Bond Reimbursement and Grant Review Committee Work Session Agenda

January 23, 2020
2:00pm - 4:00pm

Teleconference – TLS Conf. Room
801 W. Tenth Street, Juneau, Alaska

Audio Teleconference available through free online WebEx application. Meeting Number 282 545 663
1-650-479-3207 Call-in toll number (US/Canada)

Chair: Heidi Teshner

Thursday, January 23, 2020

Agenda Topics

2:00 – 2:05 PM	Committee Preparation • Call-in, Roll Call, Introductions • Chair's Opening Remarks
2:05 – 3:55 PM	*Guidelines for Rater's of the CIP Application* -- Matrix for Application Question 4a "Code deficiencies / Protection of structure / Life safety" • Project Conditions • Condition Point Values • Mixed Scope Weighting
3:55 – 4:00 PM	Committee Member Comments
4:00 PM	Adjourn

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Education & Early Development
FINANCE & SUPPORT SERVICES
801 West 10th Street, Suite 200
PO Box 110500
Juneau, Alaska 99811-0500
Telephone: 907.465.6906

To: Bond Reimbursement & Grant Review Committee
From: School Facilities
Date: January 23, 2020

LIFE SAFETY MATRIX DISCUSSION PAPER

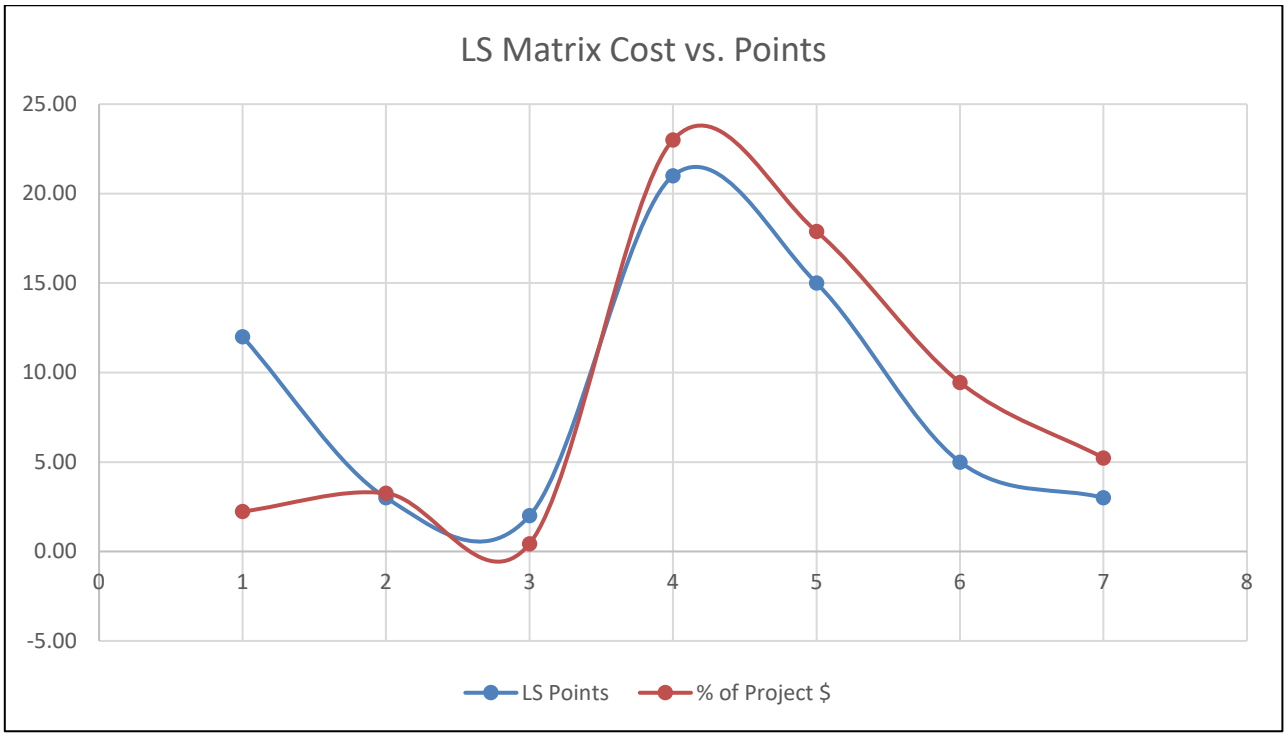
Background

On December 4, 2019, department staff presented an analysis of FY21 scoring in the Code Deficiency, Protection of Structure, Life Safety ("LS") category using the matrix approved by the committee. It was noted that, while the matrix appeared to be providing an increased level of clarity and transparency in scoring this evaluative scoring element, one area of concern surfaced regarding the weighting of points on mixed scope projects. Mixed scope projects are those where the scope of work combines both code/life-safety work and other work not related to those deficiencies. An analysis of the top 20 scores in the category showed a 27 percent uptick in the average of those scores from the FY20 CIP cycle to FY21's scores. On investigation, it appeared that the mechanism for weighting mixed-scope projects was permitting this escalated scoring.

Prior to the implementation of the matrix in the FY20 CIP application, the department evaluative raters made informed judgements on mixed scope project. This was not done based on any particular formula, but often rules-of-thumb were developed by an evaluative rater to gain consistency and to provide scoring equity among the wide variety of project scopes. To accommodate the scoring of a complex project with lots of code/life-safety issues, a rater might establish a range of points for various conditions relative to the maximum 50 points available in this category. Since this would necessarily require modest scores for any one condition, a typical rule-of-thumb was to double a particular point value for a "single scope" project. Example, if a roof was generally thought to be 7 points in a complex, mixed-scope project, then a roof-only project might have received 12-17 points.

Discussion

With the implementation of the LS Matrix in the FY20 CIP cycle, not only were point values for various conditions locked in, a calculation was implemented for the weighting of these points on mixed scope projects. First, a tabulation of each applicable LS scoring element is created and totaled. This can allow a total over 100 points for projects with multiple conditions. Next, the cost to address each LS element is determined and totaled. Then, the total value of the LS work is divided by the total value of all work and a percentage is created. The final points are then determined by multiplying the total LS point by the cost percentage. This weighting strategy seems to work for most projects. It also has the distinct benefit of allowing differentiation among raters in selecting matrix elements. However, as briefed to the committee in December, on some projects with high point-value LS items that are estimated to be resolved with a low dollar expenditure, this weighting method fails to align that minimal effort with the robust amount of assigned LS points. Below is a graphic depiction of this anomaly with the pertinent data from one project.



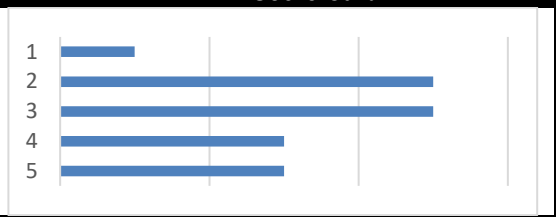
LS Matrix Item	LS Points	% of Project $	LS Cost
Env/Roof_Windows, age >30yrs	12.00	2.23	$61,686
Env/Roof_Doors, age >20yr	3.00	3.25	$89,850
Arch_ADA - 2 issues	2.00	0.43	$12,000
Mech_Mechanical Systems, WO >5/yr2	21.00	23.00	$635,161
Electric_Electrical, age >40yr	15.00	17.89	$493,851
Fire_Sprinkler Coverage Gaps	5.00	9.45	$260,818
HazMat_HazMat (all) Low Exposures	3.00	5.23	$144,378

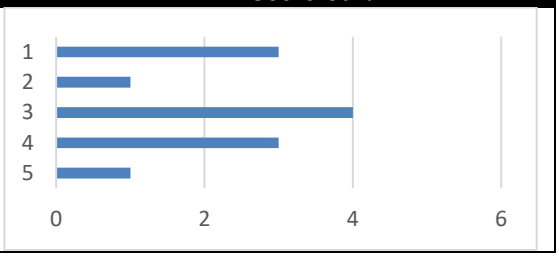
In constructing alternative mixed-scope weighting mechanisms for the LS category, the following goals should be considered:

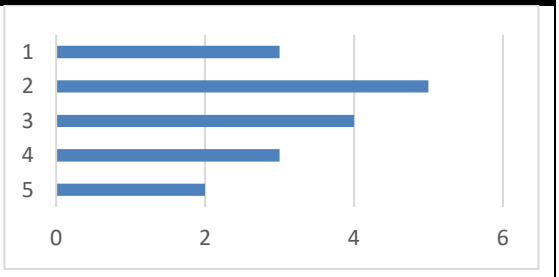
- Corrects the weighting imbalance for low-cost/high-point elements;
- Allows for minor variation in rater-assigned LS Matrix elements:
- Is relatively easy to apply and calculate;
- Accurately and adequately differentiates between single and mixed scope projects;
- Allows for consideration of non-condition related work;

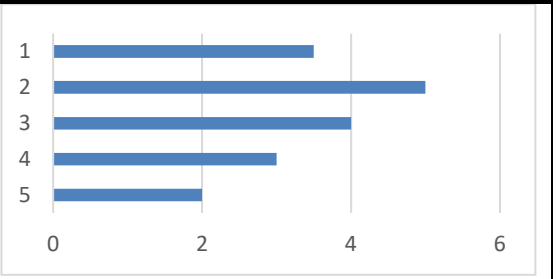
Options (Mixed Scope Weighting)

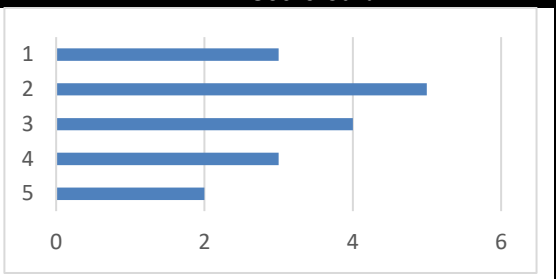
The department has formulated a spreadsheet to compare various option scenarios. These represent scenarios the department feels have the most transparency, i.e. have minimal rater discretion.

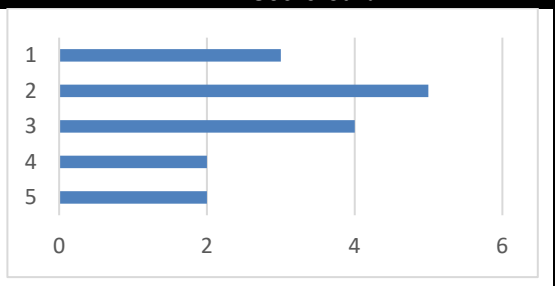
Option 1 - Current	Score Card
Condition points are added cumulatively to a total score which is then multiplied by a ratio of the costs related to correcting the conditions scored to the total construction cost of the project.	

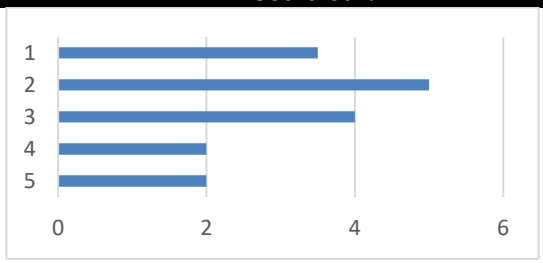
Option 2 – Initial 12/4/19	Score Card
Sum of weighted points in each matrix category where weighted points are the cost of each item divided by the cost of all LS items times that item's available matrix points. Total points are the sum of the individual weighted points. No additional mixed scope factoring is made (nor is possible).	

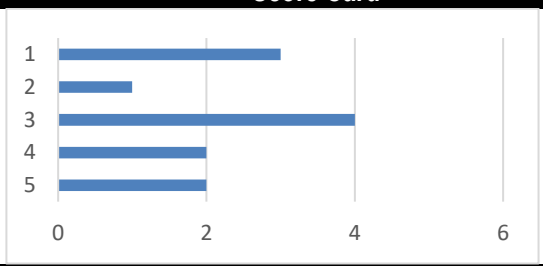
Option 3a	Score Card
Adjusts only certain LS category points where the cost of that element is low in comparison to the cost of all LS items. For 3a: Scores for conditions whose cost to repair is greater than X% (10%) of all LS costs are considered at full points. Scores for conditions whose cost to repair is less than X% (10%) of all LS costs are weighted based on a ratio of that element's cost to the cost of all LS items. A final weighting is applied in accordance with Opt 1: costs to correct the LS conditions to the total construction cost of the project.	

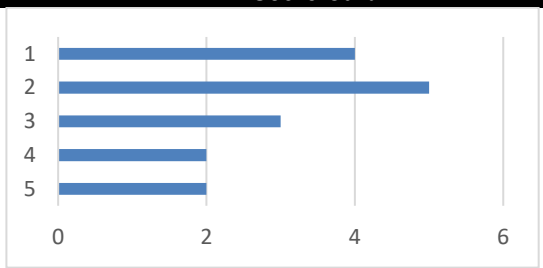
Option 3b	Score Card
Adjusts only certain LS category points where the cost of that element is low in comparison to the cost of all LS items. For 3b: Scores for conditions whose cost to repair is greater than X% (10%) of all LS costs are considered at full points. Scores for conditions whose cost to repair is less than X% (10%) of all LS costs are weighted based on a ratio of that element's cost to the cost of all LS items but not less than X% (15%, etc.) of the original points.. A final weighting is applied in accordance with Opt 1: costs to correct the LS conditions to the total construction cost of the project.	

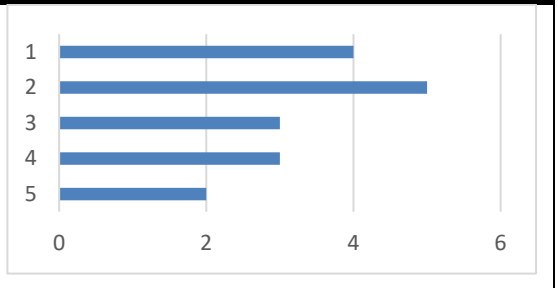
Option 3c	Score Card
Adjusts only certain LS category points where the cost of that element is low in comparison to the cost of all LS items. For 3c: Scores for conditions whose cost to repair is greater than X% (10%) of all LS costs are considered at full points. Scores for conditions whose cost to repair is less than X% (10%) of all LS costs are weighted based on a ratio of that element's cost to the sum of costs for any LS item with weighted scores. A final weighting is applied in accordance with Opt 1: costs to correct the LS conditions to the total construction cost of the project.	

Option 4a	Score Card
Sets a base score as the LS category points where construction cost is highest; adds weighted points for each additional condition as follows: Opt 4a - Base condition receives full points, additional conditions points are weighted based on the cost of each item divided by the cost of all LS items times that item's available matrix points. A final weighting is applied in accordance with Opt 1: costs to correct the LS conditions to the total construction cost of the project.	

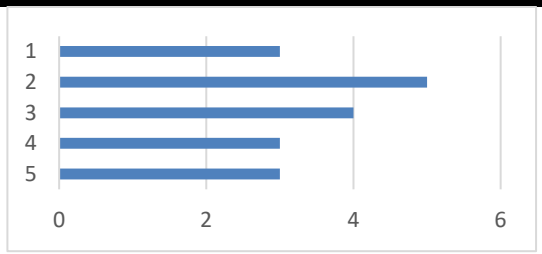
Option 4b	Score Card
Sets a base score as the LS category points where construction cost is highest; adds weighted points for each additional condition as follows: Opt 4b - Base condition receives full points, additional conditions points are weighted based on the cost of each item divided by the cost of all LS items not included in the base condition, times that item's available matrix points. A final weighting is applied in accordance with Opt 1: costs to correct the LS conditions to the total construction cost of the project.	

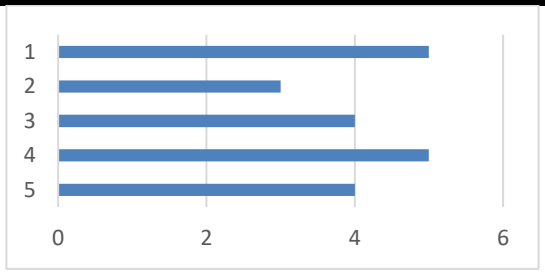
Option 4c	Score Card
Sets a base score as the LS category points where construction cost is highest; adds weighted points for each additional condition as follows: Opt 4c - Base condition receives full points, additional conditions points are weighted based on the cost of each item divided by the cost of to the total construction cost of the project, times that item's available matrix points. No additional mixed scope factoring is made.	

Option 5a	Score Card
Adjusts only certain LS category points where the cost of that element is low in comparison to the total construction cost of the project. For 5a: Scores for LS conditions whose percentage cost of the total LS costs is greater than the LS matrix points assigned are considered at full points. Scores for LS conditions whose percentage cost of total LS costs is less than the LS matrix points assigned are weighted based on dividing the differential between the category points and the cost percentage points, divided by the percent of the category costs to the total cost of LS items. A final weighting is applied in accordance with Opt 1: costs to correct the LS conditions to the total construction cost of the project.	

Option 5b	Score Card
Adjusts only certain LS category points where the cost of that element is low in comparison to the total construction cost of the project. For 5b: Scores for LS conditions whose percentage cost of total construction is greater than the LS matrix points assigned are considered at full points. Scores for LS conditions whose percentage cost of total construction is less than the LS matrix points assigned are weighted based on dividing the differential between the category points and the cost percentage points,	

divided by the percent of the category costs to the total construction cost. A final weighting is applied in accordance with Opt 1: costs to correct the LS conditions to the total construction cost of the project.	

Option 5c	Score Card
Adjusts only certain LS category points where the cost of that element is low in comparison to average cost of all LS corrections. For 5c: Scores for LS conditions whose percentage cost of the average LS cost is greater than X% (50%) are considered at full points. Scores for LS conditions whose percentage cost of the average LS cost is less than X% (50%) are weighted based on the LS cost of that item divided by the average cost of all LS items. A final weighting is applied in accordance with Opt 1: costs to correct the LS conditions to the total construction cost of the project.	

Option 5d	Score Card
Adjusts only certain LS category points where the cost of that element is low in comparison to average cost of all LS corrections. For 5d: Scores for LS conditions whose percentage cost of total construction is greater than the LS matrix points assigned are considered at full points. Scores for LS conditions whose percentage cost of total construction is less than the LS matrix points assigned are weighted based on dividing the differential between the category points and the cost percentage points, divided by the percent of the category costs to the total construction cost. A final weighting—only to full point items—based on costs to correct the LS conditions to the total construction cost of the project.	

Options Summary:

Option 2 returned severely reduced points based on a weighting factor which apportioned points based on the cost-to-correct to the total cost of corrections. This weighting resulted in an artificial ceiling for points, and had the fatal flaw of including an adjustment to all matrix scores whether "needed" or not.

Option 3 was a series of alternatives that addressed the fatal flaw in Option 2 by setting some thresholds for criticality and some variables for point assignments on those conditions that were over the threshold. In each of the sub-options, the LS items were weighted based on the total of LS work, then weighted a second time based on the total cost of the project. Option 3 produced some moderately acceptable adjustments to the imbalance—albeit seemingly overly aggressive. However, the inclusion of threshold variables (e.g., 10%) and point variables (e.g., 15%) which had no objective basis was problematic and suggested a need for constant evaluation and tinkering.

Option 4 was some out-of-the-box thinking about a completely different weighting scheme which rewarded the highest cost corrective item with full, unweighted points and then followed with weighting on remaining LS matrix items. The resulting adjustment were unpredictable and often felt completely disconnected with the list of LS items and both their raw and final scores.

Option 5 resulted from the graphical analysis of points shown in the example above. This option created a correlation between points and costs and used that relationship to establish a sliding scale of

'criticality'. Sub-options explored different point/cost relationships the most promising of which was the traditional weighting of cost-to-repair to total project cost used in the Option 1 baseline. A final '5d' scheme sought to remove the double reduction of points at both the individual LS category level and the total project level.

We also looked at the question of whether a 50pt project was possible under the different options. Although not an exhaustive analysis, we did easily create a set of project parameters that resulted in upwards of 50 points after weighting. See the attached worksheet which shows the several options which achieved this distinction. It's interesting to note that three of the Option 5 variants achieved an equal score to that which would have resulted from this project at the current Option 1 weighting.

If these 'mathematical' strategies for weighting the LS points of mixed scope projects seem too rigid, the additional option of simply providing the evaluative raters with additional discretion to adjust raw points, with justification, in any category could be considered; however, this strategy would be a move away from transparency and objective scoring.

Two final items associated with the LS category scoring:
Cost Data Dilemma on Completed Projects: Carried over—and not specifically addressed in this paper—has been an issue is in scoring of LS for recovery of funds projects where only a final contract price is given. This does not let the department accurately determine the weighted amount of the LS score in a mixed scope project. The department is left with estimating the percentage of LS to total project cost. A potential application edit would be to suggest or require a completed project submit the final design estimate as well as the contract, where applicable.

Anticipated Life-span as a Filter for LS Points: The current LS Matrix incorporates a building system's age as a factor in assigning points for. Concern has been expressed that this discriminates against those systems that have experienced premature failure. A more complete discussion of this issue is presented in a companion paper prepared by Don Hiley.

Recommendation

After analysis, the department recommends the adoption of the weighting factor established in Option 5d above. This weighting methodology best accomplishes the purpose established in the current CIP Instructions for this area, which reads, "For projects, such as districtwide projects, that combine critical and non-critical work, points for the critical portion of the project will be weighted proportionally."

Project Name	Raw Points	Option 1 LS/Const %	Option 2 all LS $	Option 3a Option 1 w equitable	Option 3b <% raw pt	Option 3c addl, remain LS $	Option 4a Base+addl, all LS $	Option 4b Base+addl, remain LS $	Option 4c Base+addl, all Const $	Option 5a Outlier to all LS $	Option 5b Outlier to all Const $	Option 5c Outlier to % of Avg	Option 5d Outlier to all Const $; partial wt adj	LS Construction Cost	Total Construction Cost	% LS Cost / Const Cost	# of Conditions
Houston Middle School Renovation/Addition	73	58.66	9.56	18.43	23.14	20.10	14.16	14.97	17.11	42.42	38.47	38.64	41.19	$8,341,303	$10,380,559	80%	12
Qugcuun Memorial K-12 School Renovation, C	104	48.31	20.78	20.30	23.83	22.17	15.35	17.40	31.42	32.21	26.82	31.15	36.31	$1,481,586	$3,189,486	46%	11
St. Paul K-12 School Roof Replacement and St	42	42.00	11.93	42.00	42.00	42.00	13.46	23.54	13.46	42.00	42.00	42.00	42.00	$1,560,562	$1,560,562	100%	3
Tatitlek K-12 School Renovation	81	40.53	8.78	16.43	18.84	20.31	8.80	9.81	14.80	33.87	24.32	38.37	30.63	$1,211,196	$2,420,782	50%	10
Craig Middle School Code and Security Improv	76	38.49	8.68	21.41	23.43	22.99	10.44	11.17	17.84	35.90	31.02	28.97	36.56	$1,128,027	$2,227,053	51%	12
Service High School Health and Safety Improv	61	37.77	13.83	25.92	27.25	28.32	16.74	18.95	24.73	32.97	31.15	29.90	32.40	$1,709,744	$2,761,130	62%	7
Akula Elitnauvik K-12 School Renovation, Kasig	78	37.29	10.02	11.51	14.94	13.82	8.26	9.43	16.09	18.82	15.43	15.89	18.18	$1,528,399	$3,196,993	48%	9
LYSD Central Office Renovation	63	35.29	6.37	18.67	20.53	20.27	4.81	6.88	6.57	31.62	24.50	25.91	32.74	$866,776	$1,547,182	56%	10
Northwood Elementary School Partial Roof Re	35	34.83	8.43	8.69	11.99	27.49	8.69	27.49	8.73	12.36	12.34	10.15	12.36	$1,286,801	$1,293,266	100%	3
Anna Tobeluk Memorial K-12 School Renovati	80	34.52	7.85	13.64	16.18	15.64	8.21	8.81	16.74	25.25	19.03	22.39	25.33	$5,740,672	$13,302,243	43%	13
Chenega Bay K-12 School Renovation	91	32.21	19.09	18.56	20.17	20.42	12.55	14.16	31.93	26.61	21.79	23.85	27.32	$738,545	$2,086,648	35%	10
Minto K-12 School Renovation/Addition	84	29.95	6.47	6.86	9.34	9.19	3.23	4.21	5.81	20.92	11.59	20.63	20.91	$1,517,214	$4,254,939	36%	11
Galena Interior Learning Academy Composite	37	28.06	6.38	11.46	13.24	14.26	6.65	9.09	7.62	28.06	28.06	16.49	28.06	$1,670,130	$2,201,875	76%	7
Nome Beltz Jr/Sr High School Generator Repla	27	27.00	14.75	16.00	16.80	27.00	16.00	27.00	16.00	27.00	27.00	17.00	27.00	$239,834	$239,834	100%	2
North Pole Middle School Exterior Upgrades	24	24.00	12.00	24.00	24.00	24.00	15.94	24.00	15.94	24.00	24.00	24.00	24.00	$774,455	$774,455	100%	2
District Office Roof Renovation and Energy Up	30	23.93	9.21	23.93	23.93	23.93	9.91	14.36	11.12	23.93	23.93	23.93	23.93	$359,910	$451,114	80%	3
Mears Middle School Roof Replacement	35	22.90	8.77	8.73	9.55	22.90	7.09	12.41	9.85	18.03	12.92	10.79	15.94	$3,061,155	$4,679,524	65%	3
William "Sonny" Nelson K-12 School Renovati	38	22.47	6.26	6.99	8.40	11.14	5.00	7.52	7.45	22.41	17.77	15.82	25.15	$758,556	$1,282,955	59%	6
David-Louis Memorial K-12 School HVAC Cont	23	20.71	13.60	20.71	20.71	20.71	14.95	20.71	16.44	20.71	20.71	16.39	20.71	$90,599	$100,599	90%	2
Akiuk Memorial K-12 School Renovation, Kasig	85	20.09	23.33	8.35	9.84	9.95	7.52	8.60	30.43	11.30	9.33	10.84	13.51	$753,880	$3,189,486	24%	8
Nenana K-12 School Boiler Replacement	19	19.00	4.45	4.61	6.25	19.00	4.61	19.00	4.61	9.58	9.58	5.22	9.58	$75,091	$75,091	100%	2
Stellar Secondary School Fire Alarm	23	18.86	19.15	16.52	16.77	18.86	16.52	18.86	20.12	18.86	18.86	16.64	18.86	$214,000	$261,000	82%	2
Bristol Bay Elementary School And Gym Roof I	18	18.00	4.00	13.06	13.75	18.00	4.46	12.58	4.46	14.72	14.72	7.37	14.72	$1,586,100	$1,586,100	100%	3
Haines High School Locker Room Renovation	24	17.25	4.68	13.05	13.59	14.87	4.24	7.37	5.36	16.88	15.82	13.47	16.39	$268,859	$373,975	72%	5
Klukwan K-12 School Roof Replacement	16	16.00	6.87	16.00	16.00	16.00	8.17	16.00	8.17	16.00	16.00	10.34	16.00	$156,852	$156,852	100%	2
Hollis K-12 School Replacement	86	15.21	8.53	7.14	7.84	7.90	3.75	3.95	16.10	12.62	4.47	14.43	17.85	$769,307	$4,349,863	18%	12
Ptarmigan Elementary School Roof Replaceme	15	14.83	15.00	14.83	14.83	14.83	14.83	14.83	15.00	14.83	14.83	14.83	14.83	$2,379,000	$2,405,675	99%	1
Aleknagik K-12 School Renovation	33	13.53	11.42	9.68	10.04	11.50	7.51	9.11	16.36	13.53	12.91	10.42	15.57	$518,170	$1,263,915	41%	4
Windows and Lighting Upgrades, 3 Sites	14	13.50	9.36	13.50	13.50	13.50	12.08	13.50	12.51	13.50	13.50	13.50	13.50	$1,896,402	$1,966,402	96%	2
Birchwood Elementary School Roof Replacem	14	12.97	7.35	7.77	8.25	10.19	7.77	10.19	8.36	12.97	12.97	8.50	12.97	$2,341,367	$2,527,174	93%	3
Kake High School Gym Floor and Bleacher Rep	14	12.55	4.13	3.78	4.93	12.55	3.78	12.55	4.19	5.99	5.68	3.97	5.92	$118,347	$131,997	90%	2
Nunaka Valley Elementary School Roof Replac	14	12.35	7.32	7.42	7.85	9.70	7.42	9.70	8.36	12.35	12.35	8.13	12.35	$1,839,539	$2,085,728	88%	3
David-Louis Memorial K-12 School Roof Repla	12	10.95	6.00	10.95	10.95	10.95	6.02	10.95	6.55	10.95	10.95	6.57	10.95	$857,146	$939,560	91%	2
Buckland K-12 School HVAC Renewal and Upg	10	10.00	6.20	10.00	10.00	10.00	7.60	10.00	7.60	10.00	10.00	8.20	10.00	$374,889	$374,889	100%	2
Hooper Bay K-12 School Emergency Lighting a	16	9.07	16.00	9.07	9.07	9.07	9.07	9.07	16.00	9.07	9.07	9.07	9.07	$102,897	$181,500	57%	1

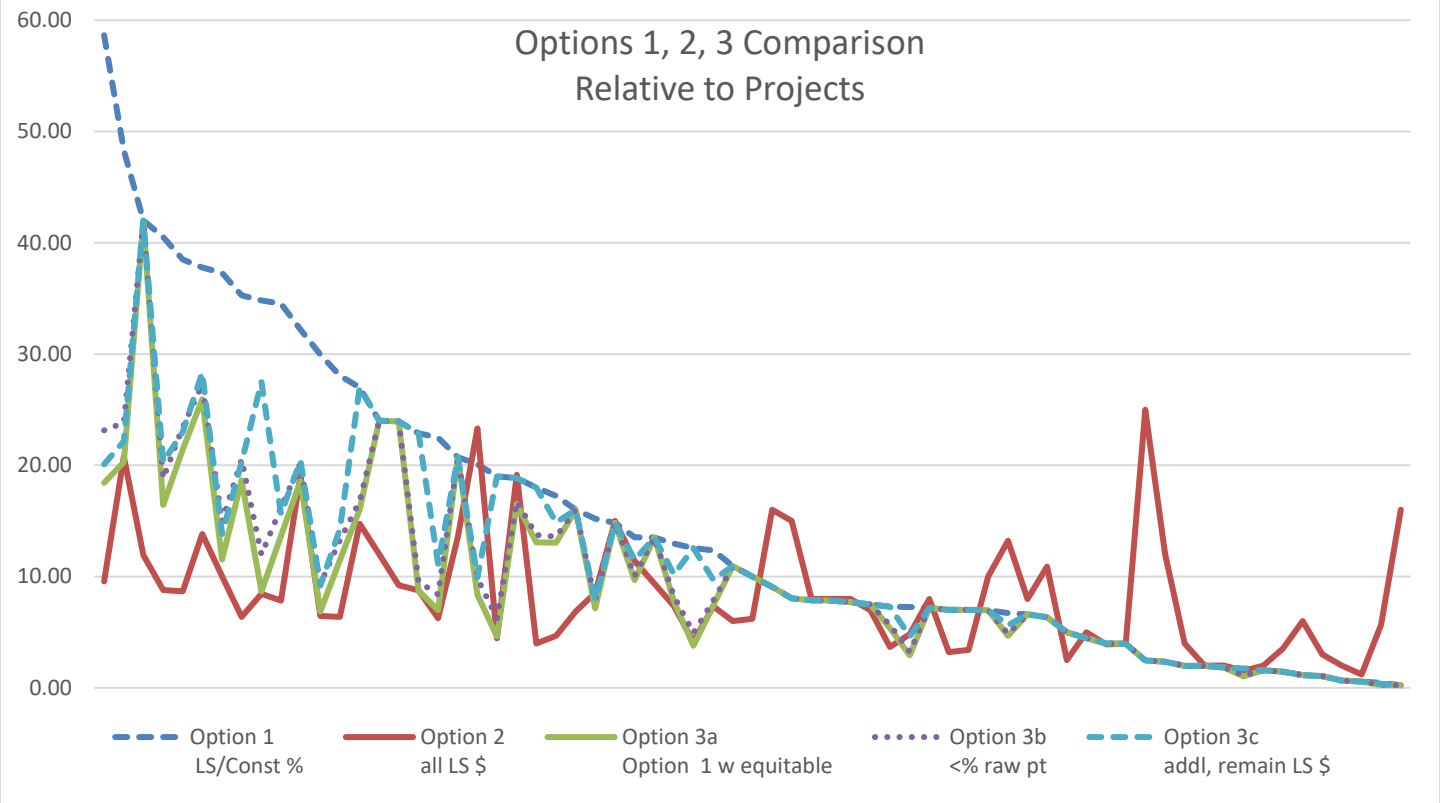
Project Name	Raw Points	Option 1 LS/Const %	Option 2 all LS $	Option 3a Option 1 w equitable	Option 3b <% raw pt	Option 3c addl, remain LS $	Option 4a Base+addl, all LS $	Option 4b Base+addl, remain LS $	Option 4c Base+addl, all Const $	Option 5a Outlier to all LS $	Option 5b Outlier to all Const $	Option 5c Outlier to % of Avg	Option 5d Outlier to all Const $; partial wt adj	LS Construction Cost	Total Construction Cost	% LS Cost / Const Cost	# of Conditions
Sheldon Point K-12 School Foundation Cooling	15	8.05	15.00	8.05	8.05	8.05	8.05	8.05	15.00	8.05	8.05	8.05	8.05	$1,564,770	$2,914,770	54%	1
Ben Eielson Jr/Sr High School Roof Replaceme	8	7.88	8.00	7.88	7.88	7.88	7.88	7.88	8.00	7.88	7.88	7.88	7.88	$2,722,426	$2,762,929	99%	1
Roof And Gutter Improvements, 3 Schools	8	7.84	8.00	7.84	7.84	7.84	7.84	7.84	8.00	7.84	7.84	7.84	7.84	$2,078,000	$2,121,600	98%	1
Lathrop High School Roof Replacement	8	7.70	8.00	7.70	7.70	7.70	7.70	7.70	8.00	7.70	7.70	7.70	7.70	$420,557	$437,080	96%	1
Sayéik: Gastineau Community School Partial R	13	7.51	6.98	7.51	7.51	7.51	6.52	7.51	10.75	7.51	7.51	7.51	7.51	$470,644	$814,752	58%	2
Keet Gooshi Heen Elementary Covered PE Stru	15	7.30	3.67	5.37	5.64	7.30	1.99	5.21	3.53	6.03	5.63	3.06	5.93	$120,750	$248,150	49%	3
Glennallen Voc-Ed Facility Renovation	23	7.27	4.83	2.92	3.24	4.63	2.49	3.07	6.60	7.27	5.66	4.50	12.44	$179,227	$567,142	32%	5
Peterson Elementary School Roof Replacemer	8	7.18	8.00	7.18	7.18	7.18	7.18	7.18	8.00	7.18	7.18	7.18	7.18	$917,964	$1,022,657	90%	1
East Elementary School Parking Lot Safety Upg	7	7.00	3.20	7.00	7.00	7.00	3.79	7.00	3.79	7.00	7.00	4.58	7.00	$183,008	$183,008	100%	2
Nenana K-12 School Flooring and Asbestos Ab	7	7.00	3.41	7.00	7.00	7.00	4.63	7.00	4.63	7.00	7.00	7.00	7.00	$355,285	$355,285	100%	2
Port Alexander K-12 School Domestic Water P	10	6.98	10.00	6.98	6.98	6.98	6.98	6.98	10.00	6.98	6.98	6.98	6.98	$17,466	$25,008	70%	1
Twin Hills K-12 School Renovation	40	6.71	13.21	4.69	4.86	5.62	3.06	4.13	15.54	6.71	3.74	5.16	9.81	$230,010	$1,371,391	17%	4
Woodriver Elementary School Roof Replacemo	8	6.61	8.00	6.61	6.61	6.61	6.61	6.61	8.00	6.61	6.61	6.61	6.61	$1,722,270	$2,085,531	83%	1
Hoonah School Playground Improvements	13	6.34	10.90	6.34	6.34	6.34	5.90	6.34	12.05	6.34	6.34	5.95	6.34	$96,794	$198,389	49%	2
Seward Middle School Exterior Repair	5	5.00	2.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	$385,000	$385,000	100%	2
Tuluksak K-12 School Generator Refurbishmer	5	4.46	5.00	4.46	4.46	4.46	4.46	4.46	5.00	4.46	4.46	4.46	4.46	$124,639	$139,639	89%	1
Kotlik and Pilot Station K-12 Schools Renewal	7	3.98	3.89	3.98	3.98	3.98	2.46	3.98	4.19	3.98	3.98	2.65	3.98	$449,618	$791,740	57%	2
Valdez High and Hermon Hutchens Elementar	4	3.96	4.00	3.96	3.96	3.96	3.96	3.96	4.00	3.96	3.96	3.96	3.96	$708,708	$715,458	99%	1
Big Lake Elementary School Water System Rep	25	2.46	25.00	2.46	2.46	2.46	2.46	2.46	25.00	2.46	1.60	2.46	16.24	$314,000	$3,189,486	10%	1
Tanana Middle School Exterior Upgrades	12	2.35	12.00	2.35	2.35	2.35	2.35	2.35	12.00	2.35	2.35	2.35	2.35	$254,025	$1,297,393	20%	1
Two Rivers Elementary School Flooring and Re	4	1.98	4.00	1.98	1.98	1.98	1.98	1.98	4.00	1.98	1.98	1.98	1.98	$67,256	$135,823	50%	1
Arctic Light Elementary School Lighting and Er	2	1.97	2.00	1.97	1.97	1.97	1.97	1.97	2.00	1.97	1.97	1.97	1.97	$225,000	$228,000	99%	1
Valdez High School Exterior Caulking Replacer	2	1.83	2.00	1.83	1.83	1.83	1.83	1.83	2.00	1.83	1.83	1.83	1.83	$156,938	$171,938	91%	1
Gruening Middle School Accessibility Upgrade	7	1.73	1.51	1.03	1.10	1.73	0.44	0.99	1.19	1.73	1.58	1.11	3.35	$78,570	$317,198	25%	3
Exterior Upgrades - Main School Facilities	2	1.58	2.00	1.58	1.58	1.58	1.58	1.58	2.00	1.58	1.58	1.58	1.58	$94,502	$119,502	79%	1
Kenai Middle School Security Remodel	7	1.45	3.54	1.45	1.45	1.45	1.12	1.45	4.29	1.45	1.45	1.45	1.45	$109,708	$528,821	21%	2
East Elementary School Special Electrical and S	6	1.15	6.00	1.15	1.15	1.15	1.15	1.15	6.00	1.15	1.15	1.15	1.15	$108,294	$566,207	19%	1
Mechanical System Improvements, 3 Schools	3	1.06	3.00	1.06	1.06	1.06	1.06	1.06	3.00	1.06	1.06	1.06	1.06	$140,937	$399,727	35%	1
Sheldon Point K-12 School Exterior Repairs, Nu	2	0.65	2.00	0.65	0.65	0.65	0.65	0.65	2.00	0.65	0.65	0.65	0.65	$313,658	$963,923	33%	1
Anvil City Charter School Restroom Renovatio	4	0.57	1.20	0.57	0.57	0.57	0.19	0.57	1.04	0.57	0.53	0.23	2.87	$35,506	$248,453	14%	2
Newtok K-12 School Relocation/Replacement,	11	0.44	5.68	0.25	0.27	0.35	0.25	0.35	6.01	0.44	0.26	0.27	0.69	$611,470	$15,347,202	4%	3
Scammon Bay K-12 School Emergency Lighting	16	0.23	16.00	0.23	0.23	0.23	0.23	0.23	16.00	0.23	0.02	0.23	1.60	$46,489	$3,189,486	1%	1

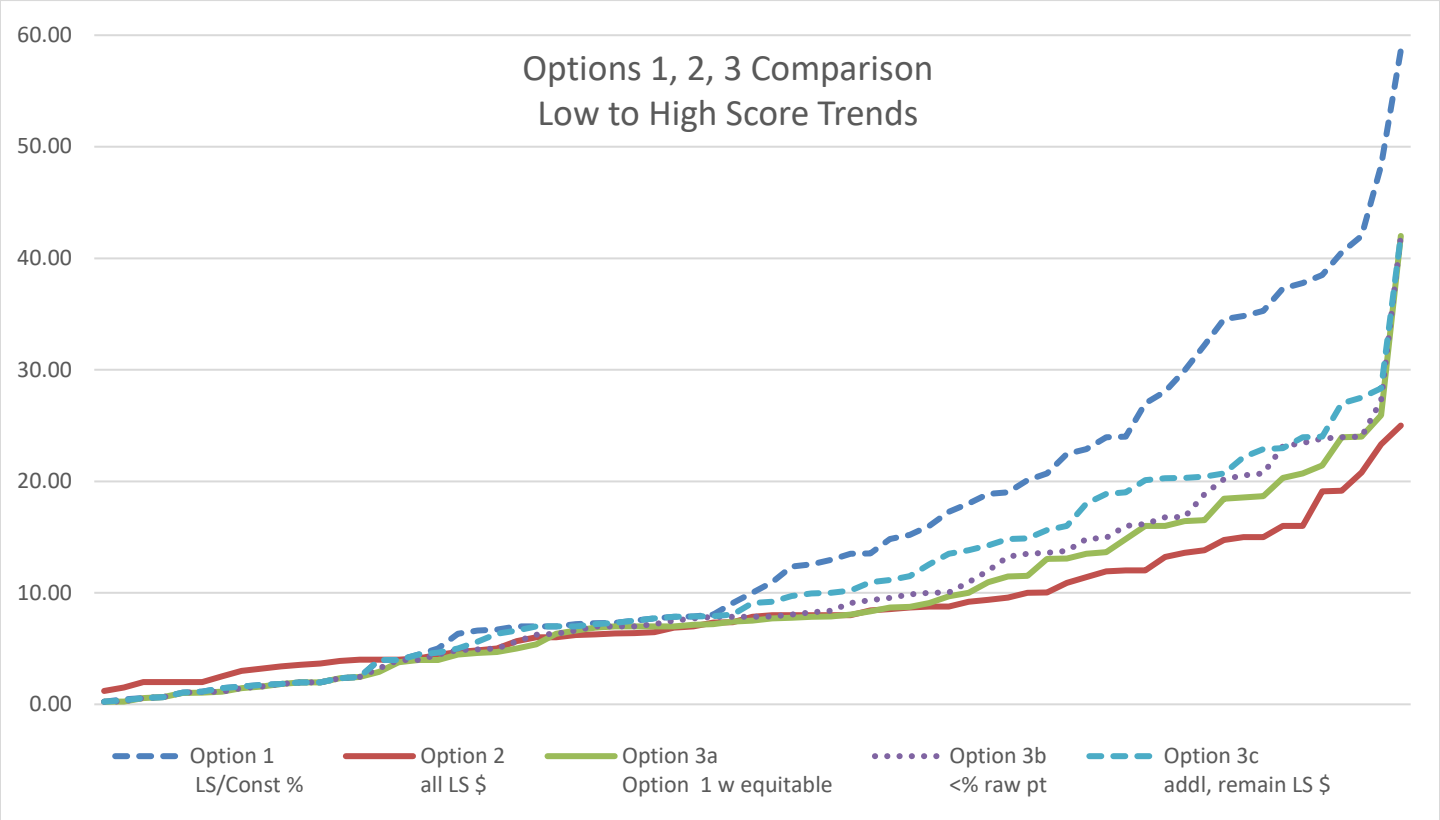
Project Name	Raw Points	Option 1 LS/Const %	Option 2 all LS $	Option 3a Option 1 w equitable	Option 3b <% raw pt	Option 3c addl, remain LS $	Option 4a Base+addl, all LS $	Option 4b Base+addl, remain LS $	Option 4c Base+addl, all Const $	Option 5a Outlier to all LS $	Option 5b Outlier to all Const $	Option 5c Outlier to % of Avg	Option 5d Outlier to all Const $; partial wt adj	LS Construction Cost	Total Construction Cost	% LS Cost / Const Cost	# of Conditions
Minimum	2	0.23	1.20	0.23	0.23	0.23	0.19	0.23	1.04	0.23	0.02	0.23	0.65	$17,466	$25,008	0	1
1st Quartile	8	4.73	4.29	3.97	4.22	4.55	2.77	3.97	4.81	4.73	4.22	3.96	5.46	$156,895	$289,099	0	1
Average	27	15.09	8.49	9.39	10.02	11.16	6.56	8.91	10.45	12.82	11.56	11.02	13.39	$949,564	$1,845,718	1	4
Median	15	10.00	7.85	7.51	7.85	9.07	6.52	7.70	8.00	9.07	8.05	7.84	10.00	$449,618	$963,923	1	2
3rd Quartile	35	22.68	11.16	13.28	14.29	17.00	8.24	12.48	15.74	18.84	15.91	15.86	18.52	$1,499,400	$2,316,364	1	4
Maximum	104	58.66	25.00	42.00	42.00	42.00	16.74	27.49	31.93	42.42	42.00	42.00	42.00	$8,341,303	$15,347,202	1	13
Top 20 Average		32.95	15.78	19.27	20.41	22.31	13.45	17.72	19.46	27.12	24.13	23.95	27.28				
Projects with No Point Changes			0	37	37	44	22	38	1	45	37	29	37				
Projects with Decreased Points from Opt 1			39	30	30	23	45	29	34	21	29	38	19				
Projects with Increased Points from Opt 1			28	0	0	0	0	0	32	1	1	0	11				
Total Projects with Point Changes			67	30	30	23	45	29	66	22	30	38	30				

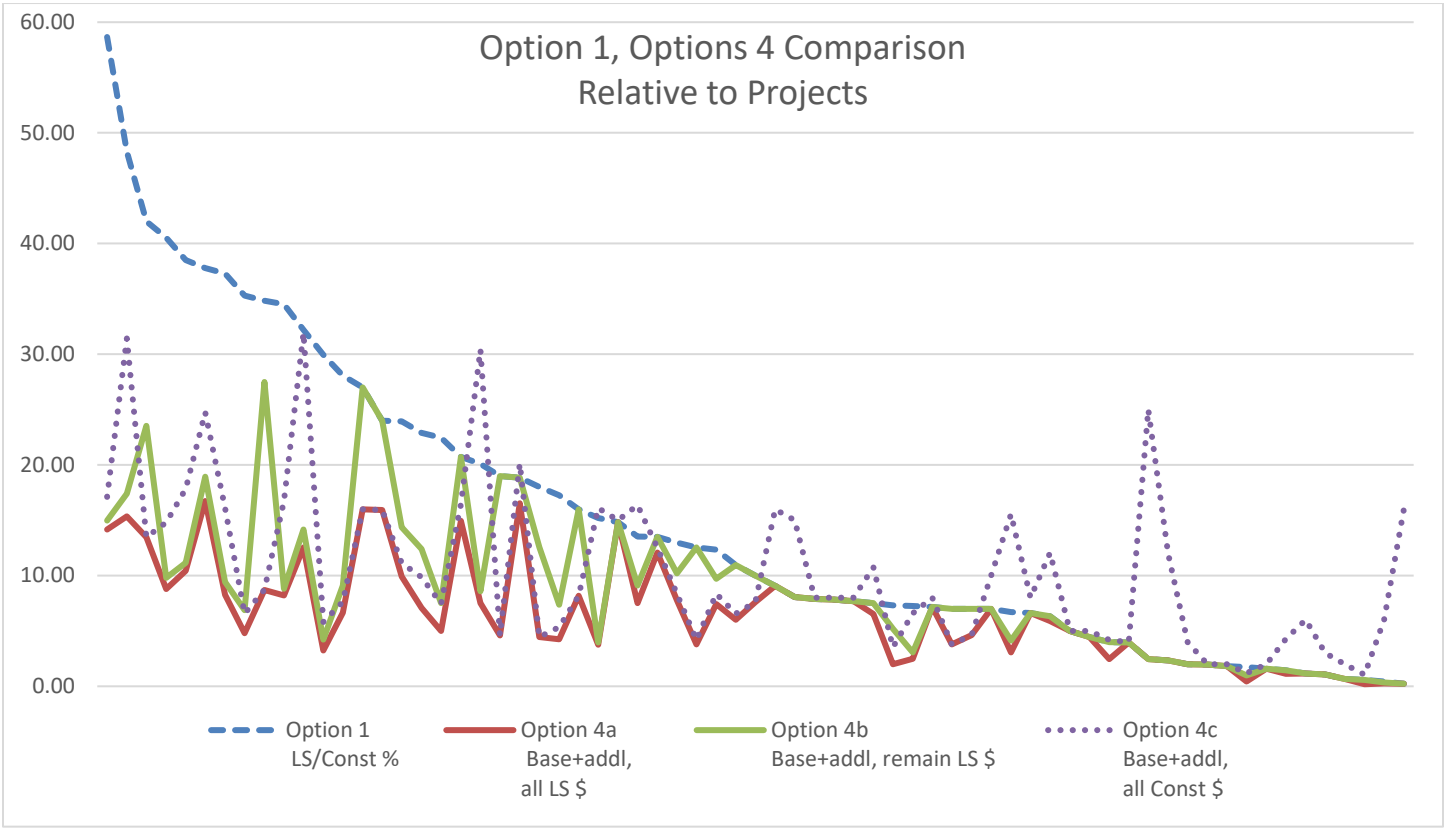
Note: 24 projects meeting criteria of "1 condition, 100% LS Cost/Const Cost" were removed from project list, as no Option changed the project score.

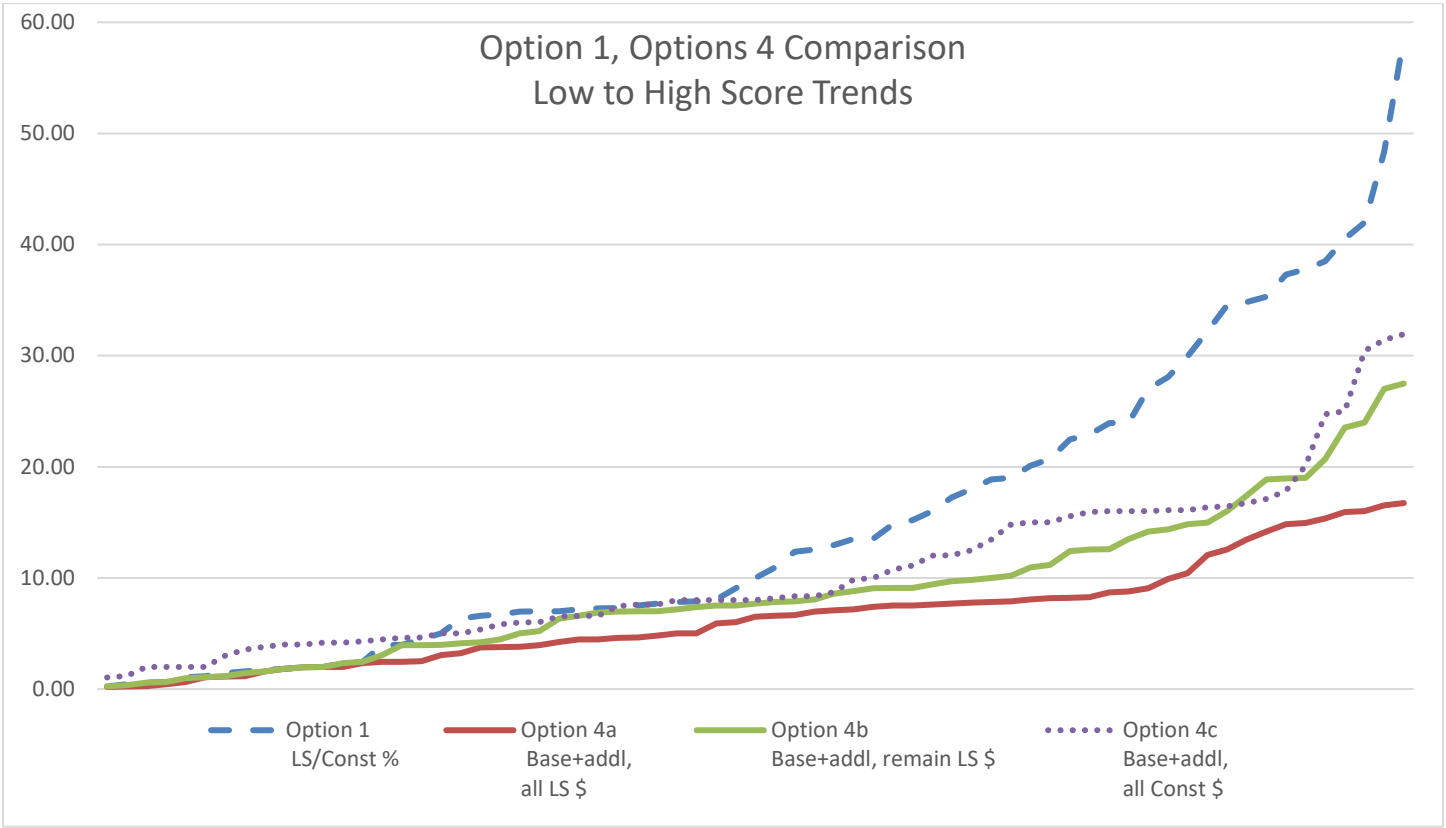
Attachment – Charts

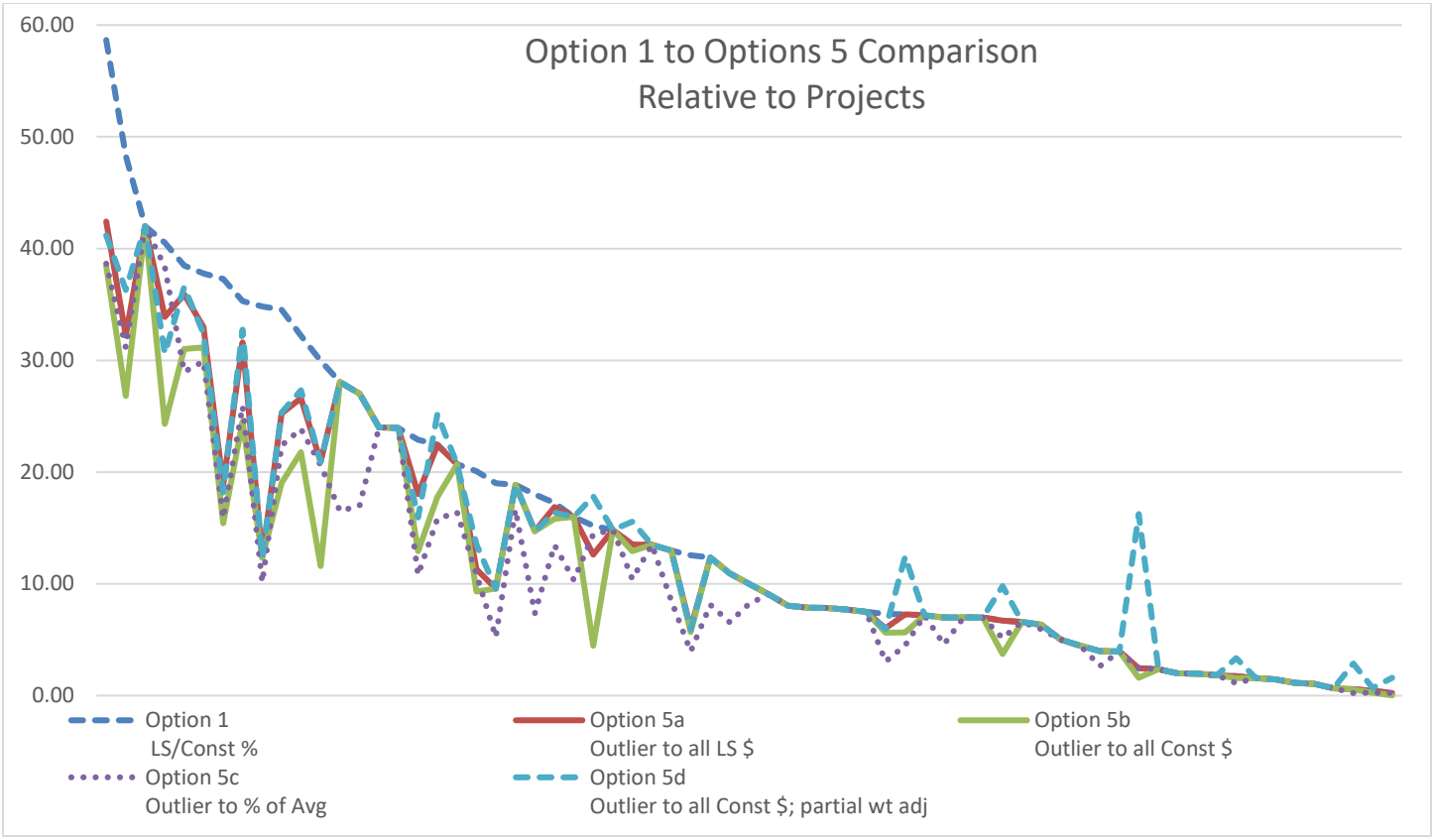
Below charts compare the current Option 1 to the option variations considered by the department.

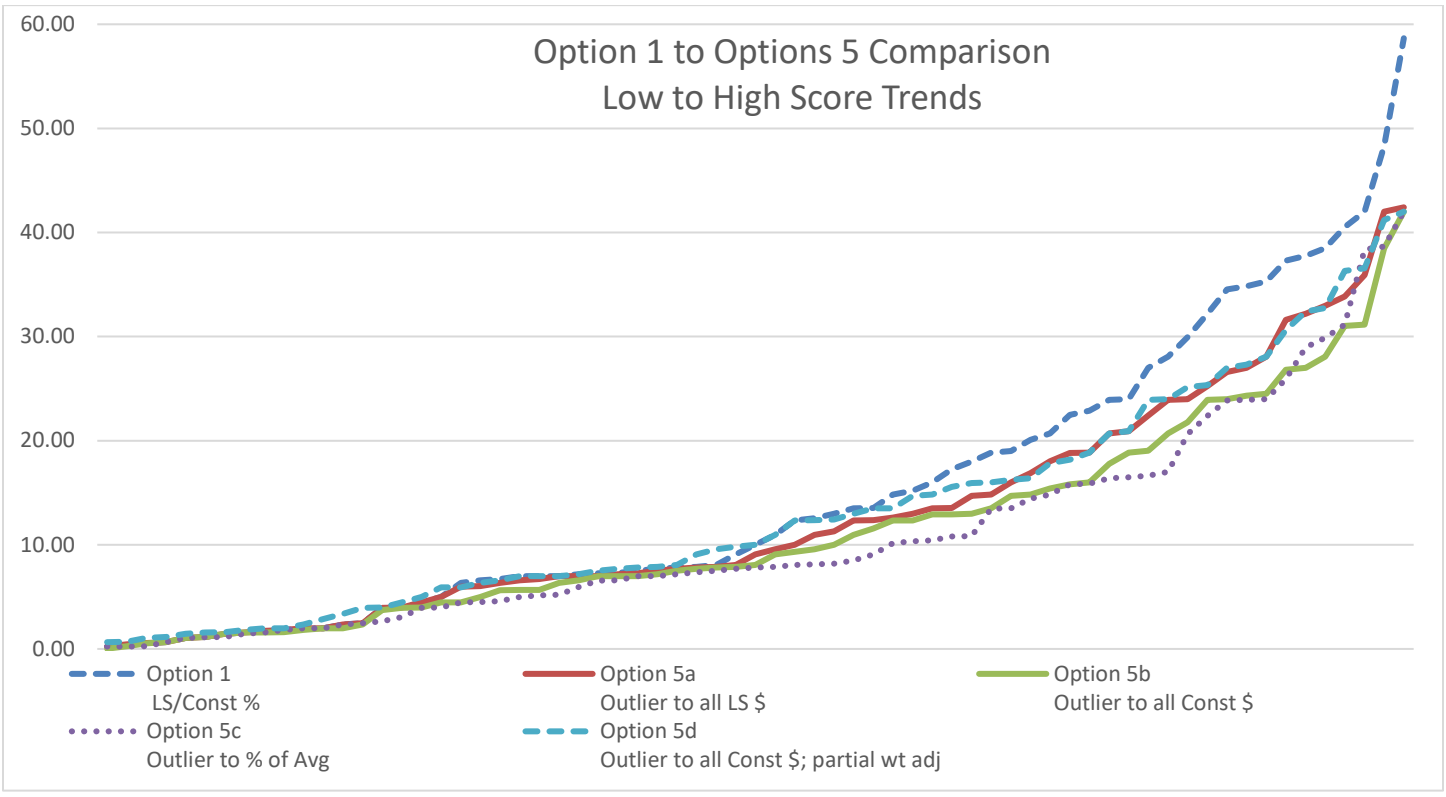


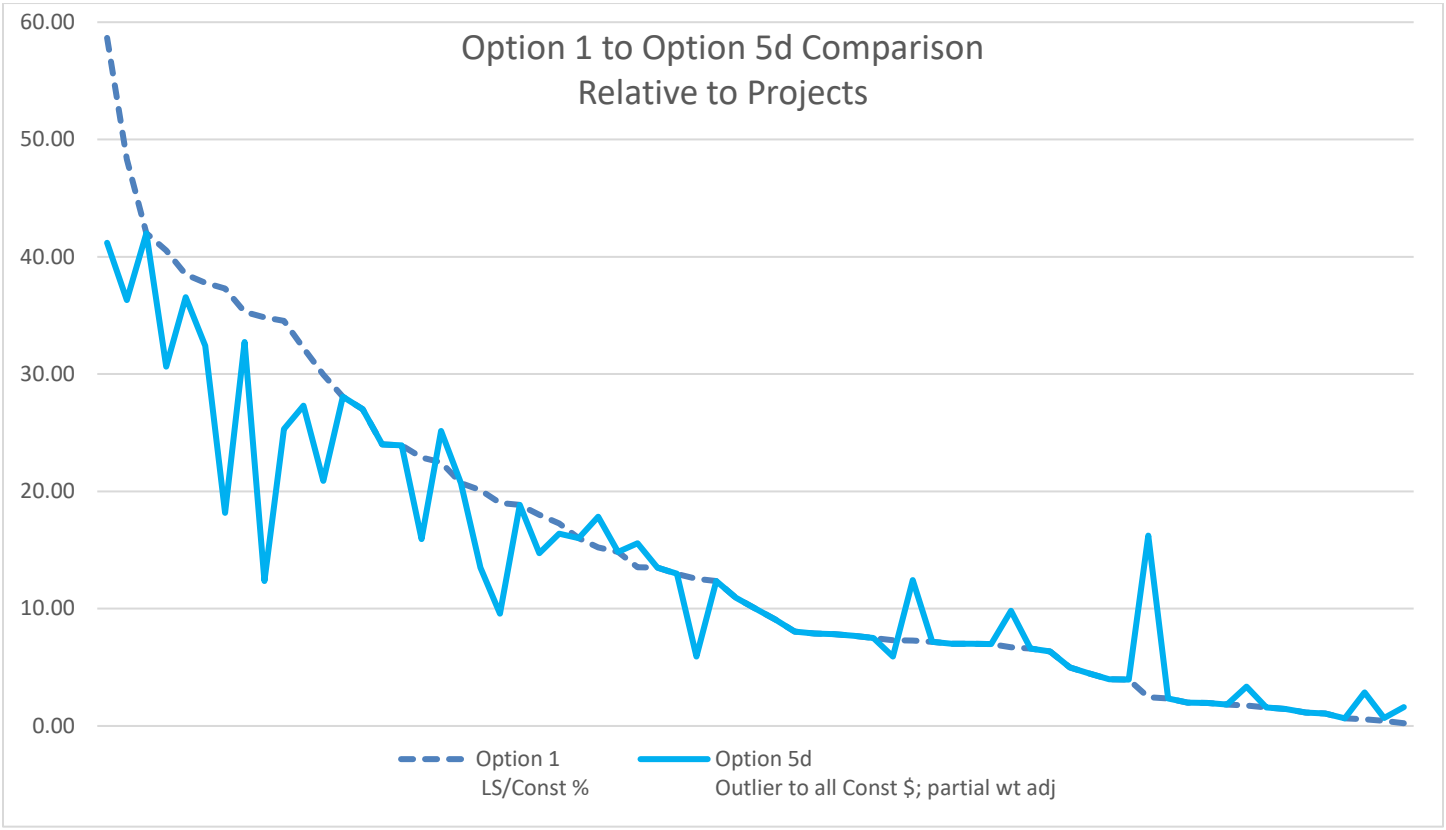


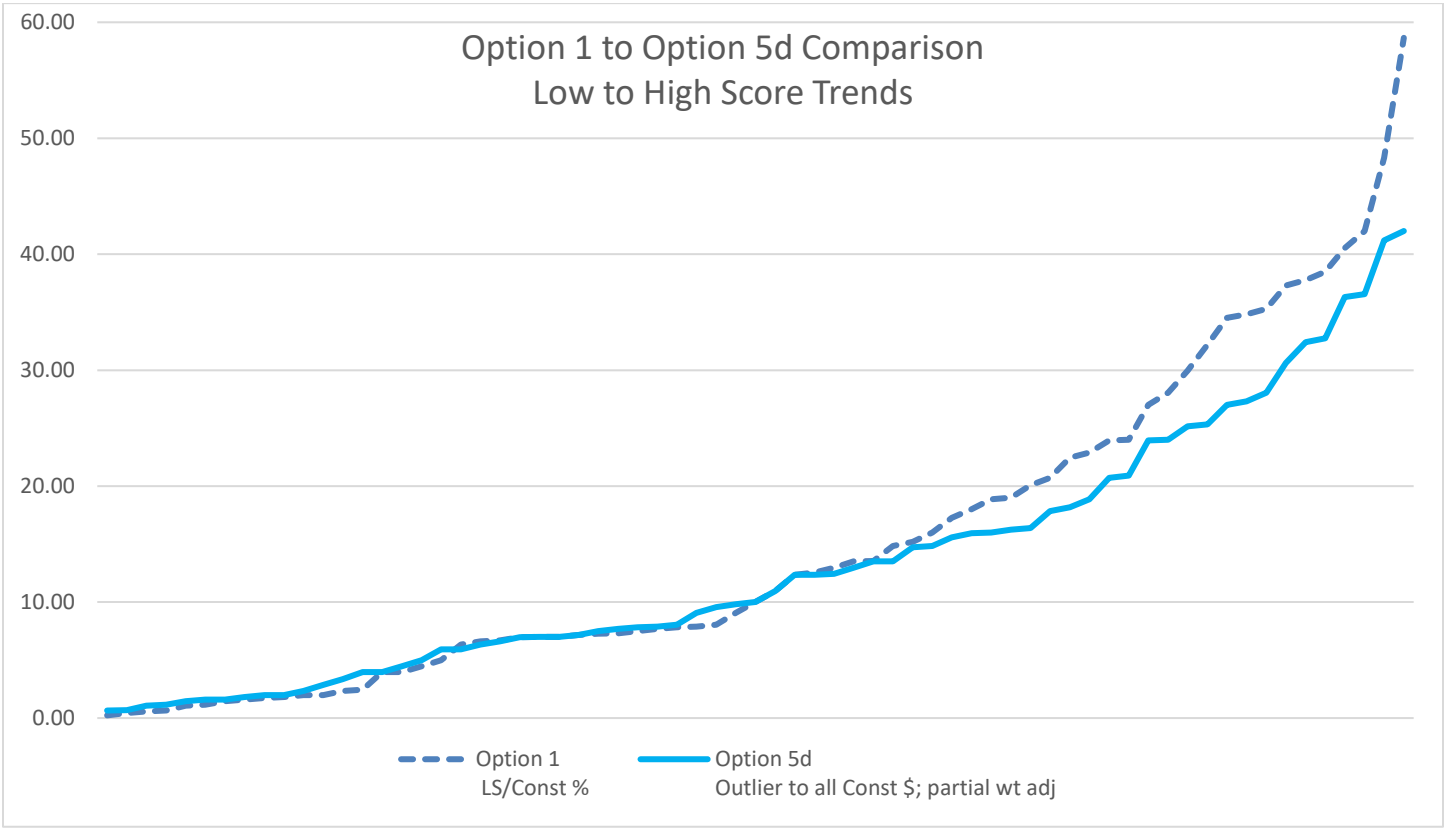

Option 1, Options 4 Comparison
Relative to Projects
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Option 1
LS/Const %
Option 4a
Base+addl,
all LS $
Option 4b
Base+addl, remain LS $
Option 4c
Base+addl,
all Const $


Option 1, Options 4 Comparison
Low to High Score Trends
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Option 1
LS/Const %
Option 4a
Base+addl,
all LS $
Option 4b
Base+addl, remain LS $
Option 4c
Base+addl,
all Const $


Option 1 to Options 5 Comparison
Relative to Projects
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Option 1
LS/Const %
Option 5a
Outlier to all LS $
Option 5b
Outlier to all Const $
Option 5c
Outlier to % of Avg
Option 5d
Outlier to all Const $; partial wt adj


Option 1 to Options 5 Comparison
Low to High Score Trends
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Option 1
LS/Const %
Option 5a
Outlier to all LS $
Option 5b
Outlier to all Const $
Option 5c
Outlier to % of Avg
Option 5d
Outlier to all Const $; partial wt adj


Option 1 to Option 5d Comparison
Relative to Projects
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Option 1
LS/Const %
Option 5d
Outlier to all Const $; partial wt adj


Option 1 to Option 5d Comparison
Low to High Score Trends
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Option 1
LS/Const %
Option 5d
Outlier to all Const $; partial wt adj

Attachment – Example Worksheets

Below, sample worksheets compare different methods of weighted scoring for LS matrix conditions.

Code Deficiency/Protection of Structure/Life Safety

District: Anchorage
Project: Service High School Health and Safety Improvements
CIP #: 21-016

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Env/Roof_Windows, age >30yrs	12.00	7.43	0.43	0.43	1.80	2.37	0.43	0.69	0.27	5.16	2.75	3.03	2.75	$61,686	From estimate
Env/Roof_Doors, age >20yr	3.00	1.86	0.16	0.16	0.45	0.90	0.16	0.26	0.10	3.00	3.00	1.15	1.86	$93,850	specified doors
Arch_ADA - 2 issues	2.00	1.24	0.01	0.01	0.30	0.08	0.01	0.02	0.01	1.08	0.56	0.10	0.56	$12,000	$8000 FA devices; $4000 doors
Mech_Mechanical Systems, WO >5/yr2	21.00	13.00	7.80	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	13.00	$635,161	
Electric_Electrical, age >40yr	15.00	9.29	4.40	15.00	15.00	15.00	4.40	7.01	2.73	15.00	15.00	15.00	9.29	$501,851	
Fire_Sprinkler Coverage Gaps	5.00	3.10	0.76	5.00	5.00	5.00	0.76	1.21	0.47	5.00	5.00	5.00	3.10	$260,818	
HazMat_HazMat (all) Low Exposures	3.00	1.86	0.25	0.25	0.45	1.39	0.25	0.40	0.16	3.00	3.00	3.00	1.86	$144,378	
Total Raw Points	61	37.77	13.83	41.86	44.00	45.74	27.03	30.60	24.73	53.24	50.30	48.28	32.40	$1,709,744	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$2,761,130	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	61.92%	100.00%	100.00%	61.92%	61.92%	61.92%	61.92%	61.92%	100.00%	61.92%	61.92%	61.92%	100.00%		
Total Weighted Points	37.77	37.77	13.83	25.92	27.25	28.32	16.74	18.95	24.73	32.97	31.15	29.90	32.40		

Code Deficiency/Protection of Structure/Life Safety

District: Lower Kuskokwim
Project: Qugvuun Memorial School Renovation, Oscarville
CIP #: 21-076

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Site_Walking Surfaces	4.00	1.86	0.05	0.05	0.60	0.18	0.05	0.13	0.03	2.04	0.75	0.60	0.75	$20,042	25% of line 11.61
Structural_Foundation/Floor - PE	15.00	6.97	0.17	0.17	2.25	0.59	0.17	0.42	0.08	1.25	0.56	1.91	0.56	$17,158	
Env/Roof_Siding Material, age >25yr	12.00	5.57	0.65	0.65	1.80	2.19	0.65	1.59	0.30	9.85	3.18	12.00	3.18	$80,126	
Arch_ADA - 4 issues	4.00	1.86	0.33	0.33	0.60	1.11	0.33	0.81	0.15	4.00	4.00	4.00	1.86	$122,243	
Arch_Floor Finishes >15yr	4.00	1.86	0.17	0.17	0.60	0.57	0.17	0.41	0.08	4.00	3.87	1.86	3.87	$62,742	
Mech_Narrative, System age >30yr	4.00	1.86	0.26	0.26	0.60	0.87	0.26	0.63	0.12	4.00	4.00	4.00	1.86	$95,662	
Mech_Codes: Plumbing + PE	15.00	6.97	0.01	0.01	2.25	0.03	0.01	0.02	0.00	0.06	0.03	0.09	0.03	$837	
Electric_Narrative, Lighting age >25yr	2.00	0.93	0.05	0.05	0.30	0.17	0.05	0.13	0.02	2.00	2.00	0.57	0.93	$38,360	
Fire_Narrative, Fire Alarm age >15yr	2.00	0.93	0.00	0.00	0.30	0.01	0.00	0.01	0.00	0.14	0.06	0.03	0.06	$1,932	
Fire_Sprinkler Non-op	30.00	13.94	17.73	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	13.94	$875,506	
Mech_Codes: Ventilation	12.00	5.57	1.35	12.00	12.00	12.00	1.35	3.31	0.63	12.00	9.29	12.00	9.29	$166,979	
Total Raw Points	104	48.31	20.78	43.70	51.30	47.73	33.05	37.46	31.42	69.34	57.73	67.06	36.31	$1,481,586	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$3,189,486	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	46.45%	100.00%	100.00%	46.45%	46.45%	46.45%	46.45%	46.45%	100.00%	46.45%	46.45%	46.45%	100.00%		
Total Weighted Points	48.31	48.31	20.78	20.30	23.83	22.17	15.35	17.40	31.42	32.21	26.82	31.15	36.31		

Code Deficiency/Protection of Structure/Life Safety

District: Kenai Peninsula
Project: Kenai Middle School Security Remodel
CIP #: 21-053

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Arch_Wall Finishes age >25yr	3.00	0.62	1.38	3.00	3.00	3.00	1.38	3.00	0.29	3.00	3.00	3.00	0.62	$50,560	25% of line 11.61
Arch_Dloor Finishes >15yr	4.00	0.83	2.16	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	0.83	$59,148	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	$0	
Total Raw Points	7	1.45	3.54	7.00	7.00	7.00	5.38	7.00	4.29	7.00	7.00	7.00	1.45	$109,708	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$528,821	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	20.75%	100.00%	100.00%	20.75%	20.75%	20.75%	20.75%	20.75%	100.00%	20.75%	20.75%	20.75%	100.00%		
Total Weighted Points	1.45	1.45	3.54	1.45	1.45	1.45	1.12	1.45	4.29	1.45	1.45	1.45	1.45		

Code Deficiency/Protection of Structure/Life Safety

District: Copper River
Project: Glennallen Voc-Ed Facility Renovation
CIP #: 21-027

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Env/Roof_Trim/Flashings, age >25yr	6.00	1.90	0.50	0.50	0.90	2.68	0.50	0.99	0.16	6.00	4.75	2.52	4.75	$15,040	Nvision survey pg 13. B-1B - F
Env/Roof_ASHRAE 90.1 Windows 4	8.00	2.53	0.73	0.73	1.20	3.91	0.73	1.44	0.23	8.00	4.54	3.67	4.54	$16,428	Nvision survey pg 13. B-1A
Arch_ADA - 1 issue	1.00	0.32	0.01	0.01	0.15	0.06	0.01	0.02	0.00	1.00	0.62	0.06	0.62	$2,163	Nvision survey pg 17. A-1
Electric_Narrative, Lighting age >25yr	2.00	0.63	0.65	2.00	2.00	2.00	0.65	1.26	0.20	2.00	2.00	2.00	0.63	$57,814	Nvision survey pg 15; D-3AL-FL
Fire_Non-addressable FA	6.00	1.90	2.94	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	1.90	$87,782	Nvision survey pg. 16; D-3A F
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Total Raw Points	23	7.27	4.83	9.25	10.25	14.66	7.89	9.71	6.60	23.00	17.91	14.24	12.44	$179,227	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$567,142	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	31.60%	100.00%	100.00%	31.60%	31.60%	31.60%	31.60%	31.60%	100.00%	31.60%	31.60%	31.60%	100.00%		
Total Weighted Points	7.27	7.27	4.83	2.92	3.24	4.63	2.49	3.07	6.60	7.27	5.66	4.50	12.44		

Code Deficiency/Protection of Structure/Life Safety

District: Kake City
Project: Kake High School Gym Floor and Bleacher Replacement
CIP #: 21-052

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Arch_Dloor Finishes >15yr	4.00	3.59	3.92	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.59	$115,847	Cost Model line 11.068
Arch_Building Egress	10.00	8.97	0.21	0.21	1.50	10.00	0.21	10.00	0.19	2.68	2.34	0.42	2.34	$2,500	Est. to install handrails at bleacher aisle
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Total Raw Points	14	12.55	4.13	4.21	5.50	14.00	4.21	14.00	4.19	6.68	6.34	4.42	5.92	$118,347	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$131,997	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	89.66%	100.00%	100.00%	89.66%	89.66%	89.66%	89.66%	89.66%	100.00%	89.66%	89.66%	89.66%	100.00%		
Total Weighted Points	12.55	12.55	4.13	3.78	4.93	12.55	3.78	12.55	4.19	5.99	5.68	3.97	5.92		

Code Deficiency/Protection of Structure/Life Safety

District: Nenana City
Project: Nenana K-12 School Boiler Replacement
CIP #: 21-093

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Mech_Narrative, System age >30yr	4.00	4.00	3.84	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	$72,037	Boilers are under 30yr; cost model line 11.116
Mech_HVAC age >40yr	15.00	15.00	0.61	0.61	2.25	15.00	0.61	15.00	0.61	5.58	5.58	1.22	5.58	$3,054	HW generator and day tank are age>40yr
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Total Raw Points	19	19.00	4.45	4.61	6.25	19.00	4.61	19.00	4.61	9.58	9.58	5.22	9.58	$75,091	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$75,091	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		
Total Weighted Points	19.00	19.00	4.45	4.61	6.25	19.00	4.61	19.00	4.61	9.58	9.58	5.22	9.58		

Code Deficiency/Protection of Structure/Life Safety

District: Anchorage
Project: Gruening Middle School Accessibilty Upgrades
CIP #: 21-002

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Structural_Seismic - no restrictions	3.00	0.74	0.16	0.16	0.45	3.00	0.16	0.62	0.04	3.00	2.36	0.48	2.36	$4,190	ES Tier 1 report; 0611 Structural Upgrades
Arch_ADA - 1 issue	1.00	0.25	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.25	$58,446	Project analysis 2.06; 011 Site Demo+131 Earthwork+132 Site Improve
HazMat_HazMat (all) Low Exposures	3.00	0.74	0.61	3.00	3.00	3.00	0.61	2.38	0.15	3.00	3.00	3.00	0.74	$15,934	Project analysis 2.3x; 016 Hazardous Materials
										0.00	0.00	0.00	0.00		
Total Raw Points	7	1.73	1.51	4.16	4.45	7.00	1.77	4.00	1.19	7.00	6.36	4.48	3.35	$78,570	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$317,198	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	24.77%	100.00%	100.00%	24.77%	24.77%	24.77%	24.77%	24.77%	100.00%	24.77%	24.77%	24.77%	100.00%		
Total Weighted Points	1.73	1.73	1.51	1.03	1.10	1.73	0.44	0.99	1.19	1.73	1.58	1.11	3.35		

Code Deficiency/Protection of Structure/Life Safety

District: Anchorage
Project: Northwood Elementary School Partial Roof Replacement
CIP #: 21-004

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Structural_Seismic - no restrictions	3.00	2.99	0.02	0.02	0.45	0.62	0.02	0.62	0.02	1.05	1.04	0.07	1.04	$10,000	Tier 1 report; Est.(could not find specific cost data)
Structural_Roof Structure - PE	24.00	23.88	0.71	0.71	3.60	19.01	0.71	19.01	0.71	3.37	3.36	2.13	3.36	$38,070	Tremco report; 05 wedge access ramp+06 snow wedge
Env/Roof_Roof Leaks - avg WO<3/yr 2	8.00	7.96	7.70	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	7.96	$1,238,731	Tremco report; Div 2-16 less Alt 1 and snow wedge
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Total Raw Points	35	34.83	8.43	8.73	12.05	27.63	8.73	27.63	8.73	12.42	12.40	10.20	12.36	$1,286,801	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$1,293,266	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	99.50%	100.00%	100.00%	99.50%	99.50%	99.50%	99.50%	99.50%	100.00%	99.50%	99.50%	99.50%	100.00%		
Total Weighted Points	34.83	34.83	8.43	8.69	11.99	27.49	8.69	27.49	8.73	12.36	12.34	10.15	12.36		

Code Deficiency/Protection of Structure/Life Safety

District: Southeast Island
Project: Hollis K-12 School Replacement
CIP #: 21-105

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Site_Wastewater Failure	24.00	4.24	1.87	1.87	3.60	4.25	1.87	2.22	0.33	11.55	1.46	24.00	1.46	$60,000	JYL survey page 5. JYL Site budget #5
Env/Roof_Siding Material, age >25yr	12.00	2.12	1.54	12.00	12.00	12.00	1.54	1.83	0.27	12.00	2.81	12.00	2.81	$99,000	JYL survey page 6. JYL budget #s Building 4, 5, 6 and 7
Arch_ADA - 3 issues	3.00	0.53	0.27	0.27	0.45	0.62	0.27	0.32	0.05	3.00	3.00	3.00	0.53	$70,000	RR, Doors and casework. JYL budget #s Site-1, Building - 1, 12 and 14
Structural_Foundation/Floor - PE	15.00	2.65	2.34	15.00	15.00	15.00	15.00	15.00	15.00	15.00	3.38	15.00	3.38	$120,000	JYL survey page 7. JYL budget building 2
Mech_Narrative, System age >30yr	4.00	0.71	0.58	4.00	4.00	4.00	0.58	0.68	0.10	4.00	4.00	4.00	0.71	$111,000	JYL page 8. JYL budget 11, 13 and 15
Electric_Codes, Power	10.00	1.77	0.73	0.73	1.50	1.65	0.73	0.86	0.13	10.00	1.48	10.00	1.48	$56,000	JYL page 8. JYL budget 16, 17, 18
Env/Roof_Roof, age Warranty +10yr 3	6.00	1.06	0.70	6.00	6.00	6.00	0.70	0.83	0.12	6.00	3.16	6.00	3.16	$90,000	JYL pg 6. JYL budget building 3
Arch_Wall Finishes age >25yr	3.00	0.53	0.20	0.20	0.45	0.46	0.20	0.24	0.04	3.00	1.99	3.00	1.99	$52,000	JYL page 6. JYL budget
Arch_Ceiling Finishes age >25yr	3.00	0.53	0.02	0.02	0.45	0.04	0.02	0.02	0.00	0.83	0.12	0.23	0.12	$5,000	JYL pg 6. JYL budget building 8
Electric_Narrative, Lighting age >25yr	2.00	0.35	0.15	0.15	0.30	0.34	0.15	0.18	0.03	2.00	2.00	2.00	0.35	$57,094	From Cost model 11.144*4084
Fire_Narrative, Fire Alarm age >15yr	2.00	0.35	0.03	0.03	0.30	0.06	0.03	0.03	0.00	2.00	0.29	0.34	0.29	$10,863	From cost model 11.161*4084
Fire_Narrative, Sprinkler >30yr	2.00	0.35	0.10	0.10	0.30	0.23	0.10	0.12	0.02	2.00	1.58	2.00	1.58	$38,349	From cost model line 11.125*4084
Total Raw Points	86	15.21	8.53	40.37	44.35	44.66	21.19	22.34	16.10	71.38	25.26	81.57	17.85	$769,307	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$4,349,863	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	17.69%	100.00%	100.00%	17.69%	17.69%	17.69%	17.69%	17.69%	100.00%	17.69%	17.69%	17.69%	100.00%		
Total Weighted Points	15.21	15.21	8.53	7.14	7.84	7.90	3.75	3.95	16.10	12.62	4.47	14.43	17.85		

Supplemental Evaluative Rating Form
Code Deficiency/Protection of Structure/Life Safety

District: X
Project: Sample High Code Project
CIP #: +50pt

Code Deficiency / Protection of Structure / Life Safety Conditions	Raw Pts	OPT1; LS/Const %	OPT2 all LS $	OPT3a; Opt 1 w equitable	OPT3b; <% raw pt	OPT3c; addl, remain LS $	OPT4a; Base+addl, all LS $	OPT4b; Base+addl, remain LS $	OPT4c; Base+addl, all Const $	OPT5a Outlier to all LS $	OPT5b; Outlier to all Const $	OPT5c; Outlier to % of Avg	OPT5d; Outlier to all Const $; partial wt adj	Cost Estimate	Notes
SAMPLE FOR COMPARISON PURPOSES ONLY				10%	15%							50%			
Site_Wastewater Failure	24.00	18.58	6.70	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	18.58	$2,160,000	
Env/Roof_Siding Material, age >25yr	12.00	9.29	1.67	12.00	12.00	12.00	1.67	2.32	1.30	12.00	12.00	12.00	9.29	$1,080,000	
Arch_ADA - 3 issues	3.00	2.32	0.10	0.10	0.45	0.39	0.10	0.15	0.08	3.00	3.00	1.26	2.32	$270,000	
Structural_Foundation/Floor - PE	15.00	11.61	2.62	15.00	15.00	15.00	2.62	3.63	2.03	15.00	15.00	15.00	11.61	$1,350,000	
Mech_Narrative, System age >30yr	4.00	3.10	0.19	0.19	0.60	0.70	0.19	0.26	0.14	4.00	4.00	4.00	3.10	$360,000	
Electric_Codes, Power	10.00	7.74	1.16	10.00	10.00	10.00	1.16	1.61	0.90	10.00	10.00	10.00	7.74	$900,000	
Env/Roof_Roof, age Warranty +10yr 3	6.00	4.64	0.42	0.42	0.90	1.57	0.42	0.58	0.32	6.00	6.00	6.00	4.64	$540,000	
Arch_Wall Finishes age >25yr	3.00	2.32	0.10	0.10	0.45	0.39	0.10	0.15	0.08	3.00	3.00	1.26	2.32	$270,000	
Arch_Ceiling Finishes age >25yr	3.00	2.32	0.10	0.10	0.45	0.39	0.10	0.15	0.08	3.00	3.00	1.26	2.32	$270,000	
Electric_Narrative, Lighting age >25yr	2.00	1.55	0.05	0.05	0.30	0.17	0.05	0.06	0.04	2.00	2.00	0.56	1.55	$180,000	
Fire_Narrative, Fire Alarm age >15yr	2.00	1.55	0.05	0.05	0.30	0.17	0.05	0.06	0.04	2.00	2.00	0.56	1.55	$180,000	
Fire_Narrative, Sprinkler >30yr	2.00	1.55	0.05	0.05	0.30	0.17	0.05	0.06	0.04	2.00	2.00	0.56	1.55	$180,000	
Total Raw Points	86	66.56	13.21	62.06	64.75	64.96	30.51	33.03	29.04	86.00	86.00	76.44	66.56	$7,740,000	Estimated cost of LS/Code items
DEED Eligible Construction Cost														$10,000,000	From Table 7.2/ Cost Adjustment Worksheet/Estimate
LS Cost:Const Cost Weighted Adjustment	77.40%	100.00%	100.00%	77.40%	77.40%	77.40%	77.40%	77.40%	100.00%	77.40%	77.40%	77.40%	100.00%		
Total Weighted Points	66.56	66.56	13.21	48.03	50.12	50.28	23.62	25.57	29.04	66.56	66.56	59.17	66.56		

Code deficiencies / Protection of structure / Life safety Scoring Issues

Submitted by Don Hiley

January 10, 2020

A scoring matrix, drafted by DEED staff, was recently introduced for this category. As this was a new method of assigning points in this area, the committee agreed to implement the matrix to see how it worked in practice. While I believe this has been a step forward in general, after working with it through a good number applications this past cycle, I feel there are aspects that should be modified. Some of these are procedural, and some philosophical.

There are several items in the current matrix that that award additional points based on the number of work orders that have been recorded in the district's CMMS over time for a particular issue, or for the age of the material, system, or equipment compared to the DEED renewal and replacement schedule. There are also a number of number of items that require professional (architect/engineer) backup.

However, in my view, this category should primarily be reflecting the current issues at the facility. Regardless of age or how it may have arisen, the problem with the facility is the problem with the facility. But the application scoring already has 60 points in total awarded for Maintenance Program, and an additional 30 points awarded for age of the facility. So those aspects are already addressed elsewhere to a large extent. Further, the notion that this category should be used to indirectly punish districts because some material or system has not lasted as long as the R+R schedule says it should I believe is misguided.

The reality is that things can, and do, fail for many reasons. These may or may not have anything to do with the care and maintenance of the facility. Improper installation/construction, design defects, material failure(s), or the local conditions to which the facility is subjected are just some of the things may represent a much larger factor in a failure than time for any given project. Yet the projects may receive vastly different points. Likewise, a problem that has suddenly manifested itself is also no less serious than a similar problem that has occurred over time, so should garner a similar number of points. (Example might be roofing or siding blowing off in a storm). Work order history may be a scoring factor, but probably should not be THE scoring factor if circumstances differ.

Even if an issue was felt to be the result of substandard maintenance, the issue still exists. Left uncorrected, many issues will lead to further and likely more costly problems if not addressed. This is not cost effective. In addition, those responsible have often moved on from the district. Current staff may be trying to correct these issues, and bring the facility back to a reasonable state, but are being hampered by lack of resources, which now places them at an ongoing disadvantage in this process. The students in the school really should not have their education disrupted in order to teach the district a lesson.

Another area of concern is the inclusiveness of work items identified in the scoring matrix. The scoring matrix does not, and cannot, address all possible projects. While some work fits readily into the existing options, other work does not fit well. This is somewhat confusing in choosing which items to check

while writing the application, and leads to questions about scoring. I believe at least more options are needed, or possibly go back to more general categories of work need to be available. Instead of trying to itemize every possible issue, maybe the matrix be could be revised to instead allow for range of points building system. Sort of a hybrid of past and present scoring.

Another area that I think needs to be looked at is the relative priority of scoring. In other words, how are points awarded relative to other areas. One example of this that I've referenced previously is that failed 24 year old exterior siding is almost certainly a more pressing issue than 25 year old siding that is still performing, yet it receives only one sixth the points.

Finally, the issue of mixed scope projects needs to be reviewed and addressed. If a particular condition merits a certain number of points in the matrix, is it proper that a project that addresses only that condition may end up with more points than a project that addresses that same condition combined with other work (due to points being prorated by cost of work)? Conversely, does a project that addresses numerous lower priority work items deserve more points than a project that addresses a single high priority work item? Lastly, there probably should be a policy in place regarding work resulting from some other issue. This arose recently when a structural failure in a building resulted in a number of finishes needing to be repaired/replaced. The issue was whether those resulting issues should receive points as deficiencies themselves, as they did not otherwise meet the scoring criteria for age etc. This could be a moot point with changes in the philosophy of the matrix discussed above.

I am hopeful that some progress can be made on these issues prior to the FY22 scoring cycle.