

## 2/4/21 Driscoll geothermal question responses

Q1: Is the geothermal line item (\$2.7M on cost/benefit analysis currently shown as outside the budget target and therefore possibly not able to be included) independent of the \$14.1MEP line item above?

A1: Yes. The complete systems with and without geothermal were designed, drawn, priced, and will be competitively bid. The \$2.7M figure is the total additional construction cost for the Ground Source Add Alternate.

Q2: If the system is not a water source heat pump but rather an air source, is the equipment required for that the same cost?

A2: No, the MEP equipment has a different cost as noted in Q1. The base system is water source heat pump with fluid cooler

Q3: Are the utility rates also the same? If not, what are the two current rates expected for new Driscoll?

A3: The rates vary depending on the demand and whether they are 100% renewably sourced.

### Standard Elec Rates:

- Base "Rate B7" school rate = \$0.2101/kwh
- Geothermal Alt = \$0.1810/kwh

### 100% Renewable Elec Rates

- Base = \$0.25465/kwh
- Geothermal Alt = \$0.2255/kwh

Q4: Was the electricity rate assumed as a Green rate or regular?

A4: Both were separately analyzed. Please see Q3 and Q6

Q5: Were Charlie Simmon's figures on maintenance and capital cost replacement escalated the same way as the BLCC v5.-38 note indicates was applied to the rates?

A5: Yes. Both analyses factored in DOE methodology for operating, maintenance and capital need replacement costs.

Q6: As one example, in the last slide (Payback) you will note that the use of Green Energy improves the payback of geothermal but comes at an annual cost increase of \$40K. In other words, it seems that the improved First Cost calculation may ignore the Operating Cost impact to the Town.

A6: Two analyses were completed, one using updated Utility company Electric rates (based on Ridley School bills), and the other based on 100% renewable electric rates. The primary reason that the payback period of ground-source alternate is reduced by 1 year when using the renewable electric rates is that the Base Option renewable green electric rate is higher than the ground source alternate. Operating costs have been factored into both analyses.

Q7: As far as the rest of the payback calculation, I was looking for confirmation that the referenced DOE methodology included each of the components identified in their columns. I understand some of these values may have been generated by Charlie Simmons.

A7: Confirmed. Please see Q5

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Q8: Do we understand the Useful Life of the Geothermal vs. Base systems? It appears their presentation assumes an equal life without stating that (although I could not find the actual number of years - 25? 40?). This is normally a lookup in an ASHRAE handbook.

A8: Lifecycle cost analyses (LCCA) study period is 30 years. LCCA factored in the major Capital need equipment replacement differences between the Base and Alternate systems. For the Base system, these costs include replacement of Adiabatic Dry Cooler (ADC) every 10 years, ADC pad every 3 years, and additional pump set motor change every 15 years. Major equipment components that require replacement within the study period (i.e. motors, compressors) for both Base and Alternate systems included a Capital equipment needs replacement cost at year 15. For presentation purposes these costs were combined and averaged over the 30 years study period. The actual analysis factored in DOE methodology. Both the Base and Alternate HVAC systems distribution system (i.e. air handling units/ductwork/piping/terminal equipment within the building) are the same, and are expected to have similar service life of 30 years or more.

Q9: In the Budget presentation, the Cost associated with the Geothermal was taken in and out without a change to the MEP line above. That means they included everything for the Base MEP and just added the Geothermal elements of permits, drilling/piping, pumps and exchange coils. This is reflected in their keeping the electric boilers in both schemes, even as they acknowledge their presence in the geothermal system is only for emergency backup. That is an added First Cost we need to understand, as it seems to come at a premium in the Geothermal payback.

A9: Please see Q1. The Electric boiler is only for backup heating in the Ground source alternate, and the electric boiler quantity and size is lower in this design option. The resultant lower cost of the Electric boiler has been factored into the additional cost of the Alternate Ground Source system.

Q10: How deep are the geothermal wells? Could we lower the price by going deeper and having less?

A10: The wells are 900' deep. This is the most cost efficient depth.

Q11: Could you please outline the assumptions about projected electricity costs for the next twenty years that were used to project the operational expenses and from what sources they were derived?"

A11: The projected electricity costs for the next 30 years are based on the DOE's projected escalation rates as follows:

<u>Year</u>	<u>Escalation</u>
2020	4.53%
2021	3.88%
2022	3.05%
2023	3.61%
2024	2.78%
2025	2.41%
2026	3.08%
2027	1.95%
2028	1.98%
2029	1.48%
2030	2.29%

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2031	2.55%
2032	2.55%
2033	2.45%
2034	2.31%
2035	2.52%
2036	3.59%
2037	3.97%
2038	3.40%
2039	2.76%
2040	2.57%
2041	2.57%
2042	2.59%
2043	2.59%
2044	2.61%
Remaining	2.61%

Q12: Are all additional site work costs included in the payback analysis? What are those costs?

A12: Yes, all additional site work costs are included. The site costs for the geothermal add alt include the geothermal wells, trenching, and any site phasing for the temporary equipment required for the building to operate prior to the geothermal field is fully functional.

Q13: What is the expected life of each system (geothermal and water source).” For geothermal, the refrigerants are expected to degrade after 30 years and will likely need to be refreshed, but the heat would still be operable. The ground around the wells heats up so that’s a factor too. The system is designed for 50 years, but I’ve been told we model for 30 years and include expect replacements after 20 years.

A13: The life cycle is based on a 30 year study period accounting for a 30 year building life. All replacements within the 30 year period have been indicated in Q8.

Q14: What is the maximum ACH/MERV under each scenario?

A14: Both scenarios will have identical ACH rates and MERV filter ratings. Each air handling unit will be provided with MERV-14 final filters and MERV-8 pre-filters. GGD has provided ACH information to Owner. Please refer to attached memo & charts.

Q15: How many wells will be needed, and where will they be?” What is the ability/cost to make the building geothermal “make-ready” for a future time? (if most of the air handling mechanicals within the school are identical for the 2 systems)

A15: 49 wells are required. Most are located under the new playfield, with the remainder under the new hardscape closer to the building. The base design system with the fluid cooler could be connected to geothermal wells at a future date though such an installation at a later date for the geothermal wells may not be feasible and would result in higher installation costs.

Q16: The analysis should be to compared the present value of the operating savings to the additional cost, factoring in things like inflation, r&m, etc. has that been done? can we see it?

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A16: Please see Questions 5 and 7 above.

Q17: I was disappointed to hear from the OPM that geothermal wells are considered unaffordable since moving forward with them would require finding a savings of \$2.7m elsewhere in the budget. Although I realize that the a FFF system will still be utilized, my understanding is that in this instance geo thermal represented an annual savings of \$120k in operating expenses.

A17: Agreed. Given the unpredictability of the construction bid environment during the pandemic, the geothermal system was recommended as an add alternate to provide the Town with an acceptable “Plan B” which would not negatively affect teaching and learning, in case the bids came in higher than the reconciled estimates. The idea was reviewed and publicly approved by the Building Commission and the School Building Advisory Committee in August of 2020. Earthwork is typically the most complex and unpredictable item to price, so it was issued as an early package so that hard bids could be received early. Unfortunately, the sitework bids came in approximately \$3M over the estimates of both professional cost estimators. The geothermal alt will still be competitively bid, and we will not know for certain that it is unaffordable until all bids are received, but it now appears unlikely that it can be built within the construction budget approved by the voters in 2019.

Q18: Same comment we heard this morning about the Florida Ruffin Ridley School energy performance

A18: The Ridley school EUI (Energy Use Index) was originally projected based on the anticipated use of the building. The building has been successful in having greater utilization of the HVAC system after hours than originally projected, to ensure more outside air is circulated through the building in an effort to help reduce the spread of the virus. Therefore, Ridley uses more energy, which had a negative impact on the EUI. The base bid (non-geothermal) option for Driscoll would still be more energy efficient than Ridley with similar use.

Q19: Under each scenario, what % of energy is expected to be provided from what sources (geothermal or water source, PV, purchased electricity, anything else)

A19: The new Driscoll will be all-electric, in conformance with the Brookline fossil fuel free ban on oil and gas piping in the building. It is anticipated that the Town will enter a Power Purchase Agreement for photovoltaic panels to be added to the roof, which would provide roughly 20% of the electricity from a renewable energy source for the new school.

M#74400  
J#680 018 00.00

DATE: December 23, 2020

MEMO

TO: Philip Gray, AIA, Principal  
Jonathan Levi Architects, Inc.

FROM: Dominick B. Puniello, P.E., Principal



PROJECT: Driscoll School  
Brookline, MA

SUBJECT: HVAC System and Airborne Pathogen (COVID) mitigation Design Strategy

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The classrooms, learning areas and offices will be served by a displacement ventilation system. Displacement ventilation systems have a higher ventilation effectiveness than traditional overhead ventilation system because supply air is delivered low in the room and airflow is exhausted high at the ceiling level where pollutants are removed. The HVAC system is provided with CO2 demand ventilation controls for energy savings. Demand ventilation controls reduce outdoor ventilation airflow when space indoor temperature conditions (i.e. 70°F +/- 2°F for all spaces in Heating Mode, 78°F +/- 2°F for Classrooms in Cooling Mode, and 75°F +/- 2°F for Offices in Cooling Mode) are satisfied. During this mode of operation, the supply air will be approximately 70% outside air and 30% re-circulated air. All supply air (i.e. outdoor air plus re-circulated air) will be filtered through high efficiency MERV-14 filters, which is the current ASHREA recommendation for new school design. The ventilation systems CO2 demand ventilation control system can be over-ridden through the building management system to provide 100 percent outdoor ventilation air. All spaces are provided with outdoor ventilation rates that meet or exceed International Mechanical Code (IMC) 2015 and ASHRAE 62.1-2019 requirements and the minimum air changes provided to each space is 4 air changes per hour when factoring the effectiveness of displacement.

The Gyms and Multi-Purpose areas of the building are also served by displacement ventilation systems with a high capacity of outdoor ventilation air (all systems are approximately 70% outdoor air, and 30% recirculated air), high efficiency MERV-14 filters and demand ventilation controls that modulate the airflow based upon occupancy for increased energy efficiency. These areas' air handling units demand ventilation control feature can also be over-ridden through the building management system to provide additional fresh air ventilation if required. These spaces are provided with outdoor ventilation rates that meet or exceed IMC 2015 and ASHRAE 62.1-2019 requirements and the minimum air changes provided to each space is 4 air changes per hour when factoring the effectiveness of displacement.

If you have any questions or concerns regarding the above, please contact our office at your earliest convenience.

DBP:jfm

Cc: Jonathan Levi, Jonathan Levi Architects, Inc.  
Carol Harris, Jonathan Levi Architects, Inc.  
Carlos G. DeSousa, P.E., GGD

Driscoll School, Brookline, MA										12/14/2020				
ROOM #	ROOM NAME	CEILING HEIGHT (FT)	FLOOR AREA (FT <sup>2</sup> )	VOLUME (FT <sup>3</sup> )	VENTILATION AIRFLOW IN (FT <sup>3</sup> /MIN)	Dispalcement?	Disp. Factor 1.2	EXHAUST/ RETURN AIRFLOW OUT (FT <sup>3</sup> /MIN)	AIR EXCHANGES PER HOUR (Baseline)	Portable HEPA Purifier (CADR)	Portable HEPA for ACH Per Assigned Room	ACH (Baseline+ Portable)	Target ACH <span style="color: green;">Good above 4.0 GREAT above 5.0</span>	
114	PTO	8.0	375.39	3003.12	170	YES	204		4.1	0.0	0.0	4.1	GOOD	
520	Health Office	8.0	162.33	1298.64	115	YES	138		6.4	0.0	0.0	6.4	IDEAL	
600	Small Gym	13.0	2801.00	36413.00	3000	YES	3600		5.9	0.0	0.0	5.9	GREAT	
700	Gymnasium	25.0	5881.90	147047.50	7000	YES	10500		4.3	0.0	0.0	4.3	GOOD	
820	Locker	8.0	430.68	3445.44	350	YES	420		7.3	0.0	0.0	7.3	IDEAL	
830	Locker	8.0	428.68	3429.44	355	YES	426		7.5	0.0	0.0	7.5	IDEAL	
1110	General Office/Mail	8.0	369.71	2957.68	300	YES	360		7.3	0.0	0.0	7.3	IDEAL	
1112	Copy	8.0	158.05	1264.40	435	YES	522		24.8	0.0	0.0	24.8	IDEAL	
1120	Conference	8.0	286.72	2293.76	245	YES	294		7.7	0.0	0.0	7.7	IDEAL	
1121	Metco Office	8.0	151.28	1210.24	90	YES	108		5.4	0.0	0.0	5.4	GREAT	
1122	SWD Team Facilitator	8.0	151.28	1210.24	90	YES	108		5.4	0.0	0.0	5.4	GREAT	
1123	Extended Day Office	8.0	311.57	2492.56	245	YES	294		7.1	0.0	0.0	7.1	IDEAL	
1130	Medical	8.0	435.72	3485.76	200	YES	240		4.1	0.0	0.0	4.1	GOOD	
1131	Waiting	8.0	90.68	725.44	75	YES	90		7.4	0.0	0.0	7.4	IDEAL	
1132	Exam Room	8.0	88.55	708.40	65	YES	78		6.6	0.0	0.0	6.6	IDEAL	
1150	World Language	8.0	149.50	1196.00	110	YES	132		6.6	0.0	0.0	6.6	IDEAL	
1151	World Language	8.0	150.88	1207.04	110	YES	132		6.6	0.0	0.0	6.6	IDEAL	
1152	Office Spare	8.0	134.19	1073.52	105	YES	126		7.0	0.0	0.0	7.0	IDEAL	
1153	Office AP2	8.0	133.53	1068.24	105	YES	126		7.1	0.0	0.0	7.1	IDEAL	
1154	Office AP1	8.0	133.36	1066.88	105	YES	126		7.1	0.0	0.0	7.1	IDEAL	
1160	Office PR	8.0	282.15	2257.20	440	YES	528		14.0	0.0	0.0	14.0	IDEAL	
1300	Multi-Purpose	8.0	4814.2	38513.5	5000	YES	6000		9.3	0.0	0.0	9.3	IDEAL	
1328	Band/Chorus	8.0	1488.12	11904.96	990	YES	1188		6.0	0.0	0.0	6.0	GREAT	
1440	Music	8.0	1151.21	9209.68	710	YES	852		5.6	0.0	0.0	5.6	GREAT	
1443	Practice	8.0	97.11	776.88	90	YES	108		8.3	0.0	0.0	8.3	IDEAL	
1444	Practice	8.0	98.62	788.96	75	YES	90		6.8	0.0	0.0	6.8	IDEAL	
1446	Music	8.0	1165.3	9322.2	710	YES	852		5.5	0.0	0.0	5.5	GREAT	
1448	Small Group	8.0	235.7	1885.3	170	YES	204		6.5	0.0	0.0	6.5	IDEAL	
1449	Small Group	8.0	241.7	1933.2	155	YES	186		5.8	0.0	0.0	5.8	GREAT	
1550	Cafeteria	8.0	3965.5	31724.3	2065	YES	2478		4.7	0.0	0.0	4.7	GOOD	
1600	Fablab/Tech	8.0	933.6	7468.6	1035	YES	1242		10.0	0.0	0.0	10.0	IDEAL	
1680	Makerspace/Shop	8.0	1541.1	12329.0	940	YES	1128		5.5	0.0	0.0	5.5	GREAT	
1813	Kitchen Office	8.0	76.47	611.76	70	YES	84		8.2	0.0	0.0	8.2	IDEAL	
1820	Kitchen	8.0	1800.00	14400.00	1655	YES	1986		8.3	0.0	0.0	8.3	IDEAL	
2110	Classroom-1	8.0	831.7	6653.5	605	YES	726		6.5	0.0	0.0	6.5	IDEAL	

2118	Classroom-1	8.0	824.7	6597.8	630	YES	756		6.9	0.0	0.0	6.9	IDEAL
2120	Classroom-1	8.0	825.7	6605.8	630	YES	756		6.9	0.0	0.0	6.9	IDEAL
2128	Classroom-1	8.0	825.5	6604.0	630	YES	756		6.9	0.0	0.0	6.9	IDEAL
2210	Teacher Workroom	8.0	458.5	3668.3	665	YES	798		13.1	0.0	0.0	13.1	IDEAL
2220	Staff Lunch	8.0	378.5	3027.8	220	YES	264		5.2	0.0	0.0	5.2	GREAT
2410	Classroom-2	8.0	832.2	6657.5	620	YES	744		6.7	0.0	0.0	6.7	IDEAL
2418	Classroom-2	8.0	825.9	6607.1	580	YES	696		6.3	0.0	0.0	6.3	IDEAL
2420	Classroom-2	8.0	824.4	6595.0	580	YES	696		6.3	0.0	0.0	6.3	IDEAL
2428	Classroom-2	8.0	824.2	6593.3	585	YES	702		6.4	0.0	0.0	6.4	IDEAL
2515	Specialist Collab Workspace	8.0	225.8	1806.7	230	YES	276		9.2	0.0	0.0	9.2	IDEAL
2525	Project Area	8.0	128.9	1031.4	655	YES	786		45.7	0.0	0.0	45.7	IDEAL
2610	LAHB Classroom	8.0	784.7	6277.9	570	YES	684		6.5	0.0	0.0	6.5	IDEAL
2616	Learning Center	8.0	423.1	3384.5	365	YES	438		7.8	0.0	0.0	7.8	IDEAL
2618	Psychologist	8.0	145.5	1164.2	70	YES	84		4.3	0.0	0.0	4.3	GOOD
2619	Psychologist	8.0	145.5	1163.9	70	YES	84		4.3	0.0	0.0	4.3	GOOD
2620	Storage	8.0	62.7	501.2	70	YES	84		10.1	0.0	0.0	10.1	IDEAL
2621	BCBA	8.0	158.5	1268.2	75	YES	90		4.3	0.0	0.0	4.3	GOOD
2622	Guidance Office	8.0	177.4	1419.4	140	YES	168		7.1	0.0	0.0	7.1	IDEAL
2623	Guidance Office	8.0	165.3	1322.1	210	YES	252		11.4	0.0	0.0	11.4	IDEAL
2624	Guidance Office	8.0	187.8	1502.6	85	YES	102		4.1	0.0	0.0	4.1	GOOD
2710	Pre-Kindergarten	8.0	1075.7	8605.3	605	YES	726		5.1	0.0	0.0	5.1	GREAT
2718	Pre-Kindergarten	8.0	1080.1	8640.7	590	YES	708		4.9	0.0	0.0	4.9	GOOD
2720	Pre-Kindergarten	8.0	1083.4	8667.2	560	YES	672		4.7	0.0	0.0	4.7	GOOD
2910	Kindergarten	8.0	1076.6	8613.0	545	YES	654		4.6	0.0	0.0	4.6	GOOD
2918	Kindergarten	8.0	1072.1	8576.6	515	YES	618		4.3	0.0	0.0	4.3	GOOD
2920	Kindergarten	8.0	1073.4	8586.8	515	YES	618		4.3	0.0	0.0	4.3	GOOD
2928	Kindergarten	8.0	1075.8	8606.1	570	YES	684		4.8	0.0	0.0	4.8	GOOD
3110	Classroom-4	8.0	818.4	6547.4	605	YES	726		6.7	0.0	0.0	6.7	IDEAL
3115	Teacher Planning	8.0	102.3	818.7	100	YES	120		8.8	0.0	0.0	8.8	IDEAL
3118	Classroom-4	8.0	814.0	6511.9	645	YES	774		7.1	0.0	0.0	7.1	IDEAL
3120	LAHB Classroom	8.0	815.9	6527.0	630	YES	756		6.9	0.0	0.0	6.9	IDEAL
3125	World Language TP	8.0	100.0	800.0	80	YES	96		7.2	0.0	0.0	7.2	IDEAL
3128	World Language	8.0	820.00	6560.00	635	YES	762		7.0	0.0	0.0	7.0	IDEAL
3128	World Language Classroom	8.0	816.0	6527.8	635	YES	762		7.0	0.0	0.0	7.0	IDEAL
3210	Teacher Workroom	8.0	451.1	3608.4	550	YES	660		11.0	0.0	0.0	11.0	IDEAL
3310	Media	8.0	3690.6	29524.8	2435	YES	2922		5.9	0.0	0.0	5.9	GREAT
3313	Media Work Room	8.0	97.1	776.6	90	YES	108		8.3	0.0	0.0	8.3	IDEAL
3314	Media Book Room	8.0	169.7	1357.5	80	YES	96		4.2	0.0	0.0	4.2	GOOD
3315	Media Office	8.0	133.6	1069.0	80	YES	96		5.4	0.0	0.0	5.4	GREAT
3326	Small Group	8.0	216.7	1733.2	175	YES	210		7.3	0.0	0.0	7.3	IDEAL
3327	Conference	8.0	297.0	2375.6	290	YES	348		8.8	0.0	0.0	8.8	IDEAL
3328	Small Group	8.0	186.7	1493.4	155	YES	186		7.5	0.0	0.0	7.5	IDEAL

3410	Classroom-5	8.0	822.7	6581.3	615	YES	738		6.7	0.0	0.0	6.7	IDEAL
3418	Classroom-5	8.0	814.3	6514.7	580	YES	696		6.4	0.0	0.0	6.4	IDEAL
3420	Classroom-5	8.0	814.3	6514.2	585	YES	702		6.5	0.0	0.0	6.5	IDEAL
3428	Classroom-5	8.0	816.5	6531.8	580	YES	696		6.4	0.0	0.0	6.4	IDEAL
3515	Specialist Collab Workspace	8.0	225.6	1805.0	240	YES	288		9.6	0.0	0.0	9.6	IDEAL
3525	Project Area	8.0	75.0	600.0	105	YES	126		12.6	0.0	0.0	12.6	IDEAL
3610	Classroom-3	8.0	807.6	6460.5	630	YES	756		7.0	0.0	0.0	7.0	IDEAL
3615	Teacher Planning	8.0	102.3	818.7	100	YES	120		8.8	0.0	0.0	8.8	IDEAL
3618	Classroom-3	8.0	812.4	6499.4	635	YES	762		7.0	0.0	0.0	7.0	IDEAL
3620	ELE Classroom	8.0	406.5	3252.2	360	YES	432		8.0	0.0	0.0	8.0	IDEAL
3622	ELE Classroom	8.0	453.7	3629.8	295	YES	354		5.9	0.0	0.0	5.9	GREAT
3710	Classroom-3	8.0	798.1	6385.0	625	YES	750		7.0	0.0	0.0	7.0	IDEAL
3715	Teacher Planning	8.0	102.3	818.7	100	YES	120		8.8	0.0	0.0	8.8	IDEAL
3718	Classroom-3	8.0	814.2	6513.2	630	YES	756		7.0	0.0	0.0	7.0	IDEAL
3810	Health	8.0	1056.6	8453.0	665	YES	798		5.7	0.0	0.0	5.7	GREAT
3820	Art K-5	8.0	1054.4	8434.9	845	YES	1014		7.2	0.0	0.0	7.2	IDEAL
3830	Art 6-8	8.0	1123.0	8984.2	865	YES	1038		6.9	0.0	0.0	6.9	IDEAL
3910	Learning Center	8.0	497.6	3980.6	315	YES	378		5.7	0.0	0.0	5.7	GREAT
3915	Learning Center TP	8.0	69.5	556.0	95	YES	114		12.3	0.0	0.0	12.3	IDEAL
3920	Classroom-4	8.0	814.0	6511.9	580	YES	696		6.4	0.0	0.0	6.4	IDEAL
3925	Teacher Planning	8.0	102.3	818.7	100	YES	120		8.8	0.0	0.0	8.8	IDEAL
3928	Classroom-4	8.0	819.9	6558.9	590	YES	708		6.5	0.0	0.0	6.5	IDEAL
4110	Classroom-7	8.0	814.6	6516.6	675	YES	810		7.5	0.0	0.0	7.5	IDEAL
4115	Teacher Planning	8.0	102.3	818.7	65	YES	78		5.7	0.0	0.0	5.7	GREAT
4118	Classroom-7	8.0	814.1	6512.7	650	YES	780		7.2	0.0	0.0	7.2	IDEAL
4120	Speech	8.0	146.2	1169.8	115	YES	138		7.1	0.0	0.0	7.1	IDEAL
4122	Speech	8.0	138.0	1104.1	115	YES	138		7.5	0.0	0.0	7.5	IDEAL
4124	LAHB Resource	8.0	436.6	3493.0	405	YES	486		8.3	0.0	0.0	8.3	IDEAL
4125	OT/PT Office	8.0	134.8	1078.7	75	YES	90		5.0	0.0	0.0	5.0	GREAT
4128	OT/PT	8.0	800.2	6401.7	640	YES	768		7.2	0.0	0.0	7.2	IDEAL
4210	Teacher Workroom	8.0	452.2	3617.2	510	YES	612		10.2	0.0	0.0	10.2	IDEAL
4230	World Language Classroom	8.0	858.8	6870.2	635	YES	762		6.7	0.0	0.0	6.7	IDEAL
4310	LAHB Classroom	8.0	799.0	6391.9	610	YES	732		6.9	0.0	0.0	6.9	IDEAL
4316	Learning Center	8.0	472.0	3775.6	410	YES	492		7.8	0.0	0.0	7.8	IDEAL
4318	SWD Conference	8.0	260.3	2082.3	120	YES	144		4.1	0.0	0.0	4.1	GOOD
4320	Conference-S	8.0	264.7	2117.2	135	YES	162		4.6	0.0	0.0	4.6	GOOD
4321	Conference	8.0	230.7	1845.2	165	YES	198		6.4	0.0	0.0	6.4	IDEAL
4323	Enrichment Support	8.0	294.4	2355.1	335	YES	402		10.2	0.0	0.0	10.2	IDEAL
4325	World Language TP	8.0	73.2	585.6	60	YES	72		7.4	0.0	0.0	7.4	IDEAL
4327	Small Group	8.0	301.3	2410.1	340	YES	408		10.2	0.0	0.0	10.2	IDEAL
4328	Small Group	8.0	259.7	2077.8	220	YES	264		7.6	0.0	0.0	7.6	IDEAL
4410	Classroom-8	8.0	816.4	6531.4	615	YES	738		6.8	0.0	0.0	6.8	IDEAL



4415	Teacher Planning	8.0	102.3	818.7	100	YES	120		8.8	0.0	0.0	8.8	IDEAL
4418	Classroom-8	8.0	814.3	6514.7	615	YES	738		6.8	0.0	0.0	6.8	IDEAL
4420	Classroom-8	8.0	813.6	6508.4	580	YES	696		6.4	0.0	0.0	6.4	IDEAL
4425	Teacher Planning	8.0	102.3	818.7	100	YES	120		8.8	0.0	0.0	8.8	IDEAL
4428	Classroom-8	8.0	815.7	6525.8	615	YES	738		6.8	0.0	0.0	6.8	IDEAL
4515	Specialist Collab Workspace	8.0	225.6	1805.0	230	YES	276		9.2	0.0	0.0	9.2	IDEAL
4525	Project Area	8.0	225.6	1805.0	110	YES	132		4.4	0.0	0.0	4.4	GOOD
4535	Project Area	8.0	113.2	905.5	140	YES	168		11.1	0.0	0.0	11.1	IDEAL
4610	Classroom-6	8.0	809.4	6475.2	630	YES	756		7.0	0.0	0.0	7.0	IDEAL
4615	Teacher Planning	8.0	102.3	818.7	100	YES	120		8.8	0.0	0.0	8.8	IDEAL
4618	Classroom-6	8.0	819.8	6558.2	630	YES	756		6.9	0.0	0.0	6.9	IDEAL
4620	ELE Classroom	8.0	405.0	3240.0	315	YES	378		7.0	0.0	0.0	7.0	IDEAL
4622	ELE Classroom	8.0	447.3	3578.1	330	YES	396		6.6	0.0	0.0	6.6	IDEAL
4710	Classroom-6	8.0	819.3	6554.2	630	YES	756		6.9	0.0	0.0	6.9	IDEAL
4715	Teacher Planning	8.0	102.3	818.7	100	YES	120		8.8	0.0	0.0	8.8	IDEAL
4718	Classroom-6	8.0	813.3	6506.0	635	YES	762		7.0	0.0	0.0	7.0	IDEAL
4810	Science	8.0	1070.0	8560.0	825	YES	990		6.9	0.0	0.0	6.9	IDEAL
4820	Science	8.0	1070.8	8566.3	805	YES	966		6.8	0.0	0.0	6.8	IDEAL
4830	Science	8.0	1135.8	9086.2	840	YES	1008		6.7	0.0	0.0	6.7	IDEAL
4910	Learning Center	8.0	497.1	3976.9	335	YES	402		6.1	0.0	0.0	6.1	IDEAL
4911	Learning Center TP	8.0	69.3	554.5	60	YES	72		7.8	0.0	0.0	7.8	IDEAL
4920	Classroom-7	8.0	814.1	6513.0	585	YES	702		6.5	0.0	0.0	6.5	IDEAL
4925	Teacher Planning	8.0	102.3	818.7	70	YES	84		6.2	0.0	0.0	6.2	IDEAL
4928	Classroom-7	8.0	819.8	6558.1	600	YES	720		6.6	0.0	0.0	6.6	IDEAL
2615A/B	LAHB TP	8.0	152.6	1220.9	70	YES	84		4.1	0.0	0.0	4.1	GOOD