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info@scasd.org — 814.231.1042

To: Board of Directors
 From: Robert O'Donnell, Vernon Bock, Randy Brown, and Ed Poprik
 Re: Proposed Playground Designs
 Date: November 27, 2019

As per our [playground update](#) shared with the Board during its Nov. 18 meeting, the administration and design professionals have prepared this update for the playground design process for the following three elementary schools: Corl Street, Radio Park, and Spring Creek. This update includes design documents resulting from the input received during this process. Also, we have included an updated cost estimate based upon the schematic design. Both of these include the latest revisions to the Radio Park playground presented at the Nov. 4 board meeting. The design professional, Metcalfe Architectural Design, will be present to provide additional clarification and response to any remaining questions.

A full recap of the process, including dates and Board action was shared with the Board during its meeting on [Nov. 4, 2019](#).

This discussion allows the Board to prepare for the acceptance of the design documents and review the associated cost estimates which is scheduled for Dec. 16.

Document Review

The design documents presented include further detail and definition not included in the schematic documents which have been provided until this point. Associated cost estimates have been provided with the schematic design as well. Table A includes a summary of the schematic cost estimates.

In addition to normal refinements of the cost estimates since the last meeting, the following items are now reflected in the cost estimates in Table A:

- Spring Creek - the cost estimate reflects the third set of swings which will be installed next summer.
- Radio Park - the cost estimate reflects the addition of the log scramble, log mound and log beam; as well as additional engineering wood fiber surrounding the Parkour due to relocation.
- Related cost estimates of design and contingency also reflect these additions.

Table A

	Spring Creek	Corl Street	Radio Park
Construction Cost	\$ 196,088	\$ 229,103	\$ 209,139
Design Cost Est.	52,398	51,083	57,326
Contingency	19,958	23,158	21,134
Swings/Basketball Hoops	47,259	2,829	63,836
Grand Total	\$ 315,703	\$ 306,174	\$ 351,436

The cost estimates resulting from the design documents are in the final review process and will be available at the Dec. 16 meeting.

Design Updates

Table B provides a comparison of equipment and opportunities proposed at each elementary school. This table has been updated to reflect the omission at Spring Creek and additions to Radio Park from the last meeting.

Table B

<u>Spring Creek</u>	<u>Corl Street</u>	<u>Radio Park</u>
Kompan Swings	Kompan Swings	Kompan Swings
Kompan Robinia Tree Climber	Kompan Robinia Tree Climber	Kompan Robinia Tree Climber
Grass Mound	Grass Mound	Grass Mound
Kompan Embankment Slide	Slide Reused	Kompan Embankment Slide
Log Stepper Slope		Log Stepper Slope

Log Mound	Log Mound	Log Mound w/ balance beam
Black Locust Posts		Black Locust Posts
	Kompan Parkour	Kompan Parkour
		Dynamo Cone Spinner
Log Stump Seats		Log Stump Seats
	Hillside Rock Slabs	
	Balance Logs	
Wood Bench		Wood Bench
Log Scramble	Log Scramble	Log Scramble
Climber Re-used		
Total pieces: 11	Total pieces: 9	Total pieces: 11

Next Steps

On Dec. 16, the Board will be asked to accept the design documents which will then be used to prepare the construction documents. Future steps will include the project being released for bidding, followed by the Board accepting the bids. The project calendar is included for reference.

Playground Master Planning

	11.26.2019	11.26.2019	11.26.2019
	Spring Creek	Corl St	Radio Park
Design/Permitting			
Mobilization	18,700	20,300	18,900
Site Prep	16,166	16,290	16,500
Demolition		4,300	
New Engineered Wood Fiber	35,390	62,307	35,180
Retaining Assembly	1,040		1,665
Underdrainage and Retaining Walls	7,740	5,400	5,220
Replace Topsoil and Lawn		2,795	
Path (Regraded)			
Planting	14,975	7,575	12,000
Lighting and Irrigation			
Kompan Swings	7,657	26,195	
Kompan Parkour		16,813	16,700
Kompan Twister			
Kompan Supernova			
Kompan Six-Sided Climbing Structure			
Kompan Robinia Tree Climber	25,992	25,900	25,900
Kompan Embankment Slide	9,239		9,239
Dynamo Cone Spinner			16,737
Black Locust Posts	15,960		12,342
Log Stump Seats	2,100		
Tree Cookie Path			
Balance Logs		2,250	2,250
Log & Boulder Climbing Area	7,695	7,695	
Hillside Rock Slabs		4,140	
Log Mound	14,785	10,625	10,162
Log Mound w/ Slide			
Log Scramble			7,695
Grass Mound	11,350	9,275	11,350
Split Mound			
Boulder Mound			
Group Embankment Slide			
Log Stepper Slope	3,300		3,300
Stone Pavers			
Wood Bench	4,000		4,000
Lookout Platform			
Raised Beds			
Basketball Hoops			
Replace Playworld Stairs and Net		7,243	
Total	196,088	229,103	209,139
All others	94,011	118,967	89,465
Equipment	102,077	110,136	119,674
Project Subtotal	196,088	229,103	209,139
Design through construction est.	41,676	40,362	46,605
Misc Reimbursement	10,722	10,722	10,722
Design Contingency	5,883	6,873	6,274
Construction Contingency	10,099	11,799	10,771
Inflation Escalation	2,121	2,478	2,262

Playground Master Planning

	11.26.2019	11.26.2019	11.26.2019
	Spring Creek	Corl St	Radio Park
Construction Bond	1,855	2,008	1,827
Prior Installation - Swings	44,429		61,007
Grand Total - Metcalfe	312,874	303,344	348,606
District Installation - Basketball	2,829	2,829	2,829
Final Grand Total	315,703	306,174	351,436
Alternates	3,000	4,960	15,105
Total with Alternates	318,703	311,134	366,541

Notes for Design Development

1. Prioritize ADA Accessibility for all students
2. Recommend for later phasing and/or partnership with stakeholders
3. Recommend purchase and installation directly by district
4. Not included in scope of this phase of project
5. Assume 16% of construction phase

Spring Creek Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

		Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
Construction & Implementation									
1 Mobilization									
	1	Mobilization - Provide on-site mobilization, layout, submittals, port-a-potty, etc.	approx 10% of project cost minus approx. previous construction and school purchases	1	ls		\$18,700.00	\$18,700.00	
Mobilization Total									\$ 18,700.00
2 Site Prep									
	1	Construction Entrance - Furnish, install, and remove rock construction entrance for erosion and sediment control.		1	ls		\$ 7,000.00	\$ 7,000.00	
	2	Erosion Control Allowance- Allowance to furnish, install and remove erosion control measures		1	ls		\$ 7,500.00	\$ 7,500.00	
	3	Protect Existing Equipment (#01)	n.i. equipment outside of construction fence	2	ea		\$ 100.00	\$ 200.00	
	4	Tree Protection - Provide protection for existing tree and root structures during construction	n.i. trees outside of construction fence	1	ea		\$ 200.00	\$ 200.00	
	5	Site Protection Fence - Furnish and install 4' orange		422	lf		\$ 3.00	\$ 1,266.00	
Site Prep Total									\$ 16,166.00
3 Kompan Robinia Tree Climber NR0834 (#03)*									
	1	Tree Climber NRO394	Costars 20% discount	1	ea		\$ 14,928.00	\$ 14,928.00	
	2	Shipping		1	ea		\$ 1,763.00	\$ 1,763.00	
	3	Install, with footings	\$6,976 / 0.9 (no discount) x 1.2	1	ea		\$ 9,301.00	\$ 9,301.00	
Kompan Robinia Tree Climber Total									\$ 25,992.00
4 Rod Forest (Black Locust Posts) (#08)									
			Per 10/15 Robi & designer email						
	1	6" to 10" diameter x 8.5' plus length		10	ea		\$ 300.00	\$ 3,000.00	
	2	6" to 10" diameter x 10.5' plus length		10	ea		\$ 360.00	\$ 3,600.00	
	3	6" to 10" diameter x 1.5' plus length		10	ea		\$ 48.00	\$ 480.00	
	4	6" to 10" diameter x 2.0' plus length		10	ea		\$ 72.00	\$ 720.00	
	5	Shipping	Includes contractor transport from Corl shipper drop	1	ea		\$ 1,960.00	\$ 1,960.00	
	6	Install including hardware purchase & assemble, footings	Allowance, pending final attachment/install detail	20	ea		\$ 310.00	\$ 6,200.00	
Rod Forest Total									\$ 15,960.00
5 Log Stumps (#09)									
	1	Log Stumps - Furnish and install 12-18" diam, 12-18" tall set on concrete foundations to frost line, on gravel drainage layer		7	ea		\$ 300.00	\$ 2,100.00	
Log Stumps Total									\$ 2,100.00
6 Log Stepper Slope									
			revised per 10/2 Metcalfe Email						
	1	Log steppers - Furnish and install log steppers (12" - 18" diameter), anchor to hillside with rebar, lag screw to one another (or set on concrete) - TBD, detail pending		11	ea		\$ 300.00	\$ 3,300.00	
Log Stepper Slope									\$ 3,300.00

Spring Creek Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

	Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
7	Wood Bench							
	1 Furnish and install wood bench - Allowance		2	ea		\$ 2,000.00	\$ 4,000.00	
	Wood Bench Total							\$ 4,000.00
8	Log Scramble (#07)	at 9" EWF area						
	1 Climbing Logs- Furnish and install (2) 24" x 16', (4) 18" x 10', & (1) 24"x10' climbing logs anchored together, countersunk		1	ls		\$ 7,000.00	\$ 7,000.00	
	2 Drainage Gravel - Furnish and install 6" min. (9" estimated) compacted aggregate (on top of EWF 3" Drainage Gravel) final design TBD (excavation is in EWF section)	280 sf @ 9" /27 @1.4tons/cy (under the logs)	11	tons		\$ 45.00	\$ 495.00	
	3 Geotextile Fabric - furnish and install	approx sf of zone	400	sf		\$ 0.50	\$ 200.00	
	Log Scramble Total							\$ 7,695.00
9	Stacked Log Mound #06							
	1 Log Mound - Furnish and install logs (12"-18" dia., 9 long), 22' wide x 4.5' h., mounded together horizontally to form hill, lag screw logs together, rebar anchor base logs to frost line	Mound: 9'w x 4.5'h x 22'l (17 logs w. x 3.5logs h. minus 3	57	ea		\$ 250.00	\$ 14,250.00	
	2 Excavate and dispose soil - 6" depth	200sf @ 6" /27 @ 1.33	5	cy		\$ 40.00	\$ 200.00	
	3 Log Mound Drainage Gravel - Furnish and install 6" compacted aggregate base and geotextile fabric	200sf @ 6" = 100cf = 3.7cy = 5t	5	tons		\$ 45.00	\$ 225.00	
	4 Geotextile Fabric - furnish and install	22' X 9' + approx. 10%	220	sf		\$ 0.50	\$ 110.00	
	Stacked Log Mound Total							\$ 14,785.00
10	Engineered Wood Fiber - 9"	area of log mound not included						
	1 Excavation - Provide labor and equipment for grading, excavation, hauling and soil disposal	5723sf @ 12" depth @ 1.33x	282	cy		\$ 40.00	\$ 11,280.00	
	2 Mulch Safety Surface - Furnish and install Engineered Wood Fiber (EWF) at 9" depth	5723sf @ 9" depth @ 1.33x	211	cy		\$ 70.00	\$ 14,770.00	
	3 Drainage Stone - Furnish and install 3" compacted aggregate base and geotextile fabric	5723sf @ 3" depth / 27 @1.4	74	tons		\$ 45.00	\$ 3,330.00	
	4 Geotextile fabric - furnish and install- 2 layers	5723sf+approx 5% x2	12,020	sf		\$0.50	\$ 6,010.00	
	9" Engineered Wood Fiber							\$ 35,390.00
11	Retaining Assembly (#14)							
	1 6x6 non-CCA pressure treated, heights per Schem. Grading plan: one timber high along walkway; priced as edging assembly	Excludes retaining assembly at swings and rock blocks, per 10/21/2019 instruction	52	lf		\$ 20.00	\$ 1,040.00	
	Retaining Assembly Total							\$ 1,040.00
12	Underdrainage at EWF and Retaining Walls							
	1 Allowance - Underdrainage at low areas of EWF & retaining walls, plus discharge / connector pipes	Allowance (pending underdrainage design)	215	lf		\$36.00	\$ 7,740.00	
	Underdrainage Total							\$ 7,740.00
13	Grass Mound	revised per 10/2 Metcalfe Email						
	1 Grass Mound - Furnish and install 6" topsoil on mound	955sf @ 6" @ 1.33x / 27	24	cy		\$ 95.00	\$ 2,280.00	
	2 Move excavated soil to mound base, compact	1/3 x 955sf x (6' extended cone minus 6") @1.33 / 27	86	cy		\$ 55.00	\$ 4,730.00	
	3 Native grass plugs on half of mound, final design TBD	450 sf	520	ea		\$ 7.00	\$ 3,640.00	
	4 Sod on mound		1	ls		\$ 700.00	\$ 700.00	
	Grass Mound Total							\$ 11,350.00
14	Kompan Embankment Slide*	revised per 10/2 Metcalfe Email						
	1 Kompan Embankment Slide	Costars discount	1	ea		\$ 6,100.00	\$ 6,100.00	
	2 Shipping		1	ea		\$ 512.00	\$ 512.00	
	3 Install		1	ea		\$ 2,626.67	\$ 2,626.67	
	Kompan Embankment Slide Total							9,238.67

Spring Creek Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

	Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
15	Kompan Swing Set*	revised per 11-2019 info from Metcalfe and Ely						
	1 Kompan Robinia Swing Set - double bay with 4 belt swings	Costars discount	1	ea		\$ 4,840.00	\$ 4,840.00	
	2 Shipping		1	ea		\$ 550.00	\$ 550.00	
	3 Install		1	ea		\$ 2,266.67	\$ 2,266.67	
	Kompan Swing Set Total							7,656.67
16	Planting							
	1 Red oak and sugar maple trees		9	ea	3" cal	\$ 875.00	\$ 7,875.00	
	2 River birch trees		4	ea	1.5"-2" cal, or 6-8' clump	\$ 650.00	\$ 2,600.00	
	3 Allowance for Grading and Reseeding - Allowance to provide labor and equipment to grade and reseed areas of the site disturbed during construction		1	ls		\$ 4,500.00	\$ 4,500.00	
	Planting Total							\$ 14,975.00
	Project Subtotal							\$196,088.34
	Design Contingency		3.0	%				\$5,883.00
	Subtotal							\$201,971.34
	Construction Contingency		5.0	%				\$10,099.00
	Subtotal							\$212,070.34
	Inflation Escalation - approx 1/2 year	Assumes school dept equipment purchase before price increase	1.0	%				\$2,121.00
	Subtotal							\$214,191.34
	Construction Bond (n.i. school dept purchases)		1.0	%				\$1,855.00
	Project Total							\$216,046.34
	Prior Installation by Others	Pending cost of purchased replacement parts						\$44,429.42
	GRAND TOTAL							\$260,475.76
	* School district to purchase all parts, accessories and delivery, and coordinate delivery to site of all play equipment (to receive discount from manufacturers).							
	Exclusions							
	Design & Engineering, Regulatory Submissions							
	Zoning/Soil Erosion & Sedim. Control/Construction Permitting & Fees							
	Lighting							
	Signage, Donor Recognition Signage							
	Irrigation							
	Phased Construction or Delays							
	Note: Items are Furnish and Install unless otherwise noted							
	Alternates							
	A Edging Assembly (#13)							
	1 6x6 non-CCA pressure treated, with rebars	Note: LF may vary according to final scope and current construction; Add \$10/LF if installing after the EWF	150	lf		\$ 20.00	\$ 3,000.00	
	Edging Assembly Total							\$ 3,000.00
	Plus mobilization, contingencies and escalation							

Radio Park Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

		Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
Construction & Implementation									
1 Mobilization									
	1	Mobilization - Provide on-site mobilization, layout, submittals, port-a-potty, etc.	approx 10% of construction cost (minus approx. previous construction and school purchases within budget)	1	ls		\$ 18,900.00	\$ 18,900.00	
Mobilization Total									\$ 18,900.00
2 Site Prep									
	1	Construction Entrance - Furnish, install, and remove rock construction entrance for erosion and sediment control.		1	ls		\$ 7,000.00	\$ 7,000.00	
	2	Erosion Control Allowance- Allowance to furnish, install and remove erosion control measures		1	ls		\$ 7,500.00	\$ 7,500.00	
	3	Protect Existing Equipment (#01)	n.i. equipment outside of construction fence	2	ea		\$ 100.00	\$ 200.00	
	4	Tree Protection - Provide protection for existing tree and root structures during construction	n.i. trees outside of construction fence	0	ea		\$ 200.00	\$ -	
	5	Site Protection Fence - Furnish and install 4' orange		600	lf		\$ 3.00	\$ 1,800.00	
Site Prep Total									\$ 16,500.00
3 Log Stepper Slope									
	1	Log steppers - Furnish and install log steppers (12" - 18" diameter), anchor to hillside with rebar, lag screw to one another (or set on concrete) - TBD, detail pending	revised per 10/2 Mercalfe Email	11	ea		\$ 300.00	\$ 3,300.00	
Log Steppers Slope Total									\$ 3,300.00
4 Wood Bench									
	1	Furnish and install wood bench - Allowance		2	ea		\$ 2,000.00	\$ 4,000.00	
Wood Bench Total									\$ 4,000.00
5 Log Scramble									
	1	Climbing Logs- Furnish and install (2) 24" x 16', (4) 18" x 10', & (1) 24"x10' climbing logs anchored together, countersunk		1	ls		\$ 7,000.00	\$ 7,000.00	
	2	Drainage Gravel - Furnish and install 6" min. (9" estimated) compacted aggregate (on top of EWF 3" Drainage Gravel) final design TBD (excavation is in EWF section)	280 sf @ 9" /27 @ 1.4tons/cy (under the logs)	11	tons		\$ 45.00	\$ 495.00	
	3	Geotextile Fabric - furnish and install	approx sf of zone	400	sf		\$ 0.50	\$ 200.00	
Log Scramble Total									\$ 7,695.00
6 Stacked Log Mound									
	1	Log Mound - Furnish and install logs (12"-18" dia., 9 long), 22' wide x 4.5' h., mounded together horizontally to form hill, lag screw logs together, rebar anchor base logs to frost line	Mound: 9'w x 4.5'h x 14.5'l (12 logs w. x 3.5logs h. minus 3	39	ea		\$ 250.00	\$ 9,750.00	
	2	Excavate and dispose soil - 6" depth	130sf @ 6" /27 @ 1.33	4	cy		\$ 40.00	\$ 160.00	
	3	Log Mound Drainage Gravel - Furnish and install 6" compacted aggregate base and geotextile fabric	130sf @ 6" = 65cf = 32.4cy @ 1.4	4	tons		\$ 45.00	\$ 180.00	
	4	Geotextile Fabric - furnish and install		143	sf		\$ 0.50	\$ 71.50	
Stacked Log Mound Total									\$ 10,161.50

Radio Park Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

	Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
7	Balance Logs (extension of stacked log mound)							
1	Balance Logs - Furnish and install balance log(s) (12" - 18" diameter)	at grade, slightly embedded into slope (decay-resistant wood required)	1	ls		\$ 2,250.00	\$ 2,250.00	
	Balance Logs Total							2,250.00
8	Kompan Parkour*							
1	Parkour 004 - Furnish Kompan Robinia Parkour 004	Costars 10% discount	1	ea		\$ 10,179.00	\$ 10,179.00	
2	Shipping, partial load		1	ea		\$ 1,161.00	\$ 1,161.00	
3	Install, with footings		1	ea		\$ 5,360.00	\$ 5,360.00	
	Kompan Parkour Total							\$ 16,700.00
9	Kompan Robinia Tree Climber NR0834 (#03)*							
1	Tree Climber NRO394	Costars 20% discount	1	ea		\$ 14,928.00	\$ 14,928.00	
2	Shipping, partial load		1	ea		\$ 1,671.00	\$ 1,671.00	
3	Install, with footings		1	ea		\$ 9,301.00	\$ 9,301.00	
	Kompan Robinia Tree Climber Total							\$ 25,900.00
10	Rod Forest (Black Locust Posts) (#06)							
1	6" to 10" diameter x 8.5' plus length		7	ea		\$ 300.00	\$ 2,100.00	
2	6" to 10" diameter x 10.5' plus length		8	ea		\$ 360.00	\$ 2,880.00	
3	6" to 10" diameter x 1.5' plus length		7	ea		\$ 48.00	\$ 336.00	
4	6" to 10" diameter x 2.0' plus length		8	ea		\$ 72.00	\$ 576.00	
5	Shipping		1	ea		\$ 1,800.00	\$ 1,800.00	
6	Install including hardware purchase & assemble, footings	Allowance, pending final attachment/install detail	15	ea		\$ 310.00	\$ 4,650.00	
	Rod Forest Total							\$ 12,342.00
11	Cone Spinner							
1	Cone Spinner #0911 substitute by Ely		1	ea		\$ 11,035.00	\$ 11,035.00	
2	Shipping		1	ea		\$ 202.00	\$ 202.00	
3	Install, with footings		1	ea		\$ 5,500.00	\$ 5,500.00	
	Cone Spinner Total							\$ 16,737.00
12	Grass Mound	revised per 10/2 Metcalfe Email						
1	Grass Mound - Furnish and install 6" topsoil on mound	955sf @ 6" @ 1.33x / 27	24	cy		\$ 95.00	\$ 2,280.00	
2	Move excavated soil to mound base, compact	1/3 x 955sf x (6' extended cone minus 6") @ 1.33 / 27	86	cy		\$ 55.00	\$ 4,730.00	
3	Native grass plugs on half of mound, final design TBD	450 sf = 1035 plugs	520	ea		\$ 7.00	\$ 3,640.00	
4	Sod		1	ls		\$ 700.00	\$ 700.00	
	Grass Mound Total							\$ 11,350.00
13	Kompan Embankment Slide*	revised per 10/2 Metcalfe Email						
1	Kompan Embankment Slide	Costars discount (10 or 20%?)	1	ea		\$ 6,100.00	\$ 6,100.00	
2	Shipping		1	ea		\$ 512.00	\$ 512.00	
3	Install		1	ea		\$ 2,626.67	\$ 2,626.67	
	Kompan Embankment Slide Total							\$ 9,238.67

Radio Park Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

		Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
I4 Engineered Wood Fiber - 12" (#11)									
	1	Excavation - Provide labor and equipment for grading, excavation, hauling and soil disposal	1180sf x 1.5' @1.33x / 27 =	87	cy		\$ 40.00	\$ 3,480.00	
	2	Mulch Safety Surface - Furnish and install Engineered Wood Fiber (EWF) at 12" depth	1180sf x 1 @1.33 / 27 =	58	cy		\$ 70.00	\$ 4,060.00	
	3	Drainage Stone - Furnish and install 6" compacted aggregate base and geotextile fabric	1180sf x .5 / 27 @1.4 tons/cy =	31	tons		\$ 45.00	\$ 1,395.00	
	4	Geotextile fabric - furnish and install- 2 layers	1180sf +5% for edge/waste x2 =	2,480	sf		\$ 0.50	\$ 1,240.00	
		12" Engineered Wood Fiber Total							\$ 10,175.00
I5 Engineered Wood Fiber - 9" (#12)									
	1	Excavation - Provide labor and equipment for grading, excavation, hauling and soil disposal	4030 sf @ 12" @1.33 / 27 =	199	cy		\$ 40.00	\$ 7,960.00	
	2	Mulch Safety Surface - Furnish and install Engineered Wood Fiber (EWF) at 9" depth	4030 sf x 9" @1.33 / 27 =	149	cy		\$ 70.00	\$ 10,430.00	
	3	Drainage Stone - Furnish and install 3" compacted aggregate base	4030 sf x 3" / 27 @1.4 tons/cy =	53	tons		\$ 45.00	\$ 2,385.00	
	4	Geotextile fabric - furnish and install- 2 layers	4030 sf +approx. 5% for edge/waste x2 =	8,460	sf		\$ 0.50	\$ 4,230.00	
		9" Engineered Wood Fiber Total							\$ 25,005.00
I6 Retaining Assembly (#14)									
	1	6x6 non-CCA pressure treated, heights per Schem. Grading plan (plus 3" below grade min), with rebars and tiebacks, incl. drainage stone and	80 LF of 5.5"x5.5" timbers	37	sf		\$ 45.00	\$ 1,665.00	
		Cedar Retaining Assembly Total							\$ 1,665.00
I7 Underdrainage at EWF and Retaining Walls									
	1	Allowance - Underdrainage at low areas of EWF & retaining walls, plus discharge / connector pipes (excluding 10/28/2019 spinner location)	Allowance (pending underdrainage design)	110	lf		\$ 36.00	\$ 3,960.00	
	2	Allowance at Spinner - Underdrainage at low area of EWF, plus discharge	Allowance, pending underdrainage design (Metcalf 10-28-2019 revised Spinner location)	35	lf		\$ 36.00	\$ 1,260.00	
		Underdrainage Total							\$ 5,220.00
I8 Planting									
	1	Red oak and sugar maple trees		10	ea	3" cal	\$ 750.00	\$ 7,500.00	
	2	Allowance for Grading and Reseeding - Allowance to provide labor and equipment to grade and reseed areas of the site disturbed during construction		1	ls		\$ 4,500.00	\$ 4,500.00	
		Planting Total							\$ 12,000.00

Radio Park Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

	Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
	Project Subtotal							\$209,139.17
	Design Contingency		3.0	%				\$6,274.00
	Subtotal							\$215,413.17
	Construction Contingency		5.0	%				\$10,771.00
	Subtotal							\$226,184.17
	Inflation Escalation - approx 1/2 year	Assumes school dept equipment purchase before price increase	1.0	%				\$2,262.00
	Subtotal							\$228,446.17
	Construction Bond (n.i. school dept purchases)		1.0	%				\$1,827.00
	Project Total							\$230,273.17
	Prior Installation by Others							\$61,006.86
	GRAND TOTAL							\$291,280.03
	* School district to purchase all parts, accessories and delivery, and coordinate delivery to site of all play equipment (to receive discount from manufacturers).							
	Exclusions							
	Design & Engineering, Regulatory Submissions							
	Zoning/Soil Erosion & Sedim. Control/Construction Permitting & Fees							
	Lighting							
	Signage, Donor Recognition Signage							
	Irrigation							
	Phased Construction or Delays							
	Note: Items are Furnish and Install unless otherwise noted							
	ALTERNATES							
	A Bonded Engineered Wood Fiber (#19) - 3" at path to/at planters	3" BEWF on 6" PA2A						
	1 Excavation - Provide labor and equipment for grading, excavation, hauling and soil disposal - 9" excavation	3080sf @ 9" /27 @1.33	114	cy		\$ 40.00	\$ 4,560.00	
	2 Bonded Engineered Wood Fiber Surface - Furnish and install Bonded Engineered Wood Fiber (BEWF) at 3" depth - ALLOWANCE COST (will require suppliers updated estimate if this Alternate moves forward)	3080sf @ 3" depth /27 @1.33	38	cy		\$ 90.00	\$ 3,420.00	
	3 PA2A Stone - Furnish and install 6" compacted aggregate base	3080sf @ 6" /27 @1.4x	80	tons		\$ 45.00	\$ 3,600.00	
	4 Geotextile fabric	n.a. with PA2A	0	sf		\$ 0.50	\$ -	
	Bonded Engineered Wood Fiber Total							\$ 11,580.00
	Add cost for grading/backfilling along sides of path, and for re-grading							
	Add mobilization, construction fencing, erosion control, seeding, contingencies, escalation, etc							
	B Edging Assembly (#13)							
	1 6x6 non-CCA pressure treated, with rebars - furnish and install - at base project (not including Alternates)	Note: LF may vary according to final scope and current construction; Add \$10/LF if installing after the EWF	141	lf		\$ 25.00	\$ 3,525.00	
	Cedar Edging Assembly Total							\$ 3,525.00
	Plus mobilization, contingencies and escalation							

Corl Street Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

		Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
Construction & Implementation									
1 Mobilization									
	1	Mobilization - Provide on-site mobilization, layout, submittals, port-a-potty, etc.	approx 10% of construction budget (\$250k minus approx. previous construction and school purchases within budget)	1	ls		\$20,300.00	\$20,300.00	
Mobilization Total									\$ 20,300.00
2 Site Prep									
	1	Construction Entrance - Furnish, install, and remove rock construction entrance for erosion and sediment control.		1	ls		\$ 7,000.00	\$ 7,000.00	
	2	Erosion Control Allowance- Allowance to furnish, install and remove erosion control measures		1	ls		\$ 7,500.00	\$ 7,500.00	
	3	Protect Existing Equipment (#01)	as indicated, plus basketball hoop	2	ea		\$ 25.00	\$ 50.00	
	4	Tree Protection - Provide protection for existing tree and root structures during construction		3	ea		\$ 200.00	\$ 600.00	
	5	Site Protection Fence - Furnish and install 4' orange		380	lf		\$ 3.00	\$ 1,140.00	
Site Prep Total									\$ 16,290.00
3 Demolition									
	1	Demo Existing Structures - as indicated on plan	2 men, 2 day @ \$350/day = \$2600 Machine @ 2 day @ \$350/day = \$700 Dump fee = \$1000	1	ls		\$ 4,300.00	\$ 4,300.00	
Demolition Total									\$ 4,300.00
4 Balance Logs (#10)									
	1	Balance Logs - Furnish and install balance log(s) (12" - 18" diameter)		1	ls		\$ 2,250.00	\$ 2,250.00	
Balance Logs Total									2,250.00
5 Log Scramble (#07)									
	1	Climbing Logs- Furnish and install (2) 24" x 16', (2) 24" x 14', & (2) 18"x10' climbing logs anchored together, countersunk		1	ls		\$ 7,000.00	\$ 7,000.00	
	2	Drainage Gravel - Furnish and install 6" min. (9" estimated) compacted aggregate (on top of EWF 3" Drainage Gravel) final design TBD (excavation is in EWF section)	280 sf @ 9" /27 @ 1.4tons/cy (under the logs)	11	tons		\$ 45.00	\$ 495.00	
	3	Geotextile Fabric - furnish and install	approx sf of zone	400	sf		\$ 0.50	\$ 200.00	
Log Scramble Total									\$ 7,695.00
6 South Grass Mound (#8)									
	1	Grass Mound - Furnish and install topsoil on mound 31' x 13' ellipse x 2'h	306sf @ 6" @ 1.33x	8	cy		\$ 95.00	\$ 760.00	
	2	Move excavated soil to mound base, compact, incl to 12" below finished grade due to existing mulch	Ellipse mound 306sf x 2.5' = 765 cf @ 1.33x = 1017cf = 38cy minus 6" topsoil	30	cy		\$ 55.00	\$ 1,650.00	
	3	Sod on mound	306sf + approx 10% waste	1	ls		\$ 700.00	\$ 700.00	
South Grass Mound Total									\$ 3,110.00

Corl Street Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

		Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
7	North Grass Mound (#9)								
	1	Grass Mound - Furnish and install topsoil on mound 34' x 20' ellipse x 3'h	518 sf @6"deep @1.33x	13	cy		\$ 95.00	\$ 1,235.00	
	2	Move excavated soil to mound base, compact, incl to 12" below finished grade due to existing mulch	Ellipse mound 518sf x 3.5' = 1813 cf @ 1.33x = 2411cf = 89cy minus 6" topsoil	76	cy		\$ 55.00	\$ 4,180.00	
	3	Sod on mound	5186sf + approx 10% waste	1	ls		\$ 750.00	\$ 750.00	
		North Grass Mound Total							\$ 6,165.00
8	Hillside Rock Slabs (in mound #09)								
	1	Excavation - n.a. (installed during mound placement)						\$ -	
	2	3 Stone Slabs- Furnish and install 4'x6'x1.5' thk stone slabs	rough bluestone type. 3@ (4x6x1.5')=108cf = @170 / 2000	9	tons		\$ 450.00	\$ 4,050.00	
	3	Boulder Aggregate Base - Furnish and install 6" compacted aggregate base PA 2A	3@4'x6'x0.5'= 36cf = 1.33cy = 1.86 tons	2	tons		\$ 45.00	\$ 90.00	
		Hillside Rock Slabs Total							\$ 4,140.00
9	Stacked Log Mound (#06)								
	1	Log Mounds - Furnish and install logs (12"-18" dia., 9' long), 6ft and 10ft widths, mounded together horizontally to form hill, lag screw logs together, rebar anchor base logs to frost line	Mound: 6' w @ 4.5'h, 10' w @ 4'.5'h, assume 15" logs formula: 5logsx3.5logs-3=15 logs plus 8logsx3.5logs-3=25	40	ea		\$ 250.00	\$ 10,000.00	
	2	Excavation and disposal - assumed just mulch	150sf @ 6" /27 @1.33	4	cy		\$ 20.00	\$ 80.00	
	3	Re-grading under log mound		1	ls		\$ 200.00	\$ 200.00	
	4	Log Mound Drainage Gravel - Furnish and install 6" compacted aggregate base	150sf @ 6" /27 @1.5 tons/cy	4	tons		\$ 45.00	\$ 180.00	
	5	Geotextile Fabric - furnish and install	150sf +10% x2	330	sf		\$ 0.50	\$ 165.00	
		Stacked Log Mound Total							\$ 10,625.00
10	Replace Playworld Challenger Stairs & Climbing net, re-assemble (#01)*								
	1	Playworld Challenger Stairs and Climbing Net, hardware, for existing disassembled equipment	school discount price	1	ea		\$ 3,843.00	\$ 3,843.00	
	1a	Shipping allowance		1	ea		\$ 400.00	\$ 400.00	
	1b	Re-assemble (remove rusted hardware), with footing for stairs (and post?)		1	ea		\$ 3,000.00	\$ 3,000.00	
		Replace/Reassemble Challenger Total							\$ 7,243.00
11	Kompan Swings*								
	1	Combo Swings Robinia NRO912 - Robinia Double Swing Combo 2 Belt 1 Basket (#05)	Costars 10% discount	1	ea		\$ 6,039.00	\$ 6,039.00	
	1a	Shipping, partial load		1	ea		\$ 588.00	\$ 588.00	
	1b	Install, with footings		1	ea		\$ 3,350.00	\$ 3,350.00	
	2	Double Swings - (1) Robinia NRO924 Double Swing 4 Belts include 1 ADA harness swing (#03)	Costars 10% discount	2	ea		\$ 4,905.00	\$ 9,810.00	
	2a	Shipping, partial load		2	ea		\$ 484.00	\$ 968.00	
	2b	Install, with footings		2	ea		\$ 2,720.00	\$ 5,440.00	
		Kompan Swings Total							\$ 26,195.00
12	Kompan Parkour*								
	1	Parkour 004 - Furnish Kompan Robinia Parkour 004 (#04)	Costars 10% discount	1	ea		\$ 10,179.00	\$ 10,179.00	
	1a	Shipping, partial load		1	ea		\$ 994.00	\$ 994.00	
	1b	Install, with footings		1	ea		\$ 5,640.00	\$ 5,640.00	
		Kompan Parkour Total							\$ 16,813.00

Corl Street Elementary Play Area

11/25/2019

Estimators: ThinkGreen Landscape Architecture & Construction 215.887.2595

Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

		Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
13		Kompan Robinia Tree Climber NR0834*							
	1	Tree Climber NRO394	Costars 20% discount	1	ea		\$ 14,928.00	\$ 14,928.00	
	2	Shipping, partial load		1	ea		\$ 1,671.00	\$ 1,671.00	
	3	Install, with footings		1	ea		\$ 9,301.00	\$ 9,301.00	
		Kompan Robinia Tree Climber Total							25,900.00
14		Engineered Wood Fiber - 12" (#11)							
	1	Excavation - Provide labor and equipment for grading, excavation, hauling and soil disposal	Assume 9" additional depth needed: 1342sf - 150sf at log mound @ 9" /27 @ 1.33x	44	cy		\$ 40.00	\$ 1,760.00	
	2	Excavation of Wood Chips - Provide labor and equipment for excavation, hauling and recycling	Assume 6" depth of chips: 1342sf @ 6" /27 @ 1.33	33	cy		\$ 20.00	\$ 660.00	
	3	Mulch Safety Surface - Furnish and install Engineered Wood Fiber (EWF) at 12" depth	1342sf @ 12" depth /27 @ 1.33x	66	cy		\$ 70.00	\$ 4,620.00	
	4	Drainage Stone - Furnish and install 3" compacted aggregate base	1342sf @ 3" /27 @ 1.4tons/cy	17	tons		\$ 45.00	\$ 765.00	
	5	Geotextile fabric - furnish and install- 2 layers	1342 +5% for edge/waste x2	2,818	sf		\$0.50	\$ 1,409.00	
		12" Engineered Wood Fiber Total							\$ 9,214.00
15		Engineered Wood Fiber - 9"	not under 150sf log mound						
	1	Excavation of Soil - Provide labor and equipment for grading, excavation, hauling and soil disposal (to 12" below top of exist mulch)	Assume 6" additional depth needed: 7741 sf @ 6" /27 @ 1.33	190	cy		\$ 40.00	\$ 7,600.00	
	2	Excavation of Wood Chips - Provide labor and equipment for excavation, hauling and recycling	Assume 6" depth of chips: 7741 sf @ 6" /27 @ 1.33	190	cy		\$ 20.00	\$ 3,800.00	
	3	Mulch Safety Surface - Furnish and install Engineered Wood Fiber (EWF) at 12" depth	7741 sf @ 9" depth @ 1.33 /27	286	cy		\$ 70.00	\$ 20,020.00	
	4	Drainage Stone - Furnish and install 3" compacted aggregate base	7741 sf @ 3" /27 @ 1.4tons/cy	301	tons		\$ 45.00	\$ 13,545.00	
	5	Geotextile fabric - furnish and install- 2 layers	7741 sf +5% for edge/waste x2	16,256	sf		\$0.50	\$ 8,128.00	
		12" Engineered Wood Fiber Total							\$ 53,093.00
16		Retaining Assembly (#14)							
	1	6x6 non-CCA pressure treated, with rebars and tiebacks, incl. drainage stone and geotextile behind wall - furnish and install	n.a. per 10/17/19 Schematic Grading Plan	0	sf		\$ 45.00	\$ -	
		Retaining Assembly Total							\$ -
17		Underdrainage at EWF and Retaining Walls							
	1	Allowance - Underdrainage at low areas of EWF & retaining walls, plus discharge / connector pipes	Allowance (pending underdrainage design)	150	lf		\$36.00	\$ 5,400.00	
		Underdrainage Total							\$ 5,400.00
18		Remove Existing Mulch, Replace With Topsoil & Lawn	this item may be deleted if leaving existing mulch between proposed EWF and existing fence						
		Remove mulch between proposed EWF and existing fence, recycle	1675 sf @ 6" assumed / 27 @ 1.33	42	cy		\$ 20.00	\$ 840.00	
		Move excavated soil from EWF excavation to this location	1675 sf @ 2" assumed, in lieu of shipping and disposal	--			--	--	
		Import 4" topsoil	1675 sf @ 4" /27 @ 1.33	27	cy		\$ 65.00	\$ 1,755.00	
		Seeding: allowance	n.a.	1	ea		\$ 200.00	\$ 200.00	
		Mulch Removal, add Topsoil and LawnTotal							\$ 2,795.00

Corl Street Elementary Play Area

11/25/2019

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Site Landscape

Project #18758

2019 Preliminary Opinion of Cost - SCHEMATIC DESIGN PHASE

		Description	Notes	qnt	unit	size	unit cost	extended cost	Totals
	19	Planting							
		1 Red oak and sugar maple trees		3	ea	3" cal	\$ 875.00	\$ 2,625.00	
		2 Furnish and place topsoil 6" deep (at lawn area near mounds)	200sf @ 6" @ 1.33x	5	cy		\$ 90.00	\$ 450.00	
		3 Allowance for Grading and Reseeding - Allowance to provide labor and equipment to grade and reseed areas of the site disturbed during construction		1	ls		\$ 4,500.00	\$ 4,500.00	
		Planting Total							\$ 7,575.00
		Project Subtotal							\$229,103.00
		Design Contingency		3.0	%				\$6,873.00
		Subtotal							\$235,976.00
		Construction Contingency		5.0	%				\$11,799.00
		Subtotal							\$247,775.00
		Inflation Escalation - approx 1/2 year	Assumes school dept equipment purchase before price increase	1.0	%				\$2,478.00
		Subtotal							\$250,253.00
		Construction Bond (n.i. school dept purchases)		1.0	%				\$2,008.00
		Project Total							\$252,261.00
		Prior Installation by Others							\$0.00
		GRAND TOTAL							\$252,261.00
		* School district to purchase all parts, accessories and delivery, and coordinate delivery to site of all play equipment (to receive discount from manufacturers).							
		Exclusions							
		Design & Engineering, Regulatory Submissions							
		Zoning/Soil Erosion & Sedim. Control/Construction Permitting & Fees							
		Lighting							
		Signage, Donor Recognition Signage							
		Irrigation							
		Phased Construction or Delays							
		Note: Items are Furnish and Install unless otherwise noted							
		Alternates							
		A Edging Assembly (#13)							
		1 6x6 non-CCA pressure treated, with rebar	Note: LF may vary according to final scope and current construction; Add \$10/LF if installing after the EWF	248	lf		\$ 20.00	\$ 4,960.00	
		Edging Assembly Total							\$ 4,960.00
		Plus mobilization, contingencies and escalation							