -
106	Compacted fill	CY	2,920	\$ 1.00	\$ 2,920.00	2,920.00	\$ 2,920.00	100%		\$ -
107	Site restoration	LS	1	\$ 5,000.00	\$ 5,000.00	1.00	\$ 5,000.00	100%	1.00	\$ 5,000.00
108	8" NRDJ Portland cement	SY	9,524	\$ 50.00	\$ 476,200.00	8,556.00	\$ 427,800.00	90%		\$ -
109	CG-1 curb and gutter	LF	5,109	\$ 16.00	\$ 81,744.00	4,646.00	\$ 74,336.00	91%		\$ -
110	6" x 10' Fiber rec path	SY	5,163	\$ 40.00	\$ 206,520.00	4,682.00	\$ 187,280.00	91%	818.00	\$ 32,720.00
111	4" x 5' Sidewalk	SY	195	\$ 30.00	\$ 5,850.00	88.00	\$ 2,640.00	45%	41.00	\$ 1,230.00
112	Access ramps	EACH	51	\$ 1,000.00	\$ 51,000.00	49.00	\$ 49,000.00	96%	1.00	\$ 1,000.00
113	Treatment of subgrade - 12" fly ash & 4" AB3	SY	10,800	\$ 9.33	\$ 100,764.00	9,192.00	\$ 85,761.36	85%		\$ -
					\$ 945,083.00		\$ 849,822.36	90%		\$ 39,950.00

Chip and Seal County Road		Unit	Quantity	Unit cost	Total					
114	Chip and Seal	SY	10,000	\$ 1.80	\$ 18,000.00	9,000.00	\$ 16,200.00	90%	9,000.00	\$ 16,200.00
<b>Chip and Seal County Road Sub Total</b>						\$ 18,000.00		\$ 16,200.00	90%	\$ 16,200.00

Rec Center Pad		Unit	Quantity	Unit cost	Total					
115	Rock Excavation	CY	18,000	\$ 10.00	\$ 180,000.00	18,000.00	\$ 180,000.00	100%		\$ -
116	Dirt Excavation	CY	10,000	\$ 2.25	\$ 22,500.00	10,000.00	\$ 22,500.00	100%		\$ -
117	Compaction	CY	8,500	\$ 1.10	\$ 9,350.00	8,500.00	\$ 9,350.00	100%		\$ -
118	Fly Ash 18"	SY	12,000	\$ 8.00	\$ 96,000.00	12,000.00	\$ 96,000.00	100%		\$ -
119	AB3 Entire building Pad	SY	20,100	\$ 4.00	\$ 80,400.00	20,100.00	\$ 80,400.00	100%		\$ -
120	AB3 Additional depth rock area	SY	8,000	\$ 5.50	\$ 44,000.00	8,000.00	\$ 44,000.00	100%		\$ -
					\$ 432,250.00		\$ 432,250.00	100%		\$ -

<b>GRAND TOTAL</b>					\$ 12,265,168.65		\$ 9,394,550.25	77%		\$ 1,050,846.30
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WCM  
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DATE: July 31, 2014

ESTIMATE No.: 12

PROJECT LOCATION: Rock Chalk Site Work

ESTIMATE OF WORK COMPLETE

FOR PERIOD: July 2014

MEASURED

ESTIMATE ON ITEMS

ITEM COMPLETE

ITEM	DESCRIPTION	UNIT	QUANTITY	CONTRACTED		COMPLETED TO DATE		Percent Complete	COMPLETED THIS PAY PERIOD	
				UNIT PRICE	AMOUNT	UNIT	AMOUNT		UNIT	AMOUNT
	General Total		\$ 523,210.00	24%	\$ 2,194,851.00					
	Site Grading Total		\$ 840,500.00	99%	\$ 850,500.00					
	Retention Ponds Total		\$ 156,250.00	100%	\$ 156,250.00					
	Eight Lighted Tennis Courts Total		\$ 964,000.00	79%	\$ 1,214,520.00					
	Waterline Total		\$ 462,522.49	99%	\$ 468,061.65					
	Sanitary Sewer Total		\$ 174,191.50	107%	\$ 162,842.50					
	Storm Sewer Total		\$ 82,688.75	100%	\$ 82,688.75					
	Parking Lot Lights Total		\$ 210,000.00	88%	\$ 240,000.00					
	Landscaping Total		\$ 459,750.00	79%	\$ 583,850.00					
	Rock Chalk Drive and George Williams Way Total		\$ 887,805.00	87%	\$ 1,026,225.25					
	Overflow Parking Lot Total		\$ 65,400.00	96%	\$ 68,200.00					
	Parking Lot/ Access Drives Total		\$ 3,269,960.15	86%	\$ 3,821,846.50					
	Rock Chalk Lane and Rock Chalk Parkway Total		\$ 849,822.36	90%	\$ 945,083.00					
	Chip and Seal County Road Total		\$ 16,200.00	90%	\$ 18,000.00					
	Rec Center Pad Total		\$ 432,250.00	100%	\$ 432,250.00					
	Grand Total		\$ 9,394,550.25	77%	\$ 12,265,168.65					

CHANGE ORDERS:				CONTRACTED		COMPLETED TO DATE		Percent Complete	COMPLETED THIS PAY PERIOD	
ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT	AMOUNT		UNIT	AMOUNT
1	4" Conduit	LF	10000		\$ -	7737	\$ -		\$ -	
2	3" Conduit for Security Cameras	LF	600		\$ -	600	\$ -		\$ -	
3	Treatment of subgrade 9" flyash RCD & GWW	SY	11825		\$ -	11434	\$ -	97%	\$ -	
4	12" HDPE Storm Pipe	LF	42		\$ -	42	\$ -	100%	\$ -	
5	12" CMP End Section	EA	1		\$ -	1	\$ -	100%	\$ -	
6	Subgrade 12" Crushed Conc. Parking Lot	SY			\$ -	5998	\$ -		\$ -	
CHANGE ORDER TOTAL:					\$ -		\$ -		\$ -	

<b>GRAND TOTAL</b>					<b>\$ 12,265,168.65</b>		<b>\$ 9,394,550.25</b>		<b>\$ 1,050,846.30</b>
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C3, 110  
 2/24/15



DATE: July 31, 2014

ESTIMATE No.: 12

PROJECT LOCATION: Rock Chalk Site Work

ESTIMATE OF WORK COMPLETE

FOR PERIOD: July 2014

MEASURED

ESTIMATE ON ITEMS

ITEM COMPLETE

ITEM	DESCRIPTION	UNIT	QUANTITY	CONTRACTED		COMPLETED TO DATE		Percent Complete	COMPLETED THIS PAY PERIOD	
				UNIT PRICE	AMOUNT	UNIT	AMOUNT		UNIT	AMOUNT

AMOUNT OF CURRENT CONTRACT: \$ 12,265,168.65

AMOUNT OF ORIGINAL CONTRACT: \$ 12,265,168.65

TOTAL WORK COMPLETED TO DATE: \$ 9,394,550.25

TOTAL PREVIOUS PAYMENTS: \$ -

AMOUNT COMPLETED THIS PAY PERIOD: \$ 1,050,846.30

*from  
2/23/15  
C3.11*

# Rock Chalk Park

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*Punch List for Substantial Completion of Public Infrastructure in South Lot and surrounding areas\*.*

On the 25<sup>th</sup> of July, 2014 the City of Lawrence walked the area with representation from Bliss and KU Endowment. The following items were discussed as items necessary of attention prior to acceptance. Predominantly, items concerned infrastructure items. Items relevant to Planning Department, such as landscaping and lighting, were not all included in this list.

## AREA

The areas included in this punch list are:

- County Road 902
- Rock Chalk Drive
- George Williams Way
- Rock Chalk Parkway
- Rock Chalk Lane (south of Rock Chalk Parkway)
- South Lot
- Soccer Lot
- Overflow Lot

## PUNCH LIST

As a whole, the area needs to be cleaned of construction trash and dirt. Behind the curb, areas need to be carefully checked for nails and bits of wire.

- All paved areas need to be revisited for scraping of excess joint sealant and refill as necessary.
- All curb joints need to be sealed up and over the curb with appropriate sealant.

The rest of the items are divided by area.

### County Road 902

No work necessary.

### Rock Chalk Drive

- Clean up pile of chips (from chip and seal) on RCD.
- Clean up dirt ramp jumping curb near west end of RCD (or establish appropriate temporary traffic control).
- Repair chip in pavement by inlet near intersection of RCP + RCD by replacing ½ panel.
- Clean out storm inlets as needed.
- Backfill holes (and low spots) adjacent to sidewalk and storm sewer inlets.

work  
2/26/15  
C3,12

- Repair broken curb on south side of RCD near the county road.
- Clean up concrete slobbers in driving lane.

### **George Williams Way**

- Replace ½ panel in SBL of GWW at North end at small, patched section.
- Replace ½ panel in SBL of GWW at South end where cracked due to construction entrance.
- Fix left arrow sign currently missing a sign post.
- Replace at least ½ panels of sidewalk east of GWW where holes and poor finishing quality left deflections of ¼ inch or more. Estimated a dozen effected panels.
- Clean and top off core holes in driving lane.

### **Rock Chalk Parkway**

- Backfill holes (and low spots) adjacent to sidewalk and storm sewer inlets.
- Seal curb crack at SE intersection of RCP and RCL.
- Replace curb at SE intersection of RCP and RCL (two cracks).
- Replace curb at NE intersection of RCP and RCL.
- Replace curb at South entry to North Lot on both east and west sides.

### **Rock Chalk Lane**

- Replace broken sidewalk panel on the west side adjacent to the soccer field.
- Repair curb crack on east side between the overflow access drives.
- Recommended: install bollard on 20' wide sidewalk to keep cars off.

### **South Lot**

- Grind and fill chipped areas with approved sealant.
- Route and seal missed cracks.
- Investigate and report cause of water seeping up through the joints (and sealant).
- Replace panel with crack and large chips in the northeast access drive.
- Clean area inlet and surrounding area north of the lot.
- Re-grade the ditch south of the lot for drainage.
- Clean sediment from rip rap in ditch east of lot.

### **Soccer Lot**

- Repair curb chip adjacent to storm sewer inlet.
- This lot has noticeable removal of joint and crack sealant due to overfilling.

### **Overflow Lot**

- Complete final grading.
- Complete site entry sign.
- Backfill access drives off Rock Chalk Lane.
- Seal joints on access drives off Rock Chalk Lane.
- Optional: install bollard on sidewalk ramp to Rock Chalk Lane to deter motorized use.

*with  
2/26/15  
C3,13*

# Rock Chalk Park

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*Punch List for Substantial Completion of Public Infrastructure in North and West Lots south of Rock Chalk Lane and surrounding areas\*.*

August 6<sup>th</sup>, 2014 the City of Lawrence walked the area with representation from Bliss and KU Endowment. The following items were discussed as items necessary of attention prior to acceptance. Predominantly, items concerned infrastructure items. Items relevant to Planning Department, such as landscaping and lighting, were not all included in this list. Items related to Parks and Rec, including the tennis court and natural trails, were also not included.

## AREA

The areas included in this punch list are:

- Rock Chalk Parkway
- Rock Chalk Lane
- West Lot
- North Lot (only as far north as RCL)
- East Pond

## PUNCH LIST

As a whole, the area needs to be cleaned of construction trash and dirt. Behind the curb, areas need to be carefully checked for nails and bits of wire.

- All paved areas need to be revisited for scraping of excess joint sealant and refill as necessary.
- All curb joints need to be sealed up and over the curb with appropriate sealant.

The rest of the items are divided by area.

### Rock Chalk Lane

- Clean out storm inlets as needed.
- Backfill holes (and low spots) adjacent to sidewalk and storm sewer inlets.
- Replace cracked panels.

### Rock Chalk Parkway

- Clean out storm inlets as needed.
- Backfill holes (and low spots) adjacent to sidewalk and storm sewer inlets.
- Clean up dirt curb ramp at GWW.

### North Lot

- Route and seal missed cracks that are relatively straight through a panel.

with  
2/26/13  
C3.14

- Replace half panels with cracks creating small or triangular shapes.
- Clean out storm inlets as needed.
- Landscape northeast corner, south of the tennis courts.

#### **West Lot**

- Repair broken curb.
- Seal missed cracks.

#### **East Pond**

- Dredge silt and re-grade to original volume.
- Clean rip rap of silt from each end pipe draining into the area.
- Remove 100ft of limestone aggregate sidewalk at West end of dam.
- Seed and mulch backfill on sides of sidewalk over dam.
- Remove rock and debris pile from east of the pond.

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C3, 15

work  
2/2/15  
DI.1

**Scope:** Determine Project Accounting based on backup provided by the city.

**Work Performed:** We acquired accounting records from the city and compared against contract terms and conditions.

Cap On City Agreement	\$	22,500,000.00	
Architectual Agreements	\$	(941,408.23)	Arch
Land Cost	\$	(10,550,630.13)	Rec Land
Recreation Center Construction	\$	(784,333.00)	Rec
	\$	<u>10,223,628.64</u>	Land
Assist Foundation Contribution	\$	1,000,000.00	
	\$	<b>11,223,628.64</b>	
Change Orders	\$	161,654.00	
	\$	<b>11,385,282.64</b>	
AMOUNTS REPRESENTED AS COST	\$	11,598,439.03	MEMO NOVEMBER 19, 2014
	\$	<b>213,156.39</b>	

DI.2  
DI.4  
DI.3

Report Issue #7

**Conclusion:** The following was transferred to the Development Agreement Analysis

1/12/12  
Walt  
D112

Could Evans

Invoice #	Invoice Date	Due Date	Effective Date	Vendor Invoice#	Line #	Description
139885	03/05/2014	05/28/2014	03/19/2014	11202222	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
137695	04/07/2014	06/05/2014	07/24/2014	11202220	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
137654	03/27/2014	05/05/2014	07/24/2014	11202217	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
130305	05/08/2014	05/27/2014	07/24/2014	11202216	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
143787	01/09/2014	04/01/2014	05/21/2014	11202218	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
130030	12/04/2013	01/28/2014	03/21/2014	11202215R	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
134832	11/07/2013	11/26/2013	11/22/2013	11202214	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
133878	11/07/2013	11/26/2013	11/22/2013	11202213	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
130737	10/08/2013	11/05/2013	10/25/2013	11202212	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
127270	09/13/2013	10/01/2013	09/23/2013	11202211	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
123942	08/08/2013	08/27/2013	08/12/2013	11202210	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
118838	07/08/2013	07/23/2013	07/15/2013	11202208	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
110482	04/03/2013	04/23/2013	04/16/2013	11202207	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
108878	03/08/2013	03/28/2013	03/07/2013	11202206	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
103116	02/22/2013	02/28/2013	02/25/2013	11202205	1.00	design, construction documents, and construction administration for City Recreation Center located at Rock Chalk Park net to exceed \$225,000. Authorized by CC 2/18/13, Bond Resolution #7006
088829	04/30/2010	06/21/2010	04/21/2010	110401	1.00	MISC SERVICES / ARCHITECTURAL DESIGN
083228	03/31/2010	04/27/2010	04/21/2010	110401	1.00	MISC SERVICES / ARCHITECTURAL DESIGN
083346	07/11/2012	07/24/2012	07/24/2012	11202201	1.00	professional services for sports village

Total Amount	Override Net Amount	Invoice Status	Check #	Check Date
6,875.00	false	Paid	401,309.00	08/29/2014
6,875.00	false	Paid	401,631.00	08/05/2014
6,875.00	false	Paid	401,631.00	08/05/2014
3,500.00	false	Paid	401,631.00	08/05/2014
6,875.00	false	Paid	388,891.00	08/27/2014
7,150.00	false	Paid	388,478.00	04/21/2014
8,600.00	false	Paid	387,022.00	01/28/2014
8,600.00	false	Paid	385,848.00	12/17/2013
9,486.88	false	Paid	385,581.00	11/28/2013
9,354.38	false	Paid	385,383.00	11/04/2013
9,356.32	false	Paid	383,820.00	10/01/2013
8,500.00	false	Paid	382,385.00	09/27/2013
9,298.67	false	Paid	381,313.00	07/23/2013
415,000.00	false	Paid	388,818.00	04/23/2013
287,110.00	false	Paid	387,883.00	03/28/2013
100,000.00	false	Paid	387,284.00	02/28/2013
17,250.00	false	Paid	401,382.00	07/23/2014
1,500.00	false	Paid	388,588.00	08/01/2010
6,000.00	false	Paid	387,488.00	04/28/2010
32,890.00	false	Paid	381,217.00	07/24/2012

941,408.23

D112  
Robert  
Fly

13/12/13  
2/2/13  
D13

City of Lawrence  
**Voucher Payable**

**Invoice #** 118529  
**Vendor Invoice #** LE070213DC  
**Department** CIP CMO Invoices  
**Buyer** Landis, Alan  
  
**Purchase Order #**

**Effective Date** 07/02/2013  
**Due Date** 07/02/2013  
**Invoice Date** 07/02/2013  
**Vendor** 243 Kansas Secured Title & Abstract  
Co Inc  
1410 Kasold Drive Ste A-18  
Lawrence,KS 66049-2349

**Description** Land Acquisition Rock Chalk Park

Line	Quantity	Unit	Vendor/Item Part #	Line Description Account #	Unit Price	Subtotal
1	1.00	EA		Land Acquisition Rock Chalk Park, Lot 2 Rock Chalk Park Addition No. 1 400-4-4800-6060 Project #: PR1005  Resolution #: Contract #:	\$784,333.00	\$784,333.00
<b>TOTAL:</b>						<b>\$ 784,333.0</b>

1.00  
1.00  
Project + Abstract  
1.00



Invoice #	Invoice Date	Due Date	Effective Date	Vendor Invoice#	Line #	Description	Total Amount	Override Net Amount	Invoice Status	Check #	Check Date
167274	09/24/2014	10/28/2014	10/24/2014	PR102214MH-6	1.00	Tennis Facility at Rock Chalk Park - add electrical outlets for ball machines	1,650.00	false	Paid	404,072.00	10/28/2014
167274	09/24/2014	10/28/2014	10/24/2014	PR102214MH-6	2.00	Tennis Facility at Rock Chalk Park - add pickleball striping on tow of the courts	1,000.00	false	Paid	404,072.00	10/28/2014
167274	09/24/2014	10/28/2014	10/24/2014	PR102214MH-6	3.00	Tennis Facility at Rock Chalk Park - add water line for future drinking fountain	3,500.00	false	Paid	404,072.00	10/28/2014
167141	09/24/2014	10/28/2014	10/23/2014	PR102214MH-5	1.00	Sports Pavilion Lawrence - Change Order to provide Wall Patch to fill connector plate voids at the base of fill-up wall panels. (proposed change order sheet #10 dated July 28th)	4,620.00	false	Paid	404,072.00	10/28/2014
167141	09/24/2014	10/28/2014	10/23/2014	PR102214MH-5	2.00	Sports Pavilion Lawrence - Change Order to provide painting of fire lines on the lower level. (Proposed change order sheet #11 dated July 28th)	4,207.50	false	Paid	404,072.00	10/28/2014
167139	09/24/2014	10/28/2014	10/23/2014	PR102214MH-4	1.00	Dehumidifying the Sports Pavilion Lawrence prior to installation of wood flooring, as specified and approved by City Commission 7-1-14. Net to Exceed \$12,350.00	12,350.00	false	Paid	404,072.00	10/28/2014
						Sports Pavilion - Electrical additions per City Request (change order sheet #12)					
						3 TV outlet on upper level \$1600 Relocate test switch in concessions \$150 Add power to divider wall \$550 Add 4plex plugs on concourse poles \$500 Add 8 outlets per side on courts 1 and 2 \$9750 Add 1 TV outlet in each party room \$625 Margin and overhead: \$1317.50					
167137	09/24/2014	10/28/2014	10/23/2014	PR102214MH-3	1.00	Changes to the interior of the Sports Pavilion Lawrence (Item #1 - 7,000 sq ft Multi-purpose area) as specified and approved by City Commission 7-1-14	14,492.50	false	Paid	404,072.00	10/28/2014
167135	09/24/2014	10/28/2014	10/23/2014	PR102214MH-2	1.00	Change order #1 at Sports Pavilion Lawrence, Approved by City Commission 5-20-14	26,847.70	false	Paid	404,072.00	10/28/2014
167133	09/24/2014	10/28/2014	10/23/2014	PR102214MH-1	1.00	Add Concrete mixture to track	22,044.00	false	Paid	404,072.00	10/28/2014
167133	09/24/2014	10/28/2014	10/23/2014	PR102214MH-1	2.00	Add electrical items as specified	3,902.80	false	Paid	404,072.00	10/28/2014
167133	09/24/2014	10/28/2014	10/23/2014	PR102214MH-1	3.00	Add a mop sink in Storage (105)	6,015.63	false	Paid	404,072.00	10/28/2014
166729	09/30/2014	10/28/2014	10/17/2014	PR1227-11	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000.	971,233.81	false	Paid	404,072.00	10/28/2014
163685	08/31/2014	10/07/2014	10/01/2014	PR1227-10	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay app #10	158,435.49	false	Paid	403,424.00	10/07/2014
160390	08/11/2014	09/02/2014	08/28/2014	PR1227-9	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000.	599,396.40	false	Paid	402,506.00	09/02/2014
155627	06/30/2014	07/08/2014	07/03/2014	PR1227-8	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000.	686,250.00	false	Paid	401,011.00	07/08/2014
153917	05/28/2014	06/24/2014	06/12/2014	PR1227-07	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay app no. 7	1,027,209.60	false	Paid	400,696.00	06/24/2014
147722	03/31/2014	05/06/2014	04/28/2014	PR1227-06	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay application #8	1,146,254.40	false	Paid	399,365.00	05/06/2014
144324	02/28/2014	03/25/2014	03/24/2014	PR1227-05	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay application No. 5	1,107,934.20	false	Paid	398,309.00	03/25/2014
139892	12/31/2013	02/04/2014	02/03/2014	PR1227-04	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay Application No. 4	1,643,622.30	false	Paid	397,161.00	02/04/2014
133664	10/31/2013	11/26/2013	11/25/2013	PR1227-03	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay application #3	1,126,800.00	false	Paid	395,560.00	11/26/2013
133658	10/31/2013	11/26/2013	11/25/2013	PR1227-03	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay application #3	10,500,000.00	false	Cancelled		
130460	09/30/2013	10/22/2013	10/21/2013	PR1227-02	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay app #2	1,530,474.30	false	Paid	394,787.00	10/22/2013
127578	08/31/2013	10/01/2013	09/27/2013	PR1227-01	1.00	Construction of Lawrence Recreation Center at Rock Chalk Park. Authorized by the City Commission on 5/21/2013. Total cost not to exceed \$10,500,000. Pay app no. 1	452,385.50	false	Paid	393,819.00	10/01/2013
110320	04/11/2013	04/16/2013	04/11/2013	RW041113CW-SETT	1.00	Auto Liability Settlement A13PR08-2/21/2013 snow plow hit vehicle while it was parked in city lot #4.	5,418.68 21,056,048.81	false	Paid	388,634.00	04/16/2013
							10,550,630.13				

*\$10,550,630*  
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Sanitary Sewer	Impervious Ditch Check	LS	1		\$ 750.00	\$ 7,397.50	\$ 7,397.50	
Sanitary Sewer	Polyurethane Manhole Lining	LS	1		\$ 7,397.50	\$ -	\$ -	
Storm Sewer	15" HDPE	LF	38		\$ 23.75	\$ 902.50	\$ 902.50	
Storm Sewer	15" Reinforced Concrete Pipe	LF	79		\$ 40.50	\$ 1,955.25	\$ 3,199.50	\$ 1,244.25
Storm Sewer	18" HDPE	LF	87		\$ 24.00	\$ 2,088.00	\$ 2,088.00	
Storm Sewer	18" Reinforced Concrete Pipe	LF	76		\$ 28.00	\$ 2,128.00	\$ 2,128.00	\$ 228.00
Storm Sewer	24" HDPE	LF	706		\$ 30.00	\$ 21,180.00	\$ 21,180.00	
Storm Sewer	24" Reinforced Concrete Pipe	LF	38		\$ 32.00	\$ 1,216.00	\$ 1,216.00	
Storm Sewer	30" HDPE	LF	19		\$ 63.50	\$ 39.00	\$ 741.00	\$ 1,206.50
Storm Sewer	30" Reinforced Concrete Pipe	LF	103		\$ 151.08	\$ 105.00	\$ 10,815.00	\$ 15,561.24
Storm Sewer	15" RCP End Section	EACH	1		\$ 661.71	\$ 450.00	\$ 450.00	\$ 661.71
Storm Sewer	30" RCP End Section	EACH	1		\$ 751.00	\$ 450.00	\$ 450.00	\$ 751.00
Storm Sewer	7' 48" RCP End Section	EACH	2		\$ 1,393.00	\$ 1,900.00	\$ 3,800.00	\$ 2,786.00
Storm Sewer	7' 5'x4' Curb Inlet	EACH	6		\$ 3,390.00	\$ 2,025.00	\$ 12,150.00	\$ 20,340.00
Storm Sewer	7' 10'x4' Curb Inlet	EACH	3		\$ 5,026.00	\$ 3,252.00	\$ 9,756.00	\$ 15,078.00
Storm Sewer	2' 4'x4' Junction Box	EACH	1		\$ 2,750.00	\$ 2,185.00	\$ 2,185.00	\$ 2,750.00
Storm Sewer	5' 18" NOM DIA Rip Rap	SY	84		\$ 29.00	\$ 25.00	\$ 2,100.00	\$ 2,436.00
Storm Sewer	Flowable fill	LS	1		\$ 11,000.00	\$ 11,000.00	\$ 11,000.00	
Parking Lot Lights	LFD-Dual Fixtures	LS	1		\$ 120,000.00	\$ 120,000.00	\$ 120,000.00	
Parking Lot Lights	Pole Bases	LS	1		\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	
Parking Lot Lights	Conduit	LS	1		\$ 40,000.00	\$ 40,000.00	\$ 40,000.00	
Parking Lot Lights	Conduit Wester	LS	1		\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	
Parking Lot Lights	Electric Service - labor	LS	1		\$ 30,000.00	\$ 22,000.00	\$ 22,000.00	
Landscaping	Trees	EACH	450		\$ 425.00	\$ 191,250.00	\$ 191,250.00	
Landscaping	Shrubs	EACH	710		\$ 60.00	\$ 42,600.00	\$ 42,600.00	
Landscaping	Site Entry Signs	LS	1		\$ 150,000.00	\$ 53,200.00	\$ 53,200.00	
Landscaping	Irrigation	LS	1		\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	
Landscaping	Misc	LS	1		\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	
Rock Chalk Drive & George Williams	21 Unclassified excavation	CY	15934		\$ 3.39	\$ 5.00	\$ 79,670.00	\$ 54,016.26
Rock Chalk Drive & George Williams	Compacted fill	CY	1790		\$ 1.00	\$ 1,790.00	\$ 1,790.00	
Rock Chalk Drive & George Williams	Site restoration	LS	1		\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	
Rock Chalk Drive & George Williams	12 11" NRDI Concrete Pavement	SY	9758		\$ 62.60	\$ 55.00	\$ 522,115.00	\$ 610,850.80
Rock Chalk Drive & George Williams	4 Type CG-1 Concrete curb & gutter	LF	6257		\$ 16.96	\$ 16.00	\$ 96,080.00	\$ 106,118.72
Rock Chalk Drive & George Williams	7 4" x 5' Concrete sidewalk	SY	40		\$ 27.70	\$ 30.00	\$ 510.00	\$ 1,108.00
Rock Chalk Drive & George Williams	7 6" x 10' Fiber reinforced cone sdwk	SY	4078		\$ 128.73	\$ 40.00	\$ 159,720.00	\$ 524,960.94
Rock Chalk Drive & George Williams	2 Access ramp	EACH	13		\$ 738.00	\$ 1,000.00	\$ 14,000.00	\$ 9,594.00
Rock Chalk Drive & George Williams	Compaction tests street	LS	5		\$ 100.00	\$ 500.00	\$ 500.00	
Rock Chalk Drive & George Williams	Construction Staking	NO BID	No Bid	No Bid	No Bid	No Bid	\$ -	
Rock Chalk Drive & George Williams	Seed, Fertilize & Mulch	LS	1		\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	
Rock Chalk Drive & George Williams	Cleating, Grubbing & Tree Removal	LS	1		\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	
Rock Chalk Drive & George Williams	7 Treatment of subgrade 12" fly ash & 4" AB3	SY	11825		\$ 4.51	\$ 9.33	\$ -	\$ 53,330.75
Rock Chalk Drive & George Williams	22 Erosion Control	CALC	1		\$ 5,233.00	\$ 2,670.00	\$ 2,670.00	\$ 5,233.00
Rock Chalk Drive & George Williams	Section Corner Monument Box	LS	1		\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	
Rock Chalk Drive & George Williams	4 2" Conduit	LF	1701		\$ 8.70	\$ 2.00	\$ 3,402.00	\$ 14,798.70
Rock Chalk Drive & George Williams	7 4" Conduit	LF	997		\$ 12.12	\$ 2.00	\$ 5,396.00	\$ 12,083.64
Rock Chalk Drive & George Williams	Traffic Control Signage	LS	1		\$ 500.00	\$ 500.00	\$ 500.00	
Overflow Parking Lot	7 Concrete access ramps	SY	464		\$ 129.00	\$ 50.00	\$ 20,400.00	\$ 59,856.00
Overflow Parking Lot	Lot Grading	LS	1		\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	
Overflow Parking Lot	Temporary Gravel Laydown	LS	1		\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	
Parking Lot / Access Drives	7 Concrete Parking Lot	SY	44,356		\$ 50.24	\$ 44.00	\$ 1,877,128.00	\$ 2,228,445.44
Parking Lot / Access Drives	4 CG-1 curb and gutter	LF	15,338		\$ 16.96	\$ 18.00	\$ 261,882.00	\$ 260,132.48
Parking Lot / Access Drives	7 Concrete parking and bus lane	SY	7,337		\$ 50.24	\$ 50.00	\$ 332,250.00	\$ 368,610.88
Parking Lot / Access Drives	7 Fire lane / Access roads	SY	8,593		\$ 50.24	\$ 44.00	\$ 151,580.00	\$ 431,712.32
Parking Lot / Access Drives	Storms Sewer	LS	1		\$ 157,000.00	\$ 104,232.30	\$ 104,232.30	
Parking Lot / Access Drives	Trim Subgrade	SY	65,393		\$ 1.25	\$ 79,700.00	\$ 79,700.00	
Parking Lot / Access Drives	7 Treatment of subgrade -12" Fly ash & 4" AB3	SY	65,425		\$ 4.51	\$ 9.33	\$ 463,187.85	\$ 295,066.75
Rock Chalk Lane and Rock Chalk Parkway	21 Unclassified excavation	CY	3,017		\$ 3.39	\$ 5.00	\$ 15,085.00	\$ 10,227.63
Rock Chalk Lane and Rock Chalk Parkway	Compacted fill	CY	2,920		\$ 1.00	\$ 2,920.00	\$ 2,920.00	
Rock Chalk Lane and Rock Chalk Parkway	Site restoration	LS	1		\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	
Rock Chalk Lane and Rock Chalk Parkway	21 8" NRDI Portland cement	SY	9,524		\$ 45.53	\$ 50.00	\$ 427,800.00	\$ 433,627.72
Rock Chalk Lane and Rock Chalk Parkway	4 CG-1 curb and gutter	LF	5,109		\$ 16.96	\$ 16.00	\$ 74,336.00	\$ 86,648.64
Rock Chalk Lane and Rock Chalk Parkway	6" x 10' Fiber ree path	SY	5,163		\$ 40.00	\$ 210,680.00	\$ 210,680.00	
Rock Chalk Lane and Rock Chalk Parkway	7 4" x 5' Sidewalk	SY	195		\$ 27.70	\$ 30.00	\$ 2,640.00	\$ 5,401.50
Rock Chalk Lane and Rock Chalk Parkway	2 Access ramps	EACH	51		\$ 738.00	\$ 1,000.00	\$ 51,000.00	\$ 37,638.00
Rock Chalk Lane and Rock Chalk Parkway	7 Treatment of subgrade -12" By ash & AB3	SY	10,800		\$ 4.51	\$ 9.33	\$ 85,761.36	\$ 48,708.00
Chip and Seal County Road	7 Chip and Seal	SY	10,000		\$ 3.68	\$ 1.80	\$ 16,200.00	\$ 36,800.00
Rec Center Pad	Rock Excavation	CY	18,000		\$ 10.00	\$ 180,000.00	\$ 180,000.00	
Rec Center Pad	7 Dirt Excavation	CY	10,000		\$ 3.39	\$ 2.25	\$ 22,500.00	\$ 33,900.00
Rec Center Pad	Compaction	CY	8,500		\$ 1.10	\$ 9,350.00	\$ 9,350.00	

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Rec Center Pad		Fly Ash 18'	SY	SY	12,000		\$	8.00	\$	96,000.00	\$	96,000.00			
Rec Center Pad		A133 Entire Building Pad	SY	SY	20,100		\$	4.00	\$	80,400.00	\$	80,400.00			
Rec Center Pad		AB3 Additional depth rock area	SY	SY	8,000		\$	5.50	\$	44,000.00	\$	44,000.00			
CHANGE ORDERS	7	4" Conduit for Fiber	LF	LF	5200	\$	12.12	\$	10.00	\$	52,000.00	\$	63,024.00	\$	11,024.00
CHANGE ORDERS	4	3" Conduit for Security	LF	LF	600	\$	8.70	\$	10.00	\$	6,000.00	\$	5,220.00	\$	(780.00)
CHANGE ORDERS	7	Treatment of subgrade 9" Fly Ash	SY	SY	11825	\$	4.51	\$	4.50	\$	51,453.00	\$	53,330.75	\$	1,877.75
CHANGE ORDERS	1	12" HDPE Storm Pipe	LF	LF	42	\$	28.00	\$	23.00	\$	966.00	\$	1,176.00	\$	210.00
CHANGE ORDERS	7	12" CMP End Section	EA	EA	1	\$	503.79	\$	450.00	\$	450.00	\$	503.79	\$	53.79
CHANGE ORDERS		Subgrade 12" Crushed Concrete Parking	Y	Y	5998			\$	9.33	\$	55,961.34	\$	55,961.34		
CHANGE ORDERS		Post Tension Concrete Tennis Courts	LS	LS				\$		\$	58,765.00	\$	58,765.00		
CHANGE ORDERS		GWV Pavement Thickness	SY	SY	2166.65			\$	5.50	\$	(11,641.58)	\$	(11,641.58)		
CHANGE ORDERS		Engineering for Low Water Crossing	LS					\$		\$	(12,960.00)	\$	(12,960.00)		
CHANGE ORDERS		Performance and Payment Bonds	LS					\$		\$	50,889.00	\$	50,889.00		
								\$		\$	11,542,121.01	\$	13,367,513.44	\$	1,825,392.43
								\$		\$	1,152,351.00				
								\$		\$	10,389,770.01				
								\$		\$	7,732,308.84	\$	9,519,772.27		
											67%				

\*\*\* These items were not paid by the city of Lawrence.

We were able to test 67% of the costs against estimated unit price totals. The remaining costs we accepted "As is."

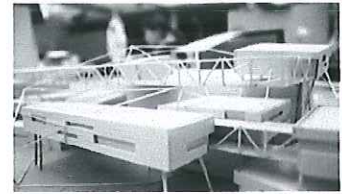
Conclusion: The analysis indicated that \$1,825,392 in costs were below established estimates

Report  
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What successful Cost Estimators know. . . and you should, too.

>>>>>> AN ESTIMATOR'S GUIDE TO POLICIES,  
>>>>>>>>> PROCEDURES, AND STRATEGIES



**HOW TO:**

**ESTIMATE THE COST OF**

# **CONCRETE CONSTRUCTION**

submitted by Bruce E. Schlesier, CPE

Bruce E. Schlesier is the Director of Cost Management in the Las Vegas area for an international cost and project management firm. His career began as an Architect later seeking a desire to be closer to construction returned to the University for an Education in Construction Engineering. Bruce founded a Construction Management design-build firm in 1986 which grew to one hundred-sixty employees covering six southeastern states. After selling the business Bruce pursued his career serving as the president or vice-president of construction for three large multi-state regional or national development firms. His current role focuses on creating estimates for the Development Teams of mega multi-use casino resorts worldwide from conceptual including soft cost though final project close-out.

1. Introduction
2. Types and Methods of Measurements
3. Specific Factors that affect Take-off and Pricing
4. Overview of Labor, Material, Equipment, Indirect Costs, and Mark-ups
5. Special Risk Considerations
6. Testing the Bid – Ratios and Analysis
7. Additional Pertinent Information
8. Sample Plans and Details
9. Sample Pricing Estimate
10. Glossary of Terms
11. List of References

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**SECTION 1:  
INTRODUCTION**

The intended purpose of this paper is to exhibit the systematic logic used in developing an estimate for concrete construction. The process has been simplified but includes the basic considerations needed to estimate the limited components reviewed for this paper. The hope is that an estimator can utilize this guide as a basis to fully develop an estimate for concrete construction that can be modified or expanded to work with their unique areas of specialty, equipment, labor, and project scopes.

Cast-in-Place Concrete covers a broad spectrum of both civil and building construction. This technical paper due to the abbreviated scope will focus on the process used to estimate slabs on grade, footings, and walls for building construction. The estimates used for example will concentrate on basic concrete material and formwork. Additional items that are often included in a concrete estimate such as excavation, reinforcing bars, miscellaneous concrete, embedded items, and hoisting will not be included in the scope of this paper.

The basis for this technical paper Institute Master Format (2004 Edition)

Division 03: Concrete

Subdivisions: 03 30 00 Cast-in-Place Concrete

**SECTION 2:  
TYPES AND METHODS  
OF MEASUREMENTS**

There are a number of Estimating types including: Schematic or Feasibility, Order of Magnitude or occasionally depending on the limited availability of information this becomes a Rough Order of Magnitude, Preliminary estimate based on preliminary Architectural documents, Baseline estimating sometime referred to as Probable Cost Estimate which is based on Architectural Design Development drawings, and the Definitive Estimate based on 90% or greater completion of the Construction Documents.

The unit of measure for concrete construction varies with the material type. Concrete material is measured in cubic yards, forms by the square foot, concrete finishing by the square foot or sometimes in mass by the

square, miscellaneous items vary but usually by count, reinforcing steel by pounds or tons, hand excavation by cubic yards, and fine grade by the square foot. The quantity survey/takeoff is this first step in preparing an estimate. The estimator conducting the quantity survey/takeoff must coordinate and follow the system or units utilized in the pricing schedule. This particularly true in larger companies where the quantity surveyor or takeoff estimator is often a different person than the pricing estimator.

**The Quantity Survey:**

Concrete yardage is the most important item and should be taken off first along with the associated formwork, finishing, hand excavation, and other items that can be taken off at the same time since their quantities are all associated with the concrete surface. Concrete's standard measure is in cubic yards by strength with an appropriate waste factor added. The waste factor will vary based on application and while there are guidelines for this one should develop their own percentages. Concrete for example placed on grade often does not utilize forms for isolated or continuous footings requiring a higher percentage of waste over concrete placed in forms. The estimator should coordinate with field operations to develop a company standard for waste factors.

There are twenty-seven cubic feet in one cubic yard so the usual procedure is to divide the amount of cubic feet by 27 to find the number of cubic yards. The decimal equivalent conversion factor is 0.37 cubic yards is equal to 1 cubic foot which is another method to determine cubic yardage. For example: a wall that is 12" wide (1'-0") by 10'-0" in height by 50'-0" long results in 1'x10'x50'=500 cubic feet (c.f.).  $500c.f./27=18.5$  cubic yards (c.y.) or  $500cf$  by  $0.37=18.5$  c.y. Both calculations provide the same results so the option is based on preference.

The experienced estimator will develop a system for quantity takeoff similar to the example shown in the simple twenty item list below. Following an outline serves consistency and prevents missed items.

**Quantity Takeoff Outline; [ 1 ]**

1. Column Footings: Hand excavation area, forms, concrete.
2. Wall Footings: Hand excavation area, forms, keys, concrete.

3. Foundations Walls: Forms (in 4-foot heights), keys, concrete.
4. Underpinning: Hand excavation in cubic yards, forms, concrete.
5. Piers below Grade: Forms, concrete.
6. Building Slabs on Fill: Sand fill, edge forms, expansion joints, finish area, concrete.
7. Columns:
  - a. Exterior Columns: Forms, concrete.
  - b. Interior Columns: Forms, concrete.
8. Beams:
  - a. Exterior Beams: Forms, concrete.
  - b. Interior Beams: Forms, concrete.
9. Shored Flat Slabs: Slab forms, edge forms, finish area, concrete.
10. Shored Pan Slabs: Slab forms, edge forms, finish area, concrete.
11. Slabs on Metal Forms: Deck forms, edge forms, finish area, concrete.
12. Stairs on fill: Sand fill, form risers, finish tread and riser, concrete.
13. Shored Stairs: Form risers and stair bottoms, finish treads and risers, concrete.
14. Stair Landings: Forms, finish, concrete.
15. Pan-fill Stairs: finish, concrete.
16. Miscellaneous Concrete in Building: Forms, finish, embedded items, concrete.
17. Exterior Sidewalks: Sand fill, edge forms, expansion joints, finish concrete.
18. Exterior Paving: Sand fill, edge forms, expansion joints, finish concrete.
19. Exterior Straight Curbs: Hand excavation, forms, finish, concrete.
20. Exterior Curb and Gutter: Hand excavation, forms, finish, concrete.

**The quantity takeoff:**

The estimator's first action is to survey the plans taking note of the section details and schedules for both structural and flatwork concrete. Schedules referring to the charts depicting the dimensions, reinforcing, and embedded items required for example in column or box footings. An estimate can be developed by 'assembly' from these details. Assembly meaning taking all items into account listed in italics in the Quantity Takeoff Outline (figure 2.1) by a unit measure, for example column pads would be each, walls by lineal foot, flat surfaces by square foot or squares equaling 100 square feet. The quantity takeoff should then be broken into sections by area and/or floors. This will help the estimator should changes

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be required later by the architect, engineer, or owner.

There are a number of ways that estimators can takeoff a project including by hand measure, rolling measure, digitizer, or onscreen takeoff which are available from a number of companies have become an industry standard. These onscreen programs provide a record by color/type that can be attached to your quantity takeoff and can easily be reviewed by supervisors for quality assurance. The onscreen programs also provide the option to include a number of mathematical functions that will calculate the items shown in the following examples simultaneously.

Examples of Assemblies by Unit are as follows for some concrete construction components including: column or box footings, wall footings, foundation walls, and building slabs on fill. While these represent only a few of the many concrete components they will provide you with some of the methods used to develop a quantity survey.

The information gathered in the quantity survey will be transferred to a recapitulation sheet for pricing.

Using the totals from figure 2.2 we can calculate the quantities required for all columns footings.

1. The cubic feet concrete total of 190 divided by 27= 7.03 c.y. or 190 times 0.037 equals 7.03 c.y. using the factor method. Waste factors are applied based on footing, form, and placement types.
2. The Forms total is 67 square feet. The estimator must coordinate with field operations to determine the best method and available forms. Material estimating will also be affected by the number of reuses.
3. Hand Excavation totals 148 square feet.

Using the totals from Figure 2.3 we can calculate the quantities required for all Wall Footings. Walls and footings should be measured at the centerline. This is the same method used for continuous footings less the keyway.

1. The cubic feet concrete total of 1,255.5 divided by 27= 46.5 c.y. or 1,255.5 times 0.037 equals 46.5 c.y. using the factor method. Waste factors are applied based on footing, form, and placement types.
2. The Forms total is 841.5 square feet. Same as in the column footings the estimator must coordinate with field operations to determine the best method and available forms. Material estimating will also be affected by the number of reuses.

**Figure 2.1**

Description	Dimensions	Count	Sq. Ft. Area	Sq. Ft. Forms	Cubic Ft. Concrete
Column Footings	W x L x D	#Ftgs.	W x L x #Ftgs.	(2W + 2L) D	W x L x D x #Ftgs.
F1	4'0"x4'0"x1'0"	4	64.0	16.0	64.0
F2	3'6"x2'0"x1'6"	3	21.0	16.5	31.5
F3	7'0"x4'6"x1'6"	2	63.0	34.5	94.5
<b>Totals:</b>		<b>9</b>	<b>148.0</b>	<b>67.0</b>	<b>190.0</b>

**Figure 2.2**

Description	Dimensions	Sq. Ft. Area	Sq. Ft. Forms	Cubic Ft. Concrete
Wall Footings	D x W x L	W x L	2D x L	W x L x D
Line A	1'0"x2'6"x112'0"	280.00	224.0	280.0
Line B	1'6"x2'0"x86'6"	173.00	259.5	259.5
Line C	2'0"x3'6"x89'6"	313.25	358.0	716.0
<b>Totals:</b>	<b>Length = 288 L.F.</b>	<b>738.25</b>	<b>841.5</b>	<b>1,225.5</b>

**Figure 2.3**

Description	Dimensions	Sq. Ft. Area	Sq. Ft. Forms	Cubic Ft. Concrete
Walls	H x W x L	W x L	2H x L	W x H x L
Line A	1'0"x2'6"x7'0"	70.0	350.0	175.0
Line B	0'8"x7'0"x45'0"	n/a	630.0	210.5
Line C	1'0"x12'0"x92'0"	n/a	2208.0	1,104.0
<b>Totals:</b>		<b>70.0</b>	<b>3,188.0</b>	<b>1,489.5</b>

**Figure 2.4**

Description	Dimensions	Sq. Ft. Area	Cubic Ft. Concrete
Slabs on Fill	W x L x D	W x L	W x L x D
Meeting Rooms	120'0"x85'0"x0'6"	10.200	5100
Hotel Lobby	46'0"x65'0"x0'6"	2.990	1495
Restaurant	65'0"x72'0"x0'6"	4.680	2340
<b>Totals:</b>		<b>17.870</b>	<b>8,935</b>

3. Hand Excavation totals 738.25 square ft.
4. Length of Keys equals the length of footing or 288 lineal ft.

Using the totals from Figure 2.4 we can calculate the quantities required for the Grade Beams and Foundation Walls.

1. The cubic feet concrete total of 1,489.5 c.f. divided by 27= 55.17 c.y. Waste factors should be applied based on footing, form, and placement types. For the purposes of this example there are no box-outs, ledges, embedded items, pilasters, waterstop, or bearing seats which must be added or deducted from the above totals.
2. Grade Beams (Line A) place on earth so the square feet area is calculated for Hand Excavation equaling 70 square feet.
3. Forms for walls should be figured by increments of vertical feet as the additional height increases the total cost for bracing, material, and labor. The total for forms is 3,188 square feet which is broken into the following: 0 to 4 feet forms 350 square feet, 4 to 8 feet forms 503 square feet, and 8 to 12 foot forms 2208 square feet.

The slabs quantities can be estimated from the few areas calculated in table 2.4.

1. Concrete total cubic feet is 8,935 divided by 27 equals 331 cubic yards. A waste factor of 3% for slabs on grade/earth increases the concrete total to 331 multiplied by 1.03 equals 341 yards.
2. Place and grade fill material sand or granular drainage fill. For 4" sand fill take the area 17,870 multiply by 0.34 the factor for 4" equals 6,076 cubic feet. 6,076 divided by 27 equals 225 cubic yards. This is the amount of compacted sand required. Sand does not come compacted so the estimator must account for the shipping volume. Using 25% compaction for sand we take the total compacted sand of 225 cubic yards by 1.25 which equals 281 cubic yards.
3. Vapor Barrier per specification. This example will use a 6 mil polyethylene sheet. The total needed is the square feet 17,870 multiplied by 1.10 adding a 10% factor for lapping the joints equals 19,657 square feet of 6 mil vapor barrier required.
4. Finish Slab is equal to the square foot area of 17,870.
5. Curing compounds or membranes will also be calculated by the square foot area.

6. The estimator should also include other items such as blockouts, edge forms, keyed control joints, and expansion joints while reviewing the plans for the slab as this information will be shown on the same drawings.

**SECTION 3: SPECIFIC FACTORS THAT AFFECT TAKE-OFF AND PRICING.**

The total price of Construction is the sum of Direct Costs, Contingency Costs, and Margin/Mark-Up consisting of indirect costs, overhead, and profit. When the Quantity Survey is completed the information is transferred to a recapitulation sheet where the information is formatted for pricing. Below is an example of a Recapitulation Outline.

**Recapitulation Outline for Pricing; [ 2 ]**

1. Forms:
  - a. List all formwork items from quantity takeoff.
  - b. Sum up total formwork for one stripping and cleaning item.
- Concrete:
  - a. List all concrete items from quantity takeoff.
  - b. Sum up total concrete yardage for testing.
3. Finish:
  - a. Screed material: sum of total finish area for building from quantity takeoff.
  - b. Float finish: from room schedule and specifications.
  - c. Steel trowel finish: screed material area less float finish area.
  - d. All other finishing: (from quantity take off).
  - e. Hand rubbing of exposed surfaces: from drawings and specifications.
4. Excavation:
  - a. Hand Excavation: from quantity takeoff.
  - b. Sand fill: from quantity takeoff.
5. Miscellaneous:
  - a. Check specifications and drawings completely for all other items.
  - b. Add curing slabs, hoist, heat protection, cleanup, foreman.
  - c. Add insurance and taxes, state taxes, overhead and profit.
  - d. Wage increases.

- e. Concrete cost per cubic yard.
6. Reinforcing Steel and Mesh:
  - a. Add as sub-item with overhead and profit.
7. Final:
  - a. List of included and non-included items.
  - b. Figure all alternates.
  - c. Figure unit prices.

The pricing estimator prior to completing the Recapitulation must coordinate with construction operations on the formwork type/method to be utilized.

Other specific factors that can affect pricing include: number of form re-uses, site access, schedule, project size, project location, weather, and equipment.

There are a number of excellent published cost databases available for use by an estimator. Estimators should exercise caution in using published data even with the local factor adjustment as these are general in nature. They work well as a check for unit prices to determine if your company's production factors are competitive.

**SECTION 4: OVERVIEW OF LABOR, MATERIAL, EQUIPMENT, INDIRECT COSTS, AND MARK-UPS.**

Pricing includes: Materials, Labor, Equipment, Contingency costs, Indirect costs, and Mark-ups. Materials, Labor, Contingency, and Equipment are considered Direct Costs:

1. Material Pricing for Concrete Construction consist of obtaining bids for the components based on the quantity and date of placement. Professional Estimators maintain current data for the regions where they typically work.
2. Labor Pricing is far more complex. Labor productivity estimating by unit and or crew cost can be pulled from commercial databases however the experienced estimator will develop cost based on their company's historical cost records and productivities. Historical records should be maintained by project type and scope which can be used as a guide. Labor costs can change so it is important to record the labor productivity of your crews then apply

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the current labor costs as this is the best indicator of the production cost for your company.

The Labor Productivity Charts below provide a basis for a method utilized to record your crew's productivity. Work with your company's Construction Operations to gather current production data by providing them with forms to register data that is consistent with the format utilized in your take-off and pricing estimating system. The published rates can be used until this information has been developed however you should exercise caution as production rates and costs are general in nature. The production factor can be multiplied by the mean average crew rate to determine the labor per unit.

Production Factors may be affected by a number of items including site conditions, tight schedules, and supervision.

The Factors can be applied using the following formulas. The estimator must coordinate with operations to determine the total crew size and required production schedule. These represent only a few examples of the many production formulas that may be required for your project but will serve as an example of how to develop unit costs.

**Labor Unit Prices Formulas:** [4]

- Daily Labor Unit Price = Total Daily Crew Cost divided by the Daily Crew Production.
- Hourly Labor Unit Price = Total Hourly Crew Cost divided by the Hourly Crew Production.
- Daily Production = Daily Crew Cost di-

vided Labor Unit Price or:

- Hourly Production = Hourly Crew Cost divided by Labor Unit Price.
- Project Duration (Days) = Total Material divided by Daily Production.
- Required Daily Production = (Daily Crew Cost multiplied by Total Material) divided by Total Labor Budget.

Note that Labor Productivity drops with greater work hours per week so if ten hours per day six days a week are anticipated the estimator will need to factor the drop in productivity.

3. Equipment Pricing. The equipment for each project can vary significantly so it is important that the estimator coordinate with construction operations which will provide a list and schedule of use for the significant equipment items specific to the project. Small tools and equipment are usually added as a factor of the cost. Some equipment items may be provided by the General Contractor an example being a tower crane with operator. Other equipment not provided by the General Contractor may be shared between trades however exercise caution on assumptions if the other trade contractors have not been selected and/or you have not had the opportunity to negotiate the terms. You may offer the General Contractor a deductive option provided this be coordinated through the bid process.

Equipment can be priced by job duration or as a unit price based on historical cost data factors similar to the charts shown in Figure 2.3.

Contingency Items is a subtopic that must also be priced by the estimator. An example is weather protection for rain to protect open trenches or green placed concrete, sump pumps to drain trenches, and straw, sand, and/or walkways to protect finished surfaces from mud tracking. Contingency Items area may be different based on the location, duration, and time of year the project is under construction.

4. Indirect Costs are project specific costs that do not become a physical part of the project. Indirect costs are a function of the project that would not be borne if the project was not under construction. Examples of indirects are temporary job offices, off-site parking if required, toilets, safety provisions, equipment maintenance,

**Samples of Labor Productivity Charts;** [3]

**Table 4.1**

**From Work:**

Work Element Description	Unit	Man-Hours Per Unit			
		Fabricate	Erect	Strip	Repair
Footing, Foundation Walls, and Grade Beams	SFCS	0.09	0.07	0.04	0.04
Slabs on Grade and Screed	SFCS	0.13 Complete			
Columns and Piers	SFCS	0.09	0.10	0.05	0.05
Suspended Slabs	SFCS	0.08	0.12	0.04	0.05
Beams and Girders	SFCS	0.11	0.10	0.05	0.05

**Placing Concrete:**

Work Element Description	Unit	Man-Hours Per Unit			
		Direct Chute	Wheeled	Pumped	Crane & Bucket
Grade Beams	CY	1.0	2.0	1.50	1.50
Slabs on Grade	CY	1.5	3.0	2.00	2.50
Suspended Slabs	CY	-	-	1.68	2.24
Beams and Girders	CY	-	-	1.68	2.24

**Finishing and Curing Concrete:**

Work Element Description	Unit	Man-Hours Per Unit
Finish – Steel Trowel Machine	SF	0.015
Finish – Hand Trowel	SF	0.030
Finish – Float Only	SF	0.025
Curing – Liquid Spray, membrane, Burlap	SF	0.005
Cold Weather Protection	CY	0.500

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licenses, administrative costs that are directly associated with the project such as site office administrative staff, insurance, permits, and taxes to name a few.

5. Mark-Ups include the company's profit and overhead costs.

Profit is the reward of the risk that a contractor takes in bidding a project. The profit is usually determined by the firm's principals who will weigh the company's need for the job to cover ongoing overhead expenses, competition, the reputation of the client, and other factors.

Overhead costs are the ongoing expenses of operations not directly generating profits. Not understanding overhead costs can seriously affect the profitability of your estimate if undervalued. The overhead for some specialty contractors can easily exceed ten percent of the total cost of the project. The overhead can be obtained from the accounting department of your firm or if you are required to develop the overhead model gather historical information by project types. Many overhead costs are fixed such as office rent however many are a function of the job size and types under construction. A large multi-use casino project will require more office staff and consumables than a small hotel for instance however as a percentage to the cost of the job the casino may actually be a lower percentage. Developing a sound model of overhead costs is essential to develop a proper estimate.

**SECTION 5: SPECIAL RISK CONSIDERATIONS.**

Pricing Special Risks can be a tricky task because if you price every possible risk then you will not get the bid. A list of special risks should be developed along with the anticipated cost should they occur and be presented to the individual making the final decision on the mark-up and profits. There are many special risks situations which a project can encounter and a wise estimator will coordinate with operations to determine the probability of an occurrence. I have listed a few of the more common special risks below.

Escalation is included in the pricing estimate based on anticipated increases in material and labor costs where firm bids or labor agreements cannot be secured to the date of placement. This information for larger

companies is tracked for the specific areas in which the company does business. Smaller organizations can usually find this information through a trade organization or online. Make certain that the escalation factor is for the geographic region or city where the project is located. For instance in early 2008 the escalation factor for Las Vegas was more than double many parts of the country. Escalation should be calculated from the estimate date to the time the material is placed on the project. For larger projects use as a placement date the midpoint of construction. Escalation is a best guess for commodity futures. Material prices during 2008 increased by a margin that was far greater than anyone had anticipated causing serious consequences to many firms. Contract clauses requiring the owner to pay for material and labor escalation works well provided it is accepted as a means to reduce the contractors up front bid without escalation added. This places the burden of risk on the owner who may save money if the commodities market drops or remains stable.

Material shortage or longer than anticipated delivery dates is another risk that occurs often enough that every estimator encounters it a few times in a career. The shortage can come from a disaster such as a hurricane that creates a plywood shortage for instance. Excess demand in the market creating a backlog in the production and fabrication of materials is another example. Care should be exercised to secure long lead items well in advance of the date needed for your project.

Weather while factored into the estimate based on normal conditions can sometimes cause a serious delay especially in concrete often requiring the additional costs in overtime, extra shift personnel, and equipment to complete the project on schedule.

Subsurface conditions are often covered in the contract allowing for a additive change order however this will slow the production rate and often require additional equipment.

**SECTION 6: TESTING THE BID – RATIOS AND ANALYSIS.**

Estimates are made from hundreds even thousands of mathematical functions. They are also dependent on translating information in the plans and specifications to quantities. This leads to many opportunities for error. I have for many years been responsible for the quality assurance / quality control QA/

QC of the estimates prepared by my staff and have a few such errors that will be used as examples on how and why testing the bid is very important.

The QA/QC estimate reviewer will not check the complete take-off or all mathematical functions but uses ratios or unit costs for the completed tested assembly as a standard of measure for comparison. No action is required of a value within a reasonable range of the standard, however if the review renders a significant difference further investigation is required.

The errors can come in many forms including using the wrong scale for the take-off, mathematical equation errors, decimal extension errors, and missing major components of the plans to name the most common.

Examples of how a simple error can affect the estimate:

1. Using unit cost to check the estimate it was discovered that the price used for a single column in a single use form located in a remote part of the project that was not accessible to the tower crane was priced at the same cost per cubic yard as the columns in a multi-story high rise when the cost based on historical data used to develop the unit cost price check table was more than three times the amount used. This was not a significant mistake overall in a large project but includes the many of the considerations an estimator must weigh when figuring a job. All columns are not equal.
2. While checking the cost per square foot of placed flat work it was noticed that the estimate was significantly low. Further investigation yielded the take-off estimator had used the wrong scale and since it was a much larger scale the overall area of the flatwork was reduced.
3. Checking structural steel on a project it was discovered that the pounds per foot of steel was significantly higher than the standard unit price table for a project of this type. Further investigation directed me to the structural columns. The take-off estimator had taken the total length of similar shaped columns to determine the weight. Then he multiplied by the number of columns which was an error in the mathematical formula resulting in the pounds per foot of steel significantly exceeding the actual weight

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## SECTION 7: ADDITIONAL PERTINENT INFORMATION.

The low bidder is most often the contractor that gets the job. An excellent estimate provides the confidence a company needs to reduce contingencies that can put your bid over.

Assuming the quantity survey or take-off is accurate another prime area where a company can reduce their bid is in labor production. Management must work to develop the best crew blend, training, morale, and equipment for improved production. Materials especially the few materials used in concrete construction will be bid at close to the same cost for all contractors. Review all costs for any possibility of additional reductions before submitting your bid.

## SECTION 8: SAMPLE PLANS AND TAKE-OFF.

The sample plans used for example are from two separate Owner's Directives that primarily affect changes in a variety of concrete construction components. Since this is a Change Directive there are examples of deducts from the old version and adds for the new changes.

The take-off was completed using On-Screen Takeoff (OST) which has highlighted in color each of the concrete components. A takeoff quantity for each item on the sheet has been included at the top right hand corner on each of the plan sheets. The sizes of the components have been indicated on the takeoff for clarity.

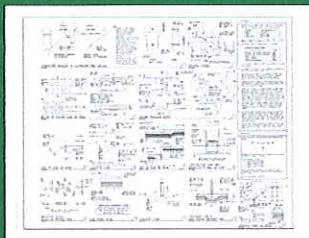
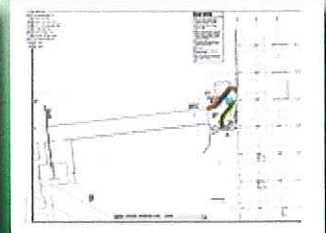
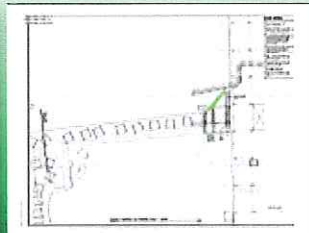
## SECTION 9: SAMPLE PRICING SHEETS.

Quantities from the takeoff sheets have been placed in the pricing worksheet. The unit cost figures used in this example are blended labor, material, and equipment costs. For instance the cost per cubic yard placed in this example for continuous footings is \$158.40 verses \$165.68 for concrete placed in a concrete wall.

Mark-ups have been included in this example as a total percentage. Mark-ups include: General Conditions, Hoisting, Bonds/Insurance, and the Contractor's Fee.

The pricing estimate contains a few items outside Concrete Construction that are part of this Owners Change Order Directive.

**ALL SAMPLE PLANS & TAKEOFF AND SAMPLE PRICING SHEETS CAN BE FOUND ON OUR WEBSITE ([www.aspenational.org](http://www.aspenational.org)) UNDER MEMBERSHIP/PUBLICATIONS/ESTIMATING TODAY**



## SECTION 10: GLOSSARY OF TERMS.

**Cast in Place Concrete:** Concrete material that is delivered in an unhardened liquid state that is formed and placed in its permanent on site location.

**Digitizer:** A surface tablet of various sizes that is actively connected to a computer and will transfer the information from the tablet to the computer. Estimators will often have tablets large enough for full plan sheets where quantities can be measured by area, by length, or by count.

**On Grade:** Ground level. Concrete is placed and supported directly by the ground.

**Green Concrete:** Concrete that has recently

been placed that has not appreciably hardened to its designed pounds per square inch (psi).

**Note:** There is another recent definition not related to this paper but due to the Green Building initiative relating to sustainable materials used in the concrete mix.

**Hoisting:** Lifting by mechanical means.

**Square:** A measurement of one hundred square feet used for large flat surface areas.

## SECTION 11: LIST OF REFERENCES.

[1], [2] Avery, C., 1980, Concrete Construction and Estimating, Craftsman Book Company, Carlsbad, CA.

[3] NAVFAC P-405, 1996, Seabee's Planner's and Estimator's Handbook, Naval Facilities Engineering Command, Alexandria, Virginia.

[4] Atcheson, D., 1995, Roofing Construction and Estimating, Craftsman Book Company, Carlsbad, CA.

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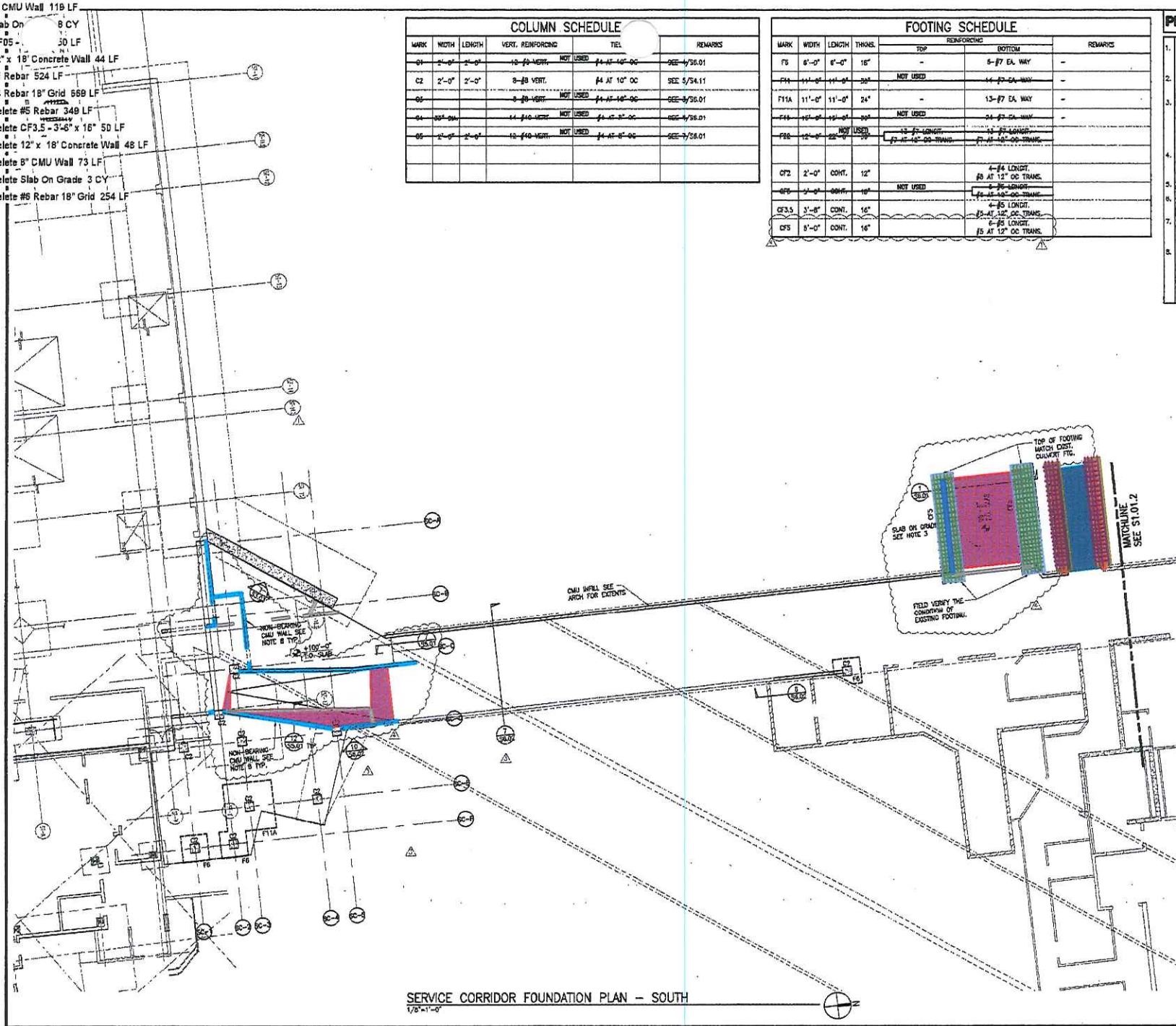
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- 8" CMU Wall 119 LF
- Slab On 8 CY
- CF05 - 30 LF
- 12" x 18" Concrete Wall 44 LF
- #5 Rebar 524 LF
- #6 Rebar 18" Grid 569 LF
- Delete #5 Rebar 349 LF
- Delete CF3.5 - 3'-6" x 16" 50 LF
- Delete 12" x 18" Concrete Wall 48 LF
- Delete 8" CMU Wall 73 LF
- Delete Slab On Grade 3 CY
- Delete #6 Rebar 18" Grid 254 LF

COLUMN SCHEDULE						
MARK	WIDTH	LENGTH	VERT. REINFORCING	TIE	REMARKS	
C1	2'-0"	2'-0"	12-#8 VERT.	NOT USED	#4 AT 10" OC	SEE 4/36.01
C2	2'-0"	2'-0"	8-#8 VERT.	NOT USED	#4 AT 10" OC	SEE 5/34.11
C3			8-#8 VERT.	NOT USED	#4 AT 10" OC	SEE 3/36.01
C4	2'-0"	2'-0"	12-#8 VERT.	NOT USED	#4 AT 10" OC	SEE 4/36.01
C5	2'-0"	2'-0"	12-#8 VERT.	NOT USED	#4 AT 10" OC	SEE 3/36.01

FOOTING SCHEDULE						
MARK	WIDTH	LENGTH	THICK	REINFORCING		REMARKS
				TOP	BOTTOM	
F5	6'-0"	6'-0"	18"	-	-	6-#7 EA. WAY
F14	11'-0"	11'-0"	24"	NOT USED	NOT USED	11-#7 EA. WAY
F11A	11'-0"	11'-0"	24"	-	-	13-#7 EA. WAY
F14	11'-0"	11'-0"	24"	NOT USED	NOT USED	13-#7 EA. WAY
F18	12'-0"	12'-0"	18"	NOT USED	NOT USED	13-#7 LONGIT. #5 AT 12" OC TRANS.
F12	2'-0"	CONT.	12"	-	-	4-#4 LONGIT. #5 AT 12" OC TRANS.
F15	2'-0"	CONT.	12"	NOT USED	NOT USED	4-#4 LONGIT. #5 AT 12" OC TRANS.
CF3.5	3'-0"	CONT.	16"	-	-	4-#5 LONGIT. #5 AT 12" OC TRANS.
CF5	3'-0"	CONT.	16"	-	-	6-#5 LONGIT. #5 AT 12" OC TRANS.

- PLAN NOTES:**
- Top of slab shall be reference elevation 205'-0". Reference elevation = 205'-0".
  - Top of footing shall be elevation 202'-8" UNO.
  - Slab on grade shall be 5" thick with #4 at 18" each way, 2" clear from top of slab. For method of placing slab on grade see SS.01. For slab slopes, compressors, slab edge etc. see Arch's drawings.
  - For typical details and notes see sheets SS.01 thru SS.04. For general notes see sheet SS.01.
  - Not Used
  - See sheet S1.01.1 for column and footing schedule.
  - 8" solid grouted cmu wall with #6 at 16" oc vert. and #4 at 24" oc horiz. see details on SS.04.
  - 8" solid grouted cmu wall with #6 at 32" oc vert. and #4 at 24" oc horiz. See details on SS.04.



SERVICE CORRIDOR FOUNDATION PLAN - SOUTH  
1/8"=1'-0"

ENTIRE SHEET REVISED

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Ver

- 8" CMU Wall 36 LF
- 12" x 18" Concrete Wall 41 LF
- CF3.5 - 5" 47 LF
- Delete CF3.5 - 3'-6" x 18" 77 LF
- Delete 12" x 18" Concrete Wall 42 LF
- Delete 8" CMU Wall 42 LF
- Delete Slab On Grade 1 CY
- Delete #6 Rebar 18" Grid 103 LF
- 6" x 3'-6" Concrete Wall 25 LF
- #4 Rebar 145 LF
- #4 Rebar 22 EA

- PLAN NOTES:**
1. Top of slab on grade shall be reference elevation 2256'-0". UNO. Reference elevation = 2256'-0".
  2. Top of footing shall be elevation 52'-0", UNO.
  3. Slab on grade shall be 4" thick, with #4 at 18" each way, 2" clear from top of slab. For method of placing slab on grade see S5.01. For slab slopes, depressions, slab edge etc. see Arch'l drawings.
  4. For typical details and notes see sheets S5.01 thru S5.04. For general notes see sheet S5.01.
  5. Not Used
  6. See sheet S1.01.1 for column and footing schedule.
  7. 8" solid grouted cross wall with #6 at 18" on vert. and #4 at 24" on horiz. see details on S5.04.

FOOTING  
KID.  
FTG.

MATCHLINE  
SEE S1.01.1

FIELD VERIFY THE  
CONDITION OF  
EXISTING FOOTING.

12" CONC  
WALL

FIELD VERIFY LOCATION  
ELECTRICAL CONTROLLER  
SLAB ON  
GRADE SEE  
NOTE 7

8" CMU  
WALL SEE  
NOTE 7

12" CONC  
WALL

ENTIRE SHEET REVISED

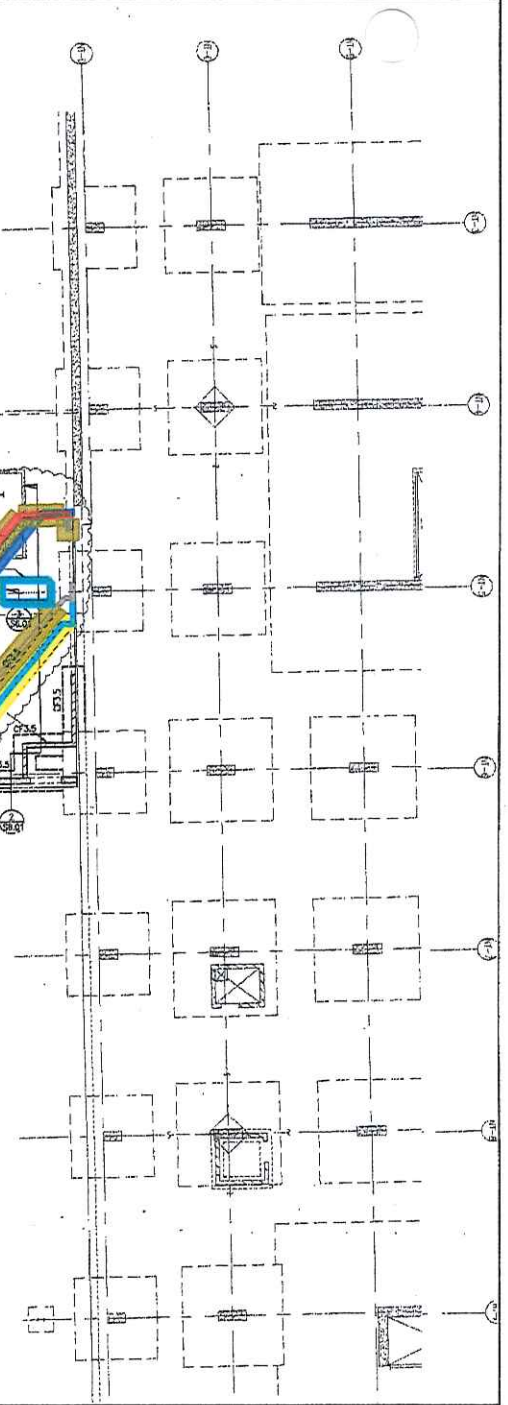
SERVICE CORRIDOR FOUNDATION PLAN - NORTH

1/8" = 1'-0"



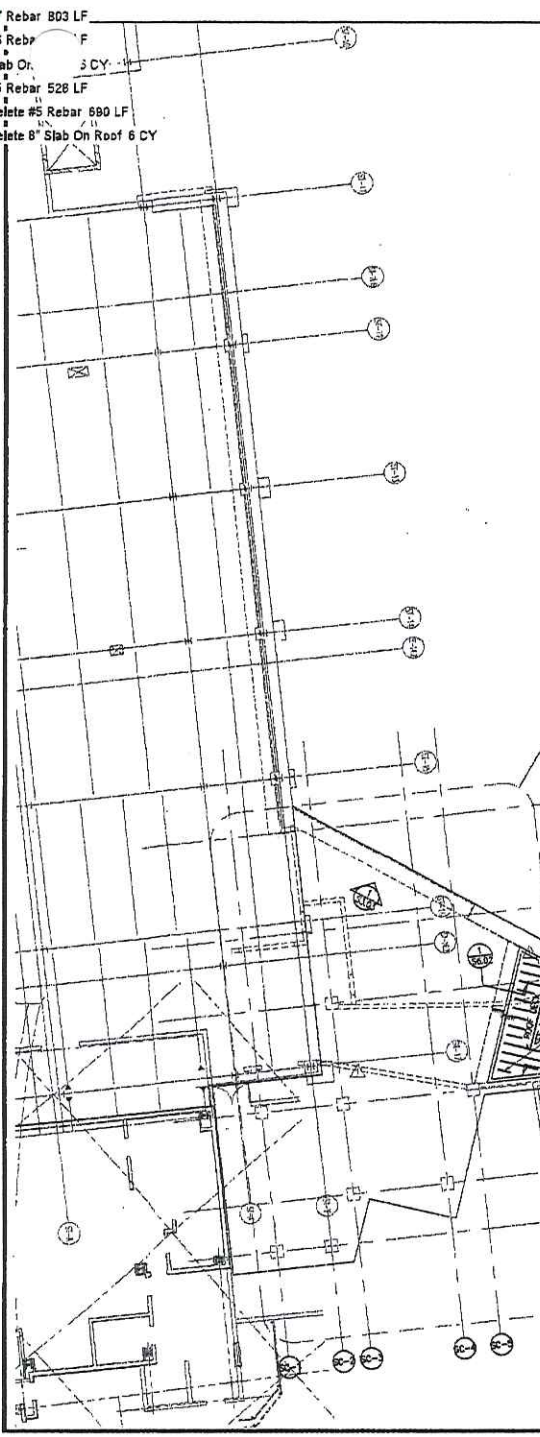
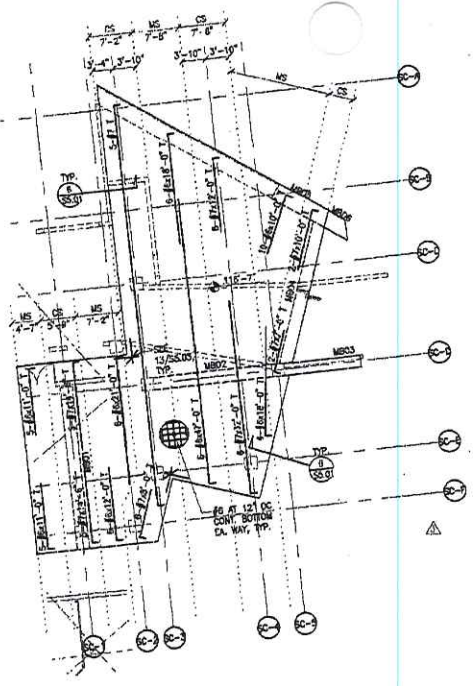
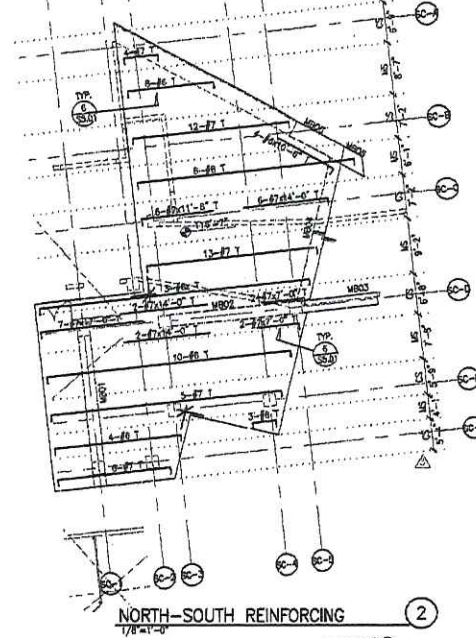
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- #7 Rebar 803 LF
- #5 Rebr 528 LF
- Slab Cr. 3 CY
- #5 Rebar 528 LF
- Delete #5 Rebar 590 LF
- Delete 8" Slab On Roof 6 CY

- PLAN NOTES:**
1. Top of Slab elevation = 110'-7" typical w/c.
  2. Structural slab shall be 14" thick mild rebar, unco. Slab and beams shall be  $f_c = 5000$  psi except where noted.
  3. For slab dimensions, depression, slopes, etc., and location of topping slab see architectural drawings. See architectural and mechanical drawings for opening locations and dimensions not shown. See detail 5/25.03 for reinforcing around openings.
  4. East-West direction mild steel reinforcing shall be placed in the outer layer of reinforcing. North-South direction reinforcing shall be placed in the inner layer of reinforcing.
  5. MB3 - indicates mild reinforced Conc. beam type, see sheet on S4.11. See S4.10 for beam type.
  6. For typical details not referenced, see sheets S3.01 thru S3.04. For general notes, see sheet S0.01.
  7. MS indicates middle strip. CS indicates column strip.
  8. Pipes are to be supported off beams and 1/3 points on slab span between beams.
  9. Bottom of Deck elevation 112'-7" UNO.
  10. Roof shall be 1 1/2" x 18 ga. Verco H5838 deck or equal. Deck shall span continuous over 3 or more spans (4 supports). See Architectural drawings for insulation, roofing, etc. Weld deck as follows:  
 using 1/2" dia. net effective puddle welds:  
 a. perpendicular loading: 4 welds per sheet per support  
 b. parallel edges of 12" oc  
 c. side seams: button punch of 12" oc
  11. Do not hang loads from metal deck. Provide engineered structural system to hang all loads from steel joists or beams. This includes but is not limited to metal stud wall or ceiling framing, mechanical or plumbing equipment, etc.
  12. Steel deck general notes see S8.02.
  13. For cold formed details see 3/58.02 thru 5/58.02



SERVICE CORRIDOR LID FRAMING PLAN - SOUTH  
1/8"=1'-0"

ENTIRE SHEET REVISED

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- Delete #6 Rebar 12" Grid 221 LF
- Delete 1 On Roof 4 CY
- Delete 1 10" Grid 258 LF

**PLAN NOTES:**

1. Top of Slab elevation = 110'-7" Typical.
2. Structural slab shall be 12" thick mild rebar, unad. Slab and beams shall be  $f_c = 5000$  psi except where noted.
3. For slab dimensions, depression, slopes, etc., and location of topping slab see architectural drawings. See architectural and mechanical drawings for opening locations and dimensions not shown. See detail 8/55.03 for reinforcing around openings.
4. East-West direction mild steel reinforcing shall be placed in the outer layer of reinforcing. North-South direction reinforcing shall be placed in the inner layer of reinforcing.
5. MBF - Indicates mild reinforced Conc. beam type, see sheet on 54.11. See 54.10 for beam type.
6. For typical details not referenced, see sheets 53.01 thru 53.04. For general notes, see sheet 53.01.
7. MS Indicates middle strip.  
CS Indicates column strip.
8. Pipes are to be supported off beams and 1/3 points on slab span between beams.

SLAB  
107'-10"

MATCHLINE  
SEE S1.02.1

#6 AT 12" OC T  
#6 AT 10" OC B

#6 AT 12" OC T  
#6 AT 10" OC B

12" THICK CONC. SLAB  
 $f_c = 5000$  PSI  
BOTTOM OF SLAB = 107'-0"

SEE 11 TYPE THIS DRAWING

ENTIRE SHEET REVISED

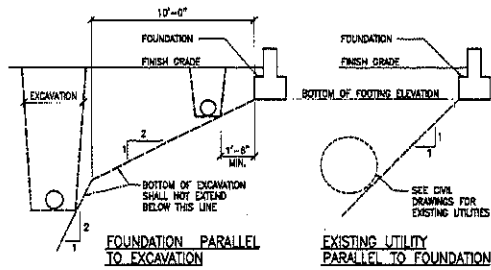
**SERVICE CORRIDOR LID FRAMING PLAN - NORTH**

1/8"=1'-0"

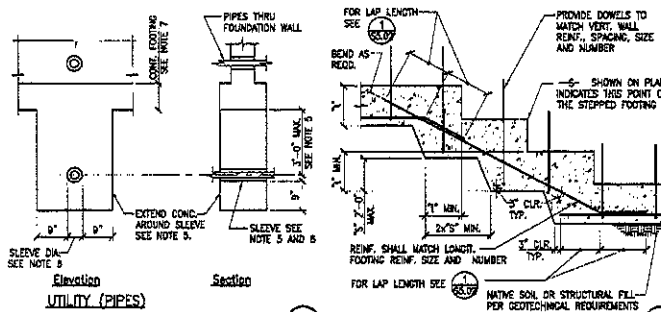


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- NOTES:**
- Contractor shall locate bottom of excavation to avoid surcharge on utilities and other foundations.
  - Contractor shall coordinate all excavations with foundation requirements.
  - Step foundation as required per 4.
  - Contractor shall adhere to the recommendations in the Geotechnical Report and the General Notes, for all excavations, backfill requirements etc.
  - Pipes joining through footings: Less than 3'-0" below foundation, provide sleeve and concrete. More than 3'-0" below foundation, step foundation per 2.3 to maintain 3'-0" Minimum.
  - Sleeves shall be minimum 1" clear all around pipes, conduit etc.
  - For pipes etc. within the footing thickness, step footing as required to pass pipes through stem wall.



**Foundation**

- The design of the foundation system is based on the geotechnical report (and any addenda) prepared by the following company:
 

Company:	Owens Geotechnical, Inc.
Report no.:	E-07-037
Date:	April 23, 2007
Revised Date:	April 30, 2007

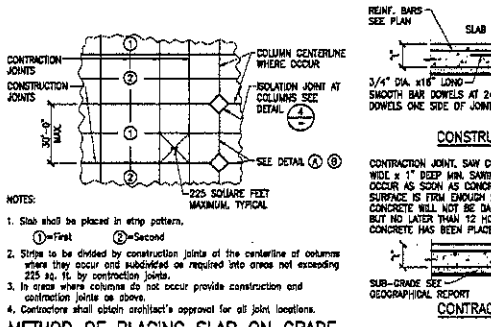
Copies are available for review at the Architect's office and contractor shall have a copy of the job file.

- The foundation system is designed based on the following:
 

Allowable Soil Bearing Pressure	3000psf
Continuous Footings	
Equivalent Fluid Pressure Unconstrained	35pcf
Equivalent Fluid Pressure Constrained	58pcf
Passive Pressure	250pcf
Friction Coefficient	.30
Retaining Wall Surcharge	250pcf

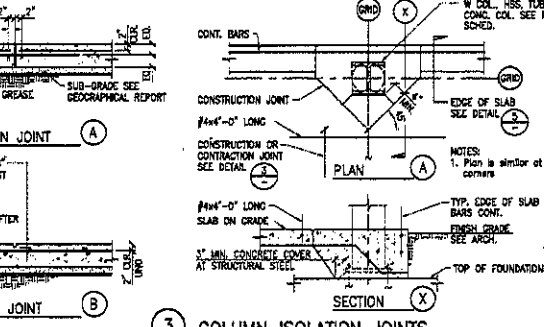
**FOUNDATIONS ADJACENT TO EXCAVATIONS AND UTILITIES**  
NO SCALE

**1 STEPPED FOOTING**  
NO SCALE



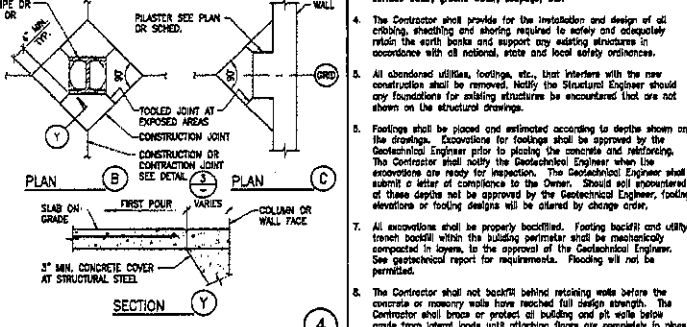
- NOTES:**
- Slab shall be placed in strip patterns.
    - ①=First
    - ②=Second
  - Stripes to be divided by construction joints at the centerline of columns where they occur or subdivided as required into areas not exceeding 215 sq. ft. by construction joints.
  - In areas where columns do not occur provide construction and construction joints as above.
  - Contractors shall obtain architect's approval for all joint locations.

**METHOD OF PLACING SLAB ON GRADE**  
NO SCALE



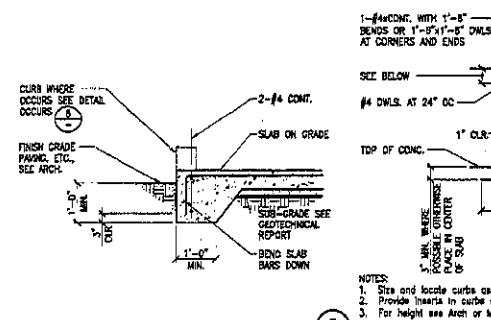
- NOTES:**
- Plan is similar at corners.

**4 COLUMN ISOLATION JOINTS**  
NO SCALE

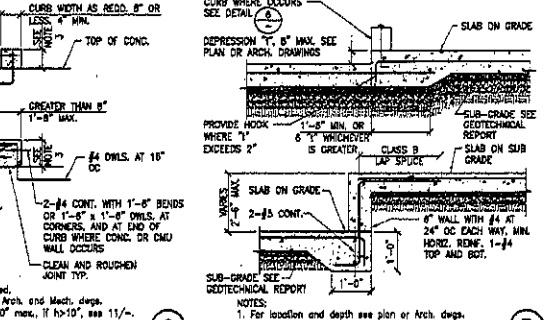


- NOTES:**
- See and locate curbs as required.
  - Provide inserts in curbs as per Arch. and Mech. depts.
  - For height see Arch or Mech. 10" max, if >10", see 11/-.

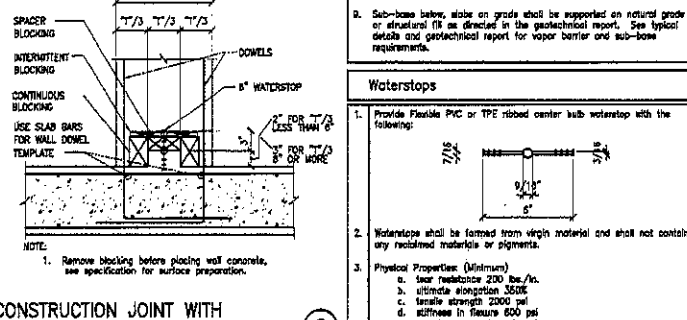
**5 EDGE OF SLAB ON GRADE**  
NO SCALE



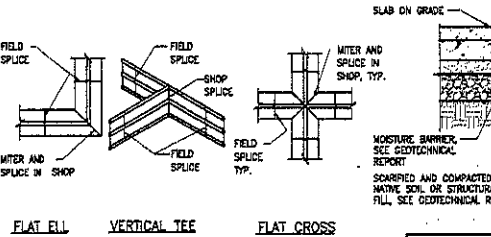
**6 CONCRETE CURB**  
NO SCALE



**7 STEP IN SLAB ON GRADE**  
NO SCALE

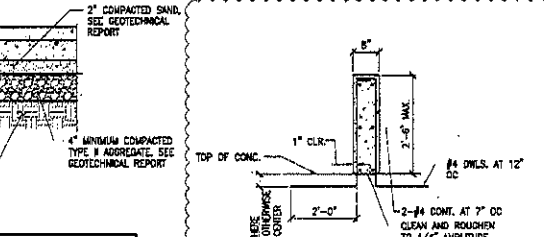


**8 CONSTRUCTION JOINT WITH WATERSTOP IN WALL AT SLAB**  
NO SCALE



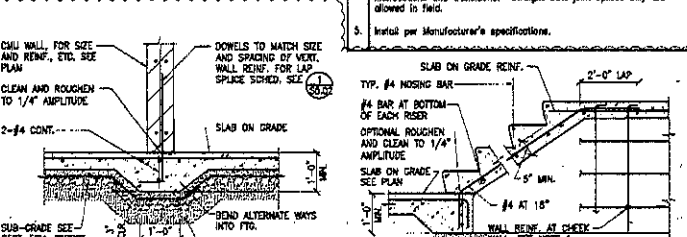
- NOTES:**
- Make field splices in strict accordance with manufacturer's recommendation.

**9 WATERSTOP SPLICE DETAILS AT INTERSECTIONS**  
NO SCALE



- NOTES:**
- Under slab information shown above are minimum requirements. See geotechnical report for additional information.

**10 SUB-GRADE DETAIL**  
NO SCALE



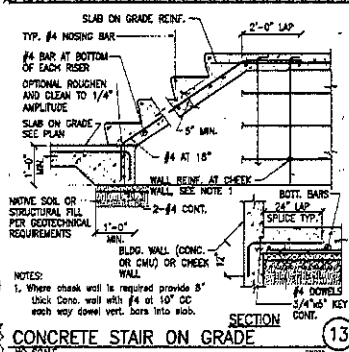
- NOTES:**
- Where chase wall is required provide 8" thick conc. wall with #4 @ 10" OC each way cast vert. bars into slab.

**11 THICKENED SLAB AT NON-BEARING MASONRY WALL**  
NO SCALE

**Waterstops**

- Provide Flexible PVC or TPE ribbed concrete curb waterstop with the following:
 

1. tear resistance	230 lbs./in.
2. ultimate elongation	350%
3. tensile strength	2000 psi
4. stiffness in flexure	800 psi
5. specific gravity	1.45 (max)
- Waterstops shall be formed from virgin material and shall not contain any recycled materials or pigments.
- Provide factory made fabrications for all changes of direction, intersections and transitions. Straight butt joint splices only are allowed in field.
- Install per manufacturer's specifications.



**12 CONCRETE STAIR ON GRADE**  
NO SCALE

Handwritten notes: 11/27/15, 11/27/15, 11/27/15



September 18, 2014

Bliss Sports II, LLC  
c/o Thomas S. Fritzel  
643 Massachusetts Street, Suite 300  
Lawrence, Kansas 66044-2255

Note: This memo was not included as an adjustment because the City of Lawrence was responsible for all of the infrastructure.

Re: Acknowledgement of Payment of "Infrastructure Improvements Costs"

Dear Thomas:

Stadium site infrastructure

As of the date of this letter, the undersigned subcontractor/vendor/consultant acknowledges that it has received a total of \$470,955.98 from Bliss Sports II, LLC, which represents hard or soft costs provided by the undersigned in connection with the development and/or construction of "Infrastructure Improvements" for the "Rock Chalk Park Project" (as those and other capitalized terms used in this letter are defined in the Rock Chalk Park Development Agreement among the City of Lawrence, Kansas, RCP, LLC, Bliss Sports, LC and Bliss Sports II, LLC, dated July 10, 2013).

The undersigned and (by signing below) Bliss Sports II, LLC, agree that the above amount represents a portion of the following (a) "Infrastructure Improvement Costs" line items from Exhibit I to the Development Agreement, or (b) soft cost otherwise included in the definition of Infrastructure Improvements Costs under Section 11.02 of the Development Agreement and is allocable between the Infrastructure Improvements on the stadium site and those elsewhere as follows:

<u>Line Item from Exhibit I / Includable Soft Cost Under Section 11.02</u>	<u>Rec Center Site</u>	<u>Stadium Site</u>
	\$	\$
Gould Evans	\$ 31,000.00	\$ 69,000.00
Hoss & Brown	\$ 13,640.00	\$ 30,360.00
Landplan Engineering	\$ 23,856.36	\$ 53,099.62
Paul Werner Architects	\$ 77,500.00	\$ 172,500.00
	\$	\$
	\$	\$
	\$	\$
	\$	\$
	\$	\$
	\$	\$
	\$	\$
	\$	\$
	\$	\$
<b>Total</b>	<b>\$ 145,996.36</b>	<b>\$ 324,959.62</b>

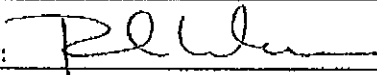
\* Unless identifiable as physical work done or as materials provided on the stadium site or elsewhere, Infrastructure Improvements Costs are to be allocated based on relative acreages of the Recreation Center Site (26) and the Stadium Site (57).

The undersigned certifies that none of the above amount(s) represents payment for hard or soft costs provided by the undersigned in connection with the development and/or construction of either the "Recreation Center" or the "Stadium Facilities" as defined in the Development Agreement.

WJK  
2/26/15  
DY.1

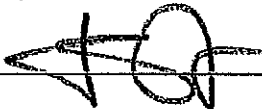
The undersigned has delivered, or contemporaneously is providing, to Bliss Sports II, LLC, a waiver of, and hereby waives, any mechanics or materialmen's lien or KSA 60-1111 bond claim that the undersigned or its subcontractors and materialmen might otherwise be able to file for the above portions of the work and materials constituting Infrastructure Improvement Costs.

Paul Werner Architects

By:   
Name: Paul Werner  
Title: owner / Architect

Acknowledged and agreed this 22<sup>nd</sup> day of Sept, 2014.

Bliss Sports II, LLC

By:   
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Walt  
2/26/15  
174.2.

gouldevans

January 7, 2014

Mr. Thomas Fritzel  
Bliss Sports  
643 Massachusetts  
Lawrence, KS 66044

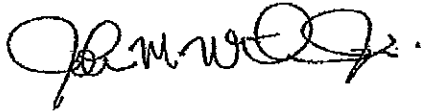
Re: Additional Services

Dear Thomas,

This letter is to confirm that we received a check from Bliss Sports II in December, 2013 for \$100,000 for Rock Chalk Park.

If you need any additional information or have questions, please give me a call at 785-691-5888.

Sincerely,



John M. Wilkins Jr, Principal

706 MASSACHUSETTS STREET  
LAWRENCE, KS 66044

KANSAS CITY LAWRENCE PHOENIX TAMPA SAN FRANCISCO NEW ORLEANS  
WWW.GOULDEVANS.COM

WOK  
2/26/15

B4.3



January 7, 2014

Bliss Sports LLC  
Thomas Fritzel  
209 Fall Creek  
Lawrence, KS 66049

To Whom It May Concern:

Payment was received from Bliss Sports for invoice number 13439, dated 7/1/2013 in the amount \$44,000 on 8/28/2013.

If you have any questions, please give me a call.

Sincerely,

Michelle Myers  
Office Manager

WML  
2/26/15  
D4.4



Civil Engineering  
Landscape Architecture  
Community Planning  
Surveying

1310 WAKARUSA DRIVE | LAWRENCE, KANSAS 66049 | 785.843.7530 (p) | 785.843.2410 (f) | info@landplan-pa.com

September 23, 2014

Thomas Fritzel  
PO Box 906  
643 Massachusetts St., Suite 300  
Lawrence, KS 66044

As of September 23, 2014, Landplan Engineering has been paid \$76,955.98 for work related to infrastructure design at Rock Chalk Park, Lawrence, Kansas.

Christopher M. Storm, P.E.

WCA  
2/26/15  
D4.5

September 23, 2014

Bliss Sports, LLC  
c/o Thomas Fritzel  
Lawrence, Kansas

Re: Payments for Rock Chalk Park

Dear Thomas,

Our records indicate that through September 23, 2014, we have received payments totaling \$250,000.00 for our fees related to infrastructure work at Rock Chalk Park.

Sincerely,



Paul Werner

WCA  
2/26/15  
154.6

**McDonald and Associates  
King Construction Subcontract Cost Review**

**Scope:** Review selected subcontractors and soft costs. Test against supporting documentation.

**Work Performed:** We reviewed all costs and subcontract/payment documentation related to King Construction subcontract and change orders.

**NOTE:** The auditor was provided with the Contract between DFC Company of Lawrence, LC (a subsidiary of Thomas Fritzel) and Kings Construction. This agreement was executed on 6/21/13

Section 4 of the contract establishes a price of \$8,506,948. The breakout of this amount is represented in column one (**ORIGINAL CONTRACT VALUE**).

Row Labels	ORIGINAL CONTRACT VALUE (Fritzel w/Kings Construction)	Balance Per Payment Applications	Development Agreement Exhibit I
General	\$ 475,000.00	\$ 475,000.00	\$ 2,191,109.00
Site Grading	\$ 850,500.00	\$ 850,499.74	\$ 850,500.00
Retention Ponds	\$ 156,250.00	\$ 156,250.00	\$ 156,250.00
Waterline	\$ 468,061.65	\$ 468,062.05	\$ 468,061.65
Sanitary Sewer	\$ 162,842.50	\$ 162,842.10	\$ 162,842.50
Storm Sewer	\$ 82,688.75	\$ 82,688.62	\$ 82,688.75
Rock Chalk Drive & George Williams	\$ 1,026,225.25	\$ 1,026,225.25	\$ 1,026,225.25
Overflow Parking Lot	\$ 68,200.00	\$ 68,200.00	\$ 68,200.00
Parking Lot / Access Drives	\$ 3,821,846.50	\$ 3,821,847.05	\$ 3,821,846.50
Rock Chalk Lane and Rock Chalk Parkway	\$ 945,083.00	\$ 945,083.00	\$ 945,083.00
Chip and Seal County Road	\$ 18,000.00	\$ -	\$ 18,000.00
Rec Center Pad	\$ 432,250.00	\$ 432,250.00	\$ 432,250.00
Landscaping			\$ 583,850.00
Natural Trails and Eight Lighted Tennis Courts		\$ 213,565.00 <sup>1</sup>	\$ 1,214,520.00
Parking Lot Lights		\$ 401,805.00 <sup>1</sup>	\$ 240,000.00
Grand Total	\$ 8,506,947.65	\$ 9,104,317.81	\$ 12,261,426.65

<sup>1</sup>Change Order #1—3/31/14 Nature Walking Trails \$401,805 and Change Order #2—5/22/14 Tennis Courts \$213,565

*Report  
Issue #8*

*WAT  
2/26/15  
E1.1*

**McDonald and Associates**  
**King Construction Subcontract Cost Review**

Under section 5.2.2 Retainage is set at 5% of the monthly draw (billed) amount. This would be the amount that Fritzel withheld from King's construction to ensure work was completed (retainage is released upon final release of lien or lien waiver/attestation).

Section 6 of the subcontract document requires all changes to be in writing—and additions to the \$8,506,948 must be documented and agreed upon in writing between the subcontractor and contractor.

**Conclusion:** The city has already removed \$63,600 and \$43,565 from the payment for these items. Any pricing concerns of the audit are covered through these withheld amounts. In addition, the amounts paid are in excess of the amounts charged (\$12,261,426.65).

wat  
2/26/15  
E1.2



NOTE: Preliminary Analysis of King Construction Agreement and Draw Review

ITEM	DESCRIPTION	SV	Draw 1 COMPLETED WORK	Draw 2	Draw 3	Draw 4	Draw 5	Draw 6	Draw 7	Draw 8	Draw 9	Draw 10	Draw 11	TOTAL	VAR
100	Mobilization	\$ 400,000.00						\$ 300,000.00	\$ 100,000.00					\$ 400,000.00	\$ -
110	Seeding	\$ 30,000.00	\$ 20,000.00							\$ 10,000.00				\$ 30,000.00	\$ -
120	Traffic Control	\$ 5,000.00								\$ 5,000.00				\$ 5,000.00	\$ -
130	Erosion Control	\$ 40,000.00	\$ 40,000.00											\$ 40,000.00	\$ -
140	Site Grading	\$ 850,500.00	\$ 349,299.00		\$ 235,160.00	\$ 107,784.00	\$ 158,256.00						\$ 0.74	\$ 850,499.74	\$ 0.26
150	Retention Ponds	\$ 156,250.00	\$ 156,250.00											\$ 156,250.00	\$ -
160	Waterline	\$ 468,062.00					\$ 116,521.00	\$ 165,758.00	\$ 51,769.00	\$ 83,845.00	\$ 50,169.00		\$ 0.05	\$ 468,062.05	\$ (0.05)
170	Sanitary Sewer	\$ 162,842.50			\$ 131,262.00		\$ 31,580.00						\$ 0.10	\$ 162,842.10	\$ 0.40
180	Storm Sewer	\$ 82,688.75						\$ 35,844.00	\$ 45,642.00	\$ 1,202.00			\$ 0.62	\$ 82,688.62	\$ 0.13
190	Rack Shalk DR/GWW	\$ 1,026,225.25			\$ 7,967.00	\$ 13,075.00					\$ 525,000.00	\$ 50,000.00	\$ 89,225.25	\$ 1,026,225.25	\$ -
200	Overflow Parking	\$ 68,200.00											\$ 68,200.00	\$ -	
210	Parking Lot/Access Roads	\$ 3,821,846.50				\$ 60,828.00	\$ 400,000.00	\$ 1,659,372.00	\$ 1,000,000.00	\$ 500,000.00	\$ 72,230.00	\$ 129,417.05		\$ 3,821,847.05	\$ (0.55)
220	RC Lane/RC Flow-Private Streets	\$ 945,093.00						\$ 118,769.00	\$ 505,000.00	\$ 200,000.00	\$ 50,000.00	\$ 71,314.00		\$ 945,093.00	\$ -
230	Chipse and Seal County Road	\$ 18,000.00												\$ 18,000.00	\$ -
240	Rec Center Pad	\$ 432,250.00		\$ 432,250.00										\$ 432,250.00	\$ -
EXTRA 2	Tennis Courts	\$ 213,565.00											\$ 213,565.00	\$ 213,565.00	\$ -
EXTRA 1	Natural Walking Trails	\$ 401,805.00											\$ 401,805.00	\$ 401,805.00	\$ -
		\$ 9,122,318.00	\$ 565,549.00	\$ 432,250.00	\$ 374,389.00	\$ 329,788.00	\$ 724,014.00	\$ 2,171,150.00	\$ 2,070,049.00	\$ 1,291,371.00	\$ 172,230.00	\$ 358,157.81	\$ 615,370.00	\$ 9,104,317.81	\$ 18,000.19

Check Num	FROM	Routing	TO	Date	Amount
1502	Thomas Fritzel	Bliss Sports LC	Kings Construction Company	2/14/2013	\$ 21,267.00
1507	Thomas Fritzel	Bliss Sports LC	Kings Construction Company	2/14/2013	\$ 30,755.44
1006	Bliss Sports II LLC		Kings Construction Company	4/18/2013	\$ 80,109.76
49363	DFC Company of Lawrence, LC.		Kings Construction Company	5/6/2013	\$ 229,365.74
49369	DFC Company of Lawrence, LC.		Kings Construction Company	5/9/2013	\$ 4,323.60
49521	DFC Company of Lawrence, LC.		Kings Construction Company	6/13/2013	\$ 239,977.44
1010	Bliss Sports II LLC		Kings Construction Company	6/21/2013	\$ 432,250.00
1013	Bliss Sports II LLC		Kings Construction Company	7/10/2013	\$ 374,389.37
1017	Bliss Sports II LLC		Kings Construction Company	8/2/2013	\$ 329,788.16
1021	Bliss Sports II LLC		Kings Construction Company	9/5/2013	\$ 724,014.65
1027	Bliss Sports II LLC		Kings Construction Company	8/29/2013	\$ 2,171,150.34
1032	Bliss Sports II LLC		Kings Construction Company	11/10/2013	\$ 2,070,048.74
1035	Bliss Sports II LLC		Kings Construction Company	12/14/2013	\$ 1,291,371.00
1036	Bliss Sports II LLC		Kings Construction Company	12/27/2013	\$ 172,229.69
1038	Bliss Sports II LLC		Kings Construction Company	4/10/2014	\$ 358,157.81
1043	Bliss Sports II LLC		Kings Construction Company	9/22/2014	\$ 615,370.00
					\$ 9,132,568.74
					\$ 10,250.74
					\$ 28,250.93

*\* Reported Change Order Amt.*

Numbers based on October Memo final cost Exhibit I

\$ 9,104,317.81	BILLED	PAID
\$ 1,860,667.80		
\$ 10,964,985.61	\$ 13,390,217.13	\$ 11,760,093.03

The following information comes directly from Exhibit I. The intent of this data is to compare it against King Construction's draw information and determine what costs were included in the King Construction Contract and what costs are outside the King Construction Agreement.					Information from Exhibit I final Cost Column
General	DESCRIPTION	UNIT	UNIT	TOTAL	
General	Mobilization	LS	1	\$ 400,000.00	\$ 400,000.00
General	Construction Staking	LS	1	\$ 225,000.00	\$ 225,000.00
General	Seeding, Mulching & Fertilizing	AC	20	\$ 1,500.00	\$ 30,000.00
General	Utilities Connection fees and expenses	LS	1	\$ 55,000.00	\$ 55,000.00
General	Traffic Control	LS	1	\$ 5,000.00	\$ 5,000.00
General	Erosion & Sediment Control	LS	1	\$ 40,000.00	\$ 40,000.00
General	Legal Fees per Development Agreement	LS	1	\$ 167,836.00	\$ 167,836.00
General	Loan origination fees for project financing	LS	1	\$ 150,000.00	\$ 150,000.00
General	Loan interest for project financing	LS	1	\$ 309,515.00	\$ 309,515.00
General	Construction Management fee 2.5% on \$11,350,317.65	LS	1	\$ 283,758.00	\$ 283,758.00
General	Professional Engineering Fees	LS	1	\$ 525,000.00	\$ 525,000.00

LOOK AT DESIGN FEE

TOTAL CHARGED TO THE PROJECT NOT UNDER THE KING CONSTRUCTION CONTRACT: \$ 1,860,667.80

*F7.1*  
*WCR*  
*11/12/15*

**NOTE: The following is a summary of costs paid (by Bliss II, Bliss Sports, Thomas F. and DFC)  
The table also shows a summary of attested costs per vendor. This was referenced throughout  
multiple workpapers.**

Row Labels	Sum of Total Attested	PAID		Unpaid	Overpaid
		Sum of Amount			
Alpha Omega Geotech	\$ 84,242.72			\$ 84,242.72	
Approved Paving	\$ 26,085.00	\$ 26,085.00		\$ -	\$ -
Black Hills Energy	\$ 39,750.00	\$ 39,750.00		\$ -	\$ -
DFC Company	\$ 1,403,716.33			\$ 1,403,716.33	\$ -
Earnies Mechanical	\$ 305,530.00	\$ 305,530.00		\$ -	\$ -
Emprise Bank	\$ 713,064.34			\$ 713,064.34	
Gould Evans	\$ 100,000.00	\$ 100,000.00		\$ -	\$ -
Hoss & Brown	\$ 44,000.00	\$ 44,000.00		\$ -	\$ -
Kings Construction	\$ 9,104,318.00	\$ 9,132,568.74		\$ -	\$ 28,250.74
Landplan Engineering	\$ 76,955.98	\$ 77,513.49			\$ 557.51
Mid America Courtworks	\$ 526,600.00	\$ 526,600.00		\$ -	\$ -
Paul Werner Architects	\$ 250,000.00	\$ 250,000.00		\$ -	\$ -
Poisinelli	\$ 212,535.81			\$ 212,535.81	
Qualite	\$ 325,000.00	\$ 325,500.00		\$ -	\$ -
<b>Grand Total</b>	<b>\$ 13,211,798.18</b>	<b>\$ 10,827,547.23</b>		<b>\$ 2,413,559.20</b>	<b>\$ 28,808.25</b>

wcf  
2/26/15  
E2.2

This information came from the vendor payment verification (lien release documents) which outlined the costs by project. The vendor signed an attestation that the amount shown on the document was paid by Bliss Sports.						This documentation accompanied some of the Attestations (canceled checks were provided to validate paid amounts).				CLAIMED BEYOND BACKUP
COMPANY	Category	Recreation Center	Stadium Site	Not Categorized	Total Attested	Payments	Ck #	Date	Payment	
DFC Company	Construction Staking	\$ 50,127.00	\$ 111,573.00		\$ 161,700.00					
DFC Company	Performance Bonds	\$ 50,889.00	\$ 232,112.13		\$ 283,001.13					
Poisinelli	Legal Fees			\$ 212,535.81	\$ 212,535.81					
Emprise Bank	Loan Interest			\$ 554,420.59	\$ 554,420.59					\$ 394,660.95
Emprise Bank	Loan Origination			\$ 151,500.00	\$ 151,500.00					
Emprise Bank	Loan Origination UCC Filing Fees			\$ 95.00	\$ 95.00					
Emprise Bank	BG Consultants			\$ 2,755.75	\$ 2,755.75					
Emprise Bank	Morris Laing Evans (IRB Counsel)			\$ 4,293.00	\$ 4,293.00					
Alpha Omega Geotech	Testing and Inspections	\$ 26,115.24	\$ 58,127.48		\$ 84,242.72					
Gould Evans	Design	\$ 31,000.00	\$ 69,000.00		\$ 100,000.00	Bliss Sports II LLC	1029	10/29/2013	\$ 100,000.00	
Hoss & Brown	Design	\$ 13,640.00	\$ 30,360.00		\$ 44,000.00	Bliss Sports II LLC	1015	7/19/2013	\$ 44,000.00	
Landplan Engineering	Design	\$ 23,856.36	\$ 53,099.62		\$ 76,955.98	DFC Company of Lawrence	49545	6/14/2013	\$ 1,341.54	
Landplan Engineering	Design				\$ -	DFC Company of Lawrence	49359	5/6/2013	\$ 4,179.27	
Landplan Engineering	Design				\$ -	Bliss Sports LC	1930	10/26/2013	\$ 2,203.24	
Landplan Engineering	Design				\$ -	Bliss Sports LC	1005	10/11/2012	\$ 15,225.54	
Landplan Engineering	Design				\$ -	Bliss Sports LC	1007	10/18/2012	\$ 6,000.00	
Landplan Engineering	Design				\$ -	Thomas Fritzel	1526	6/30/2013	\$ 1,320.00	
Landplan Engineering	Design				\$ -	Thomas Fritzel	1513	4/10/2013	\$ 21,653.57	
Landplan Engineering	Design				\$ -	Thomas Fritzel	1501	2/14/2013	\$ 17,353.37	
Landplan Engineering	Design				\$ -	Kansas Secured Title	42656	12/21/2012	\$ 6,125.00	
Landplan Engineering	Design				\$ -	Bliss Sports LC	3875	6/10/2014	\$ 1,176.96	
Landplan Engineering	Design				\$ -	Bliss Sports LC	4206	7/30/2014	\$ 935.00	
Paul Werner Architects	Design	\$ 77,500.00	\$ 172,500.00		\$ 250,000.00	Bliss Sports LC	1021	1/24/2013	\$ 50,000.00	
Paul Werner Architects	Design				\$ -	Bliss Sports II LLC	1028	10/29/2013	\$ 100,000.00	
Paul Werner Architects	Design				\$ -	Thomas Fritzel	1508	2/14/2013	\$ 75,000.00	
Paul Werner Architects	Design				\$ -	Bliss Sports LC	4060	7/2/2014	\$ 25,000.00	
Kings Construction	Mobilization	\$ 124,000.00	\$ 276,000.00		\$ 400,000.00	Thomas Fritzel	1502	2/14/2013	\$ 21,267.00	
Kings Construction	Seeding	\$ 9,300.00	\$ 20,700.00		\$ 30,000.00	Thomas Fritzel	1507	2/14/2013	\$ 30,755.44	
Kings Construction	Traffic Control	\$ 1,550.00	\$ 3,450.00		\$ 5,000.00	Bliss Sports II LLC	1006	4/18/2013	\$ 80,109.76	
Kings Construction	Erosion Control	\$ 12,400.00	\$ 27,600.00		\$ 40,000.00	DFC Company of Lawrence, L	49363	5/6/2013	\$ 223,365.74	
Kings Construction	Site Grading	\$ 263,655.00	\$ 586,845.00		\$ 850,500.00	DFC Company of Lawrence, L	49369	5/9/2013	\$ 4,323.60	
Kings Construction	Retention Ponds	\$ 48,437.50	\$ 107,812.50		\$ 156,250.00	DFC Company of Lawrence, L	49521	6/13/2013	\$ 233,977.44	
Kings Construction	Waterline	\$ 163,821.70	\$ 304,240.30		\$ 468,062.00	Bliss Sports II LLC	1010	6/21/2013	\$ 432,250.00	
Kings Construction	Sanitary Sewer	\$ 50,481.17	\$ 112,361.33		\$ 162,842.50	Bliss Sports II LLC	1013	7/10/2013	\$ 374,389.37	
Kings Construction	Storm Sewer	\$ 41,344.37	\$ 41,344.38		\$ 82,688.75	Bliss Sports II LLC	1017	8/2/2013	\$ 329,788.16	
Kings Construction	Rock Shalk DR/GWW		\$ 1,026,225.25		\$ 1,026,225.25	Bliss Sports II LLC	1021	9/5/2013	\$ 724,014.65	
Kings Construction	Overflow Parking		\$ 68,200.00		\$ 68,200.00	Bliss Sports II LLC	1027	8/29/2013	\$ 2,171,150.34	
Kings Construction	Parking Lot/Access Roads	\$ 1,816,400.25	\$ 2,005,446.25		\$ 3,821,846.50	Bliss Sports II LLC	1032	11/10/2013	\$ 2,070,048.74	
Kings Construction	RC Lane/RC Pkwy-Private Streets		\$ 945,083.00		\$ 945,083.00	Bliss Sports II LLC	1035	12/14/2013	\$ 1,291,371.00	
Kings Construction	Chipe and Seal County Road				\$ -	Bliss Sports II LLC	1036	12/27/2013	\$ 172,229.69	
Kings Construction	Rec Center Pad	\$ 432,250.00			\$ 432,250.00	Bliss Sports II LLC	1038	4/10/2014	\$ 358,157.81	
Kings Construction	Natural Walking Trails	\$ 401,805.00			\$ 401,805.00	Bliss Sports II LLC	1043	9/22/2014	\$ 615,370.00	
Kings Construction	Tennis Courts	\$ 213,565.00			\$ 213,565.00					
Mid America Courtworks	Tennis Courts	\$ 526,600.00			\$ 526,600.00	Bliss Sports LC	4170	7/30/2014	\$ 143,500.00	
Mid America Courtworks	Tennis Courts				\$ -	Bliss Sports II LLC	1042	9/22/2014	\$ 383,100.00	
Black Hills Energy	Gas Line Extension			\$ 39,750.00	\$ 39,750.00	Bliss Sports II LLC	1030	11/9/2013	\$ 39,750.00	
Earnies Mechanical	Parking Lights	\$ 30,000.00	\$ 30,000.00		\$ 60,000.00	Bliss Sports II LLC	1039	7/19/2014	\$ 84,000.00	
Earnies Mechanical	Tennis Lights	\$ 24,000.00			\$ 24,000.00	Bliss Sports II LLC	1020	9/5/2013	\$ 199,377.00	
Earnies Mechanical	Site Utilities	\$ 110,765.00	\$ 110,765.00		\$ 221,530.00	Bliss Sports II LLC	1037	2/6/2014	\$ 22,153.00	
Qualite	Parking Lights	\$ 86,000.00	\$ 86,000.00		\$ 172,000.00	Bliss Sports II LLC	1031	11/10/2013	\$ 325,500.00	
Qualite	Tennis Lights	\$ 153,000.00			\$ 153,000.00					
DFC Company	Trees	\$ 131,812.00	\$ 293,388.00		\$ 425,200.00					
DFC Company	Shrubs	\$ 21,239.65	\$ 47,275.35		\$ 68,515.00					
DFC Company	Entry Sign		\$ 53,200.00		\$ 53,200.00					
DFC Company	Irrigation	\$ 78,312.26	\$ 174,307.94		\$ 252,620.20					
DFC Company	Miscellaneous Added Trees to Scope	\$ 49,438.80	\$ 110,041.20		\$ 159,480.00					

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Approved Paving

Chipe and Seal County Road

\$ 26,085.00

\$ 26,085.00 Bliss Sports II LLC

1041

9/3/2014 \$

26,085.00

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**PAYMENT DETAIL**

Payments	Ck #	Date	Payment
Bliss Sports LC	1005	10/11/2012	\$ 15,225.54
Bliss Sports LC	1007	10/18/2012	\$ 6,000.00
Kansas Secured Title	42656	12/21/2012	\$ 6,125.00
Bliss Sports LC	1021	1/24/2013	\$ 50,000.00
Thomas Fritzel	1501	2/14/2013	\$ 17,353.37
Thomas Fritzel	1508	2/14/2013	\$ 75,000.00
Thomas Fritzel	1502	2/14/2013	\$ 21,267.00
Thomas Fritzel	1507	2/14/2013	\$ 30,755.44
Thomas Fritzel	1513	4/10/2013	\$ 21,653.57
Bliss Sports II LLC	1006	4/18/2013	\$ 80,109.76
DFC Company of Lawrence	49359	5/6/2013	\$ 4,179.27
DFC Company of Lawrence, LC.	49363	5/6/2013	\$ 223,365.74
DFC Company of Lawrence, LC.	49369	5/9/2013	\$ 4,323.60
DFC Company of Lawrence, LC.	49521	6/13/2013	\$ 233,977.44
DFC Company of Lawrence	49545	6/14/2013	\$ 1,341.54
Bliss Sports II LLC	1010	6/21/2013	\$ 432,250.00
Thomas Fritzel	1526	6/30/2013	\$ 1,320.00
Bliss Sports II LLC	1013	7/10/2013	\$ 374,389.37
Bliss Sports II LLC	1015	7/19/2013	\$ 44,000.00
Bliss Sports II LLC	1017	8/2/2013	\$ 329,788.16
Bliss Sports II LLC	1027	8/29/2013	\$ 2,171,150.34
Bliss Sports II LLC	1021	9/5/2013	\$ 724,014.65
Bliss Sports II LLC	1020	9/5/2013	\$ 199,377.00
Bliss Sports LC	1930	10/26/2013	\$ 2,203.24
Bliss Sports II LLC	1029	10/29/2013	\$ 100,000.00
Bliss Sports II LLC	1028	10/29/2013	\$ 100,000.00
Bliss Sports II LLC	1030	11/9/2013	\$ 39,750.00
Bliss Sports II LLC	1032	11/10/2013	\$ 2,070,048.74
Bliss Sports II LLC	1031	11/10/2013	\$ 325,500.00
Bliss Sports II LLC	1035	12/14/2013	\$ 1,291,371.00
Bliss Sports II LLC	1036	12/27/2013	\$ 172,229.69
Bliss Sports II LLC	1037	2/6/2014	\$ 22,153.00
Bliss Sports II LLC	1038	4/10/2014	\$ 358,157.81
Bliss Sports LC	3875	6/10/2014	\$ 1,176.96
Bliss Sports LC	4060	7/2/2014	\$ 25,000.00
Bliss Sports II LLC	1039	7/19/2014	\$ 84,000.00
Bliss Sports LC	4206	7/30/2014	\$ 935.00
Bliss Sports LC	4170	7/30/2014	\$ 143,500.00
Bliss Sports II LLC	1041	9/3/2014	\$ 26,085.00
Bliss Sports II LLC	1043	9/22/2014	\$ 615,370.00
Bliss Sports II LLC	1042	9/22/2014	\$ 383,100.00
			\$ 10,827,547.23

**PAYMENT BREAKOUT**

Bliss Sports II LLC.	\$ 9,942,844.52
DFC Company of Lawrence, LC.	\$ 467,187.89
Bliss Sports LC.	\$ 244,040.74
Thomas Fritzel	\$ 167,349.38
Kansas Secured Title	\$ 6,125.00

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Scope: Test legal fees to determine if the direct cost of the fees related to (or directly benefited) the project (recreation center and infrastructure).

Work Performed: We analyzed (in detail) the first 7 billings for legal fees (\$135k of the total charged). The reason these were selected was because it was prior to Bliss Sports II being created--and the greatest opportunity for non-City related work being charged.

From May 2013 forward, we physically went through each billing listed on the November 5, 2014 Memo from Polsinelli Law Firm, but did not capture the detail in this working paper. From May 2013 forward, we ensured that the description on the billing fit in line with what we would expect to see on the development project (costs benefiting the city)--Those that did not we identified for further review.

Month	Amount	Description	Sub-Amount	Category
Jul-12	\$ 17,566.00	Detail Testing Below		
Aug-12	\$ 15,492.61			
Sep-12	\$ 35,208.00			
Oct-12	\$ 11,705.50			
Nov-12	\$ 506.08			
Dec-12	\$ -			
Jan-13	\$ -			
Feb-13	\$ 23,833.00			
Mar-13	\$ 30,847.75			
Apr-13	\$ 5,276.50	4/8/13 Looked at endowment construction contract addendum and architects fee 2.2 hours \$825	\$ 825.00	CONTRACTING ISSUES
		4/12/13 AIA document review RCP, LLC \$527	\$ 527.00	
		4/13/13 AIA Documents Review \$660	\$ 660.00	
		4/17/13 Review of AIA 103 and A201 GCs \$310	\$ 310.00	
		4/18/13 RCP Construction MGT agreement review \$660	\$ 660.00	CONTRACTING ISSUES
		4/24/13 Review loan documents \$1232	\$ 1,232.00	FINANCING/CORP. STRUCTURE
			\$ 4,214.00	
May-13	\$ 12,295.00	5/3/13 Emprise Loan and Policy Alternatives \$132	\$ 132.00	FINANCING/CORP. STRUCTURE
		5/6/13 Organized bills regarding loan status \$660	\$ 660.00	FINANCING/CORP. STRUCTURE
		5/8/13 Worked on loan documents \$1100	\$ 1,100.00	FINANCING/CORP. STRUCTURE
		5/16/13 Reviewed articles from Lawrence Journal World \$1320	\$ 1,320.00	NEWSPAPER/PR
		5/17/13 Conferences with Lawrence Journal World \$440	\$ 440.00	NEWSPAPER/PR
			\$ 3,652.00	
Jun-13	\$ 10,951.00	6/4/13 Review press release \$660	\$ 660.00	NEWSPAPER/PR
		<b>NOTE: on 6/21/13 They discussed audit requirements under contract between RCP, LLC, Bliss Sports and</b>		
		6/27/13 Review of KU Sublease and assessment waiver \$150	\$ 150.00	KU ENDOWMENT SPECIFIC ISSUE
			\$ 810.00	
Jul-13	\$ 22,361.00	7/2/13 Newspaper Article meeting \$880	\$ 880.00	NEWSPAPER/PR
		7/3/13 Changes to construction fee application \$660	\$ 660.00	
		7/24/13 AIA Addendum Review \$440	\$ 440.00	
		7/29/13 AIA Addendum revisions \$660	\$ 660.00	
		7/30/13 Organized final construction mgt. agreement \$132	\$ 132.00	
			\$ 2,772.00	
Aug-13	\$ 16,065.48	<b>NOTE: on 8/2/13 discussed drafting subcontract between Bliss II and DFC</b>		
		8/6/13 AIA Document review \$660	\$ 660.00	
		8/7/13 AIA Document review \$440	\$ 440.00	
			\$ 1,100.00	
Sep-13	\$ 6,213.39	<b>NO BACKUP SUPPORTING TIME FOR THIS PERIOD</b>		
Oct-13	\$ -			
Nov-13	\$ 138.00	Tested without exception		
Dec-13	\$ 138.00	Tested without exception		
Jan-14	\$ -			
Feb-14	\$ 1,451.00	<b>NO BACKUP SUPPORTING TIME FOR THIS PERIOD</b>		
Mar-14	\$ 506.00	Tested without exception		
Apr-14	\$ 368.00	Tested without exception		
May-14	\$ 1,015.50	<b>NOTE REVIEWED LIEN STATEMENT FROM KING ON 4/8/14</b>		
		4/23/14 Review AIA A101 between City of Lawrence and Gene Fritzel --should this cost be on the infrastructure project?		

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Jun-14	\$	-		
Jul-14	\$	-		
Aug-14	\$	598.00	Tested without exception	
Sep-14	\$	-		
	\$	<u>212,535.81</u>	\$	132,924.73 24367.89
		\$		108,556.84

**Observations:**

<p>A total of \$79,611.08 was billed from Bliss Foundation of Lawrence (before the creation of Bliss Sports II).</p> <p>The following looks at the components of the transaction details for the period prior to Bliss Sports II. The following costs we consider questionable as it relates to infrastructure or recreation center costs:</p>	
\$	11,301.00 TAX
\$	21,621.00 FINANCING/CORP. STRUCTURE
\$	4,338.00 KU SPECIFIC ISSUES
\$	<u>37,260.00</u>
<p>Billings from Feb-Mar 2013 included detail that did not appear directly related to the project.</p>	
\$	2,442.00 TAX
\$	1,760.00 NEWSPAPER/PR
\$	3,430.00 FINANCING/CORP. STRUCTURE
\$	1,012.50 MAINTENANCE
\$	<u>8,644.50</u>
<p>The following identifies potential problems from April 2013 to September 2014--we examined the billing descriptions and determine that these items were potentially outside the scope of direct construction costs.</p>	
\$	1,485.00 CONTRACTING SPECIFIC ISSUES (NEGOTIATION OF ARCHITECT FEE, CORPORATE RISK MANAGEMENT)
\$	3,124.00 FINANCING/CORP. STRUCTURE
\$	3,300.00 NEWSPAPER/PR
\$	150.00 KU ENDOWMENT SPECIFIC ISSUE
\$	7,664.39 BILLINGS LACKED DETAILED BACKUP OR SUPPORT
\$	<u>15,723.39</u>

**CONCLUSION:**

If the development agreement is strictly followed, then Bliss Foundation of Lawrence costs are not defined as "soft costs" to the project. This calls into question \$79,611.08

If Bliss Foundation costs are allowable--we still have questions regarding \$37,260 in costs applied to this project because they seem to fit outside the agreement's terms and conditions.

The billings under Bliss Sports II (Outlined as Reimbursable in the Development Agreement--had some amounts that may have been ancillary to the project (not directly related) and mostly related to one of the Fritzel businesses or advice on how to conduct business. In addition, a few of the most recent billings lacked detail supporting the costs. This adds up to the following:

Billings Feb-Mar 2013	\$	8,644.50
Billings Apr-Sept 2014	\$	<u>15,723.39</u>
	\$	<u>24,367.89</u>

*Report Appendix A  
Issue*

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Scope: Review soft cost billings for the infrastructure in total to evaluate the adequacy of the supporting detail.

WORK PERFORMED: The following data came directly from the Emprise Bank Disclosure on the project's financing. Since this is a Federally insured entity, we are confident that the reporting and systems are accurate enough to provide sufficient detail. The components of these costs were reviewed and compared against the amounts billed to the project.

OBSERVATIONS FROM EMPRISE REPORT ON INTEREST AND PRINCIPLE: Colors correspond to expense summaries listed below the table.

Date	Description	Transaction Amount	Principle	Interest	Principle Balance	Marker
9-May-13	Original Rate	Interest Rate: 4.1250%				
May 9, 2013	NEW NOTE	\$ -	\$ -		\$ -	
9-May-13	UCC FILING FEES	\$ 95.00	\$ 95.00		\$ 95.00	
9-May-13	LOAN ORIGINATION FEE	\$ 150,000.00	\$ 150,000.00		\$ 150,095.00	
10-May-13	ADV TO DDA "6674	\$ 1,535,000.00	\$ 1,535,000.00		\$ 1,685,095.00	*
Jun 05, 2013	Payment - Extra To Principal	\$ 5,730.12	\$ -	\$ 5,730.12	\$ 1,685,095.00	\$ 138,912.00
Jun 18, 2013	BG Consultants 6-12-13 Invoice	\$ 211.00	\$ 211.00		\$ 1,685,306.00	
Jun 19, 2013	Attorney fee to Morris Laing Evans Brock & Kennedy inv dtd 4-30-13	\$ 1,512.00	\$ 1,512.00		\$ 1,686,818.00	
Jun 19, 2013	Attorney Fee to Morris Laing Evans Brock & Kennedy inv dtd 5-31-13	\$ 1,917.00	\$ 1,917.00		\$ 1,688,735.00	
Jun 28, 2013	Draw 2 to dda xxxx6674	\$ 1,037,250.00	\$ 1,037,250.00		\$ 2,725,985.00	*
Jul 05, 2013	Payment - Extra To Principal	\$ 5,721.40	\$ -	\$ 5,721.40	\$ 2,725,985.00	\$ 138,700.61
Jul 10, 2013	Draw for BG Consultants invoice 7-8-13	\$ 204.50	\$ 204.50		\$ 2,726,189.50	
Aug 07, 2013	Payment - Extra To Principal	\$ 10,840.42	\$ -	\$ 10,840.42	\$ 2,726,189.50	\$ 262,798.06
Aug 28, 2013	Draw #3 to dda xxxx6674	\$ 1,267,000.00	\$ 1,267,000.00		\$ 3,993,189.50	*
Sep 12, 2013	Payment - Extra To Principal	\$ 9,550.99	\$ -	\$ 9,550.99	\$ 3,993,189.50	\$ 231,539.15
Sep 13, 2013	Attorney bill Morris Laing Evans Brock & Kennedy Invoice 210579 8-31-13	\$ 324.00	\$ 324.00		\$ 3,993,513.50	
Sep 19, 2013	Draw for BG Consultants Inv 9-10-13	\$ 496.00	\$ 496.00		\$ 3,994,009.50	
Oct 02, 2013	Draw #4 to dda xxxx6674	\$ 1,761,582.34	\$ 1,761,582.34		\$ 5,755,591.84	*
Oct 02, 2013	Payment - Extra To Principal	\$ 15,258.87	\$ -	\$ 15,258.87	\$ 5,755,591.84	\$ 369,912.00
Oct 08, 2013	Draw for BG consultants inv 10.4-13	\$ 80.50	\$ 80.50		\$ 5,755,672.34	
Oct 17, 2013	Attorney Bill Morris Laing Evans Brock & Kennedy Invoice dtd 9-30-13	\$ 540.00	\$ 540.00		\$ 5,756,212.34	
Oct 31, 2013	Draw to wire funds for IRBs	\$ 8,028,787.66	\$ 8,028,787.66		\$ 13,785,000.00	
Oct 31, 2013	Wire from Bank of Oklahoma for IRBs	\$ 8,028,787.66	\$ 8,028,787.66		\$ 5,756,212.34	
Nov 08, 2013	Draw #5 to dda xxxx6674	\$ 2,123,700.00	\$ 2,123,700.00		\$ 7,879,912.34	*
Nov 19, 2013	Automatic Late Charge	\$ 1,077.97	\$ -		\$ 7,879,912.34	
Nov 26, 2013	Payment - Extra To Principal	\$ 21,559.54	\$ -	\$ 21,559.54	\$ 7,879,912.34	\$ 522,655.52
Dec 02, 2013	WAIVED LATE CHARGE PER RHONDA SCOTT	\$ 1,077.97	\$ -		\$ 7,879,912.34	
Dec 09, 2013	Payment - Extra To Principal	\$ 26,956.14	\$ -		\$ 7,879,912.34	
Dec 13, 2013	Draw for BG Consultant inv 11-7-13	\$ 335.00	\$ 335.00		\$ 7,880,247.34	
Dec 17, 2013	Draw for BG Consultants Inc. invoice dtd 12/6/13	\$ 248.00	\$ 248.00		\$ 7,880,495.34	
Dec 17, 2013	Draw #6 to wire to Bank of Oklahoma	\$ 1,450,978.00	\$ 1,450,978.00		\$ 9,331,473.34	*
Jan 06, 2014	Payment - Extra To Principal	\$ 31,379.88	\$ -	\$ 31,379.88	\$ 9,331,473.34	\$ 760,724.36
Jan 14, 2014	Draw for BG Consultants Invoice dtd 1-8-14	\$ 120.75	\$ 120.75		\$ 9,331,594.09	
Jan 31, 2014	Draw #7 wire to Bank of Oklahoma	\$ 950,000.00	\$ 950,000.00		\$ 10,281,594.09	*
Feb 07, 2014	Payment - Extra To Principal	\$ 32,692.46	\$ -	\$ 32,692.46	\$ 10,281,594.09	\$ 792,544.48

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**EMPRISE ASSOCIATES**  
**RCP/EMPRISE INTEREST RATE ANALYSIS**

Feb 13, 2014	Draw for BG Consultants Inc. Invoice dtd 2/7/14	\$785.00	\$ 785.00	\$ 10,282,379.09	
				\$ 10,282,379.09	
Mar 05, 2014	Payment - Extra To Principal	\$33,503.29	\$ -	\$ 33,503.29	\$ 10,282,379.09
Apr 03, 2014	Draw 8 to Bank of Oklahoma	\$1,232,000.00	\$ 1,232,000.00	\$ -	\$ 11,514,379.09 *
Apr 21, 2014	Payment - Extra To Principal	\$36,023.53	\$ -	\$ 36,023.53	\$ 11,514,379.09
May 5, 2014	Interest Payment	\$39,873.87	\$ -	\$ 39,873.87	\$ 11,514,379.09
May 7, 2014	Draw #9 wire to Bank of Oklahoma	\$1,240,000.00	\$ 1,240,000.00	\$ -	\$ 12,754,379.09 *
May 9, 2014	Rate Change	Interest Rate	4.1250%		
May 9, 2014	ORIGINATION FEE	\$1,500.00	\$ 1,500.00	\$ -	\$ 12,755,879.09
	9-May-14 Note Renewal	\$0.00	\$ -	\$ -	\$ 12,755,879.09
	16-May-14 Draw for BG Consultants Inc. kw dtd 5-6-14	\$275.00	\$ 275.00	\$ -	\$ 12,756,154.09
Jun 10, 2014	Draw for interest payment	\$46,411.89	\$ 46,411.89	\$ -	\$ 12,802,565.98 **
Jun 10, 2014	Regular Payment	\$46,411.89	\$ -	\$ 46,411.89	\$ 12,802,565.98
Jul 14, 2014	Advance for loan payment	\$43,405.96	\$ -	\$ 43,405.96	\$ 12,845,971.94
Jul 14, 2014	Regular Payment	\$43,405.96	\$ -	\$ 43,405.96	\$ 12,845,971.94
Aug 05, 2014	Advance for Interest payment	\$44,985.27	\$ -	\$ 44,985.27	\$ 12,890,957.21
Aug 05, 2014	Regular Payment	\$44,985.27	\$ -	\$ 44,985.27	\$ 12,890,957.21
Sep 19, 2014	Advance for payment	\$45,187.91	\$ -	\$ 45,187.91	\$ 12,936,145.12
Sep 19, 2014	Regular Payment	\$45,187.91	\$ -	\$ 45,187.91	\$ 12,936,145.12
Oct 20, 2014	Automatic Late Charge	\$2,190.64	\$ -	\$ 2,190.64	\$ 12,936,145.12
Oct 27, 2014	Draw for Interest payment	\$43,812.88	\$ 43,812.88	\$ -	\$ 12,979,958.00 **
Oct 27, 2014	WAIVE LATE CHARGE	\$2,190.64	\$ -	\$ -	\$ 12,979,958.00
Oct 27, 2014	Regular Payment	\$43,812.88	\$ -	\$ 43,812.88	\$ 12,979,958.00
				\$ 599,517.42	\$ 1,062,130.42

COLOR CODED EXPENSES			
UCC FILING FEES	\$	95.00	\$ 95.00
LOAN ORIGINATION FEE	\$	150,000.00	\$ 1,500.00
BG Consultants	\$	2,755.75	\$ 2,755.75
Attorney Fee	\$	4,293.00	\$ 4,293.00
			\$ 158,643.75

This amount ties to the Loan Origination Fees for project financing

LOAN PRINCIPLE DRAWS	CHECKS PAID	VARIANCE
\$ 12,597,510.34	\$ 10,827,547.23	\$ 1,769,963.11
Expenses through Inter-Company Transfer or GL		\$ 1,700,500.00
		\$ 69,463.11
	LOAN ORIGINATION	\$ (158,643.75)
	INTEREST AS OF THIS REPORT FROM EMPRISE	\$ (599,547.42)
		\$ (688,728.06)

NOT LISTED IN CHECKS PAID  
Unused Variance

**CONCLUSION:** The interest expenses on Exhibit I along with the Loan Origination fees are well documented and justified. Based on our high-level analysis, the project and this financing cost Mr. Fritzel \$688,728 in negative cash flow.

Interest Charged During the Development Agreement Period \$ 544,253.00  
 Loan Origination Fees \$ 158,643.75  
 \$ 702,896.75

Variance between Fees Presented and Fees during contract period \$ 10,167.59

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NOTE: The following looks at the amounts of checks paid by a Fitzel entity and the compared that against the amount of Bank Draws for the project. It is important to note that there were related party (or inter-company transactions) that may constitute some of the variance.

Date	Description	Transaction Amount	Principle Balance	Recorded Draws	Difference Between Checks and Bank Draws
10-May-13	ADV TO DDA #6674	\$ 1,535,000.00	\$ 1,685,095.00	\$ 555,358.29	\$ 979,641.71
Jun 28, 2013	Draw 2 to dda xxxx6674	\$ 1,037,250.00	\$ 2,725,985.00	\$ 667,568.98	\$ 1,349,322.73
Aug 28, 2013	Draw #3 to dda xxxx6674	\$ 1,267,000.00	\$ 3,993,189.50	\$ 749,497.53	\$ 1,866,825.20
Oct 02, 2013	Draw #4 to dda xxxx6674	\$ 1,761,582.34	\$ 5,755,591.84	\$ 3,094,541.99	\$ 533,865.55
Nov 08, 2013	Draw #5 to dda xxxx6674	\$ 2,123,700.00	\$ 7,879,912.34	\$ 202,203.24	\$ 2,455,362.31
Dec 17, 2013	Draw #6 to wire to Bank of Oklahoma	\$ 1,450,978.00	\$ 9,331,473.34	\$ 3,726,669.74	\$ 179,670.57
Jan 31, 2014	Draw #7 wire to Bank of Oklahoma	\$ 950,000.00	\$ 10,281,594.09	\$ 172,229.69	\$ 957,440.88
Apr 03, 2014	Draw 8 to Bank of Oklahoma	\$ 1,232,000.00	\$ 11,514,379.09	\$ 22,153.00	\$ 2,167,287.88
May 7, 2014	Draw #9 wire to Bank of Oklahoma	\$ 1,240,000.00	\$ 12,754,379.09	\$ 358,157.81	\$ 3,049,130.07
		<u>\$ 12,597,510.34</u>		<u>\$ 1,279,166.96</u>	
				<u>\$ 10,827,547.23</u>	<u>\$ 1,769,963.11</u>
					\$ 1,700,500.00 NOT LISTED IN CHECK LEDGER
					<u>\$ 69,463.11</u> Unused Variance
				LOAN ORIGINATION	\$ (158,643.75)
				INTEREST AS OF THIS REPORT FROM EMPRISE	\$ (599,547.42)
					<u>\$ (688,728.06)</u>

UCC FILING FEES	\$	95.00		\$	95.00
LOAN ORIGINATION FEE	\$	150,000.00	\$	1,500.00	\$ 151,500.00
BG Consultants	\$	2,755.75		\$	2,755.75
Attorney Fee	\$	4,293.00		\$	4,293.00
				\$	158,643.75

NOTE: This is a copy of the Fitzel Check Register showing all related draws on the project.

Date	Payments	Ck #	Payment	Recorded Draws
10/11/2012	Bliss Sports LC	1005	\$ 15,225.54	
10/18/2012	Bliss Sports LC	1007	\$ 6,000.00	
12/21/2012	Kansas Secured Title	42656	\$ 6,125.00	
1/24/2013	Bliss Sports LC	1021	\$ 50,000.00	
2/14/2013	Thomas Fritzel	1501	\$ 17,353.37	
2/14/2013	Thomas Fritzel	1508	\$ 75,000.00	
2/14/2013	Thomas Fritzel	1502	\$ 21,267.00	
2/14/2013	Thomas Fritzel	1507	\$ 30,755.44	
4/10/2013	Thomas Fritzel	1513	\$ 21,653.57	
4/18/2013	Bliss Sports II LLC	1006	\$ 80,109.76	
5/6/2013	DFC Company of Lawrence	49359	\$ 4,179.27	
5/6/2013	DFC Company of Lawrence, LC.	49363	\$ 223,365.74	
5/9/2013	DFC Company of Lawrence, LC.	49369	\$ 4,323.60	\$ 555,358.29
6/13/2013	DFC Company of Lawrence, LC.	49521	\$ 233,977.44	
6/14/2013	DFC Company of Lawrence	49545	\$ 1,341.54	
6/21/2013	Bliss Sports II LLC	1010	\$ 432,250.00	\$ 667,568.98
6/30/2013	Thomas Fritzel	1526	\$ 1,320.00	
7/10/2013	Bliss Sports II LLC	1013	\$ 374,389.37	
7/19/2013	Bliss Sports II LLC	1015	\$ 44,000.00	
8/2/2013	Bliss Sports II LLC	1017	\$ 329,788.16	\$ 749,497.53
8/29/2013	Bliss Sports II LLC	1027	\$ 2,171,150.34	
9/5/2013	Bliss Sports II LLC	1021	\$ 724,014.65	
9/5/2013	Bliss Sports II LLC	1020	\$ 199,377.00	\$ 3,094,541.99
10/26/2013	Bliss Sports LC	1930	\$ 2,203.24	
10/29/2013	Bliss Sports II LLC	1029	\$ 100,000.00	
10/29/2013	Bliss Sports II LLC	1028	\$ 100,000.00	\$ 202,203.24
11/9/2013	Bliss Sports II LLC	1030	\$ 39,750.00	
11/10/2013	Bliss Sports II LLC	1032	\$ 2,070,048.74	
11/10/2013	Bliss Sports II LLC	1031	\$ 325,500.00	
12/14/2013	Bliss Sports II LLC	1035	\$ 1,291,371.00	\$ 3,726,669.74
12/27/2013	Bliss Sports II LLC	1036	\$ 172,229.69	\$ 172,229.69
2/6/2014	Bliss Sports II LLC	1037	\$ 22,153.00	\$ 22,153.00
4/10/2014	Bliss Sports II LLC	1038	\$ 358,157.81	\$ 358,157.81
6/10/2014	Bliss Sports LC	3875	\$ 1,176.96	
7/2/2014	Bliss Sports LC	4060	\$ 25,000.00	

WCH  
2/26/15  
F2.3

**EXHIBIT G**

**CITY**

**INSPECTION**

**RECORDS**



# City of Lawrence

## UTILITIES

### Rock Chalk Park Addition No.1 Sanitary Sewer Improvements Project Number #12S014 2013

Contractor: **Kings Construction**

Wednesday 5.8.13      Lo 52      Hi 76      Cloudy      Crew

The Pre-Con meeting for Rock Chalk Park was at 2pm at the City hall conference room.

Friday 5.17.13      Lo 58      Hi 79      Cloudy      Crew 2

Rock Chalk Park – Lonnie is excavating at Sta. 0+00 to connect to sewer main and start working on installing sewer line for the project. Once the main was uncovered the crew started de-watering process. Kevin O'Meara from Custom Concrete Cutting arrived at 11:30am and started core drilling main when that was completed he installed an 8" A-Lok then Lonnie started excavating and installed one joint of pipe then capped end.

Monday 5.20.13      Lo 60      Hi 82      Sunny      Crew 0

No work performed - Lonnie (Kings) called at 7am and said that they were going to move stop working on this project and they were going to Iowa St. until further notice.

Tuesday 5.21.13      Lo 58      Hi 76      Sunny      Crew 0  
No work performed

Wednesday 5.22.13      Lo 53      Hi 70      Cloudy      Crew 0  
No work performed

Thursday 5.23.13      Lo 50      Hi 71      Cloudy      Crew 0  
No work performed

Friday 5.24.13      Lo 58      Hi 73      Sunny      Crew 0  
No work performed

Monday 5.27.13 Lo63 Hi84 Cloudy Crew 0  
Holiday – No work performed

Tuesday 5.28.13 Lo 72 Hi 83 Cloudy Crew 0  
No work performed

Wednesday 5.29.13 Lo 67 Hi 82 Cloudy Crew 0  
No work performed

Thursday 5.30.13 Lo 63 Hi 77 Cloudy Crew 0  
No work performed

Friday 5.31.13 Lo 61 Hi 78 Sunny Crew 0  
No work performed

Monday 6.3.13 Lo44 Hi75 Sunny Crew 3  
Lonnie and crew are back and are installing sewer line from Sta. 0+00 to Sta. 0+70.62. The crew installed line then poured concrete collar in the middle of the line approx. 35' from both MH's. Lonnie took his grade shots and MH A1 was 1' too high to connect to outgoing line to MH A0, He checked his elevations and grade markers then decided to dig up line and re-lay it.

Tuesday 6.4.13 Lo 63 Hi 77 Sunny Crew 3  
The crew is correcting the line between MH A0 and MH A1 and once it was corrected he re-poured concrete collar then set MH A1.

Wednesday 6.5.13 Lo 62 Hi 70 Cloudy Crew 3  
The crew is working on line between MH A1 to MH A2. They installed approx. 300' today.

Thursday 6.6.13 Lo 55 Hi 76 Cloudy Crew 3  
The crew continued toward MH A2 and set it before lunch and are continuing toward MH A3

Friday 6.7.13 Lo 50 Hi 77 Sunny Crew 3  
The crew continued toward MH A3 and set it at 11am. The crew then started excavating for impervious ditch check from Sta. 6+05 to Sta. 6+50 and once it was installed (pics taken) the crew installed inverts in MH's A1, A2, & A3 then stacked out manholes and backfilled.

Monday 6.10.13 Lo54 Hi89 Sunny Crew 3  
The crew is removing excess rock from area and continues from Sta. 6+50, they are forming areas for concrete collars where specified on plans. The 1<sup>st</sup> collar is formed at Sta. 6+75 and 2<sup>nd</sup> at Sta. 7+11 and 3<sup>rd</sup> at Sta. 7+46.

Tuesday 6.11.13 Lo 71 Hi 97 Sunny Crew 3  
The crew continued from 7+46 and formed for concrete collar at Sta. 7+81 and Sta. 8+16 then ran into 2 rock ledges so rock had to be hauled out as they hammered.

Wednesday 6.12.13 Lo 76 Hi 97 Sunday Crew 3  
The crew got through the rock ledges and final form for concrete collar was reached at 11am. The concrete collars were poured from 1pm to 4pm, the wait on concrete trucks extended time. The crew continued toward MH A4, which needs a 2' concrete barrel section since the elevation was changed 2'.

Thursday 6.13.13 Lo 59 Hi 86 Sunny Crew 3  
The crew air and mandrel tested the sewer line from MH A1 to MH A0, MH A1 to MH A2, MH A2 to MH A3 and all passed.

Friday 6.14.13 Lo 63 Hi 93 Sunny Crew 3  
The crew continued testing MH A3 to MH A4 air and mandrel tested then MH's A1, A2, and A3 were vacuum tested and passed.

Monday 6.17.13 Lo 67 Hi 86 Sunny Crew 3  
The crew started at 10am because of rain and started laying pipe from MH A4 to MH A5. The crew installed 112' of 8" PVC SDR-26.

Tuesday 6.18.13 Lo 62 Hi 88 Cloudy Crew 3  
The crew installed the service tee for the Recreation Center at approx. Sta. 10+25 then continued toward Sta. 11+44.59 to install MH A5 which was installed late afternoon.

Wednesday 6.19.13 Lo 68 Hi 86 Sunny Crew 3  
(Late start due to rain) The crew continued laying pipe from MH A5, then prepped poured inverts in MH A5, A3, and A4. They continued laying pipe toward MH A6 and flowable fill is being installed as 3 sections of pipes are laid. (8 yards poured today)

Thursday 6.20.13 Lo 68 Hi 92 Cloudy Crew 3  
The crew continues to install pipe and pour flowable fill as they go and they installed 126' today. (100 yards poured today)

Friday 6.21.13 Lo 72 Hi 94 Cloudy Crew 3  
The crew set MH A6 then continued toward MH B1 installing 28' out of MH A6 then they stopped and poured invert in MH A5 and took elevations of flow lines in MH A0, A3, A4, and A5. They stacked out MH A6, A5, and A4 and 130' yards of flowable fill was installed today.

Monday 6.24.13 Lo 78 Hi 94 Sunny Crew 3

The crew continues out of MH A6 toward MH B1, they have to hammer thru rock and fly ash being applied in the area is slowing down progress. Bob Skinner took shots of MH A1, A2,A3, A4, and concrete collar between MH A0 & A1.

Tuesday 6.25.13 Lo 74 Hi 93 Cloudy Crew 3  
The crew set MH B1 then went back to MH A6 and worked toward MH A7 and installed pipe to within 10' of MH.

Wednesday 6.26.13 Lo 70 Hi 99 Sunny Crew 3  
The crew installed service at Sta.15+03.90 then set MH A7 and poured invert, Stacked out and wrapped MH A-5, A-6 and A-7. Poured flowable fill between MH A-6 and B-1 then went back to MH B1 and started working toward MH B2. The service and MH A7 was shot by Skinner.

Thursday 6.27.13 Lo 68 Hi 87 Sunny Crew 3  
Poured invert for MH B-1. Poured flowable fill. Continued installing pipe from MH B-1 to B-2 JR

Friday 6.28.13 Lo 65 Hi 90 Sunny Crew 3  
Pressured tested and mandrel lines between MH A-4 to A-5, MH A-5 to A-6, MH A-6 to A-7, MH A-6 to B-1, Lines passed mandrel and pressure test. Vac tested MH A-4, A-6 and A-4 passed vac test. MH A-5 Failed vac test. Poured flowable Fill JR

Monday 7.01.13 Lo 57 Hi 84 Sunny Crew 3  
Continued to install sewer pipe between MH B-1 and B-2.  
Retested Vac Tested MH A-5 (passed)  
Poured Flowable Fill JR

Tuesday 7.02.13 Lo 54 Hi 75 Sunny Crew 3  
Continued to install sewer pipe Between MH B-1 and B-2 pipe install completed between manholes,  
Installed 8x8 service and poured invert to MH B-2. Stacked out and wrapped MH B-1 and B-2,  
Poured flowable fill. JR

Wednesday 7.03.13 Lo 55 Hi 88 Sunny Crew 3

Vac tested MH B-1 and B-2 (Passed), Air tested and Mandrel tested Sewer line between MH B-1 and B-2 (Passed) Bob Skinner took shots of 8x8 service and MH B-1 and B-2, Poured Flowable Fill JR

Friday 7.05.13                      Lo 63              Hi 90              Sunny              Crew 2

Talked to Lonnie with Kings Const about straps for MH A-6 – Straps have been ordered and will call when they come in and install JR

07/09/13      Tuesday      Low 75      High 100      Sunny      Crew 4

I attended the meeting at Rock Chalk. I met with Lonnie. He requested inspection for the Zebron coating for two manholes this afternoon. I went to Rock Chalk and inspected the Zebron application on the existing manhole and manhole A3. Lonnie came by to notify me that Dan King had told him to fill in the trench that was a couple feet low of flow able fill. I notified John S. I asked Lonnie to have Dan talk with Dave Cronin since they said that Bill from Public Works thought it was ok to compact. John S was notified of information. KN



# Report of Compaction Tests

RCT 11305

**Alpha-Omega Geotech, Inc.**

1701 State Avenue  
 Kansas City, KS 66102  
 Office: (913) 371-0000 Fax: (913) 371-6710  
 Website: www.aogeotech.com



Job Name: Rock Chaik Sports Complex Job No.: 12-436 Date: 7-19-13  
 Job Address: 6th and George Williams Way City/ State: Lawrence, KS  
 Client: Bliss Sports Contractor: King Excavating  
 Inspector: T. Westbrook Reviewed: [Signature]  
 Specification Requirements: 95% MDD ±3%OMC Source of Spec: Typical  
 Description of Sample: Reddish brown fat clay with trace of organics  
 Gauge No.: 16 Density Standard: 3129.0 Moisture Standard: 476.0

Proctor Results..... Maximum Dry Density, pcf: 95.5 Optimum Moisture Content, %: 23.4

Test Number	1 - 12"	2 - 6"	3 - 12"	4 - 6"	5 - 12"	6 - 6"		
Elev. or Lift #	- 2	- 2	- 1	- 1	final grade	final grade		
% Moisture	20.4	21.0	20.2	21.2	21.5	22.2		
Wet Density	112.2	114.4	112.6	114.8	117.3	114.6		
Dry Density	93.2	94.5	93.7	94.7	96.5	93.8		
% Compaction	97.6	99.0	98.1	99.2	101.1	98.2		
+/- O.M.C.	- 3	- 2.4	- 3.2	- 2.2	- 1.9	- 1.2		

Test Number								
lev. or Lift #								
% Moisture								
Wet Density								
Dry Density								
% Compaction								
+/- O.M.C.								

(Note: All elevations are approximate)

REMARKS: All tests met compaction and moisture specifications

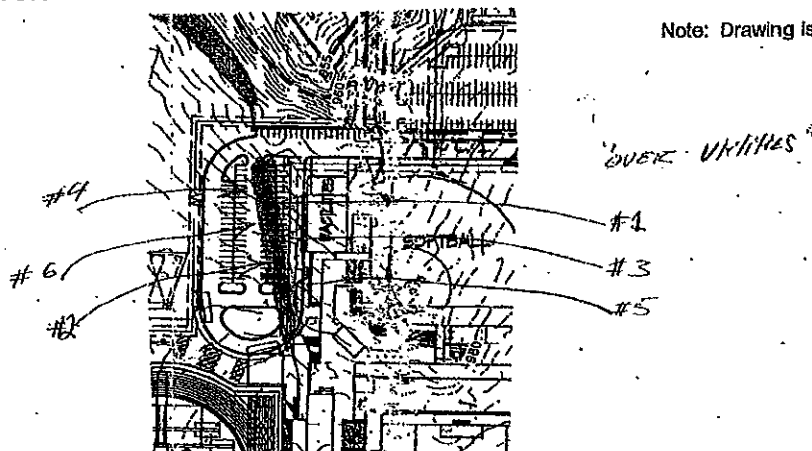
Informed contractor of results. 1 of 1

LOCATION SKETCH

Note: Drawing is not to scale.

LOCATION SKETCH

Note: Drawing is r



4-4b-13 COMP

7-19-13 comp

4-18-2014

Relays Day #3

Busy, busy, busy.

Talked to Don Kings. Called

City NO response - re: North Lot  
Drainage issues.

4-21-2014

NORTH LOT DRAINAGE ISSUES:

NEED CURB INLET, NEED SUBGRADE LOT  
DOWNWARD AND REMOVE FLY ASH THREAT  
SO 9" OF AB3 w/ 7" (INSTEAD OF 5") OF  
PAVEMENT... KINGS - LOTTING GRASS.

DLTS - W/ WITH JOINTS ON ALL  
& SURROUNDING ELEMENTS

SUNFLOWER LEFT SITE AFTER BREF SAMPLE.

TREES: 416 TREES 208 > MERCH

SHRUBS: 48 SHRUBS 24

4-22-2014

Meeting -

TREES - NEED TO BE STRAIGHTENED.

TENNIS COURT - FOOTINGS TO BE POURED

SOON. NEED TO AGREE ON PLAN DESIGN.

LAST DISAGREEMENT OVER WATER FOUNTAIN,  
ADA ISSUES. DISTANCE TO BACKROOM.

RELAYS - 6100 PEOPLE ON SATURDAY  
ESTIMATED BY PARK. LIGHT COMPLAINT FROM  
CITIZEN NORTH OF RCPARK

SWP3 - NEW MZ1 BOX IN PLACE w/  
COPIES OF OLD REPORTS 2T GWW & REP

T.L.O. - OVER, STRICTLY CONSTRUCTION  
SITE UNTIL OTHERWISE NOTIFIED. INTEREST IN  
OPENING TRUCK.

TRAILS - WAITING ON PERMITS FOR  
LOW WATER CROSSINGS & LOT W/ MTR.

MONUMENT SIGN - COST? DESIGN? SIGN  
CODE COMPLIANCE? ADD JAYHAWK & CITY OF LAWRENCE

INFRASTRUCTURE - PUNCH LIST...  
ACCEPT WORK SOUTH OF RCPARKWAY THEN  
NORTHERN SECTION LATER.

TRAILS - CITY COMMISSION WILL APPROVE  
TRAILS & WANT BREAKDOWN OF COST FIRST.

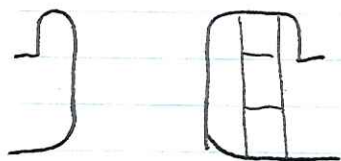
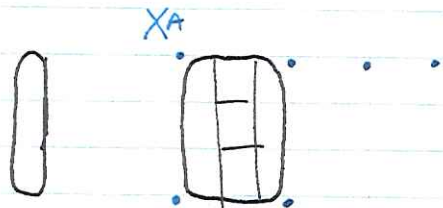
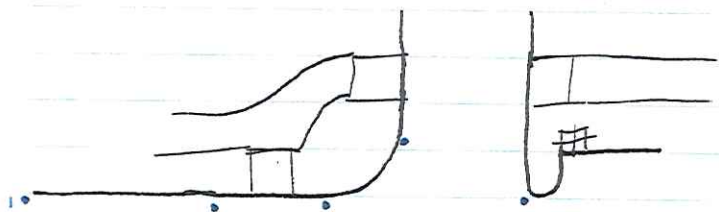
DOLLAR AMOUNT IS IN ORIGINAL BID BUT  
COMMISSION WANTS COMMENT ON COST.

CONCEPTUAL APPROVAL GIVEN, BUT NOT  
FULL APPROVAL DUE TO COST QUESTIONS.

LOW WATER BRIDGE PERMIT WAIT TIME OF  
60 DAYS w/ PUBLIC COMMENT PERIOD.

FIBER - CONDUIT CHANGE ORDER. NEED  
PUBLIC ROW AGREEMENT FOR KU'S CONDUIT.

Next Meeting - MONTHLY... as needed...  
 every other week MAY 6th



SUNFLOWER - POURING CURB  
 ADJACENT TO BUS LANE IN NW LOT.  
 TALKED TO CASEY ABOUT REMOVING  
 PAVEMENT ADJACENT TO ISLANDS  
 CURRENTLY SEWED OFF... CONTINUE W/  
 REMOVAL. CURB ISLAND EAST BUS LANE. <sup>CURB.</sup> NORTH LOT  
 BLISS - WIDENING JOINTS IN NORTH  
 LOT.

4.23.2014

SUNFLOWER - POUR EASTERN CURB  
 BLINDS IN NW LOT. POUR E-W THROUGH  
 LANE IN LOW SPOT IN NORTH SECTION OF  
 NORTH LOT.

4.24.2014 RAN

SUNFLOWER - SAW CUT YESTERDAY'S POUR.

4.25.2014

PARKING LOT LIGHT POLE INSTALLATIONS.  
 SAW CUTTING/WIDENING JOINTS IN N LOT.  
 SUNFLOWER - SAW CUT CENTERLINE JOINT ON 7<sup>th</sup> POUR  
 WHY SECTION OF BUS LANE OPEN TO TRAFFIC.

4-28-2014

WIDENING & JOINT SEALING N LOT.

FORMING REC PATH ALONG DEM.

TALKED TO CASEY ABOUT RELOCATING  
SIDEWALK WHERE WRESTLER WILL DRIVE  
ACROSS, MEASURED PARKING SPACES 18' x 8.5'

4-29-2014

4-30-14

ROUTING & SEALING JOINTS IN NORTH LOT.  
SOUTH LOT LIGHTS PREPARED FOR INSTALL.

5-01-2014

SUNFLOWER - POUR ISLAND CURB IN N LOT, W/DRIVE  
POUR PERMANENT STRIP IN N LOT, NE END

ROUTING & SEALING JOINTS ON R/L NORTH END.

5-02-2014

SUNFLOWER - POUR ISLAND CURB & PAVEMENT IN  
NE SECTION OF N LOT.

BLISS - POUR REC PATH ON DEM...

FIRST TWO LAYS LIME STONE, THIRD LAY GRANITE  
W/ FIBER. NEED TO REMOVE FIRST 100 FT.

LIGHTS - ROLLS (INSTALLING IN NORTH LOT) <sup>(S 1/2)</sup>  
& SOUTH LOTS.

ROUTING / SEALING JOINTS IN NW LOT.

5-05-2014

SUNFLOWER POUR MISC CURB IN N &  
NW LOTS.

BLISS - POUR SIDEWALK IN ISLANDS  
OF N & NW LOTS. BIG ISLAND IN N LOT.

KINGS - GRADING ACCESS ROAD  
BEHIND REC CENTER.

5-06-2014

POUR CURB - SUNFLOWER

FORM RAMPS - BLISS

FLY ASH FILL UNDER DECKING REC - KINGS

WATER HOLE IN NORTH LOT... WATER  
DRAINING FROM FOREST NEAR STREET BOOTH  
TO UNINSTALLED INLET IN NORTH LOT.

5-07-14

BLISS - POUR SIDEWALK RAMP IN  
NORTH LOT. NO VIBRATOR. ;

SUNFLOWER - POUR CURB (MILK)  
REALLY SLOW MUD... PENNY'S SUPER BUSH  
KINGS - ROLL 15% CURB BEHIND RCL

5-08-14

BLISS - POUR FIRE ACCESS BEHIND  
RCL CENTER (1954) UNTIL RAIN. EAST  
KINGS - GRADE FIRE ACCESS  
WEST OF RCL.

SUNFLOWER - POUR CURB & PAVEMENT  
SPOT CUT IN NORTH LOT UNTIL RAIN.

5-09-14

BLISS - POUR FIRE ACCESS BEHIND  
RCL CENTER (2104) WEST  
KINGS - FLY ASH FIRE ACCESS  
WEST OF RCL CENTER.

5-12-14 RAIN.

SCRAPING JOINT SEAL IN S LOT.  
LOTS (10+) TREES BLOWN OVER.  
GUTTER BUDS, PULL THEM OUT.

5-13-14

Measuring quantities. Rec center  
near fire access road cracked to hell...  
ST cracked (transverse). Saw cuts  
wide as for crack sealing... vary  
in depth 1" - 2" on 7" pavement.

FINAL CURB INLET GRADED.

FLY ASH 8-9" w/ 4" ROL... POUR ON TRUCK  
BEFORE CURB TIME COMPLETE... PASSED COMPRESSION  
TESTING THE DAY OF...

5-14-14

SCRAPING EXCESS SEAL OFF SOUTH LOT.  
FIRE ACCESS LANE WEST OF RCL  
CENTER HIGH GRADE & SLOPES NEED TO  
BE CLEARED OFF THE CURB CUT TO THE  
NW LOT.

BREKING TREES ALONG RCL


CHECKED GRADE ON FIRE ACCESS,  
GRADED DOWN 1/2 - 1" & RE-COMPACTED.  
POUR AT NOON. VIBRATOR BROKE DOWN  
MID STROKE A 30 MIN HIZUS TO FIX IT.

5-15-14

SUNFLOWER - POURING SIDEWALK RAMP  
IN NORTH & NW LOT.

BLISS - Saw cutting Fire/Access  
WALL OF REC... Almost complete  
AT 3:00 am... POUR ENDS @ 4:50 PM  
ON WEDNESDAY NIGHT. DEPTH WAS GOOD ON  
JOINTS. ASKED BOTH COBEN'S TO BLEND THEIR  
CONCRETE FOR 40' TEMPS TONIGHT.

5-16-14

BLISS - POUR RETAINING WALL  
FOOTING NORTH OF TENNIS COURTS.  
SPRUE FOOTING, NO 

5-19-14

BLISS - POUR RETAINING WALL FOOTING  
SE OF TENNIS COURTS. FOLLOWING NON-Traffic  
Backfill DETAIL.

SUNFLOWER - Poured a retaining wall.

5-20-14

MEETINGS

PUNCH LIST - Casey Has NOT RECEIVED,  
THOMAS HAS. CHIP & SUE REQ. 80%+. PARKING  
LOT LIGHT NOT YET COMPLETE. STRIP  
BETWEEN REC & FIRE ACCESS NEEDS GRAVEL OR  
CONCRETE OR SOMETHING. TENNIS COURT PLAN  
SET IN PLANNING BUT NOT YET APPROVED.  
STOP WELL WORK UNTIL PLANNING APPROVED  
& GET A BUILDING PERMIT. STOP OUT WATER  
LINE FOR WATER FOUNTAIN (TO BE INSTALLED  
BY LOU). POST TENSORED CONCRETE TENNIS  
COURT. INSPECTED BY...? FIRE ACCESS IN THE  
MUST FOR WELL. FIX CRACKS BEHIND REC.  
REMOVE LIMESTONE REC PATH (100'). POSSIBLE  
APRON BEHIND WAS FOR WEST SIDE HALLS & CONC.  
UMMS MUST DECIDE, PAM WILL TALK TO HARM  
ABOUT OUTLET. REC PATH WAITING ON LOU  
WILL APPROVING AGENCY APPROVALS. NEED FIRE  
FIT INFO... DESCRIPTION ON TRAIL DRAWING,  
NEED OWN DRAWING, NEED BUILDING PERMIT FOR  
SIGN WALL. JUNE/JULY COMPLETION FOR STADIUM  
REVISIONS. TWO ADDONS ATTACHED + WORKS TO BE  
APPROVED & INSTALLED.

5.20.14 CONT'D

BLISS - FORM SDWK ON GWW CURB

5.21.14

BLISS - POUR SDWK ON GWW CURB.

POUR SIDEWALK IN ISLAND TO NORTH LOT.

POUR <sup>N</sup> CURB INLET TARPOT IN NORTH LOT.

RETAINING WALL - FORMING WELLS ON N FOUNDATION.

SMOOTHING NORTH LOT. SIZING NORTH LOT.

FORM RAMP IN ISLAND TO NORTH LOT w/ RUBER.

5.22.14

BLISS - POUR 2 SDWK RAMP IN ISLAND IN NORTH LOT ... NO VIBRATOR. FORM SDWK NE OF REC.

5.23.14 JOSH

BLISS - POUR SDWK EAST OF REC.

5.26.14 Memorial Day

5.27.14

POUR RETAINING WALL w/ NO VIBRATOR (NORTH).

POUR TIND PAVEMENT (CURB) PAVES IN NORTH LOT.

5.28.14

POUR RETAINING WALL SOUTH w/ NO VIBRATOR

REMOVE SDWK ADJACENT TO BUILDING IN WEST LOT.

5.29.14

REMOVE FORMS FROM NORTH RETAINING WALL

FORM SIDEWALK ADJACENT TO BUILDING IN WEST LOT.

5.30.14 - JOSH

REMOVE FORMS FROM SOUTH RETAINING WALL. POUR SIDEWALK ADJACENT TO BUILDING IN WEST LOT.

6:02:14

WIDEN JOINTS IN NORTH LOT.

6:03:14

MEETING-

LOPP PERMIT, NOT DONE YET... WORKING FOR SUKRE. WAITING ON FIRE AT INFO. NEED PLAN DRAWING & DETAILING. START TRAIL CONSTRUCTION AFTER COST APPROVAL OF TRAIL... \$12.50 / SY WITH CITY ESTIMATE AT \$9.50 / SY w/ reimbursement of \$400,000 TOTAL. COMMISSION APPROVES COST & FILE PERMIT INFO HOPEFULLY BY MEETING ON 17TH.

NEED RECEIPTS ON CONSTRUCTION STAMPS.

NEED CONDUIT INFO FOR USE OF ROW, USE OF CONDUIT, COST OF CONDUIT, OWNERSHIP OF CONDUIT? KU OWN ONE & CITY OWNS ONE? LICENSE AGREEMENT W/ KU FOR USE OF CITY CONDUIT? ∴ 2ND CONDUIT BELONGS TO...?

JUNE 23RD, FINAL WALK THROUGH BY CITY OF STADIUM FACILITY. NEED DESIGN FEATURE (MORE THAN WALKED OVER) GUARDING THE PLUNGE POOL.

SIGNS- TO CITY COMMISSION. PERMIT FOR SIGNS & WALLS ON STAN. NEED DESIGN OF MONUMENT.

SIGN W/ ROW CATCHER PILE (92 SFT) & COL & JOYHEWK FOR BUILDING PERMIT FOR WELL AND SIGN PERMIT FOR MONUMENT SIGN. MAY POSSIBLY END WELL PERMIT TO RL PILE PERMITS.

ATTORNEY FROM KU ATHLETICS SAYS COSTS OF COL & JOYHEWK ONLY ON STAN BUT NEED DRAWING. PLANNING NEEDS REVISED SHEETS FOR TENNIS COURTS, DUMPSTER, NW LOT.

CONCRETE FLOOR TO CONNECT DOWNSPOUT TO PERMANENT? OR CONCRETE? CHIP & SEAL - 2-3 WEEKS OUT. BY KNOX BEFORE JULY. NOTIFY NORTH PROPERTY OWNERS PRIOR TO MEETING BY 2 DAY.

TENNIS COURTS - PIZIKU BALL DRINKING FOUNTAIN, UTILITY OUTLETS, PETIO UNDER CONTAINER BUT COURTS WILL BE POST TENSIONED. WATER R. SIDEWALKS WERE "ORIGINAL", PAVED WAS "ADDITIONAL" FOR SPARTAN TO WATCH TOURNAMENTS. ORIGINAL PLAN SHOWED TENNIS COURT W/ NO FOUNTAIN, NO PETIOS, ONLY SIDEWALKS SURROUNDING COURT TO BUILDING. NEEDS TO BE APPROVED TO GET 2 CHANGES & ORDER.





6.03.14 CONT'D

CURB INLET YET TO BE INSTALLED  
WILL DRAIN TO POND. - PAUL ~~WALKER~~

FLUO POLY LIGHTS CONNECTED TO  
BUILDING LIGHTS THAT WILL STAY ON ALL  
THE TIME.

WESTSTAR ACCESS TO LINES... COMPLETED  
POLE WORKED IN DIRT & GRASS.

6.04.14

KINGS - EXCAVATION & GRADING OF  
TENNIS COURT AREA.

SDWK RAMP POWERED...? THE ONE  
w/ 2 HUMP DUE TO IRRIGATION LINE TOO  
HIGH !. REBAR NOT IN RIGHT PLACE.  
NW RAMP OF CURVE OF RCL.

WIDENING JOINTS OF NORTH LOT.

6.05.14 - RAIN

6.06.14

SWEEPING NW LOT FOR SEEDING.

BACKFILLING RETAINING WALLS.

MUTILATED CRIPPLED TREES REMOVED.

FOUND SWP3 MAILBOX... EMPTY.

6.09.14 PM RAIN

GRADING & ROCK OF TENNIS  
COURT AREA. PEELING UP WALL  
FORMS. MOVING LOW DRIPPING TUBES.  
SEEDING NW LOT.

6.10.14 AM RAIN

MOSTLY JUST INDOOR WORK IN THE REC

6.11.14

GRADING TENNIS COURT AREA...

GRIPPING READY TO BELIEVE THE SOUTHERN  
RETAINING WALL?

SWEEPING NW LOT FOR SEEDING.

HEARTLAND MIDWEST - RUNNING CONDUIT  
ALONG WEST SIDE OF GWW FROM RCD TO 6<sup>TH</sup> ST

LEFT YELLOW SIGN MARKING POLE DAMAGED.

INSTALLING BOLT COVERS ON PERIMETER LOT LIGHTS.

WOOD STILL IN DITCH NE OF RCD + LORR

SDWK WEST OF RCL MUDDY.

WALKED ROAD FIRE/ACCESS LINE w/ STARK.

6.12.14

POURING LIGHT POLE BASES IN N & NW LOT

FORM TIE-INS EAST OF RCL

SEEDING NW LOT

6.13.14

GRADING TENNIS COURT.

FORMING CURB ON NE CORNER ON N LOT.  
PREPARING LIGHT POLES AT PREVIOUS

POURED LIGHT POLE BASES. MOUNTING TENNIS COURT  
LIGHTS.

POUR 120 FT TRAIL SE OF REC.

6.16.14

INSTALLING TENNIS COURT LIGHTS.

GRADING TENNIS COURT. FORMING,  
WELD CURBING. PARKING LOT LIGHTS. POOR  
NW LOT, WEST LOT, & NORTHERN N LOT.  
POURED PORTIONS OF NW LOT.

6.17.14

Meeting

PENNY'S CONCRETE TICKETS - ISSUE NOT RECEIVING

ALL OF THEM / CHANGING THINGS W/ WHAT TO OUT? WILL  
BUY TICKETS <sup>FROM BUS</sup> TO COMPARE.

STORM TROOP WHEN OUT. NEED TO CHECK  
BOOKS, TOO.

NEED PAY APP FOR FEW MONTHS.

WORK THROUGH WHATEVER OFFER WORK  
COMPLETE. CHIP & SEAL IN SOON.

TRAIL - RAMP W/ GRASS ON DAM & GRASS ON ENDS

WATERLINE COST FOR LINE TO

DRINKING FOUNTAIN AT TENNIS COURTS.  
TAP OFF MAIN LINE AFTER METER TO  
FIT W/ TWO VALVES.

FILE AT DRAWING, WORKFULLY  
THIS WEEK

FLAG POLE - PURCHASED BY PENNSYLVANIA  
D-U.S.  
TO CITY. WANT TO ENLARGE BY SIDEWALK.

LOW WATER LEAKAGE - NEED 2 FORM  
FOR MORE HYDRAULIC RESEARCH TO BE  
SUBMITTED TO DWR.

CURB EXIST BUILDING TO PUSH  
WATER AWAY FROM BUILDING. EXPOSED AGG?  
GRAVEL? CONCRETE?

TRAIL - LOOK THIS WEEK / BEING  
NEXT WEEK FOR GRADING TRAILS FINISH  
BACKFILLING ON BUILDING & SE CURB ROAD  
BEFORE TRAILS.

TENNIS COURT - POST TENS. DRAWING  
GMP STARTED YESTERDAY. INSPECTED BY LFS FOR  
CITY OF LANCASTER.

GRADING S FIRE/ACCESS ROAD.

TENNIS COURT.

BACKFILLING ISLANDS & TRAIL.  
FORM BUS LANE BY REC.

6-17-14 CONT'D

SOUTH FIRE/ACCESS LAINE GRADED <sup>IMPROVED</sup>  
READY FOR AB3.

BUS LAINE (WEST) POUR 7:30am on Wed.  
FOLLOWED BY CURB AT NE CORNER OF  
NORTH LOT.

CLEANING OUT THROATS ON GRW.

6-18-14

POUR BUS LAINE PULL OUT (WEST)  
8" DEPTH.

GRADE TENNIS COURTS.

FORM CURB ON NE CORNER  
OF NORTH LOT. POUR TOMORROW.

JOINT REEL MISC. EXPOS.

SEW CUT (DRAIN 1" TO 2 1/2")

PATCHES PAVED ON MONDAY.

POUR WATER WARE PATCH IN FRONT  
OF REC CENTER.

LOCATES FIRE STORM KVAW INSTALLATION.  
FORM SINK <sup>WEST SIDE</sup> <sub>ENTRANCE</sub>.

6-19-14 (TUE).

FORM CURB BEHIND BUS LAINE.  
DRIVE ON BUS LAINE PAVED YESTERDAY !!

6-19-14 CONT'D

PULLING WEEDS.  
ELECTRIC LINE NEAR NW <sup>2</sup> OF NEBT.  
TENNIS COURT.

6-20-14

FORMING FIRE/ACCESS SW SIDE OF REC.  
HOPING TO POUR TOMORROW (SAT) <sup>7:30am</sup>

POUR CURB ~~BY BUS LAINE END~~  
THE NE CORNER OF NORTH LOT ~~END~~.  
LOSS OF BACKFILL IN SITE  
GRADING.

GRADING TENNIS COURT.

6-21-14

POUR FIRE/ACCESS ROAD SW SIDE OF REC.

6-23-14

SEW CUTTING JOINTS ON FIRE/  
ACCESS PAVED ON SATURDAY NOT TO  
MY DETAIL.



VERY MUDDY/MUCKY.  
STORM BOX ON SITE.  
GRADING IN FRONT OF REC.

6.24.14

POUR - SDWK - WEST ENTRY TO REC  
# 3 DRIVEWAYS SE OF REC. CURB  
SUBGRADE SHALL TO WET.

6.25.14

POUR - CURB NORTH OF WESTERN  
BUS LANE IN NORTH LOT.

FORM EASTERN BUS LANE.

GRADE IN FRONT OF REC.

MOW GRASS IN EASTERN 2<sup>ND</sup>

JOINT SEZL PRIVATE ROAD.

SLOW CURB FORMING... REPAIR LOT 3<sup>RD</sup>  
OF 1<sup>ST</sup> TRUCK... SOUND TRUCK PAVED OUT  
BUT VERY SLOW TO FINISH.

6.26.14

POUR EXISTING BUS LANE &  
LIE DOWN CURB E OF NORTH LOT.

ENCLOSING IN FRONT OF REC. FORMING CURB  
ALONG BUS LANE. PUMPING WATER OUT  
OF 1<sup>ST</sup> WET 2<sup>ND</sup> SEZLING.

MEETING: THOMAS, CASH, LAMAR, MARK, KANSKI  
CONCRETE ON STEEL TRAIL SECTIONS, LIMESTONE,  
TIMES. A FEW CONCRETE 2000 W/ P.P.E.  
CALL REC ON MONDAY.

6.27.14

CURB - WEST END OF NORTH SIDE  
OF NW LOT. NORTH OF EAST SIDE OF  
NORTH LOT.

GRADING - CURB BEHIND  
NORTH LOT - REC.

BERRY? INSPECTED WEST REC  
INCREASE SDWK... RUNNING GREAT  
MAY BE OKAY, LANSING UP TOP 3<sup>RD</sup>  
SLOPE. 3+%. NEED TO BE < 2%.

FORMING CURB BEHIND EASTERN  
BUS LANE.

POUR - <sup>MAY</sup> GENTLY TO REC.

CASH SAID NO POUR ON SET.

6.30.14

POUR - CURB (LIE DOWN) EASTERN  
BUS LANE IN FRONT OF REC.

FORM & GRADE SIDEWALK BEHIND  
BUS LANE IN FRONT OF REC.

JOINT SEZL.

INSTALL 12" 2T TRUCK BUDGET.

NO WORK ON COUNTY ROAD.

7-01-14

MEETING: Meeting commences w/ Thomas  
on Casey.

PUNCH LIST - NEW LIST 2/10/14 ITEMS COMPLETE

CHIP SEAL - MEETING AT 10 w/ Casey

TRAIL - ADJUSTED LEGS, CONCRETE ON  
STEP SECTIONS, PIPES & CONCRETE AT HIGH  
DRAINAGE AREAS. BACKWATER STUDY OF  
LOW WATER CROSSINGS CHANGING PIPES FROM  
3 FT DIAM. TO 2 FT DIAM TO ALLOW PASSAGE  
OF STRUCTURE SOONER TO REMOVE BULKHEAD.

TENNIS COURT - NEED DRAWINGS SOON.  
SOFT SPOTS IN SUBGRADE. POURING SOON.

SIGN - WELL PERMIT APPROVED, WORKING  
w/ SIGN COMPANY ON DESIGN.

WATERLINE EASEMENT ISSUES...?

BUILDING PERMIT - FINISH ITEMS & PUNCH LIST

EASEMENT/CONDUIT OWNERSHIP/MAINTENANCE

ISSUES NEED TO BE RESOLVED. CITY WILL ACCEPT  
AGREEMENT FOR <sup>KU</sup> TO SIGN... KU OWNS  
FIBER LINE, CITY OWNS FIBER LINE; CITY OWNS  
CONDUIT w/ AGREEMENT FOR KU TO USE IT  
& KU OWNS THE EMPTY CONDUIT OR CITY  
RUNS EMPTY CONDUIT TO OWN...?

→ CONT'D →

REL CENTER MOST - FILL w/ CONCRETE

& DECIDE WHO/HOW TO PAY... INFRASTRUCTURE?

10:30 (CHIP & SEAL

PRIME COST w/ 24 HRS. LEASE?

2 LAYERS OF OIL & CHIP ( $\frac{1}{4}$ - $\frac{1}{2}$ "

MLBOD CUTBACK OIL VS RC800?

23' wide x 2430' = 6725 SY <sup>\$25,650</sup>

28' wide x 2430' = 8182 SY

MIKE - PRIME COST ON VIRGIN RENTERS

NEED CROWN ESTABLISHED 21.

MARK - NEED PROPOSAL FOR PROCS &  
ANY CHANGE IN KDOTS SPECS.

FORM & POUR SIDEWALK IN FRONT  
OF REL BEHIND BUS LANES. 6" w/  
FIBER. EXPANSION & DOWELS BEHIND CURB.

7-02-14

POUR 2 TENNIS COURTS.

FOOTING <sup>GRAVEL</sup> STWAK IN FRONT OF REL.

MUCK OUT, & REPAIR LEAKING  
IMMIGRATION LINE IN NORTH LOT, NE  
ISLAND. STWAK & POWERLINE UNDETERMINED, TO  
BE FILLED w/ RIBWALK.

PUNCH LIST FOR MARK.

7.02.14

FORM SOME 2100 IN FRONT OF REC.  
TENNIS COURT WILL NOW BE. SOUTHWEST  
CORNER BEING FORMED.

FOUNDING FOUNDATION IN 2002 SOUTH OF  
SOFTBALL BUILDING

7.04.14 4TH OF JULY

7.07.14

GRADING BY WEST LOT.  
POUR-FRONT REC LENSEL BULK FORMED  
~~PUT NOT FOR POURING~~

LIGHT POLE IN NORTH LOT.

7.08.14

TREES UNHOOKED FROM STORM.  
TREES, BACKFILLING, ETC.

7.09.14

MORNING LOADS OF CRACKED ASPHALT FOR TREES.  
START EXCAVATING <sup>PIPE</sup> STORM SEWER.  
TREES, BACKFILLING.

7.10.14

<sup>NEARLY</sup> NOTICED, CHECKED CURB AT SOUTH  
CORNER OF NORTH LOT TO REC. PLANT.

STORM SEWER - PLACING HDPE ON  
RAPIOS... NEED WEST BULK & CONCRETE ON  
JOINTS, AND FLOWABLE FILL OVER MOST OF  
THE PIPE & REC PATH WILL GO OVER.

TENNIS COURT FINISH FORMING  
TO PAVE TOMORROW.

TREES - ALONG WEST SIDE OF  
RCLN. MANY CRACKED TREES FULL  
CHECKED.

7.11.14

STORM SEWER, HDPE PIPE  
INSTALLED ON RAPIOS. CONCRETE CURBS  
ON ALL ENDED JOINTS. FLOWABLE  
FILL OVER MOST OF PIPE. BOX  
SET EVEN w/ CURB... FIXING ON  
MOUNTAIN.

7.14.14

FIXING STORM SEWER BOX, NORTH  
BULK 1 FT. TO BROKE LID, ORDERED NEW ONE.  
SMALLER WORK. BACKFILLING TENNIS COURT?

7.15.14

POUR STORM SEWER THROAT ON  
FINAL CURB INLET.

7.16.14

TREES. IRRIGATION. CONNECTING  
GUTTERS TO DRAIN PIPES ON REC CENTER.  
POUL OVERFLOW PARKING ACCESS DRIVES.  
MOVING CRUSHED ASPHALT FOR TRAILS.  
RESULTED RAMP CONSTRUCTION FOR  
REBAR.

7.17.14

PAINTING PARKING STALLS IN  
NORTH LOT.  
MOVING CRUSHED ASPHALT FOR TRAIL.  
NOTICED CURB WAS PARTIALLY ADJACENT IN  
WEST LOT.

7.18.14

LANDSCAPING

7.21.14

LANDSCAPING - SHRUBS, MULCH, FLOWERS, ...  
GRASS, TURF, SOIL, ETC. (HIPSTER ON PLI???)

7.22.14

LANDSCAPING, POUR SIGN FOUNDATION,  
TRAILS, ETC.

7.23.14

FORMING SIGN WELL, TENNIS  
COURT LIGHTS, TRAIL, NOTICED ISLAND  
IN NEED OF FF HAS BEEN LANDSCAPED  
STABILIZING TREES

7.24.14

SIGN WELL FINISHED. TRAIL. TENNIS  
COURT LIGHTS. NOTICED CONCRETE CURB PLACED  
BETWEEN BUILDING & PARKING. DAMAGED? WAS  
FINISHED. GROUND CONCRETE ADJACENT ON FIRE/  
ALUMINUM LINE NORTH OF REC. TRAIL / REC  
PARKING <sup>POUL</sup> GROUND FINISH WEST OF REC  
TO <sup>POUL</sup> DAM, WEST LOT STAGED.

MEETING w/ Dave & Charles

- BIRD SWALE?
- DEAD TREES
- SOUTH LOT - DEEPER DITCH REGRADE
- CLEAN INTERIORS THEN CLEAN PONDS
- COOL GRASS

7.25.14. MEETING w/ Ken & Rick

7-28-14 - 7-31-14 - 8-1-14

WORKING ON PUNCH LIST ITEMS  
FOR SOUTH ZONES... SOAK REMOVAL,  
GROUTING CHIPPED ZONES, MARKING ROADS,  
CONCRETE PAINT, ETC.

8-4-14

POUR SOAK BY TENNIS COURTS.

8-05-14

2640 LFT CHIP & SEAL

EXCAVATING PATCHES ON GUNWORLD.  
CALLED CARP RE: DOUBLE BARS NEEDED ON  
BOTH SIDES OF PATCH.

8-06-14

WALK MIDDLE SECTION. HEIGHTER STANDING  
FOR CITY LOTS. EXCAVATING PATCHES ON GUNW.

8-07-14

FULL DEPTH  
NEW SEW CUTS ON GUNW PATCHES.  
CURB PATCHES <sup>NOTIFIED</sup> ON RCP. FORMING SOAK &  
RAMP BY TENNIS COURTS

8-08-14

POUR PATCHES ON GUNW  
FORM PATCHES ON RED+RL+POUR  
SOAK AT NORTH LOT PATCHES.  
SUBMIT CONSTRUCTION ON RCD.

8-11-14

FORM PATCH AT WEST END OF RCD.  
SEW PATCHES IN WEST LOT.  
EXCAVATE GIANT PATCH ON RCD+GUNW

8-12-14

EXCAVATE GIANT PATCH ON RCD+GUNW  
POUR ABOVE PATCH AND PATCHES AT WEST  
END OF RCD.

POUR SOAK SOUTH OF TENNIS COURTS.

8-13-14

REMOVE PATCHES.

8-14-14

POUR PATCH IN NORTH <sup>WEST</sup> LOT.  
EXCAVATE / FORM SOAK AT CURB WITHOUT  
EXCAVATE SOAK BY SOAK FIELD.

WIP 75-24-29-29-25-24 A/L 26-3 772534



8.15.14

PATCHING, SCREENING, GRADING.

8.18.14

EXCHANGE PATCHES BEHIND REC.  
POUR IN AM.  
MARKED CORE HOLE LOCATIONS.

8.19-25.14

FRI - CORE SAMPLES  
.....

8.26.14

CORE HOLES NEED TO BE REFILLED  
LANDSCAPING, TREES, PATCHING.

8.27.14

MISC.

8.28.14

MISC.

8.29.14

PATCH RCL & UNLB. MARKED CORE HOLES  
TO BE FIXED.

9.2.14 - 9.5.14

MISC. PUNCH LIST ITEMS.

9.8.14

MISC PUNCH LIST ITEMS.

9.9.14

SAW CUT CRACKS IN STREETS.  
OPEN ON MONDAY!

9.10.14

EXCHANGE PATCHES

9.11.14

POUR STREET PATCHES

9.12.14

POUR PARKING LOT PATCH # 4K  
TREES.

9.13.14

PATCHES

9.14.14

PATCHES

9.15.14

PATCHES IN NORTH & NORTHWEST LOT

9.16.14

LANDSCAPING

9.17.14

LANDSCAPING ENTRY SIGN  
KU'S FENCE INSTALLATION

9.18.14

KU'S FENCE  
LANDSCAPING REC ENTRANCE

9.19.14

9.22.14

BACKFILL KU FENCE  
ADD MATERIAL TO PATH BY NORTH POND  
SPOKE W/ CASEY RE RAMP @ LOD

9.23.14

COLES TAKEN ON GMMW.  
LANDSCAPING.

9.24.14

SOD BY SOCCER FIELD  
TALKED TO CASEY ABOUT PUNCH  
LIST: PONDS DREGGED MAYBE  
THIS WEEK, SIDEWALK SQUARES W/  
FOOTPRINT & HOLES, SEPARING JOINTS,  
WOOD RAMP BACKFILL.

9.25.14

SOD ON SOCCER SIDE OF FENCE  
LANDSCAPING ENTRY SIGN AREA

9.26.14

REMOVE SOD RAMP W/ FOOTPRINT.  
TALKED TO AERIAL RE: PAVEMENT  
PATCH & BACKFILL (CLEANING SEWER SEWER).

 VACATION

- COMPLETED ROAD & LOT PATCHES
  - SEALED MUC PATCHES
  - REMOVED TEMP. SEDIMENT BARRIERS  
FROM PONDS... WAITING TO DRY OUT TO GRADE!
  - RE GRADED DITCH SOUTH OF SOUTH LOT.
- WAITING ON SOD

10-09-14

"WALK THRU" PUNCH LIST W/ CASEY & DAVE  
SEALING FINAL PATCHES.

10-10-14



*Trans Invoice No. 138664*

11816 LACKLAND ROAD, SUITE 150 • SAINT LOUIS, MISSOURI 63146 • TEL (314) 997-7440 • FAX (314) 997-2067

*PG No. 007062*

Mark Thiel  
 City of Lawrence Kansas  
 City Hall  
 6 E 6th Street  
 Lawrence, KS 66044

January 17, 2014  
 Project No: J021135.11  
 Invoice No: 94503

*OK per SML*

Project J021135.11 ~~Book Chalk Park~~  
**For Professional Services through December 31, 2013 for the referenced project.**

Task	7110	7110-Concrete Testing - Field			
<b>Professional Personnel</b>					
			<b>Hours</b>	<b>Rate</b>	<b>Amount</b>
Concrete Testing - Field					
	Jeronimus, Robert	11/25/2013	8.25	47.00	387.75
	Concrete Cylinder Pickup ✓				
	Robinett, Brandon	11/26/2013	3.00	47.00	141.00
	Totals		11.25		528.75
	<b>Total Labor</b>				<b>528.75</b>
<b>Unit Billing</b>					
Concrete Cylinders Cast on Site					
	11/25/2013		4.0 Each @ 18.00		72.00
	11/25/2013		4.0 Each @ 18.00		72.00
	11/25/2013 ✓		4.0 Each @ 18.00		72.00
	11/25/2013		4.0 Each @ 18.00		72.00
Vehicle Mileage					
	11/25/2013	Jeronimus, Robert 4125	97.0 Mile @ 0.65		63.05
	11/26/2013	Robinett, Brandon 4099	101.0 Mile @ 0.65		65.65
	<b>Total Units</b>				<b>416.70</b>
					<b>416.70</b>
			<b>Total this Task</b>		<b>\$945.45</b>

Task 9900 9900-Project Management and Administrati

**TERMS: NET 30 DAYS; ON PAST DUE BALANCES, A SERVICE CHARGE WILL BE ASSESSED**

**NOTICE TO OWNER**

FAILURE OF THIS CONTRACTOR TO PAY THOSE PERSONS SUPPLYING MATERIAL OR SERVICES TO COMPLETE THIS CONTRACT CAN RESULT IN THE FILING OF A MECHANIC'S LIEN ON THE PROPERTY WHICH IS THE SUBJECT OF THIS CONTRACT PURSUANT TO CHAPTER 429, R.S.Mo. TO AVOID THIS RESULT YOU MAY ASK THIS CONTRACTOR FOR 'LIEN WAIVERS' FROM ALL PERSONS SUPPLYING MATERIAL OR SERVICES FOR THE WORK DESCRIBED IN THIS CONTRACT. FAILURE TO SECURE LIEN WAIVERS MAY RESULT IN YOUR PAYING FOR LABOR AND MATERIAL TWICE.



11816 LACKLAND ROAD, SUITE 150 • SAINT LOUIS, MISSOURI 63146 • TEL (314) 997-7440 • FAX (314) 997-2067

Project J021135.11 Rock Chalk Park Invoice 94503

**Professional Personnel**

		Hours	Rate	Amount
Coordination/Management				
Damron, Stephen	12/4/2013	.25	95.00	23.75
Reports/Engineering/Data Operations				
Duck, Linda	11/25/2013	.25	45.00	11.25
Duck, Linda	12/5/2013	.25	45.00	11.25
Duck, Linda	12/12/2013	.25	45.00	11.25
Peckham, Jamie	11/26/2013	.25	45.00	11.25
Peckham, Jamie	11/27/2013	.25	45.00	11.25
Peckham, Jamie	12/16/2013	.25	45.00	11.25
Peckham, Jamie	12/27/2013	.25	45.00	11.25
Totals		2.00		102.50
<b>Total Labor</b>				<b>102.50</b>

**Total this Task \$102.50**

**Total this Invoice \$1,047.95**

*acct. 4508*

**TERMS: NET 30 DAYS; ON PAST DUE BALANCES, A SERVICE CHARGE WILL BE ASSESSED**

**NOTICE TO OWNER**

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ALPHA-OMEGA GEOTECH  
 1701 State Avenue  
 Kansas City, KS 66102  
 913-371-0000

**REPORT OF CONCRETE CYLINDER COMPRESSION TESTS**

PROJECT NO.: 13-228 DATE CAST: 5/19/2014  
 PROJECT: Rock Chalk Rec. Center  
 CLIENT: Bliss Sports  
 CONTRACTOR: Fritzel  
 SUPPLIER: Penny's Concrete

**MIX DATA**

DESIGN STRENGTH (Project Plans): 3000 UNIT WEIGHT: \_\_\_\_\_  
 DESIGN SLUMP (Project Plans): \_\_\_\_\_ TYPE OF MORTAR: \_\_\_\_\_  
 ADMIXTURES: \_\_\_\_\_  
 DESIGN STRENGTH (Delivery Ticket): 3000 WATER: \_\_\_\_\_  
 DESIGN SLUMP (Delivery Ticket): 4" CEMENT: \_\_\_\_\_  
 DESIGN MIX CODE (Delivery Ticket): 30-564F1 FINE AGGREGATE: \_\_\_\_\_  
 COARSE AGGREGATE: \_\_\_\_\_

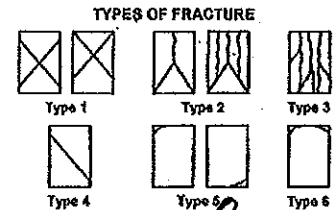
**CYLINDER DATA**

LOCATION OF POUR: footing; s.e. retaining wall footing  
 WEATHER: 70° F overcast CYLINDER SIZE: 4x8  
 TRUCK NO./TICKET NO.: 195-1094018 SLUMP: 6.5"  
 YARDS OF CONCRETE IN DELIVERY: 10 AIR CONTENT: NT  
 GAL OF WATER ADDED AT SITE: 0 CONCRETE TEMP.: 74° F  
 DISP./TEST TIME: 1:52PM / 2:20 PM UNIT WEIGHT: NT  
 CYLINDERS MADE BY: TW PICKED UP BY: AOG

CYL. NO.	AGE, DAYS	LABORATORY NUMBER	DATE REC'D	DATE OF TEST	CRUSHING, LOAD LBS.	PSI	FRACTURE	REPORT DATE
1	8	13-228 5-19 A	5/20/2014	5/27/2014	62,920	5,010	4	5/27/2014
2	28	13-228 5-19 A	5/20/2014	6/16/2014	75,820	6,030	4	6/16/2014
3	28	13-228 5-19 A	5/20/2014	6/16/2014	79,060	6,290	4	6/16/2014
4	28	13-228 5-19 A	5/20/2014	6/16/2014	74,240	5,910	4	6/16/2014
5	'0	13-228 5-19 A	5/20/2014					

FRACTURE CODE: C-CONE, CSP-CONE & SPLIT, CSH-CONE & SHEAR, S-SHEAR, COL-COLUMNAR

CC:



REMARKS:

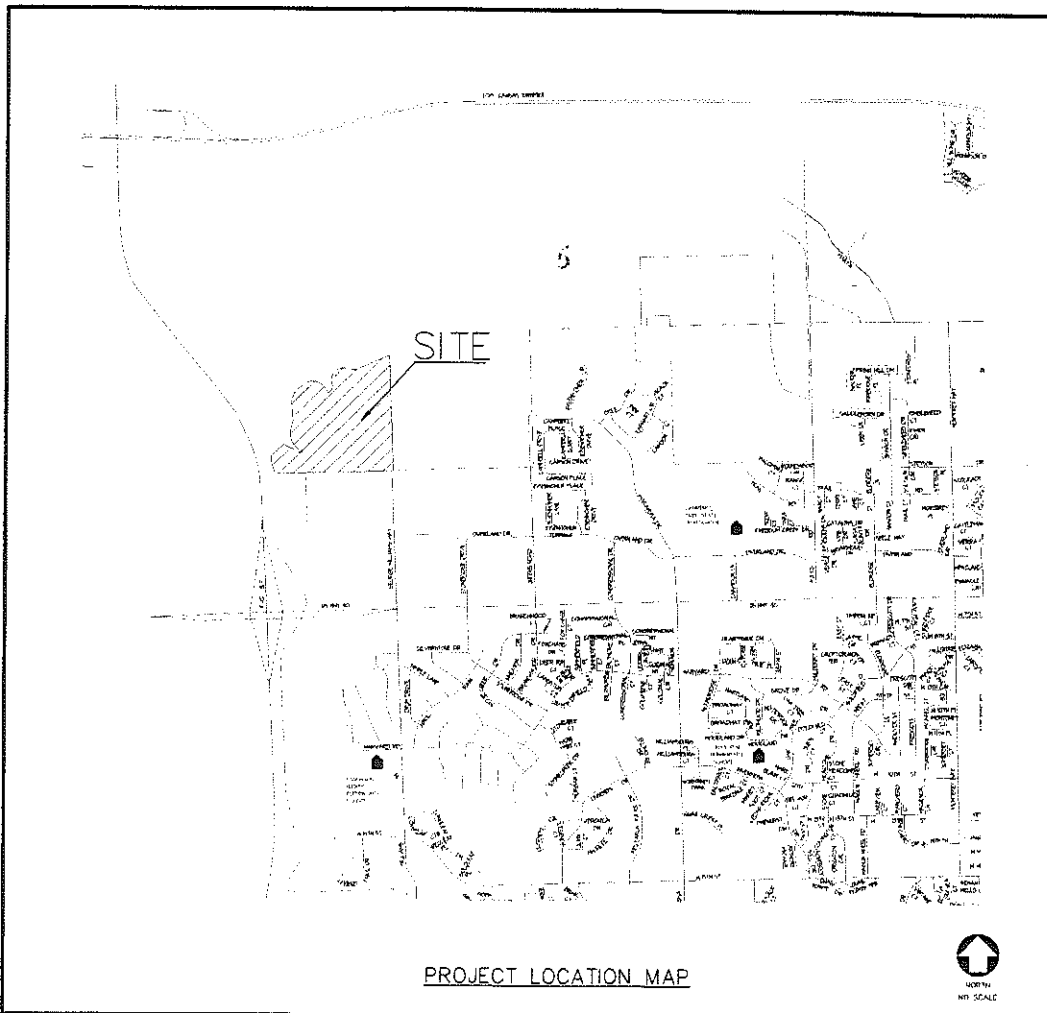
ORIGINAL SIGNED BY: [Signature]

# ROCK CHALK PARK ADDITION NO.1 SANITARY SEWER IMPROVEMENTS

CITY PROJECT NO:  
**12S014**  
 LAWRENCE, KANSAS


INDEX OF DRAWINGS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES/GENERAL LAYOUT & QUANTITIES
3-5	SANITARY LINE PLANS & PROFILES
6-7	CITY STANDARD DETAILS




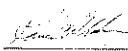
PROJECT LOCATION MAP

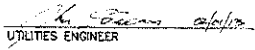
UTILITY INFORMATION	PHONE NUMBER	CONTACT	FAX	EMAIL
DIG SAFE	1-800-344-2233	JOHN SHELLAK	316-687-0029	KODDCCDD.COM
UTILITIES DEPARTMENT	832-7800	DAVID GROWN	832-3388	JOHN@KODDCCDD.COM
PUBLIC WORKS DEPARTMENT	832-3123	MARK THEIL	832-3388	JOHN@KODDCCDD.COM
PUBLIC WORKS INSPECTION DEPT:	832-3123	KEVIN GATHEMER	785-275-6100	M@THEIL@KODDCCDD.COM
AT&T TELEPHONE	785-275-1145	HARRY WATKINS	832-6242	KODDCCDD@KODDCCDD.COM
EMULOGY	312-6922	MIC SOLIDA	832-4674	JAMES@EMULOGY.COM
WESTAR	800-4867	TOMMY JOHNSON	832-3907	MILE@WESTAR.ENERGY.COM
BLACK HILLS ENERGY	832-3943			TOMMY@BLACKHILLS.ENERGY.COM

  
**Landplan Engineering, P.A.**  
 Civil Engineering  
 Landscape Architecture  
 Community Planning  
 Surveying


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 Lawrence, Kansas 66049  
 Fax: (785)243-1535  
 Tel: (785)243-2410  
 email: landplan@aol.com

  
 PROJECT ENGINEER

  
 KDHE

  
 UTILITIES ENGINEER

DATE RELEASED FOR CONSTRUCTION

  
**paulwerner**  
 ARCHITECTS

123 W. 8TH STREET  
 SUITE 82  
 LAWRENCE, KS 66044

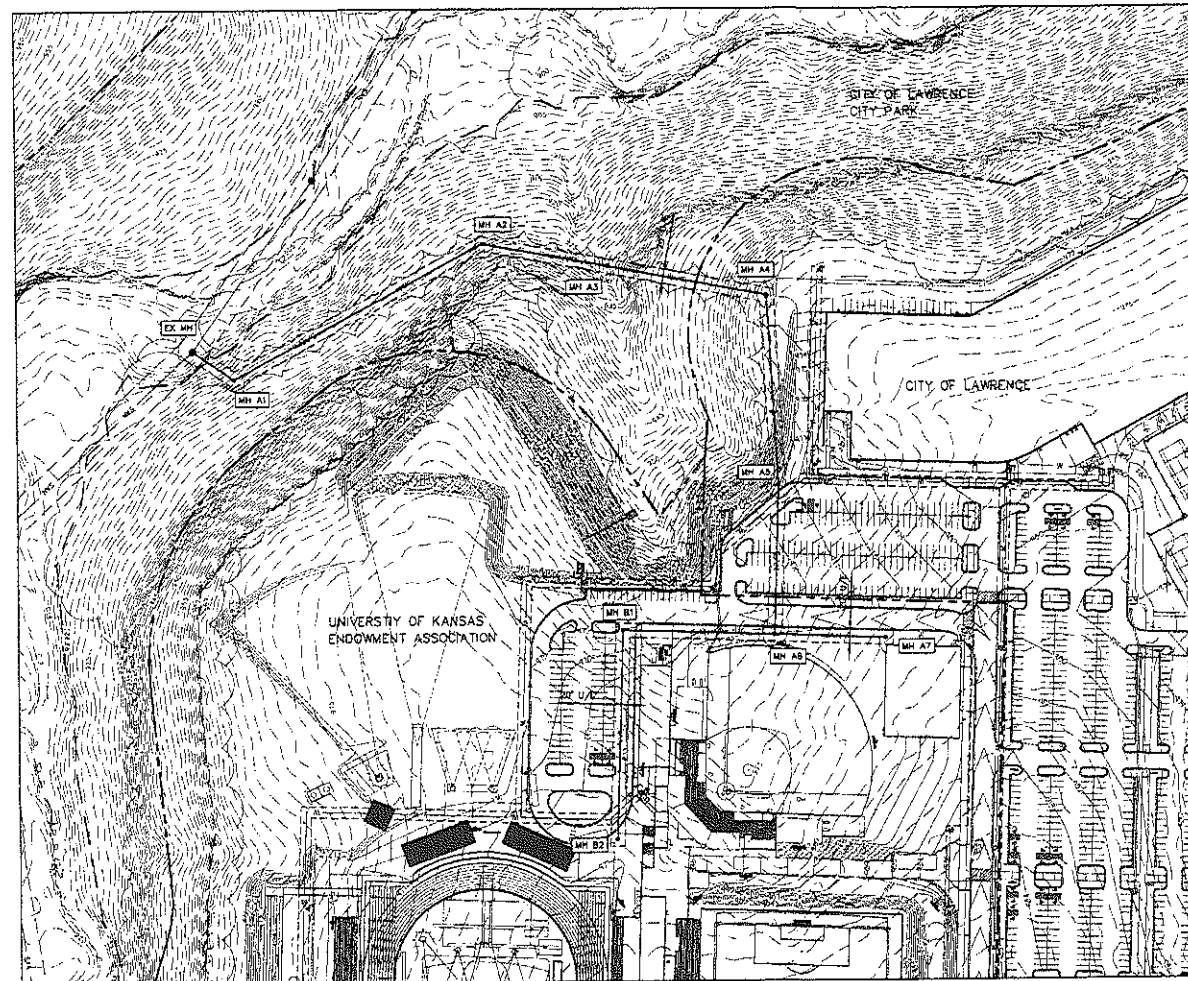
OFFICE: 785.632.0804  
 FAX: 785.632.0800

DEVELOPER:

BLISS SPORTS L.L.C.  
 643 MASSACHUSETTS,  
 STE. 300  
 LAWRENCE, KS 66044  
 785-841-6346  
 thomas@gfritzel.com

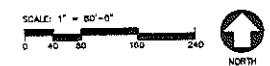
PROJECT #212-140 OCTOBER 10, 2012	RELEASE DATE: 1.0 12.17.12 1.1 1.16.13 1.2 1.28.13
SHEET 1 OF 7	

Rock Chalk Park - Sewer



### GENERAL NOTES

- PLANS ARE INITIALLY APPROVED FOR A PERIOD OF ONE (1) YEAR AFTER WHICH THEY AUTOMATICALLY BECOME VOID AND MUST BE UPDATED AND RE-APPROVED BY THE CITY BEFORE ANY CONSTRUCTION WILL BE PERMITTED.
- THE CITY OF LAWRENCE PLANS REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH CITY OF LAWRENCE DESIGN CRITERIA AND CITY ZONING. THE CITY OF LAWRENCE IS NOT RESPONSIBLE FOR THE ACCURACY OR ADEQUACY OF THE DESIGN. THE CITY OF LAWRENCE THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY OTHER THAN STATUTORY AND/OR THE COMPLETENESS AND/OR ACCURACY OF THE DOCUMENT.
- THE CONTRACTOR SHALL HAVE ONE (1) BOUND COPY OF THE PLANS (APPROVED BY THE CITY OF LAWRENCE WITH A STATE APPROVAL STAMP ON THE TITLE SHEET AND ONE (1) COPY OF THE CURRENT CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR SANITARY SEWERS ON-SITE AT ALL TIMES DURING CONSTRUCTION.
- THE CITY OF LAWRENCE TECHNICAL SPECIFICATIONS, LATEST EDITION AND CITY OF LAWRENCE CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 2900 - SANITARY SEWERS (8" TO 18" MAINS), LATEST EDITION, SHALL GOVERN CONSTRUCTION OF THIS PROJECT.
- CONTRACTOR SHALL NOT BE ALLOWED TO WORK SUNDAYS, HOLIDAY OR SATURDAY WORK SHALL BE AS APPROVED BY THE UTILITIES ENGINEER.
- THE UTILITY INFORMATION SHOWN HEREIN IS BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. THE CONTRACTOR SHALL VERIFY ALL UTILITY DEPTHS AND LOCATIONS PRIOR TO CONSTRUCTION AND CORRECT ANY NECESSARY RELOCATIONS. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF SAME SHALL BE REPAIRED AND REPLACED BY THE CONTRACTOR AT HIS ADDITIONAL EXPENSE TO THE PROJECT.
- CONTRACTOR SHALL CALL 1-800-DIG-DIRT PRIOR TO ANY PROJECT EXCAVATION.
- WHERE EXISTING UTILITIES AND SERVICE LINES ARE TO BE ENCOUNTERED, THE OTHER THEREOF SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 48 HOURS IN ADVANCE OF PERFORMING ANY WORK IN THE VICINITY.
- RELOCATION OF ANY WATER LINE, SEWER LINE OR SERVICE LINE THEREOF REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT HIS EXPENSE.
- THE CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AND IS RESPONSIBLE FOR ANY REDIRECTING NECESSARY DURING CONSTRUCTION.
- ALL SIGNING, SAFESIGES, AND DEVICES UTILIZED IN TRAFFIC CONTROL SHALL BE PROVIDED, ERECTED, AND MAINTAINED BY THE CONTRACTOR. TRAFFIC CONTROL SHALL BE IN CONFORMANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
- ALL WATER REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE PURCHASED FROM THE CITY OF LAWRENCE UTILITIES DEPARTMENT THROUGH THE USE OF A FINE, INSTANT WATER METER. METERS CAN BE OBTAINED FROM THE UTILITY DEPARTMENT FOR A NOMINAL DEPOSIT, REFUNDABLE UPON THE RETURN OF THE METER.
- CONSTRUCTION STAKING IS TO BE PROVIDED BY THE CONTRACTOR. SURVEY STAKES, BENCHMARKS, AND PROPERTY PINS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
- ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE REVEGETATED, SEEDING, AND MULCHED BY THE CONTRACTOR IN ACCORDANCE WITH CURRENT CITY OF LAWRENCE TECHNICAL SPECIFICATIONS, LATEST EDITION.
- ALL UTILITIES FEATURES DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED BY THE CONTRACTOR TO ORIGINAL CONDITION.
- WHEN BLASTING IS PERMITTED BY LAWRENCE-DODDAS COUNTY FIRE AND MEDICAL SERVICES, THE CONTRACTOR SHALL USE THE UTMOST CARE TO PROTECT LIFE AND PROPERTY. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, AND THE APPLICABLE SAFETY CODE, REGULATIONS AND REGULATIONS RELATIVE TO THE HANDLING, STORAGE AND USE OF EXPLOSIVES AND PROTECTION OF LIFE AND PROPERTY, AND HE SHALL BE RESPONSIBLE FOR ALL DAMAGES INCURRED CAUSED BY HIS OR HIS SUBCONTRACTOR'S OPERATIONS.
- THE CONTRACTOR SHALL PROVIDE INSURANCE AS REQUIRED BY THE GENERAL PROVISIONS AND COVENANTS AND SPECIAL PROJECT SPECIFICATIONS BEFORE PERFORMING ANY BLASTING. THE PROVIDING AGENCY SHALL BE NOTIFIED AT LEAST 74 HOURS BEFORE BLASTING OPERATIONS BEGIN.
- IN AREAS TO BE GRADED FOR STREET AND STORM IMPROVEMENTS, ALL EXPOSED MANHOLES SHALL BE BACKFILLED TO WITHIN 1" OF THE TOP OF RIM AT A 2:1 (HORIZONTAL:VERTICAL) MAXIMUM SLOPE. BACKFILL TO BE PLACED PER CITY SPECIFICATIONS. POSITIVE DRAINAGE SHALL BE MAINTAINED AWAY FROM MANHOLES.
- THE CONTRACTOR SHALL METEAL AND PROPERLY MAINTAIN A MECHANICAL FLUID AT ALL CONNECTION POINTS WITH EXISTING LINES WITHIN EACH TIME THAT THE NEW LINE IS TESTED AND APPROVED.
- DURING A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE CITY, THE CITY SHALL PERFORM A VIDEO INSPECTION ON THE SANITARY SEWER LINE INSTALLED UNDER THIS CONTRACT. PER RESOLUTION NUMBER 2014-014, LATEST EDITION, THE INSPECTION FEE IS REQUIRED FOR THE REPAIR. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS NEEDED AS DETERMINED FROM THE VIDEO INSPECTION.
- INSPECTION FEES ARE TO BE PAID BY THE DEVELOPER.
- ALL CLEANING, GRUBBING AND TREE REMOVAL NECESSARY TO ACCOMPLISH THE PROJECT SHALL BE OBLIGATORY TO OBTAIN PERMITS FOR SANITARY SEWER CONSTRUCTION. ALL CLEARING SHALL BE PERFORMED WITH THE INTENT TO PRESERVE AS MUCH NATURAL FLORA AS FEASIBLE. ALL CLEARING DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR ON SITE IN ACCORDANCE WITH THE CITY OF LAWRENCE MAJOR REGULATIONS. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE JOBSITE INSPECTION PRIOR TO SUBMITTING BID.
- THE PRICE BID PER LINEAR FOOT OF SANITARY SEWER LINE SHALL INCLUDE PIPE MATERIAL, ADEQUATE EQUIPMENT, FRESHING, BACKFILL AND ALL OTHER LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. ALL WEIGH EQUIPMENT SHALL BE UNLASHED. EXCESS ROCK EXCAVATED SHALL BE HAULED OFF SITE BY THE CONTRACTOR TO A LOCATION PROXIMITY BY THEIR EXPENSE.
- THE SANITARY SEWER FLOWLINE ELEVATIONS SHOWN IN THE PROFILES ARE TO THE CENTERS OF THE MANHOLES. PIPE LENGTHS ARE BASED ON THE DISTANCE BETWEEN THE MANHOLE CENTERS.
- BY USE OF THESE PLANS, THE CONTRACTOR AGREES THAT HE OR SHE SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF THE CONSTRUCTION WORKERS AND THE PUBLIC.



### BENCHMARKS/CONTROL POINTS

- BENCH MARKED SQUARE ON THE SOUTH END OF A REINFORCED CONCRETE BOX CONC UNDER N-10TH RD IS ON THE EAST SIDE OF V-15 AND THE EAST SIDE OF THE FRONTAGE ROAD (E205) AND IS APPROXIMATELY 3300' NORTH OF HWY 80. THE MARK CAN BE FOUND ON THE SOUTHEAST CORNER OF THE HEADWALL. ELEVATION = 858.67
- BENCH MARKED "X" ON THE NORTH RIM OF A SANITARY MANHOLE. MANHOLE IS KNOWN BY THE CITY OF LAWRENCE AS 18022191-073. ELEVATION = 860.67
- BENCH MARKED "X" ON THE SOUTH RIM OF A SANITARY MANHOLE. MANHOLE IS KNOWN BY THE CITY OF LAWRENCE AS 18022191-072. ELEVATION = 863.13
- BENCH IS A RAILROAD SPINE DRIVEN INTO THE WEST FACE OF A POWER POLE. THE POLE IS LOCATED APPROX. 325' NORTH OF THE CURRENT NORTH END OF GEORGE WILLIAMS WAY. ELEVATION = 860.33
- BENCH IS A RAILROAD SPINE DRIVEN INTO THE SOUTHWEST CORNER OF THE FIRST CURB INLET SOUTH OF PROPOSED OVERLAP DRIVE ON THE EAST SIDE OF GEORGE WILLIAMS WAY. ELEVATION = 1001.39
- BENCH IS A RAILROAD SPINE DRIVEN INTO THE SOUTH FACE OF A POWER POLE. THE POLE IS LOCATED APPROX. 1800' NORTH OF THE CURRENT NORTH END OF GEORGE WILLIAMS WAY. ELEVATION = 848.44

### SYMBOL LEGEND

---	STORM SEWER LINES	□	WATER METER
---	TELEPHONE LINES	○	PIPE COLLAR
---	UNDERGROUND TELEPHONE LINES	□	SANITARY MANHOLE
---	ELECTRIC LINES	□	STORM BOX
---	DIVIDED ELECTRIC LINES	□	TELEPHONE MANHOLE
---	UNDERGROUND ELECTRIC LINES	□	TELEPHONE BOX
---	GAS LINES	□	WATER METER
---	RIGHT OF WAY LINES	□	PROPERTY CLAMOR FOUND AS NOTED
---	FENCE LINE	□	STONE
---	PROPERTY LINES	□	CONCRETE
---	ADJACENT PROPERTY LINES	□	BRICK
---	EXISTING CONTOUR GRADING	□	GAC WATER
---	PROPOSED CONTOUR GRADING	□	UTILITY POLE
---	DRAINAGE DIRECTIONAL ARROWS	□	SIGNAL POLE
---	FIRE HYDRANTS	□	SUV ANCHOR
---	MANN-HOLE	□	WATER VALVE
---	WATER LINES	□	
---	SANITARY SEWER LINES	□	

### SUMMARY OF QUANTITIES

ITEM	UNIT	QUANTITY
1. 8" SDR 26 PNC W/ROUNDULAR EXHAUSTION	LINEAR FOOT	2079
2. STD MANHOLE (14" DIA, 8' DEPTH)	EACH	2
3. EXTRA DEPTH (14" DIA MANHOLE)	EACH	1
4. GROUP MANHOLE (10" DIA, 8' DEPTH)	EACH	1
5. EXTRA DEPTH (10" DIA MANHOLE)	EACH	3
6. 8" SERVICE LINE	LINEAR FOOT	1
7. CONNECT TO EXISTING MANHOLE	EACH	1
8. CONCRETE COLLARS	EACH	1
9. FLEXIBLE MOUNTAIN BACKFILL	CY	470
10. SEED, FERTILIZER AND MULCH	L.S.	1
11. CONSTRUCTION STAKING	L.S.	1
12. EROSION CONTROL	L.S.	1
13. CONCRETE ENCASUREMENT	L.S.	1
14. IMPERMEABLE DITCH LINING	L.S.	1
15. POLYURETHANE MANHOLE CHECK	L.S.	1

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## ROCK CHALK PARK ADDITION SANITARY SEWER GENERAL LAYOUT & NOTES

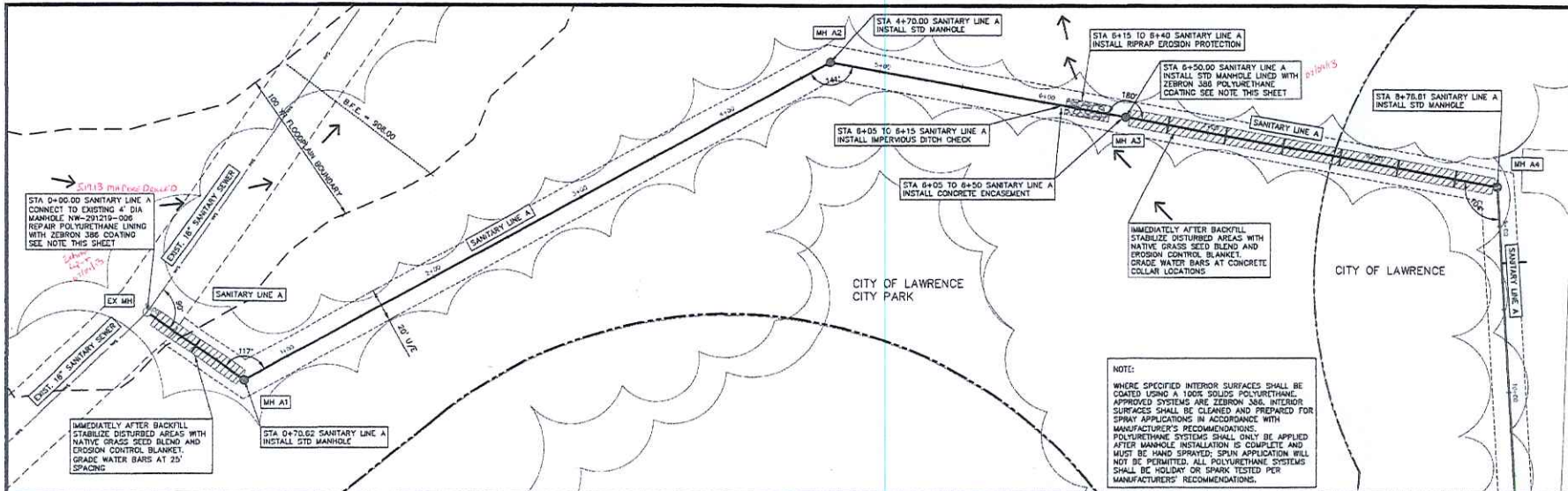


PROJECT #212-140  
 OCTOBER 11, 2012

RELEASE: DATE:  
 1.0 12.12.12  
 1.1 1.16.13  
 1.2 1.28.13  
 1.3 3.6.13  
 1.4 5.22.13

SHEET  
 2 OF 7



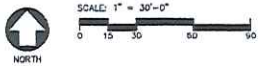


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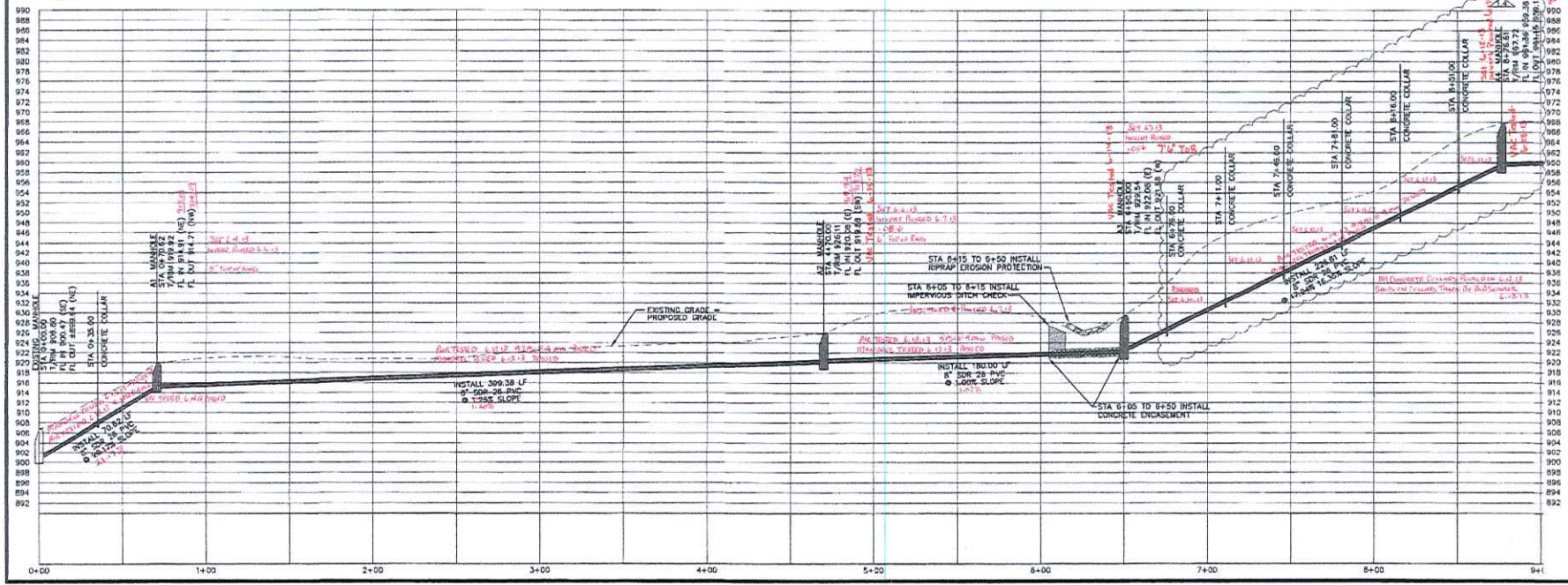
**Landplan Engineering, P.A.**

**paulwerner**  
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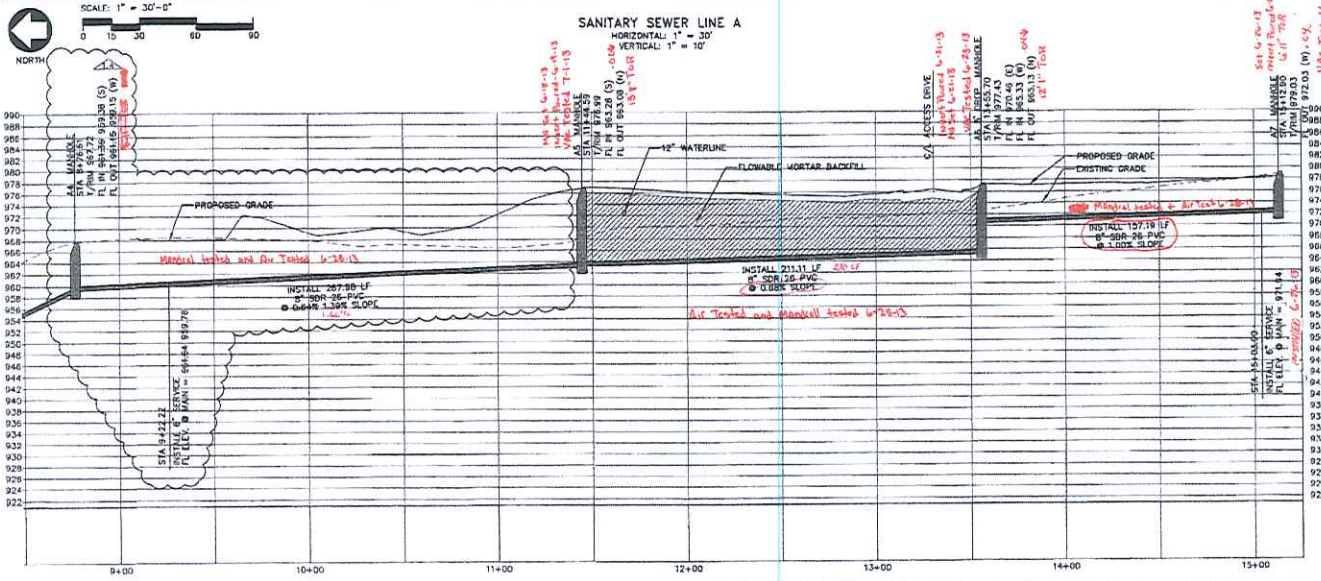
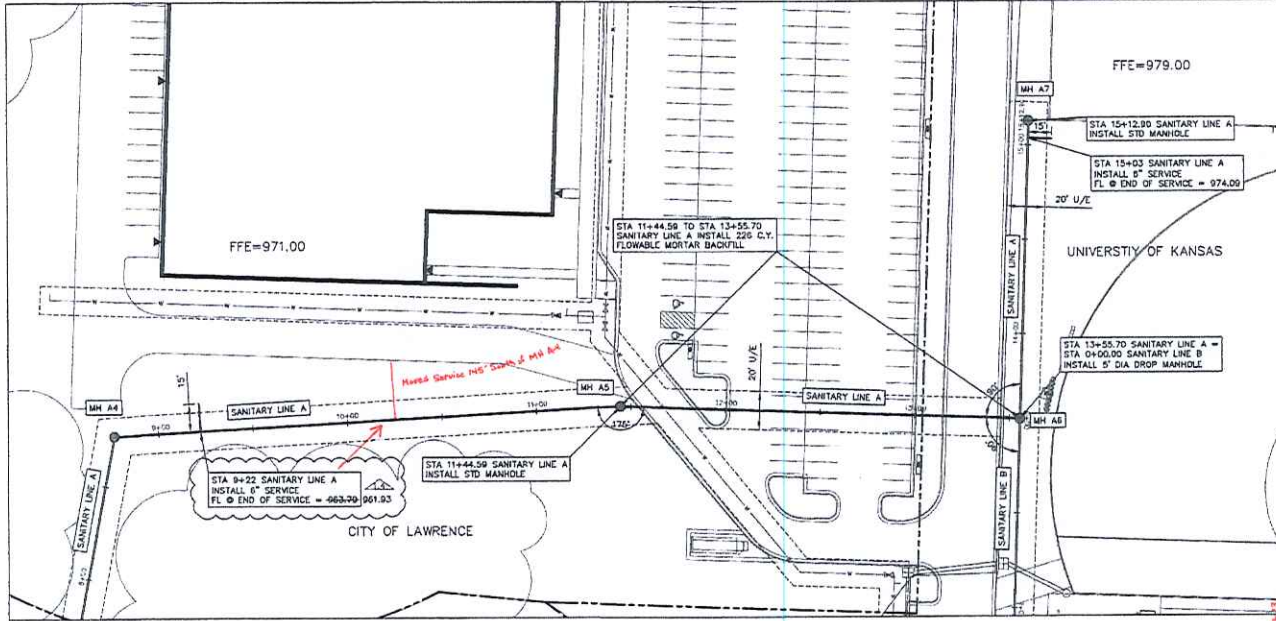


**SANITARY SEWER LINE A**  
 HORIZONTAL: 1" = 30'  
 VERTICAL: 1" = 10'



**ROCK CHALK PARK ADDITION**  
**SANITARY SEWER LINE A**  
**PLAN & PROFILE**  
 STA 0+00 TO STA 8+76.61

PROJECT #212-140  
 OCTOBER 11, 2012  
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 1.0 12.17.12  
 1.1 1.16.13  
 1.2 1.28.13  
 1.3 3.6.13  
 1.4 5.22.13



SCALE: 1" = 30'-0"  
 0 15 30 60 90  
 NORTH

SANITARY SEWER LINE A  
 HORIZONTAL: 1" = 30'  
 VERTICAL: 1" = 10'

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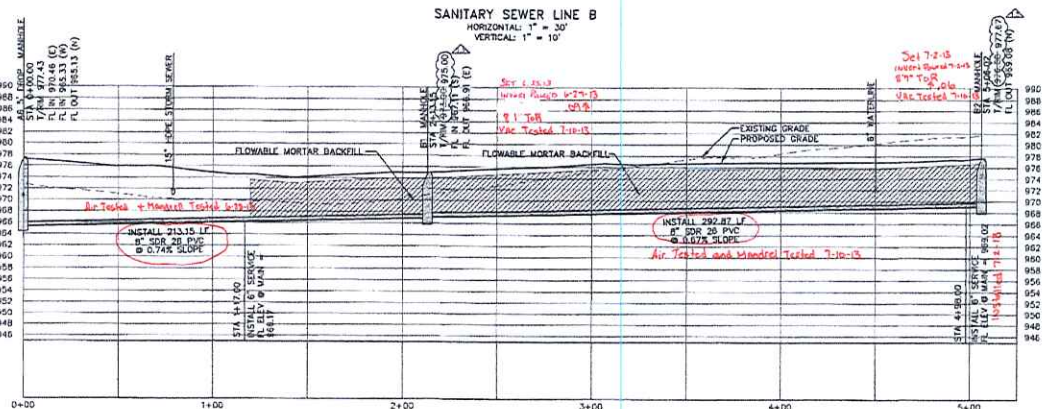
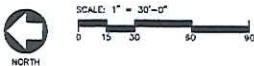
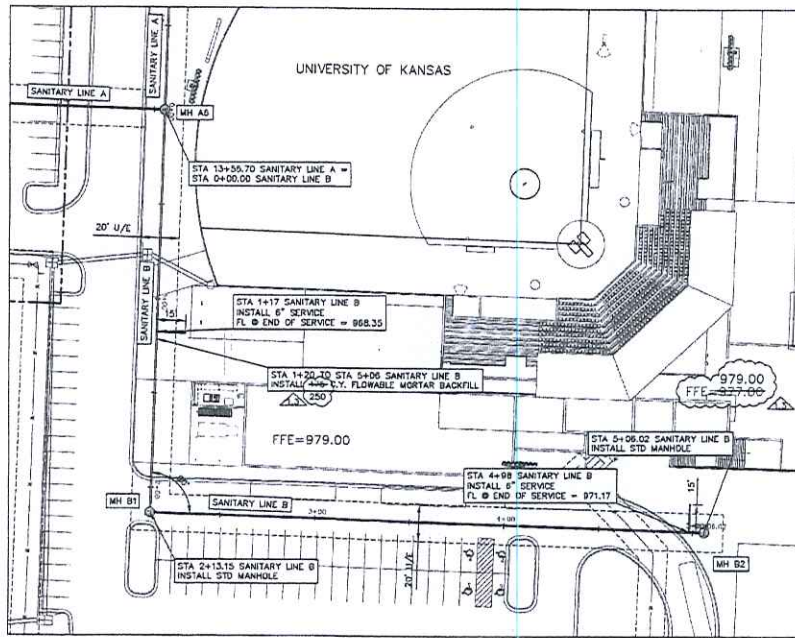
**ROCK CHALK PARK ADDITION  
 SANITARY SEWER LINE A  
 PLAN & PROFILE**  
 STA 8+76.61 TO STA 15+12.90



PROJECT #212-140  
 OCTOBER 11, 2012

RELEASE:	DATE:
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1.1	1.16.13
1.2	1.26.13
1.3	3.6.13
1.4	5.22.13

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 4 OF 7



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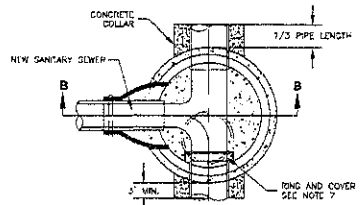
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 SANITARY SEWER LINE B  
 PLAN & PROFILE**  
 STA 0+00 TO STA 5+06.02



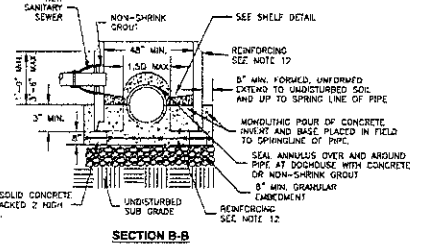
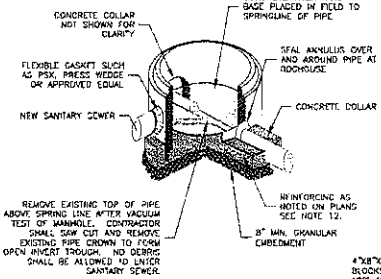
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 5 OF 7

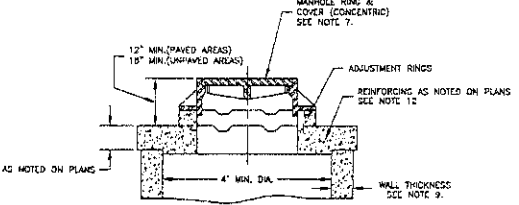
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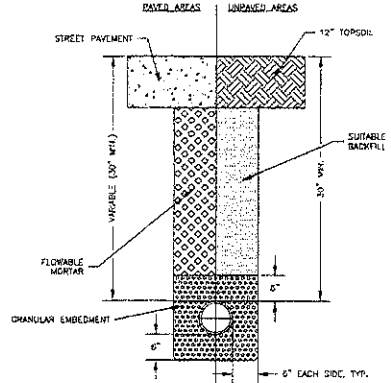
**PLAN VIEW**



**STANDARD DOGHOUSE MANHOLE  
N.T.S.**



**STANDARD PRECAST  
MANHOLE (SHALLOW TYPE)  
N.T.S.**

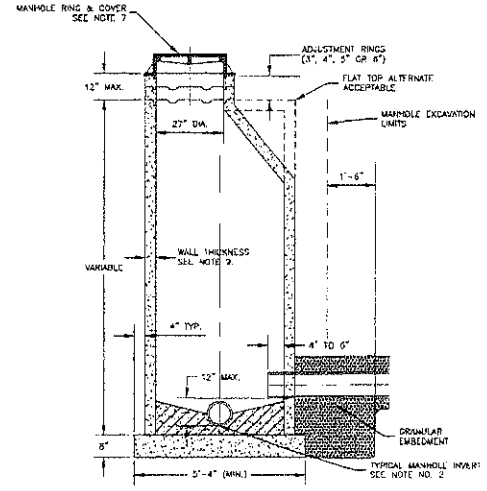


LIMITS OF FLOWABLE MORTAR SHALL CONFORM TO SECTION 2507.3 OF THE CITY OF LAWRENCE CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 2500 - SANITARY SEWER (5" TO 18" MAINS).  
 SUITABLE BACKFILL MATERIAL IS DEFINED AS ANY MATERIAL FREE OF DEBRIS, ROOTS, VEGETATION, FOREIGN MATERIAL, ROCKS, STONES OR BLOBS IF SUITABLE BACKFILL MATERIAL IS NOT FOUND DURING TRENCH EXCAVATION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FILL IN SUITABLE BACKFILL MATERIAL.  
 SUITABLE BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AT PLUS OR MINUS 2% MOISTURE CONTENT.

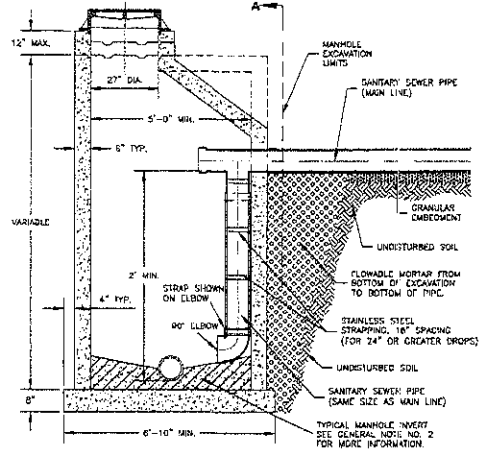
**SANITARY SEWER TRENCH DETAILS  
N.T.S.**

**NOTES**

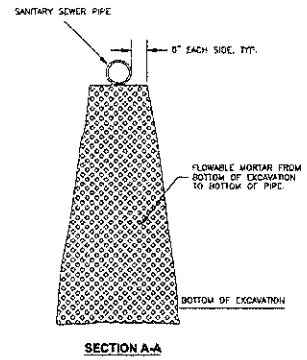
1. PRECAST MANHOLES SHALL CONFORM TO ASTM C-478 AND THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT MINIMUM STANDARDS OF DESIGN.
2. PIPE(S) SHALL BE TEMPORARILY PLUGGED PRIOR TO FORMING INVERTS. INVERTS SHALL BE FORMED WITH ROOT GLASS A CONCRETE.
3. STANDARD DEPTH MANHOLE IS 8'-0". LESSEER DEPTH TO BE PAID FOR AS STANDARD 8'-0" MANHOLE.
4. GRANULAR EMBEDMENT SHALL BE PLACED FROM THE OUTSIDE FACE OF THE MANHOLE TO A DISTANCE OF 16" BEYOND THE LIMITS OF EXCAVATION FOR THE MANHOLE, AS SHOWN.
5. COMPRESSION TYPE PIPE TO MANHOLE CONNECTIONS SHALL BE A-10F, MANHOLE PIPE CONNECTIONS, OR APPROVED EQUAL.
6. O.P.P., V.C.P., OR TRUSS PIPE TO PIPE CONNECTIONS SHALL BE PERIOD HUBBER GASKET COUPLING OR APPROVED EQUAL.
7. MANHOLE RINGS AND LIDS SHALL BE CLAY & BAILEY NO. 2032, NEENAH NO. 2032, DGLI CASTINGS NO. 504-240, BELTER FISHBAY NO. 1045, OR APPROVED EQUAL. ALL MANHOLE LIDS SHALL BE ALIGNED OVER INVERT OUT OF MANHOLE.
8. BEFORE FINAL ACCEPTANCE OF THE PROJECT, A 2"x4" PALK OF LUMBER, 5'-0" TO 6'-0" TALL, OR A GATE FENCE POST, 5'-0" TO 6'-0" TALL, SHALL BE PLACED ADJACENT TO EACH MANHOLE, IN ORDER TO LOCATE THESE STRUCTURES FOR CONVICTIONS DURING FUTURE DEVELOPMENT.
9. THE WALL THICKNESS FOR MANHOLES UNDER 15'-0" DEEP SHALL BE 1/12 OF THE INTERNAL SHELL DIAMETER, OR 4", WHICHEVER IS GREATER. THE WALL THICKNESS FOR MANHOLES 15'-0" DEEP OR GREATER SHALL BE 1/12 OF THE INTERNAL SHELL DIAMETER PLUS 1" OR 5", WHICHEVER IS GREATER.
10. IF THE SANITARY SEWER PIPE HAS A DEFLECTION IN IT, SUCH PIPE SHALL BE ROTATED SO THAT THE DEFLECTION IS ON ITS SIDE.
11. ANY SANITARY SEWER PIPE FOUND TO HAVE MORE THAN A SIX DEFLECTION WILL BE REJECTED.
12. ALL REINFORCING SHALL BE AS NOTED ON PLANS AND/OR SHOP DRAWINGS AND SHALL CONFORM TO CITY OF LAWRENCE UTILITIES DEPARTMENT SPECIFICATIONS FOR SANITARY SEWER, SECTION 2510.3.6.



**STANDARD PRECAST MANHOLE  
(ECCENTRIC CONE)  
N.T.S.**



**STANDARD DROP MANHOLE SECTION  
(FOR 8" OR 10" MAINS ONLY)  
N.T.S.**



**SECTION A-A**

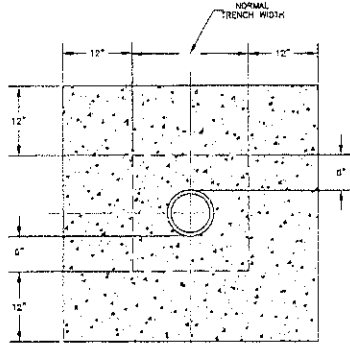
BY	DATE	REVISION
JOS	12/2010	UPDATE TO DIMENSIONS ON DROP MANHOLE AND TYPICAL TRENCH DETAIL
JOS	12/2011	REVISE REFERENCE TO EA-S AND CM-H TO GRANULAR EMBEDMENT



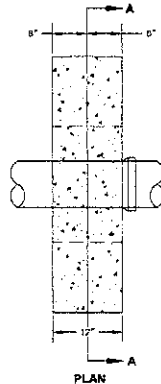
**STANDARD SANITARY  
DETAILS - GRAVITY**

JOHN SHUTAK  
DISTRICT MANAGER

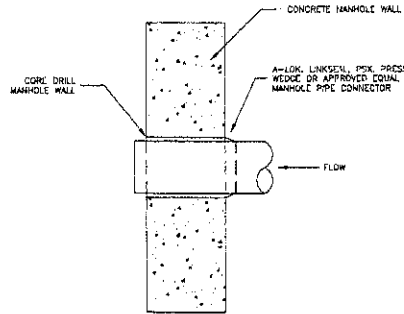
DAVID L. CORLISS  
CITY MANAGER



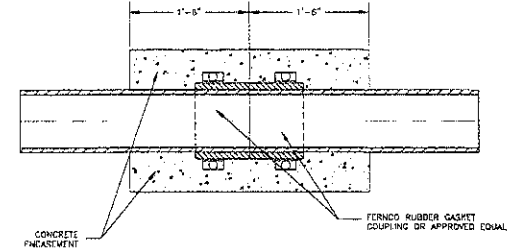
SECTION A-A



PLAN

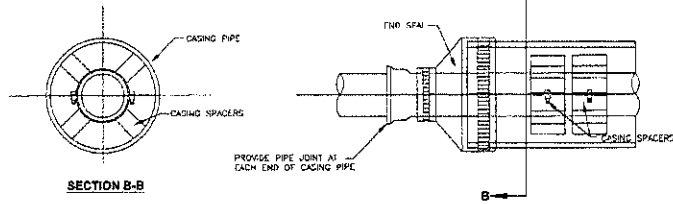


CONNECTION TO EXISTING MANHOLE  
N.T.S.



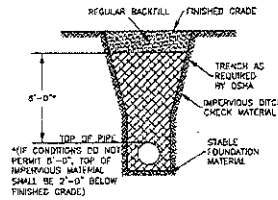
D.I.P., V.C.P. OR TRUSS PIPE CONNECTION  
(FOR REPAIRS ONLY)  
N.T.S.

CONCRETE COLLAR DETAIL  
N.T.S.



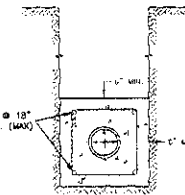
SECTION B-B

CASING PIPE DETAIL  
N.T.S.

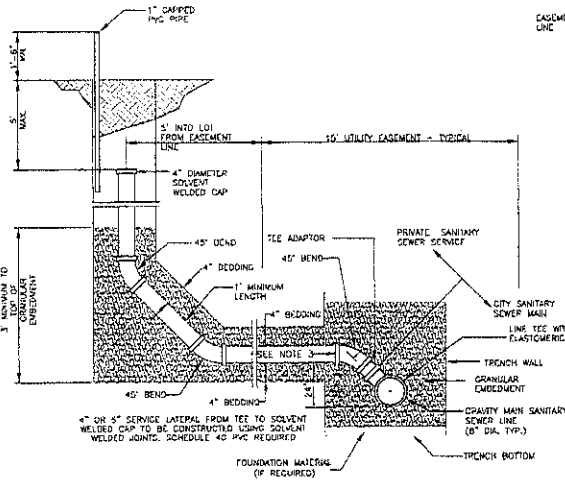


- NOTES:
1. IMPERVIOUS DITCH CHECKS SHALL BE PLACED WHERE SHOWN ON THE PLANS. LENGTH SHALL BE A MINIMUM OF 10 FT. FLOWABLE FILL IS REQUIRED FOR PVC PIPE. FOR OTHER PIPE TYPES, CLAY MATERIAL OR FLOWABLE FILL MAY BE USED AT THE CONTRACTOR'S OPTION. FLOWABLE FILL MATERIAL SHALL CONSIST OF A PORTLAND CEMENT GROUT HAVING A MINIMUM TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF FIVE HUNDRED POUNDS PER SQUARE INCH (500 PSI). ORGANIC MATERIAL SHALL BE SELECT CLAY MATERIAL SEPARATED FROM EXCAVATED MATERIALS, FREE OF CLODS, CLUMPS, GUMS, ORGANIC MATERIAL, AND STONES, COMPACTED SO AS TO OBTAIN 90% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE PLUS OR MINUS 2%, AS DETERMINED BY ASTM D698.
  2. REGULAR BACKFILL (ABOVE DITCH CHECK) SHALL BE FREE OF GUMS, ORGANIC MATERIALS AND STONES LARGER THAN 1 1/2".

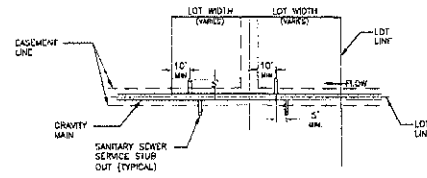
IMPERVIOUS DITCH CHECK  
N.T.S.



CONCRETE ENCASUREMENT DETAIL  
N.T.S.



SANITARY SEWER SERVICE  
CONNECTION STUB OUT  
N.T.S.



PLAN VIEW OF  
SANITARY SEWER SERVICE  
CONNECTION STUB OUT LOCATIONS  
BACK LOT LINE EXAMPLE SHOWN

- GENERAL NOTES:
1. SERVICE TEE SHALL BE INSTALLED SO THAT SERVICE CONNECTION IS AT LEAST 45° FROM HORIZONTAL.
  2. SOLVENT WELDED CONNECTIONS ARE REQUIRED FOR THE ENTIRE SERVICE CONNECTION FROM THE TEE TO THE CAP. MINIMUM GRADE FOR SERVICE LATERAL IS 1.00% FOR SIX (6) INCH AND 2.00% FOR FOUR (4) INCH SERVICE LINES.
  3. LOCATION OF TEE CONNECTION BY STATION AND HORIZONTAL LENGTH OF STUB OUT TO BE NOTED ON CONSTRUCTION DRAWINGS OF SANITARY SEWER MAIN CONSTRUCTION.

SHEET 2 OF 2

BY	DATE	REVISION



STANDARD SANITARY  
DETAILS—GRAVITY

JOHN SHUTAK UTILITIES ENGINEER DAVID L. CORNUSS CITY MANAGER



ALPHA-OMEGA GEOTECH  
 1701 State Avenue  
 Kansas City, KS 66102  
 913-371-0000

**REPORT OF CONCRETE CYLINDER COMPRESSION TESTS**

PROJECT NO.: 12-436 DATE CAST: 4/4/2014  
 PROJECT: Rock Chalk Sports Complex & Rec Center  
 CLIENT: Bliss Sports  
 CONTRACTOR: Fritzel  
 SUPPLIER: Penny's

**MIX DATA**

DESIGN STRENGTH (Project Plans): 4000 UNIT WEIGHT: \_\_\_\_\_  
 DESIGN SLUMP (Project Plans): \_\_\_\_\_ TYPE OF MORTAR: \_\_\_\_\_  
 ADMIXTURES: \_\_\_\_\_  
 DESIGN STRENGTH (Delivery Ticket): 4000 WATER: \_\_\_\_\_  
 DESIGN SLUMP (Delivery Ticket): 4 CEMENT: \_\_\_\_\_  
 DESIGN MIX CODE (Delivery Ticket): AS6525G4 FINE AGGREGATE: \_\_\_\_\_  
 COARSE AGGREGATE: \_\_\_\_\_

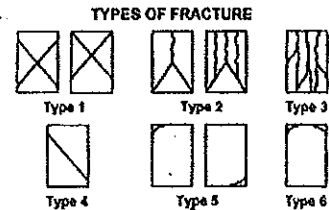
**CYLINDER DATA**

LOCATION OF POUR: Paving; ramp between soccer field and softball field  
 WEATHER: 40's°F / partly sunny CYLINDER SIZE: 4x8  
 TRUCK NO./TICKET NO.: 113 / 1093102 SLUMP: 6.00"  
 YARDS OF CONCRETE IN DELIVERY: 10 AIR CONTENT: 8.0%  
 GAL OF WATER ADDED AT SITE: 15 CONCRETE TEMP.: 68°F  
 DISP./TEST TIME: 8:17 a.m. / 9:00 a.m. UNIT WEIGHT: NT  
 CYLINDERS MADE BY: TW PICKED UP BY: AOG

CYL. NO.	AGE, DAYS	LABORATORY NUMBER	DATE REC'D	DATE OF TEST	CRUSHING LOAD LBS.	PSI	FRACTURE	REPORT DATE
1	7	12-436 4-4 A	4/5/2014	4/11/2014	57,060	4,540	4	4/11/2014
2	28	12-436 4-4 A	4/5/2014	5/2/2014	85,140	6,780	4	5/2/2014
3	28	12-436 4-4 A	4/5/2014	5/2/2014	86,060	6,850	4	5/2/2014
4	28	12-436 4-4 A	4/5/2014	5/2/2014	85,480	6,800	4	5/2/2014
5	H	12-436 4-4 A	4/5/2014					

FRACTURE CODE: C-CONE, CSP-CONE & SPLIT, CSH-CONE & SHEAR, S-SHEAR, COL-COLUMNAR

CC:



REMARKS:

ORIGINAL SIGNED BY: *[Signature]*



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 Kansas City, KS 66102  
 913-371-0000

**REPORT OF CONCRETE CYLINDER COMPRESSION TESTS**

PROJECT NO.: 12-436 DATE CAST: 4/4/2014  
 PROJECT: Rock Chalk Sports Complex & Rec Center  
 CLIENT: Bliss Sports  
 CONTRACTOR: Fritzel  
 SUPPLIER: Penny's

**MIX DATA**

DESIGN STRENGTH (Project Plans): 4000 UNIT WEIGHT: \_\_\_\_\_  
 DESIGN SLUMP (Project Plans): \_\_\_\_\_ TYPE OF MORTAR: \_\_\_\_\_  
 ADMIXTURES: \_\_\_\_\_  
 DESIGN STRENGTH (Delivery Ticket): 4000 WATER: \_\_\_\_\_  
 DESIGN SLUMP (Delivery Ticket): 4 CEMENT: \_\_\_\_\_  
 DESIGN MIX CODE (Delivery Ticket): AS6525G4 FINE AGGREGATE: \_\_\_\_\_  
 COARSE AGGREGATE: \_\_\_\_\_

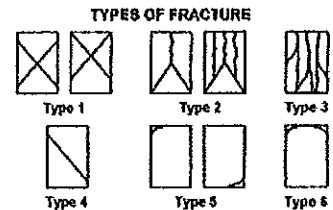
**CYLINDER DATA**

LOCATION OF POUR: Paving; ramp between softball and soccer field  
 WEATHER: 40's°F / sunny CYLINDER SIZE: 4x8  
 TRUCK NO./TICKET NO.: 139 / 1093125 SLUMP: 5.50"  
 YARDS OF CONCRETE IN DELIVERY: 10 AIR CONTENT: 7.5%  
 GAL OF WATER ADDED AT SITE: 10 CONCRETE TEMP.: 70°F  
 DISP./TEST TIME: 11:51 a.m. / 1:10 p.m. UNIT WEIGHT: NT  
 CYLINDERS MADE BY: TW PICKED UP BY: AOG

CYL. NO.	AGE, DAYS	LABORATORY NUMBER	DATE REC'D	DATE OF TEST	CRUSHING, LOAD LBS.	PSI	FRACTURE	REPORT DATE
1	7	12-436 4-4 B	4/5/2014	4/11/2014	53,920	4,290	4	4/11/2014
2	28	12-436 4-4 B	4/5/2014	5/2/2014	86,260	6,860	4	5/2/2014
3	28	12-436 4-4 B	4/5/2014	5/2/2014	88,980	7,080	1	5/2/2014
4	28	12-436 4-4 B	4/5/2014	5/2/2014	83,640	6,660	1	5/2/2014
5	0	12-436 4-4 B	4/5/2014					

FRACTURE CODE: C-CONE, CSP-CONE & SPLIT, CSH-CONE & SHEAR, S-SHEAR, COL-COLUMNAR

CC:



REMARKS:

ORIGINAL SIGNED BY: *[Signature]*



ALPHA-OMEGA GEOTECH  
 1701 State Avenue  
 Kansas City, KS 66102  
 913-371-0000

**REPORT OF CONCRETE CYLINDER COMPRESSION TESTS**

PROJECT NO.: 12-436 DATE CAST: 4/7/2014  
 PROJECT: Rock Chalk Sports Complex & Rec Center  
 CLIENT: Bliss Sports  
 CONTRACTOR: Fritzel  
 SUPPLIER: Penny's

**MIX DATA**

DESIGN STRENGTH (Project Plans): 4000 UNIT WEIGHT: \_\_\_\_\_  
 DESIGN SLUMP (Project Plans): \_\_\_\_\_ TYPE OF MORTAR: \_\_\_\_\_  
 DESIGN STRENGTH (Delivery Ticket): 5000 ADMIXTURES: \_\_\_\_\_  
 DESIGN SLUMP (Delivery Ticket): 4 WATER: \_\_\_\_\_  
 DESIGN MIX CODE (Delivery Ticket): AS6525G4 CEMENT: \_\_\_\_\_  
 FINE AGGREGATE: \_\_\_\_\_  
 COARSE AGGREGATE: \_\_\_\_\_

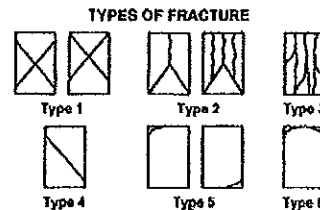
**CYLINDER DATA**

LOCATION OF POUR: Paving; ramp between soccer field and softball field, east end  
 WEATHER: 40's°F / overcast CYLINDER SIZE: 4x8  
 TRUCK NO./TICKET NO.: 174 / 1093146 SLUMP: 5.75"  
 YARDS OF CONCRETE IN DELIVERY: 10 AIR CONTENT: 8.0%  
 GAL OF WATER ADDED AT SITE: 10 CONCRETE TEMP.: 67°F  
 DISP./TEST TIME: 8:28 a.m. / 9:20 a.m. UNIT WEIGHT: NT  
 CYLINDERS MADE BY: TW PICKED UP BY: AOG

CYL. NO.	AGE, DAYS	LABORATORY NUMBER	DATE REC'D	DATE OF TEST	CRUSHING, LOAD LBS.	PSI	FRACTURE	REPORT DATE
1	7	12-436 4-7 A	4/8/2014	4/14/2014	53,900	4,290	4	4/14/2014
2	28	12-436 4-7 A	4/8/2014	5/5/2014	78,340	6,230	4	5/5/2014
3	28	12-436 4-7 A	4/8/2014	5/5/2014	79,500	6,330	4	5/5/2014
4	28	12-436 4-7 A	4/8/2014	5/5/2014	79,800	6,350	4	5/5/2014
5	0	12-436 4-7 A	4/8/2014					

FRACTURE CODE: C-CONE, CSP-CONE & SPLIT, CSH-CONE & SHEAR, S-SHEAR, COL-COLUMNAR

CC:



REMARKS:

ORIGINAL SIGNED BY: *[Signature]*





ALPHA-OMEGA GEOTECH  
 1701 State Avenue  
 Kansas City, KS 66102  
 913-371-0000

**REPORT OF CONCRETE CYLINDER COMPRESSION TESTS**

PROJECT NO.: 12-436 DATE CAST: 4/10/2014  
 PROJECT: Rock Chalk Sports Complex & Rec Center  
 CLIENT: Bliss Sports  
 CONTRACTOR: Fritzel  
 SUPPLIER: Penny's

**MIX DATA**

DESIGN STRENGTH (Project Plans): 4000 UNIT WEIGHT: \_\_\_\_\_  
 DESIGN SLUMP (Project Plans): \_\_\_\_\_ TYPE OF MORTAR: \_\_\_\_\_  
 ADMIXTURES: \_\_\_\_\_  
 DESIGN STRENGTH (Delivery Ticket): 5000 WATER: \_\_\_\_\_  
 DESIGN SLUMP (Delivery Ticket): 4 CEMENT: \_\_\_\_\_  
 DESIGN MIX CODE (Delivery Ticket): AS6525G4 FINE AGGREGATE: \_\_\_\_\_  
 COARSE AGGREGATE: \_\_\_\_\_

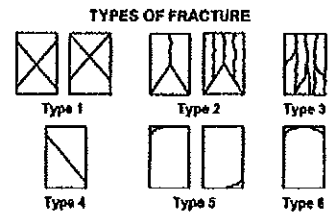
**CYLINDER DATA**

LOCATION OF POUR: Paving; approach off of N. Hual Rd. west end  
 WEATHER: 50's-60's°F / partly cloudy CYLINDER SIZE: 4x8  
 TRUCK NO./TICKET NO.: 112 / 1093254 SLUMP: 2.50"  
 YARDS OF CONCRETE IN DELIVERY: 10 AIR CONTENT: 7.4%  
 GAL OF WATER ADDED AT SITE: 5 CONCRETE TEMP.: 64°F  
 DISP./TEST TIME: 9:36 a.m. / 10:10 a.m. UNIT WEIGHT: NT  
 CYLINDERS MADE BY: TW PICKED UP BY: AOG

CYL. NO.	AGE, DAYS	LABORATORY NUMBER	DATE REC'D	DATE OF TEST	CRUSHING, LOAD LBS.	PSI	FRACTURE	REPORT DATE
1	7	12-436 4-10 A	4/11/2014	4/17/2014	68,900	5,480	4	4/17/2014
2	28	12-436 4-10 A	4/11/2014	5/8/2014	89,460	7,120	4	5/8/2014
3	28	12-436 4-10 A	4/11/2014	5/8/2014	90,880	7,230	4	5/8/2014
4	28	12-436 4-10 A	4/11/2014	5/8/2014	88,120	7,010	4	5/8/2014
5	H	12-436 4-10 A	4/11/2014					

FRACTURE CODE: C-CONE, CSP-CONE & SPLIT, CSH-CONE & SHEAR, S-SHEAR, COL-COLUMNAR

CC:



REMARKS:

ORIGINAL SIGNED BY: \_\_\_\_\_



ALPHA-OMEGA GEOTECH  
 1701 State Avenue  
 Kansas City, KS 66102  
 913-371-0000

**REPORT OF CONCRETE CYLINDER COMPRESSION TESTS**

PROJECT NO.: 13-228 DATE CAST: 4/23/2014  
 PROJECT: Rock Chalk Rec. Center  
 CLIENT: Bliss Sports  
 CONTRACTOR: Sanflower  
 SUPPLIER: Penny's

**MIX DATA**

DESIGN STRENGTH (Project Plans): 4000 UNIT WEIGHT: \_\_\_\_\_  
 DESIGN SLUMP (Project Plans): 6" Max TYPE OF MORTAR: \_\_\_\_\_  
 ADMIXTURES: \_\_\_\_\_  
 DESIGN STRENGTH (Delivery Ticket): 4000 WATER: \_\_\_\_\_  
 DESIGN SLUMP (Delivery Ticket): 4 CEMENT: \_\_\_\_\_  
 DESIGN MIX CODE (Delivery Ticket): AS6425G4 FINE AGGREGATE: \_\_\_\_\_  
 COARSE AGGREGATE: \_\_\_\_\_

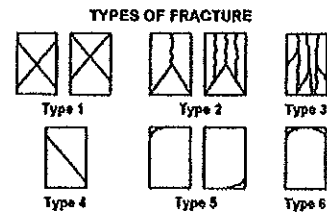
**CYLINDER DATA**

LOCATION OF POUR: Paving; Rec. center parking lot east side  
 WEATHER: 70's°F / sunny CYLINDER SIZE: 4x8  
 TRUCK NO./TICKET NO.: 146 / 1093534 SLUMP: 5.50"  
 YARDS OF CONCRETE IN DELIVERY: 10 AIR CONTENT: 8.0%  
 GAL OF WATER ADDED AT SITE: 5 CONCRETE TEMP.: 68°F  
 DISP./TEST TIME: 12:06 p.m. / 12:40 p.m. UNIT WEIGHT: NT  
 CYLINDERS MADE BY: TW PICKED UP BY: AOG

CYL. NO.	AGE, DAYS	LABORATORY NUMBER	DATE REC'D	DATE OF TEST	CRUSHING, LOAD LBS.	PSI	FRACTURE	REPORT DATE
1	7	13-228 4-23 A	4/24/2014	4/30/2014	49,340	3,930	4	4/30/2014
2	28	13-228 4-23 A	4/24/2014	5/21/2014				
3	28	13-228 4-23 A	4/24/2014	5/21/2014				
4	28	13-228 4-23 A	4/24/2014	5/21/2014				
5	0	13-228 4-23 A	4/24/2014					

FRACTURE CODE: C-CONE, CSP-CONE & SPLIT, CSH-CONE & SHEAR, S-SHEAR, COL-COLUMNAR

CC:



REMARKS:

ORIGINAL SIGNED BY: *[Signature]*

Waterline I.



# City of Lawrence

## UTILITIES

### PW1315\_RockChalkPark\_AdditionNo1 2013-2014

Contractor: **Kings Construction**

07/08/13    Monday        Low 74        High 99        Sunny        Crew 3  
The crew was onsite working on storm sewer. They had several deliveries of 12-inch PVC waterline. I met with Lonnie to ensure he would notify me of anything with inspection. KN

07/09/13    Tuesday        Low 75        High 100       Sunny        Crew 3  
John called to let me know about a meeting at Rock Chalk at 1:30. John gave me the plans for the waterline. I attended the meeting at Rock Chalk. I met with Lonnie. He showed me the staging area for fittings for the waterline. He requested inspection for the Zebron coating for two manholes this afternoon. KN

07/18/13    Thursday       Low 73        High 97        Sunny        Crew 3  
I went to the north end of George Williams Way. I shut down the water line 500' from Overland Drive. I drained the line and met with Lonnie from Kings over construction plans. Kings installed the 80' of 12-inch PVC and connected to the existing valve. They were waiting to backfill to see if they needed to install a conduit 2-3' from the waterline excavation. I went to George Williams Way and turned on the waterline. I flushed for 20 minutes. The crew had backfilled the line. Lonnie called from Kings to notify to start the waterline at Rock Chalk tomorrow upon delivery of the 12-inch cross. At Rock Chalk, Kings connected to the existing 12-inch valve and installed 80' of 12-inch PVC. I flushed the line for 20 minutes. KN

07/19/13    Friday         Low 73        High 99        Sunny        Crew 5  
I went to the meeting at City Hall over Rock Chalk Park. I went to Rock Chalk. Kings installed the 12-inch cross and 4 12-inch valves along with 8' of 12-inch pipe. Lonnie and I discussed some project details. I found out that all the construction staking was being completed by one person who was Fritzles employee. Bob S came out and took GPS shots. The crew was installing 12-inch PVC pipe. The crew installed 100' of pipe. The crew installed another 100' of 12-inch PVC. At Rock Chalk, Kings installed 200' of 12-inch PVC, 4 12-inch valves, and a 12-inch cross. KN

07/22/13    Monday        Low 72        High 95        Sunny        Crew 5  
I went to Rock Chalk. The crew was installing 12-inch PVC waterline. The crew installed 100' of pipe. I talked to Lonnie and told him that at the meeting tomorrow, it was going

to be discussed about the backfill on the sanitary sewer line. Lonnie told me that Dan had a crew backfill the area on Friday. He said that Alpha Omega tested the compaction. I sent an email to Bob B about the situation. The crew installed another 60' of pipe. The crew installed a 12-inch valve, a hydrant tee, and a 6-inch valve. I discussed with Lonnie that the hydrant legs would need to be restrained from the tee to the hydrant. He was going to order a bell restraint for the long hydrant leg. I met with Jermaine from Alpha Omega and he said that his office could email the compaction results. The crew installed another 100' of 12-inch PVC pipe. At Rock Chalk, Kings installed 260' of 12-inch PVC, 1 12-inch valves, and a hydrant tee with 6-inch valve. KN

07/23/13      Tuesday      Low 66      High 89      Sunny      Crew 3  
I went to Rock Chalk. The crew was assembling some of the valve clusters and hydrant tee with valves. I attended the update meeting for Rock Chalk. I met with Bob B and Mike after the meeting. The crew was still tightening bolts on the valves and tee's. The crew started to install pipe. They installed 60' of 12-inch PVC. I met with Bob B over Rock Chalk. I went by Oregon Trails and picked up the flow able fill tickets for Rock Chalk. I went to Rock Chalk. The crew installed another 60' of pipe. The crew installed a 12-inch valve, a hydrant tee, and a 6-inch valve. The crew installed another 60' of 12-inch PVC pipe and a hydrant assembly. They installed the bell restraint and polywrapped it on the long hydrant leg. At Rock Chalk, Kings installed 180' of 12-inch PVC, 1 12-inch valves, hydrant, and a hydrant tee with 6-inch valve. KN

07/24/13      Wednesday      Low 65      High 90      Sunny      Crew 2  
I went to Rock Chalk. The crew installed the first hydrant leg on waterline A. They set the hydrant. The crew installed one joint of pipe. The crew poured seven thrust blocks for Waterline A. They backfilled some of the excavations. I met with Bob B over Rock Chalk. We went over vertical depths. I went to Rock Chalk. The crew installed another joint of pipe. I measured all of the manhole depths. I found that the extra vertical depth was around 18.66. The crew installed a 12x12x12 MJ Tee and 2 12-inch valves. The crew installed another joint of pipe. The crew started on Waterline D and encountered a layer of rock. They had to use a breaker. At Rock Chalk, Kings installed 60' of 12-inch PVC, two 12-inch valves, hydrant, and seven thrust blocks. KN

07/25/13      Thursday      Low 63      High 88      Sunny      Crew 3  
I went to Rock Chalk. The crew started on waterline D. The crew installed three joints of pipe. Lonnie and I met over the flow able fill locations. Only one of the hydrant legs at station 4+58.24 will require flow able fill. The other hydrant on line A does not have the sidewalk cross the leg. The crew poured 20 cubic yards of flow able fill. The crew installed another three joints of pipe. They encountered a shelf of rock. The crew deflected the pipe to clear underneath the storm sewer by a foot. The crew continued to excavate the layer of rock. They had to use a breaker. The crew installed another six joints of pipe and went under the storm sewer pipe. Lynn electric was out and started to install two 4" conduits. They stayed over 24-inches or more from the waterline to the south. The crew backfilled the excavations. At Rock Chalk, Kings installed 240' of 12-inch PVC, and poured 20 cubic yards of flow able fill. KN

assembly and plug to the east, and 11' of 8-inch pipe. The crew was started in on line E. They crew installed two 8-inch 45 elbows, and excavated for the vault. At Rock Chalk, the crew backfilled part of line F and poured four thrust blocks. They used concrete that was extra from the concrete crew pouring the footings for the building. At Rock Chalk, the crew installed 11' of 8-inch PVC, one 3-inch valve, two 8-inch 45 elbow, one hydrant assembly, and poured 4 thrust blocks. KN

08/21/13      Wednesday      Low 68      High 92      Sunny      Crew 4  
I went to Rock Chalk. Bob B and Mike L stopped by to discuss the waterline C relocation. Mike wants to be 4' to the west of any bump outs on the access road. We discussed about staking for the access road and the building. Testing of the waterline was discussed and the subject was relayed to Lonnie with Kings yesterday. The crew continued to excavate on waterline E. The crew installed the backflow vault. The crew installed 120p of 12-inch PVC pipe. They installed 21' of 8-inch pipe on the private line along with one 8-inch valve, one hydrant assembly, and the backflow preventer. At Rock Chalk, the crew installed 120' of 12-inch PVC, one private 8-inch valve, one private hydrant assembly, set the base to the backflow vault, and 21' of 8-inch private pipe. KN

08/22/13      Thursday      Low 69      High 91      Sunny      Crew 3  
Mike L called about a meeting at Rock Chalk. I went to Rock Chalk. I met with James Kings, Chris Storm, Paul Warner, Thomas F, and Casey. WE discussed the alignment of the access road and waterline. The new waterline location is supposed to be 30-32' west of the practice track. Kings was installing megalugs on the 8-inch ductile iron spools for the backflow preventer. The crew reinstalled the hydrant and valve. The crew continued on water line E, the private line. The crew installed five joints of pipe. The crew installed another 4 joints of 8-inch pipe on waterline E. They backfilled the pipe. At Rock Chalk, the crew installed 180' of 8-inch PVC pipe. KN

08/23/13      Friday      Low 72      High 93      Sunny      Crew 4  
I went to Rock Chalk. The crew was working on waterline E. The crew installed two joints of pipe. Lynn Electric was installing 4-inch conduit for fiber. The crew poured four thrust blocks and plugged the ends of the backflow vault. Bob S came out and took GPS shots of the waterline and the fiber line. The crew installed another joint of pipe. The crew installed another joint of pipe. They had encountered rock and had to hammer at the north end of line E for about 90'. The crew was waiting for a hydrant tee and plug to complete the installation. The crew backfilled the line. I met with Lonnie over testing the waterlines. He said that Thomas was going to pull them off waterline to excavate the footings for the recreation center next week. The crew installed the hydrant plugged to the north with 12' of 8-inch PVC. I saw that the waterline on the west side of the stadium was staked. I met with the surveyor who staked the waterline at 29' from the practice track. I met with Casey and he said that Lonnie knew that was 1' off. I checked with Lonnie and he did not know. Lonnie and myself are going to check the staking out and measure it on Monday to verify the distance. At Rock Chalk, the crew installed 92' of 8-inch PVC pipe, one hydrant assembly with a plug, and poured four thrust blocks. KN

08/26/13      Monday      Low 70      High 96      Sunny      Crew 0  
I went to Rock Chalk. The crew was excavating for footings and not working on the waterline. I saw that Lynn Electric was excavating for the 4-inch conduit for fiber optic.

08/05/13      Monday      Low 71      High 87      Pt Cloudy      Crew 3  
I went to Rock Chalk. The crew continued on waterline D. The crew was clearing the roadway. The access roads were very muddy from the rain last night. The crew graded the roads. They added rock on the exit road. The crew excavated for the valve cluster and hydrant for the connection from Waterline D to Waterline C. The crew installed one joint of pipe. They took elevation shots to determine waterline depth. The crew installed a 17' piece of pipe and a 12-inch valve. The crew assembled one 12-inch valve and a 12x12x12 MJ Tee. The crew poured 37 cubic yards of flow able fill. The crew installed another 15' of pipe. The crew installed the hydrant assembly and one 12-inch valve. The crew installed a joint of pipe and a 5' piece of pipe. The crew backfilled the excavations. We measured out the locations for flow able fill on waterline D and waterline C. At Rock Chalk, Kings the crew installed 77' of 12-inch PVC, three 12-inch valve, 12x12x12 MJ Tee, one hydrant assembly, and poured 37 cubic yards of flowable fill. KN

08/06/13      Tuesday      Low 71      High 91      Sunny      Crew 4  
I went to Rock Chalk. The crew continued on waterline C. The crew was clearing the roadway. The access roads were very muddy from the rain last night. The crew graded the roads. They added rock on the exit road. The crew installed ten joints of pipe. I met with Bill from public works over Rock Chalk. He wanted help with the totals for the 4-inch conduits that were beside the waterline ditch. I measured the lengths of the dual 4-inch conduits and checked stations to compare lengths. I called Bill and left a message. The crew installed another three joints of pipe. Bill called about the conduit totals. He is going to turn in the station footage of 676' times two. The crew assembled two 12-inch valves, a 12x12x8 MJ Tee plugged to the north, and one 12-inch 45 elbow. The crew poured 20 cubic yards of flow able fill. Kings chose to pour an extra 22' that was under the pavement from station 25+14 to 25+36. The crew installed another four joints and 4' of 12-inch pipe. The crew backfilled the excavations. We measured out the locations for flow able fill on waterline C. At Rock Chalk, Kings the crew installed 344' of 12-inch PVC, two 12-inch valves, 12x12x8 MJ Tee plugged to the north on the 8-inch, one 12-inch 45 elbow, and poured 20 cubic yards of flowable fill. KN

08/07/13      Wednesday      Low 67      High 87      Sunny/Rain      Crew 3  
I went to Rock Chalk. The crew continued on waterline C. The crew was clearing the roadway. The access roads were very muddy from the rain last night. The crew graded the roads. They added rock on the exit road. The crew installed three joints of pipe. The crew continued to clear the road for possible flow able fill and concrete this afternoon. I met with Lynn Electric to see what totals they had on the conduits that were beside the waterline ditch. They did not have any totals. The crew installed another joint of pipe and a 12-inch 45 elbow. The crew continued to install pipe on waterline C. Bob S came out and took GPS shots. The crew installed two more joints of 12-inch PVC pipe. The crew assembled one 12-inch valve, 8' of pipe, and one 90 MJ elbow. The crew assembled the hydrant with a valve and anchor tee but did not install it. Lonnie canceled the concrete and flow able fill due to the rain over lunchtime. The crew backfilled the excavations. The crew built the 2-3' tall berm for erosion control. The berm had to be excavated for the new waterline. At Rock Chalk, Kings the crew installed 128' of 12-inch PVC, one 12-inch valve, one 12-inch 45 elbow, and one 12-inch 90 elbow. KN

07/26/13      Friday              Low 68              High 89              Sunny              Crew 3  
The crew continued on waterline D. The crew installed three joints of pipe. The crew installed two joints of 12-inch pipe. The crew went to work on storm boxes. The crew installed another three joints of pipe. The crew installed another joint of pipe and the hydrant assembly with a 12-inch valve to the west. The crew poured two thrust blocks. The crew installed one more joint of pipe. At Rock Chalk, Kings installed 200' of 12-inch PVC, one 12-inch valve, one hydrant assembly, and poured 2 thrust blocks. KN

07/30/13      Tuesday              Low 68              High 84              Cloudy              Crew 3  
I went to Rock Chalk. The crew continued on waterline D. The crew installed 5 joints of pipe. The crew installed another 8 joints of pipe and encountered rock for 120'. The crew continued to install 12-inch PVC on water line D. The crew installed another 5 joints of pipe. At Rock Chalk, Kings the crew installed 360' of 12-inch PVC. KN

07/31/13      Wednesday          Low 68              High 88              Sunny              Crew 3  
I went to Rock Chalk. The crew was excavating on waterline D. The crew installed 28' of 12-inch PVC and a 90 elbow. The crew poured 30 cubic yards of flow able fill. The crew installed another 40' of pipe. The crew assembled two 12-inch valves with a hydrant tee with a 6-inch valve and 3' of 12-inch PVC pipe. The crew installed the valve cluster. The crew installed the hydrant 3' hydrant leg and hydrant. I met with Kyle and went over project quantities on the waterline. Thomas F stopped by and asked questions about the pipe totals and project status. He was concerned about the conduits that they were not over the waterline. The crew installed another 58' of 12-inch PVC pipe. At Rock Chalk, Kings the crew installed 129' of 12-inch PVC, one hydrant assemble, one 12-inch 90 elbow, two 12-inch valves, and poured 30 cubic yards of flow able fill. KN

08/01/13      Thursday              Low 70              High 92              Sunny              Crew 3  
I went to Rock Chalk. The crew continued on waterline D. The crew installed valve boxes on waterline D and waterline A. They backfilled the various valve locations. The crew poured tee thrust blocks for the 90 elbow and hydrant. The crew installed 4 joints of pipe. The crew continued to install 12-inch PVC on water line D. The crew installed another 6 joints of pipe. The 4-inch conduit is going to be installed on the west side where the water goes north and is on the east side. At Rock Chalk, Kings the crew installed 200' of 12-inch PVC and poured 3 thrust blocks. KN

08/02/13      Friday              Low 71              High 88              Sunny/Rain          Crew 3  
I went to Rock Chalk. The crew continued on waterline D. The crew was clearing the roadway. The access roads were very muddy from the rain last night. The crew installed five joints of pipe. The crew assembled one 12-inch valve and hydrant assembly. The crew installed another four joints of pipe. The crew backfilled the excavations. We measured out the locations for flow able fill on waterline D. At Rock Chalk, Kings the crew installed 180' of 12-inch PVC, one 12-inch valve, and one hydrant assembly. KN

08/03/13      Saturday              Low 66              High 88              Cloudy              Crew 3  
I went to Rock Chalk. The crew continued on waterline D. The access roads were very muddy from the rain last night. The crew installed 12 joints of pipe. The crew backfilled the excavations. We measured out the locations for flow able fill on waterline D. At Rock Chalk, Kings the crew installed 240' of 12-inch PVC. KN

08/08/13 Thursday Low 69 High 77 Rain/Cloudy Crew 3  
I went to Rock Chalk. The crew continued on waterline C. The crew was clearing the roadway. The access roads were very muddy from the rain last night. The crew graded the roads. They added rock on the exit road. The crew took elevation shots for the hydrant assembly. I went to the update meeting for Bob Billings and Iowa. It was canceled. I went back to Rock Chalk. The crew installed 5' of pipe and a hydrant assembly. The crew installed a 10' piece of 12-inch pipe. It started to sprinkle out. The crew installed one more joint of pipe and backfilled part of the excavation. At Rock Chalk, Kings the crew installed 35' of 12-inch PVC, and one hydrant assembly. KN

08/09/13 Friday Low 65 High 85 Rain/Cloudy Crew 3  
I went to Rock Chalk. The crew continued on waterline C. The crew dug out for 11 thrust blocks to be poured. The crew cut poly wrap and covered the fittings. The crew poured 11 thrust blocks. The crew unloaded a storm box and went to work Storm Sewer boxes. Bob came out and took GPS shots. The crew continued to install pipe on waterline C. The crew installed 80' of 12-inch PVC pipe. The crew poured 40 cubic yards of flow able fill from station 21+87 to 23+82. The crew installed another two joints of 12-inch pipe. At Rock Chalk, Kings the crew installed 120' of 12-inch PVC, poured 11 thrust blocks, and poured 40 cubic yards of flowable fill. KN

08/12/13 Monday Low 66 High 87 Rain/Cloudy Crew 3  
The crew was delayed till 10 am from rain. I went to Rock Chalk. The crew graded the mud around the site. They continued to excavate on waterline C. The crew was into about 2' of rock. They had to go under the storm sewer since it was installed at a higher elevation than the plans. The crew installed four joints of pipe. They had 12-inches separation below the storm sewer. The crew moved the sand piles and had to have rebar moved to continue on south for waterline C. At Rock Chalk, the crew installed 80' of 12-inch PVC. KN

08/13/13 Tuesday Low 59 High 85 Sunny Crew 4  
I went to Rock Chalk. I attended the update meeting. The crew continued to excavate on waterline C. The crew was into about 2' of rock. The crew installed two joints of pipe. The crew installed a 12-inch 90 elbow. The crew installed another five joints of pipe. Matt from Kings called with questions over relocating the ten meter tiles along Iowa. Lonnie told me that Thomas F requested them to install the new waterline C on the west side of the stadium 10' to the east. I instructed Lonnie to stop at that point until the plans and easements could be changed. I notified Bob B and Malinda. I talked to Taylor with Kings and Tim with HD supply over some submittals that were not shown and acceptable materials. The crew installed four joints of pipe. Melinda called about the waterline relocation on water line C. I talked with Lonnie and he said that Casey told the staking crew to move the stakes because the waterline would be under the practice track. I talked with Time from HD Supply. He emailed the updated submittals and said he had an approved submittal for the 3-inch anchor couplings on May 2. He said that they do not make FBC 3-inch anchor couplings. There is a crane in the way so the crew was going to work on Waterline C where it goes east at Waterline D interception. The crew installed a 6-inch valve and anchor tee. Melinda called and we discussed the 3-inch pipe and anchor coupling. I talked to Lonnie and Tim. Tim from HD supply has all the 3-inch parts and Lonnie will pick them up tomorrow. The crew installed another two joints



of pipe. At Rock Chalk, the crew installed 282' of 12-inch PVC, one 12-inch 90 elbow, one 6-inch valve, and one 12x12x6 anchor tee. KN

08/14/13      Wednesday      Low 58      High 80      Sunny      Crew 3  
I went to Rock Chalk. The crew continued to excavate on waterline C. The crew installed three joints of pipe. The crew installed a 12x12x3 MJ tee, hydrant tee with valve plugged to the east, and 17' of pipe. The crew was installing valve boxes and backfilling the waterline. The crew installed three joints of pipe on water line C. Melinda called about the waterline relocation on water line C. Lonnie and I caught up with Casey. He explained that any distance we could move the waterline to the east would be beneficial in the future because the practice track is only 6' away from the waterline and if any maintenance in the future could possibly cause damage to the practice track. He said even 5' would be great. Lonnie had a question about how many vaults there were. Cretex said there was only two. I showed Lonnie where the three vaults were located. The crew poured five thrust blocks on waterline C. At Rock Chalk, the crew installed 137' of 12-inch PVC, one 12x12x3 MJ Tee, one hydrant anchor tee with 6-inch valve, one 12-inch plug, and poured 5 thrust blocks. KN

08/15/13      Thursday      Low 63      High 75      Pt Cloudy      Crew 3  
I went to Rock Chalk. The crew continued to excavate on waterline C. The crew installed one 12-inch valve, one hydrant assembly and 25' of 12-inch PVC. The crew was installed another joint of pipe. They broke 11 conduits that crossed the waterline 27' south of the fire hydrant. They found another 3 conduits crossing at an angle 48' south of the fire hydrant. I met with Bob over updates at Rock Chalk. I went to Rock Chalk. The crew was excavating on waterline C. The crew installed two joints of pipe. The crew installed a 12x12x12 MJ Tee, 12x8 reducer and one 8-inch valve. I met with Lonnie. I found that the ground crew had compacted the base for the practice track and were filling the area to the west of the track. The area east of the track was slope to the track. The tracks base went to the middle of the utility easement and the edge of the track would be only 4' from the center of the waterline. It appeared that the access road was moved or eliminated and instead just dirt sloped to drain. This would affect the elevation of the hydrants and access for the hydrants. I took a picture and sent it to Melinda. I called Melinda to discuss the details. I notified Bob B of the situation and asked to meet in the morning. The crew installed two joints of pipe. At Rock Chalk, the crew installed 125' of 12-inch PVC, one 12x12x12 MJ Tee, one hydrant assembly, one 8-inch valve, one 12-inch valve, and one 12x8 MJ reducer. KN

08/16/13      Friday      Low 57      High 81      Sunny      Crew 3  
I went to Rock Chalk. The crew continued to excavate on waterline C. The crew installed one 3-inch valve, and one hydrant with leg. Bob called and was onsite with Dave O. We discussed the waterline C location from station 6+24.44 to 12+35.01. There are conflicts with the location since they moved the practice track 43' from the edge of the stands and are moving the access road to the west 8' from the practice track. The crew was poured four thrust blocks. Dave W and Mike L were onsite to look at the conflict. The crew backfilled the hydrant legs. The crew continued on waterline C. They installed four joints of 12-inch pipe. Bob B called and asked me to attend a meeting on the waterline conflict. Mike L, Bob B, James K, Thomas F, Casey, and myself discussed the changes west of the track stadium. The practice track is 43' west of the track stadium. The track

elevation is 975 with a .2 fall. There is a 8' green space with 6-8 inches of drop to the access road which is at 974. The practice road was supposed to be 26' wide. It was decided to shorten the access road to 19'-20'. There was still discussion of keeping the 26'. The new waterline will be 4' west of the edge of pavement with the two hydrants west off of the waterline. The 15' utility easement will be centered on the new waterline. There is a driveway that the waterline will go under that goes to a storage building for KU. The building is around 22' wide to 150' long. Thomas agreed to have the edge of the access road staked and the drive to the storage building. The hydrant at station 7+00 may have to move to the south for the driveway and to be within 500' hydrant separation rule for the fire department. Thomas suggested to bring up in the meeting so Paul can have the new alignment drawn up and easements filed. We discussed the irrigation services and the meters which Thomas was not sure if the plumber Earl and JR were completing them or Kings. The crew started on waterline F. The crew installed 3 joints of 8-inch PVC. The crew had to hammer rock for waterline F. I met with Casey, he had taken GPS shots for Paul and was going to have some staking done possible on Monday. At Rock Chalk, the crew installed 80' of 12-inch PVC, 63' of 8-inch PVC, one hydrant, one 3-inch valve, and poured 4 thrust blocks. KN

08/19/13      Monday      Low 63      High 87      Sunny      Crew 4  
I went to Rock Chalk. The crew continued to excavate on waterline F. The crew installed two joints of pipe. They were encountering a layer of rock and had to hammer it out. The crew poured 20 cubic yards of flow able fill. The crew continued on waterline F. The crew installed 2 joints of 8-inch PVC and a 45 elbow. The crew had to hammer rock for waterline F. Bob S came out and took GPS shots of the waterline. Lynn Electric was installing the two 4-inch conduits across the road. They installed 74'. Bob S took GPS shots of the conduits. I met with the Black Hills Gas. I showed them where the new waterline and two 4-inch conduit lines were installed. The crew installed another joint of 8-inch PVC. The crew excavated for the vault. I called Melinda about the note on the construction plans for the 5' of flowable fill around the vault. She explained the reasoning to prevent any liability of settlement. I told her that the flowable would have to be installed after the 3-inch service line and the 6-inch fire line were installed. Also, that the hydrant would need at least 4' for the thrust block of undisturbed ground. She told me that the vault would be in the road. I looked at the submittals and saw that the lid had a padlock tab on it. I called her back and she discovered that the submittals included the 3-inch meter vault but it was not approved only the backflow vault and those cut sheets were in the file by mistake. We discussed what other submittals would be required for the 3-inch services and fire lines. The crew was installing the vault base. Melinda agreed that it was ok to set the base since it would be the same and approved. I notified Lonnie that the vault top was wrong and not to be installed. I explained how it would require a different hatch. The crew installed a 19' piece of pipe and a 8x8x6 tee with a 6-inch valve for a fire line. The crew backfilled part of line F. At Rock Chalk, the crew installed 120' of 8-inch PVC, one 6-inch valve, one 8-inch 45 elbow, set the base to the 3-inch meter vault, and poured 20 cubic yards of flowable fill. KN

08/20/13      Tuesday      Low 65      High 91      Sunny      Crew 3  
I went to Rock Chalk. The crew continued to excavate on waterline F. I attended the update meeting for Rock Chalk. I checked on the crew. They were bolting together the fittings for the hydrant. The crew installed a 8x8x3 MJ tee with 3-inch valve, hydrant

Kings poured three thrust blocks and 10 cubic yards of flow able fill on Waterline E. I went back to Bob Billings and Iowa. The crew excavated for the vault and existing 6-inch valve for the fire line. I met Bob S and he took gps shots of waterline E and the 4-inch conduit for fiber optic. At Rock Chalk, the crew poured three thrust blocks and 10 cubic yards of flow able fill. KN

08/27/13      Tuesday      Low 73      High 95      Sunny      Crew 0  
I went to Rock Chalk. The crew was excavating for footings and not working on the waterline. Lynn Electric was installing for 4-inch conduit for the fiber optic. I met with Bill from public works and he was tracking the lengths of fiber optic 4-inch conduit. I told him that we had current GPS shots on the fiber optic conduit. Bob S came out and took GPS shots of the 4-inch conduit. I met with Ernie from JR mechanical. He had questions over the irrigation meter installation and parts. He said that he was going to hire Kings to complete the 8 irrigation services and the two 3-inch services. I met with Lonnie and he was going to work on footings today. I looked at the staking for the waterline west of the stadium and it is still 29' west of the practice track. At Rock Chalk, the crew was working on excavating footings. KN

08/28/13      Wednesday      Low 65      High 94      Sunny      Crew 0  
I went to Rock Chalk. At Rock Chalk, we went over the monthly totals. I called Bob out to take GPS shots of the 4-inch conduit. The crew was going to work on excavating footings. I took GPS shots on the collector application on hydrants and hydrant valves. I measured 4-inch conduit. I met with Jake. At Rock Chalk, the crew was working on excavating footings. KN

08/29/13      Thursday      Low 72      High 97      Sunny      Crew 0  
I went to Rock Chalk. I tried to use the arcgis application. I was able to take a few GPS shots but ran into a lot of difficulty. I called Clint and we went over some details and tried different options. Bob S came out and took GPS shots of the 4-inch fiber optic conduit. Lonnie called about a elevation bust with the sanitary sewer. I notified Melinda. Melinda called and I went over the concerns. She asked for the elevations and where they wanted to tap the sanitary sewer. I went to Rock Chalk. I met with Lonnie and they took more elevation shots and found out that the line will have 2% slope between the two connections. I notified Melinda. Bob S came out and took GPS shots of the 4-inch conduit that is by the stadium. I measured the lengths of the conduits. At Rock Chalk, the crew was working on excavating footings and excavating for the sanitary sewer service to the recreation center. KN

08/30/13      Friday      Low 71      High 101      Sunny      Crew 0  
I viewed the changes for Rock Chalk waterline. Bob S went to Rock Chalk and took GPS shots of the 4-inch fiber optic line along George Williams Way. I sent out my comments and concerns. Lonnie called about the sanitary sewer service to the recreation center at Rock Chalk. I notified Melinda and Bob Brower. I went to Rock Chalk. I had Lonnie excavate the sanitary sewer service tee. JR mechanical and Kings took elevation shots and had 7-8 inches of fall in the service which they said was over 1%. I called Melinda and left her a message about the sanitary sewer service. I notified Bob B that it was not an issue. Kings decided to install some waterline while they were waiting for a crane to be moved. The crew installed two joints of 12-inch PVC. Melinda called back and we

discussed project updates. I measured the 4-inch conduits along George Williams Way. The august total for 4-inch conduit for fiber optics is 6644 LF. At Rock Chalk, the crew was working on excavating footings and excavating for the sanitary sewer service to the recreation center. They installed 40' of 12-inch PVC. The august total for 4-inch conduit for fiber optics is 6644 LF. KN

09/03/13      Tuesday      Low 54      High 88      Sunny      Crew 3  
I scanned some documents. I went to Rock Chalk. I attended the update meeting. I met with Mike L and Bob B over the waterline by the stadium. I met with Lonnie over updates on the waterline alignment. At Rock Chalk, the crew was working on excavating footings. KN

09/04/13      Wednesday      Low 56      High 87      Sunny      Crew 3  
I went to Rock Chalk. I met with Lonnie over the new waterline alignment. They were going to install some waterline today and we discussed testing. The crew was gathering equipment and parts to start installing the waterline. The crew was not able to have the new hydrant location staked at the northwest of the stadium. They could not work on the waterline until finish elevation can be staked. I went by Rock Chalk and the crew only installed one joint of pipe. At Rock Chalk, the crew was working on excavating footings. The crew installed 20' of 12-inch PVC. KN

09/05/13      Thursday      Low 64      High 89      Sunny      Crew 4  
I went by Rock Chalk and the crew continued to excavate footings. Lonnie called and they were starting back up at Rock Chalk. I went to Rock Chalk and the waterline on the south side of the stadium was staked. It was at the edge of the sidewalk by the track. I called Mike L to provide information on the waterline alignment and some suggestions for field adjustment. We are going to meet tomorrow morning. I met with Thomas and Casey. The access road will have a 1% slope of fall from the practice track and track. It should be around 976 elevation for the access road. The access road is going to have the most of 9-inch of tilled fly ash and 7-inches of pavement. The crew set up and gathered fittings for tomorrow. They hammered some rock out for the 90 elbow. At Rock Chalk, the crew was working on excavating footings. KN

09/06/13      Friday      Low 67      High 93      Sunny      Crew 3  
I went by Rock Chalk and the crew continued on waterline C. The crew installed two joints of pipe and a 90 12-inch elbow. I met with Mike L and Bob B over the alignment of the waterline on the south side of the stadium. We took some field measurements and verified some information with Casey. The crew installed another joint of pipe. The crew took elevation shots of the hydrant location and set the 12-inch valve and hydrant tee and 12' of 12-inch PVC. The crew installed the hydrant assembly with a 90 elbow then the hydrant valve and hydrant with anchor couplings. The entire leg is anchored together. I called Bob for GPS shots. The crew installed a 10' piece of 12-inch PVC pipe and bolted it together to the hydrant tee. The crew installed another three joints of 12-inch pipe. Bob S was out and took GPS shots. The crew installed three more joints of 12-inch PVC and backfilled the excavations. At Rock Chalk, the crew installed 202' of 12-inch PVC, one 12-inch valve, one 12-inch 90 elbow, and a hydrant assembly. KN

09/09/13 Monday Low 70 High 96 Sunny Crew 3  
I went to Rock Chalk. The crew poured four thrust blocks. They backfilled and graded over the waterline C area. The crew went back to excavating footings. I offered to fill and flush part of the waterline but Lonnie with Kings was not ready to flush any water. KN

09/12/13 Thursday Low 69 High 88 Sunny Crew 3  
I went to Rock Chalk. The crew was onsite-excavating footings. Matt called and was going to Rock Chalk to install waterline. I went to Rock Chalk. The crew installed 6 joints of 12-inch PVC pipe. I updated the as-built map for Rock Chalk. The crew installed another 6 joints of 12-inch pipe. At Rock Chalk, the crew installed 240' of 12-inch PVC. KN

09/13/13 Friday Low 48 High 80 Sunny Crew 3  
I went to Rock Chalk. Matt and I went over the new waterline alignment on the south side of the stadium. We measured and marked out the new alignment. I called Bob B to see if he would be able to view the alignment. The crew started to install waterline on Line C. The crew installed 3 joints of 12-inch PVC pipe. Bob B and Dave O came out to the site. I reviewed the alignment. Bob B agreed with the new alignment. The crew continued to install waterline. I updated as-built information. The crew installed another three joints of pipe. The crew installed a 45 elbow. The crew installed 3 joints of 12-inch PVC pipe. The crew installed one 12-inch valve and a hydrant assembly. Clint came out and took GPS shots. The crew installed another 42' of pipe. I updated the as-built map for Rock Chalk. At Rock Chalk, the crew installed 222' of 12-inch PVC, one 12-inch 45 elbow, one 12-inch valve, and one hydrant assembly. KN

09/14/13 Saturday Low 61 High 82 Sunny Crew 1  
I went to Rock Chalk. I met with Lonnie. The crew started to backfill part of the waterline. The crew poured three thrust blocks. Lonnie started to backfill the excavation for the lifts to be tested. Jerome with Alpha-Omega Geotech completed two nuclear density tests and will test Monday on the final lift for the waterline ditch. The first lift tested was 21' northwest of the fire hydrant and the second lift test was 53' northwest of the hydrant. He will complete another three tests 100' to the east on the proposed waterline ditch next week. At Rock Chalk, the crew backfilled the southwest side of the stadium with two nuclear density test and poured three thrust blocks. KN

09/18/13 Wednesday Low 68 High 93 Sunny Crew 6  
Lonnie called and the crew was going to work on the waterline at Rock Chalk. I went to Rock Chalk. The crew was grading the roads for traffic and needed to expose some existing utilities. I went to Rock Chalk. The crew installed one joint of pipe on water line B. The crew installed 2 more joints of pipe. The crew installed another joint on waterline B. The crew poured 10 cubic yards of flow able fill on waterline B at station 0+37.5 to 0+80. Another crew showed up and started on waterline C. The crew installed 3 joints of pipe. At Rock Chalk, the crews installed 140' of 12-inch PVC and 10 cubic yards of flow able fill. KN

09/19/13      Thursday      Low 67      High 94      Sunny      Crew 6  
I went to Rock Chalk. One crew was excavating footings. The other crew was working on Waterline C south of the stadium. The crew excavated around the existing electric conduits. They installed one joint of pipe. The crew excavated for the elbow and continued on to the east. Bob B and Mike L were onsite to look at the new alignment. We went over depths and alignments. They wanted to know about the backfill around the retention pond. I went and found Casey. He said that they would be filling extra areas around the retention area and it was still being designed. They would not be cutting any of the walls out but adding. The crew had to order a 22 ½ elbow since a 45 elbow was going to be too much of an angle. I went back to the office and met with Bob B over the retention pond at Rock Chalk. I relayed what Casey said. The crew installed 1 more joints of pipe. The other crew started back on Waterline B. They installed 3 joints of pipe. The crew poured 8 cubic yards of flow able fill on waterline B at station 0+80 to 1+03. They installed another 10 joints of pipe. I talked Alpha Omega and they will be doing the other compaction tests tomorrow on Waterline C. They backfilled around the entrance. The crew working on waterline C installed a 22 ½ elbow. Bob S came out and took GPS shots of the gas and fiber lines crossing waterline B and the fitting for waterline c along with the electric crossings. The crew installed 5 joints of 12-inch PVC pipe. At Rock Chalk, the crews installed 400' of 12-inch PVC, one 22 ½ elbow, and 8 cubic yards of flow able fill. KN

09/20/13      Friday      Low 48      High 75      Sunny      Crew 5  
I went to Rock Chalk. Lonnie's crew was working on Waterline B. The other crew was backfilling on Waterline C south of the stadium. They were waiting for nuclear density testing. The crew working on waterline B installed 4 joints of 12-inch PVC pipe. The crew on water line B installed 1 joint of pipe. The crew checked the elevation and grade since they were close to the hydrant assembly. The crew installed two 12-inch valves along with a hydrant assembly and two joints of 12-inch PVC pipe. The other crew on waterline C was backfilling and grading south of the stadium. Alpha Omega Geo Tech came out and took 4 nuclear density tests. The crew continued to excavate for the 90 elbow on waterline C. The other crew on Waterline B poured two thrust blocks. Bob S came out and took GPS shots. The crew on Waterline C installed one joint of pipe and a 90 elbow. They poured two thrust blocks on the 22 ½ elbow and 90 elbow. The crew on waterline B installed another joint of 12-inch PVC. At Rock Chalk, the crews installed 204' of 12-inch PVC, 1 90 elbow, 2 12-inch valves, one hydrant assembly, and 4 thrust blocks. KN

09/23/13      Monday      Low 53      High 80      Sunny      Crew 4  
I went to Rock Chalk. Lonnie's crew was working on Waterline B. The crew working on waterline B installed 10 joints of 12-inch PVC pipe. I went over the monthly totals with Kyle from Kings. I went to Rock Chalk. The crew continued on water line B. The crew installed another 7 joints of 12-inch PVC pipe. I met with Lonnie going under the storm sewer and the elevation of the road. The crew stopped on waterline B to allow the road crews to grade the area. They went back to waterline C. At Rock Chalk, the crews installed 340' of 12-inch PVC. KN

09/24/13      Tuesday      Low 53      High 80      Sunny      Crew 4  
I went to Rock Chalk and attended the bi weekly meeting. The crew was installing waterline on Waterline B. The crew installed 2 joints of 12-inch PVC. Lonnie's crew was working on Waterline B. The crew working on waterline B installed 3 joints of 12-inch PVC pipe. The crew installed the hydrant assembly and a 12-inch valve along with a 2' piece of pipe. The crew continued on water line B. The crew installed another joint of 12-inch PVC pipe. The crew poured 20 cubic yards of flowable fill. They went back to waterline C. The crew moved to waterline C. The crew installed three joints of 12-inch PVC pipe. At Rock Chalk, the crews installed 182' of 12-inch PVC pipe, one 12-inch valve, one hydrant assembly, and poured 20 cubic yards of flow able fill. The crew will not be working tomorrow. KN

09/26/13      Thursday      Low 59      High 89      Sunny      Crew 3  
I went to Rock Chalk. The crew was working on waterline C. The crew installed four joints of pipe and a 17' piece of pipe along with a valve and hydrant tee with valve. Lonnie and discussed elevations going under the storm and the staking on waterline B. The crew finished installing the hydrant assembly with 47' of 6-inch PVC pipe to the hydrant. Bob S came out and took GPS shots. The crew stopped on waterline C from the rock shelf that will need to be hammered out. The crew went back to waterline B. The rock pipe and some grading was completed. They line was staked to the connection to waterline C. The crew installed three joints of pipe. The crew poured four thrust blocks. The crew backfilled the excavations. At Rock Chalk, the crew installed 157' of 12-inch PVC, one 12-inch valve, one hydrant assembly, and four thrust blocks. KN

09/27/13      Friday      Low 66      High 87      Sunny      Crew 3  
I reviewed the first compaction results for waterline C, still waiting for the second report. I updated the project notes and folders. I went to Rock Chalk. The crew was working on waterline B. The crew installed eight joints of pipe. The crew poured 8 cubic yards of flowable fill. The crew installed a 2' hydrant extension at station 9+60.22 and backfilled the hydrant and valve. The crew installed another 2 joints of 12-inch PVC pipe. The crew back filled the excavation. The crew installed a 2' hydrant extension at station 9+60.22 and backfilled the hydrant and valve. The crew installed 2 joints of 12-inch PVC pipe. At Rock Chalk, the crew installed 240' of 12-inch PVC, and poured 8 cubic yards of flow able fill. KN

09/28/13      Saturday      Low 44      High 71      Rain      Crew 3  
I updated the folders for Rock Chalk. I went to Rock Chalk. The crew had started to excavate. The rain was coming down in spurts. The crew ended up calling it a day. At Rock Chalk, the crew was not able to install anything due to rain. KN

10/01/13      Tuesday      Low 60      High 86      Sunny      Crew 4  
I met with Mark over construction activities from yesterday. The crew at Rock Chalk installed 202' of pipe, one 12-inch valve, and a hydrant assembly. I went to Rock Chalk. The crew installed two joints of 12-inch pipe. Lonnie and I went over the remaining quantities to be installed. We found that the hydrant quantity was wrong. The plans call out for 17 hydrants and when you go through the plans and count there are 18. Lonnie ordered another hydrant. I sent an email to Bob B and Mike L to notify them of the discrepancy. The crew installed another joint of 12-inch pipe. The crew was hammering

rock. The crew installed two joints of 12-inch pipe. The crew assembled a tee and two 12-inch valves in preparation to the connection to Waterline C. The crew installed 24' of 12-inch pipe along with a 12x12x12 MJ tee and two 12-inch valves. At Rock Chalk, the crew installed 124' of 12-inch PVC, 12x12x12 MJ Tee, and two 12-inch valves. KN

10/07/13      Monday      Low 44      High 73      Sunny      Crew 3  
I went to Rock Chalk. The crew installed two joints of pipe. The crew poured three thrust blocks. The crew poured 8 cubic yards of flowable fill on waterline B. The crew stopped working on the waterline to work on the storm sewer. At Rock Chalk, the crew installed 40' of 12-inch PVC, poured three thrust blocks, and poured 8 cubic yards of flowable fill on waterline B. KN

10/16/13      Wednesday      Low 35      High 59      Pt Cloudy      Crew 4  
I updated some project notes and spreadsheets. I went to Rock Chalk. The crew was working on waterline C. The crew installed three joints of 12-inch pipe. I met with Ernie from JR mechanical. He gave me a sheet showing the locations of the irrigation meters. I went to the Kaw plant and met with Mike L and Andy over the irrigation meters. Ernie said that all of the meters would be short services. I went back to Rock Chalk. The crew installed another joint of pipe. I met with Andy over the irrigation services at Rock Chalk. I went to Rock Chalk. The crew installed another joint under the storm sewer on waterline C. The crew went back to installing storm sewer. At Rock Chalk, the crew installed 100' of 12-inch PVC pipe on waterline C. KN

10/17/13      Thursday      Low 33      High 68      Pt Cloudy      Crew 0  
I went to Rock Chalk. I found the contractor working under Kasey or Fritze had a hose hooked up to a hydrant without a meter or backflow preventer. I went over the shutoff the hydrant and removed their hose. I told the crew that they needed a backflow preventer and meter in order to draw water. They told me that Kasey had told them to fill up their 500 gallon tank which was being used to cure concrete. I flushed the hydrant for 5 minutes. I notified Mike L of the situation. He asked me to go discuss the matter with Kasey. I found Kasey and discussed the concerns and future actions. Kasey called Meredith to check out a water meter/backflow preventer. The crew was onsite and working on storm sewer. KN

10/18/13      Friday      Low 35      High 44      Rain      Crew 3  
The crew worked on waterline C. They installed two joints of 12-inch PVC pipe. They had to hammer rock. Another crew was working on the fire line for the stadium on the private side. The crew stopped work due to the rain. At Rock Chalk, the crew installed 40' of 12-inch PVC. KN

10/21/13      Monday      Low 39      High 57      Sunny      Crew 4  
I went to Rock Chalk. One crew was backfilling the excavation. Another crew showed up to work on excavating for the power poles. The crew installed two joints of pipe. The crew installed another 18' of 12-inch PVC pipe and a 12x12 sleeve. I notified Bob S that I had a few GPS shots. Lonnie talked about filling the waterline this afternoon or definitely tomorrow. I notified the water plant. The crew finished waterline C and connected it to waterline B. Bob S came out and took GPS shots. The crew started on waterline B. Lonnie, I looked at the staking, and some of the cuts/fills were not



consistent with the roads cuts/fills. They were going to have the line checked with the staking crew. The crew installed four joints of 12-inch PVC on water line B. At Rock Chalk, the crew installed 140' of 12-inch PVC pipe and one 12x12 MJ sleeve. KN

10/22/13      Tuesday      Low 38      High 63      Pt Cloudy      Crew 2  
I went to Rock Chalk. One crew was backfilling the excavation. Another crew showed up to work on excavating for the power poles. The crew was checking all the valves in preparation to fill the waterline. I found that one of the light poles was excavated 5' south of the waterline north of the stadium. We had Uriel come over to check the staking and I measured off of the construction plans where it was shown. I notified Bob B. JR Mechanical proposed to move the pole 2.5' from its shown location. I called Bob B and he agreed with proposal. I notified the water plant operators that we would be filling the waterlines at Rock Chalk. We started to fill the waterline at 11 pm. We continued to fill the waterline. Garney called to notify they were headed into town. We continued to fill the line. We switched flows and filled waterline B. The crew filled lines E and F. The crew started to hydrostatically test waterline A and waterline D from station 0+00 to 8+68. The static pressure was at 110 PSI. The crew pumped up the waterline to 200 PSI. The line held for a ½ an hour at 200 PSI. The line passed. At Rock Chalk, the crew flushed for 4 hours and passed one hydrostatic test. KN

10/23/13      Wednesday      Low 29      High 59      Pt Cloudy      Crew 3  
I went to Rock Chalk. We continued to hydrostatically test the line. The crew flushed the line for 60 minutes to blow off any air pockets. The crew pumped up the waterline D from station 8+68 to 15+88 and waterline C from Station 27+75.09 to 21+34.49 but were fighting more air pockets. The crew directionally flushed for 30 minutes. They crew checked all the valves and hydrants. The crew tested waterline D and waterline C with a static pressure of 110 PSI and a dynamic pressure of 200 Psi for 30 minutes. The line passed. The crew hydrostatically tested the waterline C from Station 21+34.49 to 3+45 and Waterline F. The static pressure was 110 PSI and the dynamic pressure was 200 PSI for 30 minutes. The line passed. The crew started to pump up waterline C from station 0+00 to 3+45 and waterline B from station 0+00 to 16+23. The static pressure was 110 PSI. I called Mark R to come out and watch the last test while I take a bacteriological sample at the Kaw water plant. At Rock Chalk, the crew pumped up the waterline to 200 PSI. The line held for a ½ an hour at 200 PSI. The line passed. At Rock Chalk, the crew flushed for 2 hours and passed three hydrostatic tests. KN

10/24/13      Thursday      Low 28      High 53      Pt Cloudy      Crew 3  
I went to Rock Chalk. We continued to hydrostatically test the line. The crew pumped up the waterline E. The line would not hold pressure. The crew tried a couple times to see if there was an air bubble in the line. The crew checked the backflow vault and the connection to the backflow was leaking water. The crew repaired the connection with the spool to the backflow vault. We filled and flushed the line for 30 minutes. The crew tried pumping up the line again and it would not hold. The crew decided to dig up about 60' north of the vault where they had a problem with one joint of pipe. The crew excavated the line and found that it was leaking from a bell. The crew went to pick up parts. The crew installed a 4' piece of pipe and two 8x12 MJ sleeves. Bob S came out and took GPS shots of the sleeves. The crew backfilled the line. We filled and flushed the line for 30 minutes. There was a piece of plastic stuck in the foot valve of the

hydrant. The crew ended up breaking the breakaway on the hydrant. They disassembled the hydrant and were going to pick up a new breakaway tomorrow morning. At Rock Chalk, the crew flushed for 1 hour and installed two 8x12 MJ sleeves. KN

10/25/13      Friday              Low 43              High 58              Pt Cloudy              Crew 3  
I went to Rock Chalk. The crew installed another breakaway in the hydrant. The crew flushed for 30 minutes. We continued to hydrostatically test the line. The crew pumped up the waterline E. The line would not hold pressure. The crew tried a couple times to see if there was an air bubble in the line. The crew flushed the line for 15 minutes. The crew could not get the line to hold pressure. They were going to setup to chlorinate the 12-inch waterline. The crew set up to chlorinate the waterline. The crew chlorinated waterline B and part of waterline C to the hydrant northwest of the stadium. The line was flushed for an hour. The crew went to each hydrant and ran them until chlorine was present. The crew changed direction and started to chlorinate waterline A, C, D, and F. The crew chlorinated for an hour and 45 minutes. They flushed all the hydrants until chlorine was present. At Rock Chalk, the crew flushed for 3 ½ hours and chlorinated the 12-inch waterline. KN

10/28/13      Monday              Low 32              High 65              Pt Cloudy              Crew 5  
I went to Rock Chalk. I started to flush the line at station 11+00 on Waterline C and B. The chlorine was reading less than 10 MG/L. It had the same reading after 15 minutes of flushing. I changed directions of flushing to waterlines, A, C, and D. The chlorine registered the same. I flushed the line for 15 minutes and it registered the same. I notified Kings that the chlorine must have combined out in the waterline and the lines would need to be rechlorinated. The crew arranged to chlorinate the line, again. I went to Chelsea Place and Bob Billings. I met Mark at Rock Chalk. He was going to assist while the crew was chlorinating the waterlines. The crew started to chlorinate the waterline. The crew finished the waterlines B and part of C, which took 2 hours. The crew changed direction and started to chlorinate waterline A, C, D, and F. The crew chlorinated for four hours and 45 minutes. They flushed all the hydrants until chlorine was present. Mark stayed while they finished chlorinating the waterlines. KN

10/29/13      Tuesday              Low 51              High 64              Cloudy/Rain              Crew 1  
I went to Rock Chalk. The crew was not working due to rain. There was a crew onsite pumping water. I attended the Rock Chalk meeting. We had to check the valves since the crew had the line isolated in several locations. We flushed the line for 100 minutes. I took the bacteriological sample to the water plant. KN

10/30/13      Wednesday      Low              High              Cloudy/Rain      Crew 1  
Kirk on vacation and I went to project to flush and sample waterlines A, C, F, and D. The crew flushed all lines thru hydrant at Sta. 11+00 for approx. 45 minutes then we flushed from all hydrants on the lines and chlorine level was tested and hydrants were flushed until residual was 3.5 mg/L.  
I took 3 samples at the following locations:  
Sta. 27+75.09 Waterline A, D, & C (2583' of 12" PVC)  
Sta. 1+87.36 Waterline C & F (1088' OF 12" PVC & 187' of 8" PVC)  
Sta. 11+00 Waterline C (437' of 12" PVC)

I spoke to Peggy Thomas about sample taken yesterday and she told me it had failed so while I took the 3 samples to CWTP the crew switched the valves over and started flushing Waterline B & C and the line was flushed for approx. 45 minutes the I tested chlorine level and re-sampled the line at Sta. 11+00 (Waterline B & C 2723' of 12" PVC C-900 DR-14) All flushing and sampling was completed at 11:30am.

10/31/13      Thursday      Low 40      High 59      Rain      Crew 0  
Peggy called and two of the three samples failed. I notified Kyle with Kings. They will be chlorinating the waterline again tomorrow. KN

11/01/13      Friday      Low 37      High 62      Pt Cloudy      Crew 2  
I went to Rock Chalk. I met Kings Construction at the sight. They set up to chlorinate the waterlines. I notified the water plant about flushing water. A crewmember and I went along and flushed each hydrant until chlorine reached it. We did this for all the waterlines and kept they hydrant flushing at station 11+00. We changed directions and chlorinated the other waterlines. Randy called to notify me about pavement restoration at Bob Billings. The crew finished chlorinating the water lines. It took 6 hours to chlorinate and flush. KN

11/04/13      Monday      Low 50      High 62      Pt Cloudy      Crew 2  
I went to Rock Chalk. I started to flush the waterline. The chlorine was over 50 mg/l. I flushed waterline B and C for 2 hours. I went to the Clinton water plant and picked up sample bottles. I changed direction and flushed waterline A, D, F, and C for 2 ½ hours. I took four bacteriological samples. The crew was working on the Private Line. We flushed and filled the line. The line was still leaking. The crew started to excavate bells to the north of the first leak. KN

11/05/13      Tuesday      Low 46      High 63      Rain      Crew 2  
I went to Rock Chalk. I attended the update meeting. Peggy called and the four bacteriological samples passed. I notified Kings that they passed. I went to the Clinton water plant and picked up sample bottles. I talked to Matt about the irrigation services at Rock Chalk Park. He thought he may be able to find the parts. I went to Rock Chalk. I started to flush the waterline. The chlorine was over 3.5 mg/l. I flushed waterline B and C for 30 minutes. I changed direction and flushed waterline A, D, F, and C for 1 hour. I took three bacteriological samples. KN

11/06/13      Wednesday      Low 31      High 48      Pt Cloudy      Crew 4  
I met with Terry and found out that the 12x2 inch saddles only were made in 3 piece design. I met with Andy to show him the results of the saddles. I went to Rock Chalk. Peggy called and the bacteriological samples passed and one failed. I notified Kings about the results. One crew started to excavate the waterline south of the stadium for the irrigation tap. I started to flush the waterline C. I went to the Clinton water plant and picked up a sample bottle. I went to Rock Chalk. Another crew was onsite looking for the water leak on private waterline E. I took a bacteriological sample on Waterline C. The crew installed the ford 3 piece saddle and ford corp. The crew tapped the waterline. They installed 2" HDPE pipe from the meter to the backflow device then to the 2½-inch PVC line that went to the track field. I called Bob S for GPS shots. The other crew found another leaking bell on waterline E. They removed one of the sleeves and replaced the

pipe to the leak. They cut out the bell and used the sleeve to connect the waterlines. The other crew installed 2-inch copper from the corpe to the meter set. KN

11/07/13      Thursday      Low 29      High 59      Pt Cloudy      Crew 2  
I went to Rock Chalk. Peggy called and the bacteriological sample passed. I notified Kings that they passed. Kings flushed and hydrostatically tested the private waterline E. The line held 200 PSI for 30 minutes and passed. The crew chlorinated the waterline. I started to flush the waterline C. I took a bacteriological sample on waterline C. I called Bob S for GPS shots but he was not available. I took measurements of the first 2-inch irrigation water meter installed south of the stadium/track. I met with Dave O about having the interceptor sanitary sewer line video inspection next Tuesday. KN

11/08/13      Friday      Low 41      High 64      Sunny      Crew  
Aurora called and the bacteriological sample passed. I notified Kings that they passed. Mark and I went to Rock Chalk. Bob S took GPS shots of the meter pit, backflow pit, and a sleeve. We met with Kings Crew over construction activities. Mark and I went over the waterline E that will need to be sampled on Monday. Mark and I went around and opened valves and closed hydrants. We went to the Clinton water plant and picked up a sample bottle. The road crew had not tilled over the interceptor sanitary sewer line. They had spread all the fly ash in preparation for tilling. I came back to the office and updated notes. I went and met with Clint over project details for Rock Chalk. Mark and I went to Rock Chalk Park. We met with Kings Construction. They will be completing the fly ash tilling today. They had already made two passes over the interceptor sanitary sewer line. They did not know any dates for paving. I informed them that the sanitary sewer line would have video inspection on Tuesday morning. We came back to the office. I met with Dave O about the progress and updates on the interceptor sanitary sewer line. KN

11/12/13      Tuesday      Low 13      High 35      Sunny      Crew 3  
I went to Rock Chalk. The city crew was out and took video inspection of the interceptor sanitary sewer line. The crew was installing waterline. The crew installed 6 joints of 12-inch PVC. I met with Matt and he was going to install another irrigation service today but was delayed for other work. Mark called and the bacteriological sample passed on waterline E. I went to the Clinton water plant and picked up another sample bottle. I went to the field shop. I dropped off the graph to Bob B of the video inspection. There are three sags in the line. One was at around 55', which is close to the center of the road. He was going to review the first video to see if the sag was created by the roadwork. I checked out a 2-inch meter. I went to Rock Chalk. The crew installed three joints of 12-inch waterline pipe. We flushed waterline E for 20 minutes. I took the second bacteriological sample. The crew assembled the hydrant assembly with two 12-inch valves one either side. The crew installed another 23' of 12-inch PVC pipe. At Rock Chalk Park, the crew installed 203' of 12-inch PVC pipe, one hydrant assembly, and two 12-inch valves. KN

11/13/13      Wednesday      Low 27      High 51      Sunny      Crew 3  
I went to Rock Chalk. The crew was hammering rock. The crew installed one joint of 12-inch PVC. Jay emailed that the second sample passed for waterline E. I went to Rock Chalk. The crew was installing waterline and hammering rock. The crew installed 2

joints of 12-inch PVC. I met with Matt and he was working on the fire line to the recreation center. There was no bends on the fire line. The crew turned on the waterline E. The crew continued to hammer rock and install water line. The crew installed 2 joints of 12-inch PVC. The crew backfilled the excavation. They had to haul in dirt. Clint called and some GPS shots were not showing up on the GIS. I called Bob S to come out and take some GPS shots. Bob S came out and took some GPS shots on waterline B and C. The crew installed 2 joints of 12-inch PVC pipe. Clint talked to me about the GPS shots on the fiber optic lines. I went ahead, redlined the rough location of the fiber optic lines, and downloaded in order for Clint to show Micah where the lines are located along with sizes. The crew continued to hammer rock. The crew installed another joint of 12-inch PVC pipe. Another crew will be excavating for the irrigation service to the soccer field tomorrow morning. The crew will be excavating the interceptor sanitary sewer in the morning to verify the depth. The crew installed another joint of pipe and backfilled the excavations. At Rock Chalk Park, the crew installed 180' of 12-inch PVC pipe. KN

11/14/13      Thursday      Low 32      High 59      Sunny      Crew 3  
I went to Rock Chalk. The crew excavated the interceptor line, which was 20 inches deep on the north side. I dug up the line on the south side and it had about 12 inches of cover from the base of the road. The crew was hammering rock. The crew installed one joint of 12-inch PVC. I met with Lonnie and he was working on the irrigation for the soccer field. He installed the ford saddle and corp. He was waiting for the copper and parts to show up in order to finish. The other crew continued to hammer rock. I went to the field shop. I stopped by the Kaw plant and met with Clint over Rock Chalk Park. I went back to Rock Chalk Park. The crew installed 2 joints of 12-inch PVC pipe. The crew continued to hammer rock. The crew backfilled the excavations. The crew continued to hammer rock and install water line. The crew installed 2 joints of 12-inch PVC. The crew backfilled the excavation. Another crew, completed a 2-inch tap and installed the irrigation meter and backflow preventer. Bob S came out and took GPS shots. The crew installed 2 joints of 12-inch PVC pipe. At Rock Chalk Park, the crew installed 140' of 12-inch PVC pipe, and one 2-inch irrigation meter and corp. KN

11/15/13      Friday      Low 46      High 60      Sunny      Crew 3  
I went to Rock Chalk. The crew hammered rock below the interceptor sanitary sewer line. Bob B called to discuss the encasement of the sanitary sewer interceptor line under the street. I did not have the updated sheet with the encasement note and it was not in the folders/files. I notified Kings and Casey with Bliss Sports (Fritze), about the encasement. Carol from Public works, Casey, and myself discussed the options. Casey wanted to pave over and cut out a section of concrete later. Carol was ok with that. Bob B emailed the updated sheet 5. I went to the office and printed out sheet 5. I went back to Rock Chalk. The crew received a delivery of 11 meter pits. I found that three of the meter pits were acceptable and the other 8 were not approved. They were obviously made from storm sewer pipe. I notified Kings of the non-acceptable pits. The crew installed 2 joints of 12-inch PVC pipe. The crew continued to hammer rock. Casey decided to go ahead and remove the concrete where the sanitary sewer interceptor line was located. I excavated and marked both sides of the street to show him where the sanitary sewer line was located. They cut out about 12'. The crew continued to hammer rock. The crew continued to hammer rock and install water line. The crew installed 4 joints of 12-inch PVC. The road crew filled in 8-10 ft to the south of the access road

south of the stadium. They are planning to build a 21' wide access road around the stadium. At Rock Chalk Park, the crew installed 120' of 12-inch PVC pipe. KN

11/18/13      Monday      Low 31      High 60      Sunny      Crew 2  
I went to Rock Chalk. The crew excavated and installed one joint of 12-inch PVC pipe. The crew excavated for the MJ tee. I met with Andy over Rock Chalk Park. I went back to Rock Chalk Park. The crew was tightening bolts on the MJ Tee and two valves. The crew stopped working on the waterline and started on the encasement on the sanitary sewer interceptor line. The crew excavated around the sanitary sewer line. They uncovered 21' of the line. They blocked under the sewer line with concrete blocks and installed #5 rebar. The crew installed another 16' of pipe and will install the two valves with MJ Tee tomorrow. At Rock Chalk Park, the crew installed 36' of 12-inch PVC pipe. KN

11/19/13      Tuesday      Low 41      High 66      Sunny      Crew 2  
I went to Rock Chalk. The crew excavated and installed the MJ tee with two valves. I attended the meeting for Rock Chalk Park. The crew installed 24' of 12-inch PVC pipe. I had kings mound dirt over the sanitary sewer interceptor line. The interceptor line was video inspected for any sags and egg shaping of pipe. The pipe still has a sag. The crew installed two more joints of PVC pipe. I saw that Ernie's Mechanical was trenching for the fiber optic lines along George Williams Way. I stopped and measured the length which was 2222'. Bob B came out and took GPS shots. The crew installed another 12' of 12-inch PVC pipe. The crew poured 8 cubic yards of flow able fill for waterline B. The crew worked on the pipe protection concrete cover over the interceptor sanitary sewer line. They installed CMH over the sanitary sewer line. The crew has an area of 37' long by 7-8' wide and 6-inches deep. They used #5 rebar with 12-inch centers. The crew poured 4 thrust blocks on waterline B. The crew assembled the hydrant tee and valve for installation tomorrow. Casey with Bliss poured 2/3rds of the concrete protection cover. They ran out of concrete and will finish the rest tomorrow morning. At Rock Chalk Park, the crew installed 76' of 12-inch PVC pipe, one 12x12x12 MJ tee, one 12-inch plug, two 12-inch MJ valves, four thrust blocks, and eight cubic yards of flow able mortar. KN

11/20/13      Wednesday      Low 41      High 53      PT Cloudy      Crew 2  
I went to Rock Chalk. Casey with Bliss had already poured the remaining part of the pipe protection cover. The crew excavated and installed the hydrant assembly. The crew set the hydrant plumb. The crew installed a 9' of 12-inch PVC pipe. They completed a 2-inch tap for the eclipse auto flusher. The crew had to go find some brass parts for the auto flusher. The crew installed a 12-inch valve with a plug. The crew poured four thrust blocks. They finished installing the eclipse auto flusher. I met with Casey about not pouring around the meter vault for the stadium since they needed cast iron valve boxes and the vault has the wrong lid. At Rock Chalk Park, the crew installed 9' of 12-inch PVC pipe, one 12-inch plug, one 12-inch MJ valve, four thrust blocks, and an eclipse auto flusher with curb stop. KN

11/21/13      Thursday      Low 25      High 51      Rain/Cloudy      Crew 2  
I went to Rock Chalk. The crew was backfilling and rough grading on waterline B. The crew installed valve boxes and finished rough grading on waterline B. I called the Kaw water plant operators and told them I would be filling the waterline off the west hills

zone. We filled and flushed the waterline for 45 minutes. The crew pumped up the line, but there was a lot of air. We left 100 PSI on the waterline during lunch. I talked to Karen and she was going to be working on Saturday so I could bring in a bacteriological sample on Friday. The crew pumped up the waterline again and still had some air. We valved off the line and all of it held pressure except the last 85'. Mark Shepard came out and we discussed the location of the new waterline where the tracer wire needed to be checked. We flushed the waterline for another 60 minutes. The waterline still would not hold pressure. The crew was going to start looking for a leak. At Rock Chalk Park, the crew flushed and filled waterline B for 105 minutes. KN

11/22/13      Friday              Low 23              High 31              Pt. Cloudy      Crew 3  
I went to Rock Chalk. The crew was excavating the saddle and curb stop for the eclipse auto flusher. The crew found that the saddle was leaking out the side. They started to disassemble the auto flusher. I went to the warehouse. We did not have any saddles for 12x2 with iron pipe threads for PVC. I went back to Rock Chalk. The crew installed the saddle and curb stop. We filled/flushed the line for 30 minutes. The crew pumped up the line but something else was still leaking. The crew excavated around the hydrant tee to check for any leaks. The crew tightened the hydrant tee. We flushed the waterline for 15 minutes. The crew pumped up the line and it did not hold pressure. The crew found that the tee with two valves had come apart. The crew excavated the tee. They were going to fence the excavation and put concrete blankets over the main till Monday. At Rock Chalk Park, the crew flushed and filled waterline B for 45 minutes. KN

11/25/13      Monday              Low 22              High 42              Pt. Cloudy      Crew 3  
I went to Rock Chalk. The crew took apart the assembly with the 12x12x12 MJ tee and two 12-inch valves. Mark S came out and we walked and checked all the tracer wire at Rock Chalk Park. All the tracer wire passed. The crew excavated back on the waterline for two joints of pipe. They deflected the line a few inches to the north and installed the 12-inch valve. Terry called and wanted to know if Kings would be able to install all the meters before the first of the year. I checked with Lonnie and the meter sets were supposed to be here next week. He said that they wanted to finish all the meter installations by Christmas. I notified Terry what Kings Construction had said. The crew installed the 12x12 x12 MJ tee with another 12-inch valve. They had to disassemble one of the nipples between the tee and the valve. The crew turned the nipple and bolted the assembly together. The crew poured three thrust blocks. At Rock Chalk Park, the crew fixed a leak on a MJ tee and valve. KN

11/26/13      Tuesday              Low 13              High 37              Pt. Cloudy      Crew 3  
I went to Rock Chalk. We filled and flushed the line for 45 minutes. The crew hydrostatically tested the remaining of waterline B from station 16+23 to 24+86. The waterline passed with a dynamic pressure of 200 PSI and a static pressure of 110 PSI. The crew set up and chlorinated the waterline. The chlorine exceeded 25 PPM. The crew excavated for the 20' encasement of the sanitary sewer line that is over the new waterline. The crew will pour the encasement tomorrow. The road is finished over the interceptor sanitary sewer line. I informed Bob B that the interceptor sanitary sewer line is ready for final video inspection. At Rock Chalk Park, the crew passed a hydrostatic test and chlorinated the waterline. KN

11/27/13      Wednesday      Low 22      High 33      Pt. Cloudy      Crew 2  
Kyle with Kings called last night and they went ahead and poured the encasement with 7 cubic yards of concrete. The crew used #5 rebar. I went to Rock Chalk. The crew had a concrete blanket over the encasement. The encasement was 20' long. I called Bob S for a GPS shot. He said he would be by today to take the shot. I met with Matt with Kings to check on construction activities. I met the video inspection crew. We found that there was still a section of road not paved on the south side. I told the crew to not video the line until the road was completed. I found Casey. He said they may try to pour the area on Friday. Bob S came out and took GPS shots of the encasement north of the road. At Rock Chalk Park, the crew completed the 20' encasement. KN

12/02/13      Monday      Low 30      High 57      Pt. Cloudy      Crew 2  
I went to Rock Chalk Park. I started to flush the waterline B. The chlorine was over 50 mg/l. We flushed all the hydrants free of chlorine and I took a bacteriological sample. The crew raised on hydrant 18-inches. The crew raised another hydrant 2' and was turning hydrants. I met with Casey and he was going to try to pour the concrete road today over the interceptor line. The crew went to work on storm sewer. At Rock Chalk Park, the crew completed two hydrant extensions and we flushed for 60 minutes. KN

12/03/13      Tuesday      Low 33      High 62      Sunny      Crew 2  
I went to Rock Chalk Park. I attended the update meeting. Mary called and the first bacteriological sample passed. I started to flush the waterline B. I met with Kyle over which direction to turn some hydrants. We discussed some elevations to raise some hydrants and finish grades. I took a bacteriological sample. Kyle called and the vault for the recreation center should be delivered next week. At Rock Chalk Park, the crew flushed for 60 minutes and the first bacteriological sample passed. KN

12/04/13      Wednesday      Low 16      High 41      Cloudy      Crew 0  
Mary called and the waterline B passed the second bacteriological test. I notified Kyle's with Kings that the sample passed. I went to Rock Chalk Park. I turned on the valves on the line and removed the out of service tags from the hydrants. Mike Lemming completed the final video inspection of the interceptor sanitary sewer line. I took the results back to the field shop and met with Bob B. He passed the interceptor sanitary sewer line. I notified Andy that the entire waterline was in service and that the interceptor sanitary sewer line passed. At Rock Chalk Park, the second bacteriological sample passed, the final video inspection passed for the interceptor sanitary sewer line, and the entire waterline is in service. KN

12/31/13      Tuesday      Low 14      High 55      Sunny      Crew 5  
The crew excavated the last 6 areas for the 2-inch irrigation taps. They did not finish exposing the irrigation tap south of the track due to ground water. The crew installed 5 Ford brass saddles and Ford corpse. The crew completed the 5 2-inch taps. They covered the water main and taps with concrete blankets until the service line will be installed. KN



01/03/14      Friday              Low 1              High 39              Pt. Cloudy      Crew 3  
I went to Rock Chalk Park. The crew installed two meter pits and backflow pits. Bob came out and took GPS shots. The crew was working on a third meter setter and Bob took GPS shots of it. The crew finished the installing the meter setter and backflow pit. The crew was working on the fourth meter setter. I took measurements of the three other meter setters. My tablet would not load the maps to take GPS shots. The crew finished installing the fourth meter setter. I took measurements on it. They continued to work on the backflow pit. KN

01/08/14      Wednesday      Low 18              High 29              Pt. Cloudy      Crew 3  
I went to Rock Chalk Park. The crew was installing a meter setter and backflow device. The crew excavated for the last irrigation service south of the track. The crew installed the saddle and meter setter with backflow device. They will disassemble in order for the waterline tap tomorrow. Bob S came out and took GPS shots. The crew was going to set up to excavate for the vault for the recreation center. The crew will have to finish it tomorrow when they have a bigger excavator onsite in order to install the vault. KN

01/09/14      Thursday              Low 29              High 36              Pt. Cloudy      Crew 3  
I went to Rock Chalk Park. The crew installed the vault for the 3-inch meter to the recreation center. They did not have elevation staking and set the vault to match the elevation with the waterline so the service line would go straight into the valve without any fittings. The crew assembled the rising stem valves and fittings for the meter and bypass assembly. The crew installed the assembly in the vault. The crew had the last 2-inch irrigation service tapped. They installed some rock in the excavation since it was holding water. The crew connected to the corpe and covered everything with sand. The crew used rock by the backflow pit and above the waterline since it would be under pavement. The crew backfilled the rest of the excavation. KN

01/14/14      Tuesday              Low 20              High 41              Pt Cloudy      Crew 2  
I went to Rock Chalk Park. The crew poured 10 cubic yards of flow able fill around the meter vault for the stadium. KN

01/31/14      Friday              Low 20              High 29              Pt Cloudy      Crew 2  
Terry emailed that the meter would be in by 10:30 this morning. I notified Matt with Kings. He was going to check his schedule with Bliss and see if he could install the meter today. Matt called back and was able to install the meter today. I met with Terry over the meter for Rock Chalk Park. Matt met me at the warehouse. He was going to see if we had some parts he needed for the meter assembly. He decided to wait for his parts to show up from Olathe. I went to Rock Chalk Park. The crew was excavating a 2-inch irrigation corp that was leaking slowly. The crew found that the saddle was leaking. They tightened the saddle and aligned the 2-inch copper to stop the leaking. Matt with Kings called and his uni-flange was too wide. He was going to the warehouse and check with Terry about our uni-flange to see if it would work. I went to the field shop and met Matt. I went to Rock Chalk Park. The crew installed the 3-inch compound meter, meter# 14081044 and read# 0.00. The crew turned on the water to the building. They notified Ernie with JR Mechanical that the water was on with no leaks. KN

# Report of Compaction Tests

RCT 11305

**Alpha-Omega Geotech, Inc.**  
 701 State Avenue  
 Kansas City, KS 66102  
 Office: (913) 371-0000 Fax: (913) 371-6710  
 Website: www.aogeotech.com

*Compaction Waterline*



Job Name: Rock Chalk Sports Complex Job No.: 12-436 Date: 9-20-13  
 Job Address: 6th and George Williams Way City/ State: Lawrence, KS  
 Client: Bliss Sports Contractor: King Excavating  
 Inspector: TW Reviewed: \_\_\_\_\_  
 Specification Requirements: 95% MDD 3±OMC Source of Spec: Typical  
 Description of Sample: Brown fat clay with trace of organics  
 Gauge No.: 16 Density Standard: 3129.0 Moisture Standard: 476.0

Proctor Results..... Maximum Dry Density, pcf: 93.3 Optimum Moisture Content, %: 23.4

Test Number	1 - 12"	2 - 6"	3 - 6"	4 - 12"	5 - 6"			
Elev. or Lift #	- 2	- 2	- 1	final grade	final grade			
% Moisture	25.9	23.7	28.7	26.5	25.1			
Wet Density	115.3	117.2	116.9	117.1	117.8			
Dry Density	91.6	94.7	90.8	92.6	94.2			
% Compaction	98.2	101.5	97.4	99.2	100.9			
+/- O.M.C.	+ 2.5	+ 0.3	+ 5.3	+ 3.1	+ 1.7			

Test Number								
Elev. or Lift #								
% Moisture								
Wet Density								
Dry Density								
% Compaction								
+/- O.M.C.								

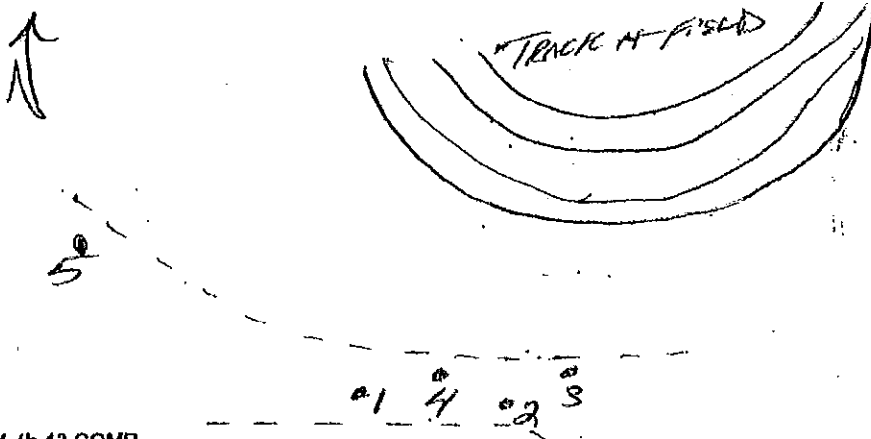
(Note: All elevations are approximate)

REMARKS: \_\_\_\_\_

Informed contractor of results. 1 of 1

LOCATION SKETCH

Note: Drawing is not to scale.



# Report of Compaction Tests

RCT 11305

**Alpha-Omega Geotech, Inc.**  
 1701 State Avenue  
 Kansas City, KS 66102  
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 Website: www.aogeotech.com



Job Name: Rock Chalk Sports Complex Job No.: 12-436 Date: 9-14-13  
 Job Address: 6th and George Williams Way City/ State: Lawrence, KS  
 Client: Bliss Sports Contractor: King Excavating  
 Inspector: Trumaine Westbrook Reviewed: \_\_\_\_\_  
 Specification Requirements: 95% MDD Source of Spec: Typical  
 Description of Sample: Reddish brown fat clay with trace of organics  
 Gauge No.: 16 Density Standard: 3129.0 Moisture Standard: 476.0  
 Proctor Results..... Maximum Dry Density, pcf: 95.5 Optimum Moisture Content, %: 23.4

Test Number	1 - 12"	2 - 6"	3 - 6"				
Elev. or Lift #	- 1	- 1	- 1				
% Moisture	27.3	26.5	19.3				
Wet Density	117.4	117.4	118.9				
Dry Density	92.2	92.8	99.7				
% Compaction	96.6	97.2	104.4				
+/- O.M.C.	+ 3.9	+ 3.1	- 4.1				

Test Number							
Elev. or Lift #							
% Moisture							
Wet Density							
Dry Density							
% Compaction							
+/- O.M.C.							

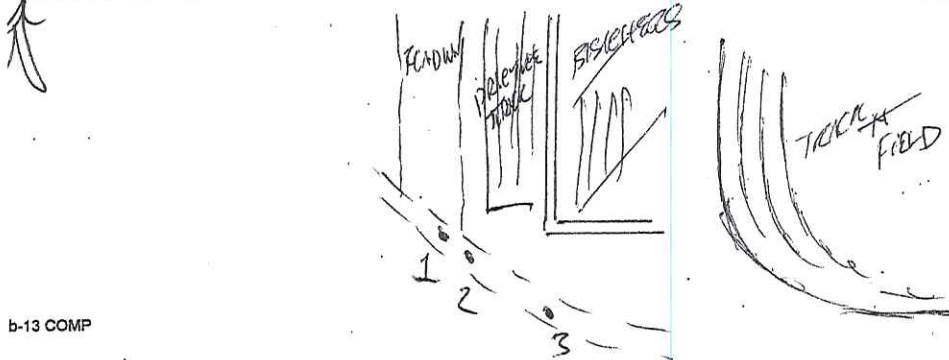
(Note: All elevations are approximate)

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Informed contractor of results. 1 of 1

LOCATION SKETCH

Note: Drawing is not to scale.





WATER INSPECTION Backup

**Meter Card Information**

Address 6100 Rock Chalk Drive		
Tile Location 88' WFH, 33' SSC of Track		
	<b>Old Meter</b>	<b>New Meter</b>
Meter Number		45075297
Meter Reading		000000 00
Make of Meter		Badger Displacement
Size		2-inch
Date	Date Out	Date In 11/07/13
Conditions/Remarks This irrigation meter will feed the track field.		
Signed: Kirk Nyberg		

### Meter Card Information

Address 6100 Rock Chalk Drive		
Tile Location 6' SFH, 15' EEC		
	<b>Old Meter</b>	<b>New Meter</b>
Meter Number		14081044
Meter Reading		0
Make of Meter		Badger Compound
Size		3-inch
Date	Date Out	Date In 01/31/14
<p>Conditions/Remarks          This meter is for the stadium. The vault is located north of the track.          High Flow-(8 digit) 0          Low Flow-(7 digit) 0</p>		
Signed: Kirk Nyberg		





# City of Lawrence

## UTILITIES

### Hydrostatic Pressure Test Report

Project Name: Rock Chalk Park Addition 1	Project No.: PW1315
Inspector: KN	Page: 1 of: 1
Contractor: Kings Construction	

Pipeline Length (ft)	Pressure (psi)		Test Time (min)	Pass	Fail	Remarks/Repairs Made
	Operating	Test				
1585	110	200	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waterline A and Waterline D from station 0+00 to 8+68 on 10/22/13
1358	110	200	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waterline D from station 8+68 to 15+86 and waterline C from Station 27+75.09 to 21+34.49 on 10/23/13
293	110	200	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waterline E on 10/24/13
1976	110	200	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waterline C from Station 21+34.49 to 3+45 and Waterline F on 10/23/13
1967	110	200	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waterline C from station 0+00 to 3+45 and waterline B from station 0+00 to 16+23 on 10/23/13
294	105	200	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waterline E (Private) on 11/07/13
863	110	200	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waterline B from station 16+23 to 24+86 on 11/26/13
				<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	
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**Notes:**

1. Maximum pipeline test length permitted is 1500 feet.
2. Test pressure shall be 2.5 times the operating pressure, not to exceed 200 psi.
3. Minimum test time shall be 30 minutes.
4. Any drop in pressure across the tested section of pipeline shall constitute a failure of the pressure test.