

# **Cost-assessment analysis and recommendations**

**January 23, 2013**

## **Introduction**

The Bond Accountability Commission engaged consultants to conduct cost-assessment studies of Segments 3 and 4 of the Cleveland Metropolitan School District's construction program funded by Issue 14 bond proceeds. The consultants issued reports that were presented at the BAC's public meeting on Jan. 15, 2013. The consultants' findings and recommendations are their own.

The BAC has reviewed the consultant reports and has performed its own analyses to make recommendations with potential for improving cost control in the construction program. The recommendations include further inquiry into some matters by the District's internal auditor, in which cases the expectation is that additional recommendations will result. In some cases our recommendations reflect to a degree those made by our consultants, and in some cases they are entirely our own.

## **Contract awards**

### **CM estimates and bid awards**

The BAC's consultants identified various instances of awarded contracts or aggregate project awards that exceeded by more than 10 percent the Construction Document-phase cost estimates published in the Construction Manager's monthly report. Ohio Revised

Code Section 153.12 states: "No contract ... shall be entered into if the price of the contract, or, if the project involves multiple contracts [as in the case of most CMSD construction] where the total price of all contracts for the project, is in excess of ten per cent above the entire estimate thereof." The law helps protect taxpayers from price gouging and provides a safeguard against possible collusion among potential contractors to submit exorbitant bids.

In reviewing the findings of consultants Skoda Minotti and BBP Partners with CMSD personnel, the BAC was told that the official estimates in force at the time of bidding were not the same as the CD-phase estimates published in the Construction Manager's monthly reports, the source used by the consultants. Rather, the BAC was told, the estimates in force represented market conditions at the time of bidding, as well as possible design and scope changes, which in some cases might have been as much as six months after the date of the CD estimate. CMSD supplied documentation to that effect for Adlai Stevenson: a Notice to Bidders listing the aggregate estimate for eight construction contracts at \$11.06 million vs. an itemized CD-phase estimate for those contracts totaling \$10.46 million, meaning that the accepted bids exceeded the estimate by 7 percent, not 13 percent as reported by the consultant.

BBP Partners reported that two Technology contract awards to Doan Pyramid (each for multiple schools) exceeded the Construction Manager report's cost estimate by more than 10 percent. Here, too, CMSD responded that the estimate had later been revised.

CMSD's deputy chief of capital projects also informed the BAC that at some point, he had asked the Construction Manager to stop including the up-to-date estimates for individual contracts in bid advertisements, so as not to tempt potential contractors to bid higher than they otherwise might (although the Notice to Bidders, posted on the CMSD Web site, for currently advertised school demolition projects *does* include project-cost estimates).

In September 2012, the BAC requested documentation of the up-to-date estimates in force at the time of bidding for all projects in Segments 3-4 (as well as Segment 5), in part so that it could determine whether contracts were awarded properly. As of January 18, 2013, the BAC had not received the requested information. CMSD said it needs more time to locate the documents.

The problem here is one of accountability. How is anyone to know whether there was compliance with bidding laws and regulations if the official estimates are kept private and not readily available for review? In addition, if the Construction Manager has

increased the cost estimates prior to bidding, have the reasons been documented on a contract-by-contract basis, lest the cost-control thrust of the bidding law be frustrated in an arbitrary way? Without a verifiable statement of the officially estimated cost, the estimate conceivably could be changed after the fact if all bids were too high rather than suffer the delay of re-bidding.

***1) Recommendation: The District should require itemized documentation of all estimate changes made after Construction Manager CD-phase cost estimates are made and should keep on file signed and dated final cost estimates for each contract. CD-phase estimates and documented revised estimates should routinely be provided to the Board of Education before it is asked to authorize the award of construction contracts.***

In the case of R.H. Jamison school, CMSD said the 13 percent variance between estimate and awarded-contract noted by the consultant reflected CMSD acceptance of various bid alternates that were not included in the base bid estimate. It said the base-bid variance was in fact 6.7 percent.

***2) Recommendation: In the future, the District administration should routinely provide the Board of Education's internal auditor with signed and dated final cost estimates for each construction contract, bid-tabulation documents itemizing base bids, and documentation of any bid alternates selected, to ensure that the lowest bid has been selected.***

Consultant BBP Partners noted that technology contracts for Segments 3 and 4 were awarded in four multi-school packages, all of which were awarded to the same contractor, Doan Pyramid. BBP found that although some 20 companies attended an informational pre-bid conference, there reportedly was only one bidder for two of the packages, two bidders on one for which Doan Pyramid was the lowest bidder, and two on another package for which one bid was deemed non-responsive.

In response to an inquiry about the District's policy regarding single-bid contract awards, Gary Sautter, CMSD deputy chief of capital projects, said: "*The District and OSFC want as many bidders as possible for each bid package. We specify at least 3 manufacturers for almost all products. The Construction Manager is charged with developing bidder interest and we have held Contractor Awareness meetings hopeful of attracting bidders. However, market forces and the front-end documents provided by the State can limit the number of bidders. We have worked to develop additional technology bidders as an example. Several years ago we contacted both AT&T and IBM, two of the technology providers that had worked with the District in the past. Both AT&T and IBM expressed reservations regarding the front-end documents and particularly the indemnification provisions. We tried to get OSFC to change those provisions for our Technology work and were unsuccessful. If the construction schedule allows, and the team believes that rebidding would improve the bids, the District, with OSFC's [Ohio School Facilities Commission's] agreement, may rebid.*"

BBP said documents provided to BBP by the District did not identify the company submitting the purported non-responsive bid or why the bid was deemed non-responsive. CMSD subsequently has provided documents to CMSD identifying Sarcom as having submitted the rejected bid, but the documents do not say why the Sarcom bid was deemed non-responsive and do not give the dollar amount of that bid.

***3) Recommendation: When only one bid is received for an advertised contract, CMSD should reject it and re-advertise the work with possible revisions based on evaluation of specifications and other matters that caused other contractors not to submit bids. CMSD should settle for no fewer than three bids for each contract and should develop a policy requiring documentation of the steps taken to ensure a sufficient number of bidders.***

***4) Recommendation: When a bid is rejected as non-responsive or a bidder is rejected as non-responsible, the District should thoroughly document the process and the reasons for the determination and make this documentation available for review upon request. This information should include the identity of the bidder and the amount of the rejected bid.***

## **Bid withdrawals**

Under certain circumstances, the lowest bidder is allowed to withdraw its bid, and the District must award the work to the next-lowest bidder. According to Ohio Revised Code Section 9.31, a bidder may withdraw its bid if the price bid was substantially lower than the other bids, and if the reason for the price bid being substantially lower was a clerical mistake (as opposed to a judgment mistake) and was actually due to an unintentional and substantial arithmetic error or an unintentional omission of a substantial quantity of work, labor, or material. The withdrawal must be made in writing filed with the contracting authority within two business days after bids are opened.

On one hand, a project owner (here, the District) might not be well served by insisting that a low bidder abide by an erroneously low bid that might lead to the contractor attempting to cut corners to recoup costs. On the other, allowing contractors to withdraw a bid without documentation of the purported error could open the possibility of collusion among two or more bidders, in which one agrees to bid low and then drop out if a colluding partner's bid ranks next lowest.

BAC consultants reported that CMSD awarded bids to the second-lowest bidder after the low bidder withdrew, citing bid errors, for these contracts: East Clark electrical, Garfield site work, Garfield HVAC, Anton Grdina combined site work, Anton Grdina concrete flat work, and Euclid Park electrical work. Letters purporting omissions or clerical errors were submitted in each case, such as reporting that a \$107,000 markup was entered as only \$7,000 or that \$440,000 for a subcontractor was entered as only \$340,000, often with little detail.

In the Euclid Park case, the letter was accepted although it was submitted six days after the deadline after the contractor, Hi-Tech, said he had problems getting the bid results from CMSD. However, according to BBP, “the bid tabulation sheet dated on the bid opening day, May 20, 2008, pre dating the withdrawal letter, indicates Hi-Tech's bid was withdrawn.”

***5) Recommendation: The Board of Education’s internal auditor should be part of deliberations on whether to accept a bid withdrawal and should require full documentation of why a purported error was indeed an error. Further, the internal auditor should investigate the circumstances of the Euclid Park electrical withdrawal, including why the bid tabulation sheet showing the withdrawal was dated eight days before the withdrawal.***

## **Documentation**

BBP Partners noted numerous instances of contracts and change order authorizations that lacked signatures, were signed by signature stamp, lacked dates with signatures, or, in the case of contracts, had signature dates that were well after the construction-start date. The BAC similarly found widespread use of signature stamps, lack of signature dates, signature dates well after the effective date, and lack of signatures on administrative purchase order resolutions for real estate consulting work in connection with property acquisition for school construction.

The use of signature stamps and the authorization of others to stamp an executive’s name in their stead may be a time-saving convenience for those executives, but the practice negates the practical accountability safeguards provided by the requirement that they sign the documents. That is, if an impropriety or wrongdoing should arise, a person whose signature is stamped on the authorizing document could plausibly deny that he or she knew anything about it, and in fact that might be true.

It is unclear exactly who was authorized to stamp someone else’s signature and under what circumstances. It appears that administrative assistants were so authorized, but the existence of any written permission for the practice is unknown.

In one example, the BAC has noted that CMSD and Allegro Realty Advisors entered a new professional services agreement with the stated term of August 2008-June 2009 but that on a copy of agreement provided by CMSD, the signatures of CMSD officials, including the Board chair, were not dated. The signature of the Allegro principal, Russell Lamb, is dated Dec. 3, 2008, four months after the stated start of the agreement’s term. An administrative resolution authorizing a \$100,000 purchase order for Allegro for the August-June term is signed with what appear to be signature stamps of CMSD officials accompanied by illegible initials and dated Dec. 5, 2008.

Lack of a date on contract signatures or dates well after the work start date could suggest that a company was hired without proper authorization. In any case, both signatures and dates could become important if a legal problem should occur.

***6) Recommendation: All construction program contracts, change order authorizations, resolutions, and purchase orders should be timely signed and dated. If signature stamps are to be used, the District should have a written policy stating who is authorized to stamp a given executive's name and under what circumstances, and the person applying the stamp must be required to clearly identify themselves on the document in handwriting.***

## **Subcontractor analysis**

Consultant BBP Partners attempted to perform cost assessments related to contractors but was thwarted by failure of the District to provide reliable information to the consultant.

The District itself did not hire the subcontractors, who were hired by the prime contractors selected by the District after competitive bidding. However, the District had the right, within a specified time, to reject for reasons of irresponsibility any subcontractor proposed by a prime contractor.

The prime contractors were required to specify their intended subcontractors and suppliers on Ohio School Facilities Commission Forms 26 and 27, which the Construction Manager was supposed to forward to the District. The District apparently never compiled the information on these forms into any kind of list or, if it did, it did not provide it to BBP or, despite several requests, to the BAC. The BAC eventually resorted to filing an Open Records request with the OSFC to learn the identities of subcontractors via Forms 26 and 27.

Some BAC members have commented on different occasions that the District's capital projects unit appears to be understaffed, given the breadth of responsibilities and attention to detail required. Given that, it is easy to understand how attention to subcontractors with which the District has no direct relationship might not be given the highest priority. (Indeed, when the District rejected a subcontractor for general trades contractor Cold Harbor on the Harvey Rice project, it did so after the specified time frame, leading to a negotiated settlement with Cold Harbor for an additional \$388,171 in contract cost.)

However, tracking subcontractors could give the District a heads-up on improper relationships between primes and subs, subcontractors not suited to do the work for which they were engaged, "pass-through subcontractors who do not actually supervise the work being done, the proposed use of subcontractors who may have been involved in corruption elsewhere, and subcontractors who

have performed poorly on previous District projects. (For example, after news that Broma Information Technologies was involved in the Cuyahoga County corruption scandal, the BAC questioned the use of Broma as a sheet-metal sub at Harvey Rice.)

A list of subcontractors on past projects, with notes of how they performed, will now be more valuable than ever, because new construction-delivery methods allowed by Ohio law – including the Construction Manager at Risk method chosen for CMSD’s three Segment 5 high schools -- will give the District more authority over selection of subcontractors.

*7) Recommendation: The District should track the identities of subcontractors and their performance on District projects, which will be useful in determining the subcontractors’ suitability for future work.*

*8) Recommendation: CMSD should establish a procedure for immediately identifying and evaluating subcontractors proposed by prime contractors and should timely reject any deemed irresponsible. New construction-delivery methods available in Ohio include a process for evaluation and pre-certification of subcontractors, but the District should have a similar process in place when it chooses to use the traditional multi-prime contractor delivery method.*

## **Contract performance**

### **Change orders**

Consultant Skoda Minotti noted a number of instances in which change orders totaled more than 10 percent of the awarded contract value. Without alleging any impropriety, it deemed variances of that size worthy of attention. Most common among these were large amounts of change orders for site work due to the need for unforeseen foundation removals and related waterline and sewer issues on the building sites. The District has portrayed these as largely unavoidable when dealing with tracts of purchased property on which the previously existing homes were removed before purchase. Soil sampling is done before site work contracts are awarded, the District said, but they are insufficient to detect all underground hazards. However, the BAC also is aware that the existence of a very large Northeast Ohio Regional Sewer District sewer apparently came as a surprise to the District as it planned the new Mound school. In fairness, the unknown foundations would have to be removed whether or not they were included in the original contract. However, a more accurate original scope of advertised work could lead to more accurate bids and avoid unforeseen construction delays.

***9) Recommendation: The District should require its architect to thoroughly research building-site property and environmental records and conduct appropriate investigation to obtain a more accurate idea of the necessary site work, which would lead to better estimates of the projected cost and more-accurate bids.***

Other large change order percentages were noted by Skoda Minotti for East Clark electrical work, Patrick Henry electrical work, and Harvey Rice general trades. The BAC, in its own analysis based on updated information, identified 52 contracts among about 230 in Segments 3-4 in which the change orders amounted to 10 percent or more of the original contract (see attached construction-cost analysis spreadsheets).

Skoda Minotti called attention to electrical-contract change orders by Atlas Electric. BAC analysis found that Atlas electrical changed orders totaled 14.52 percent of the total originally awarded contract amounts for four Segment 3 schools. However, the BAC also found that total electrical change orders were 12.05 percent of the total original contract amounts for other contractors at the remaining five Segment 3 schools. Atlas did not have any Segment 4 electrical contracts. Overall, Segment 3 electrical change orders totaled 13.02 percent of awarded electrical contracts, while the percentage for Segment 4 was 8.63 percent.

Skoda Minotti noted a \$90,000 change order for a mediated electrical claim settlement for Atlas at Patrick Henry. The signed change order supplied to the BAC by the District does not give a reason for the settlement, and the Construction Manager's report lists the reason for the change order as "Other."

***10) Recommendation: CMSD's internal auditor should investigate the circumstances leading to the mediated \$90,000 settlement for the Patrick Henry electrical contract.***

Change orders can occur for many reasons, and the monthly Construction Manager's report gives a one- or two-word "Reason" code for change orders. However, application of the 'Reason' codes appears to have been somewhat arbitrary (for example, the reports give four different reasons among various schools for the same item – licenses for connecting closed-circuit cameras to the District's central monitoring system) and in some cases no reason code is listed (all Garfield general trades allowance change orders), frustrating accurate comparisons.

In addition to the prevalence of high change order totals for site work for reasons outlined above, it appears to the BAC that another common reason for change orders is that the scope of work was changed in a significant way after the contracts were awarded because the purpose of the school was changed belatedly. Such was the case for the two schools found by the BAC analysis to have aggregate change orders in excess of 10 percent of the aggregate contract awards: Willson (12.17 per cent), in addition to the noted site problems, was changed to a school for the hearing impaired after the school was designed and contracts were awarded, requiring



numerous design changes and consequent changes in the scope of work; Thomas Jefferson (13.27 percent) was similarly changed to a K-12 (for recent immigrants and the Lincoln-West 9<sup>th</sup> grade) school from a K-8, requiring numerous design changes and consequent changes in contract scope. Jefferson's scope was changed only six months before the new school opened.

Changes in the purpose and hence design of a school after contracts are awarded can result in costly delays and prevent bidding of the true scope of a project, which can also lead to increased costs.

It should be noted that both Willson and Jefferson are larger than most new K-8s in the District and that, in the context of enrollment figures and other available schools, neither needed to be built that large. It appeared that the District may have belatedly designated these schools for special programs in an attempt to make greater use of their capacities.

***11) Recommendation: CMSD should create and employ a master planning process focused on data-based assessment of enrollment needs and its academic plan to avoid costly changes in a school project's scope after the school has been designed and contracts awarded.***

Without alleging any impropriety, BBP Partners noted repetitive change orders on the same project for the same service or product, with more than 75 percent of 735 additional-cost change orders being within the approval authority of the deputy chief of capital projects, the rest being for higher amounts (above \$25,000) that required approval of higher-ups. BBP recommended additional analysis "to determine reasons for this practice and any resulting impact on the projects."

***12) Recommendation: The Board of Education's internal auditor should investigate invoicing and change order practices as noted to determine whether they adhere to District purchasing policies regarding multiple purchase orders for the same goods and services, and recommend procedural changes if warranted.***

Without alleging any impropriety, BBP also recommended additional inquiry into the appropriateness of:

- Varying prices for "officer hours" on Tenable security invoices for Buhrer, described in a CMSD response as the hourly rate for an armed guard, of \$27.80, \$29.00, and \$35.77.
- Prime contractor Cold Harbor adding a subcontractor fee to a painting subcontractor price that also included subcontractor markup at Anton Grdina.
- A change order for Cold Harbor for temporary doors to isolate finished construction areas at Buhrer when the contract specified that "the general trade contractor shall provide protection of new finishes after installation," and of profit and overhead markups for the work.

CMSD has responded that these charges were appropriate.

*13) Recommendation: The Board of Education's internal auditor should review the above change orders.*

### **Architectural work and costs per square foot**

Cost analysis by BAC consultants was hampered by incomplete data on some projects that were not yet completed, exclusion of certain contracts or schools to avoid conflict of interest, and by use of an outdated (smaller) figure for the square footage of Adlai Stevenson school, which affected numerous findings regarding cost per square foot. The BAC therefore has done its own spreadsheet analysis of construction costs for all Segment 3 and 4 projects using updated Construction Manager figures as of Dec. 3, 2012. **(See spreadsheet charts of contract costs and change orders on Pages 16-51):**

The cost findings can be useful for identifying trends and as a starting point for further investigation into the causes of anomalies, but it should be emphasized that a particular project might involve unique or unusual circumstances that could skew a comparative analysis.

For example, the Willson project had the highest costs among Segment 3-4 schools, but that project suffered from a very high amount of change orders due to the School District changing the purpose of the school after it was designed and contracts were awarded, and also due to the unforeseen need to remove foundations and other impediments from the building site.

Harvey Rice costs were increased by \$5.34 per square foot by a single change order reflecting a \$388,000 settlement with the general trades contractor over CMSD's belated rejection of a masonry subcontractor. That change order accounted for 40 percent of all general trades change orders at Rice. The BAC's own analysis found that another \$260,000 was attributed to "Design" problems or changes.

Comparison of total costs per square foot is useful for budgeting purposes but, because not all buildings have the same features, they may not be illustrative of any specific problems. For example, some buildings may cost more than others of identical square footage, but they may be regarded as more attractive or more utilitarian because they have features that cost more to build. Not all school sites are the same size, negating the value of "per square foot" analysis based on the size of the school building itself. The cost of addressing pre-existing building site conditions also can vary greatly among projects. Design-based change orders, however, may suggest, if the designation is properly and uniformly applied, lack of attention to detail or other problems that frustrate budget-planning and accurate bidding and may also delay completion of construction.

Five of the 18 schools included geothermal heating systems, at CMSD request, that the others did not have, raising the price for each of the five by \$11-\$12 per square foot. The findings below, based on charts at the end of this report, exclude the geothermal "upcharge" listed in the Construction Manager's reports. The charts and findings, in order to provide more of an "apples-to-apples"

comparison, also break out construction costs other than the highly variable site-related costs and the costs of furnishings and equipment.

Finally, it should be noted that construction costs can vary over time. All schools in a given segment are not necessarily built at the same time. In particular, Segment 3's Willson was completed a year or more after the other Segment 3 schools, making it more comparable to schools in Segment 4.

The BAC's comparative findings:

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- Total construction hard costs (defined here as original contract amount plus approved changes for site work, concrete flat work, landscaping, general trades, fire protection, plumbing, HVAC, electrical, technology, furnishings and equipment for classrooms, administration and library, and cafeteria tables) ranged from \$229.29 per square foot at Willson to \$151.16 at Thomas Jefferson. Jefferson, at nearly 40,000 more square feet than most of the other schools, could be expected to benefit from economies of scale.
- Twelve of the 18 schools were of similar size: 63,280 square feet to 64,298 square feet. Among those the above total construction hard costs ranged from \$229.29 per square foot at Willson to \$182.25 at Mound.
- Excluding the site-specific and therefore highly variable site work, concrete flat work, and landscaping and the non-construction furnishings contracts, construction hard costs ranged from \$196.96 at Harvey Rice to \$131.62 at Jefferson.
- At schools of 63,280 square feet to 64,298 square feet, the immediately above costs ranged from \$196.96 at Harvey Rice to \$160.98 at Mound.
- Total net change orders for all contracts ranged from \$1.8 million at Thomas Jefferson to \$0.3 million at Mound.
- Net change orders per square foot for all contracts ranged from \$24.81 at Willson to \$4.24 at Mound.
- Net change orders for all contracts except highly variable site work, concrete flat work, and landscaping and the furnishings contracts ranged from \$20.48 per square foot at Harvey Rice to \$2.98 at Mound.
- Mound was arguably the best performer regarding construction costs among the 18 schools, even though Mound was the District's first school to be built to high energy-efficiency standards of the U.S. Green Building Council and had therefore been expected to cost more than other schools. Among schools of similar size, Mound was the least expensive in original contract total (\$11.26 million) and, by far, total net change orders (\$268,611).
- By architect, the average construction cost per square was 1) Robert P. Madison International, \$216.33; 2) Richard L. Bowen & Associates; \$214.98, 3) Ralph Tyler, \$194.96; 4) CEDA/Then Design, \$190.59; and 5) Irie Kynyk Goss, \$186.11.

- By architect, the average construction cost per square foot excluding the site-related and furnishings contracts was 1) Bowen, \$187.46; 2) Madison, \$178.88; 3) Tyler, \$174.85; 4) Irie Kynyk Goss, \$167.82; and 5) CEDA/Then Design, \$167.36.
- By architect, the average net change order total per square foot for construction excluding the site-related and furnishing contracts was 1) Madison, \$13.78; 2) Bowen, \$11.68; 3) CEDA/Then Design, \$7.99; 4) Tyler, \$7.13; and 5) Irie Kynyk Goss, \$5.84.
- Change orders attributed to “Design” in the Construction Manager’s report were computed by the BAC as a percentage of all net change orders, with the results ranging from 57.09 percent (Adlai Stevenson, architect R.L. Bowen & Associates) to 6.36 percent (Wilson, architect Robert P. Madison International).

***14) Recommendation: The District should analyze cost performance of contractors and architects, taking into account project differences, to help in selecting those who will participate in future projects. This should be especially important under new Ohio construction delivery methods that allow more flexibility in awarding contracts.***

***15) Recommendation: The District should analyze why Mound, designed to green building standards, had construction costs 11.6 per cent less than the average of the other 11 schools of similar size in Segments 3-4 to learn whether there are any lessons that can be applied to design and construction of its Segment 5 high schools and future K-8 schools.***

***16) Recommendation: The District should analyze change orders attributed to “Design” as a percentage of all change orders at Segment 3-4 schools, with an eye to determining whether the reason code was applied accurately and, if so, why the range of percentages is so wide. This analysis could prove useful in guiding selection of architects for future schools.***

## Costs per sq. ft., by architect, Segments 3-4

	Total no. schools	\$/sq.ft. all contracts; all schools *	\$/sq.ft. trades, tech only; all schools *	Total no. schools 63,280- 64,298 sq. ft.	\$/sq.ft all contracts @ schools of 63,280- 64,298 sq. ft *	\$/sq.ft. trades, tech only @ schools of 63,280- 64,298 sq. ft. *	Net change order total \$/total sq. ft.; all contracts	Net change order total % total original contracts	Net change order total \$/total sq. ft.; trades, tech contracts	Design change order total \$/total sq. ft.; all contracts
<b>Ceda/Then Design</b>	9	\$ 187.68	\$ 165.98	5	\$ 191.72	\$ 168.46	\$ 11.06	6.15%	\$ 8.23	\$ 4.35
<b>R.L. Bowen &amp; Assoc.</b>	5	\$ 214.91	\$ 187.46	4	\$ 213.67	\$ 187.65	\$ 13.37	6.56%	\$ 11.69	\$ 5.08
<b>Robert P. Madison Int.</b>	2	\$ 215.43	\$ 177.98	1	\$ 229.29	\$ 191.87	\$ 20.19	10.02%	\$ 13.76	\$ 1.65
<b>Irie Kynyk Goss</b>	1	\$ 186.11	\$ 167.82	1	\$ 186.11	\$ 167.82	\$ 6.50	3.62%	\$ 5.84	\$ 0.49
<b>Ralph Tyler</b>	1	\$ 194.96	\$ 174.85	1	\$ 194.96	\$ 174.85	\$ 9.17	4.94%	\$ 7.13	\$ 4.57

\* adjusted for geothermal upcharge

## Real estate services

CMSD contracted with Allegro Realty Advisors Ltd. beginning October 20, 2004, for services related to the District's need to purchase property for school construction sites. Skoda Minotti examined the involved bidding documents, contracts, service agreements, resolutions, and purchase orders.

Skoda Minotti compared purchase prices with appraised values. CMSD responded that the reported number of parcels purchased in excess of 10 percent over the appraised value, the percentage that Skoda Minotti deemed of material importance, incorrectly included parcels that were part of multi-parcel transactions for which there was a single purchase price and a single appraisal. However, Skoda Minotti also reported aggregate figures that were not challenged, except that CMSD said they were based on initial appraisals and not follow-up "review appraisals" that were done for East Clark purchases. Skoda Minotti said it did not analyze transactions that were conducted with land banks, land swaps with the City of Cleveland.

Skoda Minotti reported:

- The aggregate price paid for 17 East Clark parcels exceeded the appraised value by 48.2 percent.

- The aggregate price paid for 38 Willson parcels exceeded the aggregate appraisals by 38 percent. “One parcel was acquired at a price over three times its appraised value.
- One parcel was acquired for Charles Dickens, at the appraisal price.
- The aggregate price paid for 10 Mound parcels exceeded the aggregate appraisal by 2.89 per cent.
- The aggregate price paid for five Thomas Jefferson parcels exceeded the aggregate appraisal by 1.42 percent.

CMSD said purchases of five of the Willson parcels included relocation costs as part of the purchase price. CMSD also said that in certain Willson transactions, it had “determined that it was in the District's best interest to work towards a negotiated settlement and pay a higher sale price instead of acquiring the parcels through the eminent domain process or abandoning the project all together.”

***17) Recommendation: The CMSD internal auditor should examine the appraisals, the review appraisals, and the HUD settlement statements associated with the East Clark and Willson property purchases to determine whether purchase prices and closing costs were appropriate. This should be done for all future purchases in which the price exceeds the appraisal value by 10 percent.***

***18) Recommendation: In the future, the Board of Education should require that it be provided a written analysis showing the appraised value and recommended purchase price for all property acquisitions before any vote to approve them. It should require all providers of real estate consulting services to give the CMSD administration a written, documented explanation whenever the purchase price of a parcel exceeds the independent appraisal by more than 10%. If, the purchase price includes at the request of the seller compensation for relocation costs, the pre-sale analysis provided to the Board should clearly itemize the purchase price of the property itself, devoid of any compensatory add-ons, so that Board members can easily compare the purchase price with the appraised value.***

***19) Recommendation: The Board of Education should authorize an examination of any potential relationships involving CMSD personnel, CMSD Board members, and real-estate-consultant owners, officers and representatives, as well as any relationships between these parties and sellers of property to CMSD, during 2005 through 2009.***

The BAC makes the above recommendation as a matter of due diligence in light of

- The lack of specific contractual obligations to report and avoid relationships between the above parties.

- The extraordinary authority that is purported to be held by the CEO under Ohio law to contract with consultants without Board approval, based on a CMSD administration legal opinion cited as the basis for Allegro continuing to work for the District for at least three years beyond those approved by Board of Education resolution.
- The frequent use of signature stamps on authorizing resolutions, which frustrate determination of who has actually approved expenditures of significant amounts of money.

**20) Recommendation:** CMSD should publicly solicit bids for real estate advisory services every three years.

This seems wise if only because circumstances change over time, so periodic exposure of the work to competition could result in lower costs for the District. Periodic solicitation of bids seems especially appropriate in light of the circumstance regarding the Allegro engagement. Allegro, according to the District, was the only firm to submit a proposal in response to an RFP in 2004; the District has had three new CEOs since then. The Board by resolution authorized a one-year engagement with two optional one-year renewals, and the Board subsequently authorized renewal for the second year. The administration continued the engagement after that time.

Skoda Minotti had noted the apparent lack of a formal Board of Education action to approve the optional third-year renewal of the Allegro contract for the term Oct. 1, 2006, to Sept. 30, 2007. Further inquiry by the BAC confirmed that the second renewal was never authorized by a Board resolution and that the Allegro engagement was extended through administrative Purchase Order resolutions, most of them for under \$25,000, throughout the stated third-year term and extending at least through July 2009. The Administration also approved a Purchase Order Resolution for a firm that had been working as an Allegro subcontractor.

According to CMSD personnel, the CEO had authority to engage professional consulting services without Board approval so long as the cost did not exceed the annual appropriation by the Board. The statute itself is silent on whether the relevant Board appropriation refers to the fund from which payments are made or to a specific appropriation for a specific purpose. The real estate advisory services were paid from Fund 003, which, for example, has a fiscal 2013 appropriation of more than \$43 million.

Under the cited legal opinion, it would appear that the original Board Resolution authorizing the Allegro engagement in 2004 as well as the Board Resolution authorizing the first renewal may have been unnecessary.

**21) Recommendation:** *Future contracts involving real property acquisition services should require the District's real estate consultant to immediately disclose to CMSD any conflicts of interest or prior business relationships with any property owner with whom a property sale is being negotiated.*

## General

22) *Recommendation: CMSD should require that contractors to execute and adhere to a published conflict of interest policy and a published fraud policy. The fraud policy should include a prohibition against misrepresenting ownership and/or control of a contracting company and misrepresenting status as a City of Cleveland- or Ohio-certified minority-owned or female-owned company. Any discovery of a violation of the policies should be deemed evidence that such a company is not ‘responsible,’ and such companies should be barred from contracting with CMSD.*

### Construction costs as of Dec. 3, 2012, Segment 3

#### Artemus Ward

<i>Architect: CEDA/Then Design</i>	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Great Lakes	\$ 770,691	63,282	\$ 12.18		\$ 720,255	\$ 50,436	7.00%	\$ 0.80	
concrete flat work	Giambrone	\$ 138,478	63,282	\$ 2.19		\$ 131,196	\$ 7,282	5.55%	\$ 0.12	
Landscaping	Down to Earth	\$ 57,884	63,282	\$ 0.91		\$ 32,368	\$ 25,516	78.83%	\$ 0.40	
general trades	West 3rd	\$ 6,215,139	63,282	\$ 98.21	\$ 98.21	\$ 6,025,000	\$ 190,139	3.16%	\$ 3.00	\$ 3.00
fire protection	Comunale	\$ 212,197	63,282	\$ 3.35	\$ 3.35	\$ 197,967	\$ 14,230	7.19%	\$ 0.22	\$ 0.22
Plumbing	Katz	\$ 788,280	63,282	\$ 12.46	\$ 12.46	\$ 757,000	\$ 31,280	4.13%	\$ 0.49	\$ 0.49
HVAC	Katz	\$ 1,646,962	63,282	\$ 26.03	\$ 26.03	\$ 1,562,000	\$ 84,962	5.44%	\$ 1.34	\$ 1.34
Electrical	Atlas	\$ 1,057,945	63,282	\$ 16.72	\$ 16.72	\$ 876,800	\$ 181,145	20.66%	\$ 2.86	\$ 2.86
Technology	Doan Pyramid	\$ 1,266,089	63,282	\$ 20.01	\$ 20.01	\$ 1,230,928	\$ 35,161	2.86%	\$ 0.56	\$ 0.56
FFE administration	Corporate Exp.	\$ 109,452	63,282	\$ 1.73						
FFE classroom	Corporate Exp.	\$ 164,476	63,282	\$ 2.60		\$ 322,805	\$ (4,725)	-1.46%	\$ (0.07)	
FFE library	Corporate Exp.	\$ 44,152	63,282	\$ 0.70						
cafeteria tables	Continental	\$ 17,278	63,282	\$ 0.27		\$ 18,278	\$ (1,000)	-5.47%	\$ (0.02)	
<b>Totals</b>		<b>\$ 2,489,022</b>	<b>63,282</b>	<b>\$ 197.36</b>	<b>\$176.77</b>	<b>\$ 11,874,596</b>	<b>\$ 614,426</b>	<b>5.17%</b>	<b>\$ 9.71</b>	<b>\$ 8.48</b>



<b>Artemus Ward</b>				<b>Design change order % net change orders</b>
<b>Architect: CEDA/Then Design</b>	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	
site work	Great Lakes	\$ 34,958	\$ 0.55	69.31%
concrete flat work	Giambrone	\$ 7,429	\$ 0.12	102.02%
Landscaping	Down to Earth	\$ 9,525	\$ 0.15	37.33%
general trades	West 3rd	\$ 91,899	\$ 1.45	48.33%
fire protection	Comunale	\$ 12,612	\$ 0.20	88.63%
Plumbing	Katz	\$ 14,950	\$ 0.24	47.79%
HVAC	Katz	\$ 6,100	\$ 0.10	7.18%
Electrical	Atlas	\$ 29,499	\$ 0.47	16.28%
Technology	Doan Pyramid	\$ 32,959	\$ 0.52	93.74%
FFE administration	Corporate Express	\$ -	\$ -	NA
FFE classroom	Corporate Express	\$ -	\$ -	0.00%
FFE library	Corporate Express	\$ -	\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 239,931</b>	<b>\$ 3.79</b>	<b>39.05%</b>

**Buhrer**

*Architect: Irie  
Kynyk Goss*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
	NEO									
site work	Trenching	\$ 579,091	63,281	\$ 9.15		\$ 567,000	\$ 12,091	2.13%	\$ 0.19	
concrete flat work	Great Lakes	\$ 257,413	63,281	\$ 4.07		\$ 239,000	\$ 18,413	7.70%	\$ 0.29	
Landscaping	Down to Earth	\$ 43,381	63,281	\$ 0.69		\$ 29,709	\$ 13,672	46.02%	\$ 0.22	
general trades	Cold Harbor	\$ 6,398,428	63,281	\$ 101.11	\$ 101.11	\$ 6,121,500	\$ 276,928	4.52%	\$ 4.38	\$ 4.38
fire protection	Fire Protection	\$ 148,628	63,281	\$ 2.35	\$ 2.35	\$ 164,600	\$ (15,972)	-9.70%	\$ (0.25)	\$ (0.25)
Plumbing	Soehnlén	\$ 616,888	63,281	\$ 9.75	\$ 9.75	\$ 622,000	\$ (5,112)	-0.82%	\$ (0.08)	\$ (0.08)
HVAC	Miles	\$ 1,207,052	63,281	\$ 19.07	\$ 19.07	\$ 1,185,000	\$ 22,052	1.86%	\$ 0.35	\$ 0.35
Electrical	Atlas	\$ 1,121,831	63,281	\$ 17.73	\$ 17.73	\$ 1,060,000	\$ 61,831	5.83%	\$ 0.98	\$ 0.98
Technology	Doan Pyramid	\$ 1,127,118	63,281	\$ 17.81	\$ 17.81	\$ 1,097,581	\$ 29,537	2.69%	\$ 0.47	\$ 0.47
FFE administration	Corporate Exp.	\$ 92,652	63,281	\$ 2.08						
FFE classroom	Corporate Exp.	\$ 137,446	63,281	\$ 2.60		\$ 264,538	\$ (1,335)	-0.50%	\$ (0.02)	
FFE library	Corporate Exp.	\$ 33,106	63,281	\$ 0.55						
cafeteria tables	Continental	\$ 14,046	63,281	\$ 0.22		\$ 15,046	\$ (1,000)	-6.65%	\$ (0.02)	
<b>Totals</b>		<b>\$ 11,777,079</b>	<b>63,281</b>	<b>\$ 186.11</b>	<b>\$ 167.82</b>	<b>\$ 11,365,974</b>	<b>\$ 411,104</b>	<b>3.62%</b>	<b>\$ 6.50</b>	<b>\$ 5.84</b>

**Buhrer**

*Architect: Irie  
Kynyk Goss*

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	NEO Trenching	\$ -	\$ -	0.00%
concrete flat work	Great Lakes	\$ -	\$ -	0.00%
Landscaping	Down to Earth	\$ -	\$ -	0.00%
general trades	Cold Harbor	\$ 7,330	\$ 0.12	2.65%
fire protection	Fire Protection Inc.	\$ (18,903)	\$ (0.30)	NA
Plumbing	Soehnlén	\$ 1,799	\$ 0.03	-35.19%
HVAC	Miles	\$ 20,346	\$ 0.32	92.27%
Electrical	Atlas	\$ 16,508	\$ 0.26	26.70%
Technology	Doan Pyramid	\$ 3,745	\$ 0.06	12.68%
FFE administration	Corporate Express	\$ -	\$ -	NA
FFE classroom	Corporate Express	\$ -	\$ -	0.00%
FFE library	Corporate Express	\$ -	\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 30,825</b>	<b>\$ 0.49</b>	<b>7.50%</b>

**East Clark**

*Architect:  
CEDA/Then  
Design*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Precision	\$ 828,112	63,281	\$ 13.09		\$ 697,000	\$ 131,112	18.81%	\$ 2.07	
concrete flat work	Licursi	\$ 155,664	63,281	\$ 2.46		\$ 147,000	\$ 8,664	5.89%	\$ 0.14	
landscaping	Licursi	\$ 53,063	63,281	\$ 0.84		\$ 52,242	\$ 821	1.57%	\$ 0.01	
general trades	Mid-American	\$ 6,350,923	63,281	\$ 100.36	\$ 100.36	\$ 6,149,000	\$ 201,923	3.28%	\$ 3.19	\$ 3.19
fire protection	Fire Protection	\$ 163,883	63,281	\$ 2.59	\$ 2.59	\$ 185,900	\$ (22,017)	-11.84%	\$ (0.35)	\$ (0.35)
plumbing	Soehnlén	\$ 660,849	63,281	\$ 10.44	\$ 10.44	\$ 648,000	\$ 12,849	1.98%	\$ 0.20	\$ 0.20
HVAC	Katz	\$ 1,573,622	63,281	\$ 24.87	\$ 24.87	\$ 1,539,000	\$ 34,622	2.25%	\$ 0.55	\$ 0.55
electrical	Gateway	\$ 1,498,776	63,281	\$ 23.68	\$ 23.68	\$ 1,318,800	\$ 179,976	13.65%	\$ 2.84	\$ 2.84
technology	Doan Pyramid	\$ 1,051,410	63,281	\$ 16.61	\$ 16.61	\$ 1,018,666	\$ 32,744	3.21%	\$ 0.52	\$ 0.52
FFE administration	Corporate Exp.	\$ 114,513	63,281	\$ 1.81		\$ 154,099	\$ 1,414	0.92%	\$ 0.02	
FFE classroom	Sexton	\$ 152,767	63,281	\$ 2.41		\$ 153,274	\$ (507)	-0.33%	\$ (0.01)	
FFE library	Corporate Exp.	\$ 40,999	63,281	\$ 0.65						
cafeteria tables	Continental	\$ 17,095	63,281	\$ 0.27		\$ 18,095	\$ (1,000)	-5.53%	\$ (0.02)	
<b>Totals</b>		<b>\$ 12,661,675</b>	<b>63,281</b>	<b>\$ 200.09</b>	<b>\$ 178.56</b>	<b>\$ 12,081,076</b>	<b>\$ 580,600</b>	<b>4.81%</b>	<b>\$ 9.17</b>	<b>\$ 6.95</b>

**East Clark**

*Architect:  
CEDA/Then  
Design*

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Precision	\$ 1,433	\$ 0.02	1.09%
concrete flat work	Licursi	\$ 1,637	\$ 0.03	18.89%
landscaping	Licursi	\$ 821	\$ 0.01	100.04%
general trades	Mid-American	\$ 92,023	\$ 1.45	45.57%
fire protection	Fire Protection	\$ (24,804)	\$ (0.39)	NA
plumbing	Soehnlén	\$ 22,010	\$ 0.35	171.30%
HVAC	Katz	\$ 4,576	\$ 0.07	13.22%
electrical	Gateway	\$ 23,214	\$ 0.37	12.90%
technology	Doan Pyramid	\$ 3,492	\$ 0.06	10.66%
FFE administration	Corporate Express	\$ -	\$ -	0.00%
FFE classroom	Sexton	\$ -	\$ -	0.00%
FFE library	Corporate Express	\$ -	\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 124,402</b>	<b>\$ 1.97</b>	<b>21.43%</b>

## Garfield

*Architect: R.L.  
Bowen &  
Associates*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Precision	\$ 1,456,739	60,777	\$ 23.97		\$ 1,145,794	\$ 310,945	27.14%	\$ 5.12	
concrete flat work	Licursi	\$ 134,800	60,777	\$ 2.22		\$ 139,800	\$ (5,000)	-3.58%	\$ (0.08)	
landscaping	Licursi	\$ 86,245	60,777	\$ 1.42		\$ 87,400	\$ (1,155)	-1.32%	\$ (0.02)	
general trades	Giambrone	\$ 6,320,317	60,777	\$ 103.99	\$ 103.99	\$ 6,015,271	\$ 305,046	5.07%	\$ 5.02	\$ 5.02
fire protection	Mac	\$ 137,018	60,777	\$ 2.25	\$ 2.25	\$ 135,000	\$ 2,018	1.49%	\$ 0.03	\$ 0.03
plumbing	United	\$ 644,291	60,777	\$ 10.60	\$ 10.60	\$ 586,000	\$ 58,291	9.95%	\$ 0.96	\$ 0.96
HVAC	Miles	\$ 1,650,122	60,777	\$ 27.15	\$ 27.15	\$ 1,652,000	\$ (1,878)	-0.11%	\$ (0.03)	\$ (0.03)
electrical	Gateway	\$ 1,312,054	60,777	\$ 21.59	\$ 21.59	\$ 1,216,600	\$ 95,454	7.85%	\$ 1.57	\$ 1.57
technology	Doan Pyramid	\$ 1,280,737	60,777	\$ 21.07	\$ 21.07	\$ 1,188,651	\$ 92,086	7.75%	\$ 1.52	\$ 1.52
FFE administration	Corporate Exp.	\$ 131,795	60,777	\$ 2.17						
FFE classroom	Corporate Exp.	\$ 164,499	60,777	\$ 2.71		\$ 316,279	\$ 14,954	4.73%	\$ 0.25	
FFE library	Corporate Exp.	\$ 34,939	60,777	\$ 0.57						
cafeteria tables	Continental	\$ 24,187	60,777	\$ 0.40		\$ 16,983	\$ 7,204	42.42%	\$ 0.12	
<b>Totals</b>		<b>\$ 13,377,743</b>	<b>60,777</b>	<b>\$ 220.11</b>	<b>\$ 186.66</b>	<b>\$ 12,499,779</b>	<b>\$ 877,964</b>	<b>7.02%</b>	<b>\$ 14.45</b>	<b>\$ 9.07</b>

## Garfield

*Architect: R.L.  
Bowen &  
Associates*

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Precision	\$ 17,870	\$ 0.29	5.75%
concrete flat work	Licursi	\$ -	\$ -	0.00%
landscaping	Licursi	\$ -	\$ -	0.00%
general trades	Giambrone	\$ 32,486	\$ 0.53	10.65%
fire protection	Mac	\$ 69	\$ 0.00	3.42%
plumbing	United	\$ 4,128	\$ 0.07	7.08%
HVAC	Miles	\$ 3,637	\$ 0.06	NA
electrical	Gateway	\$ 21,896	\$ 0.36	22.94%
technology	Doan Pyramid	\$ 25,359	\$ 0.42	27.54%
FFE administration	Corporate Express		\$ -	NA
FFE classroom	Corporate Express	\$ 9,001	\$ 0.15	60.19%
FFE library	Corporate Express		\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 114,446</b>	<b>\$ 1.88</b>	<b>13.04%</b>

**Harvey Rice**

**Architect: R.L.  
Bowen &  
Associates**

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	NEO Trenching	\$ 1,292,076	63,280	\$ 20.42		\$ 1,185,000	\$ 107,076	9.04%	\$ 1.69	
concrete flat work	Great Lakes	\$ 202,648	63,280	\$ 3.20		\$ 213,400	\$ (10,752)	-5.04%	\$ (0.17)	
landscaping	Down to Earth	\$ 107,820	63,280	\$ 1.70		\$ 95,615	\$ 12,206	12.77%	\$ 0.19	
general trades	Cold Harbor	\$ 7,063,441	63,280	\$ 111.62	\$ 111.62	\$ 6,101,000	\$ 962,441	15.78%	\$ 15.21	\$ 15.21
fire protection	Mac	\$ 152,563	63,280	\$ 2.41	\$ 2.41	\$ 148,300	\$ 4,263	2.87%	\$ 0.07	\$ 0.07
plumbing	Harner	\$ 654,169	63,280	\$ 10.34	\$ 10.34	\$ 632,100	\$ 22,069	3.49%	\$ 0.35	\$ 0.35
HVAC	Gallagher	\$ 1,945,982	63,280	\$ 30.75	\$ 30.75	\$ 1,895,000	\$ 50,982	2.69%	\$ 0.81	\$ 0.81
electrical	Doan Pyramid	\$ 1,478,952	63,280	\$ 23.37	\$ 23.37	\$ 1,336,489	\$ 142,463	10.66%	\$ 2.25	\$ 2.25
technology	Doan Pyramid	\$ 1,168,562	63,280	\$ 18.47	\$ 18.47	\$ 1,054,828	\$ 113,734	10.78%	\$ 1.80	\$ 1.80
FFE administration	Corporate Exp.	\$ 122,017	63,280	\$ 1.93		\$ 162,770	\$ 2,015	1.24%	\$ 0.03	
FFE classroom	Sexton	\$ 165,184	63,280	\$ 2.61		\$ 163,774	\$ 1,410	0.86%	\$ 0.02	
FFE library	Corporate Exp.	\$ 42,768	63,280	\$ 0.68						
cafeteria tables	Continental	\$ 16,021	63,280	\$ 0.25		\$ 17,021	\$ (1,000)	-5.88%	\$ (0.02)	
<b>Totals</b>		<b>\$ 14,412,202</b>	<b>63,280</b>	<b>\$ 227.75</b>	<b>\$ 196.96</b>	<b>\$ 13,005,297</b>	<b>\$ 1,406,905</b>	<b>10.82%</b>	<b>\$ 22.23</b>	<b>\$ 20.48</b>



**Harvey Rice**

*Architect: R.L.  
Bowen &  
Associates*

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	NEO Trenching	\$ 15,063	\$ 0.24	14.07%
concrete flat work	Great Lakes	\$ 15,967	\$ 0.25	NA
landscaping	Down to Earth	\$ 5,652	\$ 0.09	46.31%
general trades	Cold Harbor	\$ 260,444	\$ 4.12	27.06%
fire protection	Mac	\$ 623	\$ 0.01	14.61%
plumbing	Harner	\$ 7,987	\$ 0.13	36.19%
HVAC	Gallagher	\$ 2,370	\$ 0.04	4.65%
electrical	Doan Pyramid	\$ 62,441	\$ 0.99	43.83%
technology	Doan Pyramid	\$ 125,088	\$ 1.98	109.98%
FFE administration	Corporate Express	\$ -	\$ -	0.00%
FFE classroom	Sexton	\$ -	\$ -	0.00%
FFE library	Corporate Express			
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 495,636</b>	<b>\$ 7.83</b>	<b>35.23%</b>

**R.G. Jones**

*Architect:  
CEDA/Then  
Design*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Great Lakes	\$ 829,272	63,281	\$ 13.10		\$ 699,775	\$ 129,497	18.51%	\$ 2.05	
concrete flat work	Giambrone	\$ 150,516	63,281	\$ 2.38		\$ 130,996	\$ 19,520	14.90%	\$ 0.31	
landscaping	Down to Earth	\$ 53,405	63,281	\$ 0.84		\$ 30,366	\$ 23,039	75.87%	\$ 0.36	
general trades	West Third	\$ 6,102,950	63,281	\$ 96.44	\$ 96.44	\$ 5,945,000	\$ 157,950	2.66%	\$ 2.50	\$ 2.50
fire protection	Comunale	\$ 210,784	63,281	\$ 3.33	\$ 3.33	\$ 197,967	\$ 12,817	6.47%	\$ 0.20	\$ 0.20
plumbing	Katz	\$ 757,894	63,281	\$ 11.98	\$ 11.98	\$ 689,000	\$ 68,894	10.00%	\$ 1.09	\$ 1.09
HVAC	Katz	\$ 1,549,665	63,281	\$ 24.49	\$ 24.49	\$ 1,462,000	\$ 87,665	6.00%	\$ 1.39	\$ 1.39
electrical	Atlas	\$ 960,208	63,281	\$ 15.17	\$ 15.17	\$ 863,000	\$ 97,208	11.26%	\$ 1.54	\$ 1.54
technology	Doan Pyramid	\$ 1,275,931	63,281	\$ 20.16	\$ 20.16	\$ 1,209,449	\$ 66,482	5.50%	\$ 1.05	\$ 1.05
FFE administration	Corporate Exp.	\$ 110,307	63,281	\$ 1.74						
FFE classroom	Corporate Exp.	\$ 169,042	63,281	\$ 2.67		\$ 329,484	\$ (3,518)	-1.07%	\$ (0.06)	
FFE library	Corporate Exp.	\$ 46,616	63,281	\$ 0.74						
cafeteria tables	Continental	\$ 17,278	63,281	\$ 0.27		\$ 18,278	\$ (1,000)	-5.47%	\$ (0.02)	
<b>Totals</b>		<b>\$ 12,233,868</b>	<b>63,281</b>	<b>\$ 193.33</b>	<b>\$ 171.57</b>	<b>\$ 11,575,314</b>	<b>\$ 658,554</b>	<b>5.69%</b>	<b>\$ 10.41</b>	<b>\$ 7.76</b>

**R.G. Jones**

*Architect:  
CEDA/Then  
Design*

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Great Lakes		\$ -	0.00%
concrete flat work	Giambrone		\$ -	0.00%
landscaping	Down to Earth	\$ 5,652	\$ 0.09	24.53%
general trades	West Third	\$ 96,892	\$ 1.53	61.34%
fire protection	Comunale	\$ 10,522	\$ 0.17	82.09%
plumbing	Katz	\$ 53,992	\$ 0.85	78.37%
HVAC	Katz	\$ 13,210	\$ 0.21	15.07%
electrical	Atlas	\$ 28,065	\$ 0.44	28.87%
technology	Doan Pyramid	\$ 41,447	\$ 0.65	62.34%
FFE administration	Corporate Express		\$ -	NA
FFE classroom	Corporate Express	\$ -	\$ -	0.00%
FFE library	Corporate Express		\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 249,780</b>	<b>\$ 3.95</b>	<b>37.93%</b>

## Wade Park

<i>Architect: CEDA/Then Design</i>	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Martin	\$ 897,480	68,600	\$ 13.08		\$ 696,000	\$ 201,480	28.95%	\$ 2.94	
concrete flat work	21st Century	\$ 206,577	68,600	\$ 3.01		\$ 198,000	\$ 8,577	4.33%	\$ 0.13	
landscaping	Down to Earth	\$ 56,113	68,600	\$ 0.82		\$ 45,685	\$ 10,428	22.83%	\$ 0.15	
general trades	East-West	\$ 6,787,989	68,600	\$ 98.95	\$ 98.95	\$ 6,648,000	\$ 139,989	2.11%	\$ 2.04	\$ 2.04
fire protection	Comunale	\$ 218,179	68,600	\$ 3.18	\$ 3.18	\$ 198,645	\$ 19,534	9.83%	\$ 0.28	\$ 0.28
plumbing	Gallagher	\$ 751,914	68,600	\$ 10.96	\$ 10.96	\$ 739,430	\$ 12,484	1.69%	\$ 0.18	\$ 0.18
HVAC	Miles	\$ 1,693,461	68,600	\$ 24.69	\$ 24.69	\$ 1,650,000	\$ 43,461	2.63%	\$ 0.63	\$ 0.63
electrical	Gateway	\$ 1,481,098	68,600	\$ 21.59	\$ 21.59	\$ 1,321,733	\$ 159,365	12.06%	\$ 2.32	\$ 2.32
technology	Doan Pyramid	\$ 1,107,911	68,600	\$ 16.15	\$ 16.15	\$ 1,087,847	\$ 20,064	1.84%	\$ 0.29	\$ 0.29
FFE administration	Corporate Exp.	\$ 117,944	68,600	\$ 1.72		\$ 161,647	\$ (2,429)	-1.50%	\$ (0.04)	
FFE classroom	Sexton	\$ 163,703	68,600	\$ 2.39		\$ 163,158	\$ 544	0.33%	\$ (0.01)	
FFE library	Corporate Exp.	\$ 41,275	68,600	\$ 0.60						
cafeteria tables	Continental	\$ 15,266	68,600	\$ 0.22		\$ 16,266	\$ (1,000)	-6.15%	\$ (0.01)	
<b>Totals</b>		<b>\$ 13,538,909</b>	<b>68,600</b>	<b>\$ 197.36</b>	<b>\$ 175.52</b>	<b>\$ 12,926,412</b>	<b>\$ 612,498</b>	<b>4.74%</b>	<b>\$ 8.93</b>	<b>\$ 5.76</b>

## Wade Park

<i>Architect:</i> <i>CEDA/Then</i> <i>Design</i>	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Martin	\$ 42,959	\$ 0.63	21.32%
concrete flat work	21st Century	\$ 12,101	\$ 0.18	141.08%
landscaping	Down to Earth	\$ 9,828	\$ 0.14	94.25%
general trades	East-West	\$ 82,472	\$ 1.20	58.91%
fire protection	Comunale	\$ 5,136	\$ 0.07	26.29%
plumbing	Gallagher	\$ 6,035	\$ 0.09	48.34%
HVAC	Miles	\$ 23,666	\$ 0.34	54.45%
electrical	Gateway	\$ 62,259	\$ 0.91	39.07%
technology	Doan Pyramid	\$ 4,218	\$ 0.06	21.02%
FFE administration	Corporate Express	\$ -	\$ -	0.00%
FFE classroom	Sexton	\$ -	\$ -	0.00%
FFE library	Corporate Express	\$ -	\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 248,674</b>	<b>\$ 3.62</b>	<b>40.60%</b>

**P. Henry**

*Architect: R.L.  
Bowen &  
Associates*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. &amp; tech</b>
site work	NEO									
concrete flat work	Trenching	\$ 918,805	63,281	\$ 14.52		\$ 1,100,000	\$ (181,195)	-16.47%	\$ (2.86)	
landscaping	Great Lakes	\$ 180,227	63,281	\$ 2.85		\$ 152,750	\$ 27,477	17.99%	\$ 0.43	
general trades	Down to Earth	\$ 53,748	63,281	\$ 0.85		\$ 52,248	\$ 1,500	2.87%	\$ 0.02	
fire protection	Cold Harbor	\$ 6,886,203	63,281	\$ 108.82	\$ 108.82	\$ 6,517,600	\$ 368,603	5.66%	\$ 5.82	\$ 5.82
plumbing	Mac	\$ 161,927	63,281	\$ 2.56	\$ 2.56	\$ 159,306	\$ 2,621	1.65%	\$ 0.04	\$ 0.04
HVAC	Commerce	\$ 644,427	63,281	\$ 10.18	\$ 10.18	\$ 641,500	\$ 2,927	0.46%	\$ 0.05	\$ 0.05
electrical	Miles	\$ 1,376,128	63,281	\$ 21.75	\$ 21.75	\$ 1,355,000	\$ 21,128	1.56%	\$ 0.33	\$ 0.33
technology	Atlas	\$ 1,621,494	63,281	\$ 25.62	\$ 25.62	\$ 1,358,000	\$ 263,494	19.40%	\$ 4.16	\$ 4.16
FFE administration	Doan Pyramid	\$ 1,256,630	63,281	\$ 19.86	\$ 19.86	\$ 1,174,395	\$ 82,235	7.00%	\$ 1.30	\$ 1.30
FFE classroom	Corporate Exp.	\$ 128,805	63,281	\$ 2.04						
FFE library	Corporate Exp.	\$ 174,353	63,281	\$ 2.76		\$ 345,946	\$ 1,347	0.39%	\$ 0.02	
cafeteria tables	Corporate Exp.	\$ 44,136	63,281	\$ 0.70						
	Continental	\$ 16,202	63,281	\$ 0.26		\$ 17,202	\$ (1,000)	-5.81%	\$ (0.02)	NA
<b>Totals</b>		<b>\$ 13,463,083</b>	<b>63,281</b>	<b>\$ 212.75</b>	<b>\$ 188.79</b>	<b>\$ 12,873,947</b>	<b>\$ 589,136</b>	<b>4.58%</b>	<b>\$ 9.31</b>	<b>\$ 11.71</b>

**Patrick Henry**

*Architect: R.L.  
Bowen &  
Associates*

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	NEO Trenching	\$ -	\$ -	0.00%
concrete flat work	Great Lakes	\$ -	\$ -	0.00%
landscaping	Down to Earth	\$ -	\$ -	0.00%
general trades	Cold Harbor	\$ 140,438	\$ 2.22	38.10%
fire protection	Mac	\$ -	\$ -	0.00%
plumbing	Commerce	\$ 2,882	\$ 0.05	98.47%
HVAC	Miles	\$ 31,898	\$ 0.50	150.98%
electrical	Atlas	\$ 57,692	\$ 0.91	21.89%
technology	Doan Pyramid	\$ 82,576	\$ 1.30	100.42%
FFE administration	Corporate Express	\$ -	\$ -	NA
FFE classroom	Corporate Express	\$ -	\$ -	0.00%
FFE library	Corporate Express	\$ -	\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 315,486</b>	<b>\$ 4.99</b>	<b>53.55%</b>

<b>Willson</b>										
<i>Architect: Robert P. Madison Int.</i>	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
	NEO									
site work	Trenching	\$ 1,684,828	63,280	\$ 26.62		\$ 1,126,000	\$ 558,828	49.63%	\$ 8.83	
concrete flat work	Perk	\$ 261,155	63,280	\$ 4.13		\$ 197,500	\$ 63,655	32.23%	\$ 1.01	
landscaping	Down to Earth	\$ 51,839	63,280	\$ 0.82		\$ 47,987	\$ 3,852	8.03%	\$ 0.06	
general trades	Giambrone	\$ 6,928,991	63,280	\$ 109.50	\$ 109.50	\$ 6,326,240	\$ 602,751	9.53%	\$ 9.53	\$ 9.53
fire protection	Comunale	\$ 205,188	63,280	\$ 3.24	\$ 3.24	\$ 189,647	\$ 15,541	8.19%	\$ 0.25	\$ 0.25
plumbing	Commerce	\$ 772,589	63,280	\$ 12.21	\$ 12.21	\$ 759,750	\$ 12,839	1.69%	\$ 0.20	\$ 0.20
HVAC	Miles	\$ 1,656,090	63,280	\$ 26.17	\$ 26.17	\$ 1,625,000	\$ 31,090	1.91%	\$ 0.49	\$ 0.49
electrical	Doan Pyramid	\$ 1,413,288	63,280	\$ 22.33	\$ 22.33	\$ 1,217,900	\$ 195,388	16.04%	\$ 3.09	\$ 3.09
technology	Doan Pyramid	\$ 1,165,661	63,280	\$ 18.42	\$ 18.42	\$ 1,137,730	\$ 27,931	2.45%	\$ 0.44	\$ 0.44
FFE administration	Corporate Exp.	\$ 130,413	63,280	\$ 2.06		\$ 88,711	\$ 41,702	47.01%	\$ 0.66	
FFE classroom	Sexton	\$ 176,847	63,280	\$ 2.79		\$ 159,403	\$ 17,444	10.94%	\$ 0.28	
FFE library	Corporate Exp.	\$ 42,331	63,280	\$ 0.67						
cafeteria tables	Continental	\$ 20,513	63,280	\$ 0.32		\$ 21,513	\$ (1,000)	-4.65%	\$ (0.02)	
<b>Totals</b>		<b>\$ 14,509,734</b>	<b>63,280</b>	<b>\$ 229.29</b>	<b>\$ 191.87</b>	<b>\$ 12,897,381</b>	<b>\$ 1,570,021</b>	<b>12.17%</b>	<b>\$ 24.81</b>	<b>\$ 13.99</b>



<b>Willson</b>		<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
<i>Architect: Robert P. Madison Int.</i>				
	<b>Contractor</b>			
site work	NEO Trenching	\$ 18,805	\$ 0.30	3.37%
concrete flat work	Perk	\$ 3,658	\$ 0.06	5.75%
landscaping	Down to Earth	\$ -	\$ -	0.00%
general trades	Giambrone	\$ 58,012	\$ 0.92	9.62%
fire protection	Comunale	\$ -	\$ -	0.00%
plumbing	Commerce	\$ -	\$ -	0.00%
HVAC	Miles	\$ 1,991	\$ 0.03	6.40%
electrical	Doan Pyramid	\$ 15,136	\$ 0.24	7.75%
technology	Doan Pyramid	\$ 2,277	\$ 0.04	8.15%
FFE administration	Corporate Express	\$ -	\$ -	0.00%
FFE classroom	Sexton	\$ -	\$ -	0.00%
FFE library	Corporate Express	\$ -	\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 99,878</b>	<b>\$ 1.58</b>	<b>6.36%</b>

## Construction costs as of Dec. 3, 2012, Segment 4

A. Stevenson		Contract plus approved changes	Square feet	Cost per sq. ft.	Trades, Tech per sq. ft.	Original contract	Net change order \$	Net change order % original contract	Net change order \$/sq. ft.	Net change order \$/sq. ft. trades & tech
<b>Architect: R.L. Bowen &amp; Associates</b>	<b>Contractor</b>									
site work	Great Lakes	\$ 1,089,024	63,282	\$ 17.21		\$ 964,475	\$ 124,549	12.91%	\$ 1.97	
concrete flat work	Perk	\$ 200,968	63,282	\$ 3.18		\$ 143,375	\$ 57,593	40.17%	\$ 0.91	
landscaping	Down to Earth	\$ 69,541	63,282	\$ 1.10		\$ 35,864	\$ 33,677	93.90%	\$ 0.53	
general trades	Giambrone	\$ 5,778,001	63,282	\$ 91.31	\$ 91.31	\$ 5,441,000	\$ 337,001	6.19%	\$ 5.33	\$ 5.33
fire protection	Fire Protection	\$ 176,940	63,282	\$ 2.80	\$ 2.80	\$ 174,100	\$ 2,840	1.63%	\$ 0.04	\$ 0.04
plumbing	Hamer	\$ 648,035	63,282	\$ 10.24	\$ 10.24	\$ 651,300	\$ (3,265)	-0.50%	\$ (0.05)	\$ (0.05)
HVAC/geothermal	Castle	\$ 3,050,703	63,282	\$ 48.21	\$ 48.21	\$ 2,995,000	\$ 55,703	1.86%	\$ 0.88	\$ 0.88
electrical	Accurate	\$ 1,525,362	63,282	\$ 24.10	\$ 24.10	\$ 1,425,580	\$ 99,782	7.00%	\$ 1.58	\$ 1.58
technology	Doan Pyramid	\$ 1,025,851	63,282	\$ 16.21	\$ 16.21	\$ 1,006,689	\$ 19,162	1.90%	\$ 0.30	\$ 0.30
FFE administration	Sexton	\$ -	63,282	\$ -						
FFE classroom	Sexton	\$ 314,291	63,282	\$ 4.97		\$ 304,669	\$ 9,622	3.16%	\$ 0.15	
FFE library	Waller-Duman	\$ 29,879	63,282	\$ 0.47		\$ 30,879	\$ (1,000)	-3.24%	\$ (0.02)	
cafeteria tables	Continental	\$ 17,466	63,282	\$ 0.28		\$ 18,466	\$ (1,000)	-5.42%	\$ (0.02)	
<b>Totals</b>		<b>\$ 13,926,061</b>	<b>63,282</b>	<b>\$ 220.06</b>	<b>\$ 192.87</b>	<b>\$ 13,191,397</b>	<b>\$ 734,664</b>	<b>5.57%</b>	<b>\$ 11.61</b>	<b>\$ 8.08</b>
less geothermal LFI charge		\$ (717,536)	63,282	\$ (11.34)	\$ (11.34)					
<b>Adjusted Total</b>		<b>\$ 13,208,525</b>		<b>\$ 208.72</b>	<b>\$ 181.53</b>					

**A. Stevenson**

*Architect: R.L.  
Bowen &  
Associates*

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Great Lakes	\$ 80,593	\$ 1.27	64.71%
concrete flat work	Perk	\$ 52,339	\$ 0.83	90.88%
landscaping	Down to Earth	\$ -	\$ -	0.00%
general trades	Giambrone	\$ 172,856	\$ 2.73	51.29%
fire protection	Fire Protection Inc	\$ 2,840	\$ 0.04	100.01%
plumbing	Hamer	\$ (3,493)	\$ (0.06)	106.98%
HVAC/geothermal	Castle	\$ 5,168	\$ 0.08	9.28%
electrical	Accurate	\$ 86,946	\$ 1.37	87.14%
technology	Doan Pyramid	\$ 16,974	\$ 0.27	88.58%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ 5,168	\$ 0.08	53.71%
FFE library	Waller-Duman	\$ -	\$ -	0.00%
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 419,390</b>	<b>\$ 6.63</b>	<b>57.09%</b>

**Anton Grdina**

*Architect: Robert P. Madison Int.*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Mr. Excavator	\$ 2,043,566	72,670	\$ 28.12		\$ 1,875,000	\$ 168,566	8.99%	\$ 2.32	
concrete flat work	Licursi	\$ 175,715	72,670	\$ 2.42		\$ 178,500	\$ (2,785)	-1.56%	\$ (0.04)	
landscaping	Great Lakes	\$ 116,972	72,670	\$ 1.61		\$ 95,000	\$ 21,972	23.13%	\$ 0.30	
general trades	Cold Harbor	\$ 6,641,982	72,670	\$ 91.40	\$ 91.40	\$ 6,097,000	\$ 544,982	8.94%	\$ 7.50	\$ 7.50
fire protection	SimplexGrinnell	\$ 222,324	72,670	\$ 3.06	\$ 3.06	\$ 168,130	\$ 54,194	32.23%	\$ 0.75	\$ 0.75
plumbing	Miller	\$ 758,670	72,670	\$ 10.44	\$ 10.44	\$ 707,900	\$ 50,770	7.17%	\$ 0.70	\$ 0.70
HVAC/geothermal	Katz	\$ 2,817,105	72,670	\$ 38.77	\$ 38.77	\$ 2,698,000	\$ 119,105	4.41%	\$ 1.64	\$ 1.64
electrical	South Shore	\$ 1,237,690	72,670	\$ 17.03	\$ 17.03	\$ 1,070,000	\$ 167,690	15.67%	\$ 2.31	\$ 2.31
technology	Doan Pyramid	\$ 1,259,852	72,670	\$ 17.34	\$ 17.34	\$ 1,210,863	\$ 48,989	4.05%	\$ 0.67	\$ 0.67
FFE administration	Sexton	\$ -	72,670	\$ -						
FFE classroom	Sexton	\$ 322,950	72,670	\$ 4.44		\$ 318,975	\$ 3,975	1.25%	\$ 0.05	
FFE library	Continental	\$ -	72,670	\$ -						
cafeteria tables	Continental	\$ 63,733	72,670	\$ 0.88		\$ 66,926	\$ (3,193)	-4.77%	\$ (0.04)	
<b>Totals</b>		<b>\$ 15,660,559</b>	<b>72,670</b>	<b>\$ 215.50</b>	<b>\$ 178.03</b>	<b>\$ 14,486,294</b>	<b>\$ 1,174,265</b>	<b>8.11%</b>	<b>\$ 16.16</b>	<b>\$ 13.56</b>
					\$					
less geothermal LFI charge		\$ (882,394)	72,670	\$ (12.14)	(12.14)					
<b>Adjusted Total</b>		<b>\$ 14,778,165</b>		<b>\$ 203.36</b>	<b>\$ 165.89</b>					

Anton Grdina

Architect: Robert P. Madison Int.	Contractor	Design change order \$	Design change order \$/sq. ft.	Design change order % net change orders
site work	Mr. Excavator	\$ -	\$ -	0.00%
concrete flat work	Licursi	\$ -	\$ -	0.00%
landscaping	Great Lakes	\$ -	\$ -	0.00%
general trades	Cold Harbor	\$ 57,127	\$ 0.79	10.48%
fire protection	SimplexGrinnell	\$ -	\$ -	0.00%
plumbing	Miller	\$ 4,880	\$ 0.07	9.61%
HVAC/geothermal	Katz	\$ 19,645	\$ 0.27	16.49%
electrical	South Shore	\$ 39,257	\$ 0.54	23.41%
technology	Doan Pyramid	\$ -	\$ -	0.00%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ 4,905	\$ 0.07	123.39%
FFE library	Continental	\$ -	\$ -	NA
cafeteria tables	Continental	\$ (1,193)	\$ (0.02)	37.36%
Totals		\$ 124,621	\$ 1.71	10.61%

**Chas. Dickens**

<i>Architect: CEDA/Then Design</i>	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Site Tech	\$ 811,613	64,272	\$ 12.63		\$ 679,800	\$ 131,813	19.39%	\$ 2.05	
concrete flat work	Licursi	\$ 165,604	64,272	\$ 2.58		\$ 169,985	\$ (4,381)	-2.58%	\$ (0.07)	
landscaping	Down to Earth	\$ 34,624	64,272	\$ 0.54		\$ 17,974	\$ 16,650	92.63%	\$ 0.26	
general trades	Giambrone	\$ 5,314,420	64,272	\$ 82.69	\$ 82.69	\$ 5,194,300	\$ 120,120	2.31%	\$ 1.87	\$ 1.87
fire protection	Comunale	\$ 162,734	64,272	\$ 2.53	\$ 2.53	\$ 158,611	\$ 4,123	2.60%	\$ 0.06	\$ 0.06
plumbing	United	\$ 791,612	64,272	\$ 12.32	\$ 12.32	\$ 785,000	\$ 6,612	0.84%	\$ 0.10	\$ 0.10
HVAC/geothermal	Castle	\$ 2,589,029	64,272	\$ 40.28	\$ 40.28	\$ 2,382,000	\$ 207,029	8.69%	\$ 3.22	\$ 3.22
electrical	ESI	\$ 1,307,060	64,272	\$ 20.34	\$ 20.34	\$ 1,242,600	\$ 64,460	5.19%	\$ 1.00	\$ 1.00
technology	Doan Pyramid	\$ 1,116,432	64,272	\$ 17.37	\$ 17.37	\$ 1,066,413	\$ 50,019	4.69%	\$ 0.78	\$ 0.78
FFE administration	Sexton	\$ -	64,272	\$ -						
FFE classroom	Sexton	\$ 303,255	64,272	\$ 4.72		\$ 303,305	\$ (50)	-0.02%	\$ (0.00)	
FFE library	Waller-Duman	\$ 33,742	64,272	\$ 0.52		\$ 34,742	\$ (1,000)	-2.88%	\$ (0.02)	
cafeteria tables	Continental	\$ 17,334	64,272	\$ 0.27		\$ 18,334	\$ (1,000)	-5.45%	\$ (0.02)	
<b>Totals</b>		<b>\$ 12,647,456</b>	<b>64,272</b>	<b>\$ 196.78</b>	<b>\$ 175.52</b>	<b>\$ 12,053,063</b>	<b>\$ 594,393</b>	<b>4.93%</b>	<b>\$ 9.25</b>	<b>\$ 7.04</b>
					\$					
less geothermal LFI charge		\$ (714,291)	64,272	\$ (11.11)	(11.11)					
<b>Adjusted Total</b>		<b>\$ 11,933,165</b>		<b>\$ 185.67</b>	<b>\$ 164.41</b>					

**Chas. Dickens**

<i>Architect:</i> <i>CEDA/Then</i> <i>Design</i>	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Site Tech	\$ 25,840	\$ 0.40	19.60%
concrete flat work	Licursi	\$ 619	\$ 0.01	-14.13%
landscaping	Down to Earth		\$ -	0.00%
general trades	Giambrone	\$ 52,977	\$ 0.82	44.10%
fire protection	Comunale	\$ 1,947	\$ 0.03	47.23%
plumbing	United	\$ 15,322	\$ 0.24	231.75%
HVAC/geothermal	Castle	\$ 140,328	\$ 2.18	67.78%
electrical	ESI	\$ 22,697	\$ 0.35	35.21%
technology	Doan Pyramid	\$ 49,404	\$ 0.77	98.77%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ -	\$ -	0.00%
FFE library	Waller-Duman	\$ -	\$ -	0.00%
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 309,134</b>	<b>\$ 4.81</b>	<b>52.01%</b>

**Euclid Park**

*Architect:  
CEDA/Then  
Design*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Great Lakes	\$ 1,520,085	53,767	\$ 28.27		\$ 1,457,541	\$ 62,544	4.29%	\$ 1.16	
concrete flat work	Foti	\$ 164,836	53,767	\$ 3.07		\$ 94,510	\$ 70,326	74.41%	\$ 1.31	
landscaping	Down to Earth	\$ 158,155	53,767	\$ 2.94		\$ 29,265	\$ 128,889	440.42%	\$ 2.40	
general trades	Foti	\$ 5,633,916	53,767	\$ 104.78	\$ 104.78	\$ 5,390,000	\$ 243,916	4.53%	\$ 4.54	\$ 4.54
fire protection	SimplexGrinnell	\$ 140,292	53,767	\$ 2.61	\$ 2.61	\$ 117,930	\$ 22,362	18.96%	\$ 0.42	\$ 0.42
plumbing	Soehnlén	\$ 690,039	53,767	\$ 12.83	\$ 12.83	\$ 679,900	\$ 10,139	1.49%	\$ 0.19	\$ 0.19
HVAC/geothermal	Castle	\$ 1,580,429	53,767	\$ 29.39	\$ 29.39	\$ 1,395,000	\$ 185,429	13.29%	\$ 3.45	\$ 3.45
electrical	Lake Erie	\$ 1,216,424	53,767	\$ 22.62	\$ 22.62	\$ 1,119,250	\$ 97,174	8.68%	\$ 1.81	\$ 1.81
technology	Doan Pyramid	\$ 1,019,613	53,767	\$ 18.96	\$ 18.96	\$ 998,428	\$ 21,185	2.12%	\$ 0.39	\$ 0.39
FFE administration	Sexton	\$ -	53,767	\$ -						
FFE classroom	Sexton	\$ 261,476	53,767	\$ 4.86		\$ 265,476	\$ (4,000)	-1.51%	\$ (0.07)	
FFE library	Waller-Duman	\$ 34,546	53,767	\$ 0.64		\$ 33,347	\$ 1,199	3.60%	\$ 0.02	
cafeteria tables	Continental	\$ 12,730	53,767	\$ 0.24		\$ 13,730	\$ (1,000)	-7.28%	\$ (0.02)	
<b>Totals</b>		<b>\$ 12,432,541</b>	<b>53,767</b>	<b>\$ 231.23</b>	<b>\$ 191.21</b>	<b>\$ 11,594,377</b>	<b>\$ 838,164</b>	<b>7.23%</b>	<b>\$ 15.59</b>	<b>\$ 10.79</b>
					\$					
less geothermal LFI charge		\$ (629,457)	53,767	\$ (11.71)	(11.71)					
<b>Adjusted Total</b>		<b>\$ 11,803,084</b>		<b>\$ 219.52</b>	<b>\$ 179.50</b>					



**Euclid Park**

**Architect:**  
**CEDA/Then**  
**Design**

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Great Lakes	\$ 57,929	\$ 1.08	92.62%
concrete flat work	Foti	\$ -	\$ -	0.00%
landscaping	Down to Earth	\$ 601	\$ 0.01	0.47%
general trades	Foti	\$ 157,055	\$ 2.92	64.39%
fire protection	SimplexGrinnell	\$ 6,247	\$ 0.12	27.94%
plumbing	Soehnlén	\$ 14,145	\$ 0.26	139.51%
HVAC/geothermal	Castle	\$ 140,754	\$ 2.62	75.91%
electrical	Lake Erie	\$ 28,557	\$ 0.53	29.39%
technology	Doan Pyramid	\$ 47,956	\$ 0.89	226.37%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ -	\$ -	0.00%
FFE library	Waller-Duman	\$ 2,199	\$ 0.04	183.35%
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 455,443</b>	<b>\$ 8.47</b>	<b>54.34%</b>

**G.W. Carver**

*Architect: Ralph  
Tyler Cos.*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	NEO Trenching	\$ 723,854	64,298	\$ 11.26		\$ 632,000	\$ 91,854	14.53%	\$ 1.43	
concrete flat work	Licursi	\$ 212,021	64,298	\$ 3.30		\$ 198,900	\$ 13,121	6.60%	\$ 0.20	
landscaping	Great Lakes	\$ 31,200	64,298	\$ 0.49		\$ 12,500	\$ 18,700	149.60%	\$ 0.29	
general trades	Blaze	\$ 5,760,516	64,298	\$ 89.59	\$ 89.59	\$ 5,556,000	\$ 204,516	3.68%	\$ 3.18	\$ 3.18
fire protection	Comunale	\$ 161,000	64,298	\$ 2.50	\$ 2.50	\$ 161,000	\$ -	0.00%	\$ -	\$ -
plumbing	Commerce	\$ 691,784	64,298	\$ 10.76	\$ 10.76	\$ 627,700	\$ 64,084	10.21%	\$ 1.00	\$ 1.00
HVAC	CRS Metalworx	\$ 1,927,795	64,298	\$ 29.98	\$ 29.98	\$ 1,921,590	\$ 6,205	0.32%	\$ 0.10	\$ 0.10
electrical	Doan Pyramid	\$ 2,386,209	64,298	\$ 37.11	\$ 37.11	\$ 2,214,770	\$ 171,439	7.74%	\$ 2.67	\$ 2.67
technology	Zenith	\$ 314,985	64,298	\$ 4.90	\$ 4.90	\$ 303,029	\$ 11,956	3.95%	\$ 0.19	\$ 0.19
FFE administration	Sexton	\$ -	64,298	\$ -						
FFE classroom	Sexton	\$ 281,208	64,298	\$ 4.37		\$ 280,148	\$ 1,060	0.38%	\$ 0.02	
FFE library	Continental	\$ -	64,298	\$ -						
cafeteria tables	Continental	\$ 45,053	64,298	\$ 0.70		\$ 38,155	\$ 6,898	18.08%	\$ 0.11	
<b>Totals</b>		<b>\$ 12,535,624</b>	<b>64,298</b>	<b>\$ 194.96</b>	<b>\$ 174.85</b>	<b>\$ 11,945,791</b>	<b>\$ 589,832</b>	<b>4.94%</b>	<b>\$ 9.17</b>	<b>\$ 7.13</b>

<b>G.W. Carver</b>				<b>Design change order % net change orders</b>
<i>Architect: Ralph Tyler Cos.</i>	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	
site work	NEO Trenching	\$ 49,930	\$ 0.78	54.36%
concrete flat work	Licursi	\$ 10,539	\$ 0.16	80.32%
landscaping	Great Lakes	\$ 1,390	\$ 0.02	7.44%
general trades	Blaze	\$ 66,006	\$ 1.03	32.27%
fire protection	Comunale	\$ -	\$ -	NA
plumbing	Commerce	\$ 2,681	\$ 0.04	4.18%
HVAC	CRS Metalworx	\$ 17,367	\$ 0.27	279.89%
electrical	Doan Pyramid	\$ 135,941	\$ 2.11	79.29%
technology	Zenith	\$ -	\$ -	0.00%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ 805	\$ 0.01	75.92%
FFE library	Continental	\$ -	\$ -	NA
cafeteria tables	Continental	\$ 8,898	\$ 0.14	128.99%
<b>Totals</b>		<b>\$ 293,557</b>	<b>\$ 4.57</b>	<b>49.77%</b>

**Mound**

*Architect:  
CEDA/Then  
Design*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Precision	\$ 807,481	63,282	\$ 12.76		\$ 729,457	\$ 78,024	10.70%	\$ 1.23	
concrete flat work	Givens	\$ 110,186	63,282	\$ 1.74		\$ 111,981	\$ (1,795)	-1.60%	\$ (0.03)	
landscaping	Great Lakes	\$ 37,547	63,282	\$ 0.59		\$ 28,460	\$ 9,087	31.93%	\$ 0.14	
general trades	Mid-American	\$ 5,923,564	63,282	\$ 93.61	\$ 93.61	\$ 5,844,800	\$ 78,764	1.35%	\$ 1.24	\$ 1.24
fire protection	Absolute	\$ 126,404	63,282	\$ 2.00	\$ 2.00	\$ 121,000	\$ 5,404	4.47%	\$ 0.09	\$ 0.09
plumbing	Soehrlen	\$ 641,181	63,282	\$ 10.13	\$ 10.13	\$ 645,600	\$ (4,419)	-0.68%	\$ (0.07)	\$ (0.07)
HVAC	Castle	\$ 1,482,045	63,282	\$ 23.42	\$ 23.42	\$ 1,468,000	\$ 14,045	0.96%	\$ 0.22	\$ 0.22
electrical	Doan Pyramid	\$ 1,700,495	63,282	\$ 26.87	\$ 26.87	\$ 1,617,900	\$ 82,595	5.11%	\$ 1.31	\$ 1.31
technology	Zenith	\$ 313,749	63,282	\$ 4.96	\$ 4.96	\$ 301,793	\$ 11,956	3.96%	\$ 0.19	\$ 0.19
FFE administration	Sexton	\$ -	63,282	\$ -						
FFE classroom	Sexton	\$ -	63,282	\$ -						
FFE library	Sexton	\$ -	63,282	\$ -						
cafeteria tables	Sexton	\$ 390,785	63,282	\$ 6.18		\$ 395,834	\$ (5,049)	-1.28%	\$ (0.08)	
<b>Totals</b>		<b>\$ 11,533,436</b>	<b>63,282</b>	<b>\$ 182.25</b>	<b>\$ 160.98</b>	<b>\$ 11,264,825</b>	<b>\$ 268,611</b>	<b>2.38%</b>	<b>\$ 4.24</b>	<b>\$ 2.98</b>

<b>Mound</b>				<b>Design change order % net change orders</b>
<b>Architect: CEDA/Then Design</b>	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	
site work	Precision	\$ 1,123	\$ 0.02	1.44%
concrete flat work	Givens	\$ -	\$ -	0.00%
landscaping	Great Lakes	\$ -	\$ -	0.00%
general trades	Mid-American	\$ 24,246	\$ 0.38	30.78%
fire protection	Absolute	\$ 4,627	\$ 0.07	85.63%
plumbing	Soehnlén	\$ 5,581	\$ 0.09	NA
HVAC	Castle	\$ 10,396	\$ 0.16	74.02%
electrical	Doan Pyramid	\$ 45,973	\$ 0.73	55.66%
technology	Zenith	\$ -	\$ -	0.00%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ -	\$ -	NA
FFE library	Sexton	\$ -	\$ -	NA
cafeteria tables	Sexton	\$ 185	\$ 0.00	-3.66%
<b>Totals</b>		<b>\$ 92,131</b>	<b>\$ 1.46</b>	<b>34.30%</b>

**R.H. Jamison**

*Architect: R.L.  
Bowen &  
Associates*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Great Lakes	\$ 864,001	64,298	\$ 13.44		\$ 849,000	\$ 15,001	1.77%	\$ 0.23	
concrete flat work	West 3rd	\$ 159,690	64,298	\$ 2.48		\$ 164,690	\$ (5,000)	-3.04%	\$ (0.08)	
landscaping	Down to Earth	\$ 52,942	64,298	\$ 0.82		\$ 46,001	\$ 6,941	15.09%	\$ 0.11	
general trades	West 3rd	\$ 6,564,703	64,298	\$ 102.10	\$ 102.10	\$ 6,123,000	\$ 441,703	7.21%	\$ 6.87	\$ 6.87
fire protection	SimplexGrinnell	\$ 143,629	64,298	\$ 2.23	\$ 2.23	\$ 139,930	\$ 3,699	2.64%	\$ 0.06	\$ 0.06
plumbing	Commerce	\$ 696,273	64,298	\$ 10.83	\$ 10.83	\$ 697,750	\$ (1,477)	-0.21%	\$ (0.02)	\$ (0.02)
HVAC	Miles	\$ 1,872,440	64,298	\$ 29.12	\$ 29.12	\$ 1,874,280	\$ (1,840)	-0.10%	\$ (0.03)	\$ (0.03)
electrical	Gateway	\$ 1,335,928	64,298	\$ 20.78	\$ 20.78	\$ 1,273,300	\$ 62,628	4.92%	\$ 0.97	\$ 0.97
technology	Doan Pyramid	\$ 1,178,063	64,298	\$ 18.32	\$ 18.32	\$ 1,101,371	\$ 76,692	6.96%	\$ 1.19	\$ 1.19
FFE administration	Sexton	\$ -	64,298	\$ -						
FFE classroom	Sexton	\$ 304,357	64,298	\$ 4.73		\$ 297,350	\$ 7,007	2.36%	\$ 0.11	
FFE library	Waller-Duman	\$ 30,145	64,298	\$ 0.47		\$ 31,145	\$ (1,000)	-3.21%	\$ (0.02)	
cafeteria tables	Continental	\$ 15,723	64,298	\$ 0.24		\$ 16,723	\$ (1,000)	-5.98%	\$ (0.02)	
<b>Totals</b>		<b>\$ 13,217,894</b>	<b>64,298</b>	<b>\$ 205.57</b>	<b>\$ 183.38</b>	<b>\$ 12,614,540</b>	<b>\$ 603,354</b>	<b>4.78%</b>	<b>\$ 9.38</b>	<b>\$ 9.04</b>

**R.H. Jamison**

*Architect: R.L.  
Bowen &  
Associates*

	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Great Lakes	\$ 8,839	\$ 0.14	58.92%
concrete flat work	West 3rd	\$ -	\$ -	0.00%
landscaping	Down to Earth	\$ -	\$ -	0.00%
general trades	West 3rd	\$ 124,965	\$ 1.94	28.29%
fire protection	SimplexGrinnell	\$ 3,699	\$ 0.06	100.00%
plumbing	Commerce	\$ 1,155	\$ 0.02	NA
HVAC	Miles	\$ -	\$ -	0.00%
electrical	Gateway	\$ 31,006	\$ 0.48	49.51%
technology	Doan Pyramid	\$ 74,447	\$ 1.16	97.07%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ 11,007	\$ 0.17	157.09%
FFE library	Waller-Duman	\$ -	\$ -	0.00%
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 255,118</b>	<b>\$ 3.97</b>	<b>42.28%</b>

**Nathan Hale**

<i>Architect: CEDA/Then Design</i>	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	NEO Trenching	\$ 672,388	58,827	\$ 11.43		\$ 609,000	\$ 63,388	10.41%	\$ 1.08	
concrete flat work	Accurate	\$ 216,189	58,827	\$ 3.67		\$ 182,300	\$ 33,889	18.59%	\$ 0.58	
landscaping	Great Lakes	\$ 36,955	58,827	\$ 0.63		\$ 20,000	\$ 16,955	84.77%	\$ 0.29	
general trades	East-West	\$ 5,174,595	58,827	\$ 87.96	\$ 87.96	\$ 4,999,999	\$ 174,596	3.49%	\$ 2.97	\$ 2.97
fire protection	SimplexGrinnell	\$ 162,220	58,827	\$ 2.76	\$ 2.76	\$ 158,930	\$ 3,290	2.07%	\$ 0.06	\$ 0.06
plumbing/geothermal	Soehnlen	\$ 606,571	58,827	\$ 10.31	\$ 10.31	\$ 575,220	\$ 31,351	5.45%	\$ 0.53	\$ 0.53
HVAC/geothermal	Miles	\$ 2,222,342	58,827	\$ 37.78	\$ 37.78	\$ 2,100,000	\$ 122,342	5.83%	\$ 2.08	\$ 2.08
electrical	Doan Pyramid	\$ 1,977,848	58,827	\$ 33.62	\$ 33.62	\$ 1,778,000	\$ 199,848	11.24%	\$ 3.40	\$ 3.40
technology	Zenith	\$ 313,647	58,827	\$ 5.33	\$ 5.33	\$ 294,621	\$ 19,026	6.46%	\$ 0.32	\$ 0.32
FFE administration	Sexton	\$ -	58,827	\$ -						
FFE classroom	Sexton	\$ 281,022	58,827	\$ 4.78		\$ 275,952	\$ 5,071	1.84%	\$ 0.09	
FFE library	Continental	\$ -	58,827	\$ -						
cafeteria tables	Continental	\$ 43,616	58,827	\$ 0.74		\$ 44,026	\$ (410)	-0.93%	\$ (0.01)	
<b>Totals</b>		<b>\$ 11,707,392</b>	<b>58,827</b>	<b>\$ 199.01</b>	<b>\$ 177.76</b>	<b>\$ 11,038,047</b>	<b>\$ 669,344</b>	<b>6.06%</b>	<b>\$ 11.38</b>	<b>\$ 9.36</b>
less geothermal LFI charge		\$ (616,174)	58,827	\$ (10.47)	\$ (10.47)					
Adjusted Total		\$ 11,091,218		\$ 188.54	\$ 167.29					



<b>Nathan Hale</b>		<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
<i>Architect:</i>				
<i>CEDA/Then Design</i>	<b>Contractor</b>			
site work	NEO Trenching	\$ -	\$ -	0.00%
concrete flat work	Accurate	\$ 8,570	\$ 0.15	25.29%
landscaping	Great Lakes	\$ -	\$ -	0.00%
general trades	East-West	\$ 57,093	\$ 0.97	32.70%
fire protection	SimplexGrinnell	\$ -	\$ -	0.00%
plumbing/geothermal	Soehlen	\$ 26,405	\$ 0.45	84.22%
HVAC/geothermal	Miles	\$ 27,563	\$ 0.47	22.53%
electrical	Doan Pyramid	\$ 112,017	\$ 1.90	56.05%
technology	Zenith	\$ 7,070	\$ 0.12	37.16%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ 1,069	\$ 0.02	21.08%
FFE library	Continental	\$ -	\$ -	NA
cafeteria tables	Continental	\$ 1,590	\$ 0.03	-388.05%
<b>Totals</b>		<b>\$ 241,376</b>	<b>\$ 4.10</b>	<b>36.06%</b>

**T. Jefferson**

*Architect:  
CEDA/Then  
Design*

	<b>Contractor</b>	<b>Contract plus approved changes</b>	<b>Square feet</b>	<b>Cost per sq. ft.</b>	<b>Trades, Tech per sq. ft.</b>	<b>Original contract</b>	<b>Net change order \$</b>	<b>Net change order % original contract</b>	<b>Net change order \$/sq. ft.</b>	<b>Net change order \$/sq. ft. trades &amp; tech</b>
site work	Mr. Excavator	\$ 1,125,218	101,591	\$ 11.08		\$ 849,000	\$ 276,218	32.53%	\$ 2.72	
concrete flat work	Licursi	\$ 156,692	101,591	\$ 1.54		\$ 123,499	\$ 33,193	26.88%	\$ 0.33	
landscaping	Brookside	\$ 91,960	101,591	\$ 0.91		\$ 26,000	\$ 65,960	253.69%	\$ 0.65	
general trades	Cold Harbor	\$ 7,030,930	101,591	\$ 69.21	\$ 69.21	\$ 6,582,000	\$ 448,930	6.82%	\$ 4.42	\$ 4.42
fire protection	SimplexGrinnell	\$ 266,927	101,591	\$ 2.63	\$ 2.63	\$ -	\$ 266,927	NA	\$ 2.63	\$ 2.63
plumbing	Miller	\$ 1,017,955	101,591	\$ 10.02	\$ 10.02	\$ 954,000	\$ 63,955	6.70%	\$ 0.63	\$ 0.63
HVAC	Katz	\$ 2,119,846	101,591	\$ 20.87	\$ 20.87	\$ 1,874,600	\$ 245,246	13.08%	\$ 2.41	\$ 2.41
electrical	Gateway	\$ 1,456,034	101,591	\$ 14.33	\$ 14.33	\$ 1,277,677	\$ 178,357	13.96%	\$ 1.76	\$ 1.76
technology	Doan Pyramid	\$ 1,479,799	101,591	\$ 14.57	\$ 14.57	\$ 1,380,581	\$ 99,218	7.19%	\$ 0.98	\$ 0.98
FFE administration	Sexton	\$ -	101,591	\$ -						
FFE classroom	Sexton	\$ 527,712	101,591	\$ 5.19		\$ 411,803	\$ 115,909	28.15%	\$ 1.14	
FFE library	Continental	\$ -	101,591	\$ -						
cafeteria tables	Continental	\$ 83,906	101,591	\$ 0.83		\$ 78,589	\$ 5,317	6.76%	\$ 0.05	
<b>Totals</b>		<b>\$ 15,356,978</b>	<b>101,591</b>	<b>\$ 151.16</b>	<b>\$ 131.62</b>	<b>\$ 13,557,749</b>	<b>\$ 1,799,228</b>	<b>13.27%</b>	<b>\$ 17.71</b>	<b>\$ 12.82</b>

**T. Jefferson**

<i>Architect:</i> <i>CEDA/Then</i> <i>Design</i>	<b>Contractor</b>	<b>Design change order \$</b>	<b>Design change order \$/sq. ft.</b>	<b>Design change order % net change orders</b>
site work	Mr. Excavator	\$ 33,048	\$ 0.33	11.96%
concrete flat work	Licursi	\$ -	\$ -	0.00%
landscaping	Brookside	\$ 15,596	\$ 0.15	23.64%
general trades	Cold Harbor	\$ 173,578	\$ 1.71	38.66%
fire protection	SimplexGrinnell	\$ 13,636	\$ 0.13	5.11%
plumbing	Miller	\$ 58,802	\$ 0.58	91.94%
HVAC	Katz	\$ 201,139	\$ 1.98	82.02%
electrical	Gateway	\$ 87,707	\$ 0.86	49.18%
technology	Doan Pyramid	\$ 69,097	\$ 0.68	69.64%
FFE administration	Sexton	\$ -	\$ -	NA
FFE classroom	Sexton	\$ -	\$ -	0.00%
FFE library	Continental	\$ -	\$ -	NA
cafeteria tables	Continental	\$ -	\$ -	0.00%
<b>Totals</b>		<b>\$ 652,603</b>	<b>\$ 6.42</b>	<b>36.27%</b>