

# Board of Education Special Meeting

Thursday, June 28, 2018 8:00 AM

Central Office Conference Room, 543 West 5th, Minden, NE 68959-0301

Ken Carpenter: Present  
Justin Glanzer: Present  
Craig Grams: Present  
Richard Jacobsen: Present  
Kevin Raun: Present  
Rusty Rhynalds: Present  
Ken Carpenter: Absent  
Craig Grams: Absent

## 1. Roll Call

## 2. New Business

2.a. Consider, Discuss, and Take Action on Potential Change Order #27 - Upside Breakers and Conductors Between High School and Middle School

**Action(s):**

Motion to approve Prime Contract Change Order #27 - Upsize breakers and conductors between high school and middle school Passed with a motion by Ken Carpenter and a second by Justin Glanzer.

**Voting Detail:**

Ken Carpenter: Yea  
Justin Glanzer: Yea  
Craig Grams: Yea  
Richard Jacobsen: Yea  
Kevin Raun: Yea  
Rusty Rhynalds: Yea

**Voting Summary:** Yea: 6, Nay: 0

2.b. Consider, Discuss, and Take Action to Authorize the Superintendent to Contact Architects and Utility Relocation Companies with Regard to Demolition of the Old High School

**Action(s):**

Motion to table authorization of the Superintendent to contact architects and utility relocation companies with regard to demolition of the old high school Passed with a motion by Richard Jacobsen and a second by Justin Glanzer.

**Voting Detail:**

Ken Carpenter: Absent  
Justin Glanzer: Yea  
Craig Grams: Absent  
Richard Jacobsen: Yea  
Kevin Raun: Yea

Rusty Rhynalds: Yea

**Voting Summary:** Yea: 4, Nay: 0, Absent: 2

### 3. Additional Information

### 4. Adjournment

**Action(s):**

At 9:21 am, motion to adjourn the meeting Passed with a motion by Justin Glanzer and a second by Richard Jacobsen.

**Voting Detail:**

Ken Carpenter: Absent

Justin Glanzer: Yea

Craig Grams: Absent

Richard Jacobsen: Yea

Kevin Raun: Yea

Rusty Rhynalds: Yea

**Voting Summary:** Yea: 4, Nay: 0, Absent: 2

---

Board Secretary

Boyd Jones Construction  
950 South 10th Street, Suite 100  
Omaha, Nebraska 68108

Phone: (402) 553-1804

Fax: (402) 561-7705

Project: 13-047 - Minden Public Schools  
622 W. 3rd St.  
Minden, Nebraska 68959

### Prime Contract Change Order #027: Upsize breakers and conductors between HS MSB and Middle School MSB

<b>TO:</b>	<b>Minden Public Schools</b> 543 West 5th St. Minden, Nebraska 68959	<b>FROM:</b>	<b>Boyd Jones Construction Company</b> 950 South 10th Street, Suite 100 Omaha Nebraska 68108
<b>DATE CREATED:</b>	6/ 15 /2018	<b>CREATED BY:</b>	Tim Meyer (Boyd Jones Construction Company)
<b>CONTRACT STATUS:</b>	Pending - In Review	<b>REVISION:</b>	0
<b>DESIGNATED REVIEWER:</b>		<b>REVIEWED BY:</b>	
<b>DUE DATE:</b>		<b>REVIEW DATE:</b>	
<b>INVOICED DATE:</b>		<b>PAID DATE:</b>	
<b>SCHEDULE IMPACT:</b>	90 days	<b>EXECUTED:</b>	No
<b>CONTRACT FOR:</b>	1:Kearney County School District Prime Contract	<b>TOTAL AMOUNT:</b>	\$ 47,831.02

#### DESCRIPTION:

Middle School Breaker/Feeder Issue as summarized by DLR:

It is correct that the size for the Middle School main switchboard is 4000A. I understand seeing the numbers 4000 and 1200 next to each other being a cause for surprise. As part of a new, cost-effective design when re-feeding an existing installation it is typical not to overfeed beyond what is necessary, with consideration for same factors of safety. Further, on a project where value management was a point of focus until the very end, trying to keep costs low and minimizing excess was of significance to the school and to the project team. The feed to the Middle School was consistent with this effort, with the apparent failure to fully consider the necessary demand factors. As stated before, the demand load reading we had during design was ~1000A, so providing a 4000A feed would have been excessive, costly, and unnecessary. It is apparent now though, that a 1200A feed was not enough to accommodate spikes in demand around the warmer, higher demand time of year.

Middle School Breaker/Feeder modification summarized by DLR:

At a minimum, we are recommending that the 1200A enclosed circuit breaker on the secondary side of the transformer be increased to 1600A. Please have Cornerstone investigate and report the temperature rating for the terminals of the feeders, all the way from the new High School MSB circuit breaker to the existing Middle School circuit breaker. Depending on those ratings we may want to upsize breakers upstream from the transformer.

As part of Cornerstone's pricing, in addition to the 1600A enclosed circuit breaker please also have them get pricing to increase the two 600A circuit breakers to the following options:

- 600A/3P fully-rated circuit breakers
- 700A/3P fully-rated circuit breakers

Middle School Breaker Feeder Modification Priced and summarized by Cornerstone Electric. This varies slightly from The DLR summary above so the DLR engineers need to review the below summary and the attached submittals for approval.:

Attached is our proposal for replacing the existing 1200 amp breaker in the Middle School with a new 1600 amp breaker. Also included in this proposal is the replacement of the 2 normal duty 600 amp breakers feeding the 500 KVA transformer with 2 new 600 amp 100% continuous duty breakers. These 2 breakers are 600 amp frame breakers so the highest setting will be 600 amps.

Due to its size the new 1600 amp breaker will be in a floor mounted switchgear section, a concrete housekeeping pad is included. A new 4" conduit will be run parallel with the existing conduits from the new breaker to the existing Middle School Switchgear. The existing conduits will be reconfigured to accommodate the additional conduit at the existing Switchgear. The existing 500 MCM Aluminum wire will be removed and replaced with 600 MCM Aluminum wire. The 500 MCM connection lugs will be changed out to 750 MCM connection lugs in the existing Middle School Switchgear.

The 6" wide by 21" tall cable entrance in the side of the 500 KVA Transformer is filled by the existing 4" flex conduits and does not allow an additional one. For this reason, we will use 4 sets of 750 MCM Copper wire to meet the 1600 amp requirement between the Transformer and new Breaker. The existing 500 MCM connection lugs will be changed out to 750 MCM connection lugs in the Transformer.

The 600 amp breaker in the New High School Switchgear will be changed out to the 600 amp 100% continuous duty breaker. The existing conductors will remain. This the largest size breaker that can be installed in this spot. If a larger size breaker is desired an additional breaker section would have to be added to the New Switchgear.

The 600 amp breaker in the Middle School next to the 500 KVA Transformer will be changed out to the 600 amp 100% continuous duty breaker. This breaker will fit in the existing enclosure and existing conductors will remain.

Also included in this proposal is the rerouting of the Water and Building Steel Bonding Ground Wire for Transformer T-LS M.S. This was routed low and is in the way of the new 1600 amp breaker. The labor for metering and testing the existing Middle School loads to determine why the breaker was tripping is also included.

I have also attached submittal information on the New Breakers for your review and approval.

I have been told that there is a 3 week lead time for the New 1600 amp breaker. I am still waiting on how long it will take to get the new 600 amp breakers.

Middle School Breaker/Feeder Modification additional info as summarized by Corenerstone Electric:

Attached is our revised proposal for changing the Middle School Breakers. I have also attached the revised quotes from GE on the breakers along with their comments. Also attached are pages from 260573-001 which shows the fault currents at the existing devices. I have also included pictures of the existing 1200 amp breaker to help Eric visualize what we are trying to do.

The existing sets of 500's will need to be removed to accommodate the new 1600 amp breaker section. Also 1 of the existing 4" conduit entries at the existing Middle School MSB will need to be relocated to make room for 1 more for a total of 5. I am not sure 6 could be made to fit without completely redoing all of the existing conduits at the existing MSB. The 1200 amp switch is a wall mount and the new 1600 amp switch is a floor mount, with this change I do not believe that the existing 500's would be long enough for the new breaker after conduit installation is complete.

I have also attached a copy of the page from the Means book that I used for labor. I have underlined in red what I used. This should cover most of what I used for labor units.

I would also like to point out that wire and steel prices have increased and these prices are reflected in this proposal.

**ATTACHMENTS:**

[Means Labor.pdf](#) [GE Proposal 1600A BREAKER.pdf](#) [Pages from 260573-001 Overcurrent Protection Device Coordination Study.pdf](#) [GE Proposal 100% RATED 600A BREAKERS.pdf](#) [Comerstone \\$45908.pdf](#) [1200 Amp Pictures.pdf](#) [Submittal MHS New Middle School Breakers.pdf](#)

**CHANGE ORDER REQUESTS IN THIS CHANGE ORDER:**

COR #	Title	Schedule Impact	Amount
027	Upsize beakers and conductors between HS MSB and Middle School MSB	0 days	\$47,831.02
<b>TOTAL:</b>			<b>\$47,831.02</b>

**CHANGE ORDER LINE ITEMS:**

**PCO # 139 : Upsize beakers and conductors between HS MSB and Middle School MSB**

#	SubJob	Cost Code	Description	Type	Amount
1	N/A	16-010 - Electrical	MS Service Upgrade	Sub Contracts	\$ 45,908.00
<b>Subtotal:</b>					\$45,908.00
<b>Fee: 3.28% Applies to Fringes, Sub Contracts, Material, Equipment, and Labor.</b>					1,505.78
<b>Bond: 0.88% Applies to Fringes, Sub Contracts, Material, Equipment, and Labor.</b>					417.24
<b>Grand Total:</b>					<b>\$47,831.02</b>

The original (Contract Sum)	\$ 22,421,484.00
Net change by previously authorized Change Orders	\$ 635,959.26
The contract sum prior to this Change Order was	\$ 23,057,443.26
The contract sum would be changed by this Change Order in the amount of	\$ 47,831.02
The new contract sum including this Change Order will be	\$ 23,105,274.28
The contract time will be increased by this Change Order by 90 days	

**Jason Schmitz (DLR Group - Omaha)**  
 6457 Frances Street, Suite 200  
 Omaha Nebraska 68106-2280

**Minden Public Schools**  
 543 West 5th St.  
 Minden Nebraska 68959

**Boyd Jones Construction Company**  
 950 South 10th Street, Suite 100  
 Omaha Nebraska 68108

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE