



TO: Board of Directors  
FROM: Liz Jamieson, Director of Capital Projects  
Gary Platt, Chief Financial Officer – Capital Projects  
SUBJECT: SHS Change Order #21 – \$106,326.00 – Mechanical Courtyard PUD Drawings  
DATE: April 21, 2020  
TYPE: Action Needed

According to Board Policy No. 6957, construction Change Orders that exceed \$100,000.00 need Board approval.

Attached is Change Order (CO) No. 21 for the new Stanwood High School project, increasing the contract with Cornerstone General Contractors by the amount of \$106,326.00.

This Change Order has two separate components; converting the electrical service to SHS from Primary Metered to Secondary Metered and modifying the service conductors to accommodate the requirements of Snohomish PUD's transformer. The attached letter from BCE explains in more detail.

The Electrical Metering Change and PUD Transformer Requirements are the primary factors behind the cost of the Change Order. The majority of the cost for the utility metering change would have been paid directly to Snohomish PUD. These costs have been shifted to paying the construction team in lieu of the utility, and the District is receiving a product that has lower long-term maintenance and responsibility. The change from aluminum to copper conductors is based on Snohomish PUD requirements and is also viewed as a lower maintenance item.

This Change Order does not change the project completion date.

Please let us know if you have any questions.

**Recommendation:**

We recommend the board **move to approve SHS Change Order #21 to the contract with Cornerstone General Contractors, Inc., for \$106,326.00, related to the new Stanwood High School replacement project.**



SCSD CHANGE ORDER LOG - STANWOOD H.S.

Phase 2 - Cornerstone GCI

Print Date:  
4/16/2020

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						O	AHJ	GC	A	S	C	K	L	MEP											
	095	3	BRB Beam Weld	RFI 395	SSK 038			x		r							08/28/19	\$4,224.00							
	105	3	Fence and Gates at Visitor Bleacher	PR 06	F1.11	x			r								08/05/19	\$8,963.00	\$80,484.00	\$263,966.00	08/26/19	\$91,709,867.00			
	001	4	Add Shear Studs to H-Piles	10/S3.04		x			r								08/13/19	\$8,303.00							
014	043	4	Footing Drain at Arbor Pit	C23.10		x				r							04/29/19	08/23/19	\$14,254.00						
	015	4	Added Column at Expansion Joint	RFI 131				x		r									\$2,785.00						
	024	4	3" Sanitary to 2nd Flr	RFI 092				x					r						\$6,095.00						
	046	4	PAC Control Room Walls Ftg Drain and Waterproofing	RFI 256	Overlay pdf.	x			r								05/06/19	08/26/19	\$13,182.00						
	050	4	Field House Hip Splice	RFI 245				x		r									\$19,426.00						
	051	4	CIP Wall Area 2 Extension	RFI 244, 5/S5.02				x		r									\$8,436.00						
019	096	4	Saturday Masonry Work			r		x									05/21/19	08/26/19	\$17,551.00	\$90,032.00	\$353,998.00		\$91,799,899.00		
	053	5	2nd Floor Deck Support on Grid 26	RFI 324				x		r									\$5,285.00						
	067	5	WRB at Roof Edge	RFI 328				x		r									\$33,571.00						
	069	5	Grading East of Gym Access					x			r								\$23,615.00						
	093	5	Revise Carpet Type to Tandus			x/r													\$33,275.00	\$95,746.00	\$449,744.00		\$91,895,645.00		
003	018	6	Gas and Air Modifications	M1.21, M1.23, M1.24, M1.25	All ref. docs			x					r				03/20/19		\$12,261.00						
	033	6	Field House - Footings at new CMU walls	RFI 149				x		r									\$39,855.00						
	048	6	Add P-6 Drain to Rm103D	RFI 216				x					r						\$1,707.00						
	052	6	Re-route Irrigation at Field House	RFI 304				x					r						\$6,761.00						
	054	6	Grandstand Repair Work	RFI 279		x		x											\$15,432.00						
	106	6	MEP Seismic Joints	RFI 393				x					r						\$20,995.00	\$97,011.00	\$546,755.00		\$91,992,656.00		
007	002.1	7	Bathroom Shower Selections	RFI 014				x					r						\$6,113.00						
	032	7	Sac and Patch at EPRO					x		r									\$49,588.00						
	112	7	Rm 241A Eye Wash & Floor Drain	RFI431				x					r						\$2,133.00						

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						O	AHJ	GC	A	S	C	K	L	MEP									
045	121	7	Grandstand Letters	A4.01R	A4.01R	x				r						09/05/19		(\$1,100.00)					
	127	7	Horticulture Lab 254 Ductwork Change	RFI 438				x						r				\$727.00					
	131	7	Floor Sink	RFI 211	M2.04R			x						r				\$3,129.00					
	136	7	Plate Extension at Brace Frame	RFI 454	S7.08			x		r								\$2,222.00					
	141	7	Kitchen Electrical Devices	RFI 482	S2.28			x		r	r							\$957.00					
	145	7	Concessions 217 Sink	RFI 457				x						r				\$2,921.00					
	147	7	Roof to Wall Term Bar	RFI 488				x		r								\$12,117.00	\$78,807.00	\$625,562.00	11/11/19	\$92,071,463.00	
016	059	8	Fire Damper Changes		M2.11, M2.21, M2.25, M2.33, M2.37, E3.11, E3.25, E3.33, E3.37, FA1.15, FA2.23, FA2.25, FA3.33,		x							r	05/29/19	11/21/19	\$77,125.00						
	123	8	Added Bent Plate at Slab	RFI 404	RFI 404, S2.33			x		r	r					12/01/19	\$3,212.00						
	126	8	Floor Drain Piping	RFI 443	RFI 443			x						r		11/21/19	\$7,501.00						
	132	8	Detail Revisions	RFI 373	RFI 373			x		r						11/14/19	\$2,057.00						
	140	8	Exterior Upper Canopy Soffit Depth	RFI 477	RFI 477, A4.01			x		r						11/15/19	\$5,417.00	\$95,312.00	\$720,874.00	12/01/19	\$92,166,775.00		
	104	9	Steel zone 17 detail	RFI 416, RFI 417	RFI 416, RFI 417			x		r						08/29/19	\$2,741.00						
	149	9	C-Store Column/Wall	RFI 489	RFI 489, A2.11			x		r						11/17/19	\$833.00						
053	157	9	C-Store Pass through	CCD 053	ASK-014			x		r						11/17/19	\$940.00						
	158	9	Cost for Electrical Permit (Direct)	AIA-A201		r	x									11/01/19	\$8,351.00						
	172	9	Roof Parapet Transition	RFI 529	RFI 529			x		r						11/14/19	\$7,404.00	\$20,269.00	\$741,143.00	12/03/19	\$92,187,044.00		
005		10	Permit Related Civil Changes		C21.02, C21.03, C21.08, C21.14, C23.02, C23.03, C23.08, C23.09, C23.10, C23.14, C23.21, C23.40, C23.41, C23.42, C23.43, C23.44, C24.02, C24.03, C24.07, C24.10, C24.11, C24.40, C24.41, C24.42, C25.02, C25.03, C25.04, C25.07, C25.08, C25.09, C25.10, C25.11, C25.14, C25.15, C26.01, C26.02, C26.03, C26.04, C26.05, C26.06, C31.02, C31.03, C33.02, C33.03, C33.04, C33.07, C34.02, C34.03, C35.03		x			r				03/20/19	12/30/19	\$168,219.00							
																	\$168,219.00	\$909,362.00		01/07/20	\$92,355,263.00		
004	19	11	Mech and Elec Permit Changes		M2.15, M2.25, M2.26; E2.11, E2.12, E2.14, E3.15, E3.21, E3.25, E3.25, E3.26, E6.14, E6.11, E6.01, E6.02, E6.31; FA1.15, FA2.25, FA2.26		x							r	03/20/19	10/25/19	\$70,287.00						

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						O	AHJ	GC	A	S	C	K	L	MEP									
	114	11	Additional Gym Wall Pads	PR 003		x			r								11/07/19	\$11,771.00	\$82,058.00	\$991,420.00	01/03/20	\$92,437,321.00	
	30	12	Field House Ceiling Demo	RFI 253				x	r	r								\$12,900.00					
	34	12	New Slab and Ftg at Door Entries	RFI 275														\$5,571.00					
	61	12	Column Extension	RFI 233				x		r								\$15,348.00					
023	97	12	Grading Revisions at FH	CCD 023	C21.14, C21.15, C23.14, C24.15, C25.14, C25.15			x			r					07/22/19	\$39,138.00						
	124	12	Added Bent Plate at Stair					x	r									\$5,211.00	\$78,168.00	\$1,069,588.00	01/08/20	\$92,515,489.00	
	014	13	Electric Trap Primers	RFI 080.1				x						r			11/08/19	\$6,801.00					
	22	13	Added Ltg/Pwr @ Pump House	RFI 086	E3.11			x						r			11/21/19	\$4,295.00					
	39	13	CMU to Roof Connection	RFI 197, RFI 155, RFI160, RFI 232				x	r	r							11/08/19	\$34,602.00					
	65	13	Zone 3 Roof	RFI 317				x	r	r							11/15/19	\$3,961.00					
	92	13	Dig Out Lagging at East Retaining Wall	CAG Observation Report 14.3				x/r	r								08/22/19	\$3,554.00					
	111	13	Added Column in Theater	RFI 414				x	r	r							12/06/19	\$5,300.00					
047	113	13	Added Power and Data for Gym Display	CCD 047	A8.16, E3.12, E4.21	x			r								11/01/19	\$1,800.00					
	133	13	Added Penetrations for HVAC	RFI 234				x		r							11/21/19	\$3,752.00					
	134	13	Mechanical Penthouse Openings	RFI271, RFI 271.1				x		r							11/22/19	\$1,869.00					
	154	13	Utility Wall Framing	RFI 410				x	r								10/31/19	\$2,542.00					
	156	13	Chase for Conduit to Mezzanine	RFI 253				x						r			10/31/19	\$4,333.00					
	164	13	Add Time HM Frame Installation					x	r								11/07/19	\$4,244.00					
	173	13	Area 1 Floor Framing	RFI 322				x	r	r							11/21/19	\$1,198.00					
	178	13	Men's Toilet 122 Furring	RFI 546, A2.12				x	r	r							12/05/19	\$1,297.00					
	184	13	Field House Spray Foam	RFI 392				x	r								12/06/19	\$4,718.00	\$84,266.00	\$1,153,854.00	01/10/20	\$92,599,755.00	
	37	14	Exterior Door Stoop Condition	RFI 096	ASK 008			x	r								12/11/19	\$18,119.00					
	47	14	Added Framing Scope at FH	RFI 294, RFI 295, RFI 326				x	r								11/15/19	\$10,183.00					
	66	14	EF108 and EF109 VFD Wiring	RFI 308	E6.32			x						r				\$1,108.00					
	85	14	Added Furring at Fitness Room	RFI 388				x	r									\$1,872.00					

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						O	AHJ	GC	A	S	C	K	L	MEP									
27	87	14	Tennis court Utilities	CCD 027	C21.14, C21.15, C23.14, C24.15, C25.14, C25.15			x	r	r		r	r			11/14/19	\$53,760.00						
37	100	14	Card Reader at Visiting Team	CCD 037												11/18/19	\$11,548.00						
	125	14	Add Electric Trap Primer	RFI 441				x						r		11/21/19	\$2,959.00	\$99,549.00	\$1,253,403.00	02/05/20	\$92,699,304.00		
28	98	15	Tennis Court Grading and Paving	CCD 028	C21.15, C23.15, C25.15; L1.12, L2.12, L4.12, Elkay cut			x			r		r			01/23/20	\$74,393.00						
	148	15	Added Plywood to Parapet for Roofing	RFI 500				x	r							12/06/19	\$3,315.00						
	166	15	Add Furring to Ramp @ Commons	RFI 528				x	r							12/05/19	\$3,703.00						
	188	15	Modify Beam Below Soffit	RFI 597				x	r	r							\$1,734.00						
067	203	15	Added Padlocks	CCD 067		x			r								\$2,337.00						
	209	15	Brace Below Ceiling in Men's 122	RFI 596				x	r	r						01/22/20	\$1,515.00						
	211	15	Classroom 207 Wall Furring	RFI 645				x	r							01/22/20	\$2,224.00						
072	215	15	Flip Storefronts #04 and #05	CCD 072		x			r								\$8,228.00	\$97,449.00	\$1,350,852.00	02/05/20	\$92,796,753.00		
057	163	16	Civil Permit Changes	CCD 057	C23.21, C31.07, C32.07, C33.07		x				r				10/20/19	01/20/20	\$49,846.02						
	170	16	Raise TP Dispensers @ Field House	RFI 170		x			r							12/11/19	\$3,365.00						
	180.1	16	Grease Interceptor Location	RFI 551	C24.09, C24.21			x			r		r				\$8,401.00						
024	168	16	Delete MTC Sewer Scope	CCD 168													\$2,796.00						
	219	16	Furr Wall @Zone3 Lvl3 Relite	RFI 649				x	r								\$2,796.00						
	224	16	Added GWB control Joints	RFI 533				x	r							01/16/20	\$7,845.00	\$75,049.02	\$1,425,901.02	02/05/20	\$92,871,802.02		
022	60	17	Stadium Field Conduit and Power	F1.14	F1.14	r									06/05/19	02/13/20	\$22,684.00						
	63	17	Door 130A size Increase	RFI 270, A2.12, A10.00				x	r						05/09/19	02/10/20	\$2,833.00						
	88	17	Detail Hoist Beam at Elevators	RFI 389				x		r					07/29/19	03/02/20	\$7,012.00						
038	101	17	Nurse Room Revisions		ASK 10, ASK 11, A10.03	x									07/30/19	03/02/20	\$1,381.00						
	135	17	Structural Beam Elevation	RFI 456, S2.33, 6/S5.30, A10.22, 4/A10.44				x	r	r					09/24/19	10/11/19	\$4,490.00						
	168	17	Credit for incorrect CI amount in CO#16	CO16, CI168		x											(\$2,796.00)						

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034	169	17	Hand Wash Sink Change	CCD 034					r								10/28/19	02/10/20	\$3,689.00							
	175	17	Stair 05 Support	RFI 541, A7.05	SSK 044			x	r	r							11/04/19	02/20/20	\$8,337.00							
	177	17	Add Soffit and Break Metal	RFI 532, RFI 532.1	ASK 15, ASK 16			x	r										\$3,886.00							
	179	17	Move HM Frame	RFI 255															\$1,830.00							
	180	17	Additional Costs for CI 180	RFI 551				x	r										\$136.00							
	182	17	Added Blocking at Parapet	RFI 564				x	r								11/25/19	02/20/20	\$2,758.00							
	191	17	Theater Roofing Termination	RFI 580				x	r								11/22/19	01/20/20	\$3,828.00							
	199	17	Vape Detector Rough-In	PR 07	E0.02, E4.11, E4.13, E4.15, E4.26, E4.35, E4.36, E4.11C, E2.01R		x							r			10/30/19	01/28/20	\$36,425.00	\$96,493.00	\$1,522,394.02	03/06/20	\$92,968,295.02			
030	99	18	Electrical at FH Coiling Doors	CCD 030										r			07/11/19	11/01/19	\$5,002.00							
	103	18	Embeds relocation at Catwalks	RFI 402, RFI 408	S2.34			x	r	r							07/31/19	01/20/20	\$6,753.00							
	189	18	Add HSS for Roof Support	RFI 569	S2.56, 2/S6.15			x		r							11/18/20	01/21/20	\$6,439.00							
	204	18	Soffit Elevation Btwn Servery & Kitchen	RFI 547	A3.11			x	r								11/26/19	01/28/20	\$8,234.00							
	206	18	Cut Beam Flange for Downspout	RFI 206, 1/A5.08				x	r	r							01/03/20	02/10/20	\$9,296.00							
	207	18	Wall Furring for Eye Wash	RFI 631, A2.25, M1.25				x	r	r				r			12/26/19	01/22/20	\$1,107.00							
	208	18	Sight Lines Mens 122	RFI 595, A2.12	ASK-029					x/r							12/06/19	01/28/20	\$5,454.00							
	210	18	Wall Type at Storefront	RFI 640,	ASK-031			x	r								12/30/19	01/22/20	\$2,929.00							
	212	18	Added Exhaust Fan	RFI 558				x						r			11/21/19	01/23/20	\$10,954.00							
	222	18	Theater Roofing Termination	RFI 668, 6/A5.07, 13/A0.24				x	r								11/12/19	02/20/20	\$2,232.00							
	233	18	Added Knox Box	RFI 677				x	r								01/17/20	01/29/20	\$1,281.00							
	236	18	Add Key Switches to Doors				x		r									03/02/20	\$7,557.00							
	252	18	Business Lab Transfer Air	RFI 727			x							r			02/11/20	02/20/20	\$3,196.00							
70	255	18	Electrical Revisions	E3.25, E3.23, E5.01			x							r			02/17/20	03/02/20	\$5,870.00	\$76,304.00	\$1,598,698.02	03/06/20	\$93,044,599.02			
	35	19	Enclosure Re-Route for Fiber	RFI 097				x						r			03/25/19	02/10/20	\$19,954.00							









April 10, 2020

Attn: Stanwood Camano School District Board

**RE: Stanwood High School CI #74**

Dear Members of the Board,

This CI has two separate components- converting the electrical service to SHS from Primary Metered to Secondary Metered and modifying the service conductors to accommodate the requirements of SNO PUD's transformer.

**Electrical Metering Change**

There are two buildings on the High School Campus (the main High School Building and the CTE Shop Building) that require separate service transformers. These transformers could each have their own Utility Meter (secondary service) or have one Utility Meter that serves both of them (Primary Metered). Primary Metered systems are typically a lower first cost than Secondary Metered systems, but cause the district to "own" the high voltage system on the school side of the meter. As a pre-bid cost saving measure, the original design called for a Primary Metered service at the High School Campus. This allowed for a single power metering point for SNO PUD and reduced the amount of equipment that would normally be installed between a transformer and the building.

This design was submitted to SNO PUD and there were no comments prior to the bid of the project. After the construction team had started work, SNO PUD noted that the price of the installation of the primary meter would be approximately \$60,000. This was a direct utility cost that the district would pay to the PUD (similar to other utility service costs). The higher-than-expected cost for the primary meter made a secondary meter solution more cost competitive. The design and construction teams agreed that secondary metering was the direction that made the most sense from a long-term maintenance perspective- based on the information provided by SNO PUD. The quoted price that was provided indicated that the installation cost for the change to installing two secondary meters was only slightly higher than the costs for the PUD to install a primary meter.

**SNO PUD Transformer Requirement**

The second component of CI #74 was required to accommodate the High School transformer provided by the PUD and eliminate additional equipment in the service yard. The bid documents specify aluminum conductors and required (9) sets of conductors between the transformer and the main electrical board. The fire pump is also directly fed from the secondary of the transformer and requires (2) sets of conductors. This equates to a total of (11) sets of conductors landing on the secondary of the utility transformer. SNO PUD requires that only allow (10) sets of conductors are able to land directly on the transformer without adding an additional cabinet. The limited space within the yard and the additional utility costs eliminated the viability of adding the additional cabinet. In an effort to maintain the requirement and eliminate the

cost of the additional transformer cabinet, the team decided to change the conductor material to copper. Copper is rated for a higher amperage than aluminum, so a fewer number of copper conductors can be used to achieve the same amperage as aluminum conductors. The down side is that copper conductors are nearly 4 times the cost of aluminum conductors. Copper is considered a better conductor material by the industry (lower maintenance) and is an overall betterment to the project.

### Summary

The Electrical Metering Change and PUD Transformer Requirements are the primary factors behind the cost of the CI. The majority of the cost for the utility metering change would have been paid directly to SNO PUD. These costs have been shifted to paying the construction team in lieu of the utility, and the District is receiving a product that has lower long-term maintenance and responsibility. The change from aluminum to copper conductors is based on SNO PUD requirements and is also viewed as a lower maintenance item.

Costs submitted by the contractors appear to be fair for the material and work involved. They do not represent overly inflated “change order” pricing. The Electrical Metering Change accounts for approximately 85% of the CI. The change to copper conductors was mostly a material change (slightly reduced labor) and accounts for approximately 15% of the CI after all markups.

We recommend that you accept this change for both the long-term maintenance benefits and relatively low difference between the Contractor’s and PUD’s costs.

Sincerely,  
BCE Engineers, Inc.



Ben Hedin, PE  
Principal