

Project Summaries

This Appendix contains detailed summaries of the 10 Los Angeles Unified School District (LAUSD) school construction projects that MGT evaluated for the construction cost analysis project. For each LAUSD project, school profiles and enrollment numbers are provided followed by project-specific details offering insights into the timelines¹ and project costs based on source documents such as Notices to Proceed (NTP), Certificates of Substantial Completion, Notices of Completion (NOP), Budget Documents, and Change Orders. Below is a listing of the 10 projects evaluated in depth by MGT.

- Carnegie MS – HVAC
- Cleveland Charter HS – Comprehensive Modernization
- Garvanza Technology & Leadership Magnet ES – Seismic Retrofit
- Glassell Park STEAM Magnet ES – Seismic Retrofit
- Hollywood HS – Roofing
- Los Angeles Center for Enriched Studies Span – Roofing
- Ramona ES – ADA Improvements
- Sun Valley Magnet MS – HVAC
- Venice HS – Comprehensive Modernization
- Wonderland ES – Classroom Replacement Modernization

¹ The number of days the projects were delayed or finished early was calculated using the projected substantial completion date from the NTP and the actual substantial completion date from the Notice of Completion (NOC). In the absence of a projected substantial completion date, the completion date from the NTP was used. In the absence of an NOC, the Certificate of Substantial Completion date was used.

Section 1 – Projects Evaluated In Depth

Carnegie MS – HVAC – COLIN ID: 10369610

School Profile

Name	Andrew Carnegie Middle School
Year Open	1965
Enrollment	838 Students
Free or Reduced Meals	80 percent of the students are eligible for free or reduced-price meals

Project Overview

This project was the installation of replacement HVAC units for the Administration and Library/Oral Arts Buildings. It included the removal of existing equipment and installing the required equipment necessary for the new units to function appropriately. The contractor for this project was Beta Investments & Contracts, Inc.

Project Timeline

The project was approved by the Board on March 13, 2018, and subsequently awarded to a vendor on September 2, 2021. Initially, the completion date was projected to be March 27, 2023; however, the project was not substantially completed until April 23, 2024. The table below details the project's timeline.

Table A.1 – Project Timeline

Activity Overall	Date
Start Date per NTP	10/4/2021
Projected Completion Date per the NTP	2/25/2023
Actual Substantial Completion Date (Cert. of Subst. Comp.)	4/23/2024
Days Late	423

Source: Created by MGT, information from LAUSD

As illustrated above, this project was completed 423 days after the projected substantial completion date. MGT's review of project documentation revealed that the primary drivers of the project being completed 423 days late included:

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

- Delays in the delivery of HVAC equipment.
- Issues with the heating and cooling system airflow operating under design.

Functional testing was delayed because the Passive Infrared Sensor (PIR) was not fully functional.

In an attempt to expedite the project, LAUSD sent event notices to the contractor describing the issues identified and the primary and secondary affected scopes of work. These notices highlighted delays of substantial and final completion. For example, on December 29, 2021, LAUSD sent an Event Notice to the contractor indicating that in accordance with the contract, "the textbook room must be boxed, labeled, and categorized by the Contractor per Principal's Instructions" and the contractor refused to do this, thereby breaching the contract. The notice also stated that the primary and secondary affected scopes of work were delays to substantial completion and final completion, respectively.

Project Construction and Cost Data

The Board approved a budget of \$3,658,844 for this project. The project was competitively bid, with a total of 12 bidders submitting proposals. LAUSD awarded the project to the lowest bidder, Beta Investments & Contracts, Inc. The project was completed at an actual cost of \$4,546,726, which was 24.3 percent over the original budget. LAUSD separated the costs associated with this project into Plans, Construction, and Management categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.2 – Project Cost by Category

Category	Amount	% of Total
Plans	\$614,295	14%
Construction	\$3,441,766	76%
Management	\$490,665	11%
Total	\$4,546,726	100%

Source: Created by MGT, information from LAUSD

As shown in Table A.4, the construction-related costs accounted for approximately 76 percent of the total project costs. This allocation aligns well with industry best practices, which typically range from 70 to 80 percent.

The table on the next page details the project's construction and cost data.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Table A.3– Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Site & Environmental	\$1,500	(\$1,500)	\$0
Plans	\$426,034	\$188,261	\$614,295
Construction	\$2,827,632	\$614,134	\$3,441,766
Management	\$203,288	\$287,377	\$490,665
Other Costs & Reserve	\$200,390	(\$200,390)	\$0
Total	\$3,658,844	\$887,882	\$4,546,726
Total Hard Costs*	\$2,829,132	\$612,634	\$3,441,766
Total Soft Costs**	\$829,712	\$275,248	\$1,104,960
Under/(Over) Original Budget			(\$887,882.00)
Under/(Over) Original Budget %			(24.3%)
Square Footage			18,447
Hard Cost per Square Foot			\$186.58
Total Cost per Square Foot			\$246.48

Source: Created by MGT, information from LAUSD

*-Hard Costs = Site and Environmental + Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

As shown in the table above, the actual costs were approximately \$887,882 over the original budget. Project costs were affected by several factors including:

- Prior to the start of construction, the budget was increased to cover Owner Initiated Change Orders, including the removal of abandoned radiators, pipes and accessories, and moving furniture.
- Work that was not included in the original construction contract. The added scope led to additional FETU asbestos/lead costs, as well as PCB testing sampling and reports.
- The low bid came in 4.2% higher than the District estimate. Eventually, the project was completed at an actual cost of \$4,546,729 which was 24.3% percent over the original budget. corrective actions being required, for the relocation of variable air volume boxes, and corrective actions required from a failed functional performance test.

Los Angeles Unified School District
Construction Cost Analysis Final Draft Report
Appendix B

Change Orders

During the course of the project, 54 change orders in the amount of \$661,072 were issued. All but one of the change orders for this project was due to owner requests for additional scope, design deficiencies and unforeseen conditions, as characterized by LAUSD staff. The table below provides an overview of the change orders.

Table A.4 – Change Orders

Change Orders	Cost
Abatement	\$95,242
Course of Construction Scope Addition	\$148,702
Design Scope Addition	\$364,351
Design Scope Deletion	(\$1,520)
Owner Initiated Scope Addition	\$11,641
Seismic	\$42,656
Total	\$661,072

Source: Created by MGT, information from LAUSD

Los Angeles Unified School District
Construction Cost Analysis Final Draft Report
Appendix B

**Cleveland Charter HS – Comprehensive Modernization – COLIN ID:
10366805**

School Profile

Name	Cleveland Charter High School
Year Open	1959
Enrollment	2,784
Free or Reduced Meals	70 percent of the students are eligible for free or reduced-price meals

Project Overview

This project included the demolition of existing buildings and construction of new school facilities. New facilities, consisting of approximately 55 classrooms and support spaces, a multi-purpose room, food services, and a school-site new maintenance & operations area. The project also included some minor reconfigurations and improvements to two classroom buildings, seismic strengthening to the physical education building, and various site infrastructure and accessibility improvements. The contractor for this project was Kemp Bros. Construction, Inc and the architect was PBWS Architects, LLP.

Project Timeline

The project was approved by the Board on February 9, 2016, and subsequently awarded to a Design-Build entity on September 21, 2017. This project was a major undertaking that had 6 Notices to Proceed. The project was substantially complete per the Certificate of Substantial Completion on February 5, 2024. The table below details the project's timeline.

Table A.5 – Project Timeline

Activity Overall	Date
Start Date per NTP #2	7/16/2018
Projected Completion Per NTP #s 2, 3, 5, and 6	6/21/2022
Actual Substantial Completion (Cert. of Subst. Comp.)	2/5/2024
Days Late	594

Source: Created by MGT, information from LAUSD

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

As illustrated above, this project overall was substantially completed in six phases . However, the overall project was approximately 98% Substantially Complete by June 2022. However, the Multi-Purpose Building (Bldg D) had a high-ceiling folding panel partition sub-contractor default (insolvency), and the system had to be redesigned and then resubmitted to DSA for review and approval. This was followed by a lengthy fabrication and procurement process before installation could take place. Another delay that was experienced during this time period was with DWP coordination issues to get the Photo Voltaic panels energized and operational on the roof top of the MPR Building.

Project Construction and Cost Data

The Board approved a budget of \$109,823,330 for this project. The project was competitively bid, with a total of four bidders submitting proposals. Ultimately, LAUSD awarded the project to Kemp Bros Construction, based on their best value proposal. The project was completed at an actual cost of \$167,080,188, which was 52.1 percent over the original budget. LAUSD separated the costs associated with this project into the Site & Environmental, Plans, Construction, Management, and Other Costs & Reserve categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.6 – Project Costs by Category

Category	Amount	% of Total
Site & Environmental	\$706,004	0%
Plans	\$13,292,055	8%
Construction	\$147,298,930	88%
Management	\$5,766,967	3%
Other Costs & Reserve	\$16,232	0%
Total	\$167,080,188	100%

Source: Created by MGT, information from LAUSD

As shown above, the construction-related costs accounted for approximately 88 percent of the total project costs. This allocation is above the industry best practices, which typically range from 70 to 80 percent.

The table on the next page details the project's construction and cost data.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Table A.7 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Site & Environmental	\$832,500	(\$126,496)	\$706,004
Plans	\$8,018,383	\$5,273,672	\$13,292,055
Construction	\$87,554,818	\$59,744,112	\$147,298,930
Management	\$4,015,000	\$1,751,967	\$5,766,967
Other Costs & Reserve	\$9,402,629	(\$9,386,397)	\$16,232
Total	\$109,823,330	\$57,256,858	\$167,080,188
Total Hard Costs*	\$88,387,318	\$59,617,616	\$148,004,934
Total Soft Costs**	\$21,436,012	(\$2,360,758)	\$19,075,254
Under/(Over) Original Budget			(\$57,256,858)
Under/(Over) Original Budget %			(52.1%)
Square Footage			246,309
Hard Cost per Square Foot			\$600.89
Total Cost per Square Foot			\$678.34

Source: Created by MGT, information from LAUSD

*-Hard Costs = Site and Environmental + Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

As shown in the table above, the actual costs were approximately \$57,256,858 over the original budget. Key factors that impacted the overall project costs include:

- Additions and changes made to the original project scope, including additional classroom improvements, the replacement of the gymnasium roof, the replacement of gas lines, and the extension of a firewater line.
- Unforeseen conditions due to hazardous material abatement and modifications to the low voltage system addressing compatibility challenges were required.

Los Angeles Unified School District
Construction Cost Analysis Final Draft Report
Appendix B

Change Orders

During the course of the project, 158 change orders were issued totaling \$2,657,635. The table below provides an overview of the change orders.

Table A.8 – Change Orders

Change Orders	Cost
Abatement	\$821,324
Administrative Change	(\$66,843)
COVID	\$87,217
Course of Construction Scope Addition	\$660,592
Design Scope Addition	\$1,643
Bid Scope Gap	\$917,289
ISD	\$6,467
Means and Methods	\$170,535
Owner Initiated Scope Addition	\$1,302,232
Owner Initiated Scope Deletion	(\$1,919,346)
Undefined	\$171,385
Utilities	\$505,140
Total	\$2,657,635

Source: Created by MGT, information from LAUSD

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Garvanza Technology & Leadership Magnet ES – Seismic Retrofit – COLIN ID: 10368733

School Profile

Name	Garvanza Elementary School
Year Open	1899
Enrollment	248
Free or Reduced Meals	78 percent of the students are eligible for free or reduced-price meals

Project Overview

This project included the seismic retrofits of the main building and other updates to bring the building in line with ADA requirements. The contractor for this project was Masters Contracting Corp and the architect was Studio Works.

Project Timeline

The project was approved by the Board on April 18, 2017, and subsequently awarded to a vendor on September 28, 2021. Initially, the completion date was projected to be November 20, 2023; however, the project was completed early on October 21, 2023. The table below details the project's timeline.

Table A.9 – Project Timeline

Activity Overall	Date
Start Date per NTP	11/1/2021
Projected Substantial Completion Date per the NTP	10/21/2023
Actual Substantial Completion Date (Cert. of Subst. Comp.)	10/21/2023
Days Early / Late	NA

Source: Created by MGT, information from LAUSD

As illustrated above, this project was delivered on time.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Project Construction and Cost Data

The Board approved a budget of \$5,224,506 for this project. The project was competitively bid, with a total of six bidders submitting proposals. Ultimately, LAUSD awarded the project to the lowest bidder, Masters Contracting Corp. The project was completed at an actual cost of \$7,328,857, which was 40.3 percent over the original budget. LAUSD separated the costs associated with this project into Site & Environmental, Plans, Construction, Management, and Other Costs & Reserve categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.10 – Project Costs by Category

Category	Amount	% of Total
Site & Environmental	\$75,398	1%
Plans	\$867,932	12%
Construction	\$5,589,673	76%
Management	\$794,469	11%
Other Costs & Reserve	\$1,385	0%
Total	\$7,328,857	100%

Source: Created by MGT, information from LAUSD

As shown above, the construction-related costs accounted for approximately 76 percent of the total project costs. This allocation is in line with best industry practices, which typically range from 70 to 80 percent.

The table below and on the next page details the project's construction and cost data.

Table A.11 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Site & Environmental	\$35,000	\$40,398	\$75,398
Plans	\$527,263	\$340,669	\$867,932
Construction	\$4,121,710	\$1,467,963	\$5,589,673
Management	\$251,348	\$543,121	\$794,469
Other Costs & Reserve	\$289,185	(\$287,800)	\$1,385
Total	\$5,224,506	\$2,104,351	\$7,328,857

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Category	Original Board Approved Budget	Budget Modifications	Actuals
Total Hard Costs*	\$4,156,710	\$1,508,361	\$5,665,071
Total Soft Costs*	\$1,067,796	\$595,990	\$1,663,786
Under/(Over) Original Budget			(\$2,104,351)
Under/(Over) Original Budget %			(40.3%)
Square Footage			33,812
Hard Cost per Square Foot			\$167.55
Total Cost per Square Foot			\$216.75

Source: Created by MGT, information from LAUSD

*-Hard Costs = Site and Environmental + Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

As shown in the table above, the actual costs were approximately \$2,104,351 over the original budget.

Though the project was completed before the projected completion date, the project costs were significantly more than the original construction contract the District agreed to. The increase in project cost was due to several factors, including:

- Additions to the original project scope prior to the start of construction.
- Hiring a general contractor to procure and install an elevator instead of using a contractor hired directly by the District.
- Increase in insurance, testing, and inspections due to the change in project scope.
- Project work and inspections were performed on Saturdays which required overtime pay.

Change Orders

During the course of the project, 83 change orders in the amount of \$808,642 were issued. A review of the change orders indicated the majority were due to design deficiencies, and unforeseen conditions. The table on the next page provides an overview of the change orders.

Los Angeles Unified School District
Construction Cost Analysis Final Draft Report
Appendix B

Table A.12 – Change Orders

Change Orders	Cost
Abatement	\$48,495
Course of Construction Scope Addition	\$342,836
Design Scope Addition	\$371,318
Owner Initiated Scope Addition	\$14,893
Undefined	\$31,100
Total	\$808,642

Source: Created by MGT, information from LAUSD

Los Angeles Unified School District
Construction Cost Analysis Final Draft Report
Appendix B

**Glassell Park STEAM Magnet ES – Seismic Retrofit of Main Building –
COLIN ID: 10368772**

School Profile

Name	Glassell Park Elementary School
Year Open	1912
Enrollment	249 Students
Free or Reduced Meals	92 percent of the students are eligible for free or reduced-price meals

Project Overview

This project was a seismic retrofit for the school’s main building. This project also included ADA upgrades with the installation of two stop modular elevators, four restroom renovations, and two new high/low drinking fountains. The contractor for this project was PCL Construction and the architect was MSP Architects.

Project Timeline

The project was approved by the Board on May 19, 2017, and subsequently awarded to a contractor on August 4, 2020. Initially, the completion date was projected to be August 12, 2022; however, the project was completed on June 3, 2022. The table below details the project’s timeline.

Table A.13 – Project Timeline

Activity	Date
Start Date per the NTP	9/2/2020
Projected Substantial Completion Date per NTP	7/13/2022
Actual Substantial Completion Date (Cert. of Subst. Comp.)	6/3/2022
Days Early	40

Source: Created by MGT, information from LAUSD

As illustrated above, this project was completed 40 days before the projected completion date.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Project Construction and Cost Data

The Board approved a budget of \$7,221,209 for this project. The project was competitively bid, with a total of three bidders submitting proposals. Ultimately, LAUSD awarded the best value project to PCL Construction. The project was completed at an actual cost of \$7,736,392, which was 7.1 percent over the original budget. LAUSD separated the costs associated with this project into Site & Environmental, Plans, Construction, Management, and Other Costs & Reserve categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.14 – Project Costs by Category

Category	Amount	% of Total
Site & Environmental	\$12,681	0%
Plans	\$585,925	8%
Construction	\$6,406,597	83%
Management	\$729,314	9%
Other Costs & Reserve	\$1,875	0%
Total	\$7,736,392	100%

Source: Created by MGT, information from LAUSD

As shown above, the construction-related costs accounted for approximately 83 percent of the total project costs. This allocation is 3 percent above the industry best practices, which typically range from 70 to 80 percent. The table below and on the next page details the project's construction and cost data.

Table A.15 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Site & Environmental	\$31,500	(\$18,819)	\$12,681
Plans	\$799,683	(\$213,758)	\$585,925
Construction	\$5,553,259	\$853,338	\$6,406,597
Management	\$383,008	\$346,306	\$729,314
Other Costs & Reserve	\$453,759	(\$451,884)	\$1,875
Total	\$7,221,209	\$515,183	\$7,736,392

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Category	Original Board Approved Budget	Budget Modifications	Actuals
Total Hard Costs*	\$5,584,759	\$834,519	\$6,419,278
Total Soft Costs**	\$1,636,450	(\$319,336)	\$1,317,114
Under/(Over) Original Budget			(\$515,183)
Under/(Over) Original Budget %			(7.1%)
Square Footage			32,270
Hard Cost per Square Foot			\$198.92
Total Cost per Square Foot			\$239.74

Source: Created by MGT, information from LAUSD

*-Hard Costs = Site and Environmental + Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

As shown in the table above, the actual costs were approximately \$515,813 over the original budget. Project costs were affected by several factors including:

- Additional information technology (IT) assistance for classroom disconnect. Reconnect and framing and structural elements which differed from the original design, and other necessary structural requirements due to the historic nature of the building.
- COVID-19-related additional costs.
- A Contractor staging area office and restroom were needed to separate Contractor and LAUSD project staff for safer work conditions.

Change Orders

During the course of the project, 81 change orders in the amount of \$932,533 were issued. A review of the change orders showed over 80% were related to unforeseen conditions, and 16% were due to design deficiencies. The table below provides an overview of the change orders.

Table A.16 – Change Orders

Change Orders	Cost
Course of Construction Scope Addition	\$969,815
Design Scope Addition	\$43,017
Owner Initiated Scope Addition	\$7,202
Owner Initiated Scope Deletion	(\$87,500)
Total	\$932,534

Source: Created by MGT

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Hollywood HS – Roofing – COLIN ID: 10370103

School Profile

Name	Hollywood HS
Year Open	1910
Enrollment	1,052
Free or Reduced Meals	90 percent of the students are eligible for free or reduced-price meals

Project Overview

Project scope was to replace approximately 66,545 square feet of deteriorated roofing on 7 of 29 buildings with new PVC roofing and metal flashing. The scope of work also included the replacement of damaged wood in kind, installation of new gutters and downspouts, paint to match existing areas affected in the roof demolition, replacement of skylights in kind, remove solar panels, replacement equipment in kind, exhaust fan and gravity vents with existing roof mounted HVAC units and ductwork at other buildings to be protected in place. The project included 85,437 square feet of waterproofing on Physical Education deck and Shop/Home Making deck.

Project Timeline

This project was approved by the Board on November 13, 2018, and subsequently awarded to a contractor on April 7, 2022. Initially, the completion date was projected to be May 31, 2023; however, the project was completed early on November 27, 2023. The table below details the project's timeline.

Table A.17– Project Timeline

Activity	Date
Start Date per the NTP	6/1/22
Projected Substantial Completion Date per NTP	5/1/23
Actual Substantial Completion Date (Cert. of Subst. Comp.)	11/27/23
Days Late	210

Source: Created by MGT, information from LAUSD

As illustrated above, this project was completed 210 days after the projected completion date.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Project Construction and Cost Data

The Board approved a budget of \$1,553,680 for this project. The project was completed at an actual cost of \$2,979,797, which was 91.8 percent over the original budget. LAUSD separated the costs associated with this project into the Plans, Construction, and Management categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.18 – Project Costs by Category

Category	Amount	% of Total
Plans	\$11,825	0%
Construction	\$2,916,623	98%
Management	\$51,349	2%
Total	\$2,979,797	100%

Source: Created by MGT, information from LAUSD

As shown above, the construction-related costs accounted for approximately 98 percent of the total project costs. This allocation is higher than the best industry practices, which typically range from 70 to 80 percent.

The table below and on the next page details the project's construction and cost data.

Table A.19 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Plans	\$23,469	(\$11,644)	\$11,825
Construction	\$1,404,868	\$1,511,755	\$2,916,623
Management	\$10,000	\$41,349	\$51,349
Other Costs & Reserve	\$115,343	(\$115,343)	\$0
Total	\$1,553,680	\$1,426,117	\$2,979,797

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Category	Original Board Approved Budget	Budget Modifications	Actuals
Total Hard Costs*	\$1,404,868	\$1,511,755	\$2,916,623
Total Soft Costs**	\$148,812	(\$85,638)	\$63,174
Under/(Over) Original Budget			(\$1,426,117)
Under/(Over) Original Budget %			(91.8%)
Square Footage			57,838
Hard Cost per Square Foot			\$50.43
Total Cost per Square Foot			\$51.52

Source: Created by MGT, information from LAUSD

*-Hard Costs = Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

As shown in the table above, the actual costs were approximately \$1,426,117 over the original budget. The budget was modified prior to the start of construction in order to award the construction contract with 15% change order contingency.

Change Orders

The District approved 4 change orders totaling \$209,744 during the project's course. The table below provides an overview of the change orders.

Table A.20 – Change Orders

Change Orders	Cost
Course of Construction Scope Addition	\$4,189
Owner Initiated Scope Addition	\$24,149
Other - Undefined or Unknown	\$181,406
Total	\$209,744

Source: Created by MGT, information from LAUSD

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Los Angeles Center for Enriched Studies Span – Roofing – COLIN ID: 10370863

School Profile

Name	Los Angeles Center for Enriched Studies
Year Open	1979
Enrollment	1,287 Students
Free or Reduced Meals	54 percent of the students are eligible for free or reduced-price meals

Project Overview

This project was to provide approximately 20,000 square feet of new roofing at 8 buildings, including the installation of new gutters and downspouts and painting of affected areas. The scope of work also included addressing water damage repairs at the lunch shelter by replacing deteriorated wood beams, attic vents, and providing new acoustic ceiling material.

Project Timeline

This project was approved by the Board on October 1, 2019, and subsequently awarded to a contractor on February 15, 2023. Initially, the substantial completion date was projected to be February 4, 2024; however, the project was completed early on January 31, 2024. The table below details the project's timeline.

Table A.21 – Project Timeline

Activity	Date
Start Date per the NTP	3/7/23
Projected Substantial Completion Date per the NTP	2/4/24
Actual Substantial Completion Date (Cert. of Subst. Comp.)	1/31/24
Days Early	4

Source: Created by MGT, information from LAUSD

As illustrated above, this project was completed 4 days before the projected completion date.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Project Construction and Cost Data

The Board approved a budget of \$1,251,581 for this project. This project had no change orders. The project was completed at an actual cost of \$1,147,825, which was 8.3 percent under the original budget. LAUSD separated the costs associated with this project into the Plans, Construction, and Management categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.22 – Project Costs by Category

Category	Amount	% of Total
Plans	\$14,557	1%
Construction	\$1,079,701	94%
Management	\$53,567	5%
Total	\$1,147,825	100%

Source: Created by MGT, information from LAUSD

As shown above, the construction-related costs accounted for approximately 94 percent of the total project costs. This allocation is higher than the best industry practices, which typically range from 70 to 80 percent.

The table below and on the next page details the project's construction and cost data.

Table A.23 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Plans	\$30,500	(\$15,943)	\$14,557
Construction	\$1,119,416	(\$39,715)	\$1,079,701
Management	\$10,000	\$43,567	\$53,567
Other Costs & Reserve	\$91,665	(\$91,665)	\$0
Total	\$1,251,581	(\$103,756)	\$1,147,825

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Category	Original Board Approved Budget	Budget Modifications	Actuals
Total Hard Costs*	\$1,119,416	(\$39,715)	\$1,079,701
Total Soft Costs**	\$132,165	(\$64,041)	\$68,124
Under/(Over) Original Budget			\$103,756
Under/(Over) Original Budget %			8.3%
Square Footage			15,620
Hard Cost per Square Foot			\$69.12
Total Cost per Square Foot			\$73.48

Source: Created by MGT, information from LAUSD

*-Hard Costs = Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

As shown in the table above, the actual costs were approximately \$103,756 under the original budget. Key factors that impacted the overall project cost included:

- A budget modification prior to the start of construction to award the construction contract with a 15% change order contingency.
- The bid amount exceeded the estimated cost due to an expanded scope associated with the lunch shelter.
- The replacement of deteriorated roof joists and beams greatly increased after the project definition.
- Additional joists/beams had to be replaced for the new roof and roof underlayment to be properly installed.

Change Orders

There were no change orders issued for this project.

Los Angeles Unified School District
Construction Cost Analysis Final Draft Report
Appendix B

Ramona ES – ADA Improvements – COLIN ID: 10370084

School Profile

Name	Ramona Elementary School
Year Open	1909
Enrollment	273
Free or Reduced Meals	95 percent of the students are eligible for free or reduced-price meals

Project Overview

Some of the buildings at Ramona Elementary School have been identified as historical structures. Currently 109 students with disabilities attend the school or programs on campus, thus the school was assigned a Category 1B accessibility, high accessibility, level. To meet this designation, various site upgrades were required such as assistive listening devices, three concrete ramp upgrades, new doors, drinking fountains, intercoms, and multiple upgrades to ease mobility around campus. The contractor for this best value project was Fredrick Towers.

Project Timeline

This project was approved by the Board on November 13, 2018, and subsequently awarded to a contractor on March 11, 2022. The project was divided into two phases, each with its unique Notice to Proceed, Projected Substantial Completion Date, and Actual Substantial Completion Date. Phase 1 was expected to be substantially completed on January 15, 2023, and Phase 2 was expected to be completed on April 1, 2024. The table below details the project's timeline.

Table A.24 – Project Timeline

Activity	Phase 1 Date	Phase 2 Date
Start Date per the NTP	3/22/2022	12/4/2023
Projected Substantial Completion Date per the NTP (Phase 1)	12/16/2023	4/1/2024
Projected Completion Date per the NTP (Phase 2)		
Actual Substantial Completion Date (MGT Project Data Table_250314 for Phase 1 & Cert. of Subst. Comp. for Phase 2)	1/26/2023*	3/26/2024
Days Late / (Early)	11	(6)

Source: Created by MGT, information from LAUSD

* - There were no Certificates of Substantial Completion or Notices of Completion provided to MGT. The completion dates could not be verified.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

As illustrated above, Phase 1 was completed 11 days after the projected completion date, and Phase 2 was completed 20 days after the estimated projected date of substantial completion. MGT's review of project documentation revealed that the primary driver of the project's completion being late was the issuance of multiple change orders near the project's completion.

Project Construction and Cost Data

The Board approved a total budget of \$6,650,121 for this project. The project was completed at an actual cost of \$3,325,834, which was 50.0 percent under the original budget.

LAUSD separated the costs associated with this project into the Site & Environmental, Plans, Construction, Management and Other Costs & Reserve categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.25 – Project Costs by Category

Category	Amount	% of Total
Site & Environmental	\$74,548	2%
Plans	\$403,493	13%
Construction	\$2,327,620	71%
Management	\$520,063	14%
Other Costs & Reserve	\$110	0%
Total	\$3,325,834	100%

Source: Created by MGT, information from LAUSD

As shown in the table above, the construction-related costs accounted for approximately 71 percent of the total project costs. This allocation is in line with best industry practices, which typically range from 70 to 80 percent.

The table on the next page details the project's construction and cost data.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Table A.26 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Site & Environmental	\$102,336	(\$27,788)	\$74,548
Plans	\$711,559	(\$308,066)	\$403,493
Construction	\$4,977,168	(\$2,649,548)	\$2,327,620
Management	\$694,782	(\$174,719)	\$520,063
Other Costs & Reserve	\$164,276	(\$164,166)	\$110
Total	\$6,650,121	(\$3,324,287)	\$3,325,834
Total Hard Costs*	\$5,079,504	(\$2,677,336)	\$2,402,168
Total Soft Costs**	\$1,570,617	(\$646,951)	\$923,666
Under/(Over) Original Budget			\$3,324,287
Under/(Over) Original Budget %			50%
Square Footage***			NA
Hard Cost per Square Foot			NA
Total Cost per Square Foot			NA

Source: Created by MGT, information from LAUSD

*-Hard Costs = Site and Environmental + Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

***-ADA Improvements Project. Not Square Footage provided.

As shown in the table above, the actual costs were approximately \$3,334,287 under the original budget. The project costs were affected by a change in project scope, which decreased the overall cost. This change included the removal of the elevator from the project scope, resulting in a reduction in planning and design, insurance, and project management costs.

Change Orders

During the course of the projects, 21 change orders totaling \$202,991 were issued. The table below provides an overview of the change orders.

Table A.27 – Change Orders

Change Orders	Cost
Abatement	\$7,263
Course of Construction Scope Addition	\$195,728
Total	\$202,991

Source: Created by MGT, information from LAUSD

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Sun Valley Magnet MS – HVAC – COLIN ID: 10369710

School Profile

Name	Sun Valley Magnet School
Year Open	1950
Enrollment	1,279
Free or Reduced Meals	94 percent of the students are eligible for free or reduced-price meals

Project Overview

This project was the installation of a new HVAC system for Building C. This included the installation of several features necessary to properly install the system including new gas lines, CO2 sensors, air and water testing, and materials abatement as needed. Portable air conditioning units were provided as an interim solution until the completion of this project. The contractor for this project was Beta Investments & Contracts, Inc.

Project Timeline

The project was approved by the Board on May 8, 2018, and subsequently awarded to a contractor on October 13, 2020. Initially, the completion date was projected to be April 19, 2022; however, the project was completed early on January 4, 2022. The table below details the project's timeline.

Table A.28 – Project Timeline

Activity	Date
Start Date per the NTP	10/26/2020
Projected Substantial Completion Date per the NTP	3/20/2022
Actual Substantial Completion (Cert. of Subst. Comp.)	1/4/2022
Days Early	(75)

Source: Created by MGT, information from LAUSD

As shown above, this project was completed 75 days ahead of schedule. Due to the COVID-19 pandemic and the school closure, the contractor had access to the entire building without any students or staff present. This allowed the contractor to finish the work earlier than anticipated.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Project Construction and Cost Data

The Board approved a budget of \$3,770,837 for this project. The project was best value bid, with a total of 12 bidders submitting proposals. Ultimately, LAUSD awarded the best value to Beta Investments & Contracts, Inc. The project was completed at an actual cost of \$4,032,483, which was 6.9 percent over the original budget.

LAUSD separated the costs associated with this project into the Site & Environmental, Plans, Construction, Management, and Other Costs & Reserve categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.29 – Project Costs by Category

Category	Amount	% of Total
Site & Environmental	\$39,608	1%
Plans	\$561,646	14%
Construction	\$3,158,237	78%
Management	\$272,467	7%
Other Costs & Reserve	\$525	0%
Total	\$4,032,483	100%

Source: Created by MGT, information from LAUSD

As shown above, the construction-related costs accounted for approximately 78 percent of the total project costs. This allocation is in line with best industry practices, which typically range from 70 to 80 percent.

The table below and on the next page details the project's construction and cost data.

Table A.30 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Site & Environmental	\$3,000	\$36,608	\$39,608
Plans	\$416,109	\$145,537	\$561,646
Construction	\$2,889,897	\$268,340	\$3,158,237
Management	\$210,814	\$61,653	\$272,467
Other Costs & Reserve	\$251,017	(\$250,492)	\$525
Total	\$3,770,837	\$261,646	\$4,032,483

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Category	Original Board Approved Budget	Budget Modifications	Actuals
Total Hard Costs*	\$2,892,897	\$304,948	\$3,197,845
Total Soft Costs**	\$877,940	(\$43,302)	\$834,638
Under/(Over) Original Budget			(\$261,646)
Under/(Over) Original Budget %			(6.9%)
Square Footage			42,200
Hard Cost per Square Foot			\$75.78
Total Cost per Square Foot			\$95.56

Source: Created by MGT, information from LAUSD

*-Hard Costs = Site and Environmental + Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

As shown in the table above, the actual costs were approximately \$261,646 over the original budget. Though the project was completed before the projected completion date, the project costs were slightly more than the original construction contract the District agreed to. The increase in project costs can be attributed to additions and changes made to the original project scope. It was determined at some point after the 50% completion mark that it would be more cost-efficient to change the design from a Heat Pumps Refrigeration system to a Variable Refrigerant Frequency System. The change was noted to decrease the number of units needed, decrease future maintenance costs, and reduce the overall noise level.

The late change in the systems design required significant work that was not originally planned for, including the architect firm having to revise its documents, plans and calculations of electrical loads. Furthermore, extra costs were also required related to the removal of radiators, pipes, and other accessories, which were not included in the original contract.

Change Orders

A review of the 21 change orders, totaling \$641,112 for this project, revealed that 67% were attributed to unforeseen conditions and design deficiencies, and 33% to other or undefined causes. The table on the next page provides an overview of the change orders.

Los Angeles Unified School District
Construction Cost Analysis Final Draft Report
Appendix B

Table A.31 – Change Orders

Change Orders	Cost
Abatement	\$37,641
Administrative Change	\$26,108
Course of Construction Scope Addition	\$56,285
Design Scope Addition	\$150,996
Design Scope Deletion	(\$895)
Owner Initiated Scope Addition	\$150,823
Undefined	\$220,154
Total	\$641,112

Source: Created by MGT, information from LAUSD

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Venice HS – Comprehensive Modernization – Colin ID: 10366807

School Profile

Name	Venice High School
Year Open	1925
Enrollment	2,223
Free or Reduced Meals	64 percent of the students are eligible for free or reduced-price meals

Project Overview

The Venice High School Comprehensive Modernization project involved significant upgrades including the demolition of old buildings, construction of new classrooms and a gymnasium, upgrades to sports facilities, site-wide infrastructure improvements, and ensuring compliance with various state and federal regulations. The contractor for this project was Hensel Phelps. The architect was NAC Architecture.

Project Timeline

This project was approved by the Board on February 9, 2016, and subsequently awarded to Hansel Phelps on July 27, 2017. The project was divided into several packages, each with a unique Notice to Proceed date, Projected Substantial Completion Date, and Actual Substantial Completion Date. The table below and on the next page details the project's timeline.

Table A.32 – Project Timeline

Activity	Notice to Proceed (NTP)	Projected Completion Date	Actual Substantial Completion Date	Days Late (Early)
NTP C1 - Package 2A Interim buildings North	5/7/2018	8/13/2018	Not Available*	N/A
NTP C1 - Package 2B Interim buildings South	5/7/2018	8/13/2018	Not Available*	N/A
NTP C1 - Package 9 - Sitewide Utilities	5/7/2018	6/10/2022	10/27/2022	139
NTP C2 - Package 1 NE Lot + LADWP Service	6/20/2018	3/1/2019	7/27/2022	1,244
NTP C3 - Tennis Courts	7/9/2018	11/17/2018	5/7/2019	174
NTP C4 - Package 3 - Building B	10/2/2018	5/1/2020	4/24/2020	(7)
NTP C5 - Package 4 - Building A	12/5/2018	6/15/2020	9/9/2020	86

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Activity	Notice to Proceed (NTP)	Projected Completion Date	Actual Substantial Completion Date	Days Late (Early)
NTP C6 - Package 5- Building D,F1,F2,G Quads,etc.	4/26/2019	1/14/2022	5/7/2021	(252)
NTP C7 - Package 6 - Building C	6/3/2019	1/14/2022	2/11/2022	28
NTP C8 - Package 8 - Auditorium ADA	8/19/2019	6/7/2022	2/7/2022	(120)
NTP C8 - Package 7 - Fields, Courts and Parking	8/19/2019	6/7/2022	12/21/2022	197

Source: Created by MGT, information from LAUSD *

*- There were no Certificates of Substantial Completion or Notices of Completion provided to MGT. The completion dates could not be verified.

Table A.33 – Overall Project Timeline

Activity	Date
Start Date per NTP #4	10/2/2018
Projected Completion Date per NTP #8	6/7/2022
Actual Substantial Completion (NTP#8) (MGT Project Data Table_250314*)	1/4/2022
Days Early	154

Source: Created by MGT, information from LAUSD

As illustrated above, this project was broken down into 11 packages. MGT obtained the Actual Substantial Completion Date for 9 of these packages. The analysis disclosed that 3 out of the 9 packages were completed between 7 and 252 days early. The remaining 6 packages were completed between 28 and 1,244 days late. The primary drivers of the project being completed late included:

- Multiple design changes, requested by the community and school, were made during the planning phase which involved the baseball and softball field and the surrounding spaces.
- The need to relocate the Los Angeles Department of Water and Power (LADWP) electrical service yard to address neighbor concerns.
- Coordination of a solar agreement with LADWP.
- Unforeseen issues during the demolition and removal of a utility tunnel and the replacement of existing football field lights due to a recall.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Project Construction and Cost Data

The Board approved a budget of \$111,491,261 for this project. The project was completed at an actual cost of \$156,907,036 which was 40.7 percent over the original budget. LAUSD separated the costs associated with this project into the Site & Environmental, Plans, Construction, Management, and Other Costs & Reserve categories. The table on the next page presents the amount allocated to each category as a percentage of the project's total cost.

Table A.34 – Project Costs by Category

Category	Amount	% of Total
Site & Environmental	\$738,722	1%
Plans	\$17,434,455	11%
Construction	\$132,508,554	84%
Management	\$6,013,419	4%
Other Costs & Reserve	\$211,886	0%
Total	\$156,907,036	100%

Source: Created by MGT, information from LAUSD

As shown above, the construction-related costs accounted for approximately 84% percent of the total project costs. This allocation is higher than the best industry practices, which typically range from 70 to 80 percent. The table below and on the next page details the project's construction and cost data.

Table A.35 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Site & Environmental	\$832,500	(\$93,778)	\$738,722
Plans	\$7,988,351	\$9,446,104	\$17,434,455
Construction	\$88,980,263	\$43,528,291	\$132,508,554
Management	\$4,015,000	\$1,998,419	\$6,013,419
Other Costs & Reserve	\$9,675,147	(\$9,463,261)	\$211,886
Total	\$111,491,261	\$45,415,775	\$156,907,036
Total Hard Costs*	\$89,812,763	\$43,434,513	\$133,247,276
Total Soft Costs**	\$21,678,498	\$1,981,262	\$23,659,760

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Category	Original Board Approved Budget	Budget Modifications	Actuals
Under/(Over) Original Budget			(\$45,415,775)
Under/(Over) Original Budget %			(40.7%)
Square Footage			402,362
Hard Cost per Square Foot			\$331.16
Total Cost per Square Foot			\$389.70

Source: Created by MGT, information from LAUSD

*-Hard Costs = Site and Environmental + Construction

**-Soft Costs = Plans + Management + Other Costs and Reserve

As shown in the table above, the actual costs were approximately \$45,415,775 over the original budget. Key factors that impacted the overall project costs include:

- Prior to the start of construction, funds were added to the project to reflect the actual bid award and other associated costs.
- Multiple changes were made during the planning phase of the project.
- Several unforeseen issues during site demolition and development.
- The replacement of a large stretch of sewer main line.
- Additional inspections, including specialty inspections.

Change Orders

During the course of the project, 299 change orders in the amount of \$16,242,267 were issued. The table below provides an overview of the change orders.

Table A.36 Change Orders

Change Orders	Cost
Abatement	\$1,282,515
Administrative Change	\$85,599
Course of Construction Scope Addition	\$9,787,548
Course of Construction Scope Deletion	(\$901)
Delay	\$0
Design Scope Addition	\$13,628
Owner Initiated Scope Addition	\$5,062,064
Owner Initiated Scope Deletion	(\$103,089)
Undefined	\$114,903
Total	\$16,242,267

Source: Created by MGT, information from LAUSD

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Wonderland ES – Classroom Replacement – COLIN ID: 10367510

School Profile

Name	Wonderland Elementary School
Year Open	1926
Enrollment	426
Free or Reduced Meals	20 percent of the students are eligible for free or reduced-price meals

Project Overview

This project was to build two new classrooms for the school. The construction included expansion of parking area, addition of a new fence and gate, infrastructure upgrades to support the new structure, restoration of landscaping, hardscape, and playgrounds, and adherence to all regulatory requirements. The contractor for this project was Geronimo Concrete, Inc.

Project Timeline

The project was approved by the Board on June 13, 2017, and subsequently awarded to a contractor on February 21, 2021. Initially, the completion date was projected to be July 15, 2022; however, the project was not completed until May 26, 2023. The table below details the project's timeline.

Table A.37 – Project Timeline

Activity	Date
Start Date per the NTP	11/23/2020
Projected Substantial Completion Date per the NTP	5/16/2022
Actual Substantial Completion (Cert. of Subst. Comp.)	5/26/2023
Days Late	375

Source: Created by MGT, information from LAUSD

As illustrated above, this project was completed 375 days after the projected completion date. The duration of the project was extended, mainly due to supply-chain issues and unforeseen design challenges, contributing to a 12-month delay.

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Project Construction and Cost Data

The Board approved a budget of \$7,004,000 for this project. The project was competitively bid, with a total of six bidders submitting proposals. Ultimately, LAUSD awarded the project to the lowest bidder, Geronimo Concrete, Inc. The project was completed at an actual cost of \$11,367,361, which was 62.3 percent over the original budget.

LAUSD separated the costs associated with this project into the Site & Environmental, Plans, Construction, Management, and Other Costs & Reserve categories. The table below presents the amount allocated to each category as a percentage of the project's total cost.

Table A.38 – Project Costs by Category

Category	Amount	% of Total
Site & Environmental	\$108,418	1%
Plans	\$1,339,428	12%
Construction	\$8,420,612	73%
Management	\$1,491,540	14%
Other Costs & Reserve	\$7,363	0%
Total	\$11,368,361	100%

Source: Created by MGT, information from LAUSD

As shown above, the construction-related costs accounted for approximately 73 percent of the total project costs. This allocation is in line with best industry practices, which typically range from 70 to 80 percent. The table below and on the next page details the project's construction and cost data.

Table A.39 – Project Costs

Category	Original Board Approved Budget	Budget Modifications	Actuals
Site & Environmental	\$131,500	(\$23,082)	\$108,418
Plans	\$942,270	\$397,158	\$1,339,428
Construction	\$4,928,574	\$3,492,038	\$8,420,612
Management	\$574,472	\$917,068	\$1,491,540
Other Costs & Reserve	\$427,184	(\$419,821)	\$7,363
Total	\$7,004,000	\$4,363,361	\$11,367,361
Total Hard Costs**	\$5,060,074	\$3,468,956	\$8,529,030

Los Angeles Unified School District

Construction Cost Analysis Final Draft Report

Appendix B

Category	Original Board Approved Budget	Budget Modifications	Actuals
Total Soft Costs***	\$1,943,926	\$894,405	\$2,838,331
Under/(Over) Original Budget			(\$4,363,361)
Under/(Over) Original Budget %			(62.3%)
Square Footage			24,141
Hard Cost per Square Foot			\$353.30
Total Cost per Square Foot			\$470.87

Source: Created by MGT, information from LAUSD

As shown in the table above, the actual costs were approximately \$4,363,361 over the original budget. The project's budget increased due to several factors, including:

- Over-budget design and development costs, site-location challenges, and additional testing and inspection expenses. Supplemental geotechnical investigations were also needed due to micro fault lines, requiring additional special inspections and increased material testing costs.
- The contract awarded was 48% higher than the initial budget due to design adjustments and ADA compliance requirements.
- Additional scope was added, including retaining wall and playground enhancements. In addition, community input during the design process, contractor access logistics, and supply chain issues also impacted the scope and costs.

Change Orders

During the course of the project, 79 change orders totaling \$604,369 were issued. The table below provides an overview of the change orders.

Table A.40 – Change Orders

Change Orders	Cost
Abatement	\$11,851
Course of Construction Scope Addition	\$210,660
Design Scope Addition	\$213,235
Owner Initiated Scope Addition	\$161,217
Other - Undefined or Unknown	\$5,632
Value Engineering	\$1,775
Total	\$604,369

Source: Created by MGT, information from LAUSD