Donald Lum Elementary School

Repair & Replacement Study

23 January 2018

ALAMEDA UNIFIED SCHOOL DISTRICT

QUATTROCCHI KWOK ARCHITECTS

1495.05

PROJECT BACKGROUND

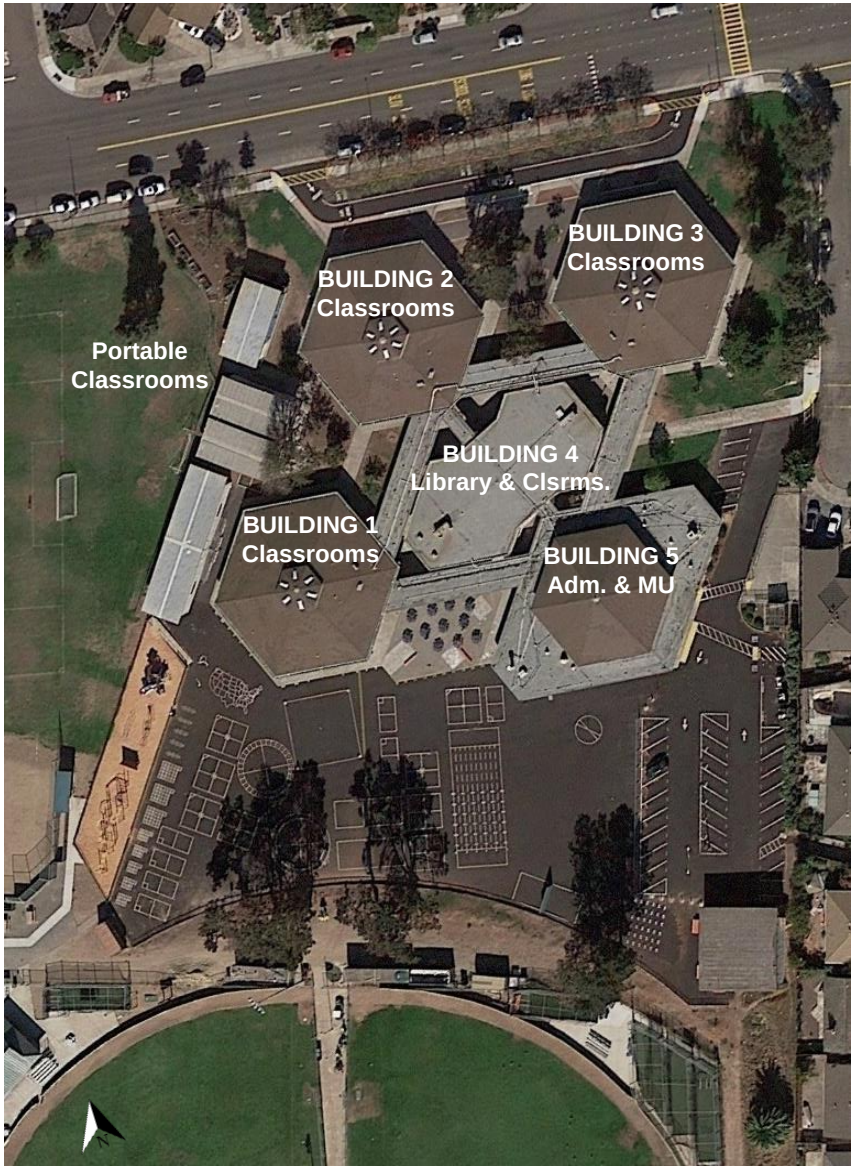
- Overview of Engineering Studies
  - Miller Pacific Geotechnical Report - March 17, 2017
  - High risk of liquefaction with potential earthquake induced settlement of 5 to 10 inches due to soil liquefaction
  - ZFA Structural Engineers
    - Existing shallow footings not designed for such a loss of bearing

… buildings will sustain more damage than they would otherwise be expected to during a large seismic event including partial building collapse and inoperable doors, thus severely limiting emergency exiting from the buildings. Both of these impacts are potential life-safety concerns.

- May 2017 Board Relocated Lum Students to Other Schools
- September 2017, District Request Study to Repair & Replace

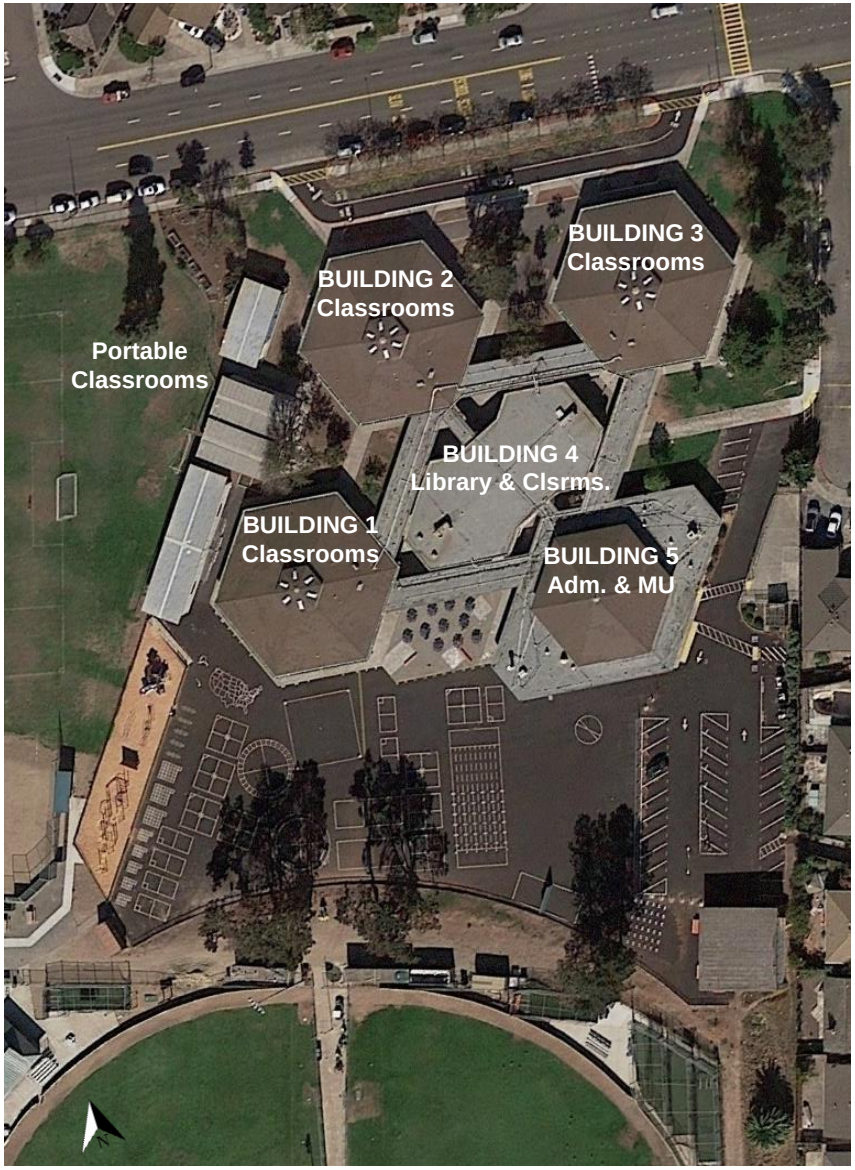
EXISTING CAMPUS

- 5-Buildings & Portables
  - 483 Students in 25-Classrooms
  - 40,840 SF
  - Wood, Steel & Masonry
- Site/ Building Accessibility
- Undersized Spaces
  - Classrooms
  - Adm./ Multi-Us
  - Other Education Specifications Shortcomings
- Modernization & Safety/ Security Needs



OPTION ONE – Seismic Upgrade to Existing Campus

- Seismic Upgrade
  - Maintains Campus Size
  - Significant & Invasive Work
  - Difficult Working Conditions
- Minimum DSA Requirements
  - Lengthy DSA Review Prior to Design
  - Include Access/ Fire-Life Safety
  - Existing Material Testing
- Seismic Upgrade Overview
  - Demolish Portions of Roofs, Walls & Covered Walks. Demo All Slabs
  - Deep Driven Concrete Piles – 90’
  - Large Concrete Grade Beams
  - New Slabs of 8 to 12-inches



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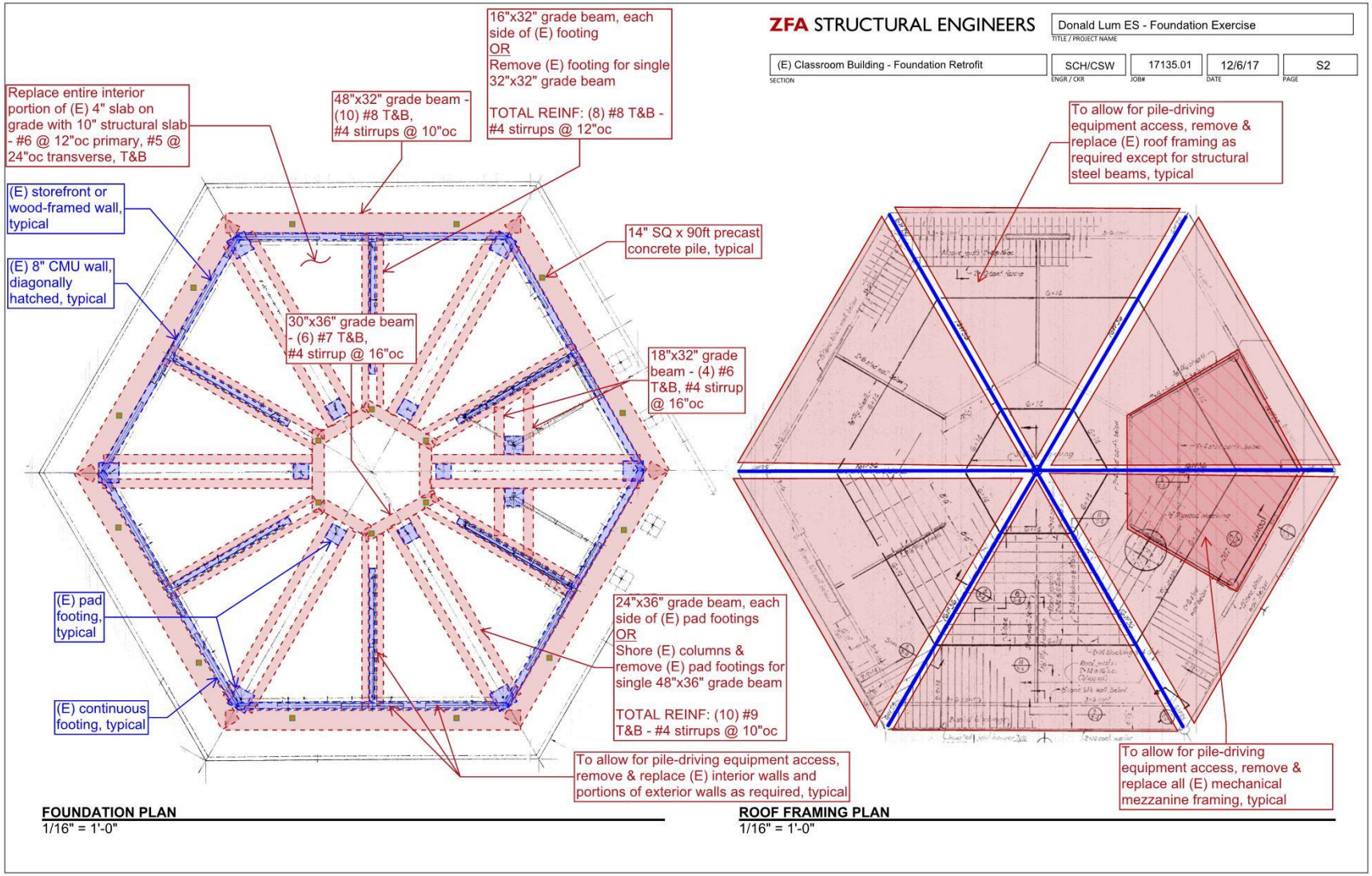

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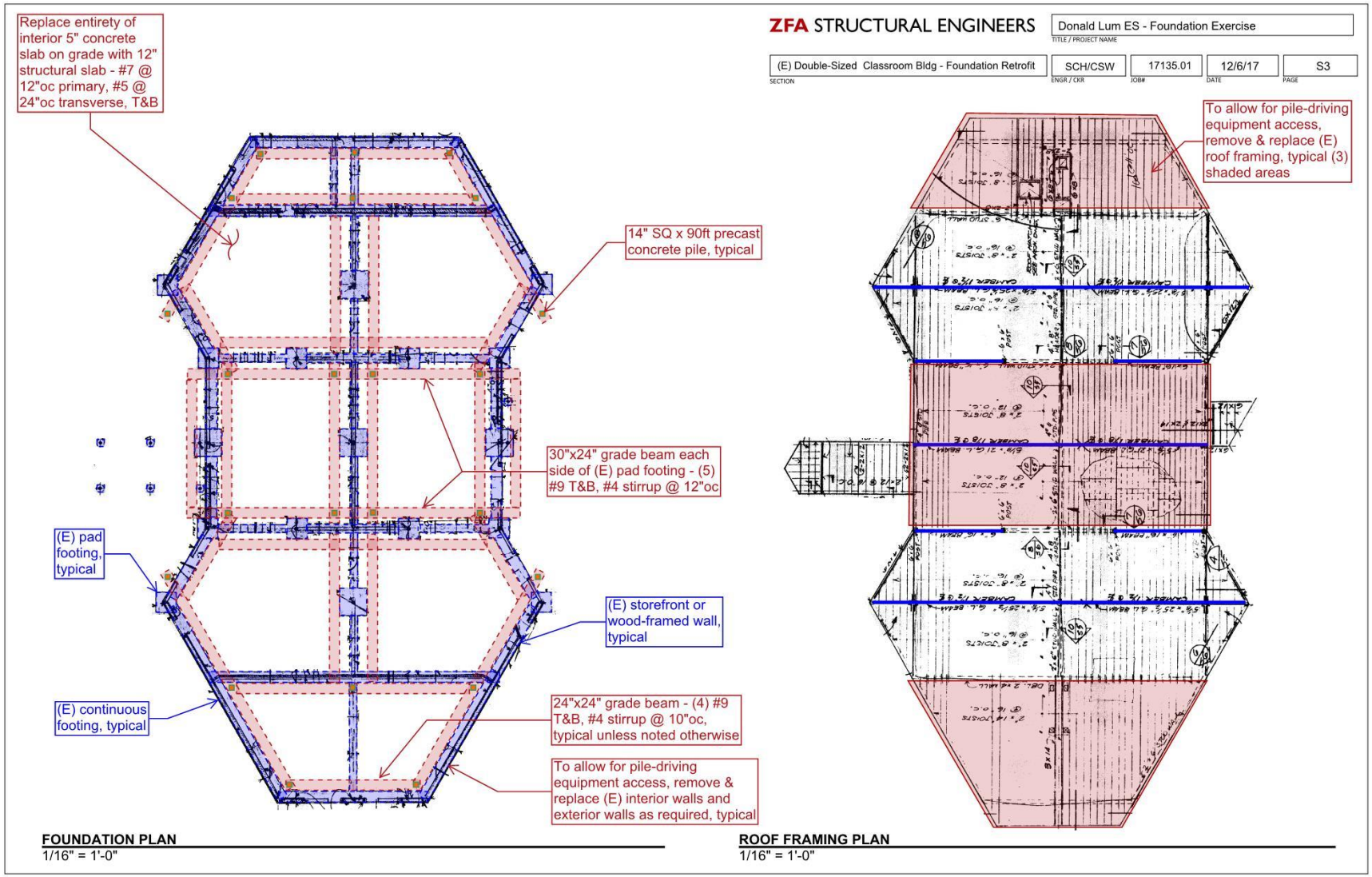

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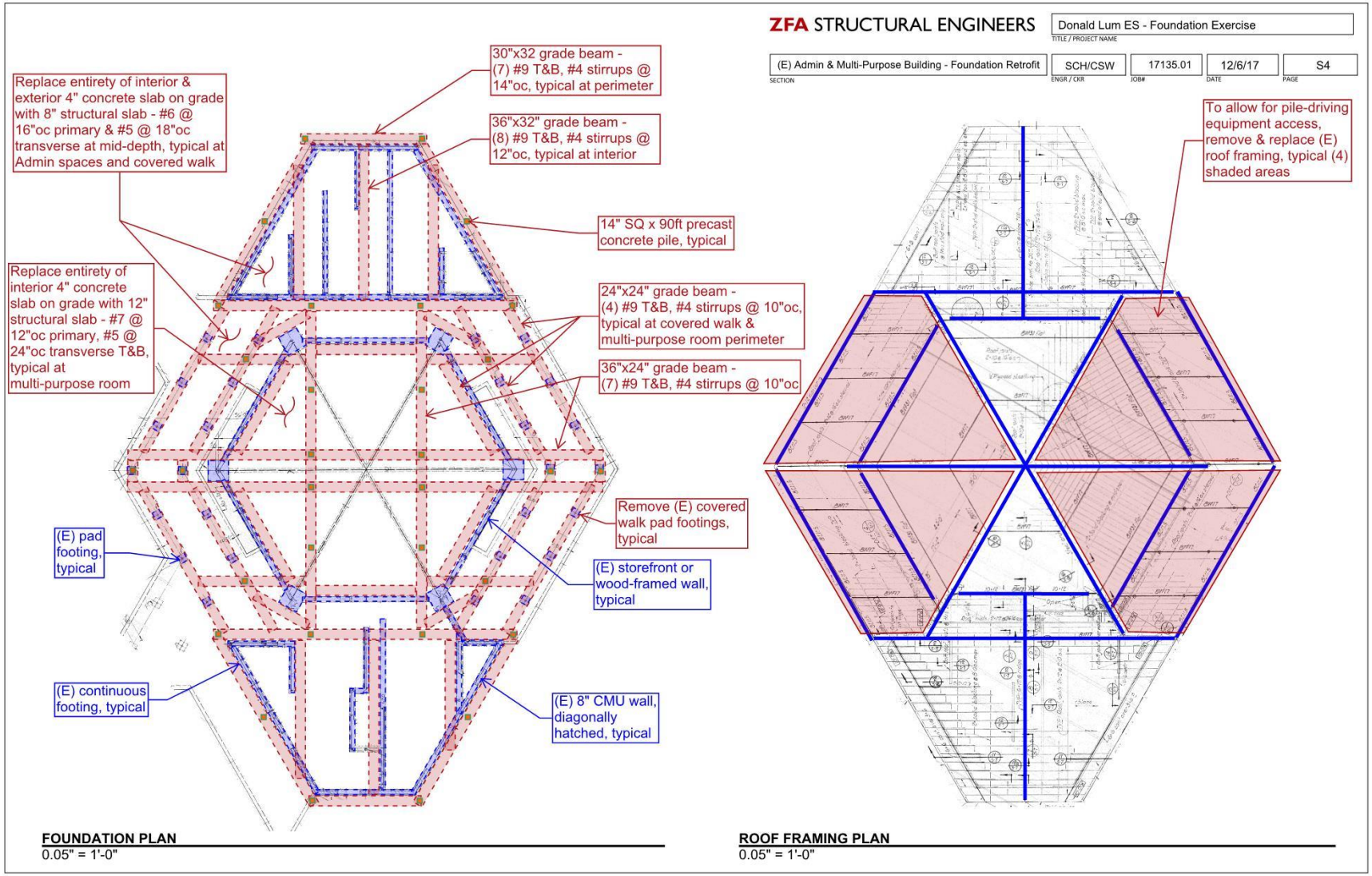
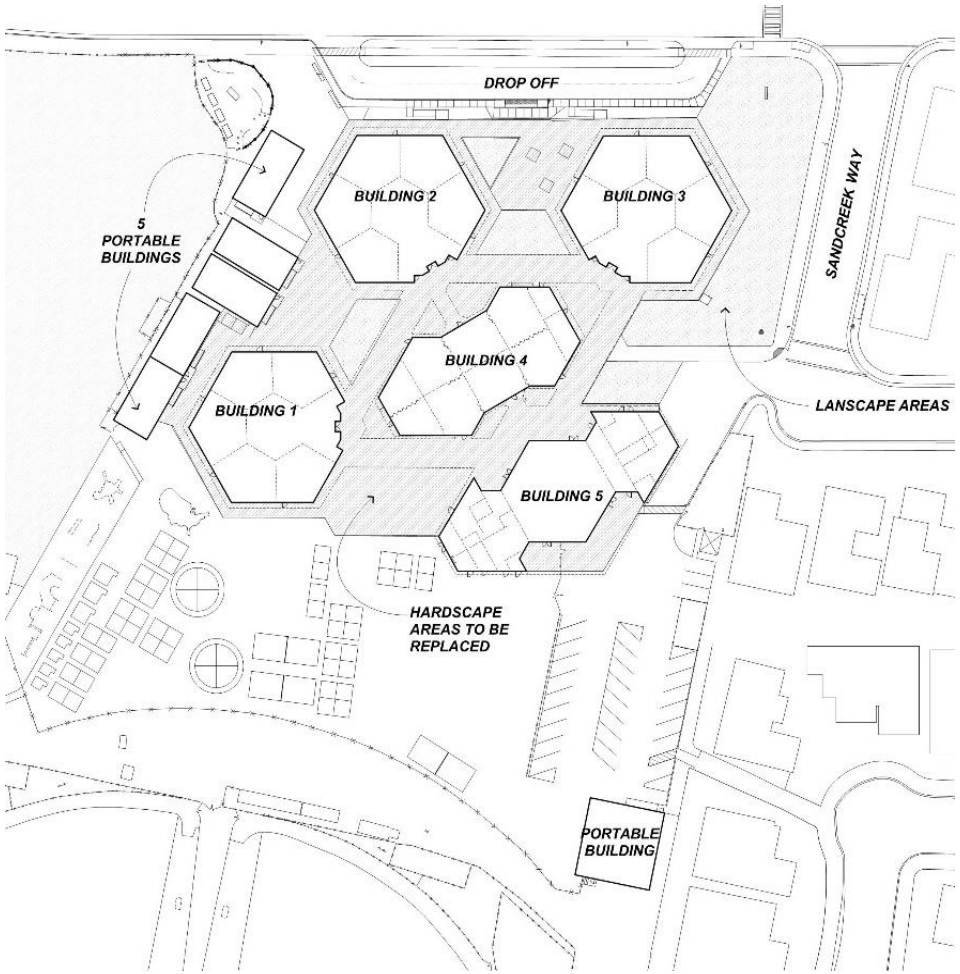


OPTION ONE – Seismic Upgrade to Existing Campus

- Other Required Upgrades
  - Replace Demolished Covered Walks and Wall/ Roof Framing
  - All New Finishes
  - Mech/ Electrical Systems
  - Reconfigure Toilet Rooms
  - Site Paving & Landscape Replaced (Blacktop reused)



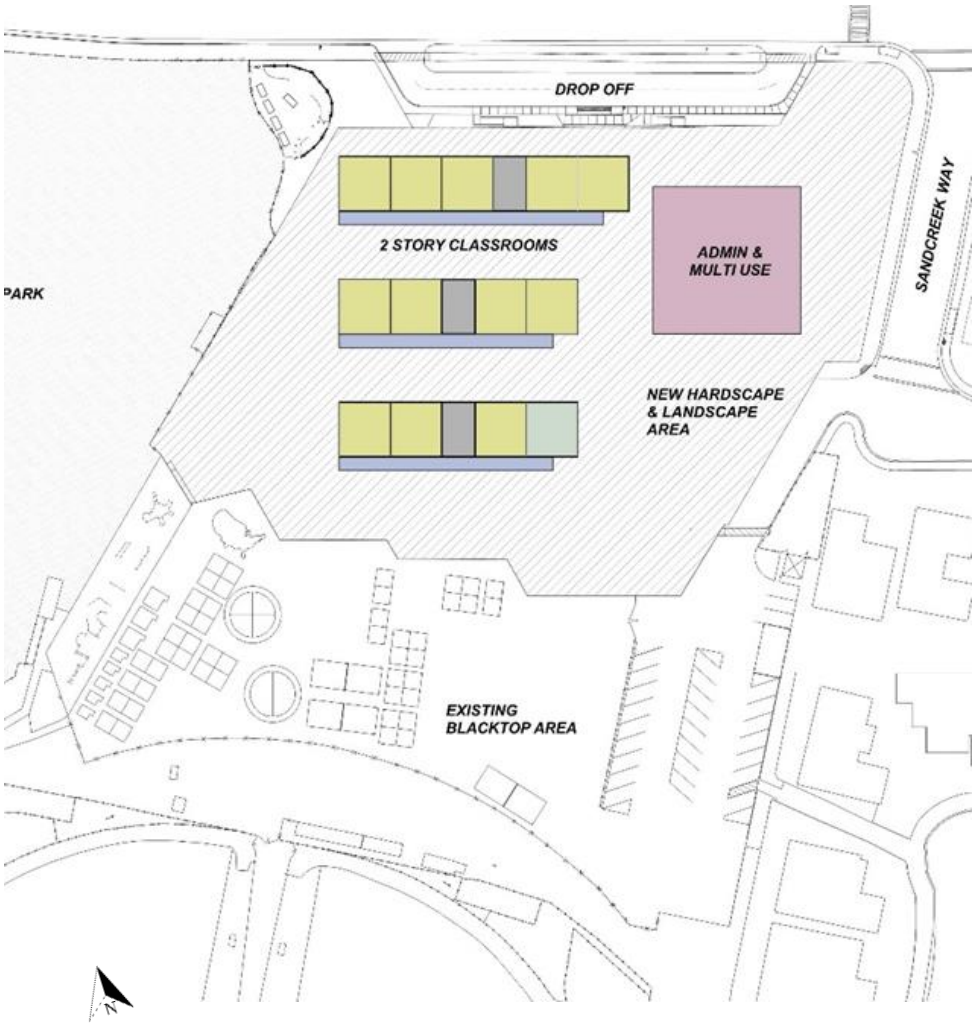
OPTION ONE – Seismic Upgrade to Existing Campus

Building	Area		$/SF	Cost	
Classroom Building 1	6,880	SF	592.93	$4,079,361	
Classroom Building 2	6,880	SF	592.93	4,079,361	
Classroom Building 3	6,880	SF	592.93	4,079,361	
Classroom Building 4	7,050	SF	592.93	4,180,159	
Administration & Multi-Use Building 5	7,550	SF	592.93	4,476,624	
Portable Buildings	5,600	SF	221.62	1,241,085	
Subtotal Buildings	40,840	SF			$22,135,949
Covered Walkway	10,070	SF	303.28	3,054,032	
Sitework	46,450	SF	27.52	1,278,498	
Subtotal Sitework					$4,332,530
					$26,468,479
Non-Construction Costs	30%				$7,940,544
TOTAL OPTION ONE Seismic Upgrade to Existing Campus - January 2018					$34,409,023

Today's Cost Excluding Escalation to Future Years of Construction

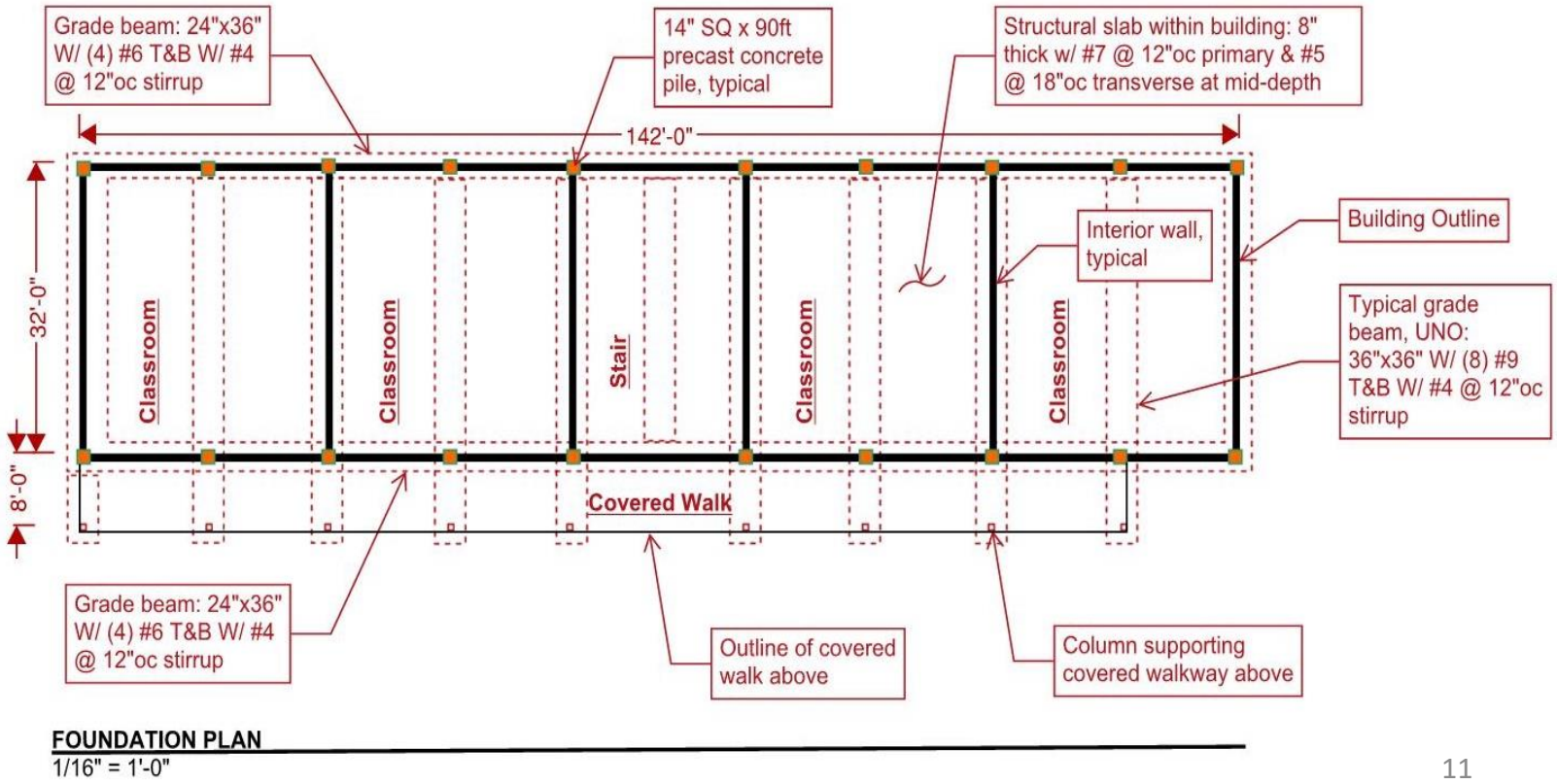
OPTION TWO – Replacement Campus

- Similar Size to Existing
  - Concept Sketch Only
  - 483 Students in 25-Classrooms
    - Meets State Size Standards
  - 44,385 SF
  - Replace Site Paving & Landscape (Blacktop reused)
- Two-Story Classroom Buildings
- Administration and Multi-Use Building
  - Remain as Undersized Spaces for Comparison Purposes



OPTION TWO – Replacement Campus

- New Construction allows opportunity to maximize foundation efficiency, which can save construction cost



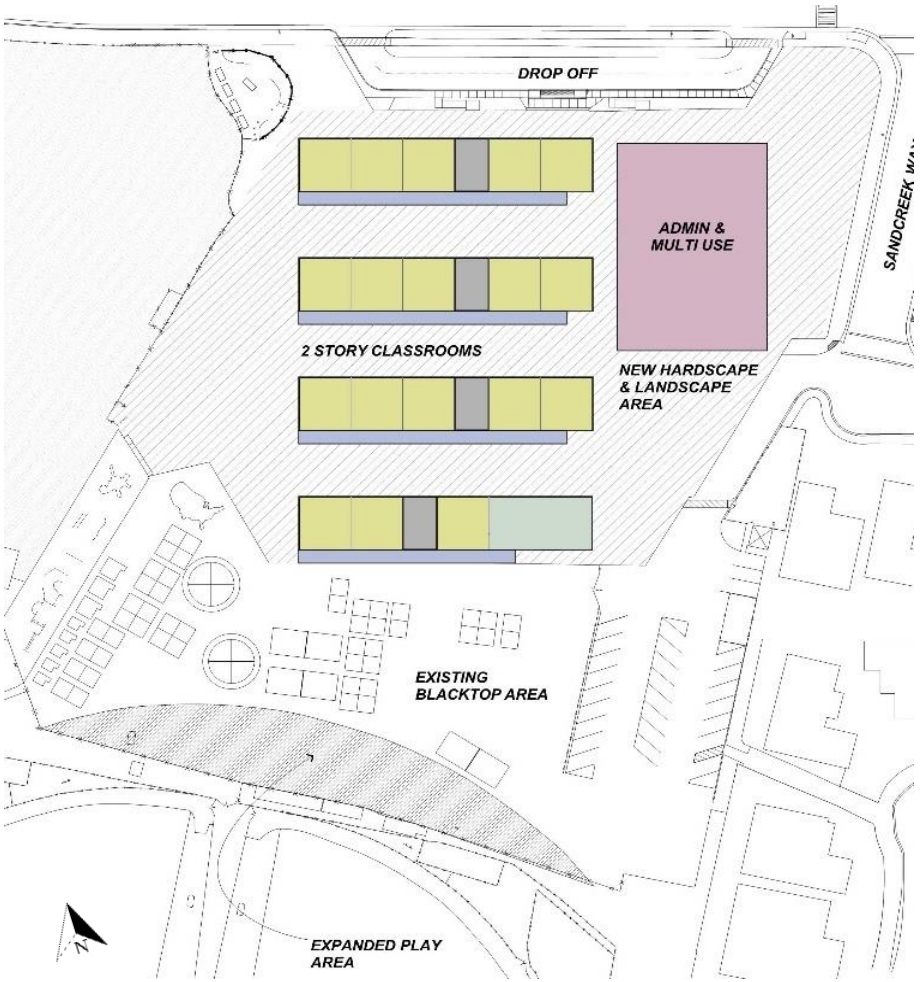
OPTION TWO – Replacement Campus

Building	Area		$/SF	Cost	
Two Story Classroom Buildings	36,835	SF	468.00	$17,238,780	
Admin & Multi-Use	7,550	SF	650.00	4,907,500	
Subtotal Buildings	44,385	SF			$22,146,280
Sitework	68,280	SF	45.29	3,092,685	
Subtotal Sitework					$3,092,685
					$25,238,965
Non-Construction Costs	30%				$7,571,689
TOTAL OPTION TWO - Campus Replacement January 2018					$32,810,654

Today's Cost Excluding Escalation to Future Years of Construction

OPTION THREE – Enlarged Replacement Campus

- Enlarged Campus Size
  - Concept Sketch Only
  - Up to 750 Students in 38-Classrooms
    - Meets State Size Standards
  - 67,110 SF
  - Replace Site Paving & Landscape (Blacktop reused)
  - Increase Playground Area
- Two-Story Classroom Buildings
- Enlarged Administration, Library & Multi-Use

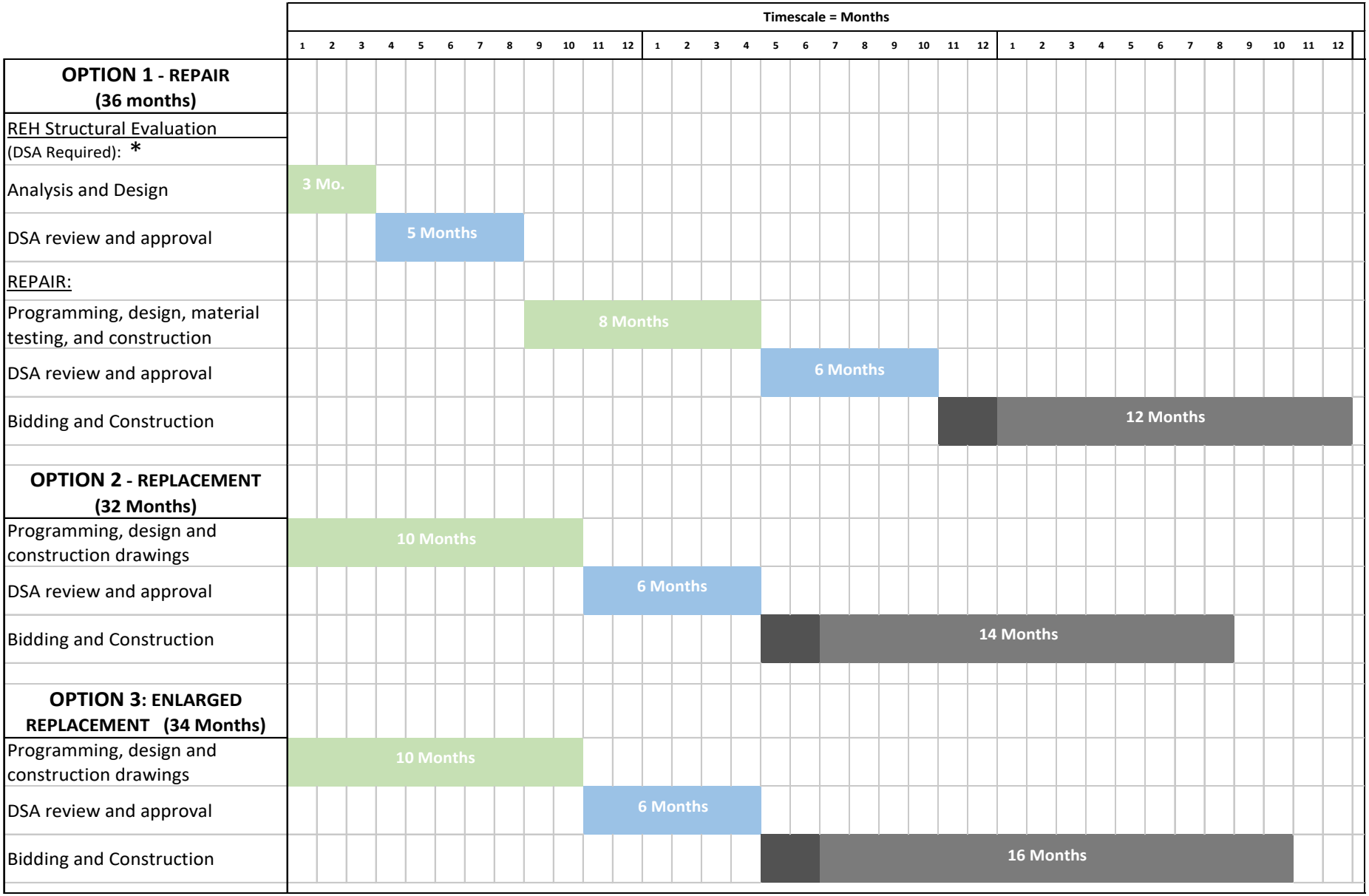


OPTION THREE – Enlarged Replacement Campus

Building	Area		$/SF	Cost	
Two Story Classroom Buildings	55,785	SF	468.00	$26,107,380	
Admin & Multi-Use	11,325	SF	650.00	7,361,250	
Subtotal Buildings	67,110	SF			$33,468,630
Sitework	60,000	SF	49.99	2,999,236	
Subtotal Sitework					$2,999,236
					$36,467,866
Non-Construction Costs	30%				$10,940,360
TOTAL OPTION THREE Enlarged Campus Replacement - January 2018					$47,408,226

Today's Cost Excluding Escalation to Future Years of Construction

SCHEDULE COMPARISION



* REH is a DSA review process required for the approval of a seismic rehabilitation/ repair project prior to commencing design

SUMMARY FINDINGS

Option	Gross Bld. Area (SF)	Number of Classrooms	Number of Students	Budget Projection (Const. & Soft Costs)
ONE – Seismic Upgrade of Existing Campus	40,840	25	483	$34.4 million
TWO – Campus Replacement	44,385	25	483	$32.8 million
THREE – Enlarged Campus Replacement	67,110	38	up to 750	$47.4 million

- Seismic Upgrade More Costly Than New Campus
  - Exceeds "50% Replacement Cost" Threshold by over 210%
- Option One:
  - Longest Schedule
  - Susceptible to Increased Costs for Unforeseen Condition
  - Does not Correct Undersized Classrooms, Administration & Multi-Use
- If Rehousing Students at Lum, Recommend Options Two or Three

NEXT STEPS

- If the direction from the Board is to pursue replacement or remediation of the Lum Elementary building:
  - Which of the three options?
  - Further Board action would be required during future open session meetings
  - Bond funds may have to be repurposed to provide funding for replacement or remediation

- If the direction from the Board is not to pursue replacement or remediation of the Lum Elementary building at this time
  - The matter may be referred to the District Advisory Committee (7-11) to review and analyze and to determine if the Lum Elementary property could be designated as “excess” or “surplus” because it will not be needed for school purposes

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Repair & Replacement Study

QUESTIONS?

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