THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

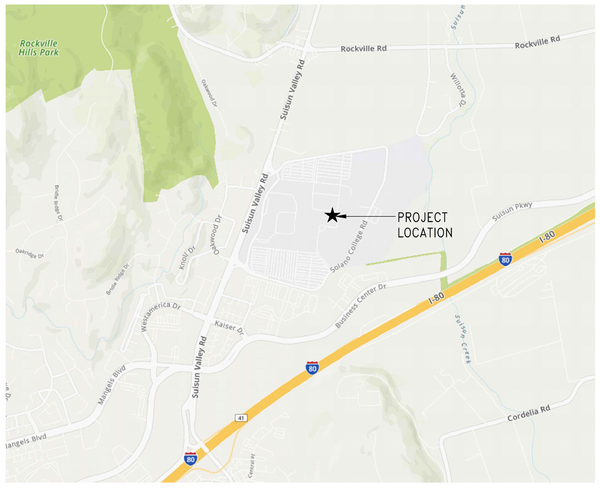
4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

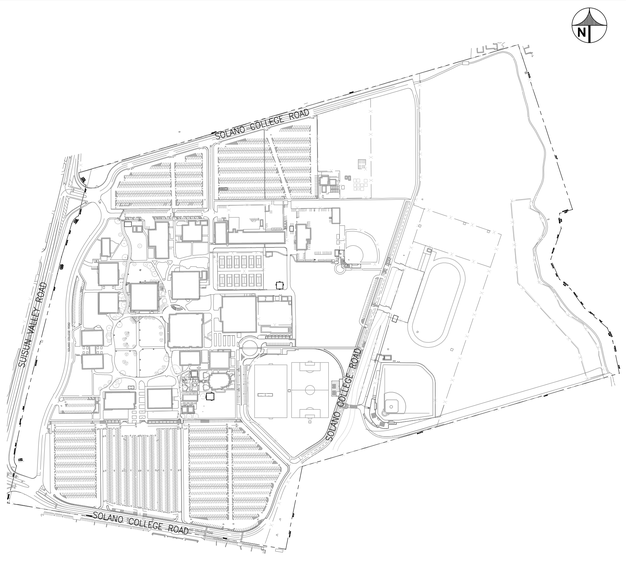
VICINITY MAP

SCALE: N.T.S.



SITE PLAN

SCALE: N.T.S.



SUMMARY OF WORK

1. THE INTENT OF THIS PROJECT IS TO REPLACE DEFICIENT SECTIONS OF THE EXISTING HYDRONIC HHW AND CHW DISTRIBUTION SYSTEM SERVING THE SOLANO CC CAMPUS. UPGRADES AND REPAIRS WILL CONSIST OF SELECTED UNDERGROUND HYDRONIC PIPING REPLACEMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: THE ADDITION OF ISOLATION VALVES, UTILITY VAULTS, AND UPGRADES AT (9) BUILDING MECHANICAL ROOMS SUCH AS REPLACEMENT OF HHW & CHW PUMPS, THE ADDITION OF CROSSOVER BRIDGES, BALANCING VALVES, ETC.

2. UNDERGROUND HYDRONIC CHW & HHW PIPING SHALL CONSIST OF:

   A. HHWS&R (ALL SIZES): PRE-FABRICATED THERMACOR FERRO-THERM (OR APPROVED EQUAL) STICKS, FITTINGS AND ANCHORS WITH THERMACOR PRESSURE TESTABLE JOINT CLOSURES. JOINTS SHALL BE WELDED.

   B. CHWS&R (12" & BELOW): PREFABRICATED SCH. 40 PVC THERMACOR CHILL-THERM (OR APPROVED EQUAL) STICKS WITH SOLVENT WELDED JOINTS. FITTINGS SHALL BE SCH. 80 PVC, FIELD INSULATED, WITH FIELD INSTALLED JOINT CLOSURES AT EACH JOINT. THRUST BLOCKS REQUIRED AT CHANGES OF DIRECTION FOR PIPE SIZES 8" AND ABOVE. JOINTS WITHIN VAULT SHALL UTILIZE SCH. 80 VAN STONE FLANGES.

   C. CHWS&R (14" ONLY): PREFABRICATED C900-DR18 THERMACOR CHILL-THERM (OR APPROVED EQUAL) STICKS WITH BELL & SPIGOT PUSH JOINTS. FITTINGS (AS NEEDED) SHALL BE C900-DR 18, B&G PUSH JOINT, FIELD INSULATED, WITH FIELD INSTALLED JOINT CLOSURES AT EACH PUSH JOINT. THRUST BLOCKS REQUIRED AT ALL CHANGES OF DIRECTION. UTILIZE DRESSER STYLE 62 TRANSITION COUPLING (OR APPROVED EQUAL) INSIDE VAULT(S) TO TRANSITION FROM C900-DR18 PVC PIPING TO SCH. 40 PVC PIPING.

   PRE-FABRICATED PIPING SHALL TERMINATE AT THE INTERIOR OF WALL PENETRATIONS (AT VAULTS OR OTHERWISE) AND FINISHED WITH A FACTORY END SEAL. FIELD INSTALLED SCH. 40 WELDED STEEL PIPING FOR HHW AND SCH. 40 PVC PIPING (W/ SCH. 80 FITTINGS) FOR CHW IS ACCEPTABLE AT INTERIOR SPACES. PROVIDE FIELD INSTALLED PYROGEL XTE INSULATION FOR HHW AND ARMACELL ARMAFLEX INSULATION FOR CHW, PVC JACKETING PIPE ID MARKERS, AND FLOW ARROWS. INSULATION AND JACKETING SHALL BE COMPLIANT WITH CEC, TITLE 24. DEZURIK BAW VALVES WITH EPDM SEALS RATED FOR DIRECT BURY USE (OR APPROVED EQUAL) SHALL BE USED FOR THE VAULT ISOLATION VALVES. EXCEPTION: OWNER SHALL PROVIDE (8) 4"DEZURIK BAW VALVES WITH NBR SEALS ACCEPTABLE ONLY FOR CHW APPLICATIONS. OWNER AND CONTRACTOR SHALL INSPECT AND ACCEPT THE EXCHANGE OF MATERIAL; AT THIS TIME THE CONTRACTOR TAKES OWNERSHIP OF THE EQUIPMENT (I.E. VALVES) FOR THE USE OF THE PROJECT.

3. DUE TO THE WIDESPREAD NATURE OF THIS PROJECT AND THE NEED TO KEEP CAMPUS FULLY OPERATIONAL, THE INTENT IS FOR THE CONTRACTOR TO CONDUCT THE WORK IN ZONES – THERE ARE FIVE (5) ZONES IDENTIFIED IN THE PROJECT. EACH ZONE WILL CONSIST OF A MAJOR SECTION OF THE CAMPUS HHW & CHW INFRASTRUCTURE AND INCLUDE UP TO THREE (3) BUILDINGS. TO MINIMIZE DISRUPTION, THE CONTRACTOR SHALL COORDINATE BRIEF SYSTEM SHUTDOWNS WITH THE COLLEGE TO EMPLOY TEMPORARY EQUIPMENT AND PROVISIONS THAT SHALL MAINTAIN OPERATIONS DURING EACH ZONE'S CONSTRUCTION. THE FIVE (5) ZONES WITHIN THE SCOPE OF WORK CAN BE DEFINED AS FOLLOWS (AND SHOWN GRAPHICALLY ON G-1.1):

   A. ZONE #1: UNDERGROUND CHW & HHW PIPING INFRASTRUCTURE SOUTH OF VAULT #1 AND EAST OF <E>VAULT #13. BUILDINGS AFFECTED IN THIS ZONE INCLUDE B-2700, AND B-1500, BOTH OF WHICH SHALL RECEIVE UPGRADES AT BUILDING HYDRONIC PUMP MECHANICAL ROOMS. THREE (3) NEW UTILITY VAULTS (VLT-7, 8 & 9) AND ISOLATION VALVES SHALL BE ADDED TO THIS AREA OF THE HYDRONIC INFRASTRUCTURE. CHW & HHW INFRASTRUCTURE AT <E> VAULT #1 SHALL BE UPGRADED.

   B. ZONE #2: UNDERGROUND CHW & HHW PIPING INFRASTRUCTURE NORTH OF VAULT #1. BUILDINGS AFFECTED IN THIS ZONE INCLUDE B-1400, B-1300, AND B-1200, ALL OF WHICH SHALL RECEIVE UPGRADES AT BUILDING HYDRONIC PUMP MECHANICAL ROOMS. TWO (2) NEW UTILITY VAULTS (VLT-4 & 5) AND ISOLATION VALVES WILL BE ADDED TO THIS AREA OF THE HYDRONIC INFRASTRUCTURE.

   C. ZONE #3: NOT IN CONTRACT

   D. ZONE #4: UNDERGROUND CHW & HHW PIPING INFRASTRUCTURE SOUTH OF VAULT #13. BUILDINGS AFFECTED IN THIS ZONE INCLUDE B-500 AND B-600, BOTH OF WHICH SHALL RECEIVE UPGRADES AT BUILDING HYDRONIC PUMP MECHANICAL ROOMS. ONE (1) NEW UTILITY VAULT (VLT-12) AND ISOLATION VALVES WILL BE ADDED TO THIS AREA OF THE HYDRONIC INFRASTRUCTURE. CHW & HHW INFRASTRUCTURE AT <E> VAULT #13 SHALL BE UPGRADED AND THE HIGH POINT AIR VENT LOCATIONS WEST OF VAULT #13 SHALL BE REPLACED AND ROUTED BENEATH THE EXISTING UTILITIES.

   E. ZONE #5: REFER TO BID ALTERNATE #8 AND M-1.5 FOR THE REPLACEMENT OF THE DOMESTIC WATER (DW) PIPING TO THE RISER WITHIN THE B-1700A MECH. RM.

4. TEMPORARY HEATING AND COOLING SYSTEMS, DURING THE TIME PERIODS AND DURATIONS INDICATED BELOW, ARE REQUIRED SUCH THAT NO BUILDING IS WITHOUT COOLING OR HEATING FOR ANY GIVEN TIME DURING OCCUPIED HOURS. LIQUIDATED DAMAGES AS DETERMINED BY OWNER (SEE DIV. 00 AND 01) WILL BE APPLIED FOR EACH DAY HEATING AND COOLING IS NOT AVAILABLE TO CAMPUS BUILDINGS. THE INTENT FOR THE TEMPORARY SYSTEMS IS FOR THE CONTRACTOR TO PROVIDE DEDICATED TEMPORARY HEATING AND COOLING EQUIPMENT FOR EACH INDIVIDUAL BUILDING, INCLUDING BUILDING HHW & CHW PUMPS, TEMPORARY PIPING, WATER TREATMENT, AIR SEPARATORS, ISOLATION VALVES, EXPANSION TANKS, INSULATION, SUPPORTS, POWER, ETC., SUCH THAT EACH BUILDING MECHANICAL ROOM IS BYPASSED BY THE TEMPORARY SYSTEMS IN ORDER TO MINIMIZE BUILDING DISRUPTION DURING CONSTRUCTION ACTIVITIES. THE FOLLOWING TEMPORARY SERVICE REQUIREMENTS APPLY:

   A. TEMPORARY COOLING: REQUIRED FROM THE START OF MARCH THROUGH THE END OF OCTOBER AND SHALL BE PROVIDED VIA AIR COOLED CHILLERS.

   B. TEMPORARY HEATING: REQUIRED FROM THE START OF SEPTEMBER THROUGH THE END OF APRIL AND SHALL BE PROVIDED VIA NATURAL GAS-FIRED BOILERS WHERE AN EXISTING GAS MANIFOLD IS PRESENT AT THE BUILDING, OR AN ELECTRIC BOILER IF BUILDING ELECTRICAL CAPACITY IS SUFFICIENT. IF NEITHER ARE AVAILABLE, CONTRACTOR SHALL PROVIDE DIESEL/OIL GENERATORS, DIESEL/OIL FUEL, AND TEMPORARY FEEDERS/PANELS TO SUPPLY POWER TO A TEMPORARY ELECTRIC BOILER. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

   C. TEMPORARY FENCING AND WAYFINDING: REQUIRED AT ALL CONTRUCTION AREAS INCLUDING WAYFINDING SIGNAGE IDENTIFYING ACCESSIBLE PATHS OF TRAVEL. FENCING SHALL PROVIDE A SAFE BOUNDARY FROM TEMPORARY EQUIPMENT, PIPING, POWER, EXCAVATION SITES, MACHINERY, LAYDOWN AREAS, ETC.

   D. TEMPORARY SHUTDOWNS: SHUTDOWNS SHALL BE COORDINATED WITH THE COLLEGE. SHUTDOWNS OF THE HHW AND CHW SYSTEM WILL BE REQUIRED TO FACILITATE THE INSTALLATION AND REMOVAL OF TEMPORARY BYPASSES AT THE SITE PIPING AND TEMPORARY CONNECTIONS AT THE BUILDINGS. TEMPORARY SHUTDOWNS SHALL OCCUR OVER WEEKEND AND OVERNIGHT PERIODS TO PROVIDE SUFFICIENT TIME FOR CONTRACTOR TO RESTORE HHW AND CHW SERVICE PRIOR TO 6:00AM THE FOLLOWING SCHOOL DAY OR MONDAY MORNING.

5. CONSTRUCTION MILESTONES BY ZONE: THE CONSTRUCTION EFFORTS (INCLUDING BOTH SITE AND BUILDING REPAIRS) AT EACH ZONE SHALL BE COMPLETED IN ACCORDANCE TO THE MILESTONE SCHEDULE BELOW FROM THE INITIAL SHUTDOWN AND SWITCH OVER TO TEMPORARY SYSTEMS. ZONE PRIORITIES CAN BE REARRANGED, IF APPROVED BY OWNER AND ENGINEER. DUE TO COLLEGE REQUIREMENTS, THE PROJECT SHALL FOLLOW A FAST-TRACK CONSTRUCTION SCHEDULE WITH COMPLETION OF MILESTONES AS DESCRIBED BELOW:

   A. SUBMITTALS & PROCUREMENT: MARCH 16TH, 2026 – MAY 22ND, 2026 (10 WEEKS)

   B. ZONE #1 & ZONE #2 CONSTRUCTION: MAY 25TH, 2026 – AUGUST 3RD, 2026 (10 WEEKS) FOR SUBSTATANTIAL CONSTRUCTION COMPLETION THROUGH TRENCH BACKFILL AND COMPACTION ACTIVITIES. AN ADDITIONAL TWO (2) WEEKS SHALL BE PROVIDED FOR HARDSCAPE/LANDSCAPE REPAIRS TO BE COMPLETED BY NO LATER THAN AUGUST 17TH, 2026.

   C. ZONE #3 CONSTRUCTION: NOT IN CONTRACT

   D. ZONE #4 CONSTRUCTION: AUGUST 17TH, 2026 – OCTOBER 12TH, 2026 (8 WEEKS). AN ADDITIONAL TWO (2) WEEKS SHALL BE PROVIDED FOR HARDSCAPE/LANDSCAPE REPAIRS TO BE COMPLETED BY NO LATER THAN OCTOBER 26TH, 2026.

   E. ZONE #5 CONSTRUCTION (BID ALTERNATE #8): OCTOBER 26TH, 2026 – DECEMBER 4TH, 2026 (6 WEEKS)

   F. PROJECT CLOSEOUT: DECEMBER 7TH, 2026 – DECEMBER 31ST, 2026 (3.5 WEEKS)

   G. EACH BUILDING AND THE ZONE-AT-LARGE SHALL BE FULLY RE-STARTED AND COMMISSIONED AT THE END OF THE STATED CONSTRUCTION PERIODS. CONTRACTOR SHALL COMMISSION THE HYDRONIC SYSTEMS DURING THE WEEKEND AND/OR OVERNIGHT PERIOD IN WHICH THE SHUTDOWN AND SWITCH OVER OCCURS TO REMOVE THE TEMPORARY EQUIPMENT. OVERALL SUBSTANTIAL PROJECT COMPLETION IS REQUIRED BY DECEMBER 31ST, 2026.

APPLICABLE CODES

UNLESS OTHERWISE INDICATED OR SPECIFIED, PERFORM THE WORK IN CONFORMANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE REGULATORY REQUIREMENTS, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. 2025 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2. 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
3. 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
4. 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
5. 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
6. 2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 CCR
7. 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
8. 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
9. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
10. 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
11. TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
12. NFPA 72 NATIONAL FIRE ALARM CODE, WITH CA AMENDMENTS: 2022 EDITION (CA AMENDED)
13. NFPA 170 STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS: 2018 EDITION
14. SFM 12-10-2 SINGLE POINT LATCHING OR LOCKING DEVICES
15. SFM 12-10-3 EMERGENCY EXIT & PANIC HARDWARE
16. UL 38-99 AMENDMENTS MANUAL OPERATED SIGNAL BOXES, WITH REVISIONS, THRU FEB.2, 2005, WITH CA
17. UL 305-2012 PANIC HARDWARE WITH REVISIONS THRU AUG. 2014
18. UL 464 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION
19. UL 864-2014 CONTROL UNITS AND ACCESSORIES FOR FIRE ALARM SYSTEMS, WITH REVISIONS THRU DEC, 2014 AND CA AMENDMENTS

AMERICANS WITH DISABILITIES ACT (A.D.A.) FEDERAL ACCESSIBILITY STANDARDS

ACI 318-19, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

AISC MANUAL OF STEEL CONSTRUCTION

ASCE/SEJ 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES WITH SUPPLEMENT NO. 1

NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION

UL 1971 – STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED 2002 (R2010)

FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

BID ALTERNATES

BID ALTERNATE #1 (ADDITIVE):

PROVIDE TEMPORARY HHW SERVICES FOR B-1500, B-1600 & B-2700 (ZONE #1) IF REQUIRED BASED ON TIME OF YEAR AS DESCRIBED IN THE SUMMARY OF WORK. REFER TO SHEET MD-1.1 AND M-1.1 FOR ADDITIONAL INFORMATION.

BID ALTERNATE #2 (ADDITIVE):

IF THE PRESSURE TEST OF THE SECTION OF PIPING AT THE INDICATED HOT SPOT FAILS, DEMOLISH AND REPLACE HHWS&R PIPING AS SPECIFIED. REFER TO SHEET MD-1.2 AND M-1.2 FOR ADDITIONAL INFORMATION.

BID ALTERNATE #3 (ADDITIVE):

IF THE PRESSURE TEST OF THE SECTION OF PIPING AT THE INDICATED HOT SPOT FAILS, DEMOLISH AND REPLACE HHWS&R PIPING AS SPECIFIED. REFER TO SHEET MD-1.2 AND M-1.2 FOR ADDITIONAL INFORMATION.

BID ALTERNATE #4 (ADDITIVE):

IF THE PRESSURE TEST OF THE SECTION OF PIPING AT THE INDICATED HOT SPOT FAILS, DEMOLISH AND REPLACE HHWS&R PIPING AS SPECIFIED. REFER TO SHEET MD-1.4 AND M-1.4 FOR ADDITIONAL INFORMATION.

BID ALTERNATE #5 (ADDITIVE):

PROVIDE TEMPORARY HHW SERVICES FOR B-1200, B-1300, & B-1400 (ZONE #2) IF REQUIRED BASED ON TIME OF YEAR AS DESCRIBED IN THE SUMMARY OF WORK. REFER TO SHEET MD-1.2 AND M-1.2 FOR ADDITIONAL INFORMATION.

BID ALTERNATE #6 (ADDITIVE): NOT USED

BID ALTERNATE #7 (ADDITIVE):

PROVIDE TEMPORARY CHW SERVICES FOR B-500 & B-600 (ZONE #4) IF REQUIRED BASED ON TIME OF YEAR AS DESCRIBED IN THE SUMMARY OF WORK. REFER TO SHEET MD-1.4 AND M-1.4 FOR ADDITIONAL INFORMATION.

BID ALTERNATE #8 (ADDITIVE):

PROVIDE A PARALLEL 4" DOMESTIC WATER IN THE OUTDOOR WALKWAY BETWEEN B-1700A AND THE POOL. DOMESTIC WATER PIPING SHALL BE PVC PIPING WITH SOLVENT WELDED JOINTS. CONTRACTOR SHALL PROVIDE RESTRAINT COUPLINGS AS NECESSARY AT CONNECTION TO EXISTING. POINT OF CONNECTION TO EXISTING SHALL BE DOWNSTREAM OF THE UNDERGROUND ISO VALVE NORTH OF B-1700A AND THE EXISTING GAS MANIFOLD ENCLOSURE. DOMESTIC WATER RISER SHALL OCCUR OUTSIDE THE B-1700A MECHANICAL ROOM, TRANSITION TO STEEL PIPING, PENETRATE THE EXTERIOR WALL, WITH CONNECTION TO THE EXISTING RISER. EXISTING PIPING SHALL BE CAPPED AND ABANDONED IN PLACE (BENEATH BLDG).

DEFERRED APPROVAL

HYDRONIC VAULTS:

HYDRONIC VAULTS SHALL BE SUBMITTED FOR DEFERRED APPROVAL AFTER CONTRACT IS AWARDED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VAULT MANUFACTURER CA-LICENSED STRUCTURAL ENGINEER STAMPED AND SIGNED CALCULATIONS.

STATEMENT OF GENERAL CONFORMANCE

APPENDIX A: EXAMPLE STATEMENT OF GENERAL CONFORMANCE FOR DPGRC

STATEMENT OF GENERAL CONFORMANCE
APPLICATION No.: 02-123745
FILE No.: 48-C1

THE DRAWINGS IDENTIFIED AS FOLLOWS:

☐ ALL DRAWING SHEETS INCLUDED IN THIS SET NOT BEARING MY STAMP AND SIGNATURE.
☒ DRAWING SHEETS DENOTED IN THE SHEET INDEX AS FOLLOWS: E- & S-SHEETS
☐ DRAWING SHEETS INCLUDED UNDER THE FOLLOWING PC APPROVAL(S): _____

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND AUTHORIZED TO PREPARE SUCH DRAWINGS (PLANS) IN THIS STATE. THEY HAVE BEEN EXAMINED BY ME FOR:

1. DESIGN INTENT AND APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND
2. COORDINATION WITH MY DRAWINGS (PLANS) AND SPECIFICATIONS AND ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

PER TITLE 24, PART 1, SECTION 4-316(b): THIS STATEMENT OF GENERAL CONFORMANCE SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344 OF TITLE 24, PART 1.

SIGNATURE		DATE
		01/23/2026
EVAN EVERETT SARVER	M40066	09/30/2026
PRINTED NAME	LICENSE NUMBER	EXPIRATION DATE

DRAWING INDEX (TOTAL 62 SHEETS)

SHEET NO.	DESCRIPTION
G-0.0	COVER SHEET
G-0.1	GENERAL NOTES
G-1.1	OVERALL SITE PLAN – EXISTING UTILITIES
G-1.2	OVERALL SITE PLAN – LAYDOWN AREAS, AND TEMPORARY EQUIPMENT
G-1.3	OVERALL ACCESS SITE PLAN
G-1.4	OVERALL SITE PLAN – EXCAVATION, TRENCHING AND SURFACE RESTORATION
G-4.1	ENLARGED SITE PLAN ZONE #1
G-4.2	ENLARGED SITE PLAN ZONE #2
G-4.3	ENLARGED SITE PLAN ZONE #3 (NOT IN CONTRACT)
G-4.4	ENLARGED SITE PLAN ZONE #4
G-4.5	ENLARGED SITE PLAN ZONE #5 (BID ALTERNATE #8)
G-5.1	GENERAL DETAILS
M-0.1	MECHANICAL SYMBOLS & ABBREVIATIONS
MD-1.1	MECHANICAL ENLARGED SITE PLAN ZONE #1 (B-1500, B-1600, & B-2700) – DEMO & TEMPORARY
M-1.1	MECHANICAL ENLARGED SITE PLAN ZONE #1 (B-1500, B-1600, & B-2700) – NEW
MD-1.2	MECHANICAL ENLARGED SITE PLAN ZONE #2 (B-1200, B-1300, & B-1400) – DEMO & TEMPORARY
M-1.2	MECHANICAL ENLARGED SITE PLAN ZONE #2 (B-1200, B-1300, & B-1400) – NEW
MD-1.3	MECHANICAL ENLARGED SITE PLAN ZONE #3 (B-700, B-800, & B-900) – DEMO & TEMPORARY (NOT IN CONTRACT)
M-1.3	MECHANICAL ENLARGED SITE PLAN ZONE #3 (B-700, B-800, & B-900) – NEW (NOT IN CONTRACT)
MD-1.4	MECHANICAL ENLARGED SITE PLAN ZONE #4 (B-500, & B-600) – DEMO & TEMPORARY
M-1.4	MECHANICAL ENLARGED SITE PLAN ZONE #4 (B-500, & B-600) – NEW
MD-1.5	MECHANICAL ENLARGED SITE PLAN ZONE #5 (B-1700A) – DEMO (BID ALTERNATE #8)
M-1.5	MECHANICAL ENLARGED SITE PLAN ZONE #5 (B-1700A) – NEW (BID ALTERNATE #8)
M-4.1	BUILDING 1500 MECHANICAL ROOM – ZONE #1: CHW & HHW
M-4.2	BUILDING 2700 MECHANICAL ROOM – ZONE #1: CHW & HHW
M-4.3	BUILDING 1200 MECHANICAL ROOM – ZONE #2: CHW & HHW
M-4.4	BUILDING 1300 MECHANICAL ROOM – ZONE #2: CHW & HHW
M-4.5	BUILDING 1400 MECHANICAL ROOM – ZONE #2: CHW & HHW
M-4.6	BUILDING 700 MECHANICAL ROOM – ZONE #3: CHW & HHW (NOT IN CONTRACT)
M-4.7	BUILDING 800 MECHANICAL ROOM – ZONE #3: CHW & HHW (NOT IN CONTRACT)
M-4.8	BUILDING 900 MECHANICAL ROOM – ZONE #3: CHW & HHW (NOT IN CONTRACT)
M-4.9	BUILDING 500 MECHANICAL ROOM – ZONE #4: CHW & HHW
M-4.10	BUILDING 600 MECHANICAL ROOM – ZONE #4: CHW & HHW
M-5.1	MECHANICAL DETAILS
M-5.2	MECHANICAL DETAILS
M-5.3	MECHANICAL DETAILS
M-5.4	MECHANICAL DETAILS
M-5.5	MECHANICAL DETAILS
M-5.6	MECHANICAL DETAILS
M-5.7	MECHANICAL DETAILS
M-6.1	MECHANICAL SCHEDULES
MD-7.1	MECHANICAL PRIMARY HYDRONIC PIPING SYSTEM SCHEMATIC – DEMO
M-7.1	MECHANICAL PRIMARY HYDRONIC PIPING SYSTEM SCHEMATIC – NEW
E-0.1	ELECTRICAL GENERAL NOTES, SYMBOLS & ABBREVIATIONS
ED-1.1	ELECTRICAL ENLARGED SITE PLAN ZONE #1 (B-1500, B-1600, & B-2700) – DEMO
E-1.1	ELECTRICAL ENLARGED SITE PLAN ZONE #1 (B-1500, B-1600, & B-2700) – NEW
ED-1.2	ELECTRICAL ENLARGED SITE PLAN ZONE #2 (B-1200, B-1300, & B-1400) – DEMO
E-1.2	ELECTRICAL ENLARGED SITE PLAN ZONE #2 (B-1200, B-1300, & B-1400) – NEW
ED-1.3	ELECTRICAL ENLARGED SITE PLAN ZONE #3 (B-700, B-800, & B-900) – DEMO (NOT IN CONTRACT)
E-1.3	ELECTRICAL ENLARGED SITE PLAN ZONE #3 (B-700, B-800, & B-900) – NEW (NOT IN CONTRACT)
ED-1.4	ELECTRICAL ENLARGED SITE PLAN ZONE #4 (B-500, & B-600) – DEMO
E-1.4	ELECTRICAL ENLARGED SITE PLAN ZONE #4 (B-500, & B-600) – NEW
E-5.1	ELECTRICAL DETAILS
E-6.1	ELECTRICAL LOAD CALCULATIONS
E-7.1	ELECTRICAL SINGLE LINE DIAGRAM – ZONE #1
E-7.2	ELECTRICAL SINGLE LINE DIAGRAM – ZONE #2
E-7.3	ELECTRICAL SINGLE LINE DIAGRAM – ZONE #3 (NOT IN CONTRACT)
E-7.4	ELECTRICAL SINGLE LINE DIAGRAM – ZONE #4
E-7.5	ELECTRICAL CAMPUS SINGLE LINE DIAGRAM
S-5.1	STRUCTURAL GENERAL NOTES AND ANCHORAGE SCHEDULE & DETAILS
S-5.2	STRUCTURAL HANGERS & BRACES SUPPORT DETAILS AND ANCHORAGE DETAILS
S-5.3	STRUCTURAL NON-PERMANENT EQUIPMENT ANCHORAGE DETAILS

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National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER
EVAN EVERETT SARVER
No. M40066
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE
COVER SHEET

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

G-0.0
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.

GENERAL NOTES

1. ALL WORK, MATERIALS, AND METHODS TO BE USED FOR SEISMIC RESTRAINTS SHALL BE AS DETAILED ON THE APPROVED DRAWINGS.
2. ALL WORK SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES.
3. PIPE HANGERS AND SUPPORTS SHALL BE SUPERSTRUT OR EQUAL INCLUDING CHANNEL, HANGERS, STRAPS, ISOLATORS, INSULATION, SHAW PIPE SHIELDS, INC., PORTABLE PIPE HANGERS, INC.
4. PATCH EXISTING AND NEW OPENINGS SO FINISH PROFILES, FIXTURES, ETC. MATCH ADJACENT UNDISTURBED WORK.
5. ALL DIMENSIONS ARE APPROXIMATE. THE DRAWINGS ARE DIAGRAMMATIC TO THE EXTENT THAT ALL FITTINGS, OFFSETS, ETC. ARE NOT SHOWN. THESE DRAWINGS ARE FOR THE GUIDANCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD FOR FABRICATION OF THE PIPING, PENETRATIONS, CONDUIT, WIRING, AND ALL COMPONENTS INTO A COMPLETE AND OPERABLE SYSTEM.
6. ALL WORK MUST BE SCHEDULED WITH THE PROJECT MANAGER TO MINIMIZE DISTURBANCE OF NORMAL ACTIVITIES. COORDINATE WORK WITH PROJECT MANAGER.
7. WHERE DISCREPANCIES OCCUR BETWEEN THE PLANS AND SPECIFICATIONS CONTRACTOR SHALL NOTIFY OWNER OF ANY DISCREPANCIES IN WRITING. ANY ADJUSTMENT OF THE CONTRACT DOCUMENTS WITHOUT A DETERMINATION BY THE OWNER SHALL BE AT THE CONTRACTOR'S OWN RISK AND EXPENSE. THE MOST STRINGENT REQUIREMENTS SHALL APPLY AS DETERMINED BY THE OWNER.
8. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
9. PRIOR TO SUBMITTING PROPOSAL, BIDDER SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND SHALL HAVE HAD VISITED THE CONSTRUCTION SITE. HE SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH HE WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION IN BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS PART.
10. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE RESTORATION OF LANDSCAPING (LAWN, MULCH, ETC.), TRAFFIC RATED CONCRETE AND ASPHALT-CONCRETE, AND PEDESTRIAN RATED CONCRETE PATHWAYS.
11. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING BUILDING CONDITIONS AND NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING OF ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENT AND EXISTING CONDITIONS.
12. THE CONTRACTOR SHALL, DURING THE COURSE OF CONSTRUCTION, PROTECT ADJACENT AREAS FROM DAMAGE, NOISE, CONSTRUCTION, AIRBORNE DUST AND FUMES AS A RESULT OF THE WORK.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL SUB-CONTRACTORS AND SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT.
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE OWNER WITH A COMPLETE SET OF RECORD DRAWING, INCLUDING THE WORK OF ALL SUBCONTRACTORS.
15. ALL PRODUCTS AND MATERIALS USED ON THIS PROJECT SHALL BE FREE OF ASBESTOS.
16. NO PRODUCT WILL BE ACCEPTED ON THE JOB SITE WITHOUT PRIOR REVIEW BY THE OWNER. THE CONTRACTOR SHALL SUBMIT CATALOG SHEETS OF ALL FIXTURES, PIPING, VALVES AND ETC., FOR REVIEW.
17. ALL PRODUCT SUBSTITUTIONS SHALL HAVE PRIOR REVIEW BEFORE INSTALLATION. THE CONTRACTOR SHALL PAY ALL COSTS INCURRED FOR REVIEW, DESIGN AND INSTALLATION OF SUBSTITUTIONS. ACCEPTANCE OF SUBSTITUTIONS BY THE OWNER'S REPRESENTATIVE DOES NOT ALTER THE REVIEW REQUIREMENT.
18. PENETRATIONS OF DUCTS, PIPES, CONDUITS, ETC. IN WALLS AND FLOOR-CEILING ASSEMBLIES REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED, PER THE U.L. FIRE LISTINGS. FIRE STOP MATERIAL SHALL BE A TESTED ASSEMBLY. SEE PLANS FOR ADDITIONAL REQUIREMENTS. SUBMIT U.L. FIRE RATED ASSEMBLIES TO FIRE MARSHALL FOR APPROVAL.
19. THE INSTALLATION OF PIPING AND EQUIPMENT SHALL BE MADE IN SUCH A MANNER TO CLEAR BEAMS AND OBSTRUCTIONS. DO NOT CUT INTO OR REDUCE THE SIZE OF PLATES OR ANY LOAD CARRYING MEMBERS WITHOUT APPROVAL OF THE ARCHITECT AND ENGINEER OF RECORD. COORDINATE WITH WORK OF OTHERS TO PREVENT INTERFERENCE.
20. ALL LOCATIONS OF PIPING AND EQUIPMENT ARE SHOWN DIAGRAMMATICALLY TO THE EXTENT THAT ALL FITTINGS, OFFSETS, ETC. ARE NOT SHOWN. ADHERE TO LOCATIONS AS CLOSELY AS POSSIBLE. HOWEVER, RUNS OR SHAPE OF PIPING CAN VARY, AS REQUIRED TO MEET FOUNDATION, STRUCTURAL AND OTHER INTERFERENCES. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD FOR FABRICATION OF THE PIPING, PENETRATIONS, AND ALL COMPONENTS INTO A COMPLETE AND OPERABLE SYSTEM.
21. SUPPORT AND RESTRAIN PIPING PER CALIFORNIA MECHANICAL CODE AND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. ALL SUPPORTING RODS, STRUT AND OTHER HARDWARE SHALL BE HOT DIPPED GALVANIZED UNLESS OTHERWISE SPECIFIED.
22. ALL SOLDER AND PLUMBING FIXTURES SHALL CONFORM TO NON LEAD STANDARDS.
23. PROVIDE ACCESS PANELS WHERE SHUT OFF VALVES AND WATER HAMMER ARRESTERS ARE LOCATED IN WALLS OR ABOVE HARD CEILINGS.
24. ALL PIPING IN THIS CONTRACT SHALL BE LABELED ACCORDING TO ANSI A13.1, CHAPTER 13, CPC AND NFPA 99. FURNISH FLOW ARROWS INDICATING DIRECTION OF FLOW FOR LIQUID PHASE MATERIALS. PIPE LABELS SHALL BE VISIBLE FROM FLOOR LEVEL. ALL VALVES IN THIS CONTRACT OTHER THAN MEDICAL VACUUM, SHALL BE LABELED WITH BRASS TAGS. ALL MEDICAL VACUUM VALVES SHALL BE LABELED PER CHAPTER 13, CPC AND NFPA 99.
25. EXACT LOCATION OF EXISTING UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED. CONTRACTOR SHALL FIELD VERIFY ALL CONNECTION POINTS AND LOCATIONS. VERIFICATION OF ADEQUATE FALL FOR WASTE LINE SHALL BE DONE PRIOR TO BEGINNING WORK OF THIS CONTRACT.
26. ALL TEMPORARY AND REMODELING WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
27. EXAMINE MECHANICAL & STRUCTURAL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING EXISTING, TEMPORARY, REMODELED AND NEW AREAS.
28. CONTRACTOR TO LEGALLY DISPOSE OF OR RECYCLE PROJECT DEBRIS.
29. ALL DEVICES & EQUIPMENT ARE NEW, UNLESS OTHERWISE NOTED.
30. SALVAGED EQUIPMENT SHALL BE TURNED OVER TO OWNER. COORDINATE WITH OWNER FOR STORAGE LOCATION.
31. MAINTAIN FIRE RATING OF ALL ASSEMBLIES PENETRATED.
32. SEAL ALL EXTERIOR PENETRATIONS WATER-TIGHT.
33. UNLESS OTHERWISE NOTED, ARRANGE, PAY FOR, COORDINATE AND PROVIDE ALL PERMITS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
34. ALL CONSTRUCTION AND DEMOLITION SHALL BE IN ACCORDANCE WITH CHAPTER 33 OF THE CBC AND CFC, AND THE WRITTEN SITE SAFETY PLAN.
35. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EQUIPMENT, MATERIALS, SUPPLIES, ETC. RELATED TO THE PROJECT THAT ARE STORED OR LEFT ON SITE. THIS SHALL INCLUDE ENCLOSURES AND SECURITY AS NECESSARY TO PROTECT MATERIALS.

INTERRUPTIONS TO EXISTING SYSTEMS:

1. THE CONTRACT REQUIRES THAT ALL ELECTRICAL CONNECTIONS REQUIRING AN OUTAGE SHALL OCCUR ON A WEEKEND OR BETWEEN THE HOURS OF 10PM AND 7AM, MONDAY THROUGH FRIDAY. OUTAGES SHALL BE SCHEDULED AND APPROVED IN ADVANCE AND IN WRITING AT LEAST 10 DAYS PRIOR TO THE OUTAGE. WORK SHALL BE SCHEDULED SUCH THAT AT NO TIME WILL ANY EMERGENCY FEEDER, CIRCUIT OR FIRE ALARM ZONE BE OUT OF SERVICE. THIS MEANS THAT CONTRACTOR, SHALL INCLUDE ALL PROVISIONS FOR TEMPORARY FEEDERS IN ORDER TO ACCOMPLISH THIS REQUIREMENT.

INTENT:

"THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITION SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CCD OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE DIVISION OF STATE ARCHITECT BEFORE PROCEEDING WITH THE WORK".

LAYING OUT THE WORK:

ACCURATELY LAYOUT INSTALLATION OF EQUIPMENT PRIOR TO BEGINNING WORK. LAYOUT WORK SHALL INCLUDE PROVISIONS FOR CONNECTIONS TO <E>SERVICES, NECESSARY TURN & CHANGES IN ELEVATION, BYPASSING OBSTRUCTIONS, AND ANY OTHER IMPEDIMENT ASSOCIATED WITH THE BELOW GRADE PIPING INSTALLATIONS.

REQUIREMENTS FOR CORED/SAWCUT HOLES THROUGH CONCRETE WALLS:

1. ALL BARS IN VICINITY OF PROPOSED CORED/SAWCUT HOLES SHALL BE LOCATED WITH MAGNETIC LOCATING DEVICE AND EACH BAR LOCATION PLAINLY AND ACCURATELY MARKED ON WALL SURFACE PRIOR TO LOCATING HOLES. MARKINGS SHALL BE REMOVED AFTER ALL HOLES ARE CORED/SAWCUT.
2. NOTIFY ENGINEER UPON BAR LOCATION AND MARKING FOR HIS DIRECTION BEFORE PROCEEDING.
3. HOLES SHALL BE LOCATED NOT LESS THAN 1.5" CLEAR FROM REINFORCING. REFER TO ORIGINAL AS-BUILT DRAWINGS FOR EXISTING REINFORCING LAYOUT IN EXISTING WALLS.
4. CONFIRM THAT PROPOSED HOLE LOCATIONS DO NOT INTERFERE WITH OPERATION OF ANY EQUIPMENT OR WITH EXISTING OR NEW PIPES OR CONDUITS.
5. DO NOT OVERCUT AT CORNERS.

PROJECT INSPECTION AND TEST REQUIREMENTS:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH SUBCONTRACTORS, OWNER, LOR, AND INSPECTORS, AND SCHEDULING THE SPECIFIED INSPECTIONS AND TESTS.
2. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROVIDE A MINIMUM OF 3 DAYS NOTICE TO INSPECTOR AND/OR LOR FOR REQUESTED INSPECTIONS AND TESTS. FOR CONCRETE POURS, SOILS COMPACTION, AND SOILS BACKFILL INSPECTIONS, A MINIMUM OF 5 DAYS NOTICE SHALL BE PROVIDED TO INSPECTOR AND/OR LOR FOR REQUESTED INSPECTIONS AND TESTS.
3. CONTRACTOR SHALL INCORPORATE SPECIFIED INSPECTIONS AND TESTS INTO MASTER CONSTRUCTION SCHEDULE, INCLUDING ADEQUATE PROVISIONS FOR INSPECTIONS AS DEFINED BELOW. CONTRACTOR SHALL IDENTIFY DAYS IN WHICH INSPECTIONS AND TESTING ARE NOT NECESSARY/REQUIRED AND INCORPORATE INTO THE MASTER CONSTRUCTION SCHEDULE. SEQUENCE "NEW" WORK SUCH THAT INSPECTIONS DO NOT OCCUR SIMULTANEOUSLY NOR AT DIFFERING AREAS OF WORK.
4. IF INSPECTIONS ARE REQUIRED, CONTRACTOR SHALL NOT PROCEED WITH WORK TO BE INSPECTED UNTIL INSPECTIONS ARE CONDUCTED, ANY REMEDIAL WORK IS COMPLETED, AND WORK IS ACCEPTED.
5. ANY WORK REQUIRING INSPECTIONS WHERE THE WORK HAS BEEN COMPLETED AND MADE INACCESSIBLE, AND NOT SIGNED OFF BY THE INSPECTOR, IS SUBJECT TO BE RE-EXPOSED AND RE-CONSTRUCTED AT NO COST OR SCHEDULE IMPACT TO THE OWNER.
6. CONTRACTOR SHALL FACILITATE THE SHARE OF INFORMATION WITH INSPECTOR AND LOR AS RELATES TO MANUFACTURER INSTALLATION INSTRUCTIONS AND OTHER CODES/STANDARDS.
7. CONTRACTOR SHALL PROVIDE ASSISTANCE TO THE INSPECTOR OR LOR IF/AS NEEDED FOR MOVING SOILS, OR BARRICADES, OPENING MANHOLES, ETC.
8. CONTRACTOR SHALL PROVIDE PHOTOGRAPHIC DOCUMENTATION OF ALL UNDERGROUND WORK, INCLUDING EVERY ITEM/PROCESS WITNESSED, BEFORE AND AFTER BACKFILL IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
9. INSPECTOR SHALL HAVE THE RIGHT AND ABILITY TO STOP AND RESTART CONTRACTOR WORK, OR PORTION THEREOF, IF POOR OR FAULTY INSTALLATION IS OBSERVED. IF THIS OCCURS, INSPECTOR SHALL DISTRIBUTE EMAIL CORRESPONDENCE WITH THE INSPECTION REPORT DESCRIBING THE ERROR TO THE OWNER, ENGINEER, AND CONSTRUCTION MANAGER IMMEDIATELY.
10. DAILY INSPECTION REPORTS ARE REQUIRED TO BE SUBMITTED TO CONSTRUCTION MANAGER AND/OR OWNER'S REPRESENTATIVE. CONSTRUCTION MANAGER IS RESPONSIBLE FOR SUBMITTING INSPECTION REPORTS TO THE AGREED UPON CONSTRUCTION ADMINISTRATION PLATFORM IN AGREED UPON FORMAT/FORM (E.G., AIA FORMAT).
11. INSPECTOR SHALL HAVE A MINIMUM OF TWO YEARS OF EXPERIENCE SPECIFIC TO THE INSTALLATION OF UNDERGROUND THERMAL ENERGY DISTRIBUTION SYSTEMS.

PHOTOGRAPHIC CONSTRUCTION RECORDS:

1. THE CONTRACTOR SHALL PROVIDE PRECONSTRUCTION DIGITAL PHOTOGRAPHS AND VIDEO RECORDINGS PRIOR TO COMMENCEMENT OF WORK ON THE SITE. BEFORE CONSTRUCTION MAY START, CONTRACTOR SHALL DOCUMENT ANY EXISTING CONDITIONS THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS (DAMAGED CONCRETE, WALLS, LANDSCAPE, ETC.). FAILURE TO DOCUMENT EXISTING DAMAGE WILL RESULT IN CONTRACTOR REPAIRS TO SURFACE TO MATCH ADJACENT AFTER CONSTRUCTION ACTIVITIES. ADDITIONAL PRECONSTRUCTION PHOTOGRAPHS/VIDEOS SHALL BE TAKEN AT LOCATIONS TO BE DESIGNATED BY THE OWNER'S REPRESENTATIVE.
2. CONTRACTOR SHALL MAKE A VIDEO RECORDING OF ALL PROPOSED ROUTINGS FOR INFRASTRUCTURE WORK, NOTING CONDITIONS OF EXISTING SURFACES AND ADJACENT IMPROVEMENTS. ONE COPY OF COMPLETE VIDEO SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE.

CONSTRUCTION PHOTOGRAPHS:

1. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION PHOTOGRAPHS SHOWING THE PROGRESS OF THE WORK AND AS MAY BE DIRECTED BY THE OWNER'S REPRESENTATIVE. PHOTOGRAPHS/VIDEOS SHALL BE FORMATTED, IDENTIFIED, AND DELIVERED AS DESCRIBED ABOVE FOR DIGITAL PHOTOS AND VIDEOS. STARTING ONE MONTH AFTER THE DATE OF THE PRECONSTRUCTION PHOTOGRAPHS AND CONTINUING AS LONG AS THE WORK IS IN PROGRESS, APPROXIMATELY 40 MONTHLY PHOTOGRAPHS SHALL BE TAKEN, CATALOGED AND CROSS REFERENCED TO DRAWINGS/PLANS.
2. ANY WORK TO BE CONCEALED (BURIED, BEHIND WALLS, ABOVE CEILING, BELOW SLAB, ETC.) SHALL BE PHOTO DOCUMENTED AFTER ANY TESTING AND INSPECTION AND PRIOR TO CONCEALING TO CLEARLY INDICATE THE WORK. DOCUMENT ON PLANS THE LOCATION AND ORIENTATION FOR EACH PHOTO DOCUMENTING CONCEALED WORK.
3. FOR FINAL COMPLETION, DOCUMENT ALL PUNCH LIST ITEM COMPLETION BY PHOTOGRAPH OR VIDEO.
4. DELIVER CONSTRUCTION PHOTOGRAPHS AND VIDEOS WITHIN 10 DAYS OF CREATION. ALL PHOTOS AND VIDEOS SHALL BE OF SUFFICIENT QUALITY TO CLEARLY DEPICT WORK.

SPECIAL REQUIREMENTS FOR TRENCHING, EXCAVATION, & BACKFILL

1. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.
2. CONTRACTOR SHALL POTHOLE A MINIMUM OF 10' IN ADVANCE OF ANY TRENCHING OR EXCAVATING OPERATIONS. POTHOLING SHALL LOCATE AND EXPOSE ANY AND ALL UTILITIES IN THE PATH OF TRENCHING OR EXCAVATING ACTIVITIES. POTHOLING SHALL BE BY VACUUM EXCAVATING EQUIPMENT OR HAND DIGGING. ALL UTILITIES ENCOUNTERED SHALL BE CLEARLY MARKED, AND HAND EXCAVATED TO PREVENT DAMAGE.
3. ALL UTILITIES LOCATED, WHETHER OR NOT SHOWN ON CONTRACT DRAWINGS ARE TO BE MARKED ON THE PROJECT RECORD DRAWINGS, AS TO SIZE AND SERVICE, WITH EITHER A REFERENCE TO STATION NUMBER OR REFERENCE TO PERMANENT SURFACE FEATURES, AND ELEVATIONS NOTED (REFERENCED TO SEA LEVEL). REGARDLESS OF OTHER REQUIREMENTS (OR LACK THEREOF) FOR AS-BUILT DRAWINGS, CONTRACTOR SHALL PROVIDE AS-BUILT, ELECTRONIC DOCUMENTATION OF ALL UTILITIES CROSSED OR EXPOSED, INDICATING LOCATION, SIZE, SERVICE AND ELEVATION, WHETHER SHOWN ON CONTRACT DOCUMENTS OR NOT.
4. ANY AND ALL RFI'S OR CLARIFICATIONS RELATED TO UNDERGROUND INTERFERENCES FOR ANY TRENCHING OR EXCAVATION ACTIVITIES SHALL INCLUDE ALL INFORMATION RELATING TO SIZE, SERVICE, LOCATION AND ELEVATION OF SUBJECT UNDERGROUND OBSTRUCTION, AND A PROPOSED SOLUTION.
5. THE COLLEGE AND CONTRACTOR ACKNOWLEDGE THAT THAT DURING THE COURSE OF EXCAVATION, IRRIGATION PIPING WILL LIKELY BE ACCIDENTALLY CUT OR IN SOME WAY BROKEN SEVERAL TIMES AND/OR IN SEVERAL PLACES. CONTRACTOR SHALL INCLUDE IN BASE BID MONIES TO ACCOMMODATE MATERIAL AND LABOR TO REPAIR THE IRRIGATION PIPING - ASSUME 1 BREAK PER 10 FEET OF TRENCH AT EACH TRENCH LOCATION. THIS INCLUDES:
   - A. IMMEDIATELY CAPPING BROKEN SECTION OF PIPE (WHETHER ACTIVE OR INACTIVE) AND IMMEDIATELY NOTIFYING THE COLLEGE OF THE IRRIGATION PIPING INCIDENT.
   - B. CUTTING AND REPLACEMENT OF DAMAGED IRRIGATION PIPE.
   - C. REPAIR OF CONTROL WIRING.
   - D. REPAIR AND REPLACEMENT OF CONTROL VALVES.
   - E. PUMPING OF EXCESS WATER OR ANY POOLED WATER INTO THE NEAREST STORM DRAIN.
   - F. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INVENTORY AND ITEMIZE IRRIGATION PIPING REPAIRS THAT OCCUR WITHIN TWO WEEKS OF OCCURRENCE.
   - G. IN THE EVENT THAT WATER IS ALLOWED TO FLOW UNCHECKED FROM A BROKEN OR RUPTURED LINE FOR GREATER THAN 15 MINUTES, THE DISTRICT SHALL HAVE THE RIGHT TO HAVE THE LINE REPAIRED AND THE CONTRACTOR SHALL BE BILLED FOR THE REPAIR WORK.
6. PROVIDE LABOR, MATERIAL, EQUIPMENT AND SERVICES NECESSARY TO COMPLETE THE TRENCHING, BACKFILLING AND COMPACTING NECESSARY FOR THIS PROJECT. COMPLY WITH DISTRICT STANDARDS, SECTION 31 23 33 – TRENCHING, BACKFILLING AND COMPACTING. THE RELATIVE COMPACTION OF TAMPED BEDDING MATERIAL SHALL BE NOT LESS THAN 90%. THE RELATIVE COMPACTION OF THE INITIAL BACKFILL SHALL BE NOT LESS THAN 90%. THE RELATIVE COMPACTION OF BACKFILL SHALL NOT BE LESS THAN 95% WITHIN 2-1/2 FEET OF FINISHED PERMANENT SURFACE GRADE OR 1-1/2 FEET BELOW THE FINISHED SUBGRADE, WHICHEVER IS GREATER.
7. A GEOTECHNICAL TESTING AGENCY (BY DISTRICT) SHALL BE RESPONSIBLE FOR COMPACTION TESTING, MOISTURE CONTENT TESTING, AND FOR QUALITY CONTROL TESTING DURING THE FILL OPERATIONS. TEST RESULTS SHALL BE SUBMITTED TO THE PROJECT MANAGER. GEOTECHNICAL AGENCY SHALL REVIEW FILL MATERIALS WITH RESPECT TO COMPLIANCE OF DISTRICT STANDARDS.
8. COORDINATE WITH DISTRICT FOR LOCATION OF NATIVE SOILS, AND LAYDOWN AREAS FOR MATERIALS. CONTRACTOR SHALL OFF-HAUL SPOILS.
9. COORDINATE ALL CLOSURES & PATHWAY OBSTRUCTIONS OR BLOCKAGES WITH DISTRICT PRIOR TO PROCEEDING WITH WORK. ALL DISRUPTION TO CAMPUS ACTIVITIES SHALL BE COORDINATED WITH DISTRICT.

HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES

1. PREREQUISITE WORK & CHECKLIST (THIS APPLIES TO ALL ZONE WORK, IMPLEMENT 'BY ZONE'):
   - A. CONTRACTOR TO VIF AND CONFIRM THE PRECISE LOCATIONS OF TEMPORARY HHW & CHW PIPING PENETRATIONS INTO THE BUILDING. IF ROOF OR WALL PENETRATIONS ARE SUGGESTED, CONTRACTOR TO VIF REBAR PATTERNS, WALL/ROOF FRAMING, AND TEMPORARY POINTS OF CONNECTION TO BUILDING HYDRONICS PRIOR TO CUTTING INTO THE EXISTING BUILDING ENVELOPE. SEE FURTHER DETAIL ON INDIVIDUAL BUILDING DRAWINGS M-4.1 THROUGH M-4.10.
   - B. CONTRACTOR TO COMPILE A BUILDING ISOLATION AND SWITCH OVER PROCEDURE. PROCEDURE SHALL IDENTIFY THE SCHEDULE OF THE SWITCH OVER EFFORT, SPECIFIC VALVES THAT WILL BE MANIPULATED, AND MANPOWER REQUIRED TO SWITCH OVER THE BUILDING HYDRONIC SYSTEMS TO TEMPORARY EQUIPMENT SERVICE SUCH THAT THE BUILDING MECHANICAL ROOM AND PUMPS ARE BYPASSED. CONFIRM PROCEDURE WITH ENGINEER OF RECORD PRIOR TO PROCEEDING WITH WORK.
   - C. CONFIRM THAT ALL TEMPORARY HEATING AND COOLING EQUIPMENT AT EACH BUILDING WITHIN THE WORK ZONE IS IN PLACE AND OPERATIONAL. THIS INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
     - i. TEMPORARY ELECTRIC AND/OR GAS SERVICES ARE SIZED FOR THE SPECIFIED TEMPORARY HEATING/COOLING EQUIPMENT IN ACCORDANCE WITH THE NEC, CPC, CMC, AND NFPA STANDARDS. THIS INCLUDES VALIDATION OF PROPER CIRCUIT PROTECTION AND FEEDER SIZING IN COMPLIANCE WITH NEC AND PROPER GAS SIZING AND DELIVERY PRESSURES IN COMPLIANCE WITH CPC. TEMPORARY ELECTRIC AND GAS SERVICES SHALL BE TESTED PER CODE AND PRIOR TO ENABLING TEMPORARY GAS AND/OR ELECTRIC SERVICE. THIS INCLUDES VALIDATION OF SYSTEM FUNCTIONALITY AND TESTING OF ALARMS TO ENSURE TIMELY NOTICE IF ANY TEMPORARY EQUIPMENT FAILS.
     - ii. TEMPORARY PIPING IS IN PLACE, SECURED TO TEMPORARY PIPE SUPPORTS, AND ROUTED TO THE TEMPORARY POINTS OF CONNECTION INSIDE THE BUILDING. TEMPORARY POINTS OF CONNECTION SHALL BE LOCATED SUCH THAT THE BUILDING HYDRONIC PUMPS ARE BYPASSED BY THE TEMPORARY HHW/CHW SYSTEM. PENETRATIONS AT THE BUILDING INTERIOR SHALL OCCUR AT EXISTING DOORWAYS, AT EXTERIOR WALLS, OR AT BUILDING ROOFS TO ACCESS CEILING SPACES.
     - iii. TEMPORARY CONSTRUCTION FENCING IS IN PLACE AROUND ALL AREAS OF WORK AND ALL WAYFINDING IS IN PLACE.
     - iv. SOUND LEVELS INSIDE THE NEAREST CLASSROOM SHALL BE NOT GREATER NC-35. CONTRACTOR TO CONDUCT SOUND PRE-READING AT NEAREST CLASSROOM(S). IF SOUND LEVELS ARE GREATER THAN NC-35 WITH TEMP. GENERATORS, BOILERS, PUMPS, AND/OR CHILLERS ONLINE, PROVIDE SOUND ATTENUATING BLANKETS AT TEMPORARY EQUIPMENT ENCLOSURES TO REDUCE SOUND OF MACHINERY (I.E. TEMP. CHILLERS, GENERATORS, BOILERS, PUMPS, ETC.).

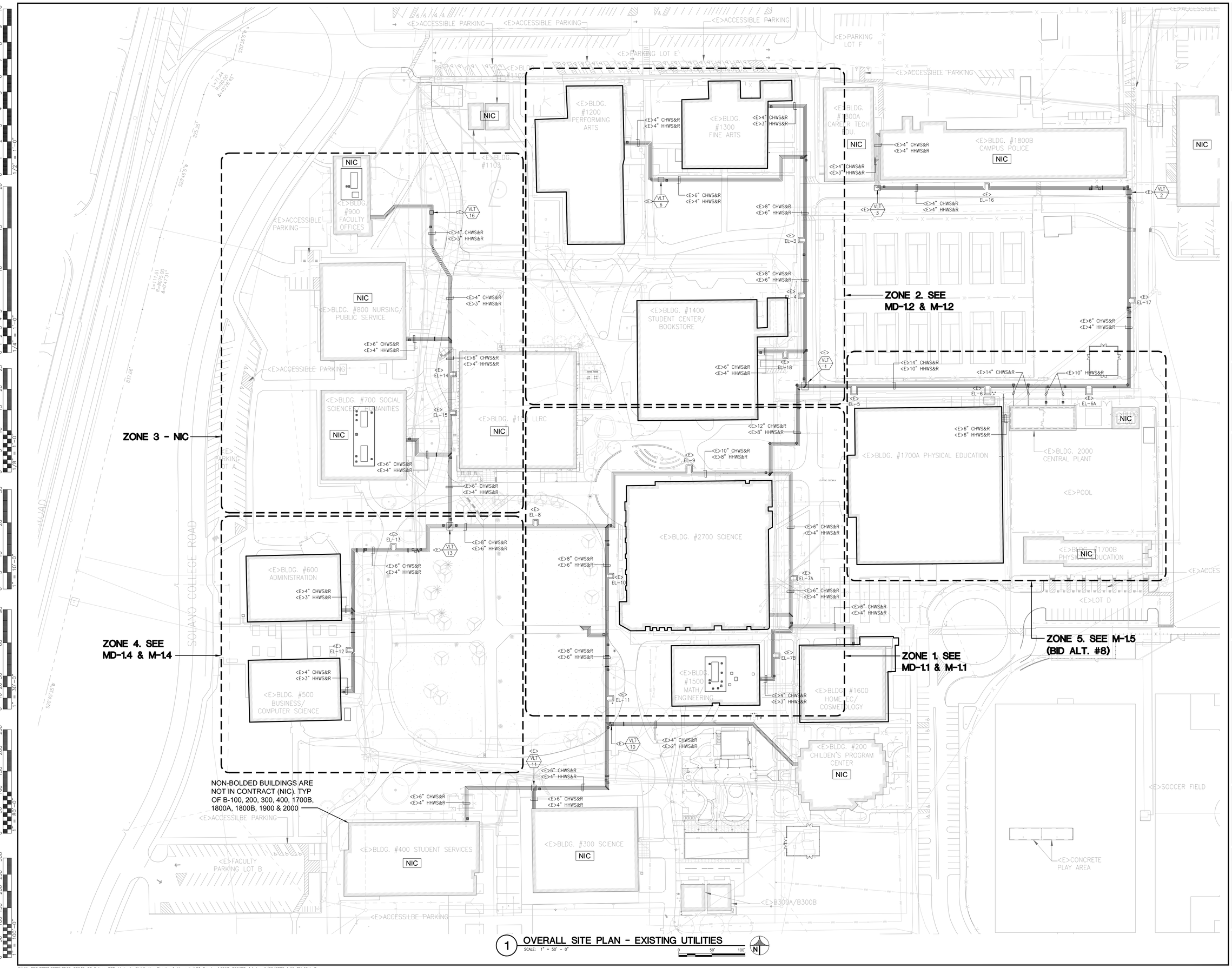
REQUIREMENTS FOR CORED/SAWCUT HOLES THROUGH CONCRETE WALLS

1. ALL BARS IN VICINITY OF PROPOSED CORED/SAWCUT HOLES SHALL BE LOCATED WITH MAGNETIC LOCATING DEVICE AND EACH BAR LOCATION PLAINLY AND ACCURATELY MARKED ON WALL SURFACE PRIOR TO LOCATING HOLES. MARKINGS SHALL BE REMOVED AFTER ALL HOLES ARE CORED/SAWCUT.
2. NOTIFY ENGINEER UPON BAR LOCATION AND MARKING FOR HIS DIRECTION BEFORE PROCEEDING.
3. HOLES SHALL BE LOCATED NOT LESS THAN 1" CLEAR FROM REINFORCING. REFER TO ORIGINAL AS-BUILT DRAWINGS FOR EXISTING REINFORCING LAYOUT IN EXISTING WALLS.
4. CONFIRM THAT PROPOSED HOLE LOCATIONS DO NOT INTERFERE WITH OPERATION OF ANY EQUIPMENT OR WITH EXISTING OR NEW PIPES OR CONDUITS.
5. DO NOT OVERCUT AT CORNERS.
6. MINIMUM DISTANCE BETWEEN DRILLED-CORE HOLES TO BE 2 x WALL THICKNESS.

DSA ADMINISTRATIVE REQUIREMENT

1. A COPY OF PARTS 1 TO 5 AND 9, TITLE 24, C.C.R. SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.
2. ALL CONSTRUCTION CHANGE DOCUMENTS AND ADDENDA TO BE SIGNED BY THE ARCHITECT AND THE OWNER AND APPROVED BY DSA. CONSTRUCTION CHANGE DOCUMENTS ARE NOT VALID UNTIL APPROVED BY DSA PER SECTION 4-338, PART 1, TITLE 24.
3. ALL TESTS TO CONFORM TO THE REQUIREMENTS OF SECTION 4-335, PART 1, TITLE 24, AND APPROVED T & I SHEET.
4. TESTS OF MATERIAL SAND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH SECTION 4-335 OF PART 1, TITLE 24, AND THE DISTRICT SHALL EMPLOY AND PAY THE LABORATORY. COSTS OF RE-TEST MAY BE BACK CHARGED TO THE CONTRACTOR.
5. DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE PER SECTION 4-331, PART 1, TITLE 24.
6. INSPECTOR SHALL BE APPROVED BY DSA. INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 4-333(B). THE DUTY OF THE INSPECTOR SHALL BE IN ACCORDANCE WITH SECTION 4-342, PART 1, TITLE 24.
7. SUPERVISION OF CONSTRUCTION BY DSA SHAL BE IN ACCORDANCE WITH SECTION 4-334, PART 1, TITLE 24.
8. CONTRACTOR, INSPECTOR, ARCHITECT AND ENGINEERS SHALL SUBMIT VERIFIED REPORTS (FORM SSS-6) IN ACCORDANCE WITH SECTION 4-336 AND 4-343, PART 1, TITLE 24.
9. THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH SECTION 4-343, PART 1, TITLE 24.
10. ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
11. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
12. A "DSA CERTIFIED" CLASS 3 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
13. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
14. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24, CCR).
15. THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEM, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PRO

THIS DRAWING IS 30" X 42" AT FULL SIZE, 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 OVERALL SITE PLAN - EXISTING UTILITIES
SCALE: 1" = 50' - 0"

M:\AA-PROJECTS\2025\2510-00649-00 Solano CCD, Hydronic Distribution Repairs & Upgrades\03 Drawings\2510-00649G-1.1.dwg 1/26/2026 1:16 PM Minh Ong

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Local **Action.**

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEET
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE
4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
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	11/12/25	PROGRESS SET
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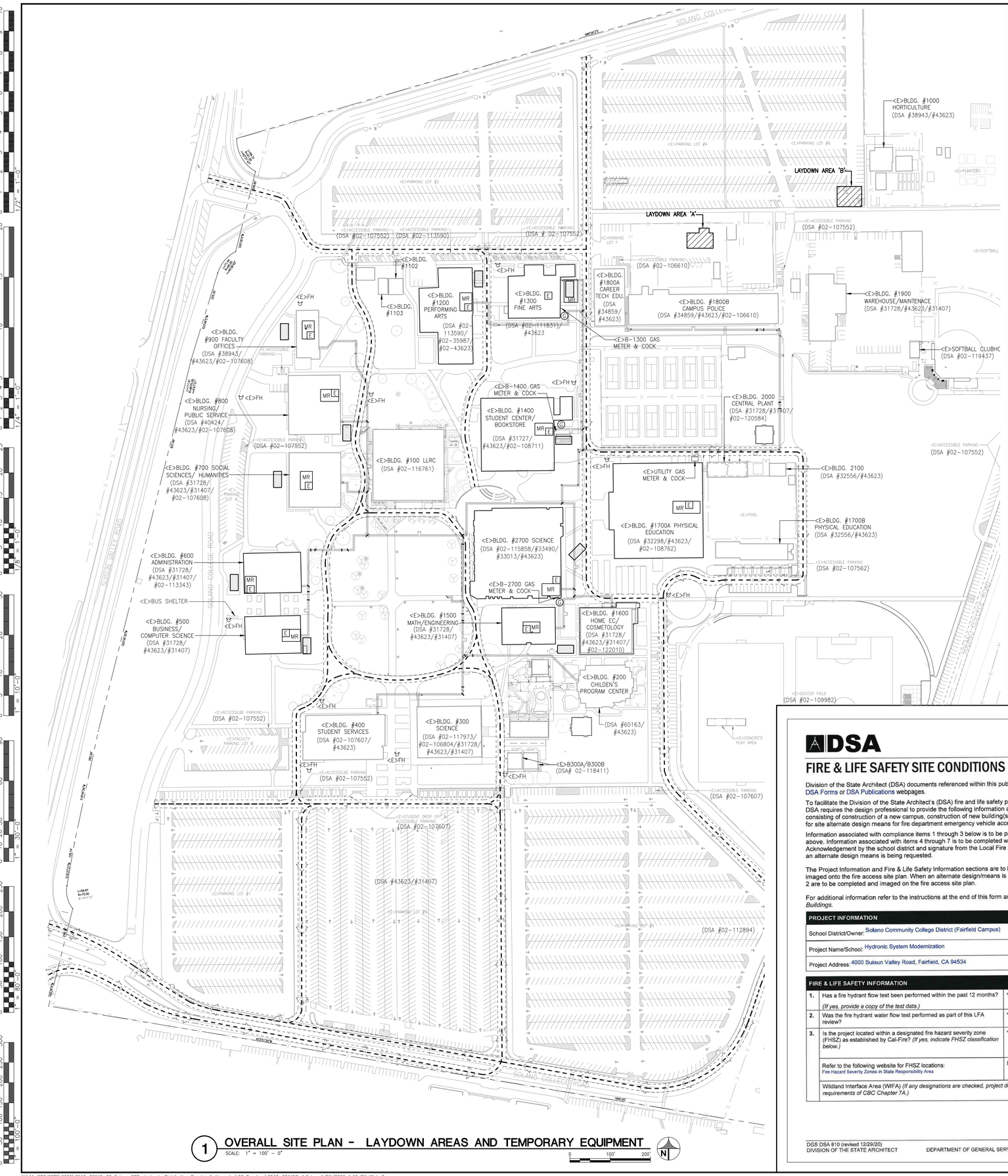
SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE
OVERALL SITE PLAN EXISTING UTILITIES

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

G-1.1
SHEET OF –

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1 OVERALL SITE PLAN - LAYDOWN AREAS AND TEMPORARY EQUIPMENT
SCALE: 1" = 100' - 0"

0 100' 200'

EXISTING BUILDING DSA APPLICATION NUMBER

	BUILDING #	DSA APPLICATION #	AREA IN SF	CONST. & OCC. TYPE	STORIES	BUILD TYPE	SPRINKLER
	100*	02-116761	58,265				
	200*	60163, 43623	9,562				
	300*	31728, 43623, 31407	24,240				
	400*	01-100548, 43623	1,440				
ZONE #4	500	31728, 43623, 31407	11,616	TYPE V-B OCC: B	ONE	COMPUTER CLASSROOMS	NO
ZONE #4	600	31728, 43623, 31407, 02-113343	13,056	TYPE V-B OCC: A-3, B	ONE	ADMINISTRATION	NO
ZONE #3 (N.I.C.)	700***	31728, 43623, 31407, 02-107608	16,864	TYPE V-B OCC: B	ONE	CLASSROOMS/OFFICES	NO
ZONE #3 (N.I.C.)	800***	40427, 43623, 02-107608	17,856	TYPE V-B OCC: B	ONE	CLASSROOMS/OFFICES	NO
ZONE #3 (N.I.C.)	900***	38943, 43623, 02-107608	2,447	TYPE V-B OCC: B	ONE	FACULTY OFFICES	NO
	1100*	28325	17,500				
ZONE #2	1200	35987, 43623, 02-113590	25,251	TYPE III-B OCC: A-3, B	TWO	PERFORMANCE ARTS	NO
ZONE #2	1300	43623, 02-111831	12,400	TYPE III-B OCC: B	ONE	FINE ARTS	NO
ZONE #2	1400	31727, 43623, 02-108711	30,976	TYPE III-A OCC: B	ONE	STUDENT CENTER	NO
ZONE #1	1500	31728, 43623, 31407	11,616	TYPE V-B OCC: B	ONE	MATH	NO
ZONE #1	1600*	31728, 43623, 31407, 02-122010	14,336	TYPE III-B OCC: B,S-1,A-3	ONE	COSMETOLOGY	YES
ZONE #1	1700A-1700B**	32298, 43623, 02-108762	48,201	TYPE III-A OCC: A-3	ONE	PHYSICAL ED/GYM	NO
	1800A*	34859, 43623	9,660				
	1800B*	34859, 43623	24,610				
	1900*	31728, 43623, 31407	10,730				
	2000*	31728, 31407	3,160				
	2100*	32556, 43623	3,500				
	2200 POOL*	32556, 43623	12,320				
ZONE #1	2700	33490, 33013, 43623, 02-115858	48,000	TYPE II-B OCC: B	ONE	SCIENCE	YES

* MECHANICAL ROOM DEFERRED MAINTENANCE UPGRADES NOT IN CONTRACT
** BID ALTERNATE #8 (ADDITIVE) - POTABLE WATER REPLACEMENT ONLY
*** NOT IN CONTRACT

LEGEND

- 20' x 40' TEMPORARY EQUIPMENT ENCLOSURE
- EXISTING FIRE HYDRANT
- E — ELECTRICAL POINT OF CONNECTION
- G — GAS POINT OF CONNECTION
- MR — MECHANICAL ROOM
- PROPERTY LINE
- FIRE DEPARTMENT ACCESS (FIRE DEPARTMENT ACCESS IS 20'-0" WIDE, 13'-6" VERTICAL CLEARANCE AND RATED FOR 32,000 LBS PER AXLE)
- LAYDOWN AREA

NOTE:

PROVIDE FIRE DEPARTMENT ACCESS (KEY BOX) TO TEMPORARY ENCLOSURES AND OTHER TEMPORARY FENCED AREAS DURING CONSTRUCTION, PER CFC SECTION 503.6 AND 506.1.

DSA 810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy *PL 09-01: Fire Flow for Buildings.*

PROJECT INFORMATION

School District/Owner:	Solano Community College District (Fairfield Campus)
Project Name/School:	Hydronic System Modernization
Project Address:	4000 Suisun Valley Road, Fairfield, CA 94534

FIRE & LIFE SAFETY INFORMATION

1.	Has a fire hydrant flow test been performed within the past 12 months? *(If yes, provide a copy of the test data.)*	Yes ☐		No ☑
2.	Was the fire hydrant water flow test performed as part of this LFA review?	Yes ☐		No ☑
3.	Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? *(If yes, indicate FHSZ classification below.)*	Yes ☐		No ☑
	Refer to the following website for FHSZ locations: Fire Hazard Severity Zones in State Responsibility Area	Moderate ☐	High ☐	Very High ☐
	Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)*			WIFA ☐

DGS DSA 810 (revised 12/29/20) DIVISION OF THE STATE ARCHITECT | DEPARTMENT OF GENERAL SERVICES | Page 1 of 4 STATE OF CALIFORNIA

DSA 810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

	CONDITION MEANS AND METHODS RESOLUTION	ALTERNATE ACCEPTED Yes	No	N/A	N/R
4.	Emergency vehicle access roadways do not meet CFC requirements.				
4a.	**Acceptable Alternate:** Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.				
5.	**Fire Hydrants:** Number and spacing does not meet CFC requirements.				
5a.	**Acceptable Alternate:** Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.				
6.	**Fire Hydrants:** Water flow and pressure are less than CFC minimum.				
6a.	**Acceptable Alternate:** The available flow and pressure is acceptable for providing fire suppression and protection of life and property.				
7.	Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.				
7a.	**Acceptable Alternate:** The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.				

School District Acceptance of Acceptable Design Alternates

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: Jason Yi Title: Project Manager

Signature: Date: 11/20/25

LOCAL FIRE AUTHORITY (LFA) INFORMATION

LFA Agency Name:	Fairfield Fire
LFA Review Official:	Steven Conti
Title:	Fire Marshal
Work Phone:	(707) 428-7550
Work Email:	sconti@fairfield.ca.gov

LFA Reviewer's Signature: Date: 11/18/26

DGS DSA 810 (revised 12/29/20) DIVISION OF THE STATE ARCHITECT | DEPARTMENT OF GENERAL SERVICES | Page 2 of 4 STATE OF CALIFORNIA

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SOLANO COMMUNITY COLLEGE DISTRICT

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HYDRONIC SYSTEM MODERNIZATION

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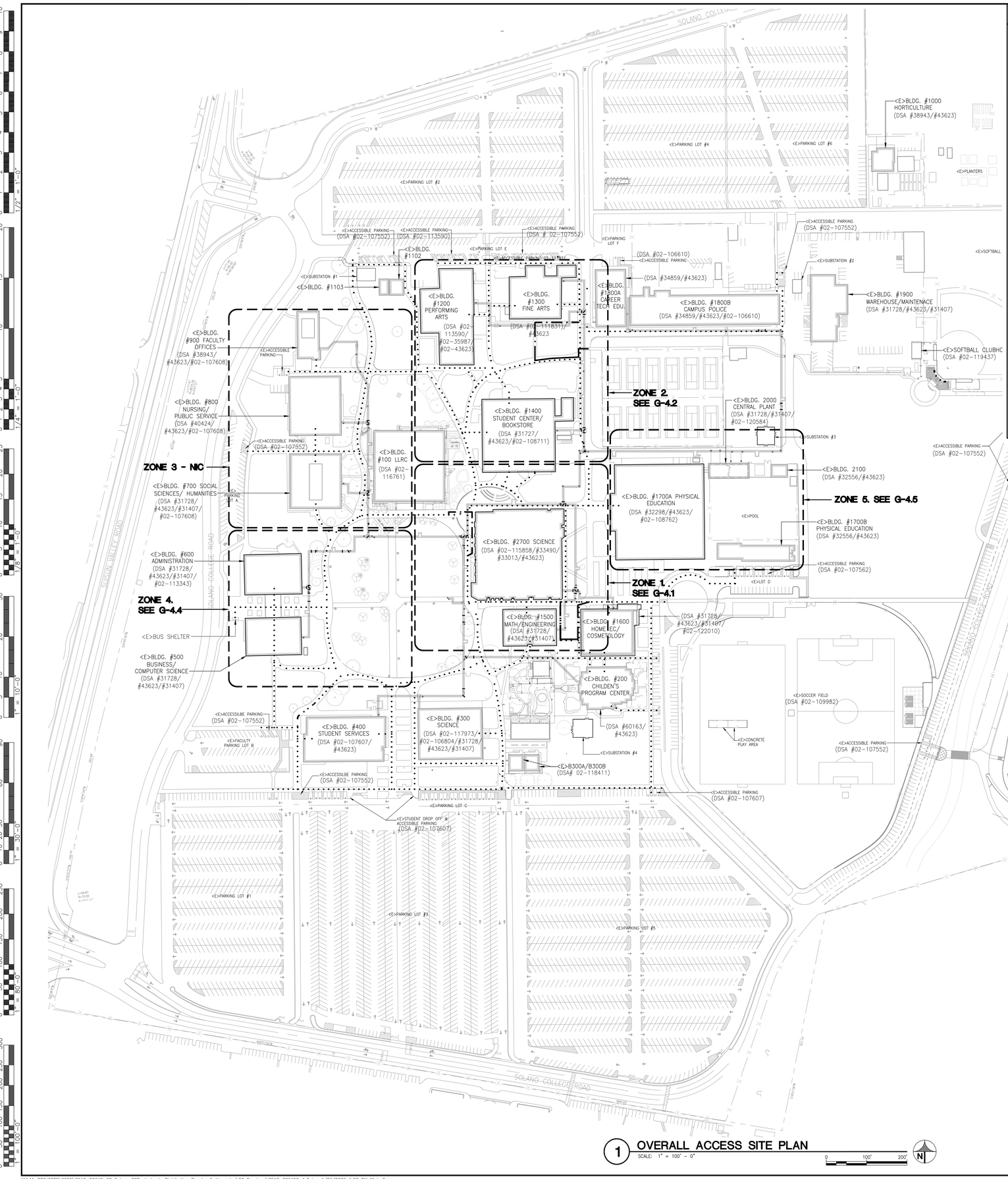
SHEET TITLE

OVERALL SITE PLAN LAYDOWN AREAS AND TEMPORARY EQUIPMENT

SCALE: AS NOTED
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SHEET OF -

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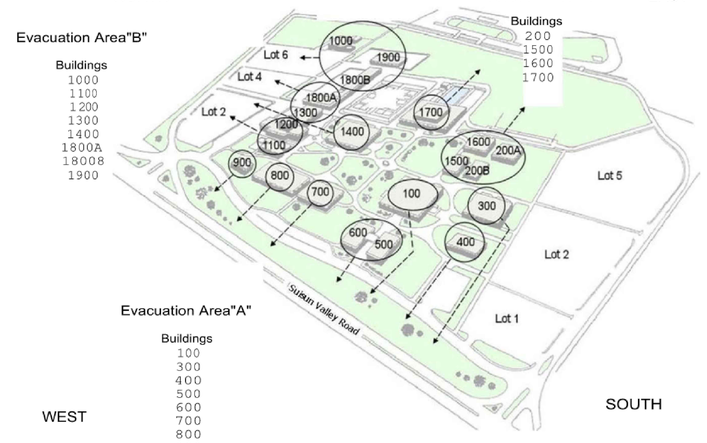
1 OVERALL ACCESS SITE PLAN
SCALE: 1" = 100' - 0"

SAFE DISPERSAL AREA MAP

Fairfield Main Campus, 4000 Suisun Valley Road, Fairfield, California 94534
(707) 864-7000 PAGE 5

CAM PUS EVACUATION AREA MAP

In the event of a campus emergency that requires a mandatory evacuation of the buildings on campus, students, faculty, and staff will proceed to the evacuation areas designated on this map. Note: Evacuation routes are to the NORTH,EAST, and WEST of campus.



PATH OF TRAVEL

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ABRUPT LEVEL CHANGES EXCEEDING ½" IF BEVELED AT 1:2 MAXIMUM SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING ¼" MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP-RESISTANT. CROSS-SLOPE SHALL NOT BE STEEPER THAN 1:48 AND SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT BE STEEPER THAN 1:20. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND FREE OF OBJECTS PROTRUDING MORE THAN 4" FROM THE WALL, ABOVE 27" AND LESS THAN 80" ABOVE THE FLOOR.

PATH OF TRAVEL UPGRADES

THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NON-COMPLIANT WITH THE CBC HAVE BEEN IDENTIFIED AND THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CBC COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THE ITEMS SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT."

MEANS OF EGRESS

MEANS OF EGRESS SHALL BE MAINTAINED IN ACCORDANCE WITH THE 2022 CALIFORNIA FIRE CODE, SECTION 1032.

LEGEND

PATH OF TRAVEL

ALTERNATE PATH OF TRAVEL

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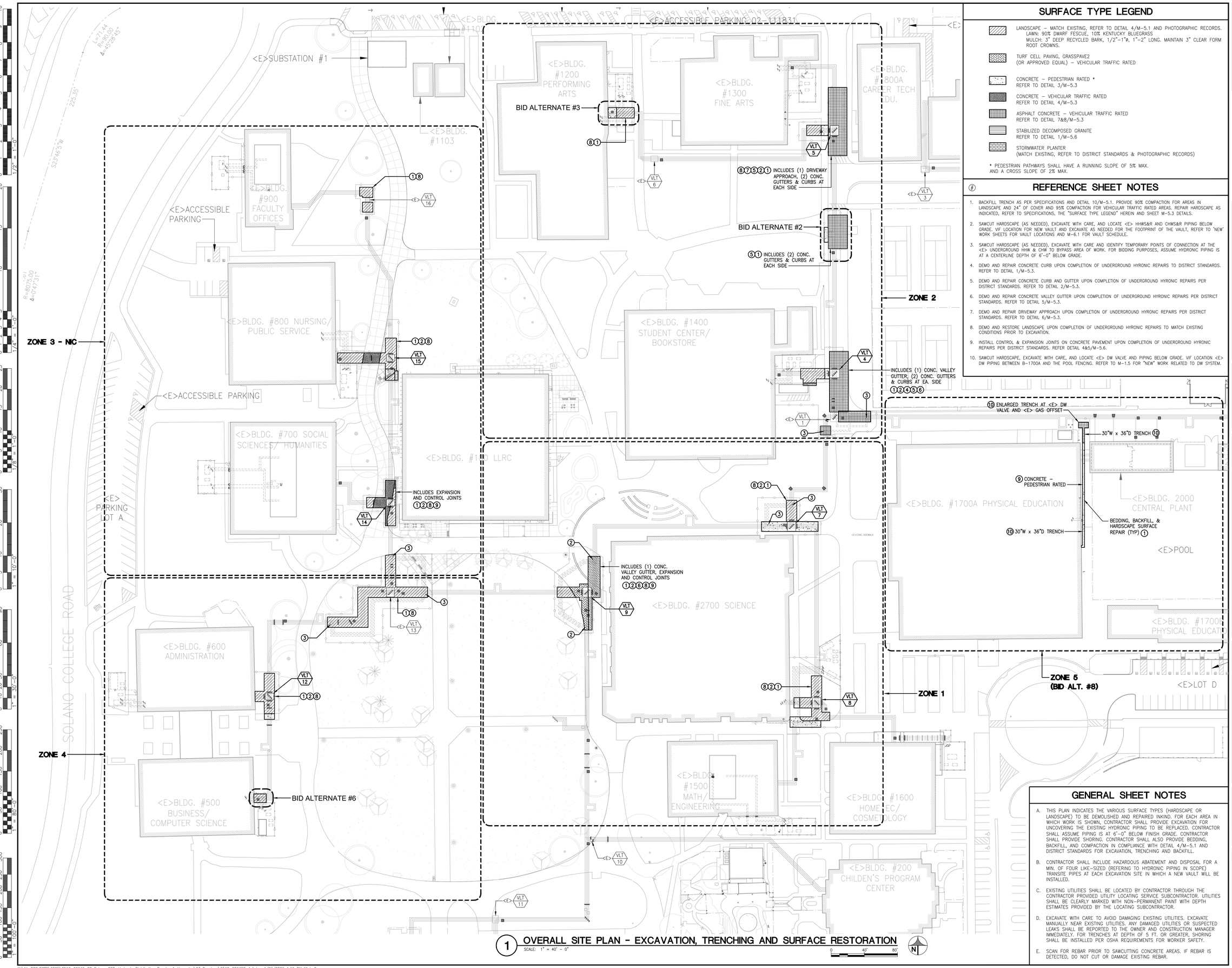
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SHEET TITLE
OVERALL ACCESS SITE PLAN

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

G-1.3
SHEET OF –

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1 OVERALL SITE PLAN - EXCAVATION, TRENCHING AND SURFACE RESTORATION

SCALE: 1" = 40' - 0"

SURFACE TYPE LEGEND

- LANDSCAPE – MATCH EXISTING, REFER TO DETAIL 4/M-5.1 AND PHOTOGRAPHIC RECORDS. LAWN: 90% DWARF FESCUE, 10% KENTUCKY BLUEGRASS MULCH: 3" DEEP RECYCLED BARK, 1/2"-1"ø, 1"-2" LONG. MAINTAIN 3" CLEAR FORM ROOT CROWNS.
- TURF CELL PAVING, GRASSPAVE2 (OR APPROVED EQUAL) – VEHICULAR TRAFFIC RATED
- CONCRETE – PEDESTRIAN RATED * REFER TO DETAIL 3/M-5.3
- CONCRETE – VEHICULAR TRAFFIC RATED REFER TO DETAIL 4/M-5.3
- ASPHALT CONCRETE – VEHICULAR TRAFFIC RATED REFER TO DETAIL 7&8/M-5.3
- STABILIZED DECOMPOSED GRANITE REFER TO DETAIL 1/M-5.6
- STORMWATER PLANTER (MATCH EXISTING, REFER TO DISTRICT STANDARDS & PHOTOGRAPHIC RECORDS)

* PEDESTRIAN PATHWAYS SHALL HAVE A RUNNING SLOPE OF 5% MAX. AND A CROSS SLOPE OF 2% MAX.

REFERENCE SHEET NOTES

1. BACKFILL TRENCH AS PER SPECIFICATIONS AND DETAIL 10/M-5.1. PROVIDE 90% COMPACTION FOR AREAS IN LANDSCAPE AND 24" OF COVER AND 95% COMPACTION FOR VEHICULAR TRAFFIC RATED AREAS. REPAIR HARDSCAPE AS INDICATED, REFER TO SPECIFICATIONS, THE "SURFACE TYPE LEGEND" HEREIN AND SHEET M-5.3 DETAILS.
2. SAWCUT HARDSCAPE (AS NEEDED), EXCAVATE WITH CARE, AND LOCATE <E> HHWS&R AND CHWS&R PIPING BELOW GRADE. VIF LOCATION FOR NEW VAULT AND EXCAVATE AS NEEDED FOR THE FOOTPRINT OF THE VAULT, REFER TO 'NEW' WORK SHEETS FOR VAULT LOCATIONS AND M-6.1 FOR VAULT SCHEDULE.
3. SAWCUT HARDSCAPE (AS NEEDED), EXCAVATE WITH CARE AND IDENTIFY TEMPORARY POINTS OF CONNECTION AT THE <E> UNDERGROUND HHW & CHW TO BYPASS AREA OF WORK. FOR BIDDING PURPOSES, ASSUME HYDRONIC PIPING IS AT A CENTERLINE DEPTH OF 6'-0" BELOW GRADE.
4. DEMO AND REPAIR CONCRETE CURB UPON COMPLETION OF UNDERGROUND HYRONIC REPAIRS TO DISTRICT STANDARDS. REFER TO DETAIL 1/M-5.3.
5. DEMO AND REPAIR CONCRETE CURB AND GUTTER UPON COMPLETION OF UNDERGROUND HYRONIC REPAIRS PER DISTRICT STANDARDS. REFER TO DETAIL 2/M-5.3.
6. DEMO AND REPAIR CONCRETE VALLEY GUTTER UPON COMPLETION OF UNDERGROUND HYRONIC REPAIRS PER DISTRICT STANDARDS. REFER TO DETAIL 5/M-5.3.
7. DEMO AND REPAIR DRIVEWAY APPROACH UPON COMPLETION OF UNDERGROUND HYRONIC REPAIRS PER DISTRICT STANDARDS. REFER TO DETAIL 6/M-5.3.
8. DEMO AND RESTORE LANDSCAPE UPON COMPLETION OF UNDERGROUND HYRONIC REPAIRS TO MATCH EXISTING CONDITIONS PRIOR TO EXCAVATION.
9. INSTALL CONTROL & EXPANSION JOINTS ON CONCRETE PAVEMENT UPON COMPLETION OF UNDERGROUND HYRONIC REPAIRS PER DISTRICT STANDARDS. REFER DETAIL 4&5/M-5.6.
10. SAWCUT HARDSCAPE, EXCAVATE WITH CARE, AND LOCATE <E> DW VALVE AND PIPING BELOW GRADE. VIF LOCATION <E> DW PIPING BETWEEN B-1700A AND THE POOL FENCING. REFER TO M-1.5 FOR "NEW" WORK RELATED TO DW SYSTEM.

GENERAL SHEET NOTES

A. THIS PLAN INDICATES THE VARIOUS SURFACE TYPES (HARDSCAPE OR LANDSCAPE) TO BE DEMOLISHED AND REPAIRED INKIND. FOR EACH AREA IN WHICH WORK IS SHOWN, CONTRACTOR SHALL PROVIDE EXCAVATION FOR UNCOVERING THE EXISTING HYDRONIC PIPING TO BE REPLACED. CONTRACTOR SHALL ASSUME PIPING IS AT 6'-0" BELOW FINISH GRADE. CONTRACTOR SHALL PROVIDE SHORING. CONTRACTOR SHALL ALSO PROVIDE BEDDING, BACKFILL, AND COMPACTION IN COMPLIANCE WITH DETAIL 4/M-5.1 AND DISTRICT STANDARDS FOR EXCAVATION, TRENCHING AND BACKFILL.

B. CONTRACTOR SHALL INCLUDE HAZARDOUS ABATEMENT AND DISPOSAL FOR A MIN. OF FOUR LIKE-SIZED (REFERING TO HYDRONIC PIPING IN SCOPE) TRANSITE PIPES AT EACH EXCAVATION SITE IN WHICH A NEW VAULT WILL BE INSTALLED.

C. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

D. EXCAVATE WITH CARE TO AVOID DAMAGING EXISTING UTILITIES. EXCAVATE MANUALLY NEAR EXISTING UTILITIES. ANY DAMAGED UTILITIES OR SUSPECTED LEAKS SHALL BE REPORTED TO THE OWNER AND CONSTRUCTION MANAGER IMMEDIATELY. FOR TRENCHES AT DEPTH OF 5 FT. OR GREATER, SHORING SHALL BE INSTALLED PER OSHA REQUIREMENTS FOR WORKER SAFETY.

E. SCAN FOR REBAR PRIOR TO SAWCUTTING CONCRETE AREAS. IF REBAR IS DETECTED, DO NOT CUT OR DAMAGE EXISTING REBAR.

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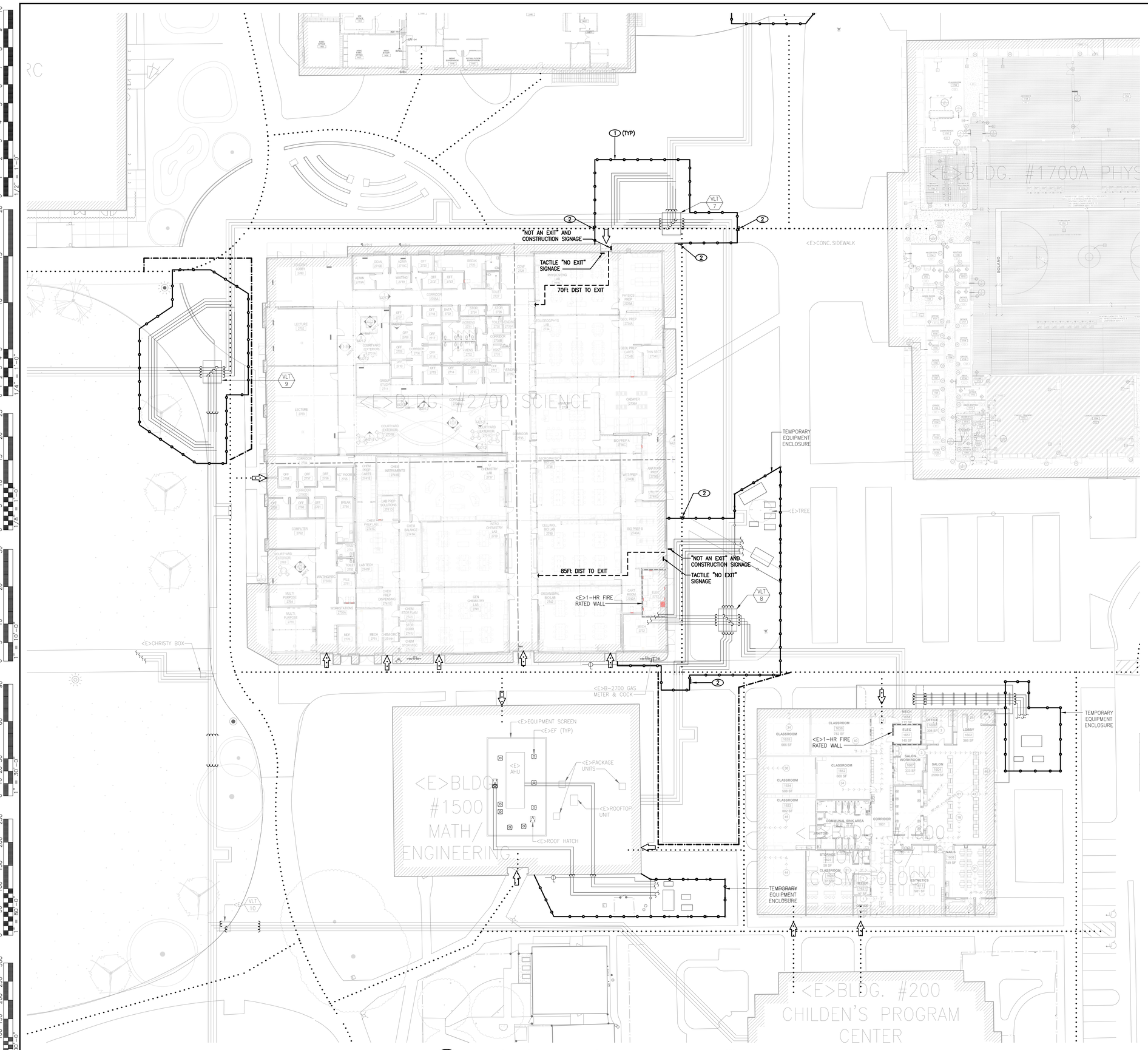
OVERALL SITE PLAN EXCAVATION, TRENCHING AND SURFACE RESTORATION

SCALE: AS NOTED
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1 ENLARGED SITE PLAN ZONE #1

SCALE: 1" = 20' - 0"

0 20' 40'

N

GENERAL SHEET NOTES

A. THE CAMPUS SHALL BE OCCUPIED AND FULLY FUNCTIONAL DURING THE ENTIRE COURSE OF CONSTRUCTION. ACCESS TO ALL BUILDINGS SHALL BE MAINTAINED WITH TEMPORARY WALKWAYS, BRIDGES, BARRIERS AND SIGNS – SEE DISTRICT STANDARDS.

B. A WORK PLAN SHALL BE COORDINATED AND APPROVED BY THE DISTRICT PRIOR TO THE START OF ANY TRENCHING ACTIVITY. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

C. CAMPUS SIGNAGE MUST BE INSTALLED PRIOR TO OPENING ANY HEADING.

D. SAWCUTTING OF CONCRETE AND ASPHALT TO OCCUR AFTER HOURS. SEE SPECIFICATIONS. SEE PATCHING DETAILS ON DRAWING M-5.3 AND DETAILS 4 AND 5/M-5.6.

E. ALL LANDSCAPING AND HARDSCAPING DAMAGED AS A RESULT OF WORK SHALL BE RESTORED TO AS-FOUND CONDITION. SAWCUTTING OF HARDSCAPE SHALL BE FROM SCOREMARK TO SCOREMARK. REFER TO DETAIL 8 & 8/M-5.6 FOR CONCRETE AND ASPHALT PATCHING DETAILS FOR INTERFACE TO EXISTING CONCRETE OR ASPHALT

F. NORMAL UNDERGROUND UTILITY LOCATION PROVISIONS (I.E. USA LOCATOR SERVICE) ARE NOT AVAILABLE ON CAMPUSES AS A RULE. CONTRACTOR IS RESPONSIBLE TO PROVIDE PRIVATE SERVICE FOR LOCATION OF UNDERGROUND SERVICES. PROVIDE ACCESS REQUEST PRIOR TO DISRUPTION OF ANY SERVICE, OR ACCESS TO ANY SENSITIVE/OCCUPIED AREA.

G. MAINTAIN ACCESSIBILITY ACCESS TO ALL BUILDINGS, PATHWAYS. PROVIDE TRENCH PLATE AS SHOWN AND/OR AS REQUIRED. COORDINATE REMOVAL AND/OR RELOCATION OF TRENCH PLATE WITH CAMPUS. SEE ADA RAMP DETAILS ON DRAWING E-5.1. PROVIDE SMOOTH OR BEVELED TRANSITIONS FROM GRADE TO TRENCH PLATE PER ADA REQUIREMENTS.

H. THE TREE PROTECTION PLAN SHALL BE SUBMITTED AS A DETAIL ON THE FINAL SITE PLAN USED FOR CONSTRUCTION. A CERTIFIED ARBORIST, REGISTERED CONSULTING ARBORIST OR REGISTERED PROFESSIONAL FORESTER SHALL BE RETAINED TO ACT AS THE PROJECT ARBORIST TO MONITOR CONSTRUCTION ACTIVITIES. PRUNE AFFECTED TREES PER ANSI A300 PRUNING STANDARDS. INSTALL TEMPORARY 6' HIGH CHAIN LINK PROTECTIVE FENCING ON CONCRETE FOOTINGS 5' FROM THE TRUNK. INSTALL A 6" LAYER OF CLEAN WOOD CHIPS, WATER TREES AND KEEP SOIL MOIST TO A DEPTH OF 18" WITHIN THE PROTECTIVE FENCING. ALL EXCAVATION, WHEN APPROVED BY THE ARBORIST, WITHIN THE PROTECTED FENCING SHALL BE PERFORMED WITH HANDHELD EQUIPMENT OR AN "AIR SPADE"

I. ADA PARKING STALLS TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES. IN THE EVENT ANY CONSTRUCTION ACTIVITIES BLOCK ACCESSIBLE PARKING SPACES, PROVIDE ALTERNATE TEMP. LOCATION WITH ACCESSIBLE DESIGNATION SIGNAGE AND GRAPHICS PER CBC SECTION 1129B.3 AND 1129B.4

REFERENCE SHEET NOTES

1. PROVIDE TEMPORARY FENCING AROUND AREAS OF WORK WITHIN PROJECT ZONE. TEMPORARY FENCING SHALL BE PROVIDED AT ALL AREAS OF WORK INCLUDING TEMPORARY HYDRONIC PIPING, TEMPORARY HEATING AND COOLING EQUIPMENT, TEMPORARY GAS PIPING, TEMPORARY GENERATOR(S), EXCAVATION SITES AND EQUIPMENT, AND LAYDOWN/STORAGE AREAS.

2. "PATHWAY CLOSED" SIGNAGE SEE DRAWING G-5.1.

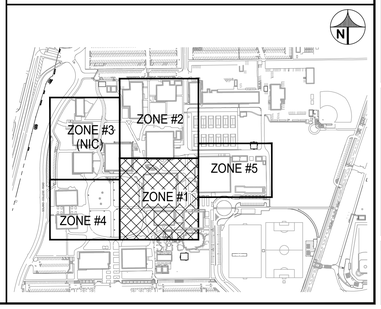
LEGEND

- TEMPORARY CHAIN LINK FENCE
- PATH OF TRAVEL
- ALTERNATE PATH OF TRAVEL
- ALTERNATE BUILDING EXIT
- ACCESSIBLE BUILDING ENTRANCE
- TEMPORARY TRENCHPLATE FOR BUILDING/CAMPUS ACCESS

NOTE:

SEE SHEET G-1.2 FOR OTHER LEGEND DESIGNATION.

KEY PLAN



Salas O'Brien

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National **Strength.**
Local **Action.**

REGISTERED PROFESSIONAL ENGINEER
JOHN BARRETT SWIFT
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	JEG
APPROVED BY:	EES

SHEET TITLE

ENLARGED SITE PLAN ZONE #1

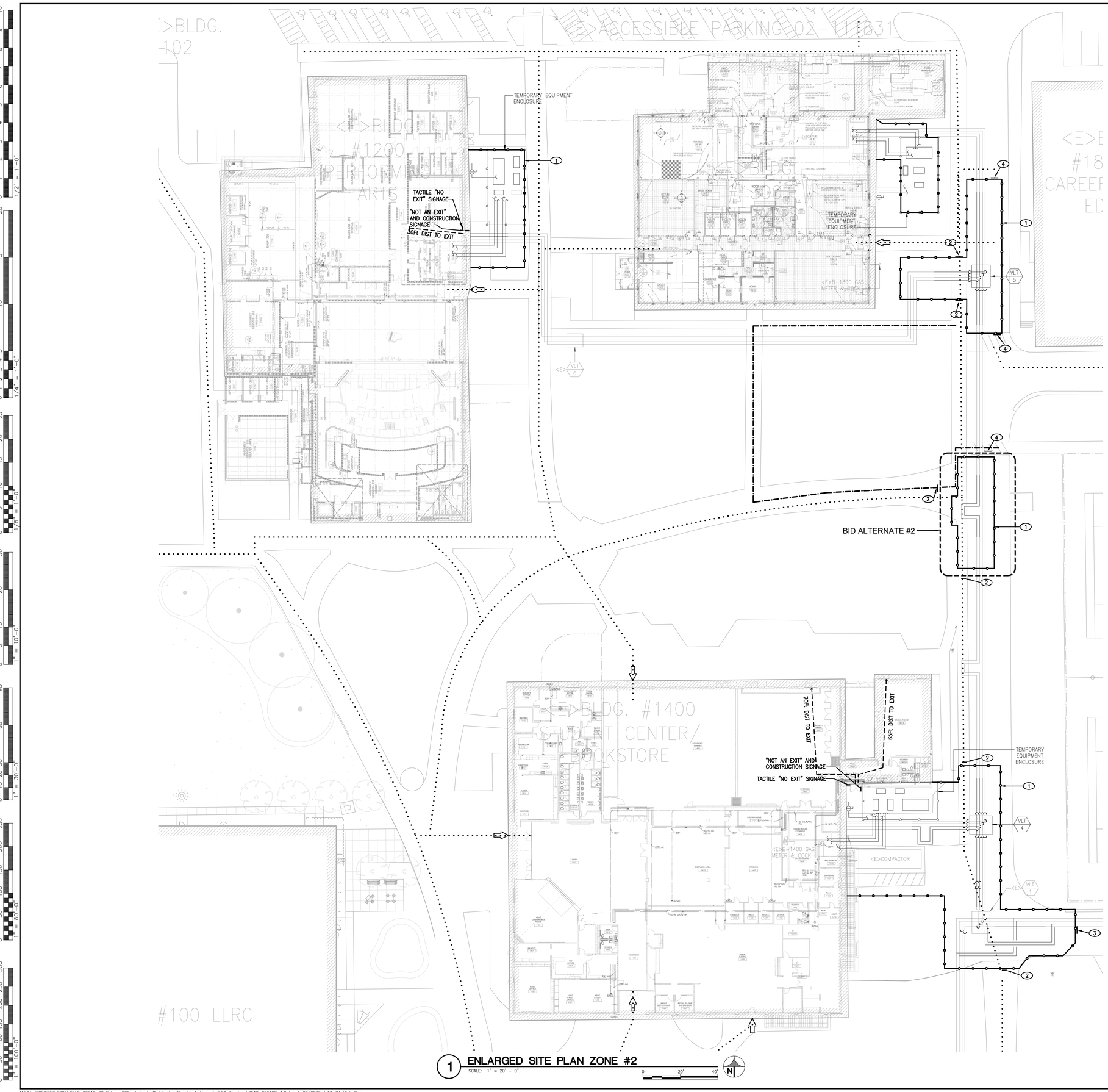
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

G-4.1

SHEET OF –

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1 ENLARGED SITE PLAN ZONE #2
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. THE CAMPUS SHALL BE OCCUPIED AND FULLY FUNCTIONAL DURING THE ENTIRE COURSE OF CONSTRUCTION. ACCESS TO ALL BUILDINGS SHALL BE MAINTAINED WITH TEMPORARY WALKWAYS, BRIDGES, BARRIERS AND SIGNS – SEE DISTRICT STANDARDS.

B. A WORK PLAN SHALL BE COORDINATED AND APPROVED BY THE DISTRICT PRIOR TO THE START OF ANY TRENCHING ACTIVITY. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

C. CAMPUS SIGNAGE MUST BE INSTALLED PRIOR TO OPENING ANY HEADING.

D. SAWCUTTING OF CONCRETE AND ASPHALT TO OCCUR AFTER HOURS. SEE SPECIFICATIONS. SEE PATCHING DETAILS ON DRAWING M-5.3 AND DETAILS 4 AND 5/M-5.6.

E. ALL LANDSCAPING AND HARDSCAPING DAMAGED AS A RESULT OF WORK SHALL BE RESTORED TO AS-FOUND CONDITION. SAWCUTTING OF HARDSCAPE SHALL BE FROM SCOREMARK TO SCOREMARK. REFER TO DETAIL 8 & 8/M-5.6 FOR CONCRETE AND ASPHALT PATCHING DETAILS FOR INTERFACE TO EXISTING CONCRETE OR ASPHALT

F. NORMAL UNDERGROUND UTILITY LOCATION PROVISIONS (I.E. USA LOCATOR SERVICE) ARE NOT AVAILABLE ON CAMPUSES AS A RULE. CONTRACTOR IS RESPONSIBLE TO PROVIDE PRIVATE SERVICE FOR LOCATION OF UNDERGROUND SERVICES. PROVIDE ACCESS REQUEST PRIOR TO DISRUPTION OF ANY SERVICE, OR ACCESS TO ANY SENSITIVE/OCCUPIED AREA.

G. MAINTAIN ACCESSIBILITY ACCESS TO ALL BUILDINGS, PATHWAYS. PROVIDE TRENCH PLATE AS SHOWN AND/OR AS REQUIRED. COORDINATE REMOVAL AND/OR RELOCATION OF TRENCH PLATE WITH CAMPUS. SEE ADA RAMP DETAILS ON DRAWING E-5.1. PROVIDE SMOOTH OR BEVELED TRANSITIONS FROM GRADE TO TRENCH PLATE PER ADA REQUIREMENTS.

H. THE TREE PROTECTION PLAN SHALL BE SUBMITTED AS A DETAIL ON THE FINAL SITE PLAN USED FOR CONSTRUCTION. A CERTIFIED ARBORIST, REGISTERED CONSULTING ARBORIST OR REGISTERED PROFESSIONAL FORESTER SHALL BE RETAINED TO ACT AS THE PROJECT ARBORIST TO MONITOR CONSTRUCTION ACTIVITIES. PRUNE AFFECTED TREES PER ANSI A300 PRUNING STANDARDS. INSTALL TEMPORARY 6' HIGH CHAIN LINK PROTECTIVE FENCING ON CONCRETE FOOTINGS 5' FROM THE TRUNK. INSTALL A 6" LAYER OF CLEAN WOOD CHIPS, WATER TREES AND KEEP SOIL MOIST TO A DEPTH OF 18" WITHIN THE PROTECTIVE FENCING. ALL EXCAVATION, WHEN APPROVED BY THE ARBORIST, WITHIN THE PROTECTED FENCING SHALL BE PERFORMED WITH HANDHELD EQUIPMENT OR AN "AIR SPADE"

I. ADA PARKING STALLS TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES. IN THE EVENT ANY CONSTRUCTION ACTIVITIES BLOCK ACCESSIBLE PARKING SPACES, PROVIDE ALTERNATE TEMP. LOCATION WITH ACCESSIBLE DESIGNATION SIGNAGE AND GRAPHICS PER CBC SECTION 1129B.3 AND 1129B.4

REFERENCE SHEET NOTES

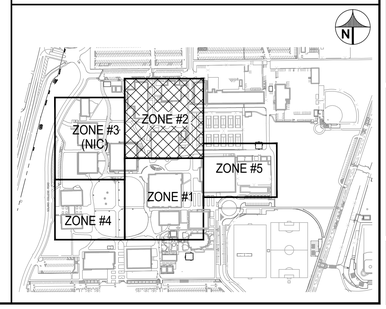
1. PROVIDE TEMPORARY FENCING AROUND AREAS OF WORK WITHIN ZONE #2. TEMPORARY FENCING SHALL BE PROVIDED AT ALL AREAS OF WORK INCLUDING TEMPORARY HYDRONIC PIPING, TEMPORARY HEATING AND COOLING EQUIPMENT, TEMPORARY GAS PIPING, TEMPORARY GENERATOR(S), EXCAVATION SITES AND EQUIPMENT, AND LAYDOWN/STORAGE AREAS.
2. "PATHWAY CLOSED" SIGNAGE, SEE DETAIL 1/G-5.1.
3. "EXIT CLOSED" SIGNAGE, SEE DETAIL 1/G-5.1.
4. "ENTRANCE CLOSED" SIGNAGE SEE DETAIL 1/G-5.1.

LEGEND

- TEMPORARY CHAIN LINK FENCE
- PATH OF TRAVEL
- ALTERNATE PATH OF TRAVEL
- ALTERNATE BUILDING EXIT
- ACCESSIBLE BUILDING ENTRANCE
- TEMPORARY TRENCHPLATE FOR BUILDING/CAMPUS ACCESS

NOTE:
SEE SHEET G-1.2 FOR OTHER LEGEND DESIGNATION.

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
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No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
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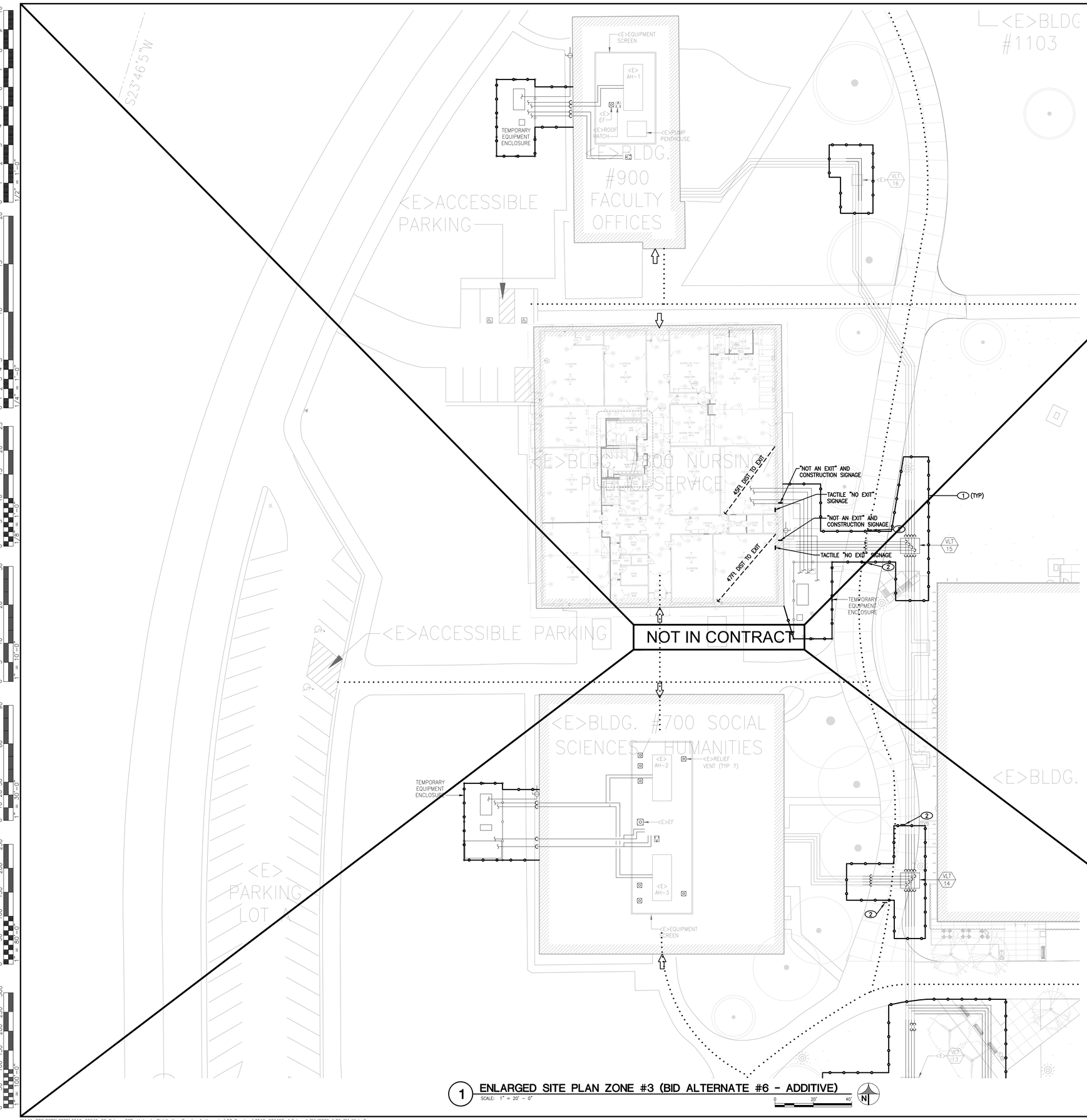
SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	JEG
APPROVED BY:	EES

SHEET TITLE
ENLARGED SITE PLAN ZONE #2

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

G-4.2
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 ENLARGED SITE PLAN ZONE #3 (BID ALTERNATE #6 - ADDITIVE)
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. THE CAMPUS SHALL BE OCCUPIED AND FULLY FUNCTIONAL DURING THE ENTIRE COURSE OF CONSTRUCTION. ACCESS TO ALL BUILDINGS SHALL BE MAINTAINED WITH TEMPORARY WALKWAYS, BRIDGES, BARRIERS AND SIGNS – SEE DISTRICT STANDARDS.

B. A WORK PLAN SHALL BE COORDINATED AND APPROVED BY THE DISTRICT PRIOR TO THE START OF ANY TRENCHING ACTIVITY. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

C. CAMPUS SIGNAGE MUST BE INSTALLED PRIOR TO OPENING ANY HEADING.

D. SAWCUTTING OF CONCRETE AND ASPHALT TO OCCUR AFTER HOURS. SEE SPECIFICATIONS. SEE PATCHING DETAILS ON DRAWING M-5.3 AND DETAILS 4 AND 5/M-5.6.

E. ALL LANDSCAPING AND HARDSCAPING DAMAGED AS A RESULT OF WORK SHALL BE RESTORED TO AS-FOUND CONDITION. SAWCUTTING OF HARDSCAPE SHALL BE FROM SCOREMARK TO SCOREMARK. REFER TO DETAIL 8 & 8/M-5.6 FOR CONCRETE AND ASPHALT PATCHING DETAILS FOR INTERFACE TO EXISTING CONCRETE OR ASPHALT

F. NORMAL UNDERGROUND UTILITY LOCATION PROVISIONS (I.E. USA LOCATOR SERVICE) ARE NOT AVAILABLE ON CAMPUSES AS A RULE. CONTRACTOR IS RESPONSIBLE TO PROVIDE PRIVATE SERVICE FOR LOCATION OF UNDERGROUND SERVICES. PROVIDE ACCESS REQUEST PRIOR TO DISRUPTION OF ANY SERVICE, OR ACCESS TO ANY SENSITIVE/OCCUPIED AREA.

G. MAINTAIN ACCESSIBILITY ACCESS TO ALL BUILDINGS, PATHWAYS. PROVIDE TRENCH PLATE AS SHOWN AND/OR AS REQUIRED. COORDINATE REMOVAL AND/OR RELOCATION OF TRENCH PLATE WITH CAMPUS. SEE ADA RAMP DETAILS ON DRAWING E-5.1. PROVIDE SMOOTH OR BEVELED TRANSITIONS FROM GRADE TO TRENCH PLATE PER ADA REQUIREMENTS.

H. THE TREE PROTECTION PLAN SHALL BE SUBMITTED AS A DETAIL ON THE FINAL SITE PLAN USED FOR CONSTRUCTION. A CERTIFIED ARBORIST, REGISTERED CONSULTING ARBORIST OR REGISTERED PROFESSIONAL FORESTER SHALL BE RETAINED TO ACT AS THE PROJECT ARBORIST TO MONITOR CONSTRUCTION ACTIVITIES. PRUNE AFFECTED TREES PER ANSI A300 PRUNING STANDARDS. INSTALL TEMPORARY 6' HIGH CHAIN LINK PROTECTIVE FENCING ON CONCRETE FOOTINGS 5' FROM THE TRUNK. INSTALL A 6" LAYER OF CLEAN WOOD CHIPS, WATER TREES AND KEEP SOIL MOIST TO A DEPTH OF 18" WITHIN THE PROTECTIVE FENCING. ALL EXCAVATION, WHEN APPROVED BY THE ARBORIST, WITHIN THE PROTECTED FENCING SHALL BE PERFORMED WITH HANDHELD EQUIPMENT OR AN "AIR SPADE"

I. ADA PARKING STALLS TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES. IN THE EVENT ANY CONSTRUCTION ACTIVITIES BLOCK ACCESSIBLE PARKING SPACES, PROVIDE ALTERNATE TEMP. LOCATION WITH ACCESSIBLE DESIGNATION SIGNAGE AND GRAPHICS PER CBC SECTION 1129B.3 AND 1129B.4

REFERENCE SHEET NOTES

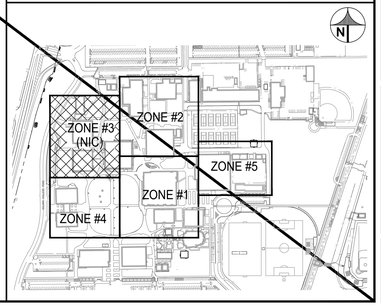
1. PROVIDE TEMPORARY FENCING AROUND AREAS OF WORK WITHIN ZONE #3. TEMPORARY FENCING SHALL BE PROVIDED AT ALL AREAS OF WORK INCLUDING TEMPORARY HYDRONIC PIPING, TEMPORARY HEATING AND COOLING EQUIPMENT, TEMPORARY GAS PIPING, TEMPORARY GENERATOR(S), EXCAVATION SITES AND EQUIPMENT, AND LAYDOWN/STORAGE AREAS.
2. "PATHWAY CLOSED" SIGNAGE, SEE DETAIL 1/G-5.1

LEGEND

- TEMPORARY CHAIN LINK FENCE
- PATH OF TRAVEL
- ALTERNATE PATH OF TRAVEL
- ALTERNATE BUILDING EXIT
- ACCESSIBLE BUILDING ENTRANCE
- TEMPORARY TRENCHPLATE FOR BUILDING/CAMPUS ACCESS

NOTE:
SEE SHEET G-1.2 FOR OTHER LEGEND DESIGNATION.

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
JOHN BARRETT SWIFT
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

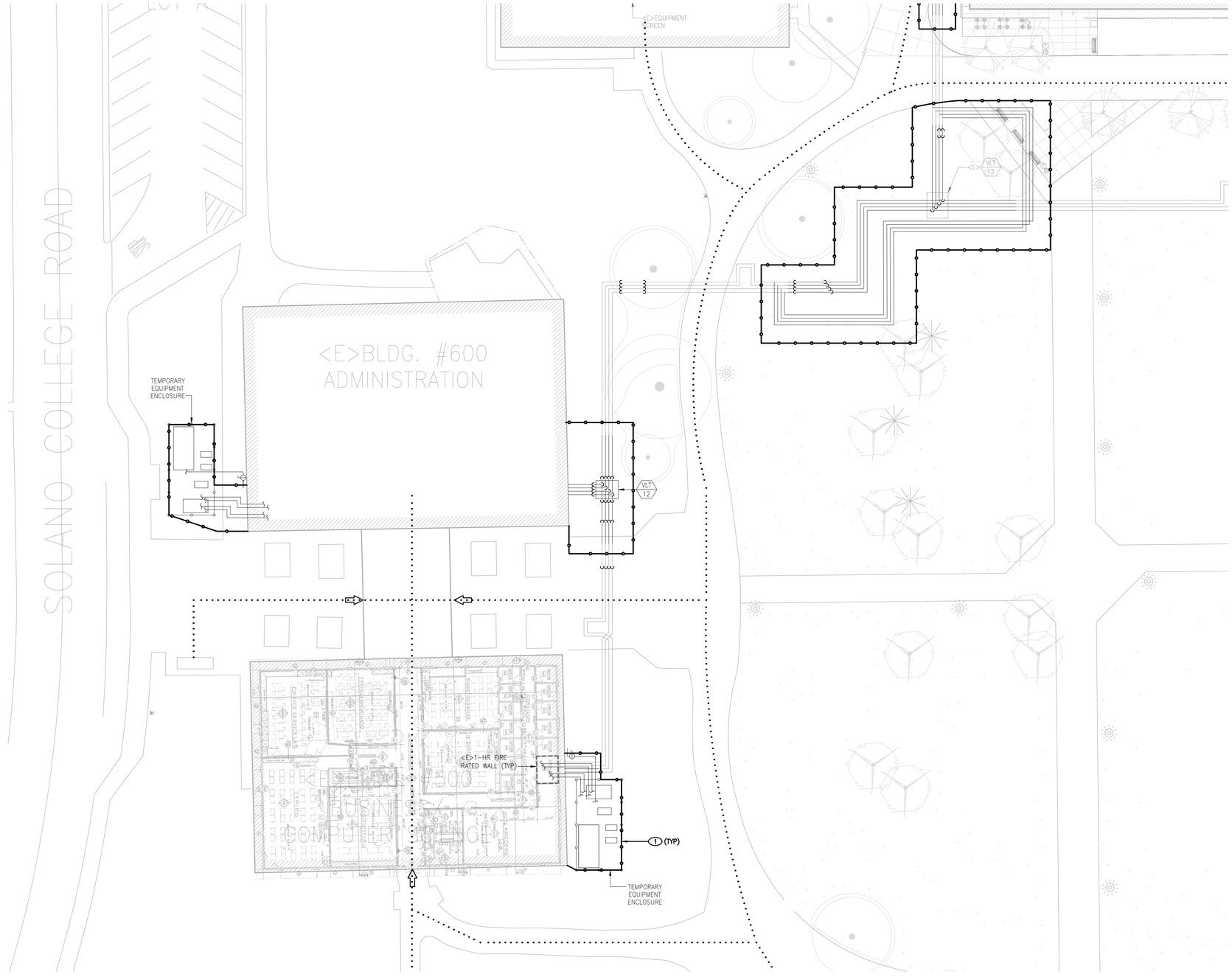
SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	JEG
APPROVED BY:	EES

SHEET TITLE
ENLARGED SITE PLAN ZONE #3 (NOT IN CONTRACT)

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

G-4.3
SHEET OF –

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1 ENLARGED SITE PLAN ZONE #4

SCALE: 1" = 20' - 0"

0 20' 40'

GENERAL SHEET NOTES

A. THE CAMPUS SHALL BE OCCUPIED AND FULLY FUNCTIONAL DURING THE ENTIRE COURSE OF CONSTRUCTION. ACCESS TO ALL BUILDINGS SHALL BE MAINTAINED WITH TEMPORARY WALKWAYS, BRIDGES, BARRIERS AND SIGNS – SEE DISTRICT STANDARDS.

B. A WORK PLAN SHALL BE COORDINATED AND APPROVED BY THE DISTRICT PRIOR TO THE START OF ANY TRENCHING ACTIVITY. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

C. CAMPUS SIGNAGE MUST BE INSTALLED PRIOR TO OPENING ANY HEADING.

D. SAWCUTTING OF CONCRETE AND ASPHALT TO OCCUR AFTER HOURS. SEE SPECIFICATIONS. SEE PATCHING DETAILS ON DRAWING M-5.3 AND DETAILS 4 AND 5/M-5.6.

E. ALL LANDSCAPING AND HARDSCAPING DAMAGED AS A RESULT OF WORK SHALL BE RESTORED TO AS-FOUND CONDITION. SAWCUTTING OF HARDSCAPE SHALL BE FROM SCOREMARK TO SCOREMARK. REFER TO DETAIL 8 & 8/M-5.6 FOR CONCRETE AND ASPHALT PATCHING DETAILS FOR INTERFACE TO EXISTING CONCRETE OR ASPHALT

F. NORMAL UNDERGROUND UTILITY LOCATION PROVISIONS (I.E. USA LOCATOR SERVICE) ARE NOT AVAILABLE ON CAMPUSES AS A RULE. CONTRACTOR IS RESPONSIBLE TO PROVIDE PRIVATE SERVICE FOR LOCATION OF UNDERGROUND SERVICES. PROVIDE ACCESS REQUEST PRIOR TO DISRUPTION OF ANY SERVICE, OR ACCESS TO ANY SENSITIVE/OCCUPIED AREA.

G. MAINTAIN ACCESSIBILITY ACCESS TO ALL BUILDINGS, PATHWAYS. PROVIDE TRENCH PLATE AS SHOWN AND/OR AS REQUIRED. COORDINATE REMOVAL AND/OR RELOCATION OF TRENCH PLATE WITH CAMPUS. SEE ADA RAMP DETAILS ON DRAWING E-5.1. PROVIDE SMOOTH OR BEVELED TRANSITIONS FROM GRADE TO TRENCH PLATE PER ADA REQUIREMENTS.

H. THE TREE PROTECTION PLAN SHALL BE SUBMITTED AS A DETAIL ON THE FINAL SITE PLAN USED FOR CONSTRUCTION. A CERTIFIED ARBORIST, REGISTERED CONSULTING ARBORIST OR REGISTERED PROFESSIONAL FORESTER SHALL BE RETAINED TO ACT AS THE PROJECT ARBORIST TO MONITOR CONSTRUCTION ACTIVITIES. PRUNE AFFECTED TREES PER ANSI A300 PRUNING STANDARDS. INSTALL TEMPORARY 6' HIGH CHAIN LINK PROTECTIVE FENCING ON CONCRETE FOOTINGS 5' FROM THE TRUNK. INSTALL A 6" LAYER OF CLEAN WOOD CHIPS, WATER TREES AND KEEP SOIL MOIST TO A DEPTH OF 18" WITHIN THE PROTECTIVE FENCING. ALL EXCAVATION, WHEN APPROVED BY THE ARBORIST, WITHIN THE PROTECTED FENCING SHALL BE PERFORMED WITH HANDHELD EQUIPMENT OR AN "AIR SPADE"

I. ADA PARKING STALLS TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES. IN THE EVENT ANY CONSTRUCTION ACTIVITIES BLOCK ACCESSIBLE PARKING SPACES, PROVIDE ALTERNATE TEMP. LOCATION WITH ACCESSIBLE DESIGNATION SIGNAGE AND GRAPHICS PER CBC SECTION 1129B.3 AND 1129B.4

REFERENCE SHEET NOTES

1. PROVIDE TEMPORARY FENCING AROUND AREAS OF WORK WITHIN ZONE #4. TEMPORARY FENCING SHALL BE PROVIDED AT ALL AREAS OF WORK INCLUDING TEMPORARY HYDRONIC PIPING, TEMPORARY HEATING AND COOLING EQUIPMENT, TEMPORARY GAS PIPING, TEMPORARY GENERATOR(S), EXCAVATION SITES AND EQUIPMENT, AND LAYDOWN/STORAGE AREAS.

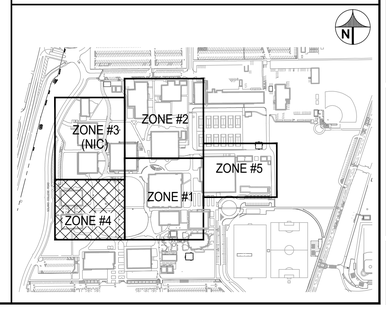
LEGEND

- TEMPORARY CHAIN LINK FENCE
- PATH OF TRAVEL
- ALTERNATE PATH OF TRAVEL
- ALTERNATE BUILDING EXIT
- ACCESSIBLE BUILDING ENTRANCE
- TEMPORARY TRENCHPLATE FOR BUILDING/CAMPUS ACCESS

NOTE:

SEE SHEET G-1.2 FOR OTHER LEGEND DESIGNATION.

KEY PLAN



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305 South 11th Street
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SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
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HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

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	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	JEG
APPROVED BY:	EES

SHEET TITLE

ENLARGED SITE PLAN ZONE #4

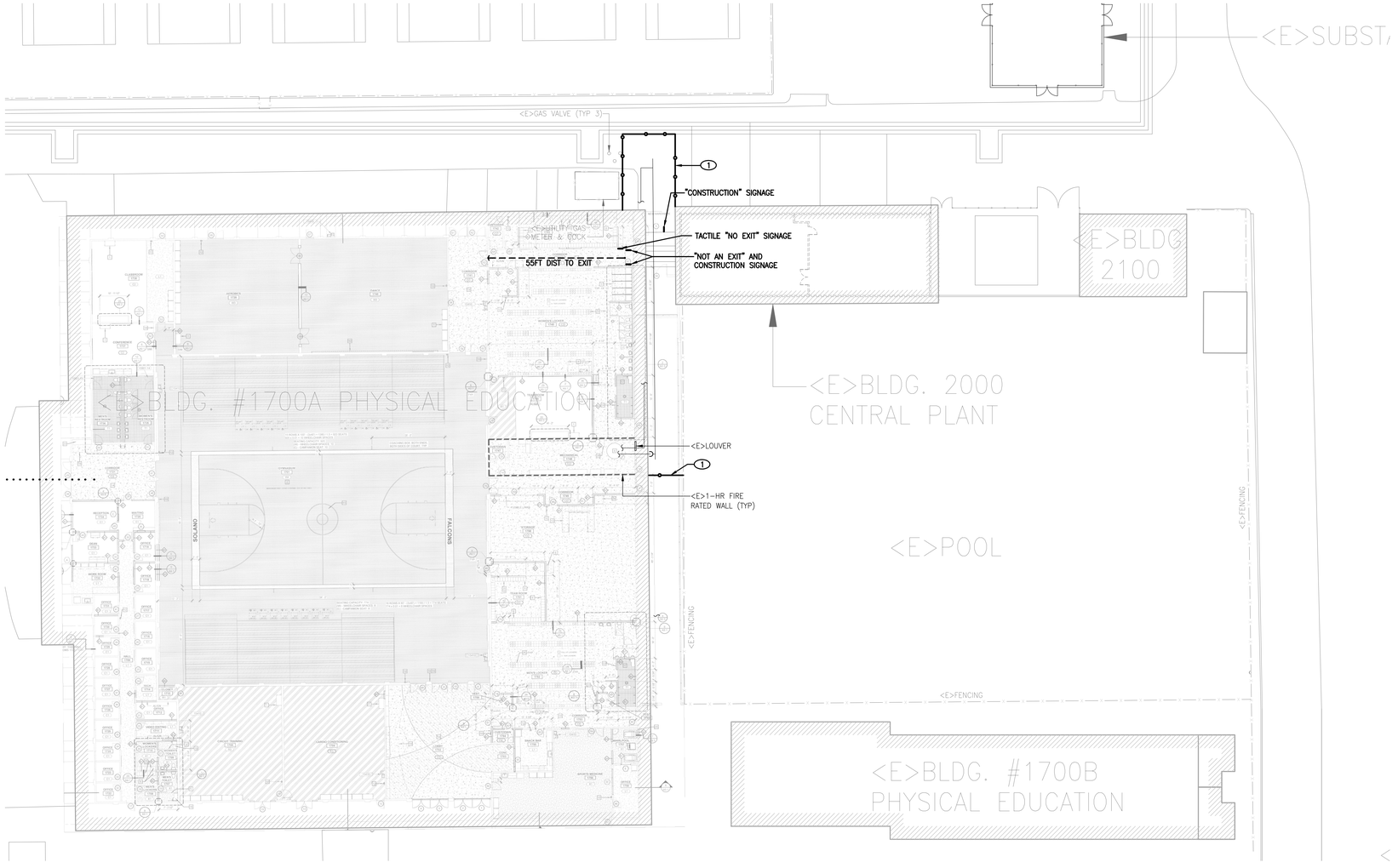
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

G-4.4

SHEET OF –

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1 ENLARGED SITE PLAN ZONE #5 (BID ALTERNATE #8)
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. THE CAMPUS SHALL BE OCCUPIED AND FULLY FUNCTIONAL DURING THE ENTIRE COURSE OF CONSTRUCTION. ACCESS TO ALL BUILDINGS SHALL BE MAINTAINED WITH TEMPORARY WALKWAYS, BRIDGES, BARRIERS AND SIGNS – SEE DISTRICT STANDARDS.

B. A WORK PLAN SHALL BE COORDINATED AND APPROVED BY THE DISTRICT PRIOR TO THE START OF ANY TRENCHING ACTIVITY. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

C. CAMPUS SIGNAGE MUST BE INSTALLED PRIOR TO OPENING ANY HEADING.

D. SAWCUTTING OF CONCRETE AND ASPHALT TO OCCUR AFTER HOURS. SEE SPECIFICATIONS. SEE PATCHING DETAILS ON DRAWING M-5.3 AND DETAILS 4 AND 5/M-5.6.

E. ALL LANDSCAPING AND HARDSCAPING DAMAGED AS A RESULT OF WORK SHALL BE RESTORED TO AS-FOUND CONDITION. SAWCUTTING OF HARDSCAPE SHALL BE FROM SCOREMARK TO SCOREMARK. REFER TO DETAIL 8 & 8/M-5.6 FOR CONCRETE AND ASPHALT PATCHING DETAILS FOR INTERFACE TO EXISTING CONCRETE OR ASPHALT

F. NORMAL UNDERGROUND UTILITY LOCATION PROVISIONS (I.E. USA LOCATOR SERVICE) ARE NOT AVAILABLE ON CAMPUSES AS A RULE. CONTRACTOR IS RESPONSIBLE TO PROVIDE PRIVATE SERVICE FOR LOCATION OF UNDERGROUND SERVICES. PROVIDE ACCESS REQUEST PRIOR TO DISRUPTION OF ANY SERVICE, OR ACCESS TO ANY SENSITIVE/OCCUPIED AREA.

G. MAINTAIN ACCESSIBILITY ACCESS TO ALL BUILDINGS, PATHWAYS. PROVIDE TRENCH PLATE AS SHOWN AND/OR AS REQUIRED. COORDINATE REMOVAL AND/OR RELOCATION OF TRENCH PLATE WITH CAMPUS. SEE ADA RAMP DETAILS ON DRAWING E-5.1. PROVIDE SMOOTH OR BEVELED TRANSITIONS FROM GRADE TO TRENCH PLATE PER ADA REQUIREMENTS.

H. THE TREE PROTECTION PLAN SHALL BE SUBMITTED AS A DETAIL ON THE FINAL SITE PLAN USED FOR CONSTRUCTION. A CERTIFIED ARBORIST, REGISTERED CONSULTING ARBORIST OR REGISTERED PROFESSIONAL FORESTER SHALL BE RETAINED TO ACT AS THE PROJECT ARBORIST TO MONITOR CONSTRUCTION ACTIVITIES. PRUNE AFFECTED TREES PER ANSI A300 PRUNING STANDARDS. INSTALL TEMPORARY 6' HIGH CHAIN LINK PROTECTIVE FENCING ON CONCRETE FOOTINGS 5' FROM THE TRUNK. INSTALL A 6" LAYER OF CLEAN WOOD CHIPS, WATER TREES AND KEEP SOIL MOIST TO A DEPTH OF 18" WITHIN THE PROTECTIVE FENCING. ALL EXCAVATION, WHEN APPROVED BY THE ARBORIST, WITHIN THE PROTECTED FENCING SHALL BE PERFORMED WITH HANDHELD EQUIPMENT OR AN "AIR SPADE"

I. ADA PARKING STALLS TO REMAIN OPEN AND ACCESSIBLE AT ALL TIMES. IN THE EVENT ANY CONSTRUCTION ACTIVITIES BLOCK ACCESSIBLE PARKING SPACES, PROVIDE ALTERNATE TEMP. LOCATION WITH ACCESSIBLE DESIGNATION SIGNAGE AND GRAPHICS PER CBC SECTION 1129B.3 AND 1129B.4

REFERENCE SHEET NOTES

1. PROVIDE TEMPORARY FENCING AROUND AREAS OF WORK WITHIN ZONE #5. TEMPORARY FENCING SHALL BE PROVIDED AT ALL AREAS OF WORK.

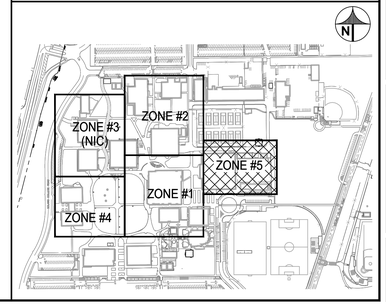
LEGEND

- TEMPORARY CHAIN LINK FENCE
- PATH OF TRAVEL
- ALTERNATE PATH OF TRAVEL
- ALTERNATE BUILDING EXIT
- ACCESSIBLE BUILDING ENTRANCE
- TEMPORARY TRENCHPLATE FOR BUILDING/CAMPUS ACCESS

NOTE:

SEE SHEET G-1.2 FOR OTHER LEGEND DESIGNATION.

KEY PLAN



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877.725.2755 | 877.925.1477 (f)
WWW.SALASOBRIEN.COM
National **Strength.**
Local **Action.**

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEET
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE
4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	JEG
APPROVED BY:	EES

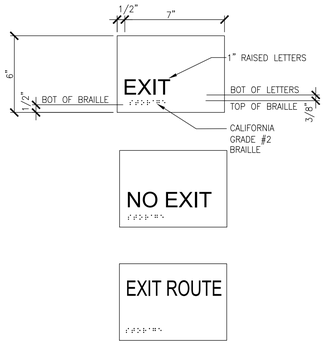
SHEET TITLE

ENLARGED SITE PLAN ZONE #5 (BID ALTERNATE #8)

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

G-4.5
SHEET OF –

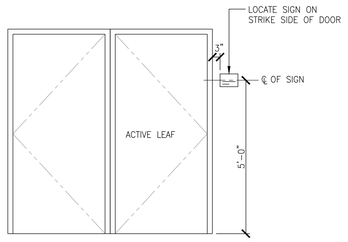
THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



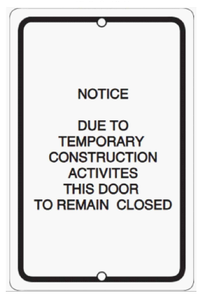
9 TACTILE SIGNAGE
SCALE: N.T.S.



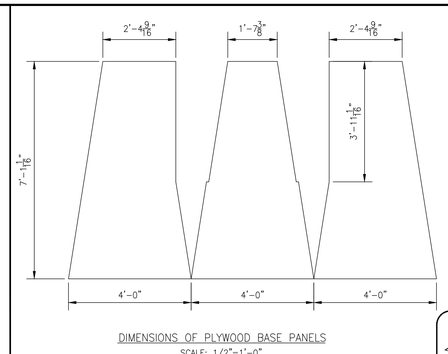
7 "NOT AN EXIT" SIGN
SCALE: N.T.S.



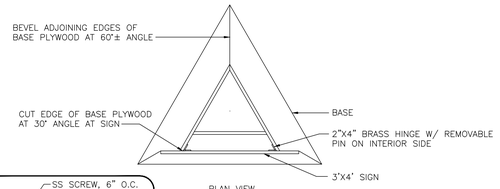
8 DOOR SIGNAGE
SCALE: N.T.S.



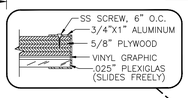
6 CONSTRUCTION NOTICE SIGN
SCALE: N.T.S.

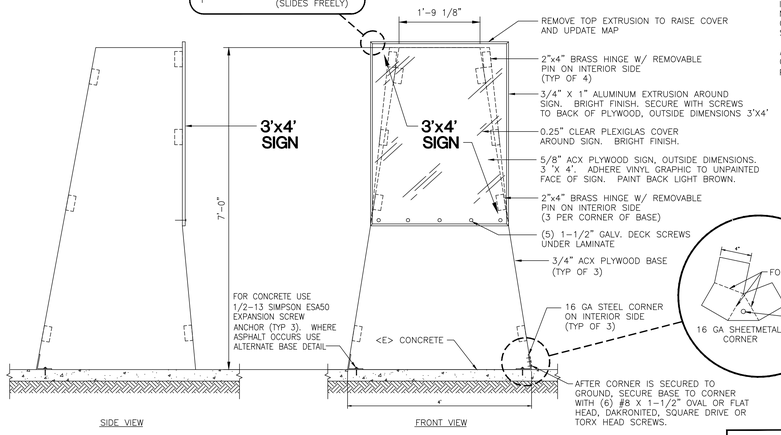


DIMENSIONS OF PLYWOOD BASE PANELS
SCALE: 1/2"=1'-0"



PLAN VIEW





SIDE VIEW

FRONT VIEW

ALTERNATE BASE DETAIL FOR WHERE SIGN OCCURS ON UNPAVED AREAS

Kiosk Signage Notes

KIOSK SIGNAGE SHALL BE INSTALLED AT LOCATIONS AS INDICATED ON SHEETS G-4.1 TO G-4.4. SIGNS SHALL BE INSTALLED SUCH THAT THEY ARE CLEARLY OBSERVABLE BY PASSING PEDESTRIANS.

SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS OR APPROVED ALTERNATE. CONSTRUCTION SHALL BE WEATHERTIGHT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SIGNS AND FOR PROMPT REMOVAL OF ANY VANDALISM OR UNAUTHORIZED POSTINGS. SIGNS SHALL BE INSTALLED WITHIN 4 WEEKS OF "NOTICE TO PROCEED".

KIOSK SIGNS SHALL BE UPDATED EVERY 2 WEEKS TO INDICATE CURRENT HEADING LOCATIONS AND ACTIVE WORK AREAS. ONLY THE MAP PORTION OF THE GRAPHIC SHALL BE UPDATED.

IN THE EVENT THAT SIGNAGE IS IN THE PATH OF WORK, OR AS DEEMED NECESSARY BY SOLANO CCD, SIGNS SHALL BE RELOCATED BY THE CONTRACTOR TO A READILY OBSERVABLE LOCATION AS APPROVED BY SOLANO CCD.

AFTER PROJECT COMPLETION, SIGNS SHALL BE REMOVED AND TURNED OVER TO SOLANO CCD. ALL FOOTINGS SHALL BE REMOVED AND HOLES PATCHED TO MATCH SURROUNDING MATERIALS AND/OR CONDITIONS.

NOTE:

PER DSA IRA-22, THIS NEW KIOSK SIGN DETAIL IS NOT FOR DSA APPROVAL

3 KIOSK SIGN DETAIL
SCALE: 3/4" = 1'-0"

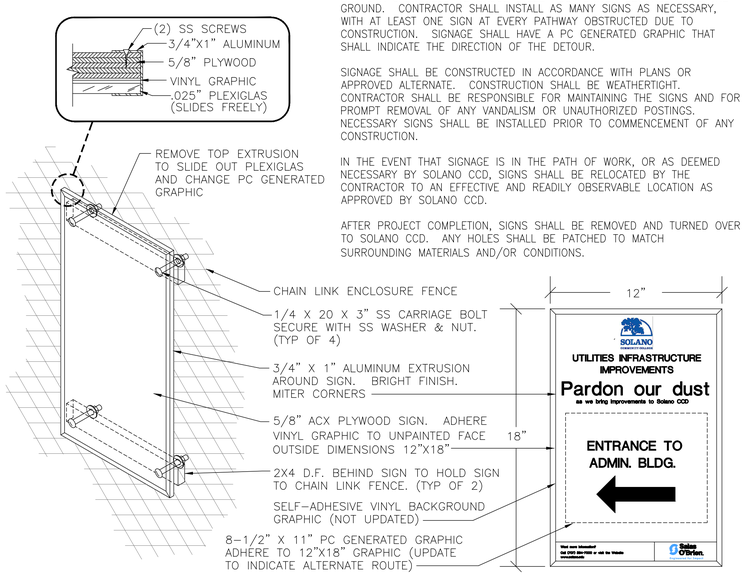
Directional Signage Notes

DIRECTIONAL SIGNS SHALL BE INSTALLED FOR THE PURPOSE OF ROUTING PEDESTRIAN TRAFFIC AROUND OPEN TRENCHES AND OBSTRUCTED PATHWAYS. THEY SHALL BE INSTALLED ON THE FENCE SURROUNDING ANY TRENCHING OR TO A GALVANIZED 12 GAUGE STEEL POST DRIVEN SECURELY INTO THE GROUND. CONTRACTOR SHALL INSTALL AS MANY SIGNS AS NECESSARY, WITH AT LEAST ONE SIGN AT EVERY PATHWAY OBSTRUCTED DUE TO CONSTRUCTION. SIGNAGE SHALL HAVE A PC GENERATED GRAPHIC THAT SHALL INDICATE THE DIRECTION OF THE DETOUR.

SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS OR APPROVED ALTERNATE. CONSTRUCTION SHALL BE WEATHERTIGHT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SIGNS AND FOR PROMPT REMOVAL OF ANY VANDALISM OR UNAUTHORIZED POSTINGS. NECESSARY SIGNS SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

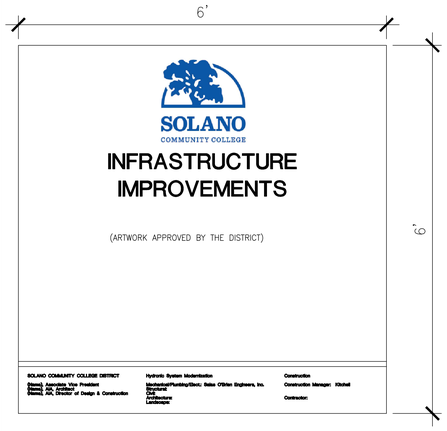
IN THE EVENT THAT SIGNAGE IS IN THE PATH OF WORK, OR AS DEEMED NECESSARY BY SOLANO CCD, SIGNS SHALL BE RELOCATED BY THE CONTRACTOR TO AN EFFECTIVE AND READILY OBSERVABLE LOCATION AS APPROVED BY SOLANO CCD.

AFTER PROJECT COMPLETION, SIGNS SHALL BE REMOVED AND TURNED OVER TO SOLANO CCD. ANY HOLES SHALL BE PATCHED TO MATCH SURROUNDING MATERIALS AND/OR CONDITIONS.



4 DIRECTIONAL SIGN MOUNTING
SCALE: N.T.S.

5 DIRECTIONAL SIGN GRAPHIC
SCALE: N.T.S.



Project Signage Notes

ONE PROJECT SIGN SHALL BE INSTALLED AS DIRECTED BY SOLANO CCD. SIMILAR, SCALED DOWN SIGNS SHALL BE INSTALLED ON THE SIDE OF EACH FIELD OFFICE TRAILER AND AT THE ENTRANCE OF THE CONSTRUCTION STAGING AREA. THESE SIMILAR SIGNS SHALL BE SCALED VERSIONS MEASURING 3 FEET WIDE BY 3 FEET TALL. ALL SIGNS SHALL BE INSTALLED SUCH THAT THEY ARE CLEARLY OBSERVABLE BY PASSING PEDESTRIANS.

SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS. CONSTRUCTION SHALL BE WEATHERTIGHT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SIGNS AND FOR PROMPT REMOVAL OF ANY VANDALISM OR UNAUTHORIZED POSTINGS. ALL SIGNS SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

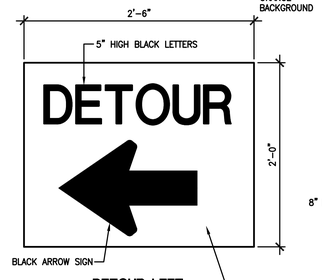
IN THE EVENT THAT SIGNAGE IS IN THE PATH OF WORK, OR AS DEEMED NECESSARY BY SOLANO CCD, SIGNS SHALL BE RELOCATED BY THE CONTRACTOR TO AN EFFECTIVE AND READILY OBSERVABLE LOCATION AS APPROVED BY SOLANO CCD.

AFTER PROJECT COMPLETION, SIGN SHALL BE REMOVED AND TURNED OVER TO SOLANO CCD. ALL HOLES SHALL BE PATCHED TO MATCH SURROUNDING MATERIALS AND/OR CONDITIONS.

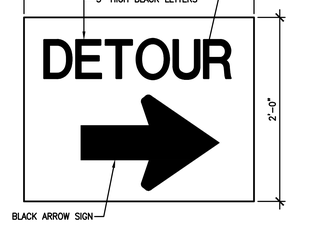
2 PROJECT SIGN DETAIL
SCALE: 1" = 1'-0"



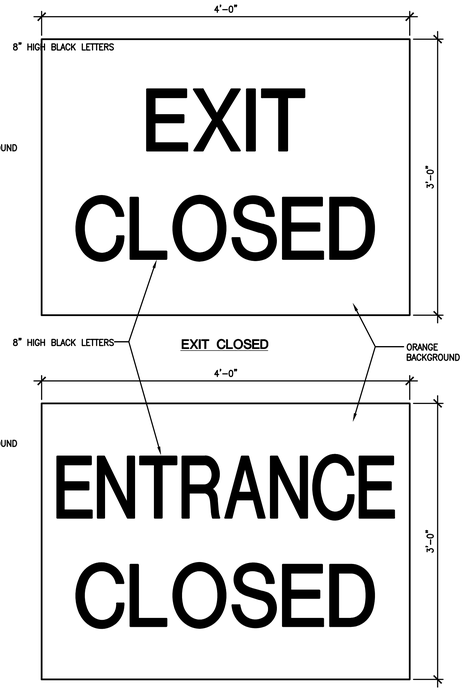
PATHWAY CLOSED



DETOUR LEFT



DETOUR RIGHT



ENTRANCE CLOSED

1 SIGNAGE
SCALE: 1-1/2" = 1'-0"

Salas O'Brien
Engineered for Impact
305 South 11th Street
San Jose, California 95112-2218
877.725.2755 | 877.925.1477 (f)
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4000 SUISUN VALLEY RD
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HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

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	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

GENERAL DETAILS

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

G-5.1
SHEET OF –

EQUIPMENT ANCHORAGE NOTES

APPLICABLE CODE: 2022 CBC

MEP COMPONENT ANCHORAGE NOTE:

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTION 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G., HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE NOR BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

APPLICABLE CODE: 2022 CBC PER IR 16-13

MEP DISTRIBUTION SYSTEM BRACING NOTE FOR PIPING, DUCTWORK, AND ELECTRICAL CONDUIT:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, AND 13.6.8; AND 2022 CBC SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEMS ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☒ MD ☐ PP ☐ E ☐ OPTION 1: PROJECT-SPECIFIC DESIGN

MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: DESIGN BASED ON OSHPD OPM, WITHIN PROJECT SUBMITTAL

MP ☐ MD ☐ PP ☐ E ☐ OPTION 3: DESIGN BASED ON OSHPD OPM, DEFERRED SUBMITTAL

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.

SYMBOLS

GENERAL

- EXTENT OF DEMOLITION
- NEW TO EXISTING CONNECTION
- REVISION NUMBER
- WORK ITEM (MECHANICAL)
- DETAIL DESIGNATION — DETAIL NUMBER / DRAWING NUMBER (IF BLANK, SAME SHEET)
- EQUIPMENT DESIGNATION — EQUIPMENT TYPE / EQUIPMENT NUMBER
- SECTION DESIGNATION — SECTION NUMBER / DRAWING NUMBER
- TO BE DEMOLISHED — <N> EQUIPMENT
- TO BE DEMOLISHED — RELOCATED EQUIPMENT

PIPING

- ARROW INDICATES DIRECTION OF FLOW
- EXISTING PIPING (ABOVE GRADE OR FLOOR)
- EXISTING PIPING (BELOW GRADE OR FLOOR)
- NEW PIPING (ABOVE GRADE OR FLOOR)
- NEW PIPING (BELOW GRADE OR FLOOR)
- PIPE TO BE REMOVED (ABOVE GRADE OR FLOOR)
- PIPE TO BE REMOVED (BELOW GRADE OR FLOOR)

PIPING SPECIALTIES

- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- AIR SEPARATOR
- ALIGNMENT GUIDE
- ANCHOR
- BACK FLOW PREVENTER
- BALL JOINT
- DIRT POCKET
- EXPANSION JOINT
- EXPANSION LOOP
- FLEXIBLE CONNECTOR
- FILTER DRYER
- FLOWMETER
- HOSE CONNECTOR
- HOSE BIBB
- METER
- POT FEEDER
- PRESSURE GAUGE AND COCK
- PUMP
- STRAINER
- STRAINER, W/BLOW OFF
- TEST PORT (PETE'S PLUG)
- THERMOMETER
- THERMOMETER, WELL
- STEAM TRAP
- SUCTION DIFFUSER

VALVES

- BALL
- BUTTERFLY
- GATE
- GATE, ANGLE
- GLOBE
- GLOBE, ANGLE
- THREE WAY
- CONTROL
- IN PIT

VALVES, SPECIAL DUTY

- CHECK, SWING GATE
- CIRCUIT SETTER
- NEEDLE
- PRESSURE REDUCING (NUMBER & SPECIFY)
- PRESSURE REGULATOR
- RELIEF (R) OR SAFETY (S)
- SEISMIC VALVE
- MAKE UP WATER ASSEMBLY
- BACK PRESSURE
- PLUG VALVE
- TRIPLE DUTY VALVE (STOP CHECK & BALANCE W/PRESSURE TAPS)
- REDUCED PRESSURE BACKFLOW PREVENTER
- FLOW CONTROL
- ORIFICE PLATE

AIR CONDITIONING

- CW(R)(S) — CONDENSER WATER (RETURN)(SUPPLY)
- CHW(R)(S) — CHILLED WATER (RETURN)(SUPPLY)
- D — DRAIN
- HC(R)(S) — HOT/CHILLED WATER (RETURN)(SUPPLY)
- PCHW(R)(S) — PRIMARY CHILLED WATER (RETURN)(SUPPLY)
- SCHW(R)(S) — SECONDARY CHILLED WATER (RETURN)(SUPPLY)
- TCHW(R)(S) — TERTIARY CHILLED WATER (RETURN)(SUPPLY)

CONTROLS

- AI — ANALOG INPUT
- AO — ANALOG OUTPUT
- BT — BYPASS TIMER
- C — CONTROLLER
- DP — DIFFERENTIAL PRESSURE TRANSMITTER
- DI — DIGITAL (ON/OFF) INPUT
- DO — DIGITAL (ON/OFF) OUTPUT
- FE — FLOW ELEMENT
- FT — FLOW TRANSMITTER
- FS — FLOW SWITCH
- FM — FLOWMETER
- OFM-1 — FLOWMETER, ORIFICE
- H — HUMIDITY CONTROLLER
- H — HUMIDITY TRANSMITTER
- M — MOTOR/ACTUATOR
- MS — MOTOR STARTER
- PI — PRESSURE INDICATOR
- PID — PID CONTROL LOOP (REPRESENTATION)
- P/S — PRESSURE SWITCH
- PT — PRESSURE TRANSMITTER
- RHC — REHEAT COIL
- R — RELAY COIL
- S — SENSOR
- T — TEMPERATURE SENSOR
- TE — TEMPERATURE ELEMENT
- TI — TEMPERATURE INDICATOR
- TT — TEMPERATURE TRANSMITTER
- T — THERMOSTAT OR TEMPERATURE SENSOR (DDC) (36" TO 48" AFF.)
- H — HEATING COIL
- C — COOLING COIL
- D — DIRECT EXPANSION COIL
- GAS FIRED HEAT EXCHANGER
- VFD — VARIABLE FREQUENCY DRIVE

ABBREVIATIONS

@	AT
AAV	AUTOMATIC AIR VENT
ABD	ABANDONED
AC	AIR CONDITIONING UNIT DESIGNATION
ACC	AIR COOLED CONDENSER
ACM	ASBESTOS CONTAINING MATERIAL
ACP	ASBESTOS CEMENT PIPE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AH	AIR HANDLER
AHU	AIR HANDLING UNIT
AHUC	AIR HANDLING UNIT CONTROLLER
AI	ANALOG INPUT
ALM	ALARM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AO	ANALOG OUTPUT
APD	AIR PRESSURE DROP (IN.W.G.)
ARCH	ARCHITECTURAL
AS	AIR SEPARATOR
ASJ	ALL SERVICE JACKET
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BAV	BALANCING VALVE
BDD	BACKDRAFT DAMPERS
BFP	BACKFLOW PREVENTER
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BUR	BUILT-UP ROOFING
BV	BALL VALVE
℄	CENTERLINE
CA	COMPRESSED AIR
CC, C/C	COOLING COIL
CD	CONDENSATE DRAIN
CFF	CAP FOR FUTURE
CFM or ∮	CUBIC FEET PER MINUTE
CFT	CHEMICAL FEED TANK
CHCP	CHILLER CONTROL PANEL
CHW(R)(S)(T)	CHILLED WATER (RETURN)(SUPPLY)(TEMP)
CL	CENTER LINE
CLG	CEILING
CLR	CENTERLINE RADIUS
CO	CLEAN-OUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT OR CONNECTION
CONT	CONTINUATION
CONTR.	CONTRACTOR
CP	CONTROL PANEL
CR	CONDENSATE RETURN
CRAC	COMPUTER ROOM AIR CONDITIONER
CT	COOLING TOWER
CTL	CONTROL
CU	COPPER
CV	CONTROL VALVE
CW	CITY WATER
CWP	CONDENSER WATER PUMP
CW(R)(S)(T)	CONDENSER WATER (RETURN)(SUPPLY) (TEMPERATURE)
D	DRAIN
DA	DEAERATOR
DB	DRY BULB
DCW	DOMESTIC CITY WATER
DDC	DIRECT DIGITAL CONTROL
DHW(R)	DOMESTIC HOT WATER (RETURN)
DI	DISCRETE INPUT
DIA	DIAMETER
DISC	DISCONNECT
DN	DOWN
DO	DISCRETE OUTPUT
DP	DIFFERENTIAL PRESSURE
DPS	DIFFERENTIAL PRESSURE SWITCH
DPT	DIFFERENTIAL PRESSURE TRANSDUCER
DWDI	DOUBLE WIDTH, DOUBLE INLET
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DX	DIRECT EXPANSION
<E>	EXISTING
EA(T)	EXHAUST AIR (TEMPERATURE)
EAD	EXHAUST AIR DUCT
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	EXPANSION LOOP
ELEV	ELEVATION
ELEC	ELECTRICAL
EMCS	ENERGY MANAGEMENT & CONTROL SYSTEM
EMS	ENERGY MANAGEMENT SYSTEM
EOD	EXTENT OF DEMOLITION
E/P	ELECTRO/PNEUMATIC TRANSDUCER
EQ	EQUAL
EQUIP.	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE (IN.W.G.)
ET	EXPANSION TANK
EWLC	ELECTRONIC WATER LEVEL CONTROLLER
EWS	EMERGENCY EYEWASH AND SHOWER
EWT	ENTERING WATER TEMPERATURE
<F>	FUTURE
F	FAHRENHEIT
FA	FACE AREA
FAF	FORCED AIR FURNACE
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FDC	FIRE DEPARTMENTCONNECTION
FDD	FLUE DISCHARGE DEFLECTOR
FHC	FIRE HOSE CABINET
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FM	FLOW METER
FMS	FACILITY MONITORING SYSTEM
FO(R)(S)	FUEL OIL (RETURN)(SUPPLY)
FOV	FUEL OIL VENT
FPF	FINS PER FOOT
FRP	FIBER REINFORCED POLYMER
FS	FLOW SWITCH
FSD	COMBINATION FIRE AND SMOKE DAMPER
FT	FLOW TRANSMITTER or FEET
G	GAS
GA	GAUGE
GAL	GALLONS
GALV	GALVANIZED
GF	GAS FURNACE
GPM	GALLONS PER MINUTE
GSM	GALVANIZED SHEET METAL
GV	GATE VALVE
H	HUMIDIFIER
HB	HOSE BIBB
HC	HEATING COIL
HDR	HEADER
HGR	HANGER
HHW(R)(S)(P)(T)	HEATING HOT WATER (RETURN)(SUPPLY)(PUMP) (TEMPERATURE)
HP	HORSE POWER
HPCR	HIGH PRESSURE CONDENSATE RETURN
HPS	HIGH PRESSURE STEAM
HT	HEIGHT
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HWP	HOT WATER PUMP
HX	HEAT EXCHANGER
HZ	HERTZ; CYCLES PER SECOND
IA	INSTRUMENT AIR
ICW	INDUSTRIAL COLD WATER
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN.	INCH
IN.W.G.	INCHES WATER GAGE (PRESSURE)
IRL	IRRIGATION LINE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LPS	LOW PRESSURE STEAM
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMPERATURE
MA(T)	MIXED AIR (TEMPERATURE)
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	1,000 BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MD	MANUAL VOLUME DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MMBTUH	MILLIONS BTU PER HOUR
MOCP	MAXIMUM OVER CURRENT PROTECTION
MOT	MOTORIZED
MPG	MEDIUM PRESSURE GAS
MR	MECHANICAL ROOM
MT, MTD, MTG	MOUNT, MOUNTED, MOUNTING
MU	MAKE-UP
<N>	NEW
N.C.	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NOX	NITROGEN OXIDE
N.O.	NORMALLY OPEN
NPSH(R)	NET POSITIVE SUCTION HEAD (REQUIRED)
N.T.S.	NOT TO SCALE
OA(G)	OUTSIDE AIR (GRILLE)
OA(T)	OUTSIDE AIR (TEMPERATURE)
OAD	OUTSIDE AIR DAMPER
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
O.C.	ON CENTER
OD	OUTSIDE DIMENSION or OUTSIDE DIAMETER
OS&Y	OUTSIDE STEM & YOKE GATE VALVE
OV	OUTLET VELOCITY
OX	OXYGEN
OWS	OPERATOR'S WORK STATION
P	PLATE
P	PUMP
PCHW(R)(S)(T)	PRIMARY CHILLED WATER (RETURN)(SUPPLY) (TEMPERATURE)
PCHWP	PRIMARY CHILLED WATER PUMP
PCR	PUMPED CONDENSATE RETURN
PD	PRESSURE DROP
PE	PNEUMATIC TO ELECTRIC RELAY
PG	PIPE GUIDE
PHW(R)(S)	PRIMARY HOT WATER (RETURN)(SUPPLY)
P&ID	PROCESS & INSTRUMENTATION DIAGRAM
PIV	POST INDICATING VALVE
PLY or PLYWD	PLYWOOD
PM	POWER METER
POC	POINT OF CONNECTION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI(G)	POUNDS PER SQUARE INCH (GAUGE)
PS-N	PIPE SUPPORT DESIGNATION
PTDF	PRESSURE TREATED DOUGLAS FIR
PVC	POLYVINYL CHLORIDE
PW	POOL WATER
R	RELAY
<RE>	REMOVE EXISTING
<RR>	REMOVE/RELOCATE
<RRN>	REMOVE & REPLACE WITH <N>
RA	RETURN AIR
RAD	RETURN AIR DUCT
RAG	RETURN AIR GRILLE
RA(T)	RETURN AIR (TEMPERATURE)
RD	ROOF DRAIN
REQ'D	REQUIRED
RF	RETURN AIR FAN
RFG	REFRIGERANT
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RIM	RIM ELEVATION
RIP	RETIRED-IN-PLACE
RLA	RATED LOAD AMPS
RO	REVERSE OSMOSIS
RPM	REVOLUTIONS PER MINUTE
RV	RELIEF VALVE
RW	RECLAIMED WATER
RWL	RAIN WATER LEADER
SAD	SUPPLY AIR DUCT
S.A.D.	SEE ARCHITECTURAL DRAWINGS
SAG	SUPPLY AIR GRILLE
SA(T)	SUPPLY AIR (TEMPERATURE)
SCBA	SELF-CONTAINED BREATHING APPARATUS
S.C.D.	SEE CIVIL DRAWINGS
SCHW(R)(S)(T)	SECONDARY CHW (RETURN)(SUPPLY)(TEMPERATURE)
SCHWP	SECONDARY CHW PUMP
SD	STORM DRAIN
SDCO	STORM DRAIN CLEAN-OUT
S.E.D.	SEE ELECTRICAL DRAWINGS
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SENS	SENSIBLE
SF	SUPPLY FAN
SHHW(R)(S)(T)	SECONDARY HEATING HOT WATER (RETURN)(SUPPLY) (TEMPERATURE)
SIM.	SIMILAR
S.L.D.	SEE LANDSCAPE DRAWINGS
SM	SHEET METAL
SMD	SMOKE DAMPER
SMH	STEAM MANHOLE
SOVL	SOLENOID VALVE
SP	STATIC PRESSURE
SPD	SUMP PUMP DISCHARGE
S.P.D.	SEE PLUMBING DRAWINGS
SPECS	SPECIFICATIONS
SRV	SAFETY RELIEF VALVE
SS	SANITARY SEWER
S/S	START/STOP
S.S.D.	SEE STRUCTURAL DRAWINGS
SST	STAINLESS STEEL
ST	SOUND TRAP
STD	STANDARD
STM	STEAM
STRUCT	STRUCTURAL
STS	STATUS
SW	SWITCH
SXR	SQUARE TO ROUND TRANSITION
T	THERMOSTAT OR TEMPERATURE SENSOR (DDC)
TBA	TO BE ABANDONED
TBR	TO BE REMOVED
TCHW(R)(S)(T)	TERTIARY CHW (RETURN)(SUPPLY)(TEMPERATURE)
TCHWP	TERTIARY CHW PUMP
TCP	TEMPERATURE CONTROL PANEL
TDH	TOTAL DYNAMIC HEAD
TDV	TRIPLE DUTY VALVE
TEMP	TEMPERATURE
TG	TRANSFER AIR GRILLE
T&G	TONGUE & GROOVE
TH	THERMOMETER
TI	TEMPERATURE INDICATOR
TOD	TOP OF DUCT
TP	TEST PLUG (PETE'S PLUG)
TR	THROUGH ROOF
TRANS	TRANSITION
TS	TEMPERATURE SENSOR
TSP	TOTAL STATIC PRESSURE (IN.W.G.)
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
U.O.N.	UNLESS OTHERWISE NOTED
V OR VT	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VACCUM BREAKER
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
VI	VIBRATION ISOLATOR
V.I.F.	VERIFY IN FIELD
VR	VENT RISER
VT	VENT
VTR	VENT THROUGH ROOF
W	WASTE
W/	WITH
WB	WET BULB
WC	WATER COLUMN
WP	WEATHER PROOF
WPD	WATER PRESSURE DROP (FT WATER)
WT	WEIGHT
WV	WATER VALVE
XFMR	TRANSFORMER
XMTR	TRANSMITTER

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REGISTERED PROFESSIONAL ENGINEER — ERIN EMMETT SWEET — No. M40086 EXP. 09-30-2026 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

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SHEET TITLE

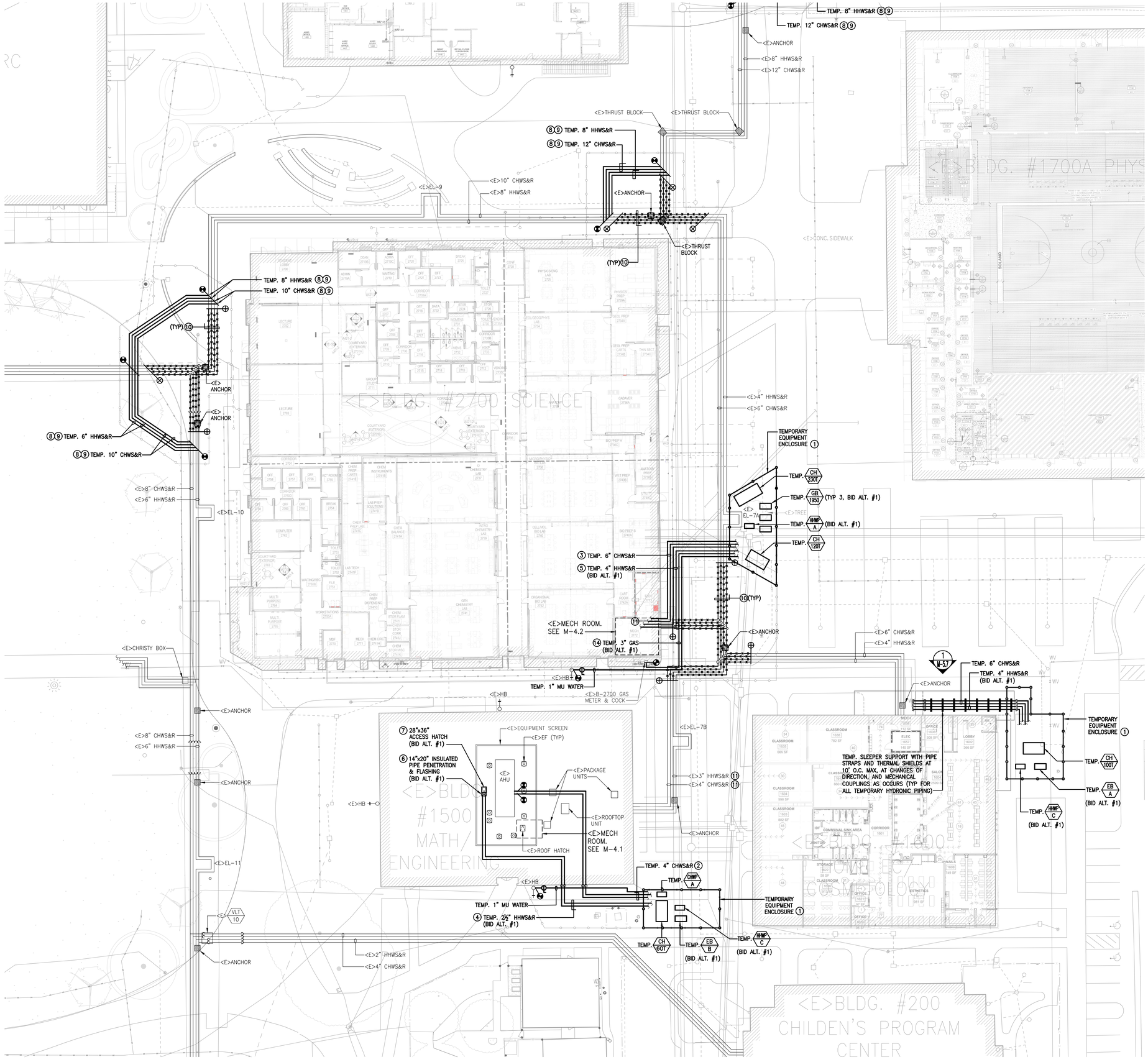
MECHANICAL SYMBOLS & ABBREVIATIONS

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-0.1

SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 ENLARGED SITE PLAN ZONE #1 - DEMO

SCALE: 1" = 20' - 0"

0 20' 40'

N

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF THE CAMPUS PRIMARY CHW & HHW SYSTEM(S) PRIOR TO CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL INCLUDE HAZARDOUS ABATEMENT AND DISPOSAL FOR A MIN. OF FOUR LIKE-SIZED (REFERRING TO HYDRONIC PIPING WORK) TRANSITE PIPES AT EACH EXCAVATION SITE IN WHICH A NEW VAULT WILL BE INSTALLED.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. PRIOR TO CONSTRUCTION, ISOLATED SECTIONS ASSOCIATED WITH THE AREAS OF WORK SHALL BE DRAINED TO SEWER.

I. CONTRACTOR SHALL TAKE PHOTOGRAPHIC RECORDS OF EXISTING CONDITION AT AREAS OF WORK PRIOR TO CONDUCTING DEMOLITION ACTIVITIES. REFER TO SHEET G-0.1.

J. TEMPORARY EQUIPMENT SHOWN DOES NOT INCLUDE ELECTRICAL OR SERVICE CLEARANCES. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CLEARANCES IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND EQUIPMENT SERVICE CLEARANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS

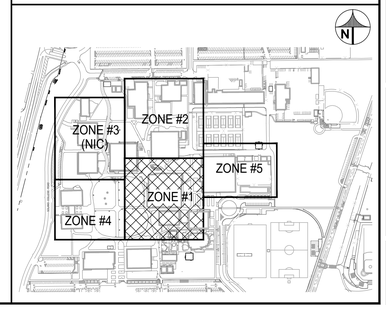
K. CONTRACTOR TO CONDUCT SOUND PRE-READING AT NEAREST CLASSROOMS AND ENSURE SOUND LEVELS ARE NOT GRATER THAN NC-35. REFER TO G-0.1 HYDRONIC SHUT DOWN AND SWITCH OVER REQUIREMENTS FOR TEMPORARY SYSTEMS, NOTE 1-C-iv, FOR SOUND ATTENUATING BLANKETS.

L. MINIMUM DISTANCE BETWEEN DRILLED-CORE HOLES TO BE 2 x WALL THICKNESS.

REFERENCE SHEET NOTES

1. PROVIDE TEMPORARY HEATING AND COOLING EQUIPMENT AT EACH BUILDING WITHIN ZONE #1 (B-1500 & B-2700). REFER TO M-6.1 FOR TEMPORARY EQUIPMENT SCHEDULES. UNLESS OTHERWISE NOTED, TEMPORARY BOILER AND CHILLER SYSTEMS SHALL INCLUDE THE FOLLOWING ITEMS: PUMP, PUMP VFD, AIR VENT, EXPANSION TANK, CHEMICAL POT FEEDERS & TEST PORTS, AND MAKE-UP WATER PROVISIONS.
2. PROVIDE TEMPORARY CHWS&R PIPING FROM TEMPORARY CHW EQUIPMENT TO THE POINTS OF CONNECTION AT THE <E> AHU SERVING B-1500. REFER TO SHEET M-4.1 FOR TEMPORARY CHW POINTS OF CONNECTION AND MECH. RM. CHW UPGRADES. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
3. PROVIDE TEMPORARY CHWS&R PIPING FROM TEMPORARY CHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-2700 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL ROOM DOORWAY. REFER TO SHEET M-4.2 FOR TEMPORARY CHW POINTS OF CONNECTION AND MECH. RM. CHW UPGRADES. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
4. PROVIDE TEMPORARY HHWS&R PIPING FROM TEMPORARY HHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE CEILING SPACE ABOVE THE B-1500 MECHANICAL ROOM. SEE RSN #6 FOR TEMPORARY HHW PIPE PENETRATION AND RSN #7 FOR CEILING ACCESS FROM ROOFTOP. REFER TO G-0.0 & M-4.1 FOR ADDITIONAL INFORMATION. (BID ALT. #1 – ADDITIVE).
5. PROVIDE TEMPORARY HHWS&R PIPING FROM TEMPORARY HHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-2700 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL ROOM DOORWAY. REFER TO G-0.0 & M-4.2 FOR ADDITIONAL INFORMATION. (BID ALT. #1 – ADDITIVE).
6. CUT 14" X 20" PENETRATION IN ROOF FOR INSULATED PIPE PENETRATION CURB AND FLASHING. PENETRATION SHALL OCCUR BETWEEN <E> 2X FRAMING (I.E. AVOID <E> FRAMING). REFER TO DETAIL 1&2/M-5.5. CONTRACTOR TO VERIFY ROOF SLOPE AND PROVIDE CRICKET (1/8" PER FT. MIN. SLOPE) AT PENETRATION CURB TO ENSURE POSITIVE DRAINAGE AROUND CURB. (BID ALT. #1 – ADDITIVE).
7. CUT 28" x 36" PENETRATION IN ROOF FOR ACCESS HATCH TO CEILING SPACE. REFER TO DETAIL 6/M-5.1 & 4/M-5.5. CONTRACTOR TO VERIFY ROOF SLOPE AND PROVIDE CRICKET (1/4" PER FT. MIN. SLOPE) AT HATCH CURB TO ENSURE POSITIVE DRAINAGE AROUND CURB. (BID ALT. #1 – ADDITIVE).
8. IDENTIFY TEMPORARY POINTS OF CONNECTION AT THE <E> UNDERGROUND HHW & CHW TO BYPASS AREA OF WORK. REFER TO G-1.4 FOR TRENCHING AND SURFACE WORK.
9. PROVIDE TEMPORARY CHWS&R AND HHWS&R BYPASS PIPING TO SERVE UNEFFECTED (BY CONSTRUCTION) AREAS OF THE CAMPUS. UTILIZE LINESTOPS OR <E> ISOLATION VALVES TO FACILITATE CONNECTION TO <E> HYDRONIC PIPING. PROVIDE CAPS TO ISOLATE THE "LIVE" HYDRONIC SYSTEM FROM PIPING UNDER CONSTRUCTION WITHIN THE ZONE. REFER TO DETAIL 3/M-5.5 FOR INSTALLED CONDITION.
10. LOCATE <E> HHWS&R AND CHWS&R PIPING BELOW GRADE. VIF LOCATION FOR NEW VAULT AND EXCAVATE AS NEEDED FOR THE FOOTPRINT OF THE VAULT. REFER TO G-1.4 FOR TRENCHING AND SURFACE WORK.
11. DEMOLISH INSULATION AND JACKETING AT HYDRONIC RISERS. DEMOLISH EXISTING VALVES AND SECTIONS OF PIPING TO FACILITATE THE INSTALLATION OF LINE SIZED TEES AND NEW VALVES.
12. PROVIDE (4) TEMPORARY COOLING "MOVE AND COOL" UNITS. TOTAL COOLING CAPACITY OF (4) TEMP. COOLERS SHALL BE A MINIMUM OF 60 TONS.
13. PROVIDE (4) TEMPORARY ELECTRIC HEATING UNITS. TOTAL HEATING CAPACITY OF (4) TEMP. HEATERS SHALL BE A MINIMUM OF 2,000 MBH. (BID ALT #1 – ADDITIVE).
14. PROVIDE 3" TEMPORARY GAS FROM THE <E> B-2700 GAS MANIFOLD TO B-2700 TEMPORARY GAS BOILERS. POINT OF CONNECTION SHALL OCCUR AT TEST PORT DIRECTLY UPSTREAM OF THE BUILDING GAS MANIFOLD. COORDINATE ISOLATION AT CAMPUS UTILITY GAS MAIN WITH DISTRICT GAS INSPECTOR AND FOLLOW UTILITY PROCEDURES.

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEET
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL ENLARGED SITE PLAN ZONE #1 (B-1500, B-1600, & B-2700) DEMO

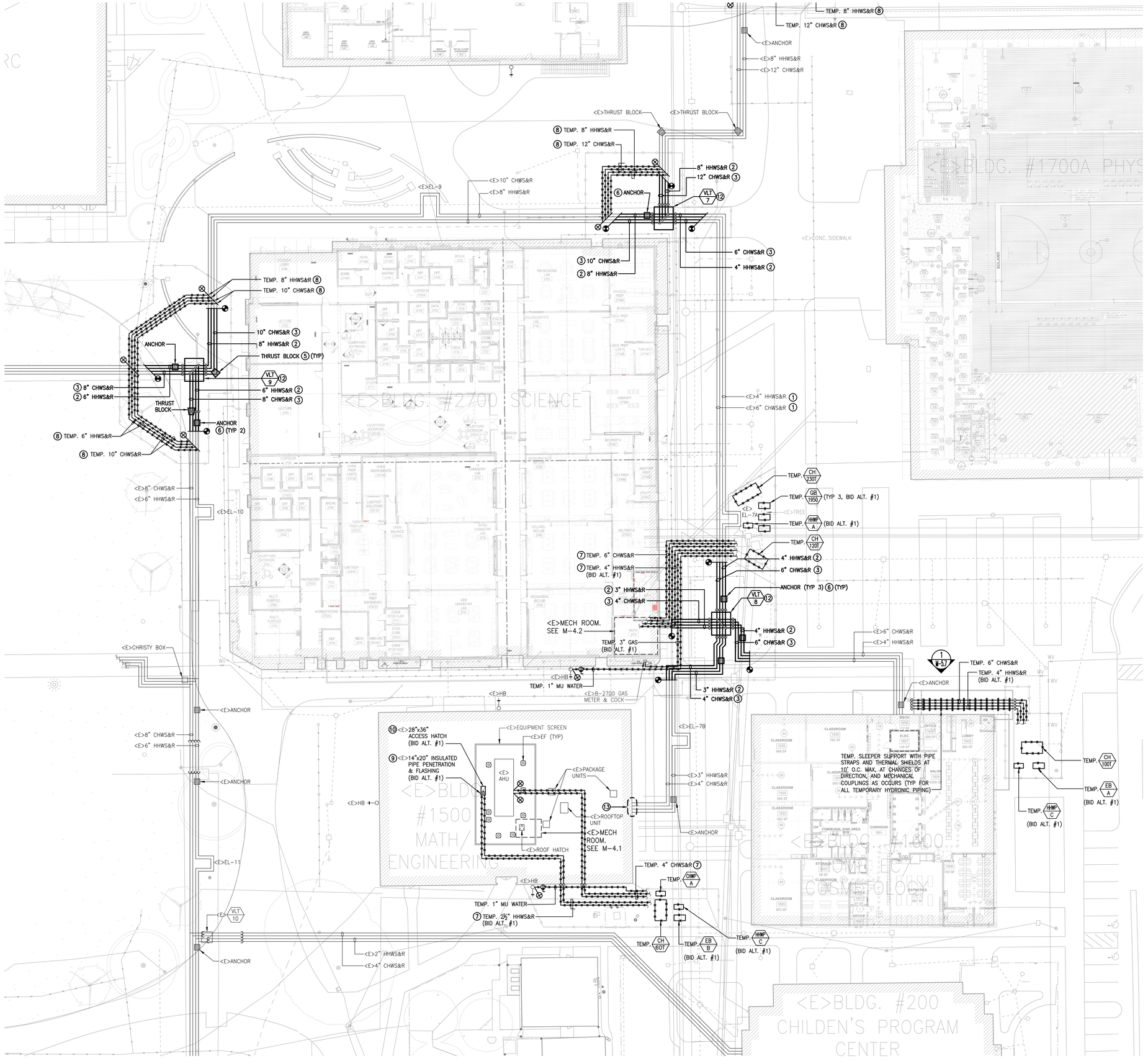
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

MD-1.1

SHEET OF –

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1 ENLARGED SITE PLAN ZONE #1 - NEW

SCALE: 1" = 20' - 0"

0 20' 40'

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF CAMPUS PRIOR CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL COMPLY WITH ALL INSPECTION AND TEST REQUIREMENTS RELATED TO UNDERGROUND SITE PIPING REPAIRS AS RELATES TO: WELDING, PRESSURE TESTABLE JOINT CLOSURES, EXCAVATION, PRESSURE TESTING, MANUFACTURER REQUIRED PROCEDURES FOR FIELD INSULATION KITS, FITTING INSULATION KITS, END SEALS, ETC.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. FIELD INSULATION KITS (PRESSURE TESTABLE AND NON-PRESSURE TESTABLE) FOR DIRECT-BURIED FIELD JOINTS SHALL BE INSTALLED BY COMPANY AND INDIVIDUALS TRAINED ON INSTALLATION REQUIREMENTS OF THE PRE-FABRICATED PIPING SYSTEM MANUFACTURER.

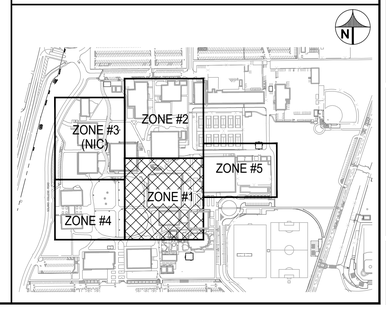
I. NEW SECTIONS OF STEEL PIPING SHALL BE PRESSURE TESTED AND CHEMICALLY TREATED PRIOR TO CONNECTION TO EXISTING PIPING.

J. NO METALIC OR STEEL COMPONENTS SHALL BE EXPOSED TO SOILS IN A DIRECT BURIED SECTION OF PIPING. COUPLINGS, TRANSITION ADAPTERS, SADDLE TEES, FLANGES, NUT AND BOLT SETS SHALL BE ENCASULATED IN LIQUID POUR POLYURETHANE INSULATION AND HDPE HEAT SHRINK JACKETING AND TAPE. THREADED PORTIONS OF BOLTS/RODS SHALL BE WRAPPED IN PLASTIC PRIOR TO APPLICATION OF LIQUID POUR POLYURETHANE INSULATION.

REFERENCE SHEET NOTES

1. IDENTIFY POINTS OF CONNECTION AT EXISTING PIPING AND VERIFY PIPE IS IN SUFFICIENT CONDITION. PIPE WALL THICKNESS SHALL BE NOT LESS THAN 80% OF THE NOMINAL THICKNESS FOR A STD SCH. 40 STEEL PIPE (MEASURED BY CALIBER IN THE FIELD, MIN. 3 LOCATIONS 90-DEG APART) AT THAT SIZE FOR A NEW WELDED JOINT. IF EXISTING PIPE DOES NOT MEET REQUIREMENT, DEMO SECTION OF PIPING AND IDENTIFY NEW POINT OF CONNECTION.
2. PROVIDE PRE-FABRICATED/PRE-INSULATED HHWS&R PIPING. ALL WELDS AND EXPOSED BARE PIPE SHALL BE PREPPED, PRIMED & PAINTED AFTER WELDING IS COMPLETE. PROVIDE PRESSURE TESTABLE JOINT CLOSURE KITS AT EACH FIELD JOINT. REFER TO DETAIL 7/M-5.1.
3. PROVIDE PRE-FABRICATED/PRE-INSULATED CHWS&R PIPING. ALL WELDS AND EXPOSED BARE PIPE SHALL BE PREPPED, PRIMED & PAINTED AFTER WELDING IS COMPLETE. PROVIDE FIELD JOINT CLOSURE KITS AT EACH FIELD JOINT. REFER TO DETAIL 7/M-5.1.
4. NOT USED.
5. PROVIDE THRUST BLOCKS AT ALL FITTINGS AND CHANGES OF DIRECTION FOR PVC HYDRONIC PIPING 8" OR GREATER IN SIZE. ALL NON-SOLVENT WELDED PVC BELL & SPIGOT JOINTS (AT EXISTING, IF DISCOVERED). REFER TO DETAIL 1&2/M-5.2.
6. PROVIDE PRE-FABRICATED/PRE-INSULATED ANCHORS (THERMACOR OR APPROVED EQUAL), INCLUDING FULLY FABRICATED ANCHOR PLATES, WATER SHED RINGS, CORROSION COATING, POLYURETHANE INSULATION, AND JACKETING. COMPLETE WELDED CONNECTION TO PIPING AND PRESSURE TESTABLE JOINT CLOSURE PRIOR TO POURING CONCRETE. ANCHOR PLATES SHALL BE CONCRETE ENCASED, REFER TO DETAIL 8/M-5.1.
7. UPON "PASSED" PRESSURE TEST AND CHEMICAL TREATMENT PROCESS OF THE NEW HHW & CHW SITE PIPING, AND COMPLETED MECHANICAL ROOM UPGRADES, CONDUCT SHUT DOWN AND SWITCH OVER FROM TEMPORARY SYSTEMS (USING INSTALLED VALVES) TO THE COMPLETED HHW & CHW PIPING SYSTEM. REMOVE TEMPORARY HHW & CHW TEMPORARY PIPING, SUPPORTS, ELECTRICAL CONNECTIONS, AND GAS PIPING. REMOVE TEMPORARY MECHANICAL EQUIPMENT AND ENCLOSURE. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER. REFER TO BID ALT #1 (ADDITIVE) FOR REMOVAL OF TEMPORARY HEATING.
8. UPON "PASSED" PRESSURE TEST AND CHEMICAL TREATMENT PROCESS OF THE NEW HHW & CHW SITE PIPING, AND COMPLETED MECHANICAL ROOM UPGRADES, CONDUCT SHUT DOWN AND SWITCH OVER FROM TEMPORARY SYSTEMS TO THE COMPLETED HHW & CHW PIPING SYSTEM. REMOVE TEMPORARY HHW & CHW TEMPORARY BYPASS PIPING AT THE UNDERGROUND SITE PIPING. CUT OUT TEMPORARY ELBOW AND COMPLETE FINAL POINTS OF CONNECTION TO HYDRONIC PIPING. FILL SYSTEM AND VENT AIR FROM BUILDING HHW & CHW SYSTEM HIGH POINTS. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
9. HHWS&R PIPE ROOF PENETRATION AND QUICK CONNECT "FOR TEMPORARY SERVICE" SHALL REMAIN. PROVIDE BLIND FLANGE AT CLOSED BUTTERFLY VALVES.
10. CEILING ACCESS HATCH TO REMAIN. DEMOLISH TEMPORARY LADDER SYSTEM AND PROVIDE PAD LOCKABLE LATCH AT EXTERIOR OF HATCH (FOR FACILITIES USE). REFER TO DETAIL 4/M-5.5 FOR ROOF HATCH DETAIL.
11. NOT USED.
12. PROVIDE NEW VAULT, REFER TO VAULT DETAIL 8/M-5.2 AND VAULT SCHEDULE ON M-6.1 FOR REQUIRED FEATURES. PRE-FABRICATED/PRE-INSULATED STEEL PIPING SHALL TERMINATE A MIN. 9" INSIDE THE VAULT WALLS (HHWS&R PIPING; AND, CHWS 6" AND LESS), REMAINDER OF HHWS&R PIPING AND CHWS PIPING (6" AND LESS) SHALL BE FIELD INSTALLED SCH. 40 STEEL PIPING WITH WELDED/FLANGED JOINTS. PROVIDE INSULATION AND JACKETING PER SPECIFICATIONS. CHW PVC PIPING SHALL PENETRATE AND REMAIN PVC WITHIN THE VAULT. ALL PENETRATIONS SHALL BE SEALED WITH LINK SEAL PER DETAIL 5/M-5.1.
13. PROVIDE LINE SIZED TEE AND NEW ISOLATION VALVES AT HYDRONIC RISERS AT THE EXTERIOR OF THE BUILDING. PROVIDE BLIND FLANGE AT "FOR FUTURE" BRANCH CONNECTION. REFER TO DETAIL SHEETS M-4.1 THROUGH M-4.10.

KEY PLAN



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SHEET TITLE

MECHANICAL ENLARGED SITE PLAN ZONE #1 (B-1500, B-1600, & B-2700) NEW

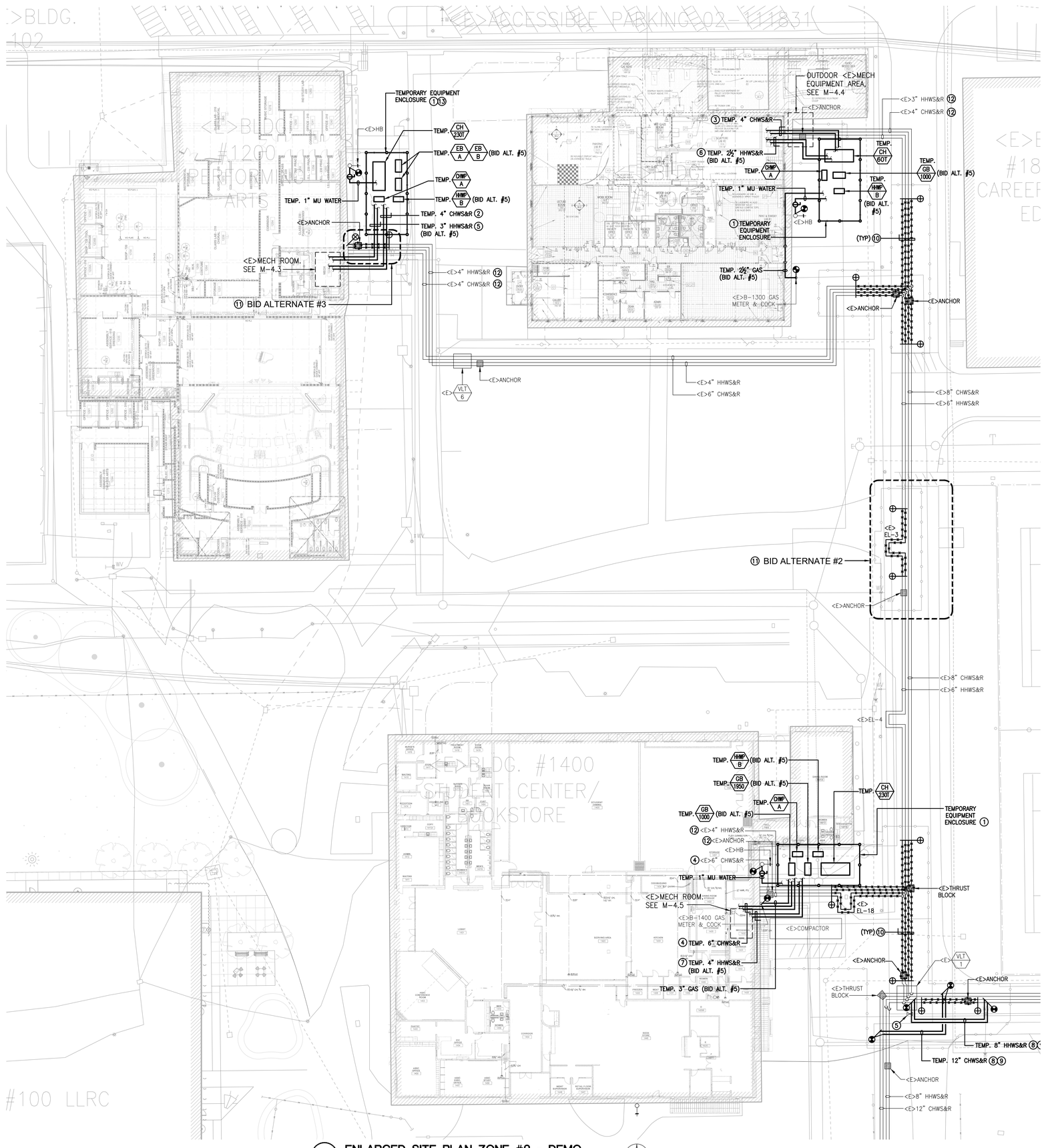
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

M-1.1

SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 ENLARGED SITE PLAN ZONE #2 - DEMO
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF THE CAMPUS PRIMARY CHW & HHW SYSTEM(S) PRIOR TO CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL INCLUDE HAZARDOUS ABATEMENT AND DISPOSAL FOR A MIN. OF FOUR LIKE-SIZED (REFERRING TO HYDRONIC PIPING WORK) TRANSITE PIPES AT EACH EXCAVATION SITE IN WHICH A NEW VAULT WILL BE INSTALLED.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. PRIOR TO CONSTRUCTION, ISOLATED SECTIONS ASSOCIATED WITH THE AREAS OF WORK SHALL BE DRAINED TO SEWER.

I. CONTRACTOR SHALL TAKE PHOTOGRAPHIC RECORDS OF EXISTING CONDITION AT AREAS OF WORK PRIOR TO CONDUCTING DEMOLITION ACTIVITIES. REFER TO SHEET G-0.1.

J. TEMPORARY EQUIPMENT SHOWN DOES NOT INCLUDE ELECTRICAL OR SERVICE CLEARANCES. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CLEARANCES IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND EQUIPMENT SERVICE CLEARANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS

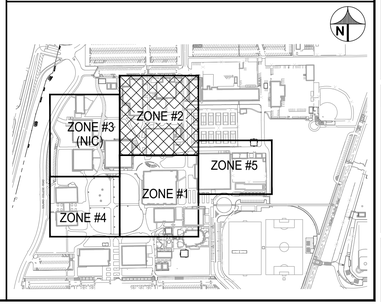
K. CONTRACTOR TO CONDUCT SOUND PRE-READING AT NEAREST CLASSROOMS AND ENSURE SOUND LEVELS ARE NOT GRATER THAN NC-35. REFER TO G-0.1 HYDRONIC SHUT DOWN AND SWITCH OVER REQUIREMENTS FOR TEMPORARY SYSTEMS, NOTE 1-C-iv, FOR SOUND ATTENUATING BLANKETS.

L. MINIMUM DISTANCE BETWEEN DRILLED-CORE HOLES TO BE 2 x WALL THICKNESS.

REFERENCE SHEET NOTES

1. PROVIDE TEMPORARY HEATING AND COOLING EQUIPMENT AT EACH BUILDING WITHIN ZONE #2 (B-1400, B-1300, & B-1200). REFER TO M-6.1 FOR TEMPORARY BOILER AND CHILLER EQUIPMENT SCHEDULES. UNLESS OTHERWISE NOTED, TEMPORARY BOILER AND CHILLER SYSTEMS SHALL INCLUDE THE FOLLOWING ITEMS: PUMP, PUMP VFD, AIR VENT, EXPANSION TANK, CHEMICAL POT FEEDERS & TEST PORTS, AND MAKE-UP WATER PROVISIONS.
2. PROVIDE TEMPORARY CHWS&R PIPING FROM TEMPORARY CHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-1200 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL ROOM DOORWAY. REFER TO SHEET M-4.3 FOR TEMPORARY CHW POINTS OF CONNECTION AND MECH. RM. CHW UPGRADES. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
3. PROVIDE TEMPORARY CHWS&R PIPING FROM TEMPORARY CHW EQUIPMENT TO THE POINTS OF CONNECTION AT THE HYDRONIC RISERS OUTSIDE B-1300. REFER TO SHEET M-4.4 FOR TEMPORARY CHW POINTS OF CONNECTION AND MECH. RM. CHW UPGRADES. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
4. PROVIDE TEMPORARY CHWS&R PIPING FROM TEMPORARY CHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-1400 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL ROOM DOORWAY. REFER TO SHEET M-4.5 FOR TEMPORARY CHW POINTS OF CONNECTION AND MECH. RM. CHW UPGRADES. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
5. PROVIDE TEMPORARY HHWS&R PIPING FROM TEMPORARY HHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-1200 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL ROOM DOORWAY. REFER TO G-0.0 & M-4.3 FOR ADDITIONAL INFORMATION. (BID ALT. #5 – ADDITIVE).
6. PROVIDE TEMPORARY HHWS&R PIPING FROM TEMPORARY HHW EQUIPMENT TO THE POINTS OF CONNECTION AT THE HYDRONIC RISERS OUTSIDE B-1300. REFER TO G-0.0 & M-4.4 FOR ADDITIONAL INFORMATION. (BID ALT. #5 – ADDITIVE).
7. PROVIDE TEMPORARY HHWS&R PIPING FROM TEMPORARY HHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-1400 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL. REFER TO G-0.0 & M-4.5 FOR ADDITIONAL INFORMATION. (BID ALT. #5 – ADDITIVE).
8. IDENTIFY TEMPORARY POINTS OF CONNECTION AT THE <E> UNDERGROUND HHW & CHW TO BYPASS AREA OF WORK. REFER TO G-1.4 FOR TRENCHING AND SURFACE WORK.
9. PROVIDE TEMPORARY CHWS&R AND HHWS&R BYPASS PIPING TO SERVE UNEFFECTED (BY CONSTRUCTION) AREAS OF THE CAMPUS. UTILIZE LINESTOPS OR <E> ISOLATION VALVES TO FACILITATE CONNECTION TO <E> HYDRONIC PIPING. PROVIDE CAPS TO ISOLATE THE "LIVE" HYDRONIC SYSTEM FROM PIPING UNDER CONSTRUCTION WITHIN THE ZONE. REFER TO DETAIL 3/M-5.5 FOR INSTALLED CONDITION.
10. LOCATE <E> HHWS&R AND CHWS&R PIPING BELOW GRADE. VIF LOCATION FOR NEW VAULT AND EXCAVATE AS NEEDED FOR THE FOOTPRINT OF THE VAULT. REFER TO G-1.4 FOR TRENCHING AND SURFACE WORK.
11. IF PRE-CONSTRUCTION PRESSURE TEST FAILS AT EXISTING SECTIONS OF UNDERGROUND HHWS&R PIPING, REPLACE HHWS&R SECTIONS IDENTIFIED OUTSIDE B-1200 MECH. RM. AND AT <E> EL-3 INCLUDING: FITTINGS, INSULATION, JACKETING, ETC. (BID ALTERNATE #2 & #3)
12. DEMOLISH INSULATION AND JACKETING AT HYDRONIC RISERS. DEMOLISH EXISTING VALVES AND SECTIONS OF PIPING TO FACILITATE THE INSTALLATION OF LINE SIZED TEES AND NEW VALVES.
13. PROVIDE TEMPORARY EQUIPMENT PAD USING CLASS II AGGRAVATED BASE COMPACTED TO 90% RELATIVE COMPACTION. TEMPORARY PAD SHALL HAVE A MINIMUM DEPTH OF 6 INCHES AND SLOPED MAXIMUM 2% AWAY FROM THE BUILDING.

KEY PLAN



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National **Strength.** Local **Action.**

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT GREEN
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

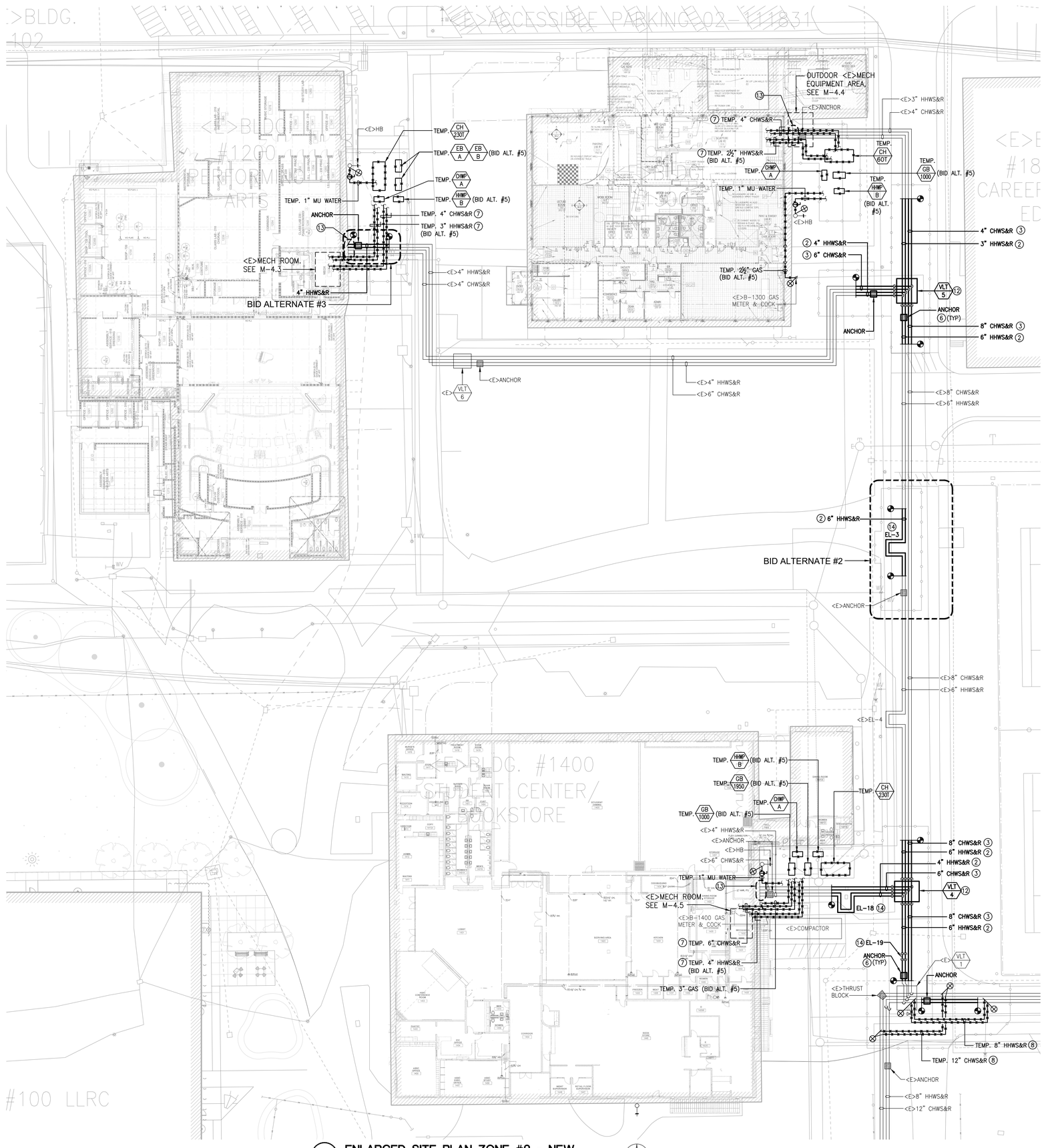
SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL ENLARGED SITE PLAN ZONE #2 (B-1200, B-1300, & B1400) DEMO

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

MD-1.2
SHEET OF –



1 ENLARGED SITE PLAN ZONE #2 - NEW

SCALE: 1" = 20' - 0"

0 20' 40'

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF CAMPUS PRIOR TO DOING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL COMPLY WITH ALL INSPECTION AND TEST REQUIREMENTS RELATED TO UNDERGROUND SITE PIPING REPAIRS AS RELATES TO: WELDING, PRESSURE TESTABLE JOINT CLOSURES, EXCAVATION, PRESSURE TESTING, MANUFACTURER REQUIRED PROCEDURES FOR FIELD INSULATION KITS, FITTING INSULATION KITS, END SEALS, ETC.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. FIELD INSULATION KITS (PRESSURE TESTABLE AND NON-PRESSURE TESTABLE) FOR DIRECT-BURIED FIELD JOINTS SHALL BE INSTALLED BY COMPANY AND INDIVIDUALS TRAINED ON INSTALLATION REQUIREMENTS OF THE PRE-FABRICATED PIPING SYSTEM MANUFACTURER.

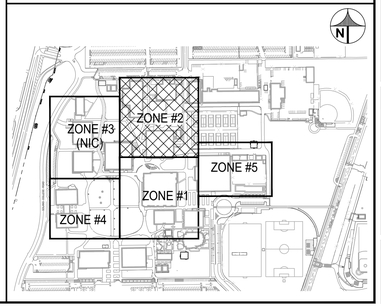
I. NEW SECTIONS OF STEEL PIPING SHALL BE PRESSURE TESTED AND CHEMICALLY TREATED PRIOR TO CONNECTION TO EXISTING PIPING.

J. NO METALIC OR STEEL COMPONENTS SHALL BE EXPOSED TO SOILS IN A DIRECT BURIED SECTION OF PIPING. COUPLINGS, TRANSITION ADAPTERS, SADDLE TEES, FLANGES, NUT AND BOLT SETS SHALL BE ENCASULATED IN LIQUID POUR POLYURETHANE INSULATION AND HDPE HEAT SHRINK JACKETING AND TAPE. THREADED PORTIONS OF BOLTS/RODS SHALL BE WRAPPED IN PLASTIC PRIOR TO APPLICATION OF LIQUID POUR POLYURETHANE INSULATION.

REFERENCE SHEET NOTES

1. IDENTIFY POINTS OF CONNECTION AT EXISTING PIPING AND VERIFY PIPE IS IN SUFFICIENT CONDITION. PIPE WALL THICKNESS SHALL BE NOT LESS THAN 80% OF THE NOMINAL THICKNESS FOR A STD SCH. 40 STEEL PIPE (MEASURED BY CALIBER IN THE FIELD, MIN. 3 LOCATIONS 90-DEG APART) AT THAT SIZE FOR A NEW WELDED JOINT. IF EXISTING PIPE DOES NOT MEET REQUIREMENT, DEMO SECTION OF PIPING AND IDENTIFY NEW POINT OF CONNECTION.
2. PROVIDE PRE-FABRICATED/PRE-INSULATED HHWS&R PIPING. ALL WELDS AND EXPOSED BARE PIPE SHALL BE PREPPED, PRIMED & PAINTED AFTER WELDING IS COMPLETE. PROVIDE PRESSURE TESTABLE JOINT CLOSURE KITS AT EACH FIELD JOINT. REFER TO DETAIL 7/M-5.1.
3. PROVIDE PRE-FABRICATED/PRE-INSULATED CHWS&R PIPING. ALL WELDS AND EXPOSED BARE PIPE SHALL BE PREPPED, PRIMED & PAINTED AFTER WELDING IS COMPLETE. PROVIDE FIELD JOINT CLOSURE KITS AT EACH FIELD JOINT. REFER TO DETAIL 7/M-5.1.
4. NOT USED.
5. PROVIDE THRUST BLOCKS AT ALL FITTINGS AND CHANGES OF DIRECTION FOR PVC HYDRONIC PIPING 8" OR GREATER IN SIZE. ALL NON-SOLVENT WELDED PVC BELL & SPIGOT JOINTS (AT EXISTING, IF DISCOVERED). REFER TO DETAIL 1&2/M-5.2.
6. PROVIDE PRE-FABRICATED/PRE-INSULATED ANCHORS (THERMACOR OR APPROVED EQUAL), INCLUDING FULLY FABRICATED ANCHOR PLATES, WATER SHED RINGS, CORROSION COATING, POLYURETHANE INSULATION, AND JACKETING. COMPLETE WELDED CONNECTION TO PIPING AND PRESSURE TESTABLE JOINT CLOSURE PRIOR TO POURING CONCRETE. ANCHOR PLATES SHALL BE CONCRETE ENCASED, REFER TO DETAIL 8/M-5.1.
7. UPON "PASSED" PRESSURE TEST AND CHEMICAL TREATMENT PROCESS OF THE NEW HHW & CHW SITE PIPING, AND COMPLETED MECHANICAL ROOM UPGRADES, CONDUCT SHUT DOWN AND SWITCH OVER FROM TEMPORARY SYSTEMS (USING INSTALLED VALVES) TO THE COMPLETED HHW & CHW PIPING SYSTEM. REMOVE TEMPORARY HHW & CHW TEMPORARY PIPING, SUPPORTS, ELECTRICAL CONNECTIONS, AND GAS PIPING. REMOVE TEMPORARY MECHANICAL EQUIPMENT AND ENCLOSURE. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
8. UPON "PASSED" PRESSURE TEST AND CHEMICAL TREATMENT PROCESS OF THE NEW HHW & CHW SITE PIPING, AND COMPLETED MECHANICAL ROOM UPGRADES, CONDUCT SHUT DOWN AND SWITCH OVER FROM TEMPORARY SYSTEMS TO THE COMPLETED HHW & CHW PIPING SYSTEM. REMOVE TEMPORARY HHW & CHW TEMPORARY BYPASS PIPING AT THE UNDERGROUND SITE PIPING. CUT OUT TEMPORARY ELBOW AND COMPLETE FINAL POINTS OF CONNECTION TO HYDRONIC PIPING. FILL SYSTEM AND VENT AIR FROM BUILDING HHW & CHW SYSTEM HIGH POINTS. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
9. HHWS&R PIPE ROOF PENETRATION AND QUICK CONNECT "FOR TEMPORARY SERVICE" SHALL REMAIN. PROVIDE BLIND FLANGE AT CLOSED BUTTERFLY VALVES.
10. CEILING ACCESS HATCH TO REMAIN. DEMOLISH TEMPORARY LADDER SYSTEM AND PROVIDE PAD LOCKABLE LATCH AT EXTERIOR OF HATCH (FOR FACILITIES USE). REFER TO DETAIL 4/M-5.5 FOR ROOF HATCH DETAIL.
11. NOT USED.
12. PROVIDE NEW VAULT, REFER TO VAULT DETAIL 8/M-5.2 AND VAULT SCHEDULE ON M-6.1 FOR REQUIRED FEATURES. PRE-FABRICATED/PRE-INSULATED STEEL PIPING SHALL TERMINATE A MIN. 9" INSIDE THE VAULT WALLS (HHWS&R PIPING; AND, CHWS 6" AND LESS). REMAINDER OF HHWS&R PIPING AND CHWS PIPING (6" AND LESS) SHALL BE FIELD INSTALLED SCH. 40 STEEL PIPING WITH WELDED/FLANGED JOINTS. PROVIDE INSULATION AND JACKETING PER SPECIFICATIONS. CHW PVC PIPING SHALL PENETRATE AND REMAIN PVC WITHIN THE VAULT. ALL PENETRATIONS SHALL BE SEALED WITH LINK SEAL PER DETAIL 5/M-5.1.
13. PROVIDE LINE SIZED TEE AND NEW ISOLATION VALVES AT HYDRONIC RISERS AT THE EXTERIOR OF THE BUILDING. PROVIDE BLIND FLANGE AT "FOR FUTURE" BRANCH CONNECTION. REFER TO DETAIL M-4.1 THROUGH M-4.10.
14. REFER TO EXPANSION LOOP DETAIL 4/M-5.2.

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
KIM BARRETT SWENSEN
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
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HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL
ENLARGED SITE PLAN
ZONE #2 (B-1200, B-1300, & B1400)
NEW

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

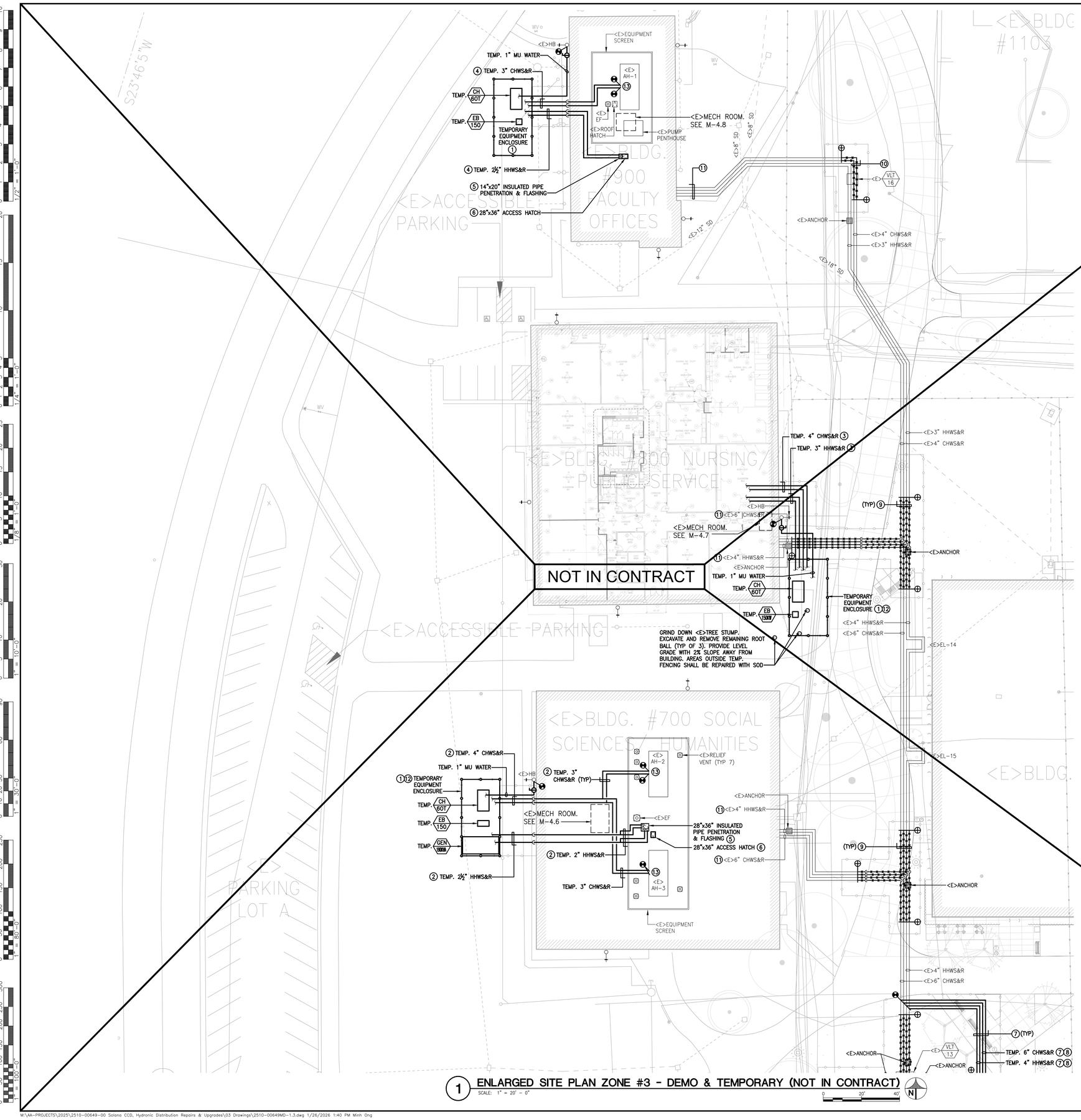
M-1.2
SHEET OF –

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1/2" = 1'-0" 1" = 10'-0" 1/4" = 1'-0" 1/8" = 1'-0" 1" = 30'-0" 1" = 80'-0" 1" = 100'-0"

M:\AA-PROJECTS\2025\2510-00649-00 Solano CCD, Hydronic Distribution Repairs & Upgrades\03 Drawings\2510-00649M-1.2.dwg 1/26/2026 5:44 PM Minh Ong

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 ENLARGED SITE PLAN ZONE #3 - DEMO & TEMPORARY (NOT IN CONTRACT)

SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF THE CAMPUS PRIMARY CHW & HHW SYSTEMS(S) PRIOR TO CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL INCLUDE HAZARDOUS ABATEMENT AND DISPOSAL FOR A MIN. OF FOUR LIKE-SIZED (REFERRING TO HYDRONIC PIPING WORK) TRANSITE PIPES AT EACH EXCAVATION SITE IN WHICH A NEW VAULT WILL BE INSTALLED.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. PRIOR TO CONSTRUCTION, ISOLATED SECTIONS ASSOCIATED WITH THE AREAS OF WORK SHALL BE DRAINED TO SEWER.

I. CONTRACTOR SHALL TAKE PHOTOGRAPHIC RECORDS OF EXISTING CONDITION AT AREAS OF WORK PRIOR TO CONDUCTING DEMOLITION ACTIVITIES. REFER TO SHEET G-0.1.

J. TEMPORARY EQUIPMENT SHOWN DOES NOT INCLUDE ELECTRICAL OR SERVICE CLEARANCES. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CLEARANCES IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND EQUIPMENT SERVICE CLEARANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS

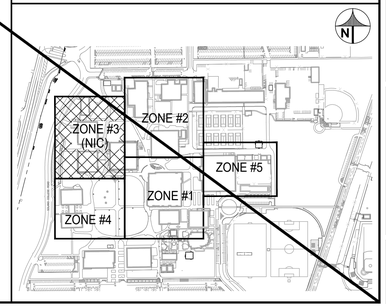
K. CONTRACTOR TO CONDUCT SOUND PRE-READING AT NEAREST CLASSROOMS AND ENSURE SOUND LEVELS ARE NOT GRATER THAN NC-35. REFER TO G-0.1 HYDRONIC SHUT DOWN AND SWITCH OVER REQUIREMENTS FOR TEMPORARY SYSTEMS, NOTE 1-C-iv, FOR SOUND ATTENUATING BLANKETS.

L. MINIMUM DISTANCE BETWEEN DRILLED-CORE HOLES TO BE 2 x WALL THICKNESS.

REFERENCE SHEET NOTES

1. PROVIDE TEMPORARY HEATING AND COOLING EQUIPMENT AT EACH BUILDING WITHIN ZONE #3 (B-700, B-800, & B-900). REFER TO M-6.1 FOR TEMPORARY BOILER AND CHILLER EQUIPMENT SCHEDULES. UNLESS OTHERWISE NOTED, TEMPORARY BOILER AND CHILLER SYSTEMS SHALL INCLUDE THE FOLLOWING ITEMS: PUMP, PUMP VFD, AIR VENT, EXPANSION TANK, CHEMICAL POT FEEDERS & TEST PORTS, AND MAKE-UP WATER PROVISIONS.
2. PROVIDE TEMPORARY CHWS&R AND HHWS&R PIPING FROM TEMPORARY CHW AND HHW EQUIPMENT TO THE B-700 ROOFTOP. TEMPORARY CHWS&R PIPING SHALL BE ROUTED TO THE POINTS OF CONNECTION AT <E> AH-1 AND AH-2. TEMPORARY HHWS&R PIPING SHALL BE ROUTED TO POINTS OF CONNECTION INSIDE CEILING SPACE ABOVE THE B-700 MECHANICAL ROOM. REFER TO SHEET M-4.6 FOR TEMPORARY CHW & HHW POINTS OF CONNECTION AND MECH. RM. CHW & HHW UPGRADES. REFER TO RSN #6 FOR TEMPORARY HHW PIPE PENETRATION AND RSN #6 FOR CEILING ACCESS FROM ROOFTOP. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
3. PROVIDE TEMPORARY CHWS&R AND HHWS&R PIPING FROM TEMPORARY CHW AND HHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-800 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL ROOM DOORWAY. REFER TO SHEET M-4.7 FOR TEMPORARY CHW & HHW POINTS OF CONNECTION AND MECH. RM. CHW & HHW UPGRADES. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
4. PROVIDE TEMPORARY CHWS&R AND HHWS&R PIPING FROM TEMPORARY CHW AND HHW EQUIPMENT TO THE B-900 ROOFTOP. TEMPORARY CHWS&R PIPING SHALL BE ROUTED TO THE POINTS OF CONNECTION AT <E> AH-1. TEMPORARY HHWS&R PIPING SHALL BE ROUTED TO POINTS OF CONNECTION INSIDE CEILING SPACE BELOW THE B-900 ROOFTOP HYDRONIC PUMP HOUSE. REFER TO SHEET M-4.8 FOR TEMPORARY CHW & HHW POINTS OF CONNECTION AND MECH. RM. CHW & HHW UPGRADES. REFER TO RSN #6 FOR TEMPORARY HHW PIPE PENETRATION AND RSN # FOR CEILING ACCESS FROM ROOFTOP. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
5. CUT PENETRATION IN ROOF FOR INSULATED PIPE PENETRATION CURB AND FLASHING. REFER TO DETAIL 1&2/M-5.5 FOR INSULATED PIPE PENETRATION CURB AND FLASHING. CONTRACTOR TO VERIFY ROOF SLOPE AND PROVIDE CRICKET (1/8" PER FT. MIN. SLOPE) AT PENETRATION CURB TO ENSURE POSITIVE DRAINAGE AROUND CURB.
6. CUT 28" x 36" PENETRATION IN ROOF FOR ACCESS HATCH TO CEILING SPACE. REFER TO DETAIL 4/M-5.5 FOR ACCESS HATCH AND TEMPORARY LADDER. CONTRACTOR TO VERIFY ROOF SLOPE AND PROVIDE CRICKET (1/8" PER FT. MIN. SLOPE) AT HATCH CURB TO ENSURE POSITIVE DRAINAGE AROUND CURB.
7. FOR ZONE #4 WORK (SEE MD-1.4 AND M-1.4), SAWCUT HARDSCAPE (AS NEEDED), EXCAVATE WITH CARE AND IDENTIFY TEMPORARY POINTS OF CONNECTION AT THE <E> UNDERGROUND HHW & CHW TO BYPASS AREA OF WORK.
8. FOR ZONE #4 WORK (SEE MD-1.4 AND M-1.4), PROVIDE TEMPORARY CHWS&R AND HHWS&R BYPASS PIPING TO SERVE UNEFFECTED (BY CONSTRUCTION) AREAS OF THE CAMPUS. UTILIZE LINESTOPS OR <E> ISOLATION VALVES TO FACILITATE CONNECTION TO <E> HYDRONIC PIPING. PROVIDE CAPS TO ISOLATE THE "LIVE" HYDRONIC SYSTEM FROM PIPING UNDER CONSTRUCTION WITHIN THE ZONE. REFER TO DETAIL 3/M-5.5 FOR INSTALLED CONDITION.
9. LOCATE <E> HHWS&R AND CHWS&R PIPING BELOW GRADE. VIF LOCATION FOR NEW VAULT AND EXCAVATE AS NEEDED FOR THE FOOTPRINT OF THE VAULT. REFER TO G-1.4 FOR TRENCHING AND SURFACE WORK.
10. LOCATE <E> CHWS&R PIPING BELOW GRADE AT <E> VAULT #16. DEMOLISH <E> UNDERGROUND CHWS&R PIPING THROUGH VAULT #16 INCLUDING VALVES, VENTS, PIPE SUPPORTS, ETC. CORE DRILL LARGER DIAMETER PENTRATIONS FOR CHWS&R PIPING TO ACCOMODATE THE O.D. OF THE PREFABRICATED CHW PIPING AND MODULAR LINK SEAL. REFER TO DETAIL 1&5B/M-5.1.
11. DEMOLISH INSULATION AND JACKETING AT HYDRONIC RISERS. DEMOLISH EXISTING VALVES AND SECTIONS OF PIPING TO FACILITATE THE INSTALLATION OF LINE SIZED TEES AND NEW VALVES.
12. PROVIDE TEMPORARY EQUIPMENT PAD USING CLASS II AGGRAVATED BASE COMPACTED TO 90% RELATIVE COMPACTION. TEMPORARY PAD SHALL HAVE A MINIMUM DEPTH OF 6 INCHES AND SLOPED MAXIMUM 2% AWAY FROM THE BUILDING.
13. PROVIDE TEMPORARY SHEET METAL BLANK OFFS TO TEMPORARILY PATCH THE OPENING AT THE <E> AHU DOORWAY AT THE COIL SECTION. SHEET METAL BLANK OFFS SHALL BE SECURED TO AHU AND SHALL WITHSTAND 6" OF TOTAL STATIC PRESSURE (TSP). FURNISH PENETRATIONS IN THE SHEET METAL FOR THE TEMPORARY CHWS&R PIPING (TYP 3).

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEET
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL ENLARGED SITE PLAN ZONE #3 (B-700, B-800, & B-900) DEMO & TEMPORARY (NOT IN CONTRACT)

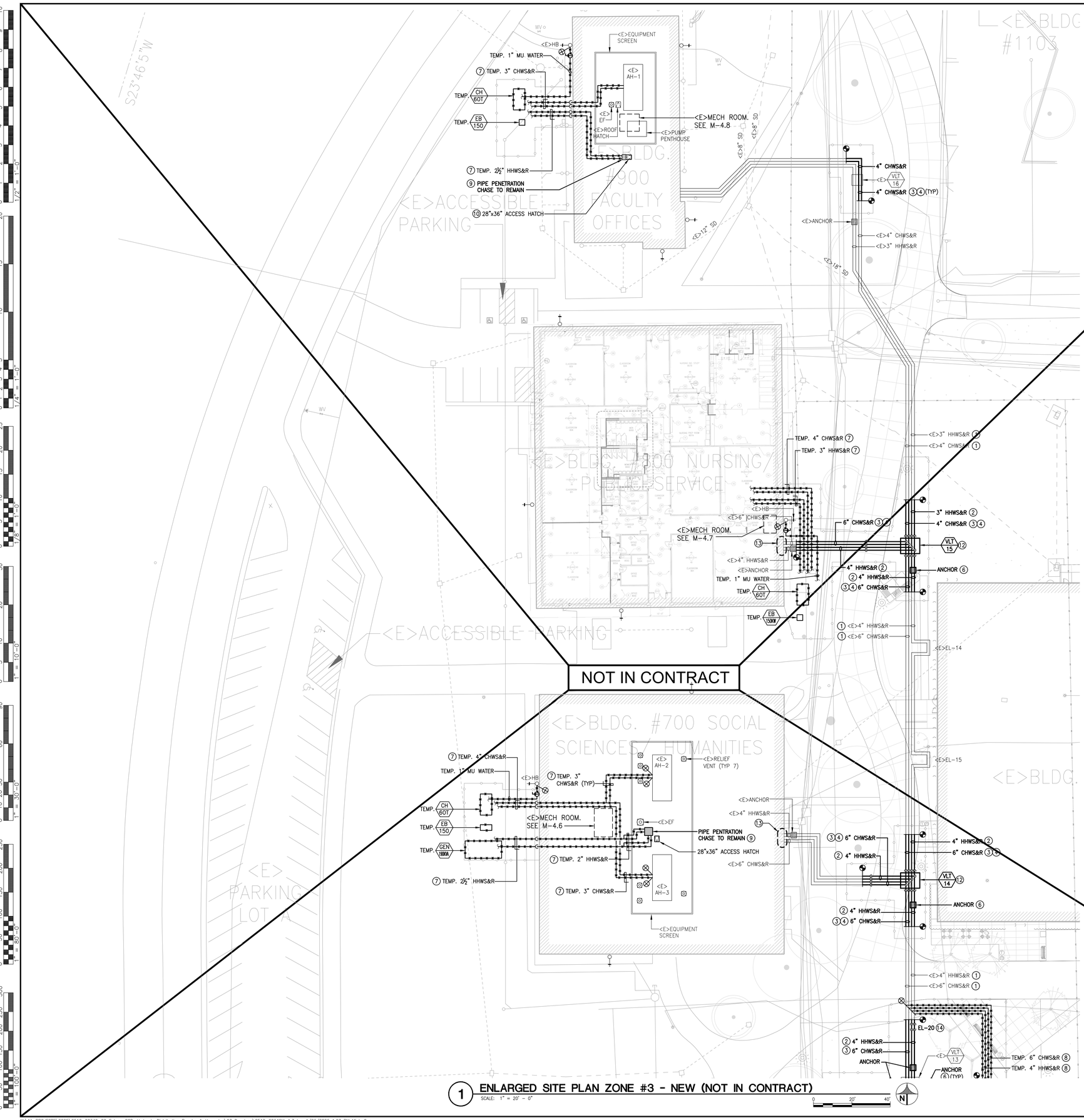
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

MD-1.3

SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 ENLARGED SITE PLAN ZONE #3 - NEW (NOT IN CONTRACT)
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF CAMPUS PRIOR CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL COMPLY WITH ALL INSPECTION AND TEST REQUIREMENTS RELATED TO UNDERGROUND SITE PIPING REPAIRS AS RELATES TO: WELDING, PRESSURE TESTABLE JOINT CLOSURES, EXCAVATION, PRESSURE TESTING, MANUFACTURER REQUIRED PROCEDURES FOR FIELD INSULATION KITS, FITTING INSULATION KITS, AND SEALS, ETC.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. FIELD INSULATION KITS (PRESSURE TESTABLE AND NON-PRESSURE TESTABLE) FOR DIRECT-BURIED FIELD JOINTS SHALL BE INSTALLED BY COMPANY AND INDIVIDUALS TRAINED ON INSTALLATION REQUIREMENTS OF THE PRE-FABRICATED PIPING SYSTEM MANUFACTURER.

I. NEW SECTIONS OF STEEL PIPING SHALL BE PRESSURE TESTED AND CHEMICALLY TREATED PRIOR TO CONNECTION TO EXISTING PIPING.

J. NO METALIC OR STEEL COMPONENTS SHALL BE EXPOSED TO SOILS IN A DIRECT BURIED SECTION OF PIPING. COUPLINGS, TRANSITION ADAPTERS, SADDLE TEES, FLANGES, NUT AND BOLT SETS SHALL BE ENCASULATED IN LIQUID POUR POLYURETHANE INSULATION AND HDPE HEAT SHRINK JACKETING AND TAPE. THREADED PORTIONS OF BOLTS/RODS SHALL BE WRAPPED IN PLASTIC PRIOR TO APPLICATION OF LIQUID POUR POLYURETHANE INSULATION.

REFERENCE SHEET NOTES

1. IDENTIFY POINTS OF CONNECTION AT EXISTING PIPING AND VERIFY PIPE IS IN SUFFICIENT CONDITION. PIPE WALL THICKNESS SHALL BE NOT LESS THAN 80% OF THE NOMINAL THICKNESS FOR A STD SCH. 40 STEEL PIPE (MEASURED BY CALIBER IN THE FIELD, MIN. 3 LOCATIONS 90-DEG APART) AT THAT SIZE FOR A NEW WELDED JOINT. IF EXISTING PIPE DOES NOT MEET REQUIREMENT, DEMO SECTION OF PIPING AND IDENTIFY NEW POINT OF CONNECTION.

2. PROVIDE PRE-FABRICATED/PRE-INSULATED SCH. 40 STEEL FERRO-THERM (OR APPROVED EQUAL) HHWS&R PIPING WITH WELDED JOINTS. ALL WELDS AND EXPOSED BARE PIPE SHALL BE PREPPED, PRIMED & PAINTED AFTER WELDING IS COMPLETE. PROVIDE PRESSURE TESTABLE JOINT CLOSURE KITS AT EACH FIELD JOINT. INSULATION SHALL BE LIQUID-POURED POLYURETHANE FINISHED WITH AN HDPE JACKET. INSTALL PER THERMACOR (OR APPROVED EQUAL) INSTALLATION REQUIREMENTS. REFER TO DETAIL 7/M-5.1.

3. PROVIDE PRE-FABRICATED/PRE-INSULATED SCH. 40 STEEL FERRO-THERM (OR APPROVED EQUAL) CHW SUPPLY PIPING (6" NPS OR LESS) WITH WELDED JOINTS. ALL WELDS AND EXPOSED BARE PIPE SHALL BE PREPPED, PRIMED & PAINTED AFTER WELDING IS COMPLETE. PROVIDE PRESSURE TESTABLE JOINT CLOSURE KITS AT EACH FIELD JOINT. INSULATION SHALL BE LIQUID-POURED POLYURETHANE FINISHED WITH AN HDPE JACKET. INSTALL PER THERMACOR (OR APPROVED EQUAL) INSTALLATION REQUIREMENTS. REFER TO DETAIL 7/M-5.1.

4. PROVIDE CLASS 160 PVC CHW SUPPLY (8" NPS AND GREATER) AND RETURN (ALL SIZES) PIPING WITH SOLVENT WELDED BELL & SPIGOT JOINTS. PROVIDE PURPLE PVC PRIMER AND PVC SOLVENT CEMENT. PROVIDE PRE-FORMED POLYURETHANE INSULATION WITH MIN. 3" OVERLAP, SECURE CIRCUMFERENTIAL AND LONGITUDINAL JOINTS WITH VAPOR SEAL TAPE. PROVIDE SPLIT HDPE JACKETING WITH LONGITUDINAL AND CIRCUMFERENTIAL JOINTS SEALED WITH HEAT SHRINK TAPE. INSTALL PER THERMACOR (OR APPROVED EQUAL) INSTALLATION REQUIREMENTS.

5. PROVIDE THRUST BLOCKS AT ALL FITTINGS AND CHANGES OF DIRECTION FOR PVC HYDRONIC PIPING 8" OR GREATER IN SIZE. ALL NON-SOLVENT WELDED PVC BELL & SPIGOT JOINTS (AT EXISTING, IF DISCOVERED). REFER TO DETAIL 1&2/M-5.2.

6. PROVIDE PRE-FABRICATED/PRE-INSULATED ANCHORS (THERMACOR OR APPROVED EQUAL), INCLUDING FULLY FABRICATED ANCHOR PLATES, WATER SHED RINGS, CORROSION COATING, POLYURETHANE INSULATION, AND JACKETING. COMPLETE WELDED CONNECTION TO PIPING AND PRESSURE TESTABLE JOINT CLOSURE PRIOR TO POURING CONCRETE. ANCHOR PLATES SHALL BE CONCRETE ENCASED, REFER TO DETAIL 8/M-5.1.

7. UPON "PASSED" PRESSURE TEST AND CHEMICAL TREATMENT PROCESS OF THE NEW HHW & CHW SITE PIPING, AND COMPLETED MECHANICAL ROOM UPGRADES, CONDUCT SHUT DOWN AND SWITCH OVER FROM TEMPORARY SYSTEMS (USING INSTALLED VALVES) TO THE COMPLETED HHW & CHW PIPING SYSTEM. REMOVE TEMPORARY HHW & CHW TEMPORARY PIPING, SUPPORTS, ELECTRICAL CONNECTIONS, AND GAS PIPING. REMOVE TEMPORARY MECHANICAL EQUIPMENT AND ENCLOSURE. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.

8. UPON "PASSED" PRESSURE TEST AND CHEMICAL TREATMENT PROCESS OF THE NEW HHW & CHW SITE PIPING, AND COMPLETED MECHANICAL ROOM UPGRADES, CONDUCT SHUT DOWN AND SWITCH OVER FROM TEMPORARY SYSTEMS TO THE COMPLETED HHW & CHW PIPING SYSTEM. REMOVE TEMPORARY HHW & CHW TEMPORARY BYPASS PIPING AT THE UNDERGROUND SITE PIPING. CUT OUT TEMPORARY ELBOW AND COMPLETE FINAL POINTS OF CONNECTION TO HYDRONIC PIPING. FILL SYSTEM AND VENT AIR FROM BUILDING HHW & CHW SYSTEM HIGH POINTS. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.

9. HHWS&R PIPE ROOF PENETRATION AND QUICK CONNECT "FOR TEMPORARY SERVICE" SHALL REMAIN. PROVIDE BLIND FLANGE AT CLOSED BUTTERFLY VALVES.

10. CEILING ACCESS HATCH TO REMAIN. DEMOLISH TEMPORARY LADDER SYSTEM AND PROVIDE PAD LOCKABLE LATCH AT EXTERIOR OF HATCH (FOR FACILITIES USE). REFER TO DETAIL 4/M-5.5 FOR ROOF HATCH DETAIL.

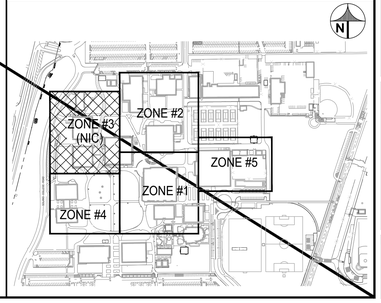
11. NOT USED.

12. PROVIDE NEW VAULT, REFER TO VAULT DETAIL 8/M-5.2 AND VAULT SCHEDULE ON M-6.1 FOR REQUIRED FEATURES. PRE-FABRICATED/PRE-INSULATED STEEL PIPING SHALL TERMINATE A MIN. 9" INSIDE THE VAULT WALLS (HHWS&R PIPING; AND, CHWS 6" AND LESS). REMAINDER OF HHWS&R PIPING AND CHWS PIPING (6" AND LESS) SHALL BE FIELD INSTALLED SCH. 40 STEEL PIPING WITH WELDED/FLANGED JOINTS. PROVIDE INSULATION AND JACKETING PER SPECIFICATIONS. CHW PVC PIPING SHALL PENETRATE AND REMAIN PVC WITHIN THE VAULT. ALL PENETRATIONS SHALL BE SEALED WITH LINK SEAL PER DETAIL 5/M-5.1.

13. PROVIDE LINE SIZED TEE AND NEW ISOLATION VALVES AT HYDRONIC RISERS AT THE EXTERIOR OF THE BUILDING. PROVIDE BLIND FLANGE AT "FOR FUTURE" BRANCH CONNECTION. REFER TO DETAIL M-4.1 THROUGH M-4.10.

14. REFER TO EXPANSION LOOP DETAIL 4/M-5.2.

KEY PLAN



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ERIN EMMETT GREEN
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DATE SIGNED: 01/23/26

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DSA APPL #02-123745

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CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL ENLARGED SITE PLAN ZONE #3 (B-700, B-800, & B-900) NEW (NOT IN CONTRACT)

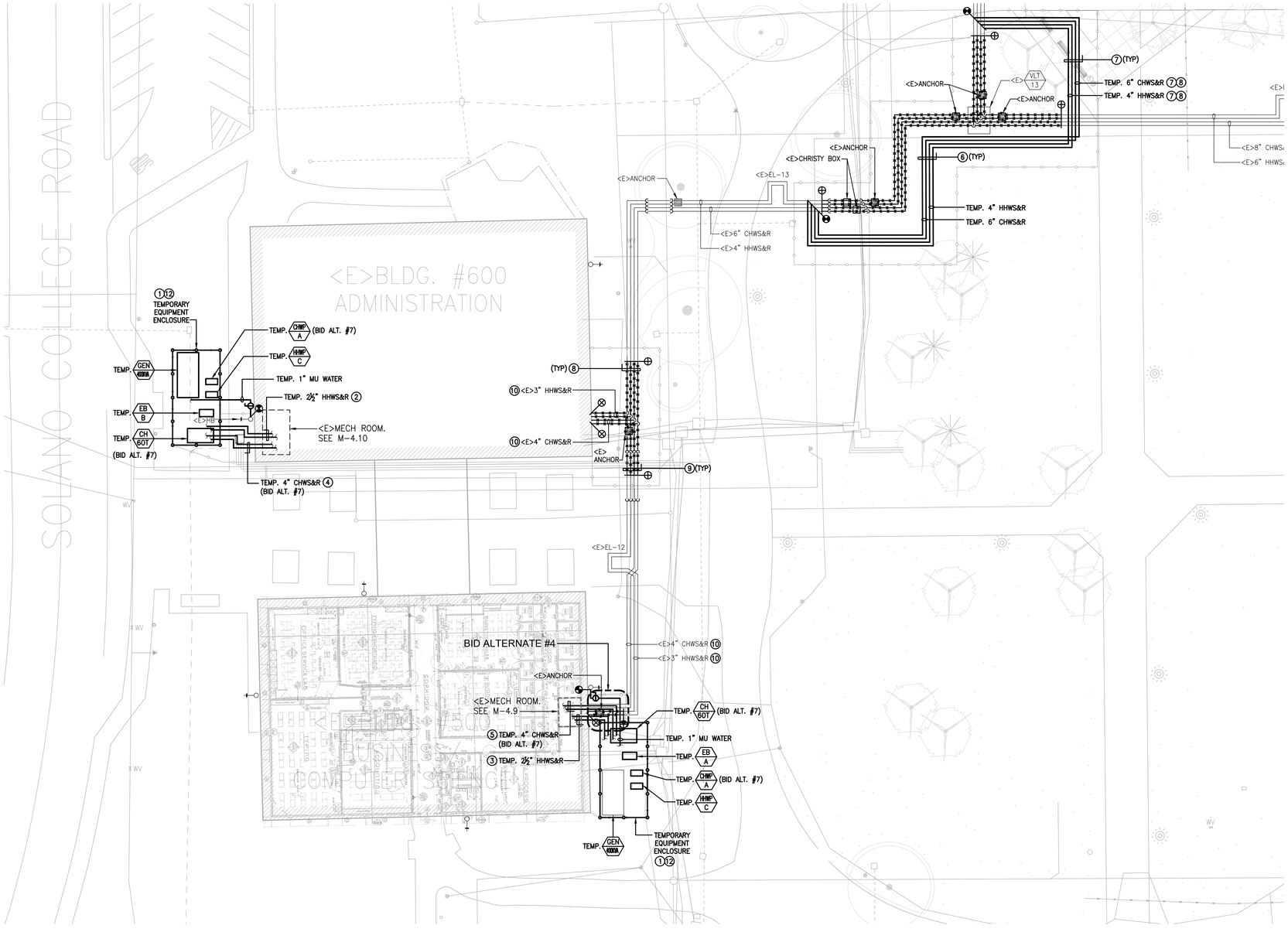
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

M-1.3

SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 ENLARGED SITE PLAN ZONE #4 - DEMO
SCALE: 1" = 20' - 0"
0 20' 40'

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF THE CAMPUS PRIMARY CHW & HHW SYSTEM(S) PRIOR TO CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL INCLUDE HAZARDOUS ABATEMENT AND DISPOSAL FOR A MIN. OF FOUR LIKE-SIZED (REFERRING TO HYDRONIC PIPING WORK) TRANSITE PIPES AT EACH EXCAVATION SITE IN WHICH A NEW VAULT WILL BE INSTALLED.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. PRIOR TO CONSTRUCTION, ISOLATED SECTIONS ASSOCIATED WITH THE AREAS OF WORK SHALL BE DRAINED TO SEWER.

I. CONTRACTOR SHALL TAKE PHOTOGRAPHIC RECORDS OF EXISTING CONDITION AT AREAS OF WORK PRIOR TO CONDUCTING DEMOLITION ACTIVITIES. REFER TO SHEET G-0.1.

J. TEMPORARY EQUIPMENT SHOWN DOES NOT INCLUDE ELECTRICAL OR SERVICE CLEARANCES. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CLEARANCES IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND EQUIPMENT SERVICE CLEARANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS

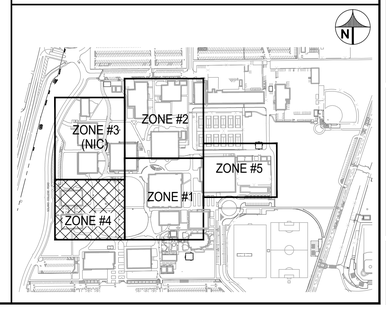
K. CONTRACTOR TO CONDUCT SOUND PRE-READING AT NEAREST CLASSROOMS AND ENSURE SOUND LEVELS ARE NOT GRATER THAN NC-35. REFER TO G-0.1 HYDRONIC SHUT DOWN AND SWITCH OVER REQUIRMENTS FOR TEMPORARY SYSTEMS, NOTE 1-C-iv, FOR SOUND ATTENUATING BLANKETS.

L. MINIMUM DISTANCE BETWEEN DRILLED-CORE HOLES TO BE 2 x WALL THICKNESS.

REFERENCE SHEET NOTES

1. PROVIDE TEMPORARY HEATING AND COOLING EQUIPMENT AT EACH BUILDING WITHIN ZONE #4 (B-500 & B-600). REFER TO M-6.1 FOR TEMPORARY BOILER AND CHILLER EQUIPMENT SCHEDULES. UNLESS OTHERWISE NOTED, TEMPORARY BOILER AND CHILLER SYSTEMS SHALL INCLUDE THE FOLLOWING ITEMS: PUMP, PUMP VFD, AIR VENT, EXPANSION TANK, CHEMICAL POT FEEDERS & TEST PORTS, AND MAKE-UP WATER PROVISIONS.
2. PROVIDE TEMPORARY HHWS&R PIPING FROM TEMPORARY HHW EQUIPMENT TO THE POINTS OF CONNECTION WITHIN THE B-500 MECHANICAL ROOM. SCAN FOR REBAR AND CORE DRILL THROUGH EXTERIOR CONCRETE WALL FOR THE TEMPORARY HHWS&R PIPING ENTERING THE MECHANICAL ROOM. REFER TO SHEET M-4.9 FOR TEMPORARY HHW POINTS OF CONNECTION AND MECH. RM. HHW UPGRADES. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
3. PROVIDE TEMPORARY HHWS&R PIPING FROM TEMPORARY HHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-600 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL ROOM DOORWAY. REFER TO SHEET M-4.10 FOR TEMPORARY HHW POINTS OF CONNECTION AND MECH. RM. HHW UPGRADES. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
4. PROVIDE TEMPORARY CHWS&R PIPING FROM TEMPORARY CHW EQUIPMENT TO THE POINTS OF CONNECTION WITHIN THE B-500 MECHANICAL ROOM. SCAN FOR REBAR AND CORE DRILL THROUGH EXTERIOR CONCRETE WALL FOR THE TEMPORARY CHWS&R PIPING ENTERING THE MECHANICAL ROOM. REFER TO G-0.0 & M-4.9 FOR ADDITIONAL INFORMATION. (BID ALT. #7 – ADDITIVE)
5. PROVIDE TEMPORARY CHWS&R PIPING FROM TEMPORARY HHW EQUIPMENT TO THE POINTS OF CONNECTION INSIDE THE B-600 MECHANICAL ROOM. PENETRATION OF TEMPORARY PIPING INTO SPACE SHALL BE THROUGH THE <E> MECHANICAL ROOM DOORWAY. REFER TO G-0.0 & M-4.10 FOR ADDITIONAL INFORMATION. (BID ALT. #7 – ADDITIVE).
6. FOR ZONE #3 WORK (SEE MD-1.3 AND M-1.3), PROVIDE TEMPORARY CHWS&R AND HHWS&R BYPASS PIPING TO SERVE UNEFFECTED (BY CONSTRUCTION) AREAS OF THE CAMPUS. UTILIZE LINESTOPS OR <E> ISOLATION VALVES TO FACILITATE CONNECTION TO <E> HYDRONIC PIPING. PROVIDE CAPS TO ISOLATE THE "LIVE" HYDRONIC SYSTEM FROM PIPING UNDER CONSTRUCTION WITHIN THE ZONE. REFER TO DETAIL 3/M-5.5 FOR INSTALLED CONDITION.
7. FOR ZONE #4 WORK, PROVIDE TEMPORARY CHWS&R AND HHWS&R BYPASS PIPING TO SERVE UNEFFECTED (BY CONSTRUCTION) AREAS OF THE CAMPUS. UTILIZE LINESTOPS OR <E> ISOLATION VALVES TO FACILITATE CONNECTION TO <E> HYDRONIC PIPING. PROVIDE CAPS TO ISOLATE THE "LIVE" HYDRONIC SYSTEM FROM PIPING UNDER CONSTRUCTION WITHIN THE ZONE. REFER TO DETAIL 3/M-5.5 FOR INSTALLED CONDITION.
8. LOCATE <E> HHWS&R AND CHWS&R PIPING BELOW GRADE. VIF LOCATION FOR NEW VAULT AND EXCAVATE AS NEEDED FOR THE FOOTPRINT OF THE VAULT. REFER TO G-1.4 FOR TRENCHING AND SURFACE WORK.
9. LOCATE <E> HHWS&R AND CHWS&R PIPING BELOW GRADE. REFER TO G-1.4 FOR TRENCHING AND SURFACE WORK.
10. DEMOLISH INSULATION AND JACKETING AT HYDRONIC RISERS. DEMOLISH EXISTING VALVES AND SECTIONS OF PIPING TO FACILITATE THE INSTALLATION OF LINE SIZED TEES AND NEW VALVES.
11. IF PRE-CONSTRUCTION PRESSURE TEST FAILS AT EXISTING SECTIONS OF UNDERGROUND HHWS&R PIPING, REPLACE HHWS&R SECTIONS IDENTIFIED OUTSIDE B-500 MECH. RM. INCLUDING: FITTINGS, INSULATION, JACKETING, ETC. (BID ALTERNATE #4).
12. PROVIDE TEMPORARY EQUIPMENT PAD USING CLASS II AGGRAVATED BASE COMPACTED TO 90% RELATIVE COMPACTION. TEMPORARY PAD SHALL HAVE A MINIMUM DEPTH OF 6 INCHES AND SLOPED MAXIMUM 2% AWAY FROM THE BUILDING.

KEY PLAN



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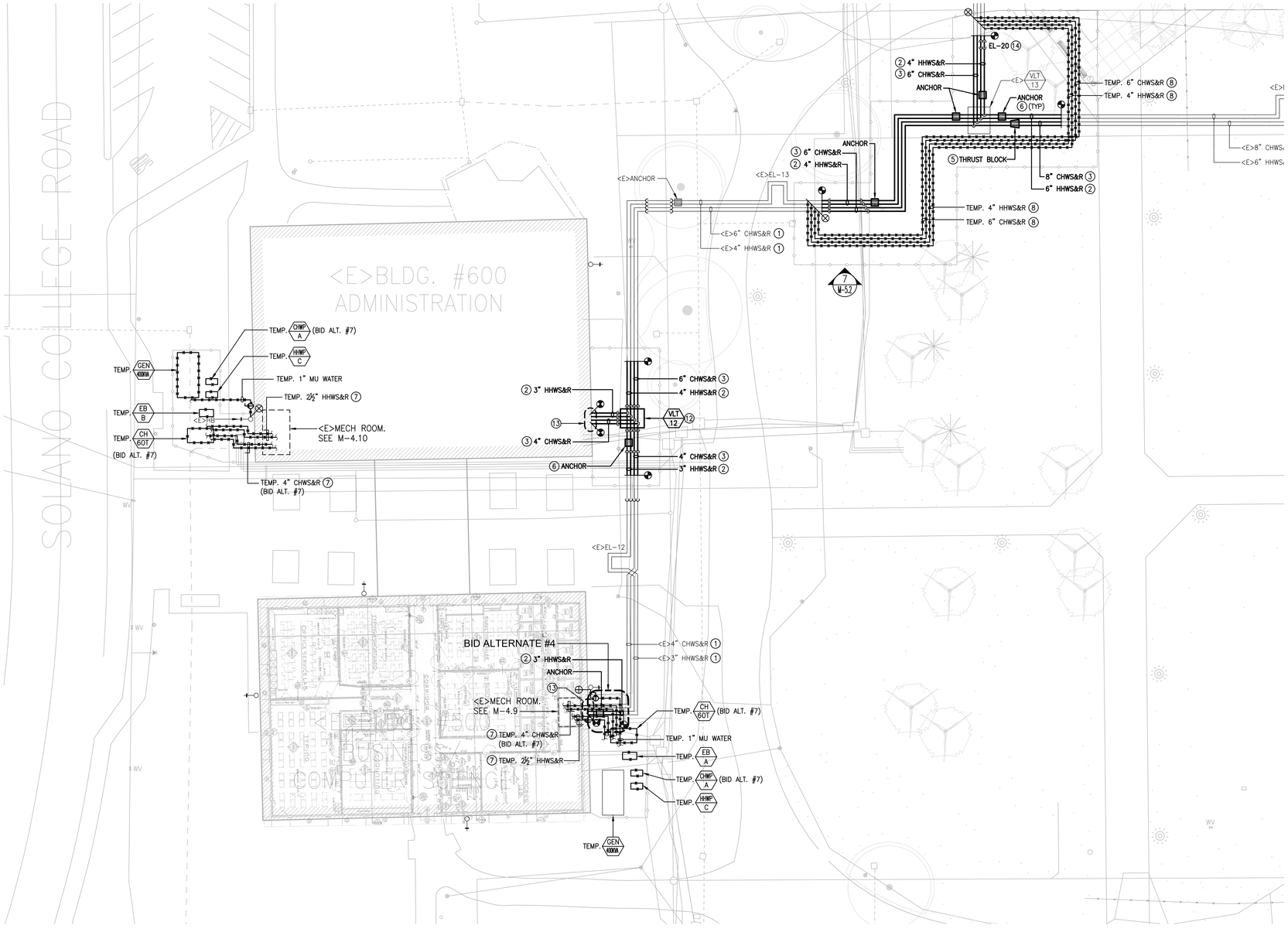
SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE
MECHANICAL ENLARGED SITE PLAN ZONE #4 (B-500, & B-600) DEMO

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

MD-1.4
SHEET OF –

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1 ENLARGED SITE PLAN ZONE #4 - NEW

SCALE: 1" = 20' - 0"

0 20' 40'

N

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF CAMPUS PRIOR CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL COMPLY WITH ALL INSPECTION AND TEST REQUIREMENTS RELATED TO UNDERGROUND SITE PIPING REPAIRS AS RELATES TO: WELDING, PRESSURE TESTABLE JOINT CLOSURES, EXCAVATION, PRESSURE TESTING, MANUFACTURER REQUIRED PROCEDURES FOR FIELD INSULATION KITS, FITTING INSULATION KITS, END SEALS, ETC.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. FIELD INSULATION KITS (PRESSURE TESTABLE AND NON-PRESSURE TESTABLE) FOR DIRECT-BURIED FIELD JOINTS SHALL BE INSTALLED BY COMPANY AND INDIVIDUALS TRAINED ON INSTALLATION REQUIREMENTS OF THE PRE-FABRICATED PIPING SYSTEM MANUFACTURER.

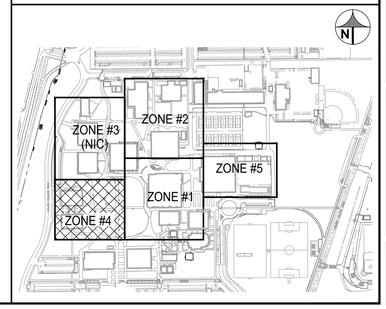
I. NEW SECTIONS OF STEEL PIPING SHALL BE PRESSURE TESTED AND CHEMICALLY TREATED PRIOR TO CONNECTION TO EXISTING PIPING.

J. NO METALIC OR STEEL COMPONENTS SHALL BE EXPOSED TO SOILS IN A DIRECT BURIED SECTION OF PIPING. COUPLINGS, TRANSITION ADAPTERS, SADDLE TEES, FLANGES, NUT AND BOLT SETS SHALL BE ENCASULATED IN LIQUID POUR POLYURETHANE INSULATION AND HDPE HEAT SHRINK JACKETING AND TAPE. THREADED PORTIONS OF BOLTS/RODS SHALL BE WRAPPED IN PLASTIC PRIOR TO APPLICATION OF LIQUID POUR POLYURETHANE INSULATION.

REFERENCE SHEET NOTES

1. IDENTIFY POINTS OF CONNECTION AT EXISTING PIPING AND VERIFY PIPE IS IN SUFFICIENT CONDITION. PIPE WALL THICKNESS SHALL BE NOT LESS THAN 80% OF THE NOMINAL THICKNESS FOR A STD SCH. 40 STEEL PIPE (MEASURED BY CALIBER IN THE FIELD, MIN. 3 LOCATIONS 90-DEG APART) AT THAT SIZE FOR A NEW WELDED JOINT. IF EXISTING PIPE DOES NOT MEET REQUIREMENT, DEMO SECTION OF PIPING AND IDENTIFY NEW POINT OF CONNECTION.
2. PROVIDE PRE-FABRICATED/PRE-INSULATED HHWS&R PIPING. ALL WELDS AND EXPOSED BARE PIPE SHALL BE PREPPED, PRIMED & PAINTED AFTER WELDING IS COMPLETE. PROVIDE PRESSURE TESTABLE JOINT CLOSURE KITS AT EACH FIELD JOINT. REFER TO DETAIL 7/M-5.1.
3. PROVIDE PRE-FABRICATED/PRE-INSULATED CHWS&R PIPING. ALL WELDS AND EXPOSED BARE PIPE SHALL BE PREPPED, PRIMED & PAINTED AFTER WELDING IS COMPLETE. PROVIDE FIELD JOINT CLOSURE KITS AT EACH FIELD JOINT. REFER TO DETAIL 7/M-5.1
4. NOT USED.
5. PROVIDE THRUST BLOCKS AT ALL FITTINGS AND CHANGES OF DIRECTION FOR PVC HYDRONIC PIPING 8" OR GREATER IN SIZE. ALL NON-SOLVENT WELDED PVC BELL & SPIGOT JOINTS (AT EXISTING, IF DISCOVERED). REFER TO DETAIL 1&2/M-5.2.
6. PROVIDE PRE-FABRICATED/PRE-INSULATED ANCHORS (THERMACOR OR APPROVED EQUAL), INCLUDING FULLY FABRICATED ANCHOR PLATES, WATER SHED RINGS, CORROSION COATING, POLYURETHANE INSULATION, AND JACKETING. COMPLETE WELDED CONNECTION TO PIPING AND PRESSURE TESTABLE JOINT CLOSURE PRIOR TO POURING CONCRETE. ANCHOR PLATES SHALL BE CONCRETE ENCASED, REFER TO DETAIL 8/M-5.1.
7. UPON "PASSED" PRESSURE TEST AND CHEMICAL TREATMENT PROCESS OF THE NEW HHW & CHW SITE PIPING, AND COMPLETED MECHANICAL ROOM UPGRADES, CONDUCT SHUT DOWN AND SWITCH OVER FROM TEMPORARY SYSTEMS (USING INSTALLED VALVES) TO THE COMPLETED HHW & CHW PIPING SYSTEM. REMOVE TEMPORARY HHW & CHW TEMPORARY PIPING, SUPPORTS, ELECTRICAL CONNECTIONS, AND GAS PIPING. REMOVE TEMPORARY MECHANICAL EQUIPMENT AND ENCLOSURE. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
8. UPON "PASSED" PRESSURE TEST AND CHEMICAL TREATMENT PROCESS OF THE NEW HHW & CHW SITE PIPING, AND COMPLETED MECHANICAL ROOM UPGRADES, CONDUCT SHUT DOWN AND SWITCH OVER FROM TEMPORARY SYSTEMS TO THE COMPLETED HHW & CHW PIPING SYSTEM. REMOVE TEMPORARY HHW & CHW TEMPORARY BYPASS PIPING AT THE UNDERGROUND SITE PIPING. CUT OUT TEMPORARY ELBOW AND COMPLETE FINAL POINTS OF CONNECTION TO HYDRONIC PIPING. FILL SYSTEM AND VENT AIR FROM BUILDING HHW & CHW SYSTEM HIGH POINTS. COORDINATE WITH COLLEGE FOR SHUT DOWN & SWITCH OVER.
9. HHWS&R PIPE ROOF PENETRATION AND QUICK CONNECT "FOR TEMPORARY SERVICE" SHALL REMAIN. PROVIDE BLIND FLANGE AT CLOSED BUTTERFLY VALVES.
10. CEILING ACCESS HATCH TO REMAIN. DEMOLISH TEMPORARY LADDER SYSTEM AND PROVIDE PAD LOCKABLE LATCH AT EXTERIOR OF HATCH (FOR FACILITIES USE). REFER TO DETAIL 4/M-5.5 FOR ROOF HATCH DETAIL.
11. NOT USED.
12. PROVIDE NEW VAULT, REFER TO VAULT DETAIL 8/M-5.2 AND VAULT SCHEDULE ON M-6.1 FOR REQUIRED FEATURES. PRE-FABRICATED/PRE-INSULATED STEEL PIPING SHALL TERMINATE A MIN. 9" INSIDE THE VAULT WALLS (HHWS&R PIPING; AND, CHWS 6" AND LESS). REMAINDER OF HHWS&R PIPING AND CHWS PIPING (6" AND LESS) SHALL BE FIELD INSTALLED SCH. 40 STEEL PIPING WITH WELDED/FLANGED JOINTS. PROVIDE INSULATION AND JACKETING PER SPECIFICATIONS. CHW PVC PIPING SHALL PENETRATE AND REMAIN PVC WITHIN THE VAULT. ALL PENETRATIONS SHALL BE SEALED WITH LINK SEAL PER DETAIL 5/M-5.1.
13. PROVIDE LINE SIZED TEE AND NEW ISOLATION VALVES AT HYDRONIC RISERS AT THE EXTERIOR OF THE BUILDING. PROVIDE BLIND FLANGE AT "FOR FUTURE" BRANCH CONNECTION. REFER TO DETAIL M-4.1 THROUGH M-4.10.
14. REFER TO EXPANSION LOOP DETAIL 4/M-5.2.

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT GREEN
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL
ENLARGED SITE PLAN
ZONE #4 (B-500, & B-600)
NEW

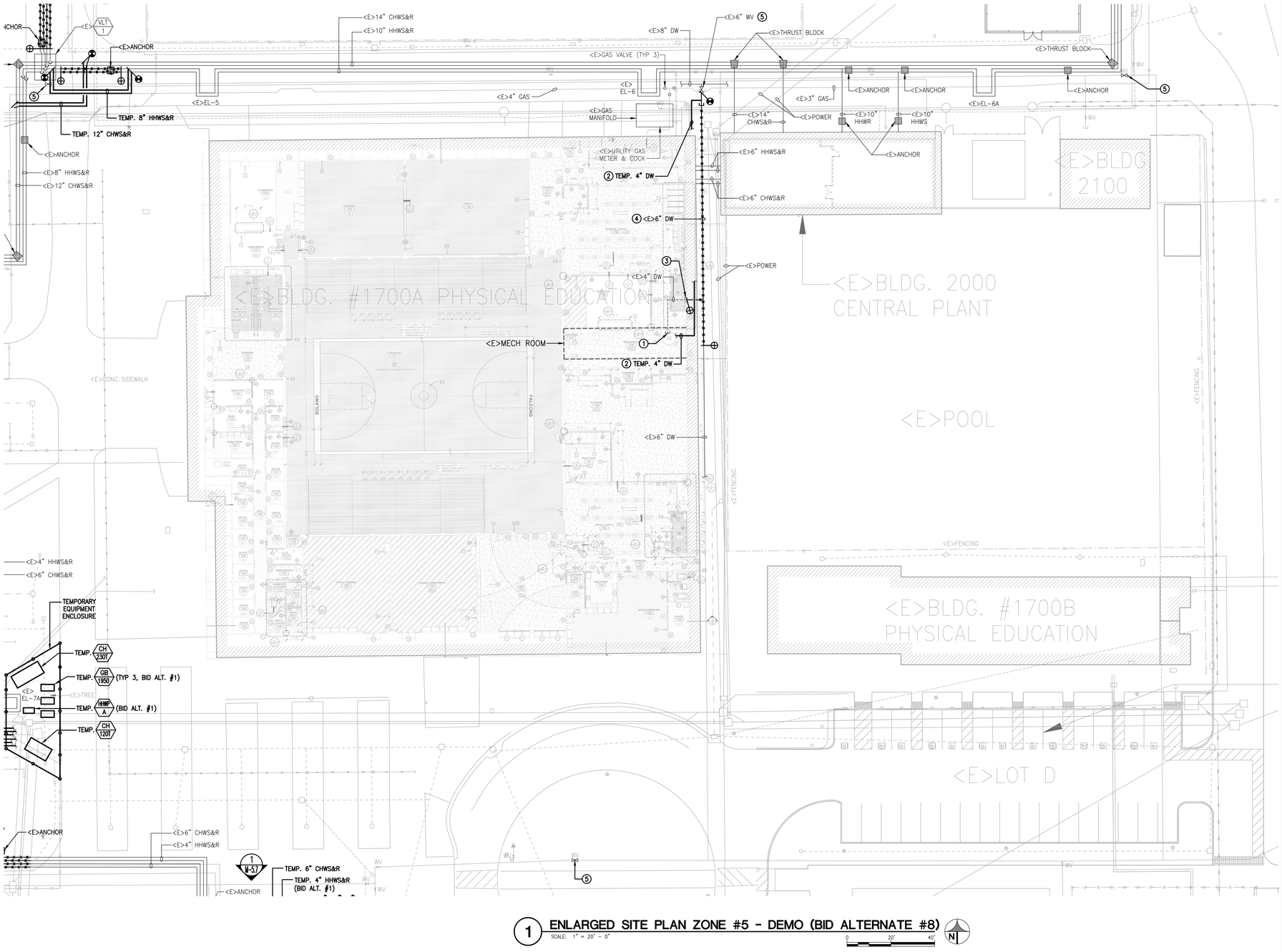
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

M-1.4

SHEET OF -

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1 ENLARGED SITE PLAN ZONE #5 - DEMO (BID ALTERNATE #8)
SCALE: 1" = 20' - 0"
0 20' 40'

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF THE CAMPUS PRIMARY CHW & HHW SYSTEM(S) PRIOR TO CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL INCLUDE HAZARDOUS ABATEMENT AND DISPOSAL FOR A MIN. OF FOUR LIKE-SIZED (REFERRING TO HYDRONIC PIPING WORK) TRANSITE PIPES AT EACH EXCAVATION SITE IN WHICH A NEW VAULT WILL BE INSTALLED.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. PRIOR TO CONSTRUCTION, ISOLATED SECTIONS ASSOCIATED WITH THE AREAS OF WORK SHALL BE DRAINED TO SEWER.

I. CONTRACTOR SHALL TAKE PHOTOGRAPHIC RECORDS OF EXISTING CONDITION AT AREAS OF WORK PRIOR TO CONDUCTING DEMOLITION ACTIVITIES. REFER TO SHEET G-0.1.

J. TEMPORARY EQUIPMENT SHOWN DOES NOT INCLUDE ELECTRICAL OR SERVICE CLEARANCES. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CLEARANCES IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND EQUIPMENT SERVICE CLEARANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS

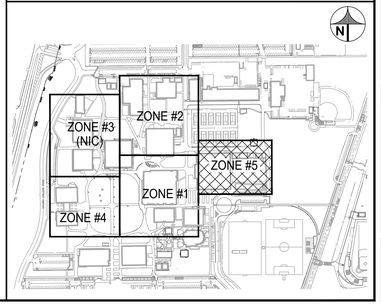
K. CONTRACTOR TO CONDUCT SOUND PRE-READING AT NEAREST CLASSROOMS AND ENSURE SOUND LEVELS ARE NOT GRATER THAN NC-35. REFER TO G-0.1 HYDRONIC SHUT DOWN AND SWITCH OVER REQUIRMENTS FOR TEMPORARY SYSTEMS, NOTE 1-C-iv, FOR SOUND ATTENUATING BLANKETS.

L. MINIMUM DISTANCE BETWEEN DRILLED-CORE HOLES TO BE 2 x WALL THICKNESS.

(F) REFERENCE SHEET NOTES

1. DEMO <E> RISER PIPE BELOW <E> FINISHED FLOOR. INSERT PLUG INTO <E> PIPE DOWN TO NEAREST CHANGE OF DIRECTION. FILL WITH GROUT AND ABANDON IN PLACE. FINISH GROUT FLUSH TO ADJACENT FINISHED FLOOR.
2. CONDUCT TEMPORARY SHUT DOWN OF B-1700A DOMESTIC WATER AND PROVIDE TEMPORARY DOMESTIC WATER PIPING FROM THE <E> WATER VALVE TO THE <E> RISER WITHIN THE B-1700A MECHANICAL ROOM. CONTRACTOR SHALL ACCOUNT FOR THRUST FORCES AND TEMPORARY THRUST RESTRAINTS (AS NEEDED) FOR TEMPORARY DW PIPING SYSTEM. PRESSURE TEST AND BACTERIAL TEST OF TEMPORARY PIPING SYSTEM SHALL OCCUR DURING OFF-HOURS.
3. FILL WITH GROUT, CAP AND ABANDON IN PLACE.
4. V.I.F. <E> DW ROUTING. ONCE TEMPORARY DW PIPING SYSTEM IS INSTALLED AND TESTED, DEMO DW PIPING THROUGH THE 6"x4" BRANCH TEE SERVING THE 4" WATER MAIN FOR B-1700A.
5. MANIPULATE <E> WATER VALVE TO ISOLATE DW FOR ZONE #5 DW REPLACMENT, TYPICAL IN 4 LOCATIONS.

KEY PLAN



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MINH BARRETT ONG
No. M40086
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SOLANO COMMUNITY COLLEGE DISTRICT

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HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
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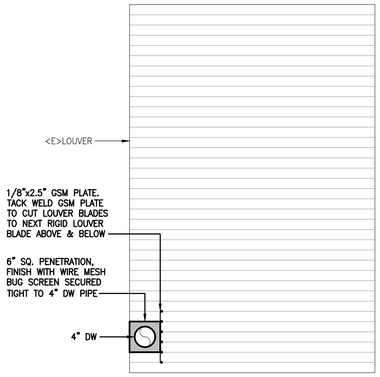
SHEET TITLE

MECHANICAL ENLARGED SITE PLAN ZONE #5 (B-1700A) - DEMO (BID ALTERNATE #8)

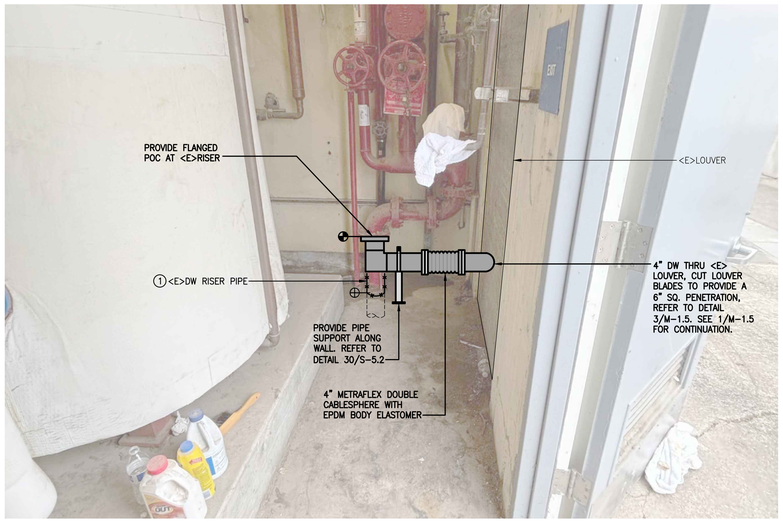
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THIS DRAWING IS 30" X 42" AT FULL SIZE

MD-1.5
SHEET OF –

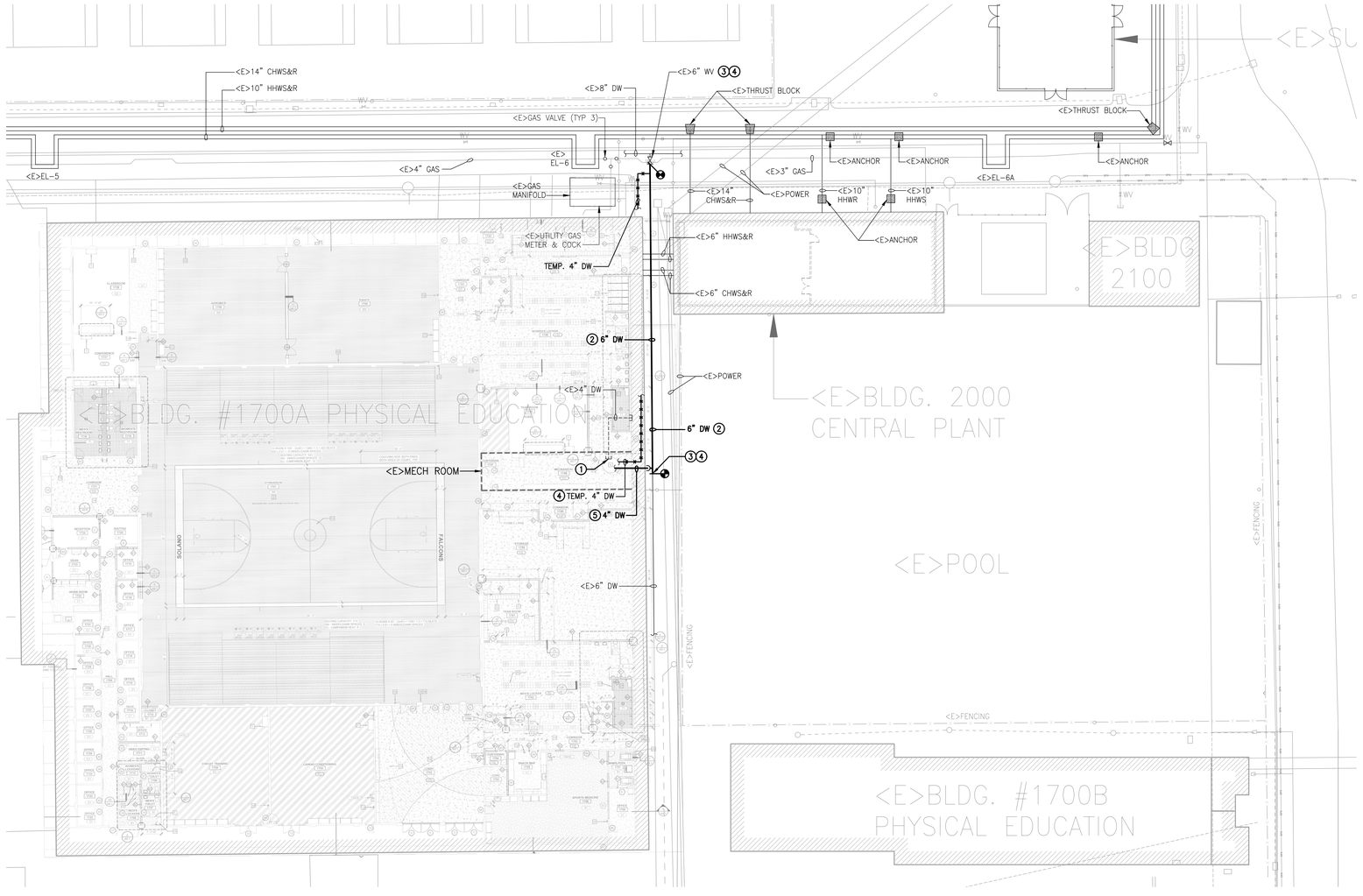
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3 LOUVER PENETRATION (BID ALTERNATE #8)
SCALE: N.T.S.



2 BUILDING 1700A DW REPAIR (BID ALTERNATE #8)
SCALE: N.T.S.



1 ENLARGED SITE PLAN ZONE #5 - NEW (BID ALTERNATE #8)
SCALE: 1" = 20' - 0"

0 20' 40'

GENERAL SHEET NOTES

A. COORDINATE ALL SHUT DOWNS WITH DISTRICT. NO SYSTEM SHUT DOWNS SHALL OCCUR WITHOUT DISTRICT APPROVAL. SYSTEM SHUT DOWNS SHALL OCCUR OFF HOURS AND SHALL NOT EFFECT CAMPUS OPERATIONS AT ANY GIVEN TIME DURING "OCCUPIED" HOURS. SHUT DOWNS FOR SWITCH OVERS SHALL OCCUR DURING OFF HOURS (WEEKEND AND/OR NIGHT).

B. REFER TO "HYDRONIC SHUT DOWN & SWITCH OVER REQUIREMENTS FOR TEMPORARY SERVICES" ON G-0.1.

C. NOT USED.

D. UNLESS OTHERWISE NOTED, NO BUILDING SHALL BE WITHOUT COOLING OR HEATING SERVICE AT ANY GIVEN TIME. TEMPORARY HEATING/COOLING SYSTEMS MUST BE SERVING THE EFFECTED ZONE BUILDINGS, AND TEMPORARY BYPASSES IN THE SITE HYDRONIC PIPING MUST BE SERVING THE REMAINDER OF CAMPUS PRIOR CONDUCTING FURTHER DEMOLITION OR NEW WORK FOR A DEDICATED ZONE.

E. CONTRACTOR SHALL COMPLY WITH ALL INSPECTION AND TEST REQUIREMENTS RELATED TO UNDERGROUND SITE PIPING REPAIRS AS RELATES TO: WELDING, PRESSURE TESTABLE JOINT CLOSURES, EXCAVATION, PRESSURE TESTING, MANUFACTURER REQUIRED PROCEDURES FOR FIELD INSULATION KITS, FITTING INSULATION KITS, END SEALS, ETC.

F. EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR THROUGH THE CONTRACTOR PROVIDED UTILITY LOCATING SERVICE SUBCONTRACTOR. UTILITIES SHALL BE CLEARLY MARKED WITH NON-PERMANENT PAINT WITH DEPTH ESTIMATES PROVIDED BY THE LOCATING SUBCONTRACTOR.

G. REFER TO PROJECT SPECIFICATIONS MANUAL.

H. FIELD INSULATION KITS (PRESSURE TESTABLE AND NON-PRESSURE TESTABLE) FOR DIRECT-BURIED FIELD JOINTS SHALL BE INSTALLED BY COMPANY AND INDIVIDUALS TRAINED ON INSTALLATION REQUIREMENTS OF THE PRE-FABRICATED PIPING SYSTEM MANUFACTURER.

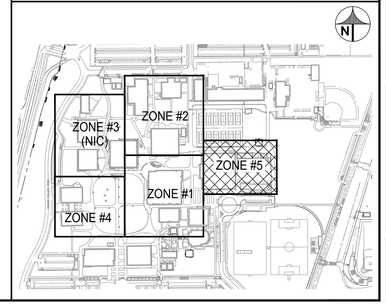
I. NEW SECTIONS OF STEEL PIPING SHALL BE PRESSURE TESTED AND CHEMICALLY TREATED PRIOR TO CONNECTION TO EXISTING PIPING.

J. NO METALIC OR STEEL COMPONENTS SHALL BE EXPOSED TO SOILS IN A DIRECT BURIED SECTION OF PIPING. COUPLINGS, TRANSITION ADAPTERS, SADDLE TEES, FLANGES, NUT AND BOLT SETS SHALL BE ENCASULATED IN LIQUID POUR POLYURETHANE INSULATION AND HDPE HEAT SHRINK JACKETING AND TAPE. THREADED PORTIONS OF BOLTS/RODS SHALL BE WRAPPED IN PLASTIC PRIOR TO APPLICATION OF LIQUID POUR POLYURETHANE INSULATION.

REFERENCE SHEET NOTES

1. DEMO <E> RISER PIPE 1" MIN. BELOW <E> FINISHED FLOOR. INSERT PLUG INTO <E> PIPE DOWN TO NEAREST CHANGE OF DIRECTION. FILL WITH GROUT AND ABANDON IN PLACE. FINISH GROUT FLUSH TO ADJACENT FINISHED FLOOR.
2. PROVIDE SCH. 40 PVC PIPING, SCH. 80 PVC FITTINGS, WITH SOLVENT WELDED JOINTS.
3. IDENTIFY POINTS OF CONNECTION AT EXISTING PIPING AND VERIFY PIPE (OR VALVE) IS IN GOOD CONDITION FOR CONDITION. IF EXISTING PIPE/VALVE IS DAMAGED, CORRODED, OR OTHERWISE COMPROMISED, DEMO AND REPLACE SECTION OF PIPING (OR VALVE) AND IDENTIFY NEW POINT OF CONNECTION. CONTRACTOR MUST PROVIDE RESTRAINT COUPLINGS (OR THRUST BLOCKS) AT POINT OF CONNECTION TO EXISTING.
4. ONCE NEW PIPING IS INSTALLED CONDUCT TEMPORARY SHUT DOWN OF B-1700A DOMESTIC WATER. DEMO TEMPORARY DW PIPING AND MAKE FINAL CONNECTIONS TO THE "NEW" DW PIPING SYSTEM. PRESSURE TEST AND BACTERIAL TEST UPON COMPLETION OF WORK (OFF-HOURS). TESTS SHALL COMPLY WITH CPC REQUIREMENTS AND "PASS" MUST BE OBSERVED BY AN INSPECTOR.
5. TRANSITION TO STEEL PIPING ABOVE GRADE VIA A PVC VANSTONE FLANGE TO STEEL FLANGE (DISSIMILAR METAL CONNECTIONS ARE NOT ACCEPTABLE). EXTERIOR PVC SHALL BE PAINTED WITH 3 COATS OF UV-RATED PAINT. ONCE PIPING TRANSITIONS TO STEEL ABOVE GRADE, PIPING SHALL PENETRATE THROUGH EXISTING LOUVER (SEE DETAIL 3/M-1.5), CONNECTION TO THE EXISTING RISER. PROVIDE PIPE SUPPORT ALONG WALL PER DETAIL 30/S-5.2. SEE ALSO DETAIL 2/M-1.5.

KEY PLAN



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ERIN EMMETT SWEET
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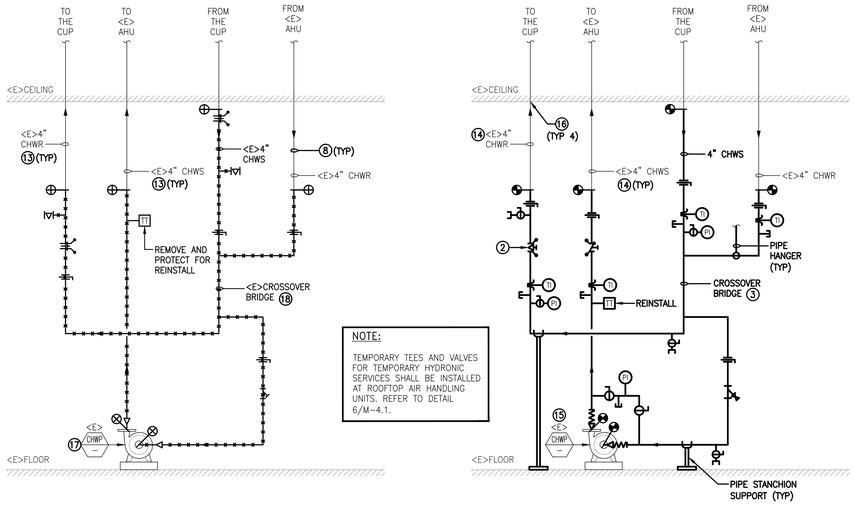
SHEET TITLE

MECHANICAL ENLARGED SITE PLAN ZONE #5 (B-1700A) - NEW (BID ALTERNATE #8)

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-1.5
SHEET OF –

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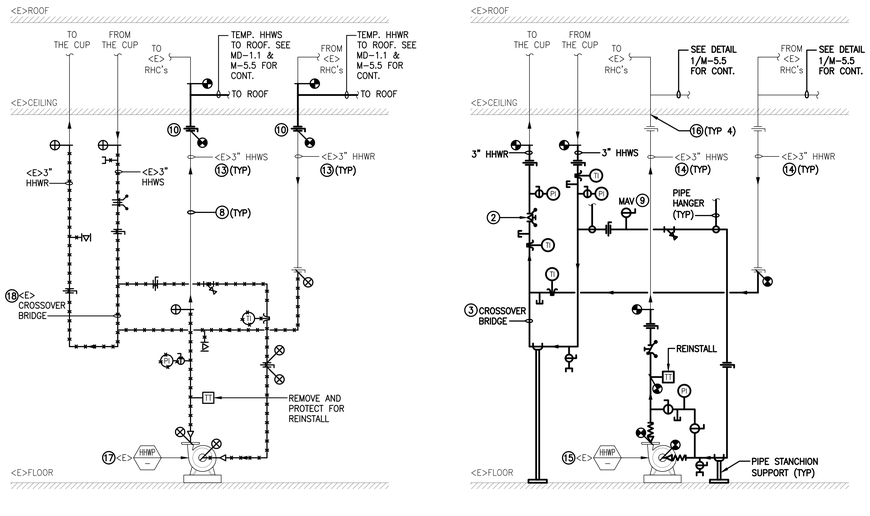


NOTE:

TEMPORARY TEES AND VALVES FOR TEMPORARY HYDRONIC SERVICES SHALL BE INSTALLED AT ROOFTOP AIR HANDLING UNITS. REFER TO DETAIL 6/M-4.1.

DEMO **NEW**

1 BUILDING 1500 MECHANICAL ROOM - ZONE 1 CHW UPGRADES
SCHEMATIC



DEMO **NEW**

2 BUILDING 1500 MECHANICAL ROOM - ZONE 1 HHW UPGRADES
SCHEMATIC

BUILDING 1500 CHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
5	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	4"	Balancing Valve	
2	EA	1/4"	Ball Valve	
2	EA	4"	Blind Flange	
1	EA	1/4"	Test Plugs	
3	EA	1/4"	Pressure Indicator	
4	EA	1/4"	Temperature Indicator	
6	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
1	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° Elbow	
2	EA	4"X4"X4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
6	EA	4"	Cal-Silicate Inserts	
3	EA	4"	Pipe hanger	
3	EA	4"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS). CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

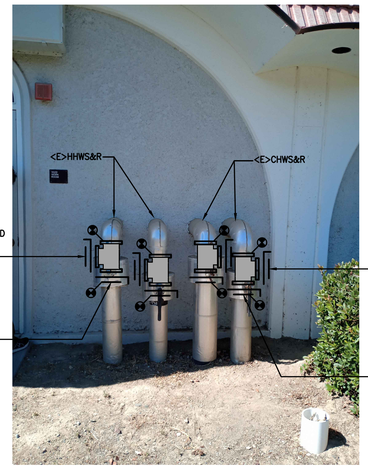
3 BUILDING 1500 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

BUILDING 1500 HHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
9	EA	3"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
3	EA	1/4"	Ball Valve	
2	EA	3"	Blind Flange	
2	EA	1/4"	Test Plugs	
3	EA	1/4"	Pressure Indicator	
3	EA	1/4"	Temperature Indicator	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
1	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° Elbow	
6	EA	3"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	3"x3"x3"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
6	EA	3"	Cal-Silicate Inserts	
3	EA	3"	Pipe hanger	
3	EA	3"	Pipe Stanchion	

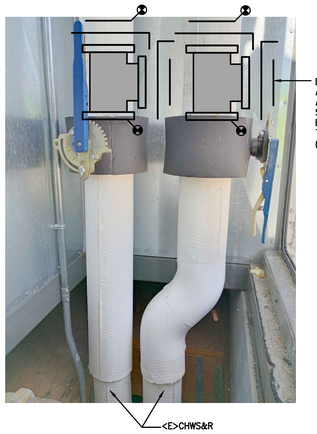
NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

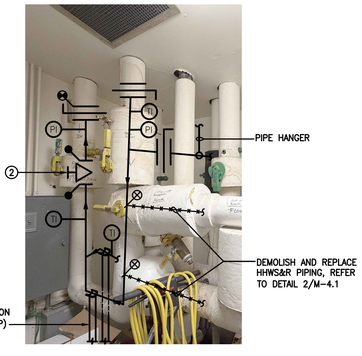
4 BUILDING 1500 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC



5 BUILDING 1500 EXTERIOR HHW & CHW RISER UPGRADE
SCHEMATIC



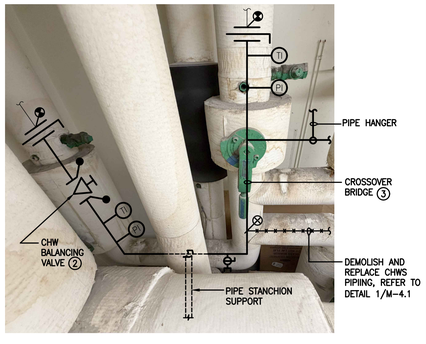
6 BUILDING 1500 AHU CHW TEMPORARY CONNECTION
SCALE: N.T.S.



NOTE:

SEE 2/M-4.1 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

7 BUILDING 1500 HHW CROSS-OVER BRIDGE
SCALE: N.T.S.



NOTE:

SEE 1/M-4.1 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

8 BUILDING 1500 CHW CROSS-OVER BRIDGE
SCALE: N.T.S.

REFERENCE SHEET NOTES

1. NOT USED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE HYDRONIC RETURN PIPING OF THE PRIMARY LOOP.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAILS 7&8/M-4.1 & 3/M-5.6.
4. NOT USED.
5. AT BUILDING EXTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH ISOLATION VALVES AT THE CAMPUS HYDRONIC LOOP SIDE AND AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR FUTURE SERVICES). SEE DETAIL 5/M-4.1.
6. NOT USED.
7. NOT USED.
8. DEMO ALL INSULATION AND JACKETING AT ISOLATED HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. DETERMINE IF FURTHER DEFERRED MAINTENANCE AND/OR REPLACEMENTS ARE NECESSARY.
9. PROVIDE AIR VENT AT HIGH POINT OF HYDRONIC SUPPLY AND RETURN PIPING (HHW & CHW) WITHIN THE MECHANICAL ROOM.
10. PROVIDE LINE SIZE TEES WITH ISOLATION VALVE(S) FOR TEMP SERVICES AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A POINT OF CONNECTION FOR TEMPORARY EQUIPMENT. FOR B-1500 TEMPORARY CHW SERVICE, REFER TO DETAIL 6/-. FOR B-1500 TEMPORARY HHW SERVICE, THIS SHALL OCCUR IN THE CEILING SPACE FOR HHW, REFER TO DETAIL 1, 2, & 4/M-5.5 FOR ACCESS AND PIPE PENETRATIONS (BID ALTERNATE #1 - ADDITIVE).
11. PROVIDE BLIND FLANGE AND CONNECT TO ISOLATION VALVE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED.
12. NOT USED.
13. REPLACE EXISTING RUSTED/DEGRADED HYDRONIC PIPING WITHIN MECHANICAL ROOM. PIPING TO BE RETAINED SHALL BE WIRE BRUSHED CLEAN FROM ANY MINOR SURFACE RUST.
14. PRIME AND PAINT ALL HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. PROVIDE INSULATION, VAPOR BARRIER (FOR CHW), PVC JACKETING, AND PIPE ID MARKERS.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. CAULK AND SEAL ALL PENETRATIONS THROUGH WALLS AND CEILINGS. FIRE-RATED ASSEMBLIES SHALL BE CAULKED AND SEALED WITH FIRE STOP CAULK. REFER TO DETAIL 2/M-5.7. PROVIDE ESCUTCHEON PLATES AT ALL PENETRATIONS. REFER TO DETAIL 6/M-5.6.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.
18. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE.

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National Strength. Local Action.

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEET
No. M40066
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

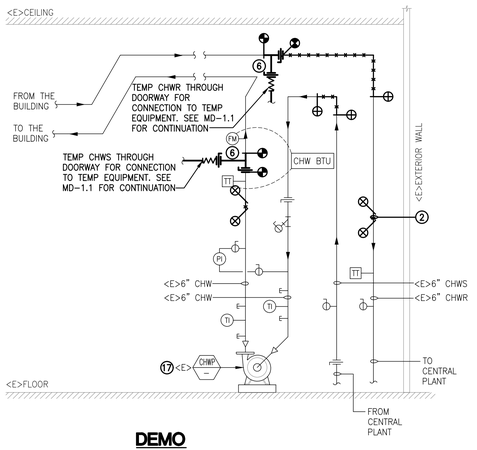
SHEET TITLE

BUILDING 1500 MECHANICAL ROOM ZONE #1: CHW & HHW

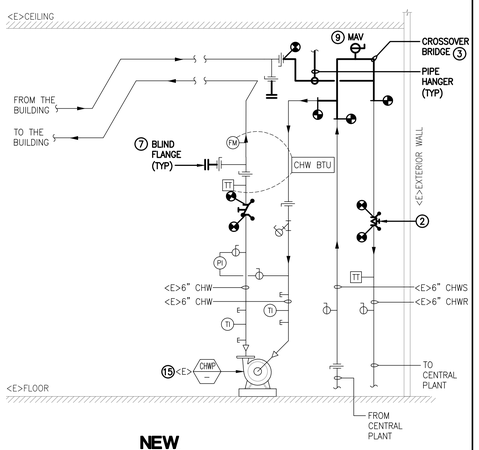
SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-4.1
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.

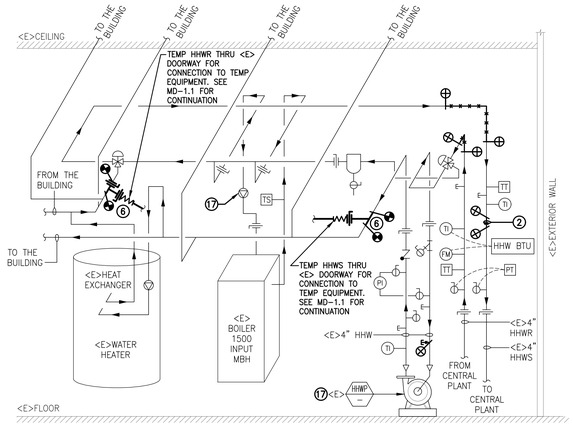


DEMO

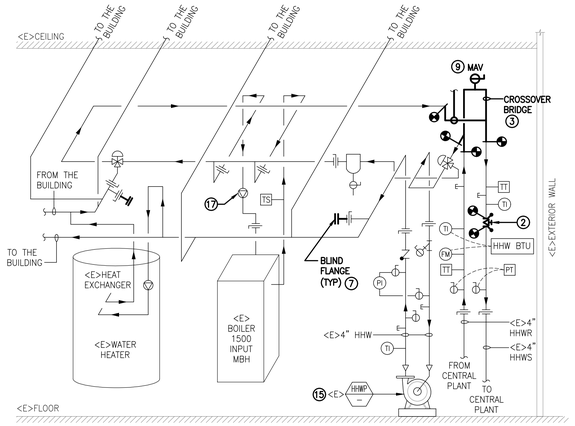


NEW

1 BUILDING 2700 MECHANICAL ROOM - ZONE 1 CHW UPGRADES
SCHEMATIC



DEMO



NEW

2 BUILDING 2700 MECHANICAL ROOM - ZONE 1 HHW UPGRADES
SCHEMATIC

BUILDING 2700 CHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
4	EA	6"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	6"	Balancing Valve	
1	EA	6"	Triple Duty Valve	
2	EA	6"	Blind Flange	
1	EA	1/4"	Air Vent	
0	EA	1/4"	Test Plugs	
20	LF	6"	Insulation	
20	LF	6"	Jacketing	
20	LF	6"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
0	EA	6"	Sch. 40 Steel (ASTM A53, Grade B) 90° Elbow	
4	EA	6"	Flange, Bolts & Gasket Kit	
2	EA	6"x6"x6"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	6"	Cal-Silicate Inserts	
3	EA	6"	Pipe hanger	
2	EA	6"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

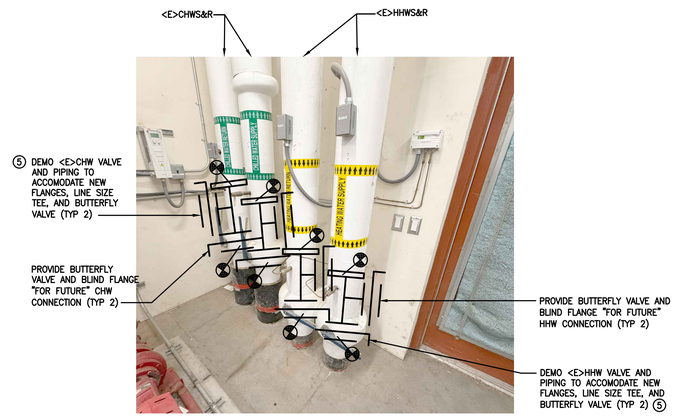
3 BUILDING 2700 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

BUILDING 2700 HHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
3	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	4"	Balancing Valve	
2	EA	4"	Blind Flange	
1	EA	1/4"	Air Vent	
0	EA	1/4"	Test Plugs	
0	EA	1/4"	Temperature Indicator	
20	LF	4"	Insulation	
20	LF	4"	Jacketing	
20	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
4	EA	4"	Flange, Bolts & Gasket Kit	
2	EA	4"X4"X4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	4"	Cal-Silicate Inserts	
3	EA	4"	Pipe hanger	
2	EA	4"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
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3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

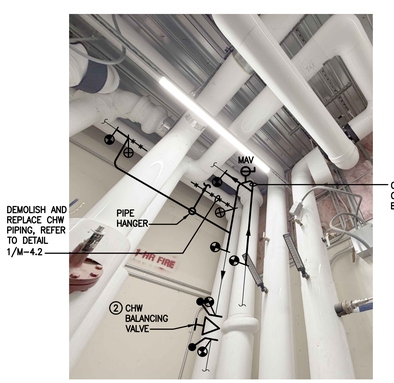
4 BUILDING 2700 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC



5 BUILDING 2700 INTERIOR HHW & CHW RISER UPGRADE
SCHEMATIC

REFERENCE SHEET NOTES

1. NOT USED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE HYDRONIC RETURN PIPING OF THE PRIMARY LOOP.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAILS 6&7/M-4.2 & 3/M-5.6.
4. NOT USED.
5. AT BUILDING INTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH ISOLATION VALVES AT THE CAMPUS HYDRONIC LOOP SIDE AND AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR FUTURE SERVICES). SEE DETAIL 5/M-4.2.
6. PROVIDE LINE SIZE TEES WITH ISOLATION VALVE(S) FOR TEMP SERVICES AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A POINT OF CONNECTION FOR TEMPORARY EQUIPMENT. REFER TO DETAIL 8/M-4.2 FOR CHW. REFER TO DETAIL 9/M-4.2 FOR HHW (BID ALT. #1 – ADDITIVE).
7. PROVIDE BLIND FLANGE AND CONNECT TO ISOLATION VALVE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED.
8. NOT USED.
9. PROVIDE AIR VENT AT HIGH POINT OF HYDRONIC SUPPLY AND RETURN PIPING (HHW & CHW) WITHIN THE MECHANICAL ROOM.
10. NOT USED.
11. NOT USED.
12. NOT USED.
13. NOT USED.
14. NOT USED.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. NOT USED.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.



NOTE:

SEE 1/M-4.2 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

6 BUILDING 2700 MECHANICAL ROOM CHW CROSS-OVER BRIDGE
SCALE: N.T.S.



NOTE:

SEE 2/M-4.2 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

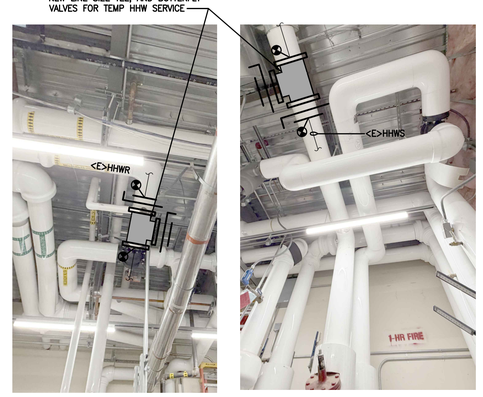
7 BUILDING 2700 MECHANICAL ROOM HHW CROSS-OVER BRIDGE
SCALE: N.T.S.



NOTE:

SEE 1/M-4.2 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

8 BUILDING 2700 MECHANICAL ROOM CHW TEMP. EQUIPMENT CONNECTION
SCALE: N.T.S.



NOTE:

SEE 2/M-4.2 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

9 BUILDING 2700 MECHANICAL ROOM HHW TEMP. EQUIPMENT CONNECTION
SCALE: N.T.S.

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305 South 11th Street
San Jose, California 95112-2218
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WWW.SALASOBRIEN.COM
National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEET
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

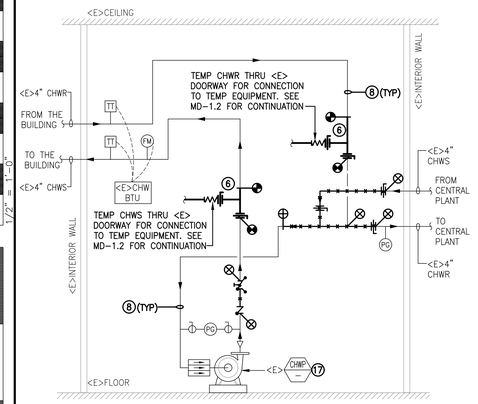
BUILDING 2700 MECHANICAL ROOM ZONE #1: CHW & HHW

SCALE:	AS NOTED
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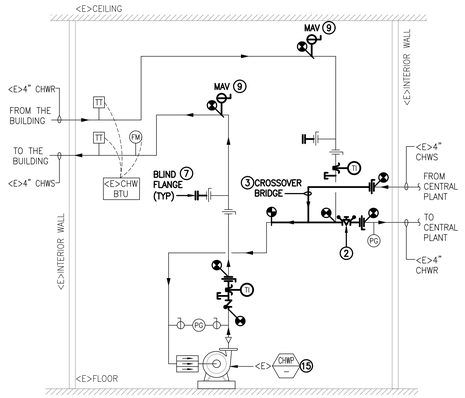
M-4.2

SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.

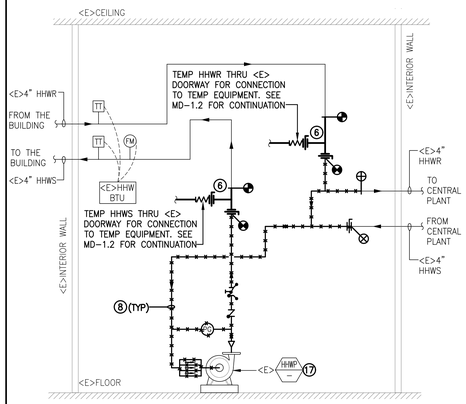


DEMO

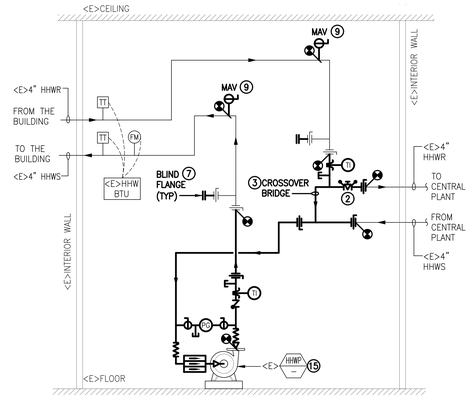


NEW

1 BUILDING 1200 MECHANICAL ROOM - ZONE 2 CHW UPGRADES
SCHEMATIC



DEMO



NEW

2 BUILDING 1200 MECHANICAL ROOM - ZONE 2 HHW UPGRADES
SCHEMATIC

REFERENCE SHEET NOTES

1. NOT USED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE HYDRONIC RETURN PIPING OF THE PRIMARY LOOP.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAIL 3/M-5.6.
4. NOT USED.
5. AT BUILDING EXTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH AN ISOLATION VALVE AT THE CAMPUS HYDRONIC LOOP SIDE OF THE TEE AND ADD ANOTHER ISOLATION VALVE AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR TEMPORARY SERVICES). SEE DETAIL 5/M-4.3.
6. PROVIDE LINE SIZE TEES WITH ISOLATION VALVE(S) FOR TEMP SERVICES AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A POINT OF CONNECTION FOR TEMPORARY EQUIPMENT. REFER TO DETAIL 7/M-4.3 FOR CHW. REFER TO DETAIL 6/M-4.3 FOR HHW (BID ALT. #5 – ADDITIVE).
7. PROVIDE BLIND FLANGE AND CONNECT TO ISOLATION VALVE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED.
8. DEMO ALL INSULATION AND JACKETING AT ISOLATED HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. DETERMINE IF FURTHER DEFERRED MAINTENANCE AND/OR REPLACEMENTS ARE NECESSARY. CONTRACTOR TO PROVIDE PCO IF ADDITIONAL DEFERRED MAINTENANCE IS REQUIRED BEYOND WHAT IS INDICATED HEREIN.
9. PROVIDE AIR VENT AT HIGH POINT OF HYDRONIC SUPPLY AND RETURN PIPING (HHW & CHW) WITHIN THE MECHANICAL ROOM.
10. NOT USED.
11. NOT USED.
12. NOT USED.
13. NOT USED.
14. NOT USED.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. NOT USED.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.

BUILDING 1200 CHW BILL OF MATERIAL

Quantity	Unit	NPS	Component Description	Notes
8	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling
1	EA	4"	Balancing Valve	
0	EA	1/4"	Ball Valve	
2	EA	1/2"	Air Vent	
1	EA	4"	Check Valve	
2	EA	4"	Blind Flange	
2	EA	1/2"	Temperature Indicator	
30	LF	4"	Insulation	
30	LF	4"	Jacketing	
10	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
6	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	4"x4"x4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling
5	EA	4"	Cal-Silicate Inserts	
3	EA	4"	Pipe hanger	
2	EA	4"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS). CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
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5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

3 BUILDING 1200 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

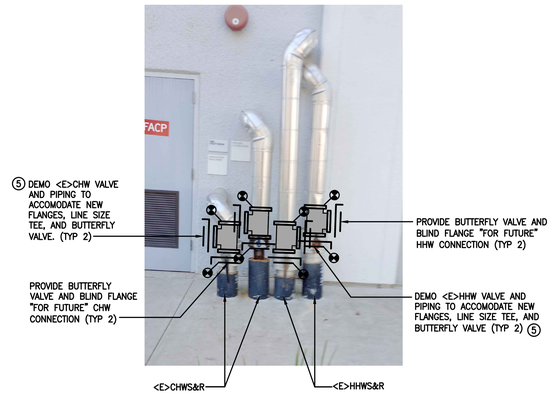
BUILDING 1200 HHW BILL OF MATERIAL

Quantity	Unit	NPS	Component Description	Notes
6	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	4"	Balancing Valve	
1	EA	4"	Check Valve	
2	EA	1/4"	Ball Valve	
2	EA	1/2"	Air Vent	
0	EA	4"	Triple Duty Valve	
2	EA	4"	Blind Flange	
30	LF	4"	Insulation	
30	LF	4"	Jacketing	
20	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
6	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	4"x4"x4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	4"	Cal-Silicate Inserts	
3	EA	4"	Pipe hanger	
2	EA	4"	Pipe Stanchion	

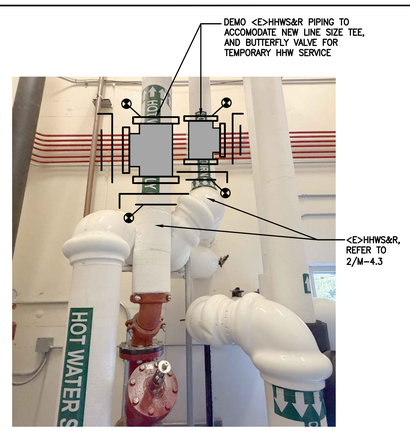
NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS). CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

4 BUILDING 1200 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC



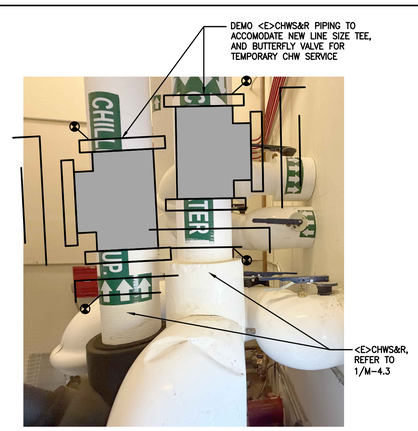
5 BUILDING 1200 EXTERIOR HHW & CHW RISER UPGRADE
SCHEMATIC



NOTE:

SEE 2/M-4.3 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

6 BUILDING 1200 MECHANICAL ROOM HHW TEMP. EQUIPMENT CONNECTION
SCHEMATIC



NOTE:

SEE 1/M-4.3 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

7 BUILDING 1200 MECHANICAL ROOM CHW TEMP EQUIPMENT CONNECTION
SCHEMATIC

Salas O'Brien
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305 South 11th Street
San Jose, California 95112-2218
877.725.2755 | 877.925.1477 (f)
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National **Strength.** Local **Action.**

REGISTERED PROFESSIONAL ENGINEER — ERIN EMMETT SPRIGG — No. M40066 EXP. 09-30-2026 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

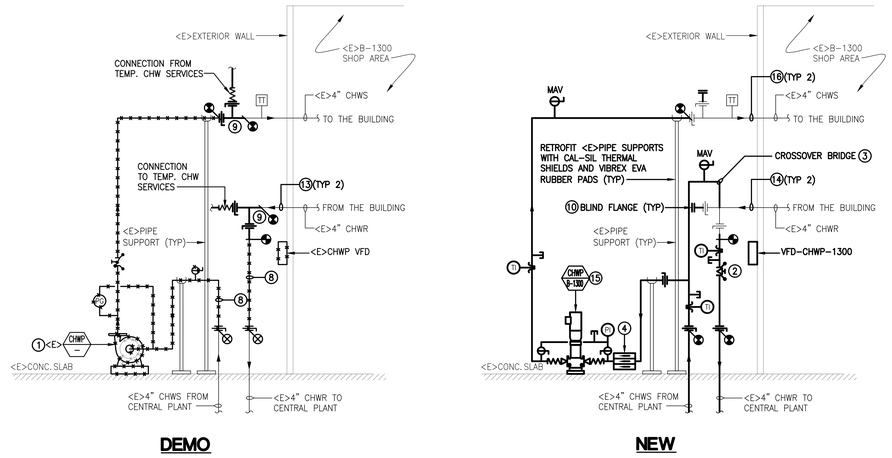
SHEET TITLE

BUILDING 1200 MECHANICAL ROOM ZONE #2: CHW & HHW

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

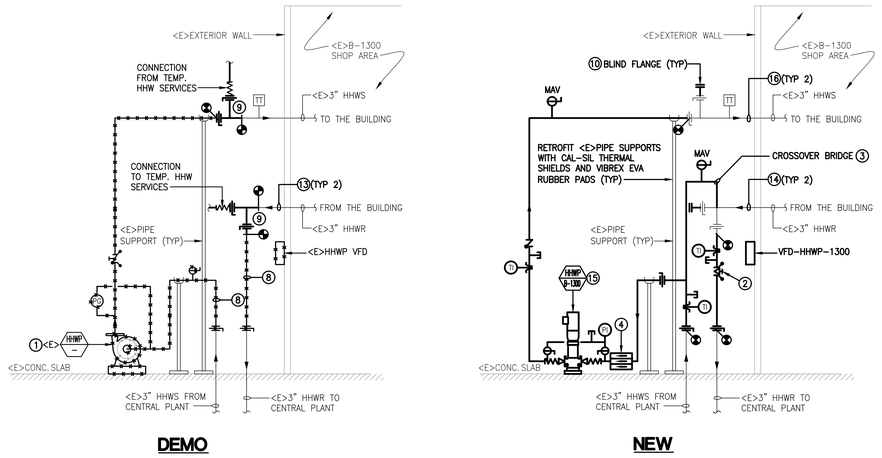
M-4.3
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



DEMO **NEW**

1 BUILDING 1300 MECHANICAL ROOM - ZONE 2 CHW UPGRADES
SCHEMATIC



DEMO **NEW**

2 BUILDING 1300 MECHANICAL ROOM - ZONE 2 HHW UPGRADES
SCHEMATIC

BUILDING 1300 CHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
7	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	4"	Balancing Valve	
2	EA	1/4"	Ball Valve	
1	EA	4"	Check Valve	
0	EA	1/4"	Test Plugs	
1	EA	1/4"	Pressure Indicator	
3	EA	1/4"	Temperature Indicator	
30	LF	4"	Insulation	
30	LF	4"	Jacketing	
30	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
4	EA	4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
2	EA	4"x4"x4"	Sch. 40 Steel (ASTM A53, Grade B) tee	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
6	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	4"x4"x4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
3	EA	4"	Cal-Silicate Inserts	
0	EA	4"	Pipe hanger	
3	EA	4"	Pipe Stanchion	
1	EA	4"	CHWP	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

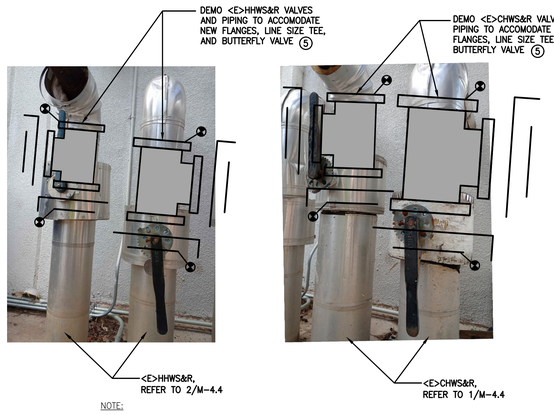
3 BUILDING 1300 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

BUILDING 1300 HHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
7	EA	3"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	3"	Balancing Valve	
1	EA	3"	Check Valve	
2	EA	1/4"	Ball Valve	
0	EA	1/4"	Test Plugs	
1	EA	1/4"	Pressure Indicator	
3	EA	1/4"	Temperature Indicator	
30	LF	3"	Insulation	
30	LF	3"	Jacketing	
30	LF	3"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
4	EA	3"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
1	EA	3"x3"x3"	Sch. 40 Steel (ASTM A53, Grade B) tee	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
6	EA	3"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	3"x3"x3"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
3	EA	3"	Cal-Silicate Inserts	
0	EA	3"	Pipe hanger	
3	EA	3"	Pipe Stanchion	
1	EA	3"	HHW pump	

NOTES:

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5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

4 BUILDING 1300 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC



NOTE:

SEE 1&2/M-4.4 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW & HHW HYDRONIC SYSTEM.

5 BUILDING 1300 EXTERIOR HHW & CHW RISER UPGRADE
SCHEMATIC

REFERENCE SHEET NOTES

1. DEMO EXISTING HYDRONIC PUMP INCLUDING ANCHORS, PUMP BASE, POWER TO VFD OR MOTOR STARTER, PUMP VFD (SEE M-6.1), AND SPECIALTIES AS INDICATED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE HYDRONIC RETURN PIPING OF THE PRIMARY LOOP.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAIL 3/M-5.6.
4. PROVIDE SUCTION DIFFUSER AT PUMP, REFER TO M-6.1 FOR SIZING.
5. AT BUILDING EXTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH AN ISOLATION VALVE AT THE CAMPUS HYDRONIC LOOP SIDE OF THE TEE AND ADD ANOTHER ISOLATION VALVE AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR TEMPORARY SERVICES). SEE DETAIL 5/M-4.4.
6. NOT USED.
7. NOT USED.
8. DEMO ALL INSULATION AND JACKETING AT ISOLATED HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. DETERMINE IF FURTHER DEFERRED MAINTENANCE AND/OR REPLACEMENTS ARE NECESSARY.
9. PROVIDE LINE SIZE TEES WITH ISOLATION VALVE(S) FOR TEMP SERVICES AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A POINT OF CONNECTION FOR TEMPORARY EQUIPMENT. (BID ALT. #5 – ADDITIVE FOR HHW).
10. PROVIDE BLIND FLANGE AND CONNECT TO ISOLATION VALVE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED.
11. NOT USED.
12. NOT USED.
13. REPLACE EXISTING RUSTED/DEGRADED HYDRONIC PIPING WITHIN MECHANICAL ROOM. PIPING TO BE RETAINED SHALL BE WIRE BRUSHED CLEAN FROM ANY MINOR SURFACE RUST.
14. PRIME AND PAINT ALL HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. PROVIDE INSULATION, VAPOR BARRIER (FOR CHW), PVC JACKETING, AND PIPE ID MARKERS.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. CAULK AND SEAL ALL PENETRATIONS THROUGH WALLS AND CEILINGS. FIRE-RATED ASSEMBLIES SHALL BE CAULKED AND SEALED WITH FIRE STOP CAULK. REFER TO DETAIL 2/M-5.7. PROVIDE ESCUTCHEON PLATES AT ALL PENETRATIONS. REFER TO DETAIL 6/M-5.6.
17. NOT USED.

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San Jose, California 95112-2218
877.725.2755 | 877.925.1477 (f)
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National **Strength.** Local **Action.**

REGISTERED PROFESSIONAL ENGINEER — ERIN EMMETT SWEET — No. M40086 EXP. 09-30-2026 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

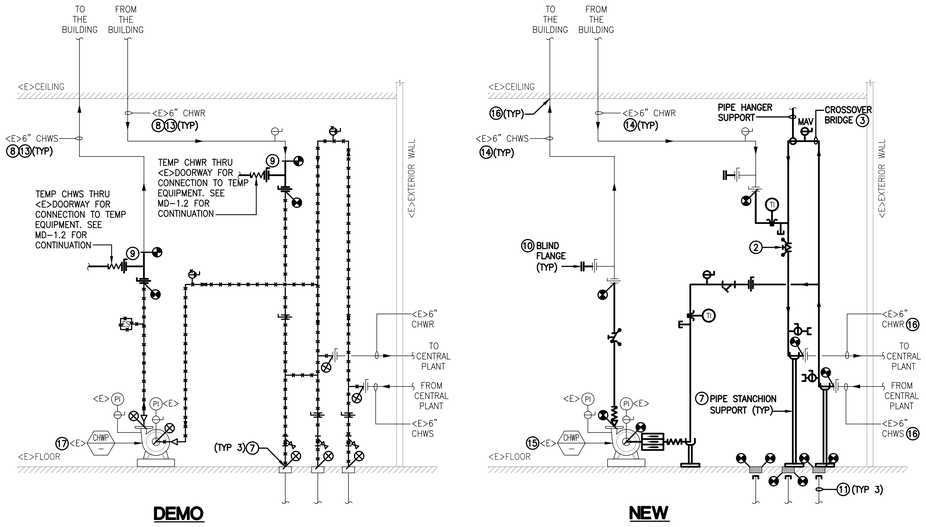
SHEET TITLE

BUILDING 1300 MECHANICAL ROOM ZONE #2: CHW & HHW

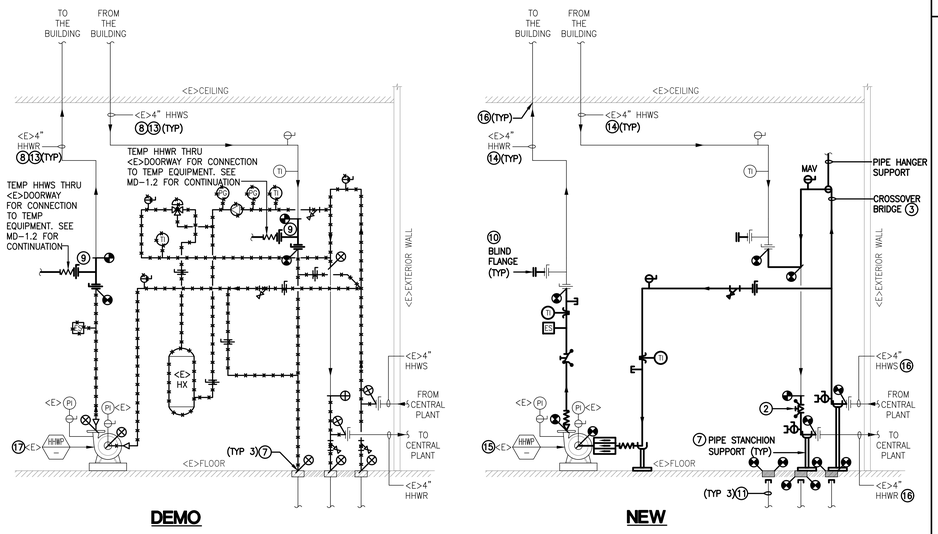
SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-4.4
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 BUILDING 1400 MECHANICAL ROOM - ZONE 2 CHW UPGRADES
SCHEMATIC



2 BUILDING 1400 MECHANICAL ROOM - ZONE 2 HHW UPGRADES
SCHEMATIC

BUILDING 1400 CHW BILL OF MATERIAL

Quantity	Unit	NPS	Component Description	Notes
5	EA	6"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling
1	EA	6"	Balancing Valve	
2	EA	6"	Blind Flange	
1	EA	6"	Triple Duty Valve	
0	EA	1/4"	Test Plugs	
2	EA	1/4"	Temperature Indicator	
0	EA	1/4"	Pressure Indicator	
40	LF	6"	Insulation	
40	LF	6"	Jacketing	
20	LF	6"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
5	EA	6"	Sch. 40 Steel (ASTM A53, Grade B) 90° Elbow	
2		6"x6"x6"	Sch. 40 Steel (ASTM A53, Grade B) Tee	
8	EA	6"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	6"x6"x6"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling
6	EA	6"	Cal-Silicate Inserts	
3	EA	6"	Pipe hanger	
3	EA	6"	Pipe Stanchion	

NOTES:

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3 BUILDING 1400 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

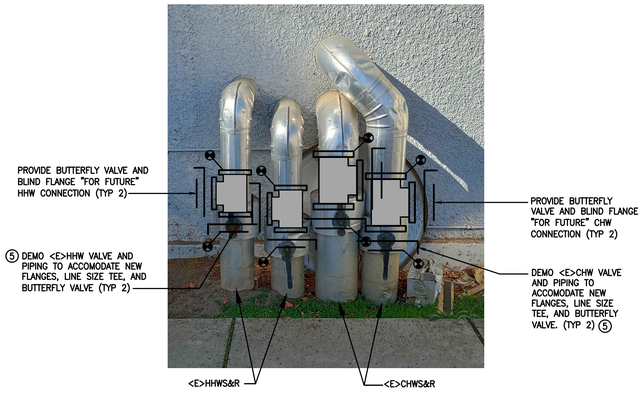
BUILDING 1400 HHW BILL OF MATERIAL

Quantity	Unit	NPS	Component Description	Notes
4	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	4"	Balancing Valve	
2	EA	4"	Blind Flange	
1	EA	4"	Triple Duty Valve	
0	EA	1/4"	Test Plugs	
0	EA	1/4"	Pressure Gauges	
2	EA	1/4"	Temperature Indicator	
40	LF	4"	Insulation	
40	LF	4"	Jacketing	
40	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
3	EA	4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
1	EA	4"X4"X4"	Sch. 40 Steel (ASTM A53, Grade B)Tee	
0	LF	1/4"	Copper piping	
6	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
1	EA	4"X4"X4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
6	EA	4"	Cal-Silicate Inserts	
3	EA	4"	Pipe hanger	
3	EA	4"	Pipe Stanchion	

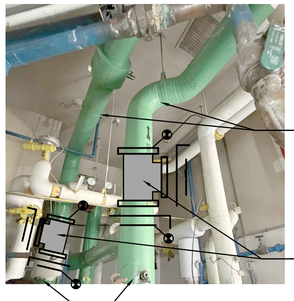
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5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

4 BUILDING 1400 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC



5 BUILDING 1400 EXTERIOR HHW & CHW RISER UPGRADE
SCHEMATIC



NOTE:

SEE 1/M-4.5 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

6 BUILDING 1400 MECHANICAL ROOM CHW TEMP EQUIPMENT CONNECTION
SCHEMATIC

REFERENCE SHEET NOTES

1. NOT USED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE HYDRONIC RETURN PIPING OF THE PRIMARY LOOP.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAIL 3/M-5.6.
4. NOT USED.
5. AT BUILDING EXTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH AN ISOLATION VALVE AT THE CAMPUS HYDRONIC LOOP SIDE OF THE TEE AND ADD ANOTHER ISOLATION VALVE AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR TEMPORARY SERVICES). SEE DETAIL 5/M-4.5.
6. NOT USED.
7. DEMO <E> RISER PIPE TO FLOOR, FINISHING FLUSH TO <E> FINISHED FLOOR SURFACE. PLUG AND FILL WITH GROUT. EXISTING DOMESTIC WATER PIPING SHALL BE CAPPED AND ABANDONED IN PLACE. PROVIDE PIPE SUPPORTS IN-KIND PER DETAIL 30/S-5.2.
8. DEMO ALL INSULATION AND JACKETING AT ISOLATED HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. DETERMINE IF FURTHER DEFERRED MAINTENANCE AND/OR REPLACEMENTS ARE NECESSARY.
9. PROVIDE LINE SIZE TEES WITH ISOLATION VALVE(S) FOR TEMP SERVICES AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A POINT OF CONNECTION FOR TEMPORARY EQUIPMENT. REFER TO DETAIL 6/M-4.5 FOR CHW. (BID ALT. #5 - ADDITIVE FOR HHW).
10. PROVIDE BLIND FLANGE AND CONNECT TO ISOLATION VALVE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED.
11. PLUG THE INNER DIAMETER OF THE ABANDONED PIPES, FILL ANCHOR HOLES AND OPENINGS WITH GROUT AND FINISH FLUSH TO MATCH EXISTING CONCRETE SLAB.
12. NOT USED.
13. REPLACE EXISTING RUSTED/DEGRADED HYDRONIC PIPING WITHIN MECHANICAL ROOM. PIPING TO BE RETAINED SHALL BE WIRE BRUSHED CLEAN FROM ANY MINOR SURFACE RUST.
14. PRIME AND PAINT ALL HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. PROVIDE INSULATION, VAPOR BARRIER (FOR CHW), PVC JACKETING, AND PIPE ID MARKERS.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. CAULK AND SEAL ALL PENETRATIONS THROUGH WALLS AND CEILINGS. FIRE-RATED ASSEMBLIES SHALL BE CAULKED AND SEALED WITH FIRE STOP CAULK. REFER TO DETAIL 2/M-5.7. PROVIDE ESCUTCHEON PLATES AT ALL PENETRATIONS. REFER TO DETAIL 6/M-5.6.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.

Salas O'Brien
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National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT GREEN
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

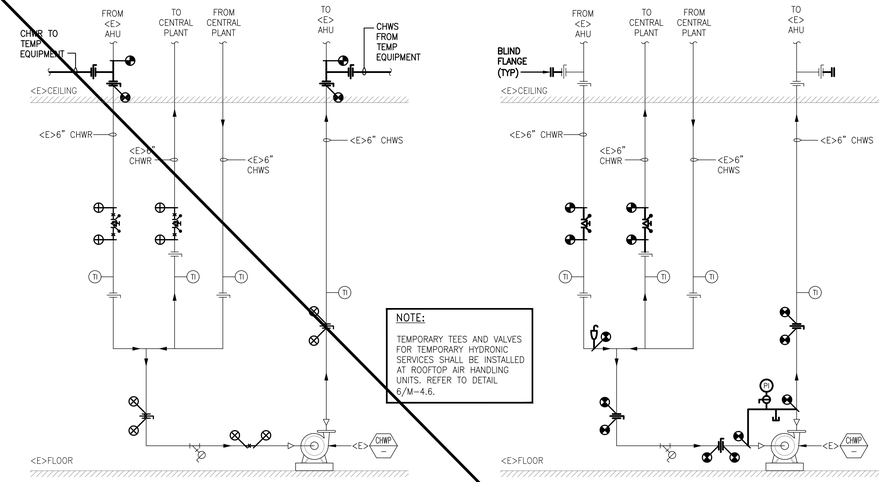
SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE
BUILDING 1400 MECHANICAL ROOM ZONE #2: CHW & HHW

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

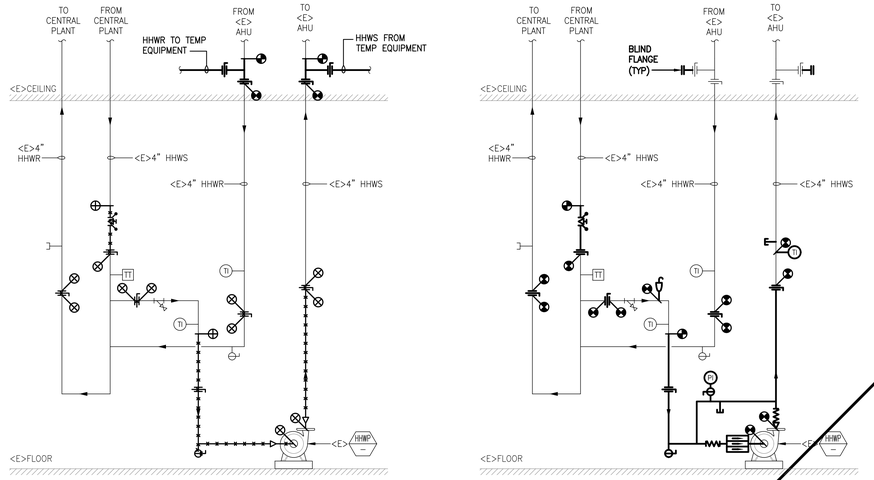
M-4.5
SHEET OF -

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



DEMO **NEW**

1 BUILDING 700 MECHANICAL ROOM - ZONE 3 CHW UPGRADES (BID ALTERNATE #6 - ADDITIVE)
SCHEMATIC



DEMO **NEW**

2 BUILDING 700 MECHANICAL ROOM - ZONE 3 HHW UPGRADES (BID ALTERNATE #6 - ADDITIVE)
SCHEMATIC

BUILDING 700 CHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
6	EA	6"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
2	EA	6"	Balancing Valve	
2	EA	1/4"	Ball Valve	
2	EA	6"	Blind Flange	
1	EA	1/4"	Air Vent	
2	EA	1/4"	Test Plugs	
1	EA	1/4"	Pressure Gauges	
18	LF	6"	Insulation	
18	LF	6"	Jacketing	
10	LF	6"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
5	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
8	EA	6"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	6"x6"x6"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	6"	Cal-Silicate Inserts	
3	EA	6"	Pipe hanger	
2	EA	6"	Pipe Stanchion	

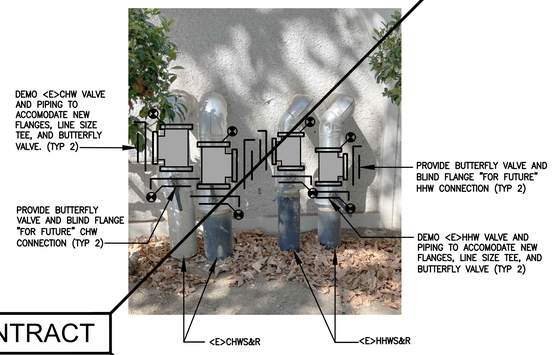
NOTES:
1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS). CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

3 BUILDING 700 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

BUILDING 700 HHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
8	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	4"	Balancing Valve	
2	EA	1/4"	Ball Valve	
2	EA	4"	Blind Flange	
1	EA	1/4"	Air Vent	
1	EA	1/4"	Test Plugs	
1	EA	1/4"	Pressure Gauges	
1	EA	1/4"	Temperature Indicator	
30	LF	4"	Insulation	
30	LF	4"	Jacketing	
10	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
5	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
8	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	4"x4"x4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	4"	Cal-Silicate Inserts	
3	EA	4"	Pipe hanger	
2	EA	4"	Pipe Stanchion	

NOTES:
1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS). CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

4 BUILDING 700 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC



NOT IN CONTRACT

5 BUILDING 700 EXTERIOR HHW & CHW RISER UPGRADE
SCHEMATIC

REFERENCE SHEET NOTES

1. NOT USED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE PRIMARY HYDRONIC LOOP SIDE OF THE CROSSOVER BRIDGE.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAIL _____.
4. PROVIDE SUCTION DIFFUSER AT PUMP, REFER TO M-6.1 FOR SIZING.
5. AT BUILDING EXTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH AN ISOLATION VALVE AT THE CAMPUS HYDRONIC LOOP SIDE OF THE TEE AND ADD ANOTHER ISOLATION VALVE AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR TEMPORARY SERVICES). SEE DETAIL 5/M-4.6.
6. INSTALL LINE SIZE TEES WITH (2) ISOLATION VALVES FOR TEMP SERVICES (TYP 2) AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A CONNECTION FOR TEMPORARY EQUIPMENT.
7. INSTALL BLIND FLANGE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED TO SEAL THE CONNECTIONS.
8. DEMO ALL INSULATION AND JACKETING AT ISOLATED HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. DETERMINE IF FURTHER DEFERRED MAINTENANCE AND/OR REPLACEMENTS ARE NECESSARY. CONTRACTOR TO PROVIDE PCO IF ADDITIONAL DEFERRED MAINTENANCE IS REQUIRED BEYOND WHAT IS INDICATED HEREIN.
9. PROVIDE AIR VENT AT HIGH POINT OF HYDRONIC SUPPLY AND RETURN PIPING (HHW & CHW) WITHIN THE MECHANICAL ROOM.
10. DISASSEMBLE PUMP FROM PUMP BASE, RETAIN AND PROTECT PUMP IMPELLAR, SHAFT, MOTOR, ETC. DURING CONSTRUCTION ACTIVIES. DEMO PUMP BASE AND ANCHORS. PROVIDE NEW PUMP BASE AND ANCHORS AND REINSTALL PUMP TO PUMP BASE. ANCHOR TO PAD AND FILL PUMP BASE PER MFG'S REQUIREMENTS.
11. NOT USED.
12. NOT USED.
13. REPLACE EXISTING RUSTED/DEGRADED HYDRONIC PIPING WITHIN MECHANICAL ROOM. PIPING TO BE RETAINED SHALL BE WIRE BRUSHED CLEAN FROM ANY MINOR SURFACE RUST.
14. PRIME AND PAINT ALL HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. PROVIDE INSULATION, VAPOR BARRIER (FOR CHW), PVC JACKETING, AND PIPE ID MARKERS.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. CAULK AND SEAL ALL PENETRATIONS THROUGH WALLS AND CEILINGS. FIRE-RATED ASSEMBLIES SHALL BE CAULKED AND SEALED WITH FIRE STOP CAULK. PROVIDE ESCUTCHEON PLATES AT ALL PENETRATIONS.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.

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SOLANO COMMUNITY COLLEGE DISTRICT

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HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
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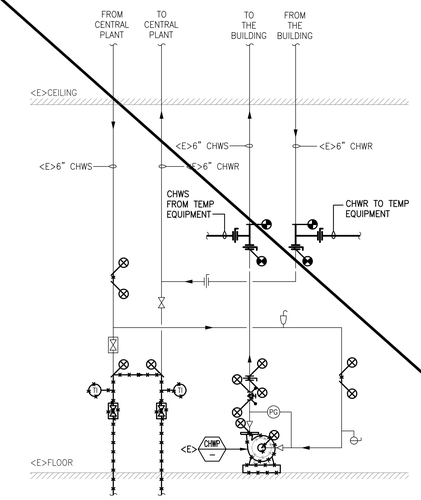
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DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE
BUILDING 700 MECHANICAL ROOM ZONE #3: CHW & HHW (NOT IN CONTRACT)

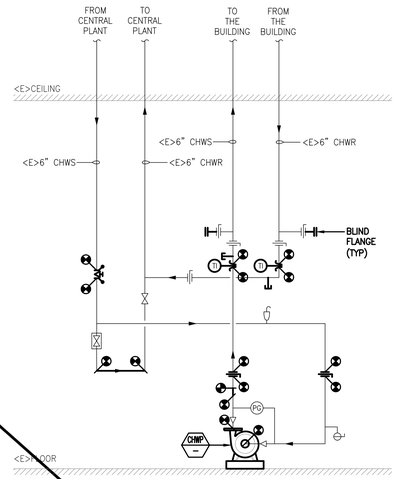
SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-4.6
SHEET OF –

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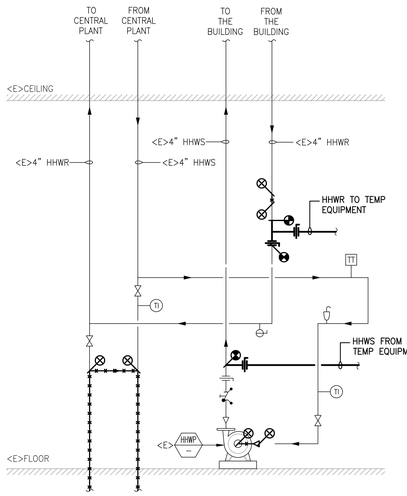
DEMO



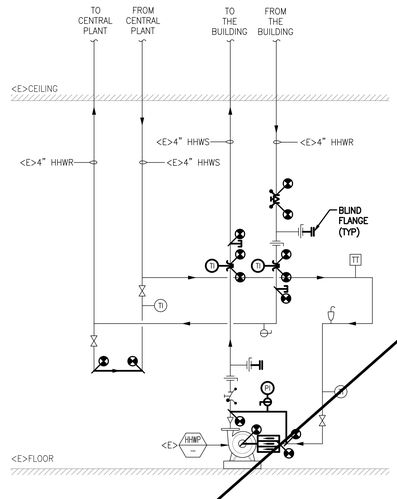
NEW

1 BUILDING 800 MECHANICAL ROOM - ZONE 3 CHW UPGRADES (BID ALTERNATE #6 - ADDITIVE)

SCHEMATIC



DEMO



NEW

2 BUILDING 800 MECHANICAL ROOM - ZONE 3 HHW UPGRADES (BID ALTERNATE #6 - ADDITIVE)

SCHEMATIC

REFERENCE SHEET NOTES

1. DEMO EXISTING HYDRONIC PUMP INCLUDING ANCHORS, PUMP BASE, POWER TO VFD OR MOTOR STARTER, PUMP VFD (SEE M-6.1), AND SPECIALTIES AS INDICATED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE PRIMARY HYDRONIC LOOP SIDE OF THE CROSSOVER BRIDGE.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAIL _____.
4. PROVIDE SUCTION DIFFUSER AT PUMP, REFER TO M-6.1 FOR SIZING.
5. AT BUILDING EXTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH AN ISOLATION VALVE AT THE CAMPUS HYDRONIC LOOP SIDE OF THE TEE AND ADD ANOTHER ISOLATION VALVE AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR TEMPORARY SERVICES). SEE DETAIL 5/M-4.7.
6. NOT USED.
7. DEMO EXISTING ABANDONED HYDRONIC RISERS. PROVIDE PIPE SUPPORTS IN KIND PER DETAIL _____.
8. DEMO ALL INSULATION AND JACKETING AT ISOLATED HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. DETERMINE IF FURTHER DEFERRED MAINTENANCE AND/OR REPLACEMENTS ARE NECESSARY. CONTRACTOR TO PROVIDE PCO IF ADDITIONAL DEFERRED MAINTENANCE IS REQUIRED BEYOND WHAT IS INDICATED HEREIN.
9. INSTALL LINE SIZE TEES WITH (2) ISOLATION VALVES FOR TEMP SERVICES (TYP 2) AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A CONNECTION FOR TEMPORARY EQUIPMENT.
10. INSTALL BLIND FLANGE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED TO SEAL THE CONNECTIONS.
11. NOT USED.
12. REPLACE PIPE AND FITTINGS AT DHW MANIFOLD ABOVE THE CHW PUMP AT B-800.
13. REPLACE EXISTING RUSTED/DEGRADED HYDRONIC PIPING WITHIN MECHANICAL ROOM. PIPING TO BE RETAINED SHALL BE WIRE BRUSHED CLEAN FROM ANY MINOR SURFACE RUST.
14. PRIME AND PAINT ALL HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. PROVIDE INSULATION, VAPOR BARRIER (FOR CHW), PVC JACKETING, AND PIPE ID MARKERS.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. CAULK AND SEAL ALL PENETRATIONS THROUGH WALLS AND CEILINGS. FIRE-RATED ASSEMBLIES SHALL BE CAULKED AND SEALED WITH FIRE STOP CAULK. PROVIDE ESCUTCHEON PLATES AT ALL PENETRATIONS.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.

BUILDING 800 CHW BILL OF MATERIAL

Quantity	Unit	NPS	Component Description	Notes
6	EA	6"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	6"	Balancing Valve	
2	EA	6"	Blind Flange	
2	EA	1/4"	Test Plugs	
2	EA	1/4"	Temperature Indicator	
10	LF	6"	Insulation	
10	LF	6"	Jacketing	
10	LF	6"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	6"	Sch. 40 Steel (ASTM A53, Grade B) 90° Elbow	
6	EA	6"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	6"x6"x6"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
6	EA	6"	Cal-Silicate Inserts	
3	EA	6"	Pipe hanger	
3	EA	6"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS). CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

3 BUILDING 800 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL

SCHEMATIC

BUILDING 800 HHW BILL OF MATERIAL

Quantity	Unit	NPS	Component Description	Notes
4	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	4"	Balancing Valve	
2	EA	1/4"	Ball Valve	
2	EA	4"	Blind Flange	
2	EA	1/4"	Test Plugs	
1	EA	1/4"	Pressure Gauges	
2	EA	1/4"	Temperature Indicator	
20	LF	4"	Insulation	
20	LF	4"	Jacketing	
10	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
5	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
4	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	4"X4"X4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
6	EA	4"	Cal-Silicate Inserts	
3	EA	4"	Pipe hanger	
3	EA	4"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS). CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
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3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

4 BUILDING 800 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL

SCHEMATIC

NOT IN CONTRACT



5 BUILDING 800 EXTERIOR HHW & CHW RISER UPGRADE

SCHEMATIC

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National **Strength.**
Local **Action.**

REGISTERED PROFESSIONAL ENGINEER — ERIN ERNESTY SPRING — No. M40086 EXP. 09-30-2026 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE

MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

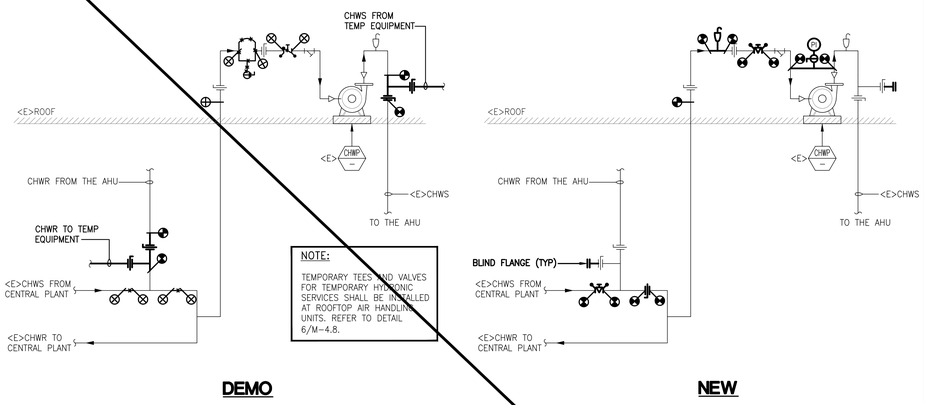
SHEET TITLE

BUILDING 800 MECHANICAL ROOM ZONE #3: CHW & HHW (NOT IN CONTRACT)

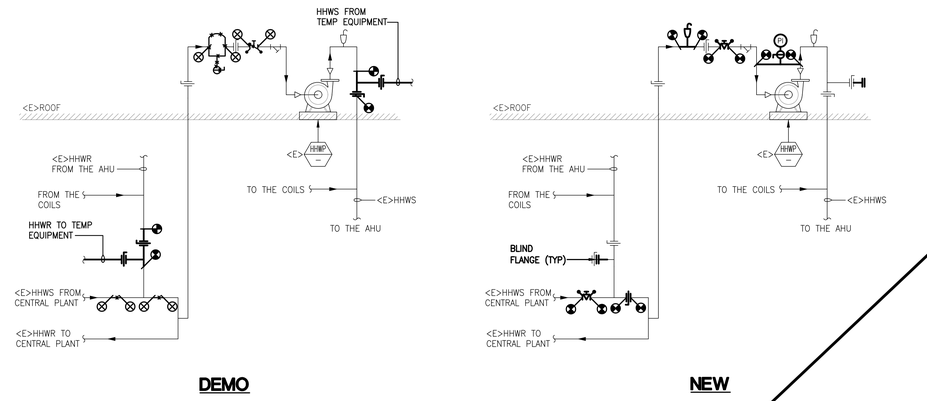
SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-4.7
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 BUILDING 900 MECHANICAL ROOM - ZONE 3 CHW UPGRADES (BID ALTERNATE #6 - ADDITIVE)
SCHEMATIC



2 BUILDING 900 MECHANICAL ROOM - ZONE 3 HHW UPGRADES (BID ALTERNATE #6 - ADDITIVE)
SCHEMATIC

NOT IN CONTRACT

BUILDING 900 CHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
5	EA	3"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	3"	Balancing Valve	
2	EA	1/4"	Ball Valve	
2	EA	3"	Blind Flange	
3	EA	1/4"	Test Plugs	
1	EA	1/4"	Air Vent	
1	EA	1/4"	Pressure Gauges	
2	EA	1/4"	Temperature Indicator	
10	LF	3"	Insulation	
10	LF	3"	Jacketing	
10	LF	3"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
5	EA	3"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	3"x3"x3"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	3"	Cal-Silicate Inserts	
3	EA	3"	Pipe hanger	
2	EA	3"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

3 BUILDING 900 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

BUILDING 900 HHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
5	EA	2-1/2"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	2-1/2"	Balancing Valve	
2	EA	1/4"	Ball Valve	
2	EA	2-1/2"	Blind Flange	
3	EA	1/4"	Test Plugs	
1	EA	1/4"	Air Vent	
1	EA	1/4"	Pressure Gauges	
2	EA	1/4"	Temperature Indicator	
10	LF	2-1/2"	Insulation	
10	LF	2-1/2"	Jacketing	
10	LF	2-1/2"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
6	EA	2-1/2"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	2.5"x2.5"x2.5"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	2-1/2"	Cal-Silicate Inserts	
3	EA	2-1/2"	Pipe hanger	
2	EA	2-1/2"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

4 BUILDING 900 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC

(#) REFERENCE SHEET NOTES

1. NOT USED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE PRIMARY HYDRONIC LOOP SIDE OF THE CROSSOVER BRIDGE.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAIL _____.
4. INSTALL LINE SIZE TEES WITH (2) ISOLATION VALVES FOR TEMP SERVICES (TYP 2) AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A CONNECTION FOR TEMPORARY EQUIPMENT.
5. INSTALL BLIND FLANGE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED TO SEAL THE CONNECTIONS.
6. DEMO EXISTING DISSIMILAR METAL CONNECTIONS. PROVIDE DIELECTRIC FITTING TO INSULATE DISSIMILAR METAL CONNECTIONS AND PROTECT FROM GALVANIC CORROSION.
7. NOT USED.
8. NOT USED.
9. PROVIDE AIR VENT AT HIGH POINT OF HYDRONIC SUPPLY AND RETURN PIPING (HHW & CHW) WITHIN THE MECHANICAL ROOM.
10. NOT USED.
11. CLEAN STRAINER UPSTREAM OF THE PUMP AND PROVIDE BLOWDOWN VALVE AND HOSE FITTING AT STRAINER DRAIN PORT.
12. NOT USED.
13. REPLACE EXISTING RUSTED/DEGRADED HYDRONIC PIPING WITHIN MECHANICAL ROOM. PIPING TO BE RETAINED SHALL BE WIRE BRUSHED CLEAN FROM ANY MINOR SURFACE RUST.
14. PRIME AND PAINT ALL HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. PROVIDE INSULATION, VAPOR BARRIER (FOR CHW), PVC JACKETING, AND PIPE ID MARKERS.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. CAULK AND SEAL ALL PENETRATIONS THROUGH WALLS AND CEILINGS. FIRE-RATED ASSEMBLIES SHALL BE CAULKED AND SEALED WITH FIRE STOP CAULK. PROVIDE ESCUTCHEON PLATES AT ALL PENETRATIONS.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.

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National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEET
No. M40066
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

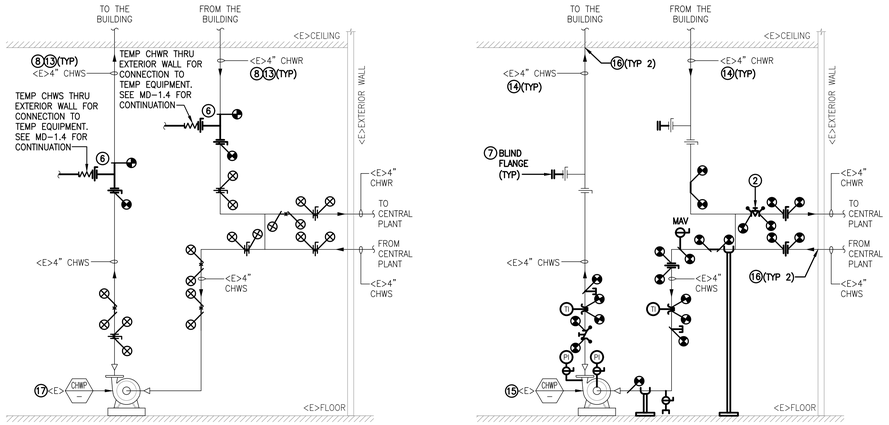
SHEET TITLE

BUILDING 900 MECHANICAL ROOM ZONE #3: CHW & HHW (NOT IN CONTRACT)

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-4.8
SHEET OF –

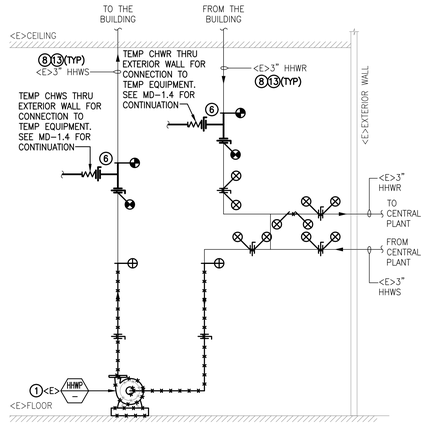
THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



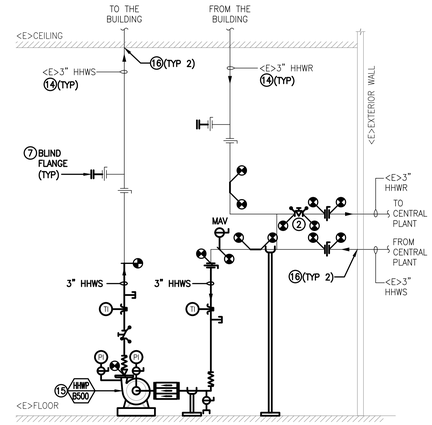
DEMO

NEW

1 BUILDING 500 MECHANICAL ROOM - ZONE 4 CHW UPGRADES
SCHEMATIC



DEMO



NEW

2 BUILDING 500 MECHANICAL ROOM - ZONE 4 HHW UPGRADES
SCHEMATIC

REFERENCE SHEET NOTES

1. DEMO AND REPLACE HYDRONIC PUMP INCLUDING ANCHORS, PUMP BASE, POWER TO VFD OR MOTOR STARTER, AND SPECIALTIES AS INDICATED. REFER TO BUILDING HYYDRONIC PUMP SCHEDULE ON M-6.1.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE HYDRONIC RETURN PIPING OF THE PRIMARY LOOP.
3. NOT USED.
4. NOT USED.
5. AT BUILDING EXTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH AN ISOLATION VALVE AT THE CAMPUS HYDRONIC LOOP SIDE OF THE TEE AND ADD ANOTHER ISOLATION VALVE AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR TEMPORARY SERVICES). SEE DETAIL 5/M-4.9.
6. PROVIDE LINE SIZE TEES WITH ISOLATION VALVE(S) FOR TEMP SERVICES AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A POINT OF CONNECTION FOR TEMPORARY EQUIPMENT. REFER TO DETAIL 10/M-4.9 FOR CHW (BID ALT. #7 - ADDITIVE). REFER TO DETAIL 9/M-4.9 FOR HHW.
7. PROVIDE BLIND FLANGE AND CONNECT TO ISOLATION VALVE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED.
8. DEMO ALL INSULATION AND JACKETING AT ISOLATED HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. DETERMINE IF FURTHER DEFERRED MAINTENANCE AND/OR REPLACEMENTS ARE NECESSARY.
9. NOT USED.
10. NOT USED.
11. NOT USED.
12. NOT USED.
13. REPLACE EXISTING RUSTED/DEGRADED HYDRONIC PIPING WITHIN MECHANICAL ROOM. PIPING TO BE RETAINED SHALL BE WIRE BRUSHED CLEAN FROM ANY MINOR SURFACE RUST.
14. PRIME AND PAINT ALL HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. PROVIDE INSULATION, VAPOR BARRIER (FOR CHW), PVC JACKETING, AND PIPE ID MARKERS.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. CAULK AND SEAL ALL PENETRATIONS THROUGH WALLS AND CEILINGS. FIRE-RATED ASSEMBLIES SHALL BE CAULKED AND SEALED WITH FIRE STOP CAULK. REFER TO DETAIL 2/M-5.7. PROVIDE ESCUTCHEON PLATES AT ALL PENETRATIONS. REFER TO DETAIL 6/M-5.6.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.

BUILDING 500 CHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
2	EA	3"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
2	EA	1/4"	Ball Valve	
1	EA	4"	Balancing Valve	
1	EA	3"	Air Vent	
2	EA	4"	Blind Flange	
1	EA	4"	Triple Duty Valve	
0	EA	1/4"	Test Plugs	
2	EA	1/4"	Pressure Indicator	
2	EA	1/4"	Temperature Indicator	
30	LF	4"	Insulation	
30	LF	4"	Jacketing	
10	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
4	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	3"	Flange, Bolts & Gasket Kit, ANSI 150	
1	EA	4"x4"x4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	3"x4"x3"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
5	EA	4"	Cal-Silicate Inserts	
3	EA	4"	Pipe hanger	
2	EA	4"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
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3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

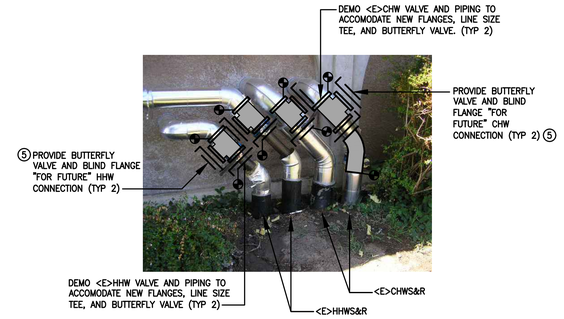
3 BUILDING 500 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

BUILDING 500 HHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
7	EA	3"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling
1	EA	3"	Balancing Valve	
2	EA	1/4"	Ball Valve	
2	EA	3"	Blind Flange	
1	EA	3"	Triple Duty Valve	
1	EA	1/2"	Air vent	
0	EA	1/4"	Test Plugs	
2	EA	1/4"	Pressure Indicator	
2	EA	1/4"	Temperature Indicator	
30	LF	3"	Insulation	
30	LF	3"	Jacketing	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
30	LF	3"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
3	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
6	EA	3"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	3"x3"x3"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling
5	EA	3"	Cal-Silicate Inserts	
3	EA	3"	Pipe hanger	
2	EA	3"	Pipe Stanchion	

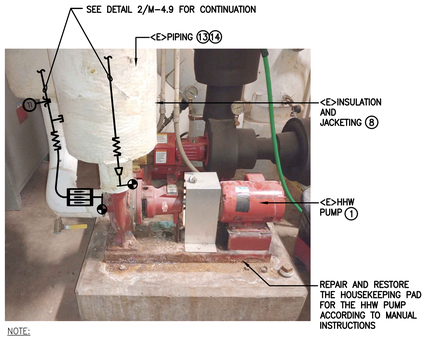
NOTES:

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3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

4 BUILDING 500 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC



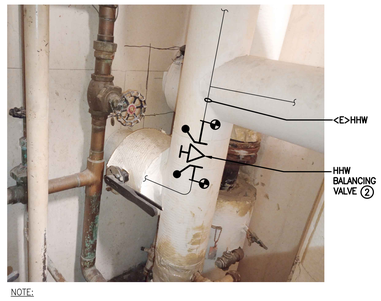
5 BUILDING 500 EXTERIOR HHW & CHW RISER UPGRADE
SCHEMATIC



NOTE:

SEE 2/M-4.9 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

6 BUILDING 500 MECHANICAL ROOM HHW PUMP REPLACEMENT
SCHEMATIC



NOTE:

SEE 2/M-4.9 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

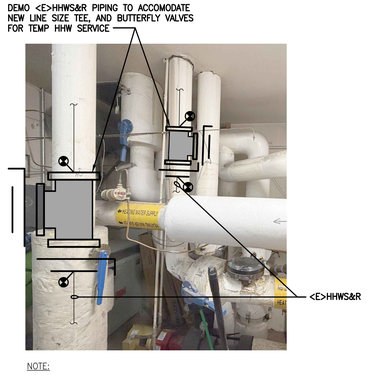
7 BUILDING 500 MECHANICAL ROOM HHW CROSS-OVER BRIDGE
SCHEMATIC



NOTE:

SEE 1/M-4.9 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

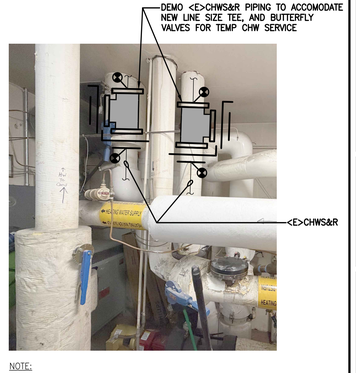
8 BUILDING 500 MECHANICAL ROOM CHW CROSS-OVER BRIDGE
SCHEMATIC



NOTE:

SEE 2/M-4.9 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

9 BUILDING 500 MECHANICAL ROOM HHW TEMP. EQUIPMENT CONNECTION
SCHEMATIC



NOTE:

SEE 1/M-4.9 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

10 BUILDING 500 MECHANICAL ROOM CHW TEMP. EQUIPMENT CONNECTION
SCHEMATIC

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305 South 11th Street
San Jose, California 95112-2218
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WWW.SALASOBRIEN.COM
National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SPRING
No. M40066
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

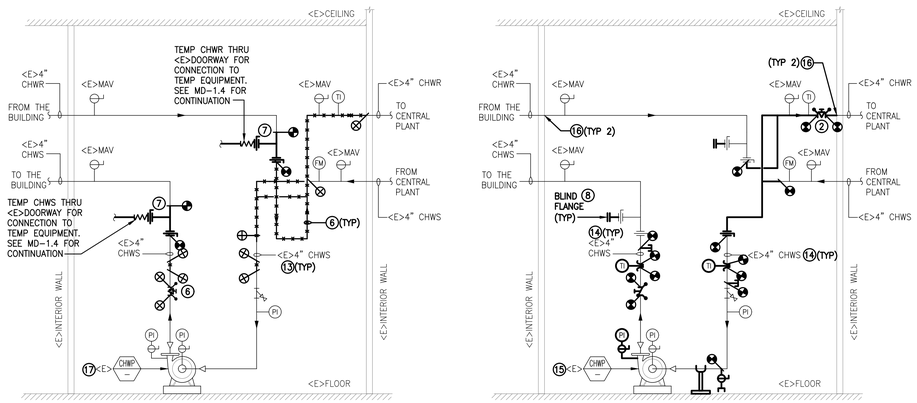
SHEET TITLE

BUILDING 500 MECHANICAL ROOM ZONE #4: CHW & HHW

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-4.9
SHEET OF –

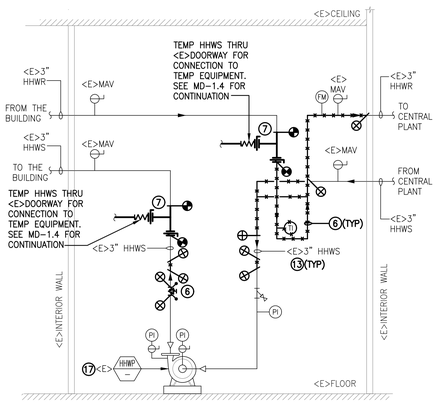
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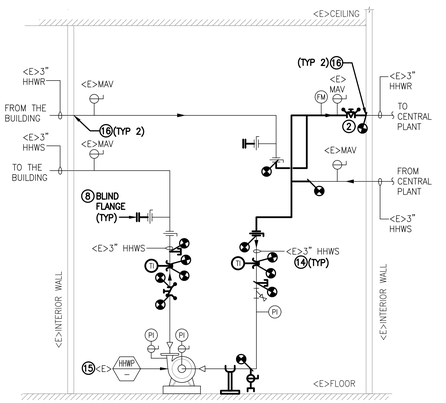
DEMO

NEW

1 BUILDING 600 MECHANICAL ROOM - ZONE 4 CHW UPGRADES
SCHEMATIC



DEMO



NEW

2 BUILDING 600 MECHANICAL ROOM - ZONE 4 HHW UPGRADES
SCHEMATIC

REFERENCE SHEET NOTES

1. NOT USED.
2. DEMO SECTION OF PIPING AND PROVIDE NEW BALANCING VALVE AT THE HYDRONIC RETURN PIPING OF THE PRIMARY LOOP.
3. DEMO SECTION OF SUPPLY AND RETURN PIPING FOR THE INSTALL OF PRIMARY/SECONDARY CROSSOVER BRIDGE. PROVIDE LINE SIZE TEES AND PIPING TO COMPLETE THE CROSSOVER BRIDGE. REFER TO DETAILS 6&7/M-4.10 & 3/M-5.6.
4. NOT USED.
5. AT BUILDING EXTERIOR RISERS, DEMOLISH EXISTING ISOLATION VALVE AND PROVIDE LINE SIZED TEE WITH AN ISOLATION VALVE AT THE CAMPUS HYDRONIC LOOP SIDE OF THE TEE AND ADD ANOTHER ISOLATION VALVE AT THE BRANCH PORT OF THE TEE. PROVIDE BLIND FLANGE AT BRANCH PORT (FOR TEMPORARY SERVICES). SEE DETAIL 5/M-4.10.
6. DEMO EXISTING DISSIMILAR METAL CONNECTIONS. PROVIDE DIELECTRIC FITTING TO INSULATE DISSIMILAR METAL CONNECTIONS AND PROTECT FROM GALVANIC CORROSION.
7. PROVIDE LINE SIZE TEES WITH ISOLATION VALVE(S) FOR TEMP SERVICES AT THE BEGINNING OF THE "DEMO" PHASE TO PROVIDE A POINT OF CONNECTION FOR TEMPORARY EQUIPMENT. REFER TO DETAIL 9/M-4.10 FOR CHW (BID ALT. #7 – ADDITIVE). REFER TO DETAIL 8/M-4.10 FOR HHW.
8. PROVIDE BLIND FLANGE AND CONNECT TO ISOLATION VALVE AT THE BRANCH PORTION OF THE TEES AFTER "NEW" PHASE IS COMPLETE AND TEMPORARY SERVICES ARE DISCONNECTED.
9. NOT USED.
10. NOT USED.
11. NOT USED.
12. NOT USED.
13. REPLACE EXISTING RUSTED/DEGRADED HYDRONIC PIPING WITHIN MECHANICAL ROOM. PIPING TO BE RETAINED SHALL BE WIRE BRUSHED CLEAN FROM ANY MINOR SURFACE RUST.
14. PRIME AND PAINT ALL HYDRONIC PIPING WITHIN THE MECHANICAL ROOM. PROVIDE INSULATION, VAPOR BARRIER (FOR CHW), PVC JACKETING, AND PIPE ID MARKERS.
15. PROVIDE POST-CONSTRUCTION TAB OF HYDRONIC PUMP(S), REFER TO HYDRONIC PUMP SCHEDULE ON M-6.1 FOR PUMP FLOW (GPM) AND PRESSURE (TDH) DESIGN PARAMETERS.
16. CAULK AND SEAL ALL PENETRATIONS THROUGH WALLS AND CEILINGS. FIRE-RATED ASSEMBLIES SHALL BE CAULKED AND SEALED WITH FIRE STOP CAULK. REFER TO DETAIL 2/M-5.7. PROVIDE ESCUTCHEON PLATES AT ALL PENETRATIONS. REFER TO DETAIL 6/M-5.6.
17. PROVIDE MAINTENANCE AT HYDRONIC PUMP(S). INSPECT PUMP FOR LEAKS, VIBRATION, AND IRREGULAR SOUNDS. INSPECT BEARINGS, SEALS, IMPELLER, BUSHINGS, AND SHAFT SLEEVE. RE-GREASE BEARINGS AND VERIFY COUPLINGS, CONNECTIONS, AND PUMP ALIGNMENT. CHECK ALL FASTENERS AND FOUNDATION. REPLACE WORN SEALS/BUSHINGS AS NEEDED.

BUILDING 600 CHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
5	EA	4"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	4"	Balancing Valve	
1	EA	1/4"	Ball Valve	
2	EA	4"	Blind Flange	
1	EA	4"	Triple Duty Valve	
0	EA	1/4"	Test Plugs	
1	EA	1/4"	Pressure Indicator	
2	EA	1/4"	Temperature Indicator	
40	LF	4"	Insulation	
40	LF	4"	Jacketing	
10	LF	4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
2	LF	1/4"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
1	EA	1/4"	Sch. 40 Steel (ASTM A53, Grade B) 90° elbow	
6	EA	4"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	4"X4"X4"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
6	EA	4"	Cal-Silicate Inserts	
4	EA	4"	Pipe hanger	
2	EA	4"	Pipe Stanchion	

NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

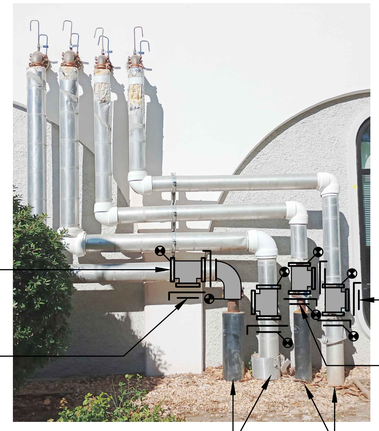
3 BUILDING 600 MECHANICAL ROOM CHW UPGRADE BILL OF MATERIAL
SCHEMATIC

BUILDING 600 HHW BILL OF MATERIAL				
Quantity	Unit	NPS	Component Description	Notes
5	EA	3"	Butterfly Valves	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
1	EA	3"	Balancing Valve	
2	EA	3"	Blind Flange	
1	EA	3"	Triple Duty Valve	
0	EA	1/4"	Test Plugs	
0	EA	1/4"	Pressure Gauges	
2	EA	1/4"	Temperature Indicator	
40	LF	3"	Insulation	
40	LF	3"	Jacketing	
40	LF	3"	Sch. 40 Steel (ASTM A53, Grade B) Piping	
6	EA	3"	Flange, Bolts & Gasket Kit, ANSI 150	
2	EA	3"x3"x3"	Line Size Tee	Priority, Weekend work; Required prior to Bldg. Temporary Heating/Cooling service
6	EA	3"	Cal-Silicate Inserts	
4	EA	3"	Pipe hanger	
2	EA	3"	Pipe Stanchion	

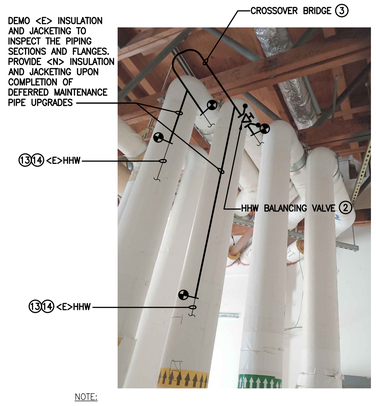
NOTES:

1. BOM IS APPROXIMATE (AND SHALL BE DEEMED THE MIN. NEEDS), CONTRACTOR SHALL FIELD VERIFY AND CONFIRM QUANTITIES ON SITE DURING BID WALK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WELD NECKS, FLANGES, WELD-O-LETS, THERMOWELLS, ETC. THAT ARE DEEMED NECESSARY TO COMPLETE THE INSTALL.
2. THE WORK WITHIN THE MECH. RM. WILL BE DISCOVERY IN NATURE. ONCE INSULATION/JACKETING IS REMOVED, ADDITIONAL COMPONENTS MAY REQUIRE REPLACEMENT BASED ON CONDITION AND PRESENCE OF OXIDATION OR GALVANIC CORROSION.
3. BASE BID SHALL INCLUDE THE QUANTITIES, AS WELL AS ALL LABOR, OVERHEAD AND PROFIT RELATING TO THIS BILL OF MATERIALS.
4. UPON FIELD VERIFICATION AND DISCOVERY EFFORTS, A PCO (AS NEEDED) WILL BE CONSIDERED FOR QUANTITIES OR CAPACITIES ABOVE AND BEYOND THIS BILL OF MATERIALS.
5. REFER TO PROJECT MANUAL FOR EQUIPMENT AND MATERIAL SPECIFICATIONS.

4 BUILDING 600 MECHANICAL ROOM HHW UPGRADE BILL OF MATERIAL
SCHEMATIC



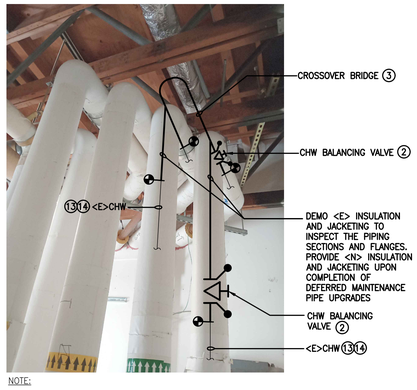
5 BUILDING 600 EXTERIOR HHW & CHW RISER UPGRADE
SCHEMATIC



NOTE:

SEE 2/M-4.10 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

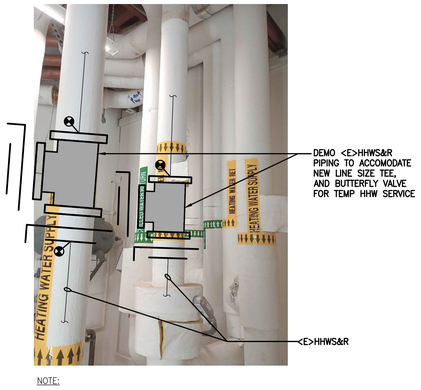
6 BUILDING 600 MECHANICAL ROOM HHW CROSS-OVER BRIDGE
SCHEMATIC



NOTE:

SEE 1/M-4.10 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

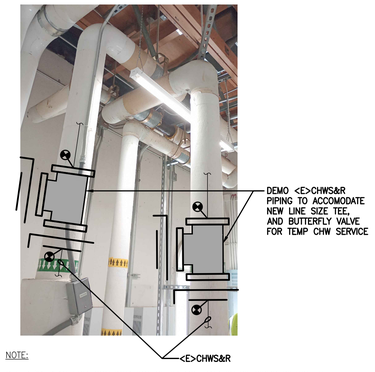
7 BUILDING 600 MECHANICAL ROOM CHW CROSS-OVER BRIDGE
SCHEMATIC



NOTE:

SEE 2/M-4.10 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE HHW HYDRONIC SYSTEM.

8 BUILDING 600 MECHANICAL ROOM HHW TEMP EQUIPMENT CONNECTION
SCHEMATIC



NOTE:

SEE 1/M-4.10 FOR CONTINUATION OF "DEMO" AND "NEW" WORK WITHIN THE MECHANICAL ROOM ON THE CHW HYDRONIC SYSTEM.

9 BUILDING 600 MECHANICAL ROOM CHW TEMP EQUIPMENT CONNECTION
SCHEMATIC

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National Strength. Local Action.

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SHEEN
No. M40066
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

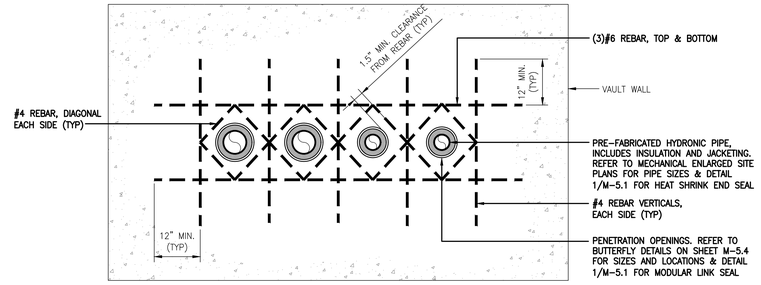
SHEET TITLE

BUILDING 600 MECHANICAL ROOM ZONE #4: CHW & HHW

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-4.10
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



12 TYPICAL VAULT WALL PENETRATION REINFORCEMENT

SCALE: 3/4" = 1' - 0"

MINIMUM CLEARANCE REQUIREMENTS (INCHES)

	PC	SC	G	TEL	TV	LV	W
PRIMARY CONDUIT (OVER 600V) (PC)	–	60	60	60	60	60	60
SECONDARY POWER CONDUIT (SC)	60	–	12	12	12	12	36
GAS (G)	60	12	–	12	12	12	36
TELEPHONE (TEL)	60	12	12	–	2	2	36
CATV (TV)	60	12	12	2	–	2	36
OTHER LOW VOLTAGE (LV)	60	12	12	2	2	–	36
WET UTILITIES (W)	60	36	36	36	36	36	–

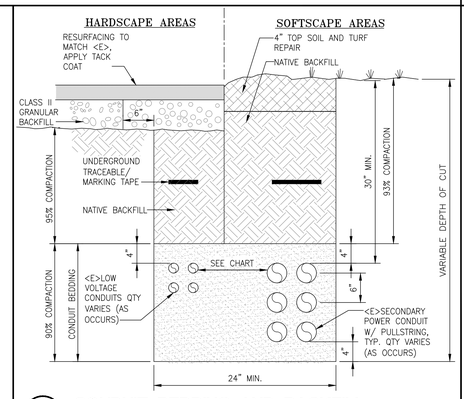
TABLE ONLY APPLIES TO CONDUITS AFTER THE UTILITY POINT OF CONNECTION.

NOTES:

1. UTILITY OWNED AND END-USER CONDUITS AND TRENCH SHALL NOT BE COMBINED.
2. PROVIDE 12" SEPARATION WHEN CROSSING "WET" UTILITIES.

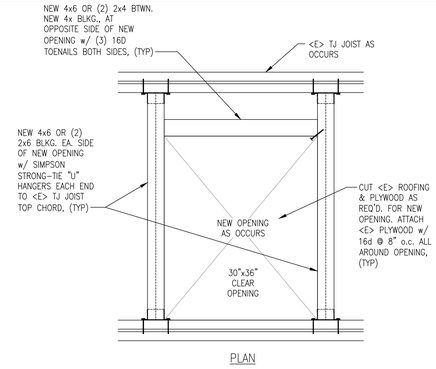
11 UG UTILITY CLEARANCE REQUIREMENTS

SCALE: N.T.S.



10 CONDUIT BEDDING AND BACKFILL

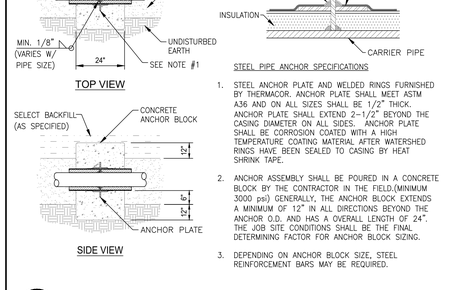
SCALE: N.T.S.



PLAN

6 ROOF HATCH FRAMING DETAIL

SCALE: N.T.S.

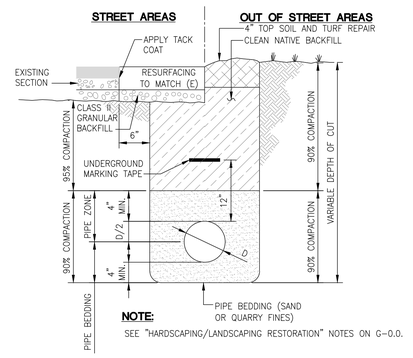


STEEL PIPE ANCHOR SPECIFICATIONS

1. STEEL ANCHOR PLATE AND WELDED RINGS FURNISHED BY THERMACOR. ANCHOR PLATE SHALL MEET ASTM A36 AND ON ALL SIZES SHALL BE 1/2" THICK. ANCHOR PLATE SHALL EXTEND 2-1/2" BEYOND THE CASING DIAMETER ON ALL SIDES. ANCHOR PLATE SHALL BE CORROSION COATED WITH A HIGH TEMPERATURE COATING MATERIAL AFTER WATERSHED RINGS HAVE BEEN SEALED TO CASING BY HEAT SHRINK TAPE.
2. ANCHOR ASSEMBLY SHALL BE POURED IN A CONCRETE BLOCK BY THE CONTRACTOR IN THE FIELD.(MINIMUM 3000 psi) GENERALLY, THE ANCHOR BLOCK EXTENDS A MINIMUM OF 12" IN ALL DIRECTIONS BEYOND THE ANCHOR O.D. AND HAS A OVERALL LENGTH OF 24". THE JOB SITE CONDITIONS SHALL BE THE FINAL DETERMINING FACTOR FOR ANCHOR BLOCK SIZING.
3. DEPENDING ON ANCHOR BLOCK SIZE, STEEL REINFORCEMENT BARS MAY BE REQUIRED.

8 ANCHOR DETAIL

SCALE: N.T.S.



NOTE:

SEE "HARDSCAPING/LANDSCAPING RESTORATION" NOTES ON G-0.0.

4 PIPE BEDDING & BACKFILL

SCALE: N.T.S.

TABLE I:
RECOMMENDED ASPHALT/CONCRETE PAVEMENT SECTIONS

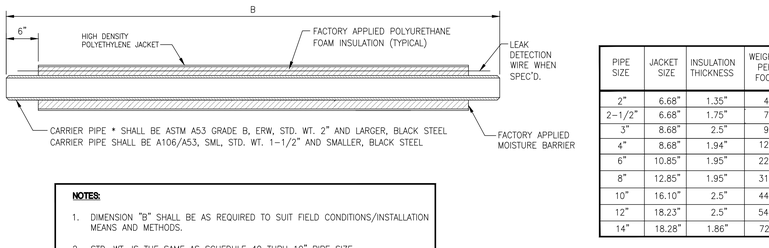
TRAFFIC CONDITION	ASPHALT PAVEMENT (INCHES)	CONCRETE PAVEMENT (INCHES)	CLASS 2 AGGREGATE BASE (INCHES)	TOTAL THICKNESS (INCHES)
PEDESTRIAN/LIGHT TRUCK (T.I. = 4.5)	3.0 –	– 4.0	8.0 6.0	11.0 10.0
FIRE TRUCK TRAFFIC (T.I. = 6.0)	4.0 –	– 5.0	11.0 8.0	15.0 13.0

NOTE:

HOLES RESULTING FROM THE REMOVAL OF UNDERGROUND OBSTRUCTIONS (SUCH AS OLD CONCRETE FOOTINGS, ABANDONED UTILITIES OR TREE ROOT BULBS) THAT EXTEND BELOW THE PLANNED FINISHED GRADE SHALL BE CLEARED OF LOOSE SOIL AND DEBRIS, AND BACKFILLED WITH SUITABLE MATERIAL COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION AS DETERMINED BY ASTM TEST DESIGNATION D1557.

3 TABLE I : ASPHALT/CONCRETE PAVEMENT SECTIONS

SCALE: N.T.S.



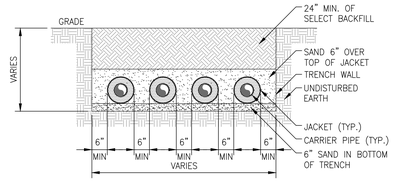
PIPE SIZE	JACKET SIZE	INSULATION THICKNESS	WEIGHT PER FOOT
2"	6.68"	1.35"	4.60
2-1/2"	6.68"	1.75"	7.05
3"	8.68"	2.5"	9.17
4"	8.68"	1.94"	12.45
6"	10.85"	1.95"	22.43
8"	12.85"	1.95"	31.95
10"	16.10"	2.5"	44.13
12"	18.23"	2.5"	54.14
14"	18.28"	1.86"	72.56

NOTES:

1. DIMENSION "B" SHALL BE AS REQUIRED TO SUIT FIELD CONDITIONS/INSTALLATION MEANS AND METHODS.
2. STD. WT. IS THE SAME AS SCHEDULE 40 THRU 10" PIPE SIZE.

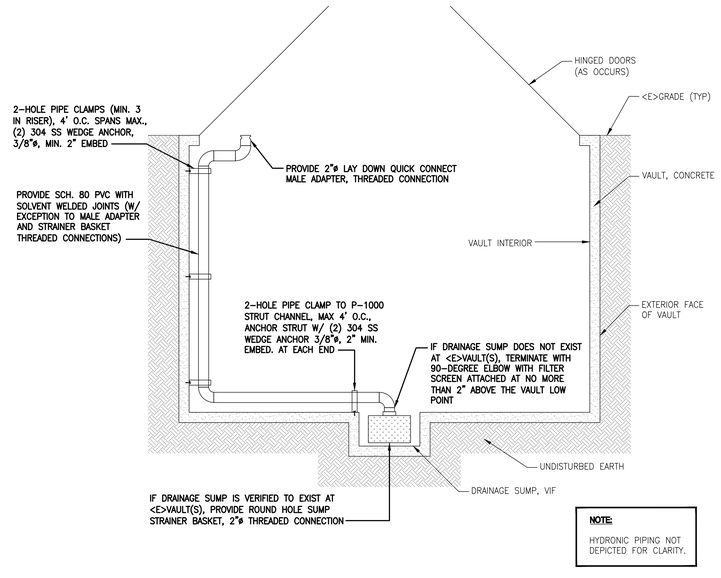
7 TYPICAL PRE-FABRICATED PIPING SECTION

SCALE: N.T.S.



2 TRENCH DETAIL

SCALE: N.T.S.

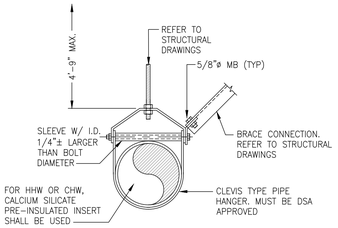


NOTE:

HYDRONIC PIPING NOT DEPICTED FOR CLARITY.

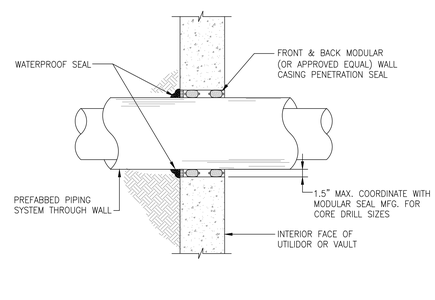
9 VAULT SUMP QUICK CONNECTION (TYP OF 8 NEW VAULTS & 2 <E> VAULTS)

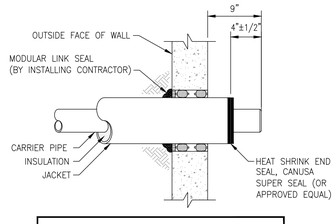
SCALE: N.T.S.



5 TYPICAL CLEVIS HANGER

SCALE: N.T.S.





NOTE:

FOR SYSTEMS WHICH ARE ANCHORED, A MECHANICAL COMPRESSIVE SEAL ASSEMBLY CAN BE UTILIZED FOR WATERPROOFING THE WALL PENETRATION.

1 TYPICAL VAULT WALL PENETRATION DETAIL

SCALE: N.T.S.

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Local **Action.**

REGISTERED PROFESSIONAL ENGINEER
JOHN BARRETT GREEN
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EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL DETAILS

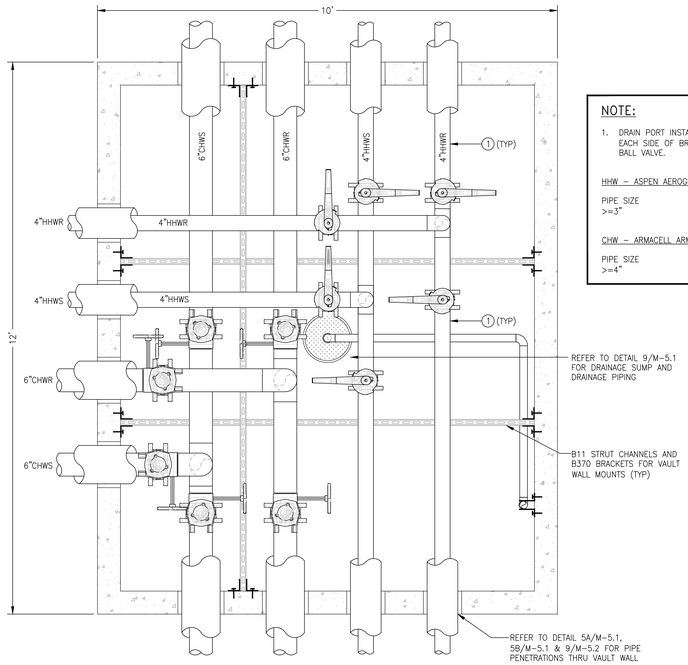
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

M-5.1

SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



NOTE:

1. DRAIN PORT INSTALLED ON HHW AND CHW PIPING ON EACH SIDE OF BRANCH TEE (TYP). 1" DRAIN PIPE AND BALL VALVE.

HHW – ASPEN AEROGEL PYROGEL XTE INSULATION:

PIPE SIZE	THICKNESS
>=3"	1.2"

CHW – ARMACELL ARMAFLEX CLOSED CELL INSULATION:

PIPE SIZE	THICKNESS
>=4"	1.5"

8 TYPICAL VAULT DETAIL

SCALE: 3/4" = 1' - 0"

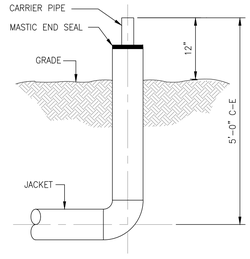


7 TYPICAL HPAV OFFSET REPLACEMENT

SCALE: N.T.S.

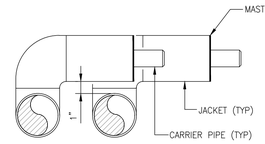
9 NOT USED

SCALE:



6 RISER DETAIL

SCALE: N.T.S.



NOTE:

CROSSOVER PIPING TO HAVE APPROX. 1" CLEARANCE BETWEEN JACKETS.

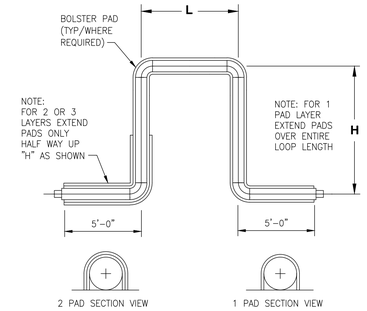
5 CROSSOVER DETAIL

SCALE: N.T.S.

EXPANSION LOOP SCHEDULE

LOOP NO.	SERVICE	JACKET SIZE	TOTAL EXP.	DIMENSIONS H	DIMENSIONS W	BOLSTER LAYERS
3	**6" HWS**	**10.85"**	**1.72"**	**9'-0"**	**6'-6"**	**1**
	6" HWR	10.85"	1.72"	9'-0"	9'-6"	1
<E>4	6" HWS	10.85"	1.39"	9'-0"	6'-6"	1
	6" HWR	10.85"	1.39"	9'-0"	9'-6"	1
<E>5	10" HWS	16.14"	2.27"	13'-0"	6'-6"	2
	10" HWR	16.14"	2.27"	13'-0"	10'-6"	2
<E>6	10" HWS	16.14"	1.98"	11'-0"	5'-6"	1
	10" HWR	16.14"	1.98"	11'-0"	9'-6"	1
<E>6A	4" HWS	8.68"	1.19"	7'-0"	4'-4"	1
	4" HWR	8.68"	1.19"	7'-0"	7'-6"	1
<E>7	8" HWS	14.12"	1.89"	9'-0"	4'-6"	1
	8" HWR	14.12"	1.89"	9'-0"	8'-0"	1
<E>7A	4" HWS	8.68"	2.36"	9'-0"	4'-6"	2
	4" HWR	8.68"	2.36"	9'-0"	8'-0"	2
<E>7B	3" HWS	6.68"	0.86	4'-4"	4'-4"	1
	3" HWR	6.68"	0.86	4'-4"	7'-6"	1
<E>8	6" HWS	10.85"	2.69"	11'-0"	10'-0"	2
	6" HWR	10.85"	2.69"	11'-0"	6'-6"	2
<E>9	8" HWS	14.12"	3.07"	15"-0"	11'-0"	2
	8" HWR	14.12"	3.07"	15"-0"	7'-6"	2
<E>10	6" HWS	10.85"	1.66"	9'-0"	9'-6"	1
	6" HWR	10.85"	1.66"	9'-0"	6'-6"	1
<E>11	6" HWS	10.85"	1.36"	9'-0"	9'-6"	1
	6" HWR	10.85"	1.36"	9'-0"	6'-6"	1
<E>12	4" HWS	8.68"	0.89"	5'-0"	7'-6"	1
	4" HWR	8.68"	0.89"	5'-0"	4'-4"	1
<E>13	4" HWS	8.68"	1.17"	7'-0"	7'-6"	1
	4" HWR	8.68"	1.17"	7'-0"	4'-4"	1
<E>14	4" HWS	8.68"	2.17"	9'-0"	7'-6"	2
	4" HWR	8.68"	2.17"	9'-0"	4'-6"	2
<E>15	4" HWS	8.68"	2.17"	7'-0" 12'-0"	8'-0"	2
	4" HWR	8.68"	2.17"	7'-0" 12'-0"	5'-0"	2
<E>16	4" HWS	8.68"	3.70"	11'-0"	8'-6"	2
	4" HWR	8.68"	3.70"	11'-0"	5'-6"	2
<E>17	4" HWS	8.68"	3.54"	12'-0"	10'-0"	2
	4" HWR	8.68"	3.54"	12'-0"	6'-6"	2
18	**4" HWS**	**8.68"**	**0.80"**	**6'-0"**	**4'-4"**	**1**
	4" HWR	**8.68"**	**0.80"**	**6'-0"**	**7'-6"**	**1**
19	**6" HWS**	**10.85"**	**0.62"**	**5'-0"**	**2'-6"**	**1**
	6" HWR	**10.85"**	**0.62"**	**5'-0"**	**2'-6"**	**1**
20	**4" HWS**	**8.68"**	**1.01"**	**5'-4"**	**2'-6"**	**1**
	4" HWR	**8.68"**	**1.01"**	**5'-4"**	**2'-6"**	**1**

SHEET M-1.2 — SHEET M-1.1 — SHEET M-1.4 — SHEET M-1.3 — SHEET M-1.2 — SHEET M-1.4



4 EXPANSION LOOP

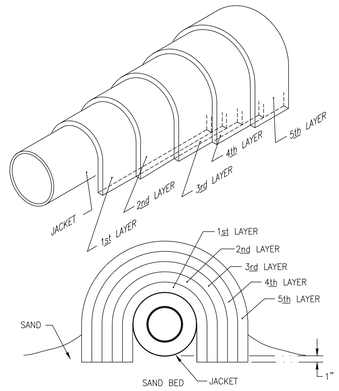
SCALE: N.T.S.

INSTALLATION INSTRUCTIONS: EXPANSION BOLSTERS (HDPE JACKET)

PROCEDURE:

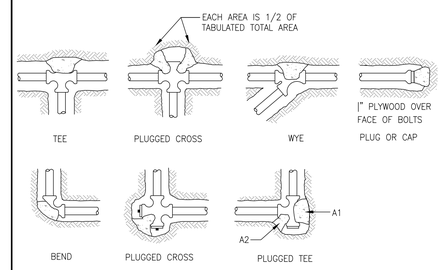
1. EXPANSION BOLSTER MATERIAL IS SUPPLIED IN PRECUT PADS: 41" WIDE x 1" THICK x PRECUT LENGTH.
2. USE APPROPRIATE PADS FOR EACH ELBOW OR EXPANSION LOOP AS PER THE INSTALLATION INSTRUCTIONS PROVIDED BY MFR.
3. WRAP BOLSTER AROUND JACKET HOLDING IT IN PLACE WITH BEDDING SAND. BE CERTAIN THAT THE BOLSTER FITS SNUG AROUND JACKET.
4. BUILD THE PADS TO THE REQUIRED LENGTH AND NUMBER OF LAYERS BY BUTTING PADS IN LONG SEGMENTS AND LAYERING AS REQUIRED BY THE SHOP DRAWINGS.

HDPE JACKET OD (INCHES)	WRAPAROUND DIMENSION PER LAYER (INCHES) FIRST LAYER	SECOND LAYER	THIRD LAYER	FOURTH LAYER	FIFTH LAYER
5.40	17	20	23	27	31
6.68	20	23	27	31	34
8.68	26	30	33	36	39
10.85	32	35	39	42	45
12.85	38	41	44	47	50
14.1	41	45	48	50	53
16.1	46	49	52	55	58
18.2	49	52	55	60	64
20.28	57	60	63	66	70
22.2	61	66	71	77	82
24.38	67	72	77	82	87
28.25	77	82	87	92	97



3 EXPANSION BOLSTER

SCALE: N.T.S.



NOTES:

1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
3. THE REQUIRED THRUST BEARING AREAS FOR SPECIAL CONNECTIONS ARE SHOWN ENCIRCLED ON THE PLANS; e.g. (15) INDICATES 15 SQUARE FEET BEARING AREA REQUIRED.
4. IF NOT SHOWN ON PLANS REQUIRED BEARING AREAS AT FITTING SHALL BE AS INDICATED BELOW, ADJUSTED IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING STRESS(ES) STATED IN THE SPECIAL SPECIFICATIONS.
5. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL.

FITTING SIZE	BEARING AREA OF THRUST BLOCKS IN SQ. FT. TEE, WYE, PLUG, OR CAP	90° BEND PLUGGED CROSS	TEE PLUGGED ON RUN A1	TEE PLUGGED ON RUN A2	45° BEND	22.5° BEND	11.25° BEND
4	1.0	1.4	1.9	1.4	1.0	--	--
6	2.1	3.0	4.3	3.0	1.6	1.0	--
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0
10	5.9	8.4	11.8	8.4	4.6	2.4	1.2
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7
14	11.5	16.3	23.0	16.3	8.9	4.6	2.3
16	15.0	21.3	30.0	21.3	11.6	6.0	3.0
18	19.0	27.0	38.0	27.0	14.6	7.6	3.8
20	23.5	33.3	47.0	33.3	18.1	9.4	4.7
24	34.0	48.0	68.0	48.0	26.2	13.6	6.8

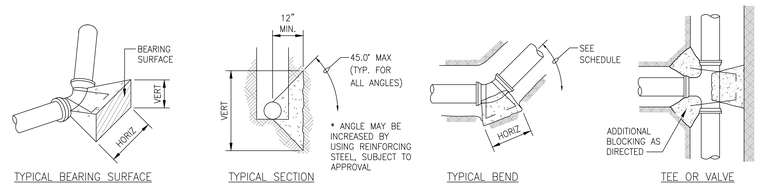
NOTE:

ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 150 P.S.I. AND AN ALLOWABLE SOIL BEARING STRESS OF 2,000 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION: BEARING AREA = (TEST PRESSURE/150) X (2000/SOIL BEARING STRESS) X (TABLE VALUE).

PLUMBING VERSION 2: 2000 PSF 150 PSIG

2 THRUST BLOCK

SCALE: N.T.S.



NOTES:

1. THRUST BLOCK BEARING AREA BASED ON ALLOWABLE SOIL BEARING VALUE OF 1500 psf PRESSURE AND 225 psi LINE PRESSURE WITH 3'-0" COVER MINIMUM. FOR BEARING = 1000 psf, 1.5 X AREA SHOWN
   FOR BEARING = 500 psf, 3.0 X AREA SHOWN
2. ALL THRUST BLOCKS SHALL BE 2,000 PSI CONCRETE AND PLACED AGAINST UNDISTURBED SOIL.
3. STRAPS TO BE #4 REBARS EMBEDDED IN THRUST BLOCK TO A DEPTH EQUAL TO 3/4 OF PIPE DIAMETER. STRAP BEND EQUALS 1/2 PIPE DIAMETER.
4. CONCRETE SHALL NOT EXTEND ONTO FLANGE OR ADJOINING PIPE.
5. JOINTS AND FACE OF PLUGS TO BE KEPT CLEAR OF CONCRETE.
6. WRAP EXPOSED PORTION OF BARS AND 2" INTO CONCRETE WITH HALF LAPPED, 10 MIL PVC TAPE.
7. WHEN CLEARANCES TO OTHER FACILITIES OR UTILITIES DO NOT ALLOW THE USE OF THRUST BLOCK, RESTRAINED PIPE SHALL BE USED.
8. THRUST BLOCKS ON CROSSES SHALL BE USED ONLY WHEN THERE IS A 8-STUB-OUT ON ONE OR MORE SIDES, OR WHEN THERE IS ADJOINING UNRESTRAINED LENGTHS OF VALVES.

MINIMUM SIZE OF THRUST BLOCK BEARING SURFACE

PIPE SIZE	11 1/4° BEND HORIZ.	VERT.	22 1/2° BEND HORIZ.	VERT.	45° BEND HORIZ.	VERT.	90° BEND HORIZ.	VERT.	TEE HORIZ.	VERT.	END CAP HORIZ.	VERT.
4"	1'-6"	0'-9"	1'-6"	0'-9"	1'-6"	1'-0"	2'-3"	1'-3"	1'-6"	1'-0"	1'-6"	1'-6"
6"	2'-6"	1'-0"	2'-6"	1'-0"	3'-6"	1'-6"	4'-6"	2'-3"	4'-0"	2'-0"	2'-6"	1'-9"
8"	3'-0"	1'-6"	3'-0"	1'-6"	4'-3"	2'-3"	5'-6"	3'-0"	5'-0"	2'-6"	3'-9"	2'-0"
10"	3'-9"	1'-9"	3'-9"	1'-9"	5'-0"	2'-9"	7'-0"	3'-6"	5'-6"	3'-3"	4'-6"	2'-6"
12"	4'-3"	2'-3"	4'-3"	2'-3"	5'-6"	3'-6"	8'-3"	4'-0"	7'-0"	3'-6"	5'-3"	3'-0"

PLUMBING VERSION 1: 1500 PSF 225 PSIG

1 THRUST BLOCK

SCALE: N.T.S.

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WWW.SALASOBRIEN.COM
National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER — JOHN BARRETT SWIRE — No. M40086 EXP. 09-30-2026 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	

SHEET TITLE

MECHANICAL DETAILS

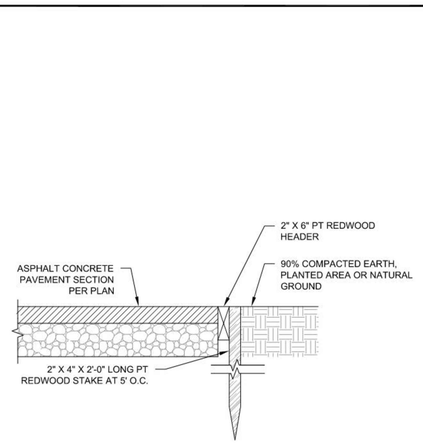
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

M-5.2

SHEET OF –

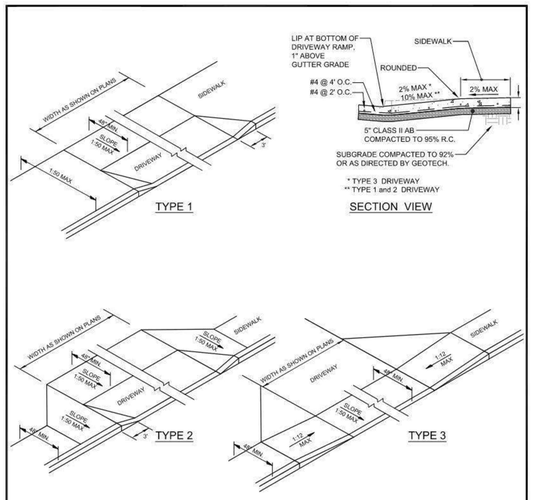
THIS DRAWING IS 30" X 42" AT FULL SIZE, 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



NOTE:
1. REFER TO PROJECT CONSTRUCTION DOCUMENTS FOR ASPHALT PAVEMENT SECTION , SUBGRADE PREPARATION AND OTHER REQUIREMENTS.

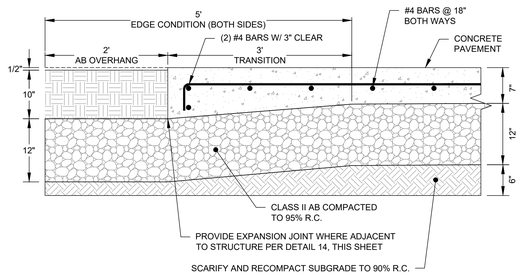
Rev.	Date		SOLANO COMMUNITY COLLEGE DISTRICT	ASPHALT PAVEMENT EDGE DETAIL
CSW ST2 ENGINEERING GROUP		SOLANO COMMUNITY COLLEGE	STANDARD DETAILS	DWG. NO. 135 · January 2014

8 ASPHALT PAVEMENT EDGE
SCALE: N.T.S.



Rev.	Date		SOLANO COMMUNITY COLLEGE DISTRICT	DRIVEWAY APPROACH
CSW ST2 ENGINEERING GROUP		SOLANO COMMUNITY COLLEGE	STANDARD DETAILS	DWG. NO. 125 · January 2014

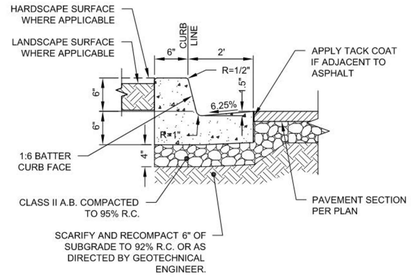
6 DRIVEWAY APPROACH
SCALE: N.T.S.



NOTES:
1. PAVEMENT SECTIONS ARE BASED ON RECOMMENDATIONS FROM THE PROJECT GEOTECHNICAL REPORT.
2. ALL TREAD SURFACES TO BE SLIP RESISTANT, LIGHT BROOM FINISH
3. REFER TO LANDSCAPE PLANS FOR CONCRETE COLOR AND LOCATION OF CONTROL JOINTS, UNLESS OTHERWISE NOTED ON PLANS.
4. CONCRETE COMPRESSIVE STRENGTH TO BE 4500 PSI OR GREATER (FLEXURAL STRENGTH OF 625 PSI OR GREATER)

Rev.	Date		SOLANO COMMUNITY COLLEGE DISTRICT	CONCRETE VEHICULAR PAVEMENT
CSW ST2 ENGINEERING GROUP		SOLANO COMMUNITY COLLEGE	STANDARD DETAILS	DWG. NO. 115 · January 2014

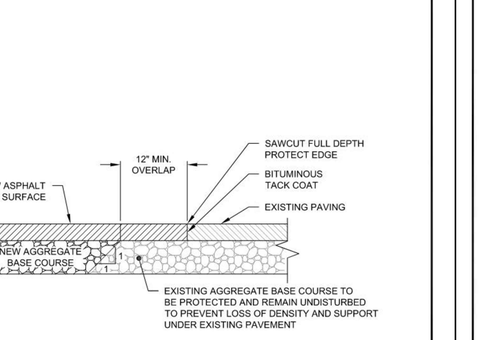
4 CONCRETE VEHICULAR PAVEMENT
SCALE: N.T.S.



NOTES:
1. WHERE CONCRETE WALK IS ADJACENT TO CURB, PROVIDE ISOLATION JOINT BETWEEN WALK AND BACK OF CURB.
2. CONTROL JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 10' INTERVALS O.C. - ALL SIDES EXCEPT BOTTOM.
3. WHERE WALK IS ADJACENT TO CURB, THE JOINTS SHALL ALIGN WITH THE JOINTS IN THE CURB.

Rev.	Date		SOLANO COMMUNITY COLLEGE DISTRICT	CONCRETE CURB AND GUTTER
CSW ST2 ENGINEERING GROUP		SOLANO COMMUNITY COLLEGE	STANDARD DETAILS	DWG. NO. 105 · January 2014

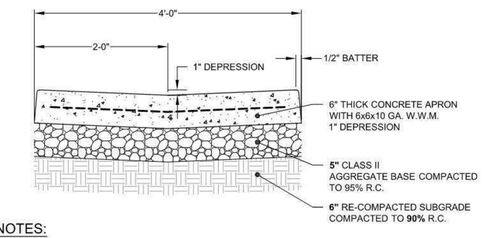
2 CONCRETE CURB AND GUTTER
SCALE: N.T.S.



NOTE:
1. REFER TO PROJECT CONSTRUCTION DOCUMENTS FOR ASPHALT PAVEMENT SECTION , SUBGRADE PREPARATION AND OTHER REQUIREMENTS.

Rev.	Date		SOLANO COMMUNITY COLLEGE DISTRICT	ASPHALT PAVEMENT CONFORM
CSW ST2 ENGINEERING GROUP		SOLANO COMMUNITY COLLEGE	STANDARD DETAILS	DWG. NO. 130 · January 2014

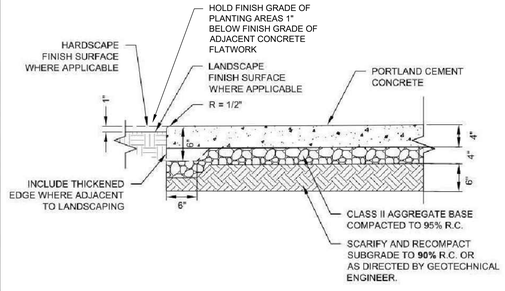
7 ASPHALT PAVEMENT CONFORM
SCALE: N.T.S.



NOTES:
1. CONCRETE SHALL BE CLASS "B" (5 SACK) WITH 1" AGGREGATE.
2. NO CONCRETE SHALL BE PLACED PRIOR TO FORM INSPECTION .
3. ASPHALT CONCRETE SHALL BE 1/4" HIGH AT EDGE OF CONCRETE.
4. REFER TO DETAIL 4/M-5.6 FOR CONTROL JOINTS.
5. REFER TO DETAIL 5/M-5.6 FOR EXPANSION JOINTS.

Rev.	Date		SOLANO COMMUNITY COLLEGE DISTRICT	CONCRETE VALLEY GUTTER
CSW ST2 ENGINEERING GROUP		SOLANO COMMUNITY COLLEGE	STANDARD DETAILS	DWG. NO. 120 · January 2014

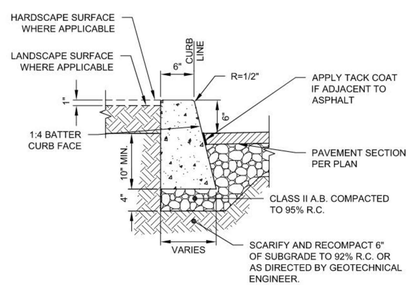
5 CONCRETE VALLEY GUTTER
SCALE: N.T.S.



NOTES:
1. ALL TREAD SURFACES SHALL BE SLIP RESISTANT.
2. REFER TO PROJECT CONSTRUCTION DRAWINGS/ SPECIFICATIONS FOR COLOR, PATTERN, TEXTURE , FINISH, AND LOCATION OF JOINTS.
3. REFER TO DETAIL 4/M-5.6 FOR CONTROL JOINTS.
4. REFER TO DETAIL 5/M-5.6 FOR EXPANSION JOINTS.

Rev.	Date		SOLANO COMMUNITY COLLEGE DISTRICT	CONCRETE PEDESTRIAN WALKWAY
CSW ST2 ENGINEERING GROUP		SOLANO COMMUNITY COLLEGE	STANDARD DETAILS	DWG. NO. 110 · January 2014

3 CONCRETE PEDESTRIAN WALKWAY
SCALE: N.T.S.



NOTES:
1. WHERE CONCRETE WALK IS ADJACENT TO CURB, PROVIDE ISOLATION JOINT BETWEEN WALK AND BACK OF CURB.
2. CONTROL JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 10' INTERVALS O.C. - ALL SIDES EXCEPT BOTTOM.
3. WHERE WALK IS ADJACENT TO CURB, THE JOINTS SHALL ALIGN WITH THE JOINTS IN THE CURB.

Rev.	Date		SOLANO COMMUNITY COLLEGE DISTRICT	CONCRETE CURB
CSW ST2 ENGINEERING GROUP		SOLANO COMMUNITY COLLEGE	STANDARD DETAILS	DWG. NO. 100 · January 2014

1 CONCRETE CURB
SCALE: N.T.S.

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WWW.SALASOBRIEN.COM
National Strength. Local Action.

REGISTERED PROFESSIONAL ENGINEER — ERIN EMMETT SPRING — No. M40086 EXP. 09-30-2026 — MECHANICAL — STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT
SOLANO COMMUNITY COLLEGE
4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

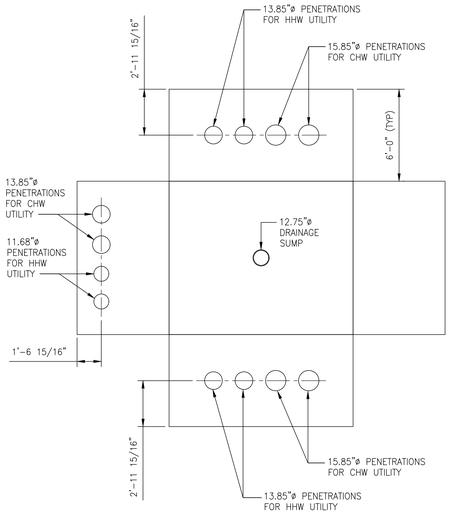
SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE
MECHANICAL DETAILS

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-5.3
SHEET OF –

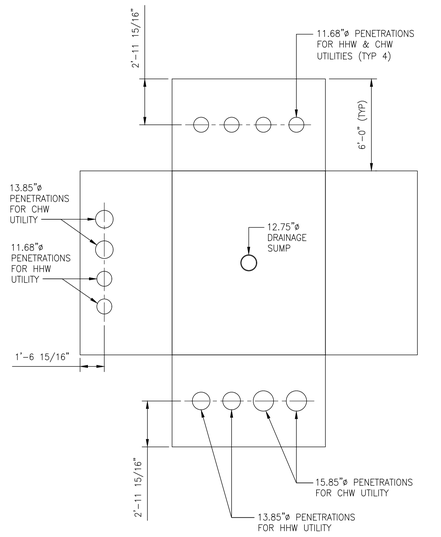
THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



NOTES:

1. THE 6'-0" DIMENSION IS THE INSIDE CLEAR DIMENSION REPRESENTING THE HEIGHT OF THE VAULT.
2. REFER TO VAULT SCHEDULE ON M-6.1 FOR LID TYPE, HATCH RISER, ETC.
3. DEPTH OF COVER (ABOVE LID OF VAULT) EQUALS 12".
4. SEE ENLARGED MECHANICAL SITE PLANS FOR HYDRONIC OFFSETS OUTSIDE OF VAULT(S).
5. REFER TO DETAIL 12/M-5.1 FOR REQUIRED VAULT WALL PENETRATION REINFORCEMENT.

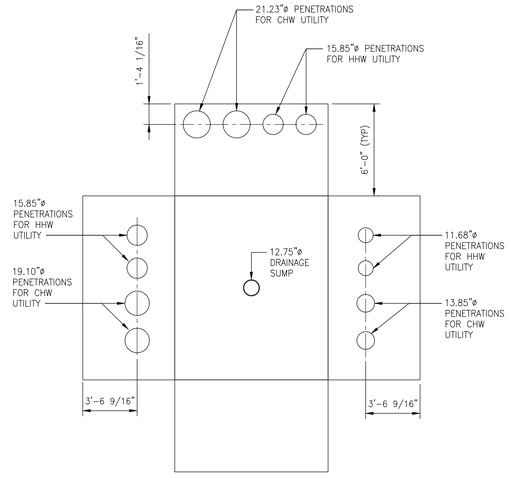
1 VAULT #4
SCALE: 1/4" = 1'-0"



NOTES:

1. THE 6'-0" DIMENSION IS THE INSIDE CLEAR DIMENSION REPRESENTING THE HEIGHT OF THE VAULT.
2. REFER TO VAULT SCHEDULE ON M-6.1 FOR LID TYPE, HATCH RISER, ETC.
3. DEPTH OF COVER (ABOVE LID OF VAULT) EQUALS 12".
4. SEE ENLARGED MECHANICAL SITE PLANS FOR HYDRONIC OFFSETS OUTSIDE OF VAULT(S).
5. REFER TO DETAIL 12/M-5.1 FOR REQUIRED VAULT WALL PENETRATION REINFORCEMENT.

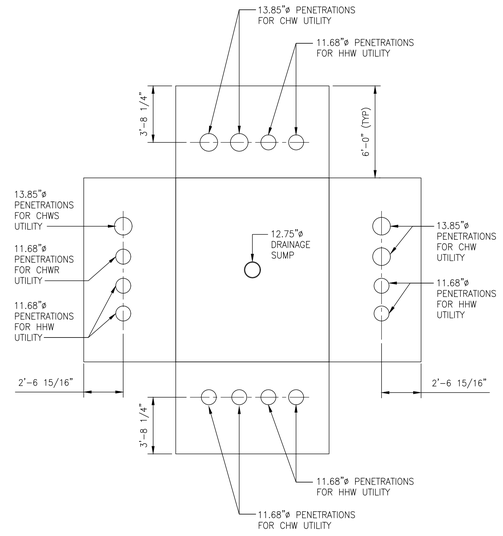
2 VAULT #5
SCALE: 1/4" = 1'-0"



NOTES:

1. THE 6'-0" DIMENSION IS THE INSIDE CLEAR DIMENSION REPRESENTING THE HEIGHT OF THE VAULT.
2. REFER TO VAULT SCHEDULE ON M-6.1 FOR LID TYPE, HATCH RISER, ETC.
3. DEPTH OF COVER (ABOVE LID OF VAULT) EQUALS 12".
4. SEE ENLARGED MECHANICAL SITE PLANS FOR HYDRONIC OFFSETS OUTSIDE OF VAULT(S).
5. REFER TO DETAIL 12/M-5.1 FOR REQUIRED VAULT WALL PENETRATION REINFORCEMENT.

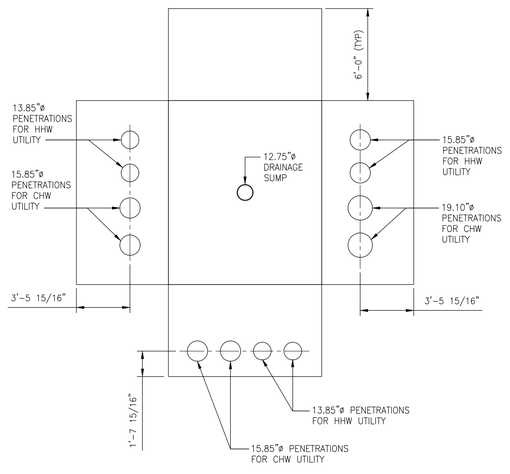
3 VAULT #7
SCALE: 1/4" = 1'-0"



NOTES:

1. THE 6'-0" DIMENSION IS THE INSIDE CLEAR DIMENSION REPRESENTING THE HEIGHT OF THE VAULT.
2. REFER TO VAULT SCHEDULE ON M-6.1 FOR LID TYPE, HATCH RISER, ETC.
3. DEPTH OF COVER (ABOVE LID OF VAULT) EQUALS 0".
4. SEE ENLARGED MECHANICAL SITE PLANS FOR HYDRONIC OFFSETS OUTSIDE OF VAULT(S).
5. REFER TO DETAIL 12/M-5.1 FOR REQUIRED VAULT WALL PENETRATION REINFORCEMENT.

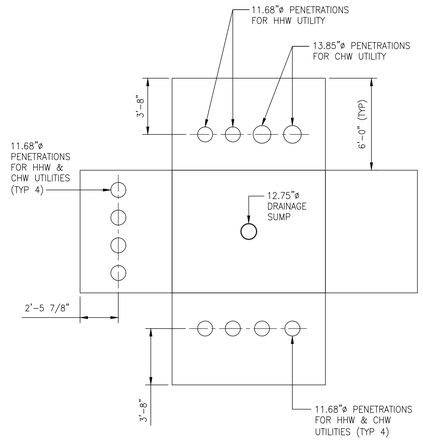
4 VAULT #8
SCALE: 1/4" = 1'-0"



NOTES:

1. THE 6'-0" DIMENSION IS THE INSIDE CLEAR DIMENSION REPRESENTING THE HEIGHT OF THE VAULT.
2. REFER TO VAULT SCHEDULE ON M-6.1 FOR LID TYPE, HATCH RISER, ETC.
3. DEPTH OF COVER (ABOVE LID OF VAULT) EQUALS 12".
4. SEE ENLARGED MECHANICAL SITE PLANS FOR HYDRONIC OFFSETS OUTSIDE OF VAULT(S).
5. REFER TO DETAIL 12/M-5.1 FOR REQUIRED VAULT WALL PENETRATION REINFORCEMENT.

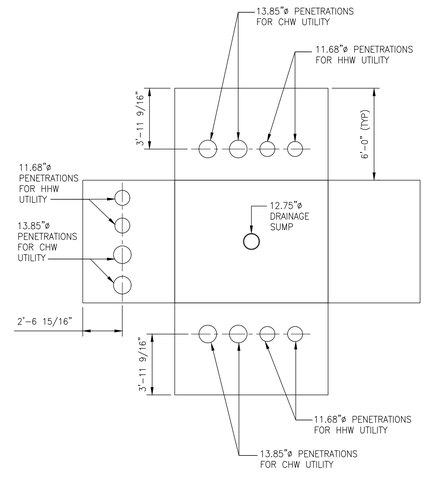
5 VAULT #9
SCALE: 1/4" = 1'-0"



NOTES:

1. THE 6'-0" DIMENSION IS THE INSIDE CLEAR DIMENSION REPRESENTING THE HEIGHT OF THE VAULT.
2. REFER TO VAULT SCHEDULE ON M-6.1 FOR LID TYPE, HATCH RISER, ETC.
3. DEPTH OF COVER (ABOVE LID OF VAULT) EQUALS 0".
4. SEE ENLARGED MECHANICAL SITE PLANS FOR HYDRONIC OFFSETS OUTSIDE OF VAULT(S).
5. REFER TO DETAIL 12/M-5.1 FOR REQUIRED VAULT WALL PENETRATION REINFORCEMENT.

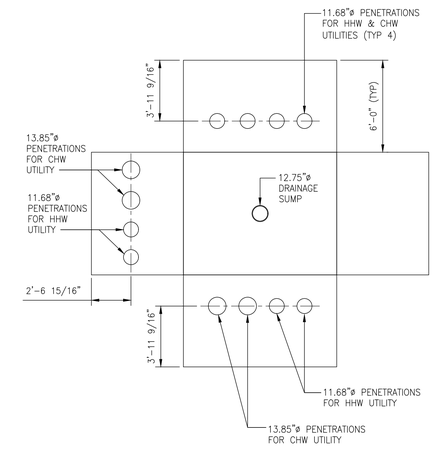
6 VAULT #12
SCALE: 1/4" = 1'-0"



NOTES:

1. THE 6'-0" DIMENSION IS THE INSIDE CLEAR DIMENSION REPRESENTING THE HEIGHT OF THE VAULT.
2. REFER TO VAULT SCHEDULE ON M-6.1 FOR LID TYPE, HATCH RISER, ETC.
3. DEPTH OF COVER (ABOVE LID OF VAULT) EQUALS 0".
4. SEE ENLARGED MECHANICAL SITE PLANS FOR HYDRONIC OFFSETS OUTSIDE OF VAULT(S).
5. REFER TO DETAIL 12/M-5.1 FOR REQUIRED VAULT WALL PENETRATION REINFORCEMENT.

7 VAULT #14
SCALE: 1/4" = 1'-0"



NOTES:

1. THE 6'-0" DIMENSION IS THE INSIDE CLEAR DIMENSION REPRESENTING THE HEIGHT OF THE VAULT.
2. REFER TO VAULT SCHEDULE ON M-6.1 FOR LID TYPE, HATCH RISER, ETC.
3. DEPTH OF COVER (ABOVE LID OF VAULT) EQUALS 0".
4. SEE ENLARGED MECHANICAL SITE PLANS FOR HYDRONIC OFFSETS OUTSIDE OF VAULT(S).
5. REFER TO DETAIL 12/M-5.1 FOR REQUIRED VAULT WALL PENETRATION REINFORCEMENT.

8 VAULT #15
SCALE: 1/4" = 1'-0"

M:\AA-PROJECTS\2025\2510-00649-00 Solano CCD, Hydronic Distribution Repairs & Upgrades\03 Drawings\2510-00649M-5.4.dwg 1/26/2026 1:28 PM Minh Ong

Salas O'Brien
Engineered for Impact
305 South 11th Street
San Jose, California 95112-2218
877.725.2755 | 877.925.1477 (f)
WWW.SALASOBRIEN.COM
National **Strength.**
Local **Action.**

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT GREEN
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE

MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

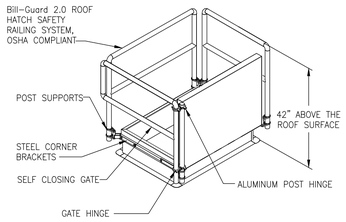
SHEET TITLE

MECHANICAL DETAILS

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

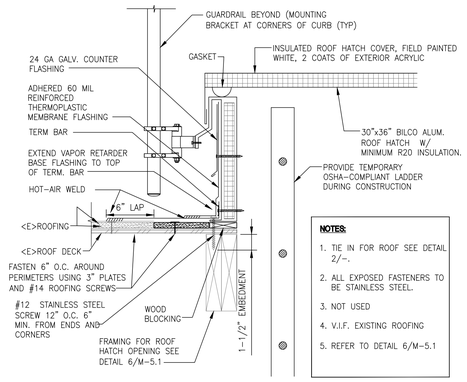
M-5.4
SHEET OF –

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NOTES:

1. V.I.F. CEILING SPACE AND TEMPORARY HYDRONIC POINTS OF CONNECTION PRIOR TO CUTTING ROOF.
2. PROVIDE TEMPORARY PLYWOOD BOARDS FOR TEMPORARY LANDING AT <E>CEILING JOISTS.
3. PROVIDE TEMPORARY LADDER TO FACILITATE ACCESS TO CEILING SPACE FOR TEMPORARY HYDRONIC CONNECTIONS.



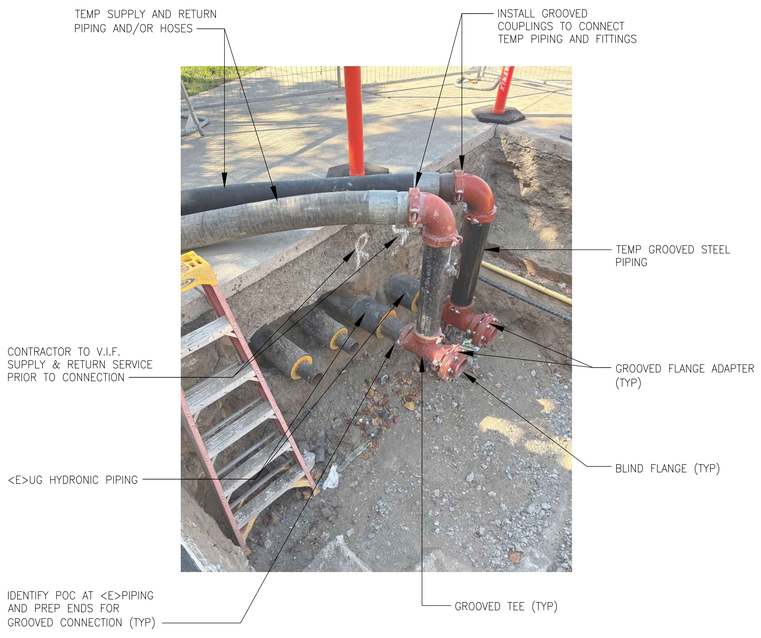
SECTION VIEW

NOTES:

1. TIE IN FOR ROOF SEE DETAIL 2/-.
2. ALL EXPOSED FASTENERS TO BE STAINLESS STEEL.
3. NOT USED
4. V.I.F. EXISTING ROOFING
5. REFER TO DETAIL 6/M-5.1

4 ROOF HATCH WITH GUARDRAIL AND GATE SYSTEM

SCALE: N.T.S.

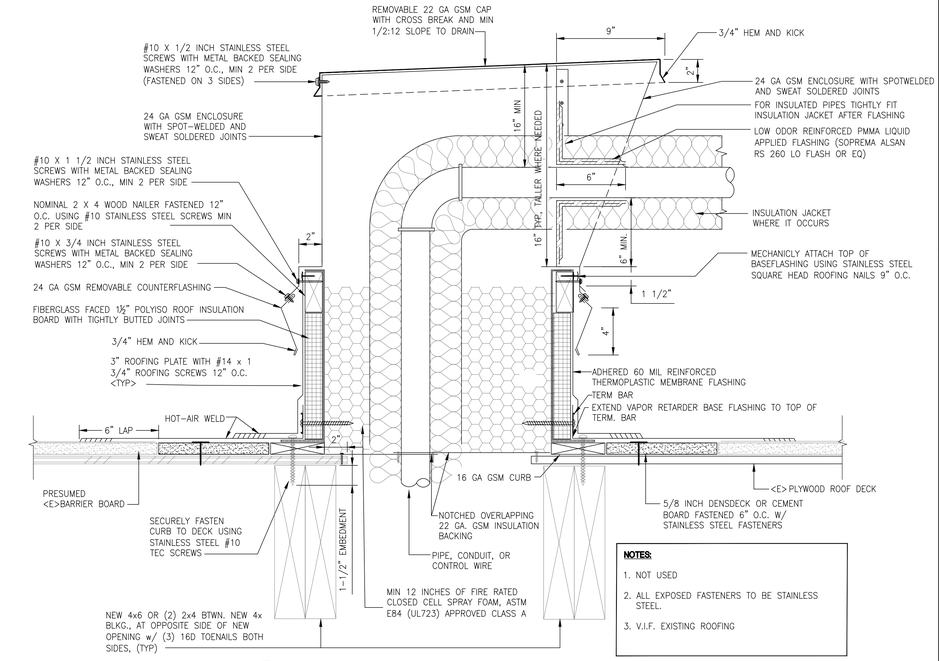


NOTE:

UPON COMPLETION OF WORK AND REMOVAL OF TEMPORARY SERVICES, CUT OUT GROOVES FROM <E>PIPING AND PREP FOR WELDS TO NEW PIPING.

3 TEMPORARY BYPASS FOR UNDERGROUND SITE PIPING

SCALE: N.T.S.

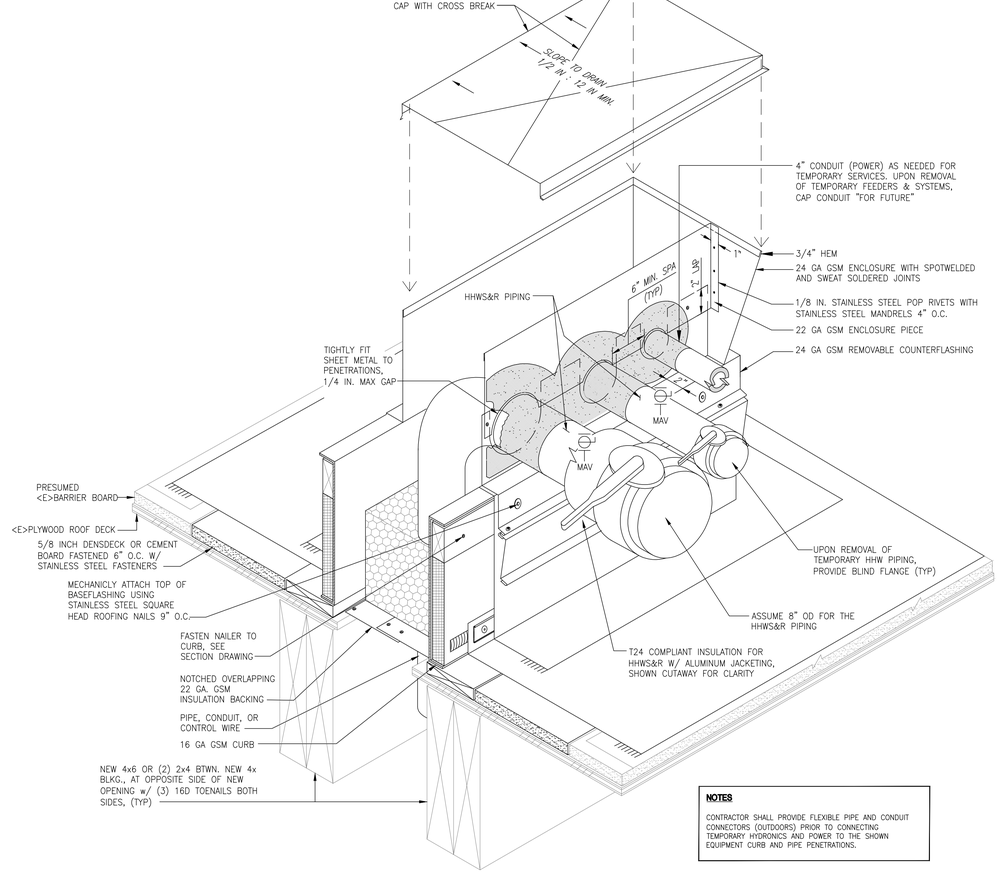


NOTES:

1. NOT USED
2. ALL EXPOSED FASTENERS TO BE STAINLESS STEEL.
3. V.I.F. EXISTING ROOFING

2 MECHANICAL EQUIPMENT CURB - SECTION VIEW

SCALE: N.T.S.



NOTES

CONTRACTOR SHALL PROVIDE FLEXIBLE PIPE AND CONDUIT CONNECTORS (OUTDOORS) PRIOR TO CONNECTING TEMPORARY HYDRONICS AND POWER TO THE SHOWN EQUIPMENT CURB AND PIPE PENETRATIONS.

1 MECHANICAL EQUIPMENT CURB - ISO VIEW

SCALE: N.T.S.

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National **Strength.** Local **Action.**

REGISTERED PROFESSIONAL ENGINEER — ERIN EMMETT SPRING — No. M40086 EXP. 09-30-2026 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

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SOBE PROJECT NO:	2510-00649
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CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL DETAILS

SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

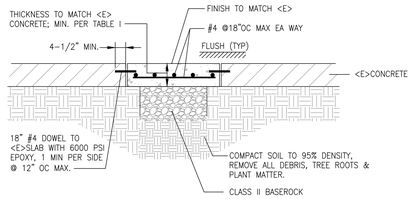
M-5.5

SHEET OF –

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NOTES:

1. COORDINATE TRENCHING WITH MECHANICAL & ELECTRICAL
2. 2% MAX SLOPE CROSS SLOPE AT PATH OF TRAVEL AND 5% MAX RUNNING SLOPE ALONG PATH OF TRAVEL
3. DO NOT GRIND CONCRETE TO LEVEL SURFACES.
4. SEE TABLE 1 & NOTE ON 3/M-5.1.

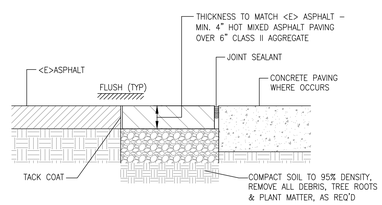


9 CONCRETE PATCH

SCALE: N.T.S.

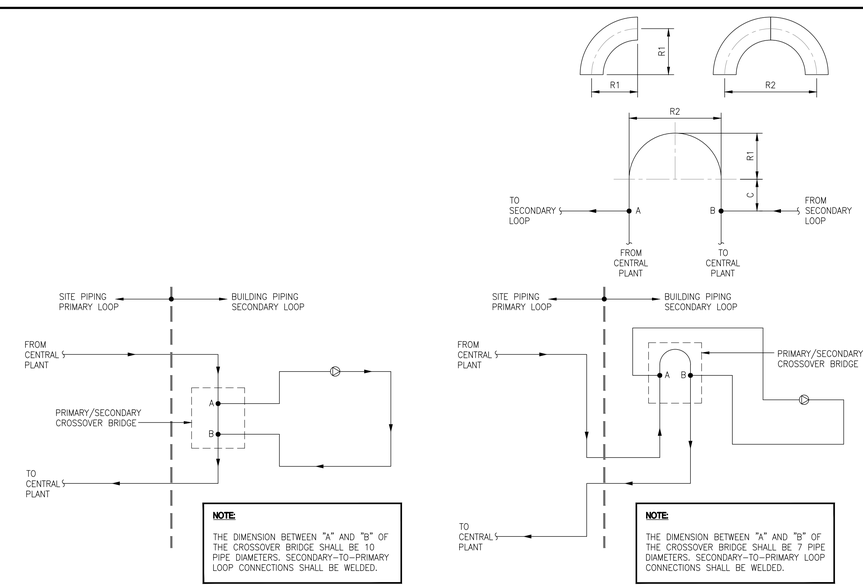
NOTES:

1. PATCH, REPAIR, REBUILD MUST MATCH EXISTING BUILT UP. MUST REBUILD TRENCH TO MATCH EXISTING BASE/SPECIFICATION. SEE TABLE 3/M-5.1.



8 ASPHALT PATCH

SCALE: N.T.S.



NOTE:

THE DIMENSION BETWEEN "A" AND "B" OF THE CROSSOVER BRIDGE SHALL BE 10 PIPE DIAMETERS, SECONDARY-TO-PRIMARY LOOP CONNECTIONS SHALL BE WELDED.

PRIMARY LOOP NPS (IN)	CROSSOVER BRIDGE LENGTH (A TO B) (IN)
2.5	25
3	30
4	40
6	60
8	80
10	100

3A - CROSSOVER BRIDGE AT STRAIGHT PIPING

NOTE:

THE DIMENSION BETWEEN "A" AND "B" OF THE CROSSOVER BRIDGE SHALL BE 7 PIPE DIAMETERS, SECONDARY-TO-PRIMARY LOOP CONNECTIONS SHALL BE WELDED.

PRIMARY LOOP NPS (IN)	90° LONG RADIUS ELBOW CENTER TO END DIMENSION (IN) (R1)	DUAL WELDED 90° LONG RADIUS ELBOW DIMENSION (IN) (R2)	DISTANCE FROM ELBOW TO LINE SIZE TEE (IN) (C)	DISTANCE FROM A TO B (IN)
2.5	3.75	7.5	2.5	16.8
3	4.5	9	3	20.1
4	6	12	4	26.8
6	9	18	6	40.3
8	12	24	8	53.7
10	15	30	10	67.1

3B - CROSSOVER BRIDGE WITH 180° LONG RADIUS FITTING

3 CROSSOVER BRIDGE DETAIL

SCALE: N.T.S.

NOTE:

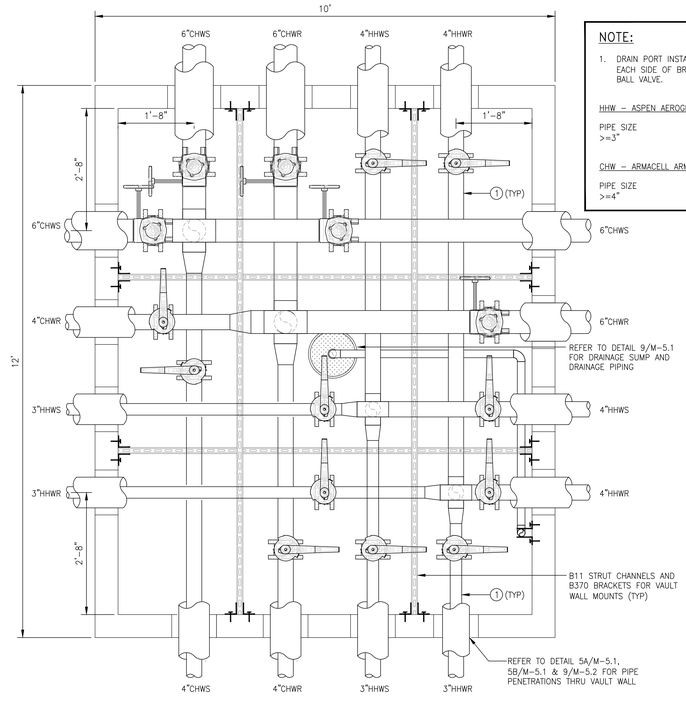
1. DRAIN PORT INSTALLED ON HHW AND CHW PIPING ON EACH SIDE OF BRANCH TEE (TYP). 1" DRAIN PIPE AND BALL VALVE.

HHW - ASPEN AEROGEL PYROGEL XTE INSULATION:

PIPE SIZE	THICKNESS
>=3"	1.2"

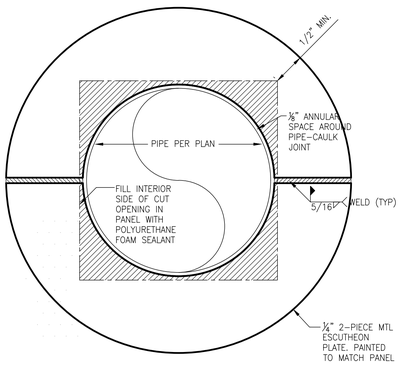
CHW - ARMACELL ARMAFLEX CLOSED CELL INSULATION:

PIPE SIZE	THICKNESS
>=4"	1.5"



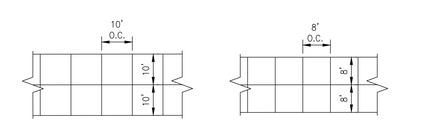
7 VAULT #8 DETAIL

SCALE: 3/4" = 1' - 0"



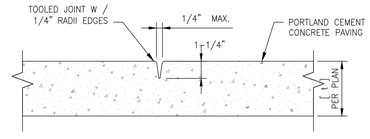
6 ESCUTCHEON PLATE DETAIL

SCALE: N.T.S.



FIRE ACCESS ROAD JOINT SPACING

PEDESTRIAN WALKWAY JOINT SPACING



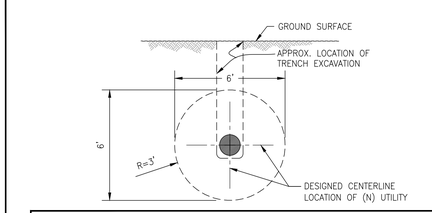
TOOLED CONTROL JOINT

NOTES:

1. CONSTRUCT CONTROL JOINTS WITHIN 24 HOURS OF POUR.
2. SEE LANDSCAPE PLAN FOR LOCATION OF CONTROL JOINTS AND SEE ABOVE FOR CONTROL JOINT LOCATIONS IN THE FIRE ACCESS ROAD.

4 CONTROL JOINTS FOR CONCRETE PAVEMENT

SCALE: N.T.S.

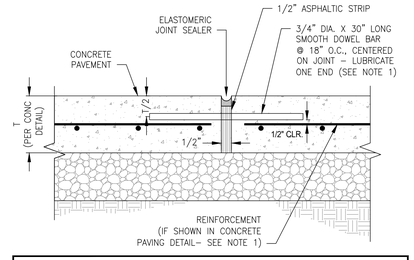


NOTES:

1. ANY FIELD ADJUSTMENTS TO THE PROPOSED LOCATION OF UTILITIES WITHIN A 3 FOOT RADIUS OF THE DESIGN CENTERLINE LOCATION SHALL BE DONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL PROPOSED ADJUSTMENTS SHALL BE SUBJECT TO PRIOR APPROVAL OF THE OWNER. SHOULD THE OWNER AGREE THAT IT IS NECESSARY TO ADJUST THE DESIGN LOCATION OF THE UTILITY TO A POSITION OUTSIDE THE ABOVE 3 FOOT RADIUS, SUCH ADJUSTMENT SHALL BE SUBJECT TO REVIEW AS AN ITEM OF EXTRA EXPENSE.
2. IF IT IS NECESSARY TO RELOCATE (E) UTILITIES IN ORDER TO ALLOW THE UTILITY TO BE INSTALLED WITHIN A 3 FOOT RADIUS OF ITS DESIGNED CENTERLINE, THEN SUCH RELOCATION OF (E) UTILITIES SHALL BE PAID FOR AS AN ITEM OF EXTRA EXPENSE. ANY SUCH RELOCATION SHALL BE SUBJECT TO PRIOR APPROVAL OF THE OWNER.
3. IN AREAS WHERE SHORING IS NOT REQUIRED AS PER THE LINE PROFILE DRAWINGS, THE MAXIMUM DEPTH OF TRENCHING TO AVOID OBSTACLES WITHOUT ADDITIONAL COST SHALL BE 5' BELOW GRADE. IN AREAS WHERE SHORING IS REQUIRED TO MEET DESIGN GRADE, THE LINE MAY BE ADJUSTED AN ADDITIONAL 3' BELOW THAT SHOWN WITH NO INCREASE IN COST.

2 TYPICAL ADJUSTMENT CRITERIA

SCALE: N.T.S.

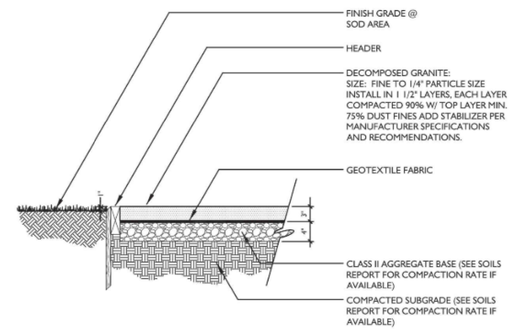


NOTES:

1. FOR UN-REINFORCED PAVEMENT SECTIONS, DOWEL MAY BE ELIMINATED.
2. REFER TO APPROPRIATE CONCRETE PAVEMENT DETAILS FOR THICKNESS OF PAVEMENT, AGGREGATE BASE, COMPACTION REQUIREMENTS AND SUBGRADE PREPARATION.
3. EXPANSION JOINTS TO BE INSTALLED IF ADJACENT TO A BUILDING OR STRUCTURE.
4. EXPASION JOINTS TO BE INSTALLED AT 20' O.C. ALONG FIRE ACCESS ROAD. FOR PEDESTRIAN WALKWAYS, USE 16'.
5. ALL EXPOSED FASTENERS TO BE STAINLESS STEEL.

5 EXPANSION JOINT FOR CONCRETE PAVEMENT

SCALE: N.T.S.



1 DECOMPOSED GRANITE PAVING

SCALE: N.T.S.

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APPROVED BY:	EES

SHEET TITLE

MECHANICAL DETAILS

SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

M-5.6

SHEET OF –

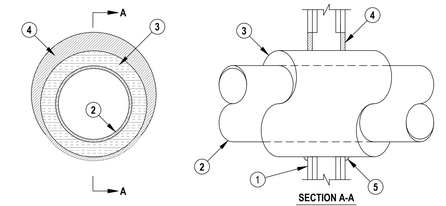
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1/2" = 1'-0"
1/4" = 1'-0"
1/8" = 1'-0"
1" = 10'-0"
1" = 30'-0"
1" = 80'-0"
1" = 100'-0"

Classified by Underwriters Laboratories Inc. to UL 1479 and CAN/ULC-S115

System No. W-L-5029

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1, 2 and 3 Hr (See Items 1, 3 and 4)	F Ratings — 1, 2 and 3 Hr (See Items 1, 3 and 4)
T Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)	FT Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
L Rating At Ambient — 4 CFM/Sq Ft	FH Ratings — 1, 2 and 3 Hr (See Items 1, 2 and 4)
L Rating At 400 F — Less Than 1 CFM/Sq Ft	FTH Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
	L Rating At Ambient — 4 CFM/Sq Ft
	L Rating At 400 F — Less Than 1 CFM/Sq Ft

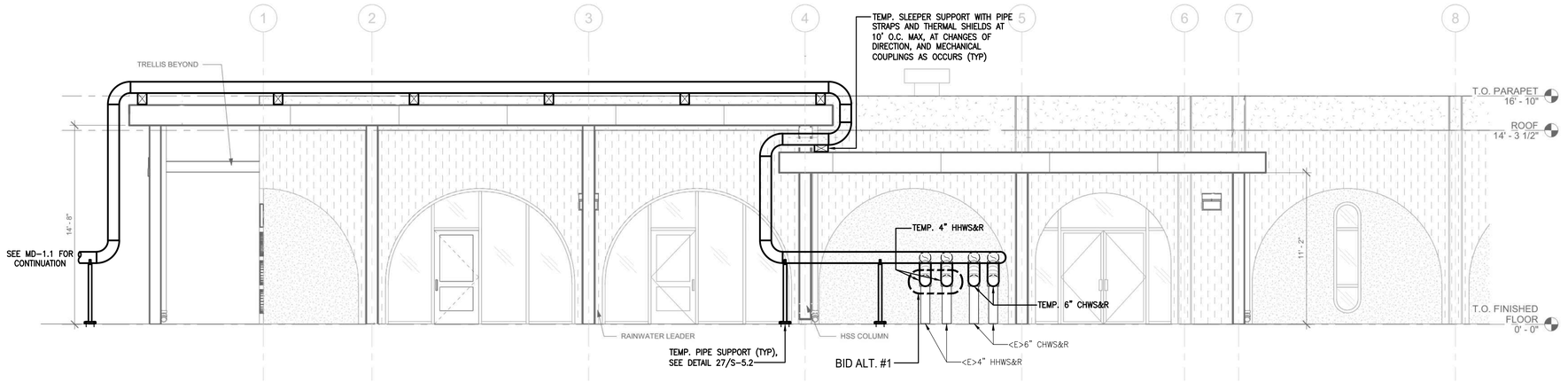


1. Wall Assembly — The 1, 2 or 3 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide for 1 and 2 hr F and FH rating and 3-1/2 in. (89 mm) wide for 3 hr F and FH rating and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — Min 5/8 in. (16 mm) thick with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 18-5/8 in. (473 mm).
   The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through Penetrants — One metallic pipe or tubing to be installed within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   A. Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.
   C. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper tube shall not exceed 4 in. (102 mm).
   D. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper pipe shall not exceed 4 in. (102 mm).
3. Pipe Covering* — Nom 1, 1-1/2 or 2 in. (25, 38 or 51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. For 1 and 2 hr F and FH Ratings, the annular space between insulated penetrant and periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. (48 mm). For 3 hr F and FH Ratings, the annular space shall be min 0 in. (point contact) to max 1-1/4 in. (32 mm).
   See Pipe and Equipment Covering — Materials (BRGU) category in the Building Material Directory for the names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
   The hourly T, FT, FTH Ratings of the firestop system are 1/2 hr for 1 hr rated walls and 1 hr for 2 hr rated walls. For 3 hr rated walls, the hourly T, FT and FTH Ratings when steel and iron pipes are used are 1 hr. For 3 hr rated walls, the hourly T, FT and FTH Ratings when copper penetrants are used are 1-1/4 hr for 2 in. (51 mm) thick pipe covering and 0 hr for pipe covering thickness less than 2 in. (51 mm).
3A. Pipe Covering* — (Not Shown) — As an alternate to Item 3, max 2 in. (51 mm) thick cylindrical calcium silicate (min 14 pcf) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 18 AWG stainless steel wire spaced max 12 in. (305 mm) OC. When the alternate pipe covering is used, the T and FT Rating shall be as specified in item 3 above.
   See Pipe and Equipment Covering — Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
4. Fill, Void or Cavity Material* — Sealant — For 1 and 2 hr F and FH Rating, min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 3 hr F and FH Rating, min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point contact location between pipe covering and gypsum board, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Hilti Firestop Systems

2 PIPE PENETRATION
SCALE: N.T.S.



1 BUILDING 1600 CANOPY NORTH ELEVATION
SCALE: 1/4" = 1' - 0"

0 4' 8'

Salas O'Brien
Engineered for Impact
305 South 11th Street
San Jose, California 95112-2218
877.725.2755 | 877.925.1477 (f)
WWW.SALASOBRIEN.COM
National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEENEY
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE

MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL DETAILS

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-5.7

SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.

VAULT SCHEDULE

VAULT TAG	MANUFACTURER	INSIDE CLEAR DIMENSIONS (FT)			WALL THICKNESS (IN)	LID TYPE	LOAD LEVELS		NOTES
		L	W	H			CLASS (MIN.)	TRAFFIC RATING	
<E>VLT-1	-	-	-	-	-	MANHOLE	-	-	8
<E>VLT-2	-	-	-	-	-	HATCH	-	-	8
<E>VLT-3	-	-	-	-	-	HATCH	-	-	8
VLT-4	**JENSEN**	**12**	**10**	**6**	**8**	**HATCH**	**5**	**HL93**	**1-4, 7-12**
VLT-5	**JENSEN**	**12**	**10**	**6**	**8**	**HATCH**	**5**	**HL93**	**1-4, 7-12**
<E>VLT-6	-	-	-	-	-	HATCH	-	-	8
VLT-7	**JENSEN**	**12**	**10**	**6**	**8**	**HATCH**	**4**	**HL93**	**1-4, 7-12**
VLT-8	**JENSEN**	**12**	**10**	**6**	**8**	**HATCH**	**2**	**PEDESTRIAN**	**1, 5-12**
VLT-9	**JENSEN**	**12**	**10**	**6**	**8**	**HATCH**	**5**	**HL93**	**1-4, 7-12**
<E>VLT-10	-	-	-	-	-	HATCH	-	-	8
<E>VLT-11	-	-	-	-	-	HATCH	-	-	8
VLT-12	**JENSEN**	**10**	**8**	**6**	**8**	**HATCH**	**2**	**PEDESTRIAN**	**1, 5-11, 13**
<E>VLT-13	-	-	-	-	-	MANHOLE	-	-	8
VLT-14	**JENSEN**	**10**	**8**	**6**	**8**	**HATCH**	**5**	**HL93**	**1-4, 7-11, 13**
VLT-15	**JENSEN**	**10**	**8**	**6**	**8**	**HATCH**	**2**	**PEDESTRIAN**	**1, 5-11, 13**
<E>VLT-16	-	-	-	-	-	HATCH	-	-	8

NOTES:
1) PROVIDE AND INSTALL 12" SQ. (MIN.) VAULT SUMP.
2) PROVIDE HATCH DOORS WITH 8' X 6' OPENING SIZE
3) ACCESS LID SHALL BE COMPLIANT WITH ASTM STANDARD C1802
4) PROVIDE AND INSTALL 8' X 6' X 12" HATCH RISER
5) PROVIDE HATCH DOORS WITH 5' X 3' OPENING SIZE
6) PROVIDE AND INSTALL 5' X 3' X 12" HATCH RISER
7) REFER TO M-1.1, M-1.2, M-1.3, AND M-1.4 FOR VAULT LOCATIONS AND SPECIFIC VAULT TAG # SYSTEM.
8) PROVIDE ENGRAVED TAG AT VAULT LID INDICATING "HYDRONICS - " FOLLOWED BY THE VAULT TAG "VLT-#". LETTERING SHALL BE A MINIMUM 1" IN SIZE. TAGS SHALL BE WELDED TO VAULT LIDS OR ENGRAVED BY FACTORY.
9) DESIGNED ASTM C857
10) STAMPED AND SEALED SUBMITTAL CALCULATIONS BY LICENSED ENGINEER (BY MFG)
11) LOCKEFORD PLANT 6000 PSI CONCRETE MIX DESIGN
12) PRECAST BASE SECTION, 7/8" PULLING IRON 100008599 LOCATED IN WALLS OR FLOOR, FOAM BLOCKOUTS (FIELD GROUT IN UNUSED AREAS), GROUND ROD HOLE, P75 LIFTING, 100003073 SUMP PAN, HEAVIEST PICK 43,399/LBS 8" WALLS AND BASE
13) PRECAST BASE SECTION, 7/8" PULLING IRON 100008599 LOCATED IN WALLS OR FLOOR, FOAM BLOCKOUTS (FIELD GROUT IN UNUSED AREAS), GROUND ROD HOLE, P75 LIFTING, 100003073 SUMP PAN, HEAVIEST PICK 34,003/LBS

VFD SCHEDULE

BLDG	MARK	MOTOR DATA			DRIVE DATA				VOLTAGE/ PHASE/ FREQ	BYPASS	WEIGHT (LBS)	ANCHORAGE DETAIL	NOTES
		HP	FLA	Volts	Product ID	HP	FLA	Volts					
1300	VFD-HHWP-1300	1.5	3	460 VAC	ACH580-BCR-03A0-4+B058+F267	1.5	3	480 VAC	480/3/60	YES	134	11/S-5.1	1 - 5
1300	VFD-CHWP-1300	2	3.4	460 VAC	ACH580-BCR-03A5-4+B058+F267	2	3.5	480 VAC	480/3/60	YES	134	11/S-5.1	1 - 5

NOTES:
1.) ABB VFD SHALL HAVE PAD-LOCKABLE CIRCUIT BREAKER (DISCONNECT)
2.) ABB VFD SHALL HAVE DIRECT COMMUNICATION TO CONTROL SYSTEM VIA BACNET INTERFACE CARD
3.) WARRANTY SHALL BE 3 YEARS
4.) FACTORY START-UP AND TRAINING SHALL BE INCLUDED
5.) VFD SHALL RESTART AUTOMATICALLY AFTER POWER OUTAGE

BUILDING HYDRONIC PUMP SCHEDULE

BUILDING	ROOM NR.	HHW/CHW SERVICE	MAKE	MODEL	GPM	TDH (Ft.)	HP	RPM	SIZE	VOLT/PH/ HERTZ	OPER. WEIGHT (LBS)	SUCT. DIFF.	CHECK VLV.	TRIP. DUTY VLV.	ANCHORAGE DETAIL	NOTES
B-500	525	**HHWP**	**BELL & GOSSETT**	**E-1510**	**74**	**35**	**1.5**	**1800**	**1.5AD**	**460/3/60**	**130**	**3" x 2"**	-	**3"**	**10/S-5.1, 22/S-5.1**	**1, 2, 3, 6, 7, 8, 14**
		<E> CHWP	BELL & GOSSETT	E-1510	105	40	2	1800	2AD	460/3/60	-	-	-	**3"**		4, 14
B-600	55	<E> HHWP	BELL & GOSSETT	E-1510	30	60	2	1750	1.25BC	460/3/60	-	-	-	**3"**		4, 15
		<E> CHWP	BELL & GOSSETT	E-1510	76	60	5	1750	2BD	460/3/60	-	-	-	**4"**		4, 15
B-700	742	<E> HHWP	BELL & GOSSETT	E-1510	55	50	2	1800	1.25AD	460/3/60	-	**3" x 1-1/2"**	-	-		3, 4, 6, 7, 8
		<E> CHWP	BELL & GOSSETT	E-1510	150	45	3	1800	2.5AC	460/3/60	-	-	-	-		4
B-800	810	<E> HHWP	BELL & GOSSETT	E-1510	74	35	1.5	1800	1.5AD	460/3/60	-	**3" x 2"**	-	-		3, 4, 7, 8
		<E> CHWP	BELL & GOSSETT	E-1510	125	35	-	-	-	-	-	-	-	-	-	4
B-900	ROOFTOP	<E> HHWP	BELL & GOSSETT	E 80	43	45	2	1760	1.5X7	460/3/60	-		-	-		4
		<E> CHWP	BELL & GOSSETT	E 90	-	-	2	1800	2AB	460/3/60	-		-	-		4
B-1200	1248	<E> HHWP	BELL & GOSSETT	E-1510	115	70	5	1750	2BD	460/3/60	-	**4" x 2-1/2"**	**3"**	-		3, 4, 6, 11
		<E> CHWP	BELL & GOSSETT	E-1510	294	74	10	1750	2.5BB	460/3/60	-	4" x 3"	**4"**	-		4, 11
B-1300	PATIO WOOD KILN	**HHWP**	**BELL & GOSSETT**	**e-SV**	**58**	**24**	**0.75**	**1750**	**22SV**	**460/3/60**	**67**	**3" x 2"**	**4"**	-	**16/S-5.1**	**1, 2, 3, 5, 6, 7, 12**
		CHWP	**BELL & GOSSETT**	**e-SV**	**138**	**36**	**2**	**1800**	**46SV**	**460/3/60**	**269**	**4" x 3"**	-	**3"**	**16/S-5.1**	**1, 2, 3, 5, 6, 12**
B-1400	1430	<E> HHWP	BELL & GOSSETT	E-1510	170	60	5	1800	2.5BB	460/3/60	-	**4" x 3"**	-	**4"**		3, 4, 6, 13
		<E> CHWP	BELL & GOSSETT	E-1510	400	50	7.5	1800	4BD	460/3/60	-	**6" x 5"**	-	**6"**		3, 4, 6, 13
B-1500	1518	<E> HHWP	BELL & GOSSETT	E-1510	40	45	1.5	1800	1.5AD	460/3/60	-	-	-	**3"**		4, 6, 9
		<E> CHWP	BELL & GOSSETT	E-1510	110	40	2	1800	2.5AC	460/3/60	-	-	-	-		4, 6, 9
B-1600	1658	<E> HHWP	BELL & GOSSETT	E-1510	30	60	2	1750	1.25BC	460/3/60	140	**3" x 1-1/2"**		**4"**		3, 4, 6, 7, 8
		<E> CHWP	BELL & GOSSETT	E-1510	170	50	5	1800	2BD	460/3/60	-	**4" x 2-1/2"**		**6"**		3, 4, 6, 7, 8
B-2700	2772	<E>-HHWP-S1	BELL & GOSSETT	E-1510	270	40	5	1750	3AD	460/3/60	295	-	4"	-		1, 2, 3, 4
		<E>-HHWR (CIRC. PUMP)-P1	BELL & GOSSETT	-	-	-	-	-	-	-	-	-		-		
		<E>-DHW-P2	BELL & GOSSETT	-	-	-	-	-	-	-	-	-		-		
		<E> CHWP	BELL & GOSSETT	E-1510	545	30	7.5	1800	5A	460/3/60	-	-	-	**6"**		4, 10

NOTES:
1) TUNGSTEN CARBIDE SEALS
2) TEFC INVERTER DUTY MOTOR
3) PROVIDE SUCTION DIFFUSER AS INDICATED. VIF SYSTEM AND PUMP NPS. SUCTION DIFFUSER SHALL INCLUDE STRAIGHTENING VANES, 3/16" PERFORATED STRAINER, PRESSURE/TEMPERATURE PORTS, AND AN ADJUSTABLE SUPPORT FOOT.
4) EXISTING PUMP TO REMAIN
5) MOUNT PUMPS ONTO COMMON INERTA BASE. MAKE/MODEL: VIBREX RMSBI-SR3200 OR ACCEPTABLE EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
6) PROVIDE LINE SIZED FLEXIBLE PIPE CONNECTORS AT PUMP SUCTION AND DISCHARGE.
7) PROVIDE FLANGED UNION
8) PROVIDE REDUCER
9) REFER TO SHEET M-4.1 FOR BUILDING 1500 HYDRONIC PUMPS
10) REFER TO SHEET M-4.2 FOR BUILDING 2700 HYDRONIC PUMPS
11) REFER TO SHEET M-4.3 FOR BUILDING 1200 HYDRONIC PUMPS
12) REFER TO SHEET M-4.4 FOR BUILDING 1300 HYDRONIC PUMPS
13) REFER TO SHEET M-4.5 FOR BUILDING 1400 HYDRONIC PUMPS
14) REFER TO SHEET M-4.9 FOR BUILDING 500 HYDRONIC PUMPS
15) REFER TO SHEET M-4.10 FOR BUILDING 600 HYDRONIC PUMPS

TEMPORARY CHILLER SCHEDULE

MARK	SERVICE	NOM. TONS	EVAPORATOR					CONDENSER FANS		COMPRESSOR		REF. TYPE	REF. CHG. (LBS)	ON-BOARD PUMP			ELECTRICAL DATA *(PUMP NOT INCLUDED)*			OPER. WEIGHT (LBS)	ANCHORAGE DETAIL	NOTES
			GPM		EWT (F)	LWT (F)	IN/OUT CONN. (IN)	NO.	HP EA	NO.	HP EA			GPM	TDH (FT)	HP	VOLT/PH/ HERTZ	UNIT KW	FLA (AMPS)			
			DESIGN	MAX																		
(TEMP) CH-60T	B-500, B-600, B-1200, B-1300, B-1400 & B-1500	60	144	216	55	45	4" / 4"	6	1.0	4	15	R-22	135	*EFER TO TEMP. PUMP SCHEDUL*			480/3/60	180	113	8,215	9/S-5.3, 11/S-5.3	1 - 8, 10 - 13
(TEMP) CH-100T	B-1600 & B-2700	100	240	346	55	45	4" / 4"	8	1.3	4	40	R454B	162	350	90	15	460/3/60	300	207	12,580	9/S-5.3, 11/S-5.3	1 - 9, 12, 13
(TEMP) CH-200T	B-1200, B-1400 & B-2700	200	400	720	55	45	4" / 4"	10	1.5	4 + 2	50 + 40	R454B	126	600	100	25	460/3/60	600	436	15,300	9/S-5.3, 11/S-5.3	1 - 9, 12, 13

NOTES:
1) PROVIDE TEMPORARY COMPRESSION-EXPANSION TANK, MIN. 150 GALLONS CHARGED TO TEMPORARY FILL PRESSURE.
2) PROVIDE MAKE UP WATER PROVISIONS SUCH AS BFP, METER AND PRESSURE REGULATOR AT A MINIMUM. CONTRACTOR TO PROVIDE TEMPORARY MAKE-UP WATER PIPING FILL PRESSURE SHALL BE REGULATED TO 25 PSIG.
3) PROVIDE TEMPORARY AIR BLEEDING PROVISIONS AT HIGH POINTS.
4) PROVIDE TEMPORARY WATER TREATMENT SYSTEM COMPLETE WITH TEST PORTS AND 5-GALLON CHEMICAL POT FEEDER.
5) PROVIDE TEMPORARY CONTROLS COMPLETE WITH USER INTERFACE CONTROL PANEL
6) PROVIDE TEMPORARY STRAINER AT EQUIPMENT, OR AT TEMPORARY PUMP.
7) CONTRACTOR RESPONSIBLE FOR TEMPORARY PIPING, SUPPORTS, ISOLATION VALVES, ETC. TO FACILIATE A COMPLETE AND FUNCTIONAL TEMPORARY CHILLER SYSTEM FOR EACH BUILDING.
8) PROVIDE TEMPORARY ELECTRICAL FEEDERS. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH ELECTRICAL SHEETS AND TEMPORARY EQUIPMENT LOCATIONS FOR REQUIRED TEMPORARY FEEDER LENGTHS AND SIZES IN COMPLIANCE WITH NEC.
9) PROVIDE ON-BOARD TEMPORARY PUMP WITH LIKE-SIZED (HP) VFD. REFER TO BUIDLING HYDRONIC PUMP SCHEDULE FOR TEMPORARY CHW/HHW PUMP GPM AND TDH REQUIREMENTS FOR EACH BLDG. SYSTEM SHALL BE BALANCED FOR EACH BUILDING SYSTI
10) PROVIDE TEMPORARY PUMP FOR 60T CHILLER, REFER TO TEMPORARY PUMP SCHEDULE.
11) BID ALTERNATE #7 APPLIES TO B-500 & B-600 ONLY.
12) DETAIL 9/S-5.3 IS APPLICABLE TO ANCHORING TEMPORARY EQUIPMENT TO A.C. PAVING AND GRADE SURFACES ONLY.
13) DETAIL 11/S-5.3 IS APPLICABLE TO ANCHORING TEMPORARY EQUIPMENT TO CONCRETE SURACES.

TEMPORARY GAS BOILER SCHEDULE

MARK	SERVICE	INPUT (MBH)	OUTPUT (MBH)	EFF. (%)	HEATING HOT WATER					NATURAL GAS				OPER. WEIGHT (LBS)	ANCHORAGE DETAIL	NOTES
					GPM	EWT (F)	LWT (F)	WPD (FT)	IN/OUT CONN. (IN)	FLUE DIA. (IN)	GAS TRAIN SIZE (IN)	MIN. GAS PRESS. (IN. W.C.)	MAX. GAS PRESS. (IN. W.C.)			
(TEMP) GB-1950	B-1400 & B-2700	1,950	1,658	85.0%	165	160	180	7.70	2.5" / 2.5"	12"	2"	5	14"	2,020	9/S-5.3, 11/S-5.3	1 - 17
(TEMP) GB-1000	B-1300 & B-1400	1,000	850	85.0%	85	160	180	3.44	2.5" / 2.5"	10"	2"	5	14"	1,400	11/S-5.3	1 - 13, 15, 17

NOTES:
1) PROVIDE TEMPORARY COMPRESSION-EXPANSION TANK(S). B-2700 REQUIRES A TOTAL VOLUME OF 1,600 GALLONS, WHILE THE OTHER BUILDINGS LISTED REQUIRE 750 GALLONS.
2) PROVIDE MAKE UP WATER PROVISIONS SUCH AS BFP, METER AND PRESSURE REGULATOR AT A MINIMUM. CONTRACTOR TO PROVIDE TEMPORARY MAKE-UP WATER PIPING. FILL PRESSURE SHALL BE REGULATED TO 25 PSIG.
3) PROVIDE TEMPORARY AIR BLEEDING PROVISIONS AT HIGH POINTS.
4) PROVIDE TEMPORARY WATER TREATMENT SYSTEM COMPLETE WITH TEST PORTS AND 5-GALLON CHEMICAL POT FEEDER.
5) PROVIDE TEMPORARY CONTROLS COMPLETE WITH USER INTERFACE CONTROL PANEL
6) PROVIDE TEMPORARY STRAINER AT EQUIPMENT, OR AT TEMPORARY PUMP.
7) PROVIDE TEMPORARY PUMP WITH LIKE-SIZED (HP) VFD. REFER TO TEMPORARY PUMP SCHEDULE FOR TEMPORARY PUMP GPM AND TDH REQUIREMENTS. SYSTEM SHALL BE BALANCED FOR EACH BUILDING SYSTEM.
8) PROVIDE TEMPORARY SAFETY CONTROLS FOR PRESSURE RELIEF, HIGH TEMPERATURE LIMIT, FLOW SWITCH, AND OTHER ALARMS.
9) PROVIDE TEMPORARY FLUE WITH RAIN CAP TERMINATED NO LESS THAN 7'-0" FROM THE BASE OF THE UNIT. TERMINATION SHALL BE NO LESS THAN 10 FT. HORIZONTALLY FROM WALKWAYS AND BUILDING OPENINGS.
10) PROVIDE TEMPORARY NATURAL GAS TRAIN, TEMPORARY GAS PIPING (SEE PLANS), AND A POUNDS-INCHES PRESSURE REGULATOR.
11) PROVIDE TEMPORARY CONDENSATE HANDLING AND NEUTRALIZATION SYSTEM AS NEEDED. PROVIDE TEMPORARY PVC PIPE TO THE NEAREST SANITARY SEWER DRAIN.
12) CONTRACTOR RESPONSIBLE FOR TEMPORARY PIPING, SUPPORTS, ISOLATION VALVES, ETC. TO FACILIATE A COMPLETE AND FUNCTIONAL TEMPORARY BOILER SYSTEM FOR EACH BUILDING.
13) PROVIDE TEMPORARY ELECTRICAL FEEDERS. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH ELECTRICAL SHEETS AND TEMPORARY EQUIPMENT LOCATIONS FOR REQUIRED TEMPORARY FEEDER LENGTHS AND SIZES IN COMPLIANCE WITH NEC.
14) BID ALTERNATE #1 APPLIES TO B-2700 ONLY.
15) BID ALTERNATE #5 APPLIES TO B-1300 & B-1400 ONLY
16) DETAIL 9/S-5.3 IS APPLICABLE TO ANCHORING TEMPORARY EQUIPMENT TO A.C. PAVING AND GRADE SURFACES ONLY.
17) DETAIL 11/S-5.3 IS APPLICABLE TO ANCHORING TEMPORARY EQUIPMENT TO CONCRETE SURACES.

ELECTRIC BOILER SCHEDULE

MARK	MAKE	MODEL	SERVICE	INPUT (kW)	OUTPUT (MBH)	GPM	EWT (F)	LWT (F)	IN/OUT CONN. (IN)	ELECTRICAL			OPER. WEIGHT (LBS)	ANCHORAGE DETAIL	NOTES
										EFF. (%)	VOLT/PH/ HERTZ	FLA			
EB-A	LATTNER	300-LW-480-3	B-500, B-1200, B-1500	300	1,014	101	160	180	2.5" / 2.5"	99.0%	460/3/60	361	2,400	9/S-5.3	1 - 14
EB-B	LATTNER	300-LW-480-3	B-600, B-1200, B-1600	300	1,014	101	160	180	2.5" / 2.5"	99.0%	460/3/60	361	2,400	9/S-5.3, 11/S-5.3	1 - 14

NOTES:
1) ELECTRIC BOILERS SHALL BE PURCHASED AND USED FOR TEMPORARY HHW SERVICES. CONTRACTOR SHALL INCLUDE RIGGING AND MOBILIZATION RELATED TO RELOCATING BOILERS BETWEEN BUILDINGS, ALL OTHER ACCESSORIES SHALL BE PROVIDED (ASSUMED TO BE RENTAL EQUIPMENT) FOR COMPLETE FUNCTIONAL TEMPORARY SERVICE. OWNERSHIP SHALL BE TRANFERRED TO COLLEGE UPON COMPLETION OF THE PROJECT.
2) PROVIDE TEMPORARY COMPRESSION-EXPANSION TANK(S). BUILDINGS LISTED REQUIRE 750 GALLONS MINIMUM.
3) PROVIDE MAKE UP WATER PROVISIONS SUCH AS BFP, METER AND PRESSURE REGULATOR AT A MINIMUM. CONTRACTOR TO PROVIDE TEMPORARY MAKE-UP WATER PIPING. FILL PRESSURE SHALL BE REGULATED TO 25 PSIG.
4) PROVIDE TEMPORARY AIR BLEEDING PROVISIONS AT HIGH POINTS.
5) PROVIDE TEMPORARY WATER TREATMENT SYSTEM COMPLETE WITH TEST PORTS AND 5-GALLON CHEMICAL POT FEEDER.
6) PROVIDE TEMPORARY CONTROLS COMPLETE WITH USER INTERFACE CONTROL PANEL
7) PROVIDE TEMPORARY STRAINER AT EQUIPMENT, OR AT TEMPORARY PUMP.
8) PROVIDE TEMPORARY PUMP WITH LIKE-SIZED (HP) VFD. REFER TO TEMPORARY PUMP SCHEDULE FOR TEMPORARY PUMP GPM AND TDH REQUIREMENTS. SYSTEM SHALL BE BALANCED FOR EACH BUILDING SYSTEM.
9) PROVIDE TEMPORARY SAFETY CONTROLS FOR PRESSURE RELIEF, HIGH TEMPERATURE LIMIT, FLOW SWITCH, AND OTHER ALARMS.
10) CONTRACTOR RESPONSIBLE FOR TEMPORARY PIPING, SUPPORTS, ISOLATION VALVES, ETC. TO FACILIATE A COMPLETE AND FUNCTIONAL TEMPORARY BOILER SYSTEM FOR EACH BUILDING.
11) PROVIDE TEMPORARY ELECTRICAL FEEDERS. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH ELECTRICAL SHEETS AND TEMPORARY EQUIPMENT LOCATIONS FOR REQUIRED TEMPORARY FEEDER LENGTHS AND SIZES IN
12) BID ALTERNATE #1 APPLIES TO TEMPORARY ACCESSORIES RELATED TO EB-A OR EB-B NOTED HEREIN FOR B-1500 & B-1600 TEMPORARY SERVICES.
13) BID ALTERNATE #5 APPLIES TO TEMPORARY ACCESSORIES RELATED TO EB-A OR EB-B NOTED HEREIN FOR B-1200 TEMPORARY SERVICES.
14) DETAIL 9/S-5.3 IS APPLICABLE TO ANCHORING TEMPORARY EQUIPMENT TO A.C. PAVING AND GRADE SURFACES ONLY.

TEMPORARY PUMP SCHEDULE

MARK	SERVICE	GPM	TDH (Ft.)	HP	RPM	VOLT/PH/ HERTZ	OPER. WEIGHT (LBS)	ANCHORAGE DETAIL	NOTES
m	**B-500, B-600, B-1200, B-1300, B-1400 & B-1500**	**250**	**75**	**7.5**	**1800**	**480/3/60**	**1,000**	**9/S-5.3, 11/S-5.3**	**3 - 10**
(TEMP) HHWP-A	**B-2700**	**600**	**130**	**40**	**1800**	**480/3/60**	**2,235**	**9/S-5.3**	**1, 3 - 7, 9**
(TEMP) HHWP-B	**B-1200 & B-1400**	**250**	**75**	**7.5**	**1800**	**480/3/60**	**1,000**	**9/S-5.3, 11/S-5.3**	**2 - 7, 9, 10**
(TEMP) HHWP-C	**EB-A, EB-B, B-500, B-600, B-1300, B-1500 & B-1600**	**125**	**75**	**7.5**	**1800**	**480/3/60**	**1,000**	**9/S-5.3, 11/S-5.3**	**2 - 7, 9, 10**

NOTES:
1) BID ALTERNATE #1
2) BID ALTERNATE #5
3) PROVIDE TEMPORARY PUMP WITH LIKE-SIZED (HP) VFD.
4) PROVIDE BALANCING VALVE AT DISCHARGE SIDE OF PUMP.
5) PROVIDE TEST, ADJUSTMENT, AND BALANCE FOR EACH TEMPORARY PUMP AT EACH BUILDING. REFER TO BUIDLING HYDRONIC PUMP SCHEDULE FOR TEMPORARY CHW/HHW PUMP GPM AND TDH REQUIREMENTS FOR EACH BLDG.
6) PROVIDE TEMPORARY ELECTRICAL FEEDERS. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH ELECTRICAL SHEETS AND TEMPORARY EQUIPMENT LOCATIONS FOR REQUIRED TEMPORARY FEEDER LENGTHS AND SIZES IN COMPLIANCE WITH NEC.
7) PROVIDE CHECK VALVE IF MORE THAN ONE PUMP IS MANIFOLDED TOGETHER FOR TEMPORARY SERVICES.
8) BID ALTERNATE #7 APPLIES TO B-500 & B-600 ONLY.
9) DETAIL 9/S-5.3 IS APPLICABLE TO ANCHORING TEMPORARY EQUIPMENT TO A.C. PAVING AND GRADE SURFACES ONLY.
10) DETAIL 11/S-5.3 IS APPLICABLE TO ANCHORING TEMPORARY EQUIPMENT TO CONCRETE SURACES.

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National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER — No. M40086 EXP. 09-30-2026 — MECHANICAL — STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE
4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE

MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

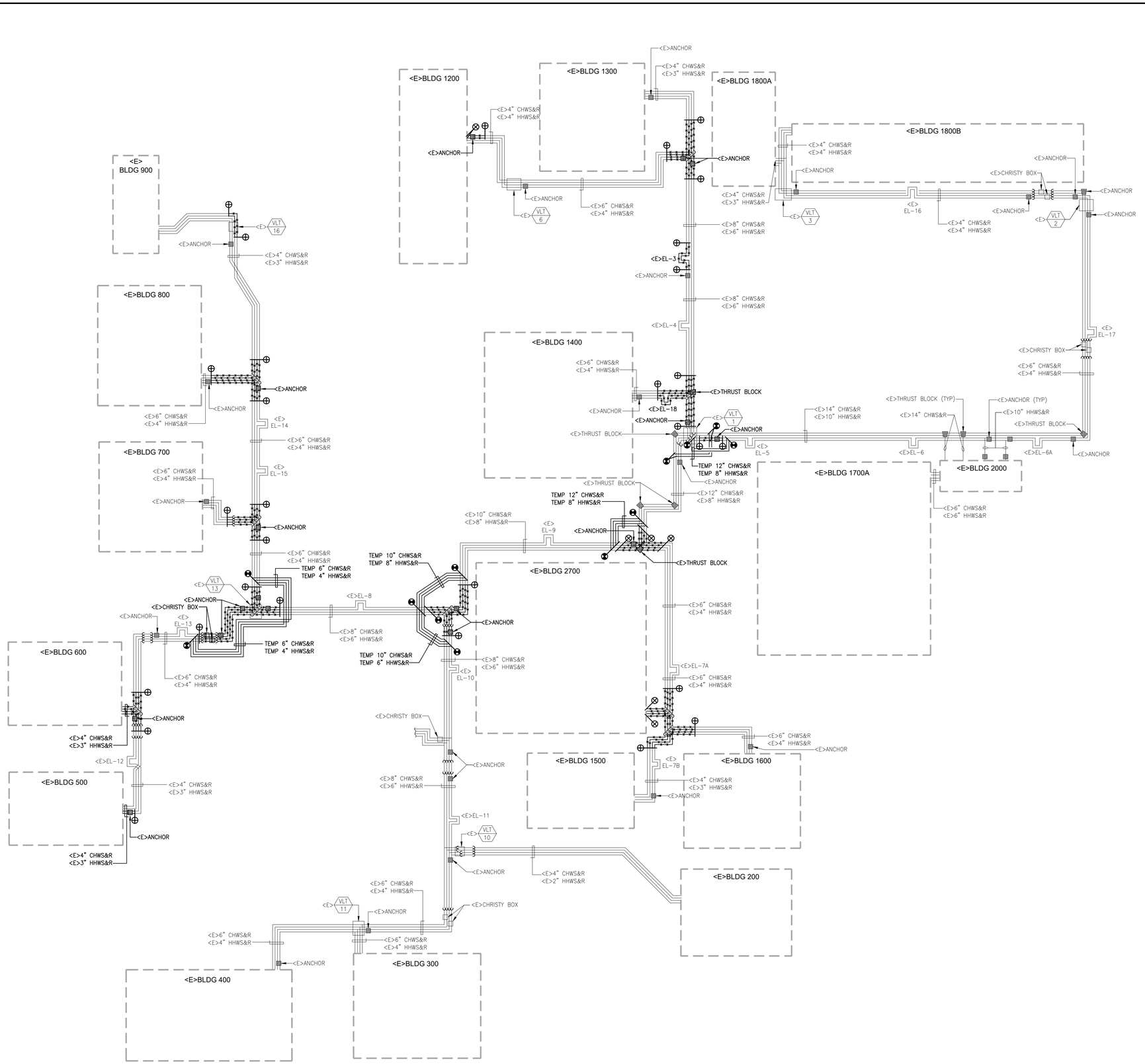
SOBE PROJECT NO: 2510-00649
DATE: 01/23/26
DRAWN BY:
CHECKED BY: EES
APPROVED BY: EES

SHEET TITLE
MECHANICAL SCHEDULES

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-6.1
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 PRIMARY HYDRONIC PIPING SYSTEM SCHEMATIC - DEMO

SCHEMATIC

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National **Strength.** Local **Action.**

REGISTERED PROFESSIONAL ENGINEER
ERIN EMMETT SWEET
No. M40086
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

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4000 SUISUN VALLEY RD
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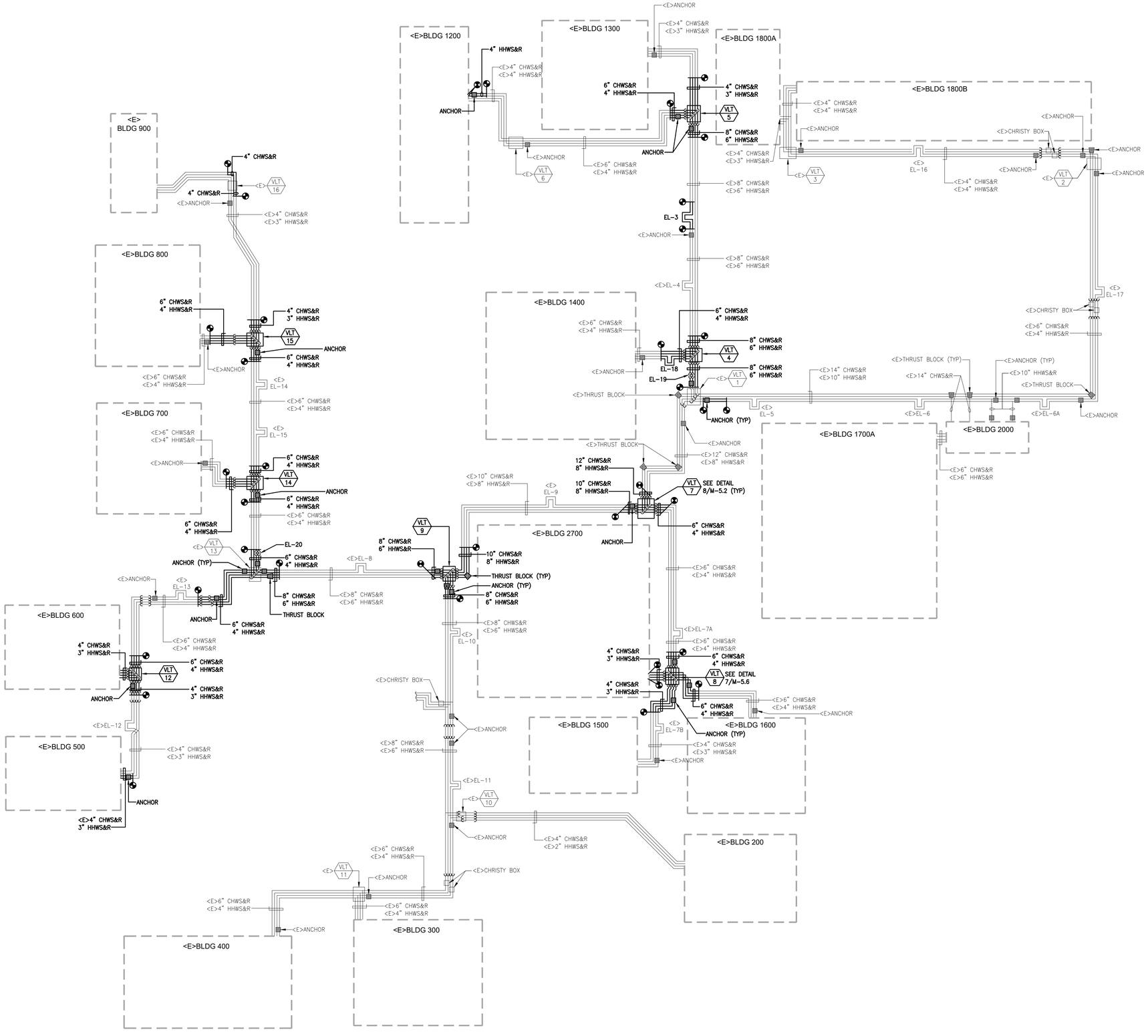
MECHANICAL
PRIMARY HYDRONIC PIPING SYSTEM SCHEMATIC - DEMO

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

MD-7.1

SHEET OF –

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1 PRIMARY HYDRONIC PIPING SYSTEM SCHEMATIC - NEW

SCHEMATIC

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CHECKED BY:	EES
APPROVED BY:	EES

SHEET TITLE

MECHANICAL
PRIMARY HYDRONIC PIPING SYSTEM SCHEMATIC - NEW

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

M-7.1

SHEET OF –

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DEMOLITION NOTES

1. REMOVE EXISTING EQUIPMENT IN CONFLICT WITH NEW CONDITIONS. REMOVE ALL WIRE NOT IN SERVICE AND FROM ABANDONED RACEWAYS. PROTECT EXISTING CIRCUITING PASSING THROUGH DEMOLITION AREAS. EXTEND AND/OR RELOCATE AS NECESSARY.
2. ALL ABANDONED EQUIPMENT INCLUDING LIGHT, RECEPTACLES, DATA, FIRE ALARM, ETC., SHALL BE COVERED WITH BLANK METAL PLATES AND PAINTED TO MATCH THE ADJACENT FINISH OF SURROUNDING WALLS OR CEILING TO THE SATISFACTION OF THE ARCHITECT/OWNER.
3. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AFFECTED BY THE PROJECT. THIS INCLUDES REROUTING OR THE EXTENSION OF EXISTING CONDUIT AND FEEDER WHERE NECESSARY TO MAINTAIN OPERATIONAL OF ANY EXISTING EQUIPMENT.
4. CIRCUIT NUMBERS AND CONDUIT HOMERUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING RECORD DRAWINGS. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING CIRCUITING AND CONDUIT HOMERUNS. ADJUST CIRCUIT NUMBERS ACCORDING TO THE ACTUAL CONDITIONS.
5. WHERE EXISTING CONDUIT IS TO BE ABANDONED OR DEMOLISHED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, IN A CRAWL SPACE OR IN AN ACCESSIBLE CEILING. ABANDONED OR DEMOLISHED CONDUIT FEEDS UP THROUGH THE FLOOR SHALL BE CUT OFF AND PLUGGED FLUSH WITH THE FLOOR.
6. ALL ELECTRICAL EQUIPMENT INCLUDING LIGHT, RECEPTACLE, DATA, FIRE ALARM, ETC., THAT ARE TO BE REMOVED, SHALL BE REMOVED COMPLETELY, INCLUDING CONDUIT AND WIRING BACK TO THE LAST DEVICE REMAINING IN SERVICE, OR SOURCE.
7. EXISTING CIRCUITS WHICH ARE REMOVED AND NOT REUSED SHALL BE IDENTIFIED ON THE PANEL SCHEDULE AS "SPARE".
8. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVAL OF EXISTING ELECTRICAL EQUIPMENT AND TURN OVER REMOVED EQUIPMENT THAT THE OWNER REQUESTS IN AN "AS-FOUND" CONDITION.
9. ALL DEMOLITION WORK SHOWN, IF ANY, WAS PREPARED FOR THE CONVENIENCE OF THE CONTRACTOR. NO REPRESENTATION HAS BEEN MADE THAT ALL ITEMS THAT MAY REQUIRE DEMOLITION HAVE BEEN SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY EXAMINE THE SITE AND THE CONTRACT DOCUMENTS AND TO PERFORM ALL DEMOLITION AND RECONSTRUCTION WHICH MAY BE REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
10. WHEN CALLED FOR, OR SCOPE OF WORK REQUIRES ELECTRICAL EQUIPMENT TO BE REMOVED, ALL CONDUIT, WIRE, BOXES, HANGERS, ETC. SHALL BE REMOVED COMPLETELY. ALL OPENINGS SHALL BE PATCHED, SEALED AND PAINTED TO MATCH THE ADJACENT FINISH.

ANCHORAGE NOTE

APPLICABLE CODE: 2022 CBC

MEP COMPONENT ANCHORAGE NOTE:

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTION 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G., HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE NOR BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

BRACING NOTE

APPLICABLE CODE: 2022 CBC PER IR 16-13

MEP DISTRIBUTION SYSTEM BRACING NOTE FOR PIPING, DUCTWORK, AND ELECTRICAL CONDUIT:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, AND 13.6.8; AND 2022 CBC SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEMS ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☐ MD ☐ PP ☐ E ☒ OPTION 1: PROJECT-SPECIFIC DESIGN

MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: DESIGN BASED ON OSHPD OPM, WITHIN PROJECT SUBMITTAL

MP ☐ MD ☐ PP ☐ E ☐ OPTION 3: DESIGN BASED ON OSHPD OPM, DEFERRED SUBMITTAL

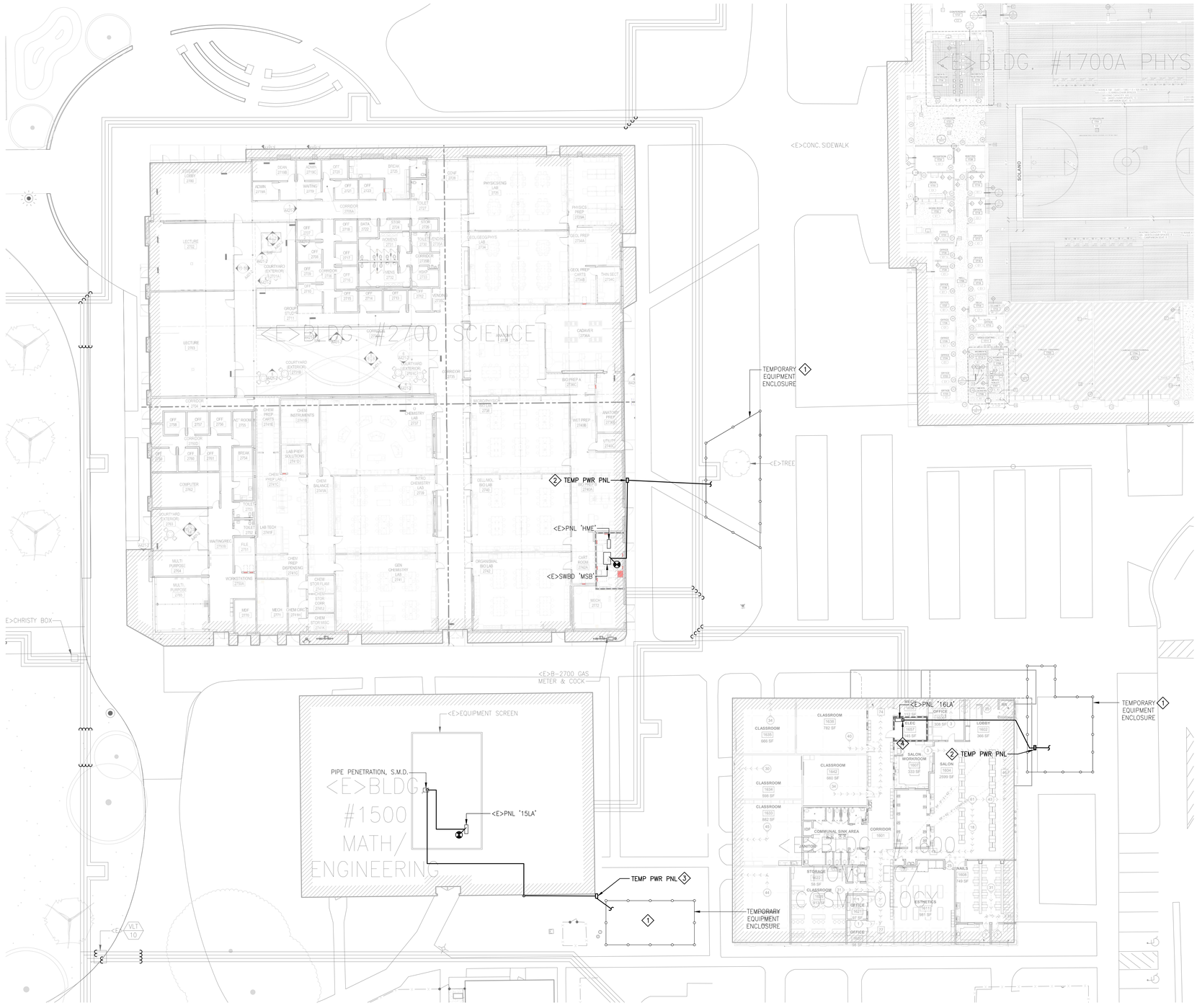
GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS, AND SPECIFICATIONS. PRIOR TO SUBMITTING PROPOSAL, CONTRACTOR SHALL EXAMINE ARCHITECTURAL, STRUCTURAL AND MECHANICAL CONSTRUCTION DRAWINGS AND SPECIFICATIONS AND SHALL HAVE VISITED THE CONSTRUCTION SITE. HE/SHE SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH HE/SHE WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION IN BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS/HER PART. DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING TEMPORARY FACILITIES AND CONNECTIONS REQUIRED FOR THE DURATION OF THE PROJECT.
2. ALL TEMPORARY CONNECTIONS SHALL BE CONSIDERED PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY, PERSONAL, AND PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT, AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
4. THE CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ALL ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
5. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL, AT THE CONCLUSION OF THE PROJECT, PROVIDE A SET OF REPRODUCIBLE (AUTOCAD), ACCURATE AND NEAT "AS-BUILT" DRAWINGS ACCEPTABLE TO THE ARCHITECT.
6. THESE DRAWINGS DO NOT REPRESENT THE EXACT LOCATIONS, SIZES OR EXTENT OF UTILITIES ON SITE. CONTRACTOR SHALL TAKE STANDARD PRECAUTIONS FOR WORK IN EXISTING FACILITIES.
7. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION, AS REQUIRED AND/OR DIRECTED. WHERE REQUIRED, SHOWN AND/OR DIRECTED, OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED. IN SOME CASES IT MAY BE NECESSARY TO EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING OR REPLACE OLD WIRING WITH NEW.
8. CERTAIN REMODELING OF ELECTRICAL FACILITIES WILL BE REQUIRED IN THE EXISTING BUILDING. EXISTING CONDUIT RUNS ARE GENERALLY NOT SHOWN, ALTHOUGH A FULL ATTEMPT HAS BEEN MADE TO SHOW SOME EXISTING CONDITIONS, OF WHICH INFORMATION HAS BEEN TAKEN FROM EXISTING RECORD DRAWINGS AND/OR LIMITED FIELD INVESTIGATIONS. THE DRAWINGS SHOWING LOCATION OF EXISTING EQUIPMENT, OUTLETS, FIXTURES, ETC., ARE APPROXIMATE ONLY (CONTRACTOR TO FIELD VERIFY).
9. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY AND SHALL BE INSTALLED AS PER LISTING OR LABELING (IE. MAXIMUM FUSE SIZE MEANS FUSE PROTECTION IS REQUIRED).
10. ALL ELECTRICAL EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
    a. AMERICAN STANDARD ASSOCIATION (ASA)
    b. AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)
    c. AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)
    d. CALIFORNIA CODE OF REGULATIONS TITLE 24 (CCR)
    e. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
    f. INSULATED POWER CABLE ENGINEERS ASSOCIATIONS (IPCEA)
    g. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATIONS (NEMA)
    h. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
    i. ALL LOCAL CODE HAVING JURISDICTION
11. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL UTILITY SYSTEM SHUT-DOWNS AND START-UP. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION REQUIRED WITH OTHER AGENCIES AND UTILITY COMPANIES.
12. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CROSSINGS ON NEW UTILITIES WITH THAT OF EXISTING ON SITE AND IN ADJACENT PROPERTIES. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS OR DISCREPANCIES FROM THIS PLAN.
13. CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH OTHER TRADE ON SITE. ANY COST TO PERFORM WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATIONS. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT/ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
14. COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. PROVIDE POWER AND CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON ELECTRICAL DRAWINGS AND DRAWINGS OF OTHER TRADES. CONTRACTOR SHALL REVIEW DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT. DISCONNECT SWITCHES, STARTERS, AND CONDUITS FOR CONTROL WIRING FOR MECHANICAL AND PLUMBING EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUITS TO THIS EQUIPMENT.
15. BEFORE ROUGH-IN, VERIFY ALL MOUNTING HEIGHTS AND EXACT LOCATIONS FOR ALL EQUIPMENT, ELECTRICAL CONNECTIONS, STUB-UPS, RECEPTACLES, OUTLETS, CONDUIT RUNS, ETC. WITH ARCHITECT AND OWNER. PLACE DEVICES LOCATED ABOVE COUNTERS, SHELVING, ETC. AND IN BATHROOMS SO AS NOT TO CONFLICT WITH EDGES OF WAINSCOTING, COUNTER SPLASH, SHELVING, ETC. ARCHITECTURAL DRAWINGS SHALL GOVERN. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATIONS OF ELECTRICAL DEVICES
16. MOUNTING HEIGHTS OF ALL CONTROL DEVICES TO BE USED BY OCCUPANT OF THE ROOM OR AREA SHALL BE MOUNTED AT THE FOLLOWING HEIGHTS:
    RECEPTACLES OUTLETS : +18" (TO BOTTOM OF OUTLETS)
    TELEPHONE/TV/DATA OUTLETS : +18" (TO BOTTOM OF OUTLETS)
    LIGHT SWITCHES : +44" (TO HIGHEST OPERABLE PART)
    OUTLETS ABOVE COUNTER : +44" (TO HIGHEST OPERABLE PART)
    MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO LOCATION OF DEVICE AS NOTED. EQUIPMENT INSTALLED IN LOCATIONS NOT APPROVED BY THE ARCHITECT SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
17. COORDINATE ALL OUTLET BOX INSTALLATION WITH ARCHITECTURAL WALL FINISH SCHEDULES. SPACE BETWEEN FACEPLATE AND DEVICE BOX SHALL NOT EXCEED 1/8".
18. FOR RENOVATION WORK, THE CONTRACTOR SHALL CONCEAL ALL WORK WHERE POSSIBLE. ALL EXPOSED RACEWAY AND BOXES IN OCCUPIED AREAS OR ON EXTERIOR WALLS SHALL BE PAINTED TO MATCH ADJACENT FINISHES.
19. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
20. SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS. FURNISH AND INSTALL FIRE RATED BACKBOXES AS REQUIRED, MAINTAINING FIRE RATING OF CEILING OR WALLS WHERE RECESSED ELECTRIC EQUIPMENT SUCH AS LIGHT FIXTURES, SWITCHES, RECEPTACLES, PANEL, ETC. ARE INSTALLED IN RATED WALL OR CEILINGS. PENETRATIONS OF FIRE RATED WALLS, CEILINGS, OR FLOORS SHALL COMPLY WITH CBC CHAPTER 7 (714) REQUIREMENTS. CONDUIT PENETRATIONS THAT ARE NOT STUBBED-OUT INSIDE THE WALL SHALL MEET F AND T RATING. ALL FIRE PROOFING METHODS SHALL BE UL APPROVED.
21. ALL EXTERIOR EQUIPMENT SHALL BE NEMA 3R RATED. ALL WALL PENETRATIONS TO EXTERIOR WALLS SHALL BE SEALED WATER TIGHT.
22. PULLING TAPES: ALL RACEWAY WITHOUT CABLE OR WIRE SHALL BE INSTALLED WITH A MINIMUM 1100 LBS. STRENGTH TEST POLYESTER PULLING TAPE. PULLING TAPES SHALL BE DETECTABLE MULE-TAPE WITH SEQUENTIAL FOOTAGE MARKING.
23. RUN NO MORE THAN 3 CURRENT CARRYING CONDUCTORS IN ANY WIREWAY UNLESS DE-RATING IS APPROVED BY ENGINEER OR SHOWN ON DRAWINGS.
24. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER, #10 AWG MINIMUM, RATED FOR 600V, THHN/THWN, 75 DEGREE CELSIUS. ALL CONDUCTORS SHALL BE STRANDED, SOFT DRAWN ANNEALED COPPER WIRE 98% CONDUCTIVITY, BEARING THE UL LABEL. SYSTEM VOLTAGE SHALL BE IDENTIFIED AS TO VOLTAGE AND PHASE CONNECTIONS BY MEANS OF COLOR IMPREGNATED INSULATION OR APPROVED COLORED MARKING TAPE.
25. WHERE MULTI-HOMERUNS ARE INDICATED ON DRAWINGS INDICATING THE SAME CIRCUIT NUMBER, PROVIDE A JUNCTION BOX ABOVE THE ACCESSIBLE CEILING AND ROUTE ONE SET OF WIRES TO THE CIRCUIT BREAKER.
26. REFER TO THE SINGLE LINE DIAGRAM FOR THE CONDUIT AND CONDUCTOR SIZES HOMERUN TO ELECTRICAL PANELS. CONDUIT RUNS MAY NOT BE SHOWN ON DRAWINGS, BUT ARE PART OF THIS CONTRACT.
27. ALL CONDUIT RUNS INCLUDING STRAIGHT FEEDER AND BRANCH CIRCUIT SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS.
28. FINAL CONNECTIONS TO ALL EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS, AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIAL AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
29. DO NOT COMBINE DIFFERENT SYSTEM VOLTAGES IN SAME CONDUIT (EG., 120/208V VS. 277/480V), UNLESS APPROVED BY ENGINEER OR SHOWN ON DRAWINGS.
30. ELECTRICAL SYSTEMS SHALL BE INSTALLED FOR FINAL INSPECTIONS. PROVIDE NEUTRAL TEST AND PROOF OF TORQUE DURING FINAL INSPECTION FOR ALL UNITS. FINAL TERMINATIONS OF CONDUCTORS TO ELECTRICAL EQUIPMENT AND DEVICES SHALL BE TORQUE WRENCH TIGHTENED TO THE MANUFACTURER'S RECOMMENDED SPECIFICATION, NO EXCEPTION.
31. CIRCUIT BREAKER TERMINALS IN SWITCHBOARDS AND LOAD CENTER SHALL BE UL LISTED AND APPROVED FOR USE WITH COPPER 75 DEGREE CELSIUS CONDUCTORS.
32. SIZES OF BREAKERS, SWITCHES, FUSES AND FEEDERS ARE BASED ON DESIGNED EQUIPMENT SIZES. THESE SIZES SHALL BE ADJUSTED TO SATISFY REQUIREMENTS OF ACTUAL INSTALLED OR SUBSTITUTE EQUIPMENT. UP SIZING OR DOWNSIZING OF FEEDERS SHALL BE PROVIDED WITHOUT ADDITIONAL COST TO THE OWNER.
33. AS REQUIRED ALL OVERSIZED FEEDERS THAT WERE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP SHALL BE PROVIDED WITH ADAPTER LUGS OR SPLICE BOX. ADAPTER LUGS SHALL BE PROVIDED IF SIZE IS AVAILABLE. OTHERWISE PROVIDE CABLE SPLICES IN THE SPLICE BOX TO REDUCE CABLES TO THE MAXIMUM SIZE THAT THE BREAKER LUGS CAN ACCOMMODATE.
34. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAW-CUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO COMPLETE WORK. USE EXTREME CAUTION WHEN TRENCHING NEAR EXISTING UNDERGROUND UTILITY LINES. CONTRACTOR SHALL PROVIDE ALL REQUIRED CUTTING, PATCHING, PAINTING, AND REPAIRS NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING AT THE START OF WORK.
35. ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST HORIZONTAL FORCE ACTING IN ANY DIRECTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF ASCE7.
36. ALL INTERIOR AND ABOVE GRADE EXTERIOR CONDUIT INSTALLATION SHALL BE RIGID GALVANIZED STEEL, UNLESS EXCEPTED BY NOTE 37 BELOW.
37. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN THE FOLLOWING CONDITIONS: INTERIOR APPLICATIONS, SMALLER THAN 2" TRADE SIZE DIAMETER AND INSTALLED EIGHT (8) FEET FROM FINISHED FLOOR OR HIGHER, OR INTERIOR APPLICATIONS, SMALLER THAN 2" TRADE SIZE DIAMETER AND ENTERING A PANEL FROM ABOVE.
38. CONNECTIONS TO VIBRATING EQUIPMENT (MOTOR, TRANSFORMER ENCLOSURE, ETC.) AND SEISMIC SEPARATIONS SHALL BE PROVIDED WITH LIQUID-TIGHT FLEXIBLE STEEL CONDUIT WITH WATERTIGHT CONNECTORS. MAXIMUM LENGTH OF CONDUIT SHALL BE SIX FEET, UNLESS OTHERWISE NOTED.
39. POLYVINYL CHLORIDE (PVC) SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB AND UNDERGROUND INSTALLATION. INSTALL PVC COATED RIGID STEEL CONDUIT FOR TRANSITION FROM UNDERGROUND TO ABOVE GRADE INSTALLATION.
40. CONTRACTOR SHALL PROVIDE TERMINATIONS FOR ALL DATA/VOICE CABLES INDICATED AT OUTLET LOCATIONS INDICATED ON DRAWINGS.
41. CONTRACTOR SHALL PROVIDE AND INSTALL ACCESS PANELS IN NON-ACCESSIBLE CEILINGS WHERE REQUIRED TO ACCESS ELECTRICAL EQUIPMENT IN CEILING SPACE. ACCESS DOORS SHALL HAVE FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
42. ALL FIRE LIFE SAFETY EQUIPMENT, SUCH AS FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLIES SHALL BE PROVIDED WITH DEDICATED CIRCUITS. IDENTIFY CIRCUIT DESIGNATION AND PROVIDE PERMANENT LABELING, "FIRE ALARM CIRCUIT" ON ELECTRICAL PANEL. PROVIDE LOCKABLE CIRCUIT BREAKER.
43. CONTROL CONDUIT FOR ENERGY/BUILDING MANAGEMENT SYSTEM (E/BMS) SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
44. ROUTE CONDUIT PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.
45. WHEN A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT, CIRCUIT BREAKERS, ETC., ARISES ON THE DRAWINGS OR SPECIFICATIONS, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL REQUIRED BY THE MOST STRINGENT CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO PROVIDE A COMPLETE AND OPERABLE SYSTEM, OR AS DIRECTED BY ENGINEER.
46. FOR SMALL AC MOTORS NOT HAVING BUILT-IN THERMAL OVERLOAD PROTECTION, PROVIDE MANUAL MOTOR STARTERS WITH OVERLOAD HEATER ELEMENTS SIZED PER MANUFACTURER'S RECOMMENDATION. FOR SMALL AC MOTORS WITH BUILT-IN THERMAL OVERLOAD PROTECTION, PROVIDE A HORSEPOWER RATED TOGGLE DISCONNECT SWITCH.
47. DISCONNECT SAFETY SWITCHES SHALL BE HEAVY DUTY AND BE RATED FOR THE NUMBER OF POLES, VOLTAGE, CURRENT AND HORSEPOWER RATING AS REQUIRED. PROVIDE FUSE PROTECTION BASED ON THE MOTOR NAMEPLATE RATINGS.
48. PROVIDE PERMANENT IDENTIFICATION (NAMEPLATES) FOR ALL ELECTRICAL PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, TRANSFORMERS, TERMINAL CABINETS, ETC.
49. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILING. PROVIDE ALL NECESSARY MOUNTING KIT/HARDWARE TO PROVIDE A COMPLETE WORKING LIGHTING SYSTEM.
50. ALL FINAL ELECTRICAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE ELECTRICAL CONTRACTOR.
51. ALL SPLICES AND TERMINALS SHALL BE COMPRESSION TYPE, OF SEAMLESS PURE COPPER, TIN PLATED, LONG BARREL, INSPECTION WINDOW, TERMINALS WITH TWO-HOLE PAD (WITH NEMA DRILLING). CLEAN ALL SURFACES AND INSTALL WITH OXIDE INHIBITING COMPOUND BURNDY PENETROX-E OR EQUAL. APPLY COMPOUND BETWEEN BUS BAR AND LUG PAD AND BETWEEN CONDUCTOR AND LUG BARREL. INSTALL COMPRESSION CONNECTORS WITH A FULLY CIRCUMFERENTIAL COMPRESSION DIE BURNDY HYPRESS OR EQUAL.
52. LABEL ALL CONDUIT WHERE IT BEGINS, AND WHERE IT TERMINATES INTO A BOX, PANEL, DEVICE, LOAD, OR DISCONNECT. CONDUIT SHALL BE LABELED EVERY 30 FEET OR LESS. CONDUIT SHALL BE LABELED WHERE IT PENETRATES ANY WALL OR FLOOR. LABEL SHALL BE PERMANENT PRINTED LABELS (DESCRIBING SOURCE, CIRCUIT, AND LOAD) LEGIBLE FROM FLOOR WHERE POSSIBLE (STANDING POSITION).
53. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT OR INSTALLATION METHODS.
54. PROVIDE ARC-FLASH HAZARD WARNING LABELS ON ALL AFFECTED ELECTRICAL EQUIPMENT, INCLUDING SWITCHBOARDS, PANEL BOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS. MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS. LABEL SHALL BE FACTORY PRE-PRINTED OR MACHINE-PRINTED SELF-ADHESIVE VINYL MATERIAL; UV, CHEMICAL, WATER, HEAT AND ABRASION RESISTANT; PRODUCED USING MATERIALS RECOGNIZED BY UL 969. MINIMUM SIZE: 3.5 BY 5 INCHES.
55. UNLESS OTHERWISE NOTED, ARRANGE, PAY FOR, COORDINATE AND PROVIDE ALL PERMITS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
56. ALL WORK IS <N> UNLESS OTHERWISE NOTED.
57. ELECTRICAL CONDUCTORS SERVING EQUIPMENT SUPPLIED BY POWER CONVERSION EQUIPMENT AS PART OF A VARIABLE FREQUENCY DRIVE (VFD) SYSTEM AND/OR A SERVO DRIVE SYSTEM SHALL HAVE THERMOSET INSULATION TYPE XHHW, OR XHHW-2

SYMBOLS & ABBREVIATIONS

EXTENT OF DEMOLITION
NEW TO EXISTING CONNECTION
1 — WORK ITEM (ELECTRICAL)
1/E-ST — DETAIL DESIGNATION; DETAIL NUMBER / DRAWING NUMBER (IF BLANK, SAME SHEET)
CT 1 — EQUIPMENT DESIGNATION; EQUIPMENT TYPE / EQUIPMENT NUMBER
1/E-ST — SECTION DESIGNATION; SECTION NUMBER / DRAWING NUMBER (IF BLANK, SAME SHEET)
EXISTING CONDUIT
NEW CONDUIT
CONDUIT TO BE DEMOLISHED
PANEL BOARD/TERMINAL CABINET – FLUSH/SURFACE MOUNTED
BRANCH CIRCUIT WIRING IN CONDUIT CONCEALED IN CEILING SPACE OR WHERE POSSIBLE, EXPOSED ON ROOF OR BUILDING EXTERIOR.
BRANCH CIRCUIT WIRING IN CONDUIT CONCEALED UNDER FLOOR, UNDERGROUND OR WHERE POSSIBLE.
BRANCH CIRCUIT HOME RUN TO PANEL. CONCEALED IN CEILING SPACE OR WHERE POSSIBLE. *= PANEL BOARD & CIRCUIT #
EXISTING DEVICES, CONDUITS, WIRES, ETC TO REMAIN
NEW (BOLD) DEVICES, CONDUITS, WIRES, ETC.
CONDUIT UP
CONDUIT DOWN
WALL MOUNTED DUPLEX RECEPTACLE 20A, 125V, 3WG, NEMA 5-20R, +18"AFF
C — WALL MOUNTED DUPLEX CONTROL RECEPTACLE
WP GFI — DUPLEX GFI RECEPTACLE, WEATHERPROOF, 20A, 165V, 3WG, NEMA 5-20R, GFI
WALL-MOUNTED DOUBLE DUPLEX RECEPTACLE 20A, 125V, 3WG, (2) NEMA 5-20R, +18" UON
SPECIAL RECEPTACLE (TYPE AND CONFIGURATION AS NOTED)
(1) RJ-45 DATA OUTLET
(1) RJ-11 VOICE OUTLET W/ FACE PLATE
(1) RJ-45 DATA OUTLET – CEILING
CEILING-MOUNTED DUPLEX RECEPTACLE 20A, 125V, 3WG, NEMA 5-20R
CEILING-MOUNTED DOUBLE DUPLEX RECEPTACLE 20A, 125V, 3WG, (2) NEMA 5-20R

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 ENLARGED SITE PLAN ZONE #1 - DEMO

SCALE: 1" = 20' - 0"

0 20' 40'

N

GENERAL SHEET NOTES

A. CONTRACTOR TO PROVIDE HEAVY DUTY CABLE PROTECTOR AT PARKING & DRIVE AISLE WITH SLIP RESISTANT ADA ACCESSIBILITY PEDESTRIAN RAMP. PROVIDE COMPLETE MODULAR DESIGN WITH INTERLOCKING 'T' SYSTEM, END CAPS AND END RAILS FOR ALL AREAS OF WORK. WHEN TEMPORARY CABLES CROSS FIRE ACCESS LANES, PROTECTION SHALL BE RATED FOR 32,000 LBS. PER AXLE. WHEN TEMPORARY CABLES CROSS ACCESSIBLE PATHS OF TRAVEL, PROTECTION SHALL MEET CODE REQUIRED SLOPES AND ELEVATION CHANGES.

B. WHEN PENETRATING INTO EXISTING ELECTRICAL EQUIPMENT OR ENCLOSURES, ALL PENETRATIONS SHALL BE SEALED AND PROTECTED AS NEEDED.

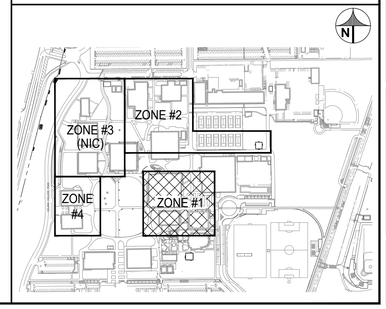
C. WHEN TEMPORARY POWER IS REMOVED, ALL EQUIPMENT, BUILDING, AND SITE CONDITIONS SHALL BE RETURNED TO THE SAME CONDITIONS AS THEY WERE PRIOR TO CONSTRUCTION.

D. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. PROVIDE POWER TO TEMPORARY MECHANICAL EQUIPMENT VIA A TEMPORARY POWER DISTRIBUTION PANEL CONNECTED TO THE EXISTING MAIN PANEL IN THE BUILDING BEING SERVED.
2. MOUNT PANEL ON FREESTANDING STRUCTURE, REFER TO DETAIL 4/E-5.1. STRUCTURE TO BE DEMOLISHED AND REMOVED AFTER COMPLETION OF WORK.
3. MOUNT PANEL ON FREESTANDING STRUCTURE, REFER TO DETAIL 3/E-5.1. STRUCTURE TO BE DEMOLISHED AND REMOVED AFTER COMPLETION OF WORK.
4. ROOF PENETRATION PER DETAIL 6/E-5.1. PENETRATION TO BE CAPPED AND SEALED AFTER COMPLETION OF WORK.

KEY PLAN



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SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

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FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	HK
APPROVED BY:	HK

SHEET TITLE

ELECTRICAL
ENLARGED SITE PLAN
ZONE #1 (B-1500, B-1600, & B-2700)
DEMO

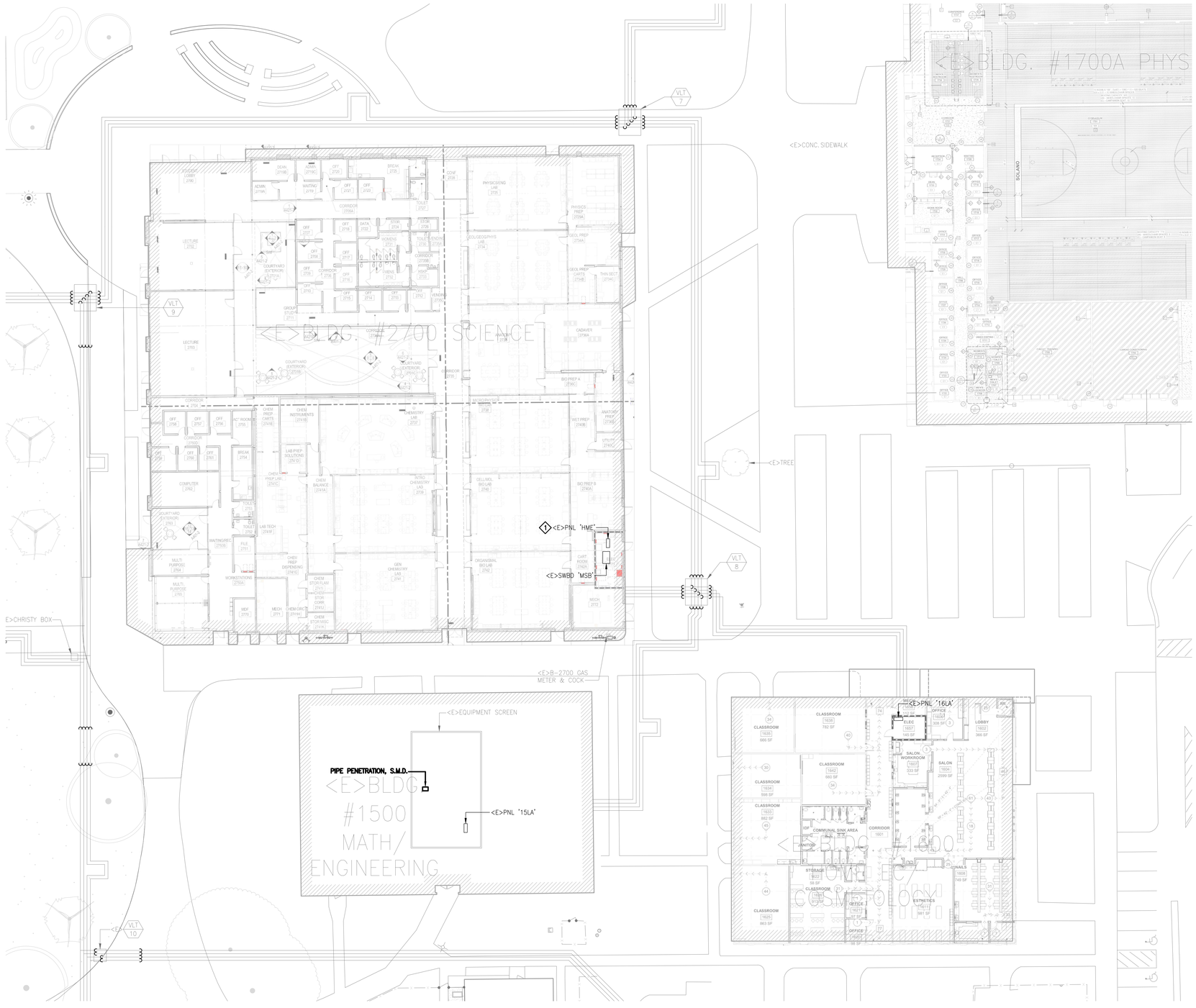
SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

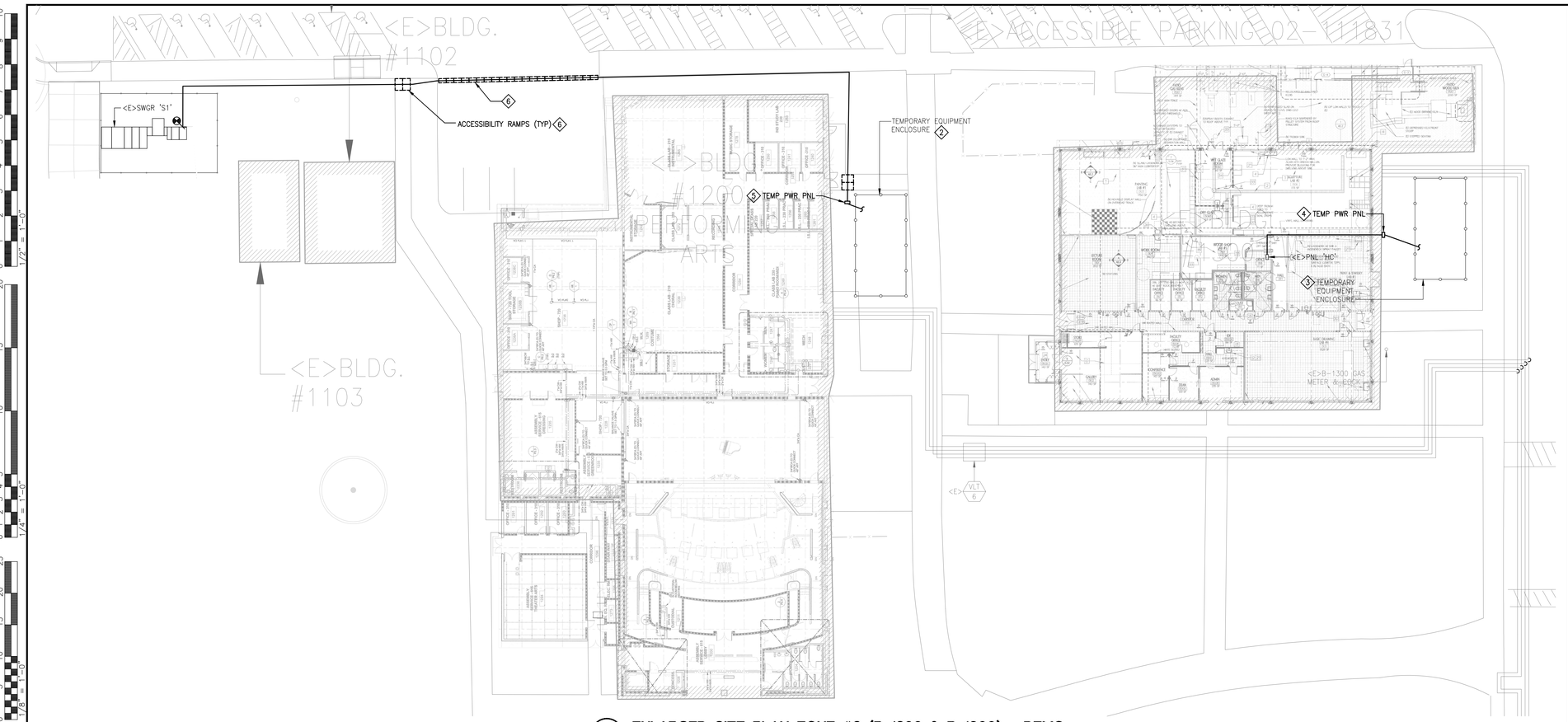
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SHEET OF –

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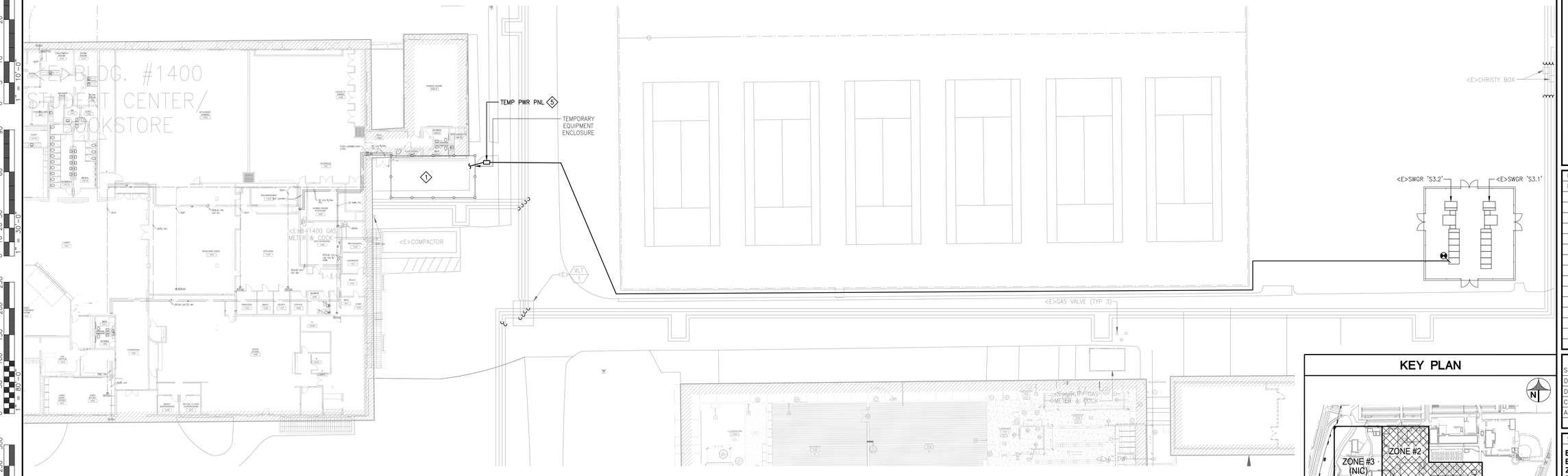


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2 ENLARGED SITE PLAN ZONE #2 (B-1200 & B-1300) - DEMO

SCALE: 1" = 20' - 0"



1 ENLARGED SITE PLAN ZONE #2 (B-1400) - DEMO

SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. CONTRACTOR TO PROVIDE HEAVY DUTY CABLE PROTECTOR AT PARKING & DRIVE AISLE WITH SLIP RESISTANT ADA ACCESSIBILITY PEDESTRIAN RAMP. PROVIDE COMPLETE MODULAR DESIGN WITH INTERLOCKING 'T' SYSTEM, END CAPS AND END RAILS FOR ALL AREAS OF WORK. WHEN TEMPORARY CABLES CROSS FIRE ACCESS LANES, PROTECTION SHALL BE RATED FOR 32,000 LBS. PER AXLE. WHEN TEMPORARY CABLES CROSS ACCESSIBLE PATHS OF TRAVEL, PROTECTION SHALL MEET CODE REQUIRED SLOPES AND ELEVATION CHANGES.

B. WHEN PENETRATING INTO EXISTING ELECTRICAL EQUIPMENT OR ENCLOSURES, ALL PENETRATIONS SHALL BE SEALED AND PROTECTED AS NEEDED.

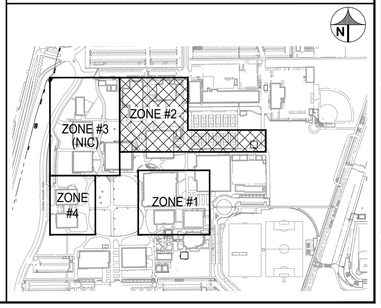
C. WHEN TEMPORARY POWER IS REMOVED, ALL EQUIPMENT, BUILDING, AND SITE CONDITIONS SHALL BE RETURNED TO THE SAME CONDITIONS AS THEY WERE PRIOR TO CONSTRUCTION.

D. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. PROVIDE POWER TO TEMPORARY MECHANICAL EQUIPMENT VIA A TEMPORARY POWER DISTRIBUTION PANEL CONNECTED TO THE EXISTING SUBSTATION 3.
2. PROVIDE POWER TO TEMPORARY MECHANICAL EQUIPMENT VIA A TEMPORARY POWER DISTRIBUTION PANEL CONNECTED TO THE EXISTING SUBSTATION 1.
3. PROVIDE POWER TO TEMPORARY MECHANICAL EQUIPMENT VIA A TEMPORARY POWER DISTRIBUTION PANEL CONNECTED TO THE EXISTING MAIN PANEL IN THE BUILDING BEING SERVED.
4. MOUNT PANEL ON FREESTANDING STRUCTURE. REFER TO DETAIL 4/E-5.1. STRUCTURE TO BE DEMOLISHED AND REMOVED AFTER COMPLETION OF WORK.
5. MOUNT PANEL ON FREESTANDING STRUCTURE. REFER TO DETAIL 3/E-5.1. STRUCTURE TO BE DEMOLISHED AND REMOVED AFTER COMPLETION OF WORK.
6. CABLE PROTECTORS. REFER TO DETAIL 5/E-5.1.

KEY PLAN



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SOLANO COMMUNITY COLLEGE DISTRICT

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HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE

MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
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SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	HK
APPROVED BY:	HK

SHEET TITLE

ELECTRICAL
ENLARGED SITE PLAN
ZONE #2 (B-1200, B-1300, & B-1400)
DEMO

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

ED-1.2

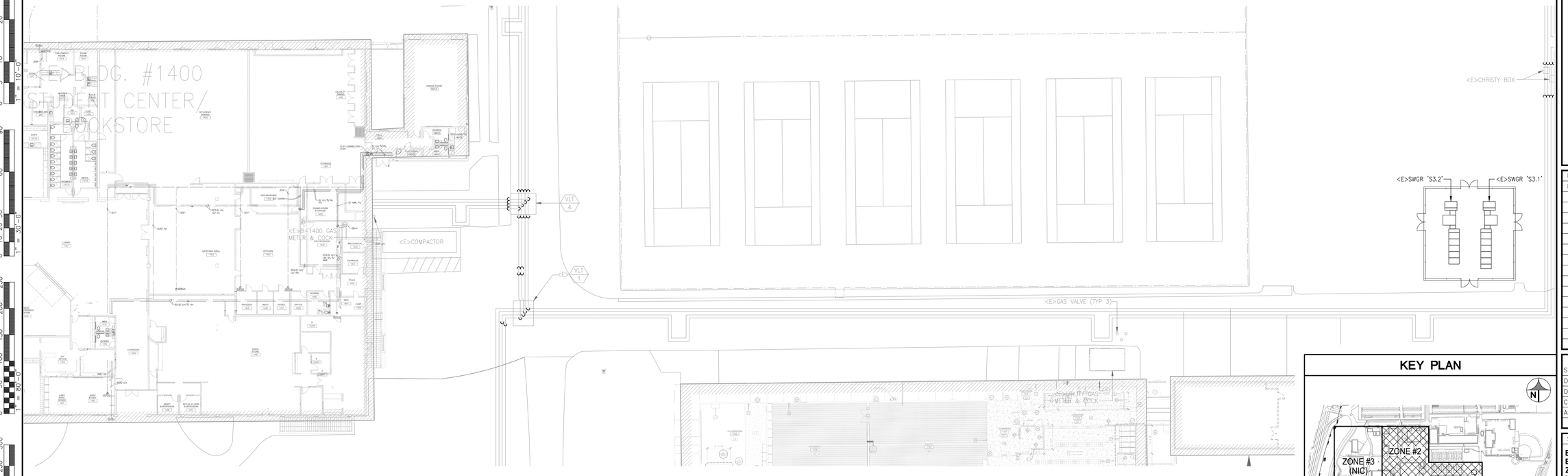
SHEET OF –

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2 ENLARGED SITE PLAN ZONE #2 (B-1200 & B-1300) - NEW

SCALE: 1" = 20' - 0"



1 ENLARGED SITE PLAN ZONE #2 (B-1400) - NEW

SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. CONTRACTOR TO PROVIDE HEAVY DUTY CABLE PROTECTOR AT PARKING & DRIVE AISLE WITH SLIP RESISTANT ADA ACCESSIBILITY PEDESTRIAN RAMP. PROVIDE COMPLETE MODULAR DESIGN WITH INTERLOCKING 'T' SYSTEM, END CAPS AND END RAILS FOR ALL AREAS OF WORK. WHEN TEMPORARY CABLES CROSS FIRE ACCESS LANES, PROTECTION SHALL BE RATED FOR 32,000 LBS. PER AXLE. WHEN TEMPORARY CABLES CROSS ACCESSIBLE PATHS OF TRAVEL, PROTECTION SHALL MEET CODE REQUIRED SLOPES AND ELEVATION CHANGES.

B. WHEN PENETRATING INTO EXISTING ELECTRICAL EQUIPMENT OR ENCLOSURES, ALL PENETRATIONS SHALL BE SEALED AND PROTECTED AS NEEDED.

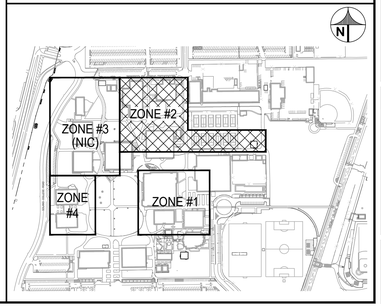
C. WHEN TEMPORARY POWER IS REMOVED, ALL EQUIPMENT, BUILDING, AND SITE CONDITIONS SHALL BE RETURNED TO THE SAME CONDITIONS AS THEY WERE PRIOR TO CONSTRUCTION.

D. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. EXISTING CHWP AND HP HHWP TO BE REPLACED WITH NEW. INTERCEPT AND EXTEND EXISTING FEEDERS AS NECESSARY TO CONNECT TO NEW PUMPS.

KEY PLAN



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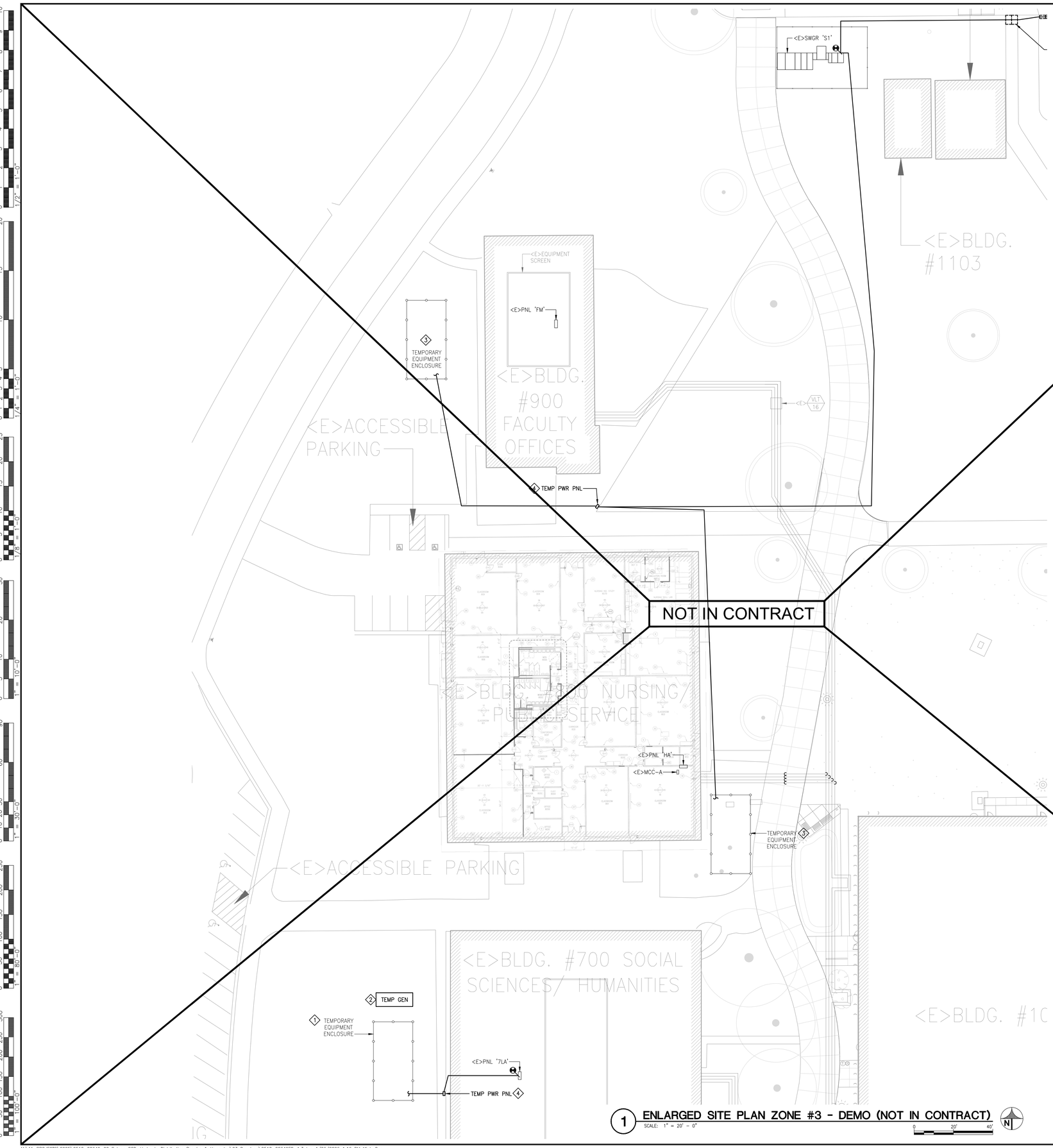
ELECTRICAL
ENLARGED SITE PLAN
ZONE #2 (B-1200, B-1300, & B-1400)
NEW

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

E-1.2

SHEET OF –

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1 ENLARGED SITE PLAN ZONE #3 - DEMO (NOT IN CONTRACT)
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. CONTRACTOR TO PROVIDE HEAVY DUTY CABLE PROTECTOR AT PARKING & DRIVE AISLE WITH SLIP RESISTANT ADA ACCESSIBILITY PEDESTRIAN RAMP. PROVIDE COMPLETE MODULAR DESIGN WITH INTERLOCKING 'T' SYSTEM, END CAPS AND END RAILS FOR ALL AREAS OF WORK. WHEN TEMPORARY CABLES CROSS FIRE ACCESS LANES, PROTECTION SHALL BE RATED FOR 32,000 LBS. PER AXLE. WHEN TEMPORARY CABLES CROSS ACCESSIBLE PATHS OF TRAVEL, PROTECTION SHALL MEET CODE REQUIRED SLOPES AND ELEVATION CHANGES.

B. WHEN PENETRATING INTO EXISTING ELECTRICAL EQUIPMENT OR ENCLOSURES, ALL PENETRATIONS SHALL BE SEALED AND PROTECTED AS NEEDED.

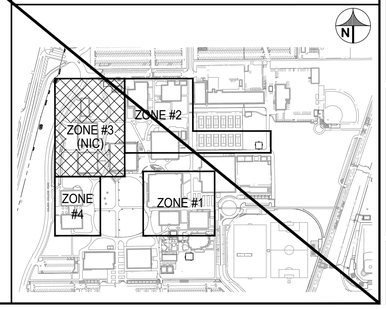
C. WHEN TEMPORARY POWER IS REMOVED, ALL EQUIPMENT, BUILDING, AND SITE CONDITIONS SHALL BE RETURNED TO THE SAME CONDITIONS AS THEY WERE PRIOR TO CONSTRUCTION.

D. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. PROVIDE POWER TO TEMPORARY MECHANICAL EQUIPMENT. CHILLER AND CHILLED WATER PUMP SHALL BE FED BY A TEMPORARY POWER DISTRIBUTION PANEL CONNECTED TO THE EXISTING MAIN PANEL IN THE BUILDING BEING SERVED. BOILER AND HOT WATER PUMP SHALL BE FED BY A TEMPORARY GENERATOR SIZED ADEQUATELY FOR THE EXPECTED LOADS.
2. 150KW, 480V, 3-PHASE, 4-WIRE PORTABLE GENERATOR. GENERATOR TO BE REFUELED AS NEEDED TO MAINTAIN RUNTIME OF 16 HOURS PER DAY, 5 DAYS A WEEK, FOR THE DURATION OF WORK AT THE BUILDING.
3. PROVIDE POWER TO TEMPORARY MECHANICAL EQUIPMENT VIA TEMPORARY POWER DISTRIBUTION PANEL CONNECTED TO THE EXISTING SUBSTATION 1.

KEY PLAN



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STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

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SOLANO COMMUNITY COLLEGE

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HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
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	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
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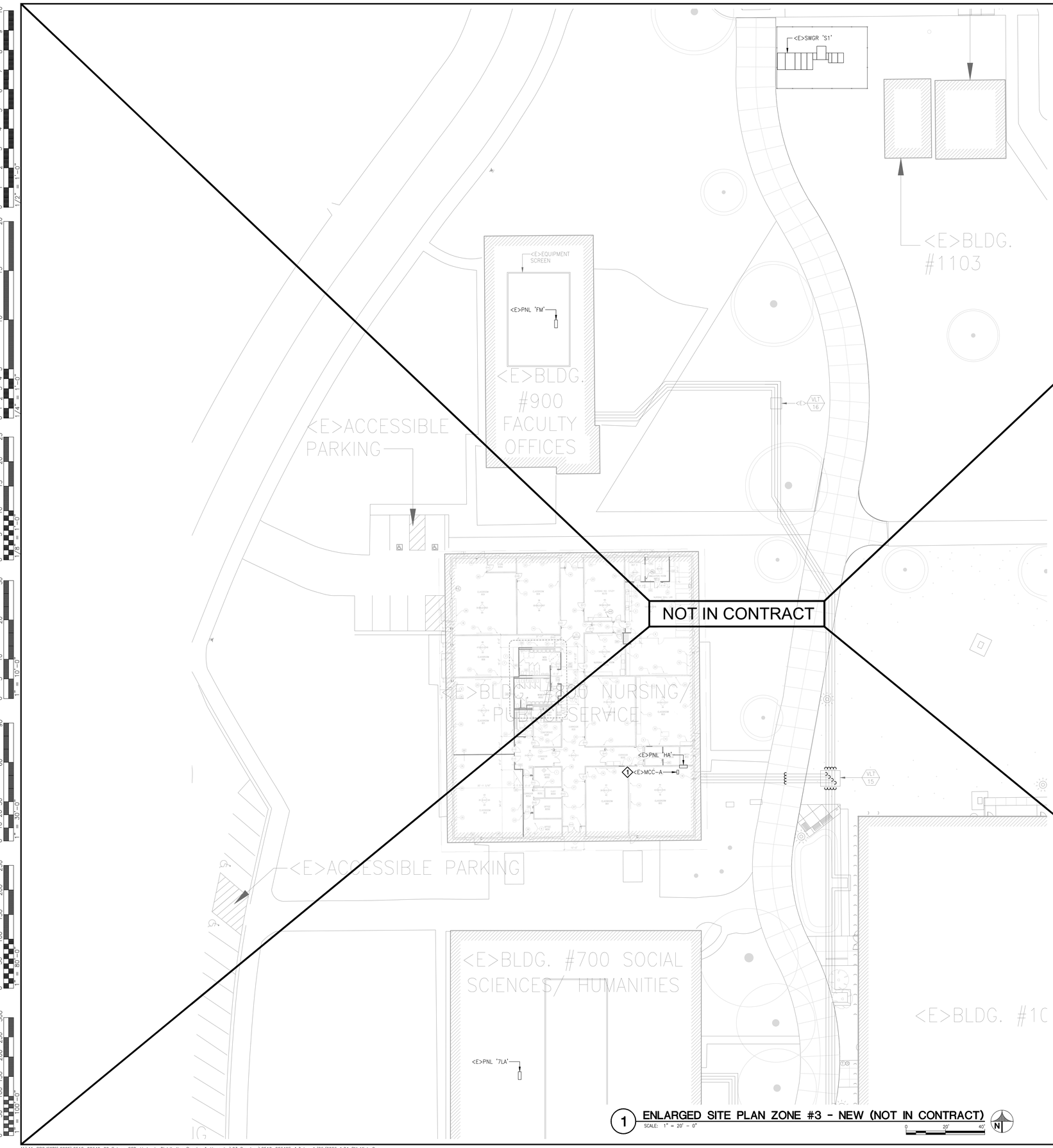
SHEET TITLE

ELECTRICAL
ENLARGED SITE PLAN
ZONE #3 (B-700, B-800, & B-900)
DEMO
(NOT IN CONTRACT)

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

ED-1.3
SHEET OF –

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



1 ENLARGED SITE PLAN ZONE #3 - NEW (NOT IN CONTRACT)
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. CONTRACTOR TO PROVIDE HEAVY DUTY CABLE PROTECTOR AT PARKING & DRIVE AISLE WITH SLIP RESISTANT ADA ACCESSIBILITY PEDESTRIAN RAMP. PROVIDE COMPLETE MODULAR DESIGN WITH INTERLOCKING 'T' SYSTEM, END CAPS AND END RAILS FOR ALL AREAS OF WORK. WHEN TEMPORARY CABLES CROSS FIRE ACCESS LANES, PROTECTION SHALL BE RATED FOR 32,000 LBS. PER AXLE. WHEN TEMPORARY CABLES CROSS ACCESSIBLE PATHS OF TRAVEL, PROTECTION SHALL MEET CODE REQUIRED SLOPES AND ELEVATION CHANGES.

B. WHEN PENETRATING INTO EXISTING ELECTRICAL EQUIPMENT OR ENCLOSURES, ALL PENETRATIONS SHALL BE SEALED AND PROTECTED AS NEEDED.

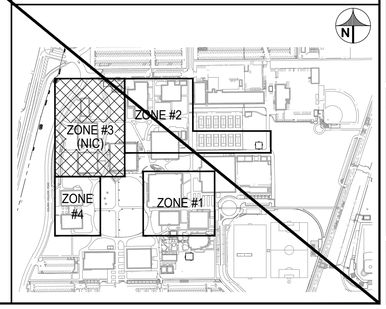
C. WHEN TEMPORARY POWER IS REMOVED, ALL EQUIPMENT, BUILDING, AND SITE CONDITIONS SHALL BE RETURNED TO THE SAME CONDITIONS AS THEY WERE PRIOR TO CONSTRUCTION.

D. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. EXISTING CHWP TO BE REPLACED WITH NEW. INTERCEPT AND EXTEND EXISTING FEEDER AS NECESSARY TO CONNECT TO NEW PUMP.

KEY PLAN



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National Strength.
Local Action.

REGISTERED PROFESSIONAL ENGINEER
HSIAW L. KING
No. E20530
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
CHECKED BY:	HK
APPROVED BY:	HK

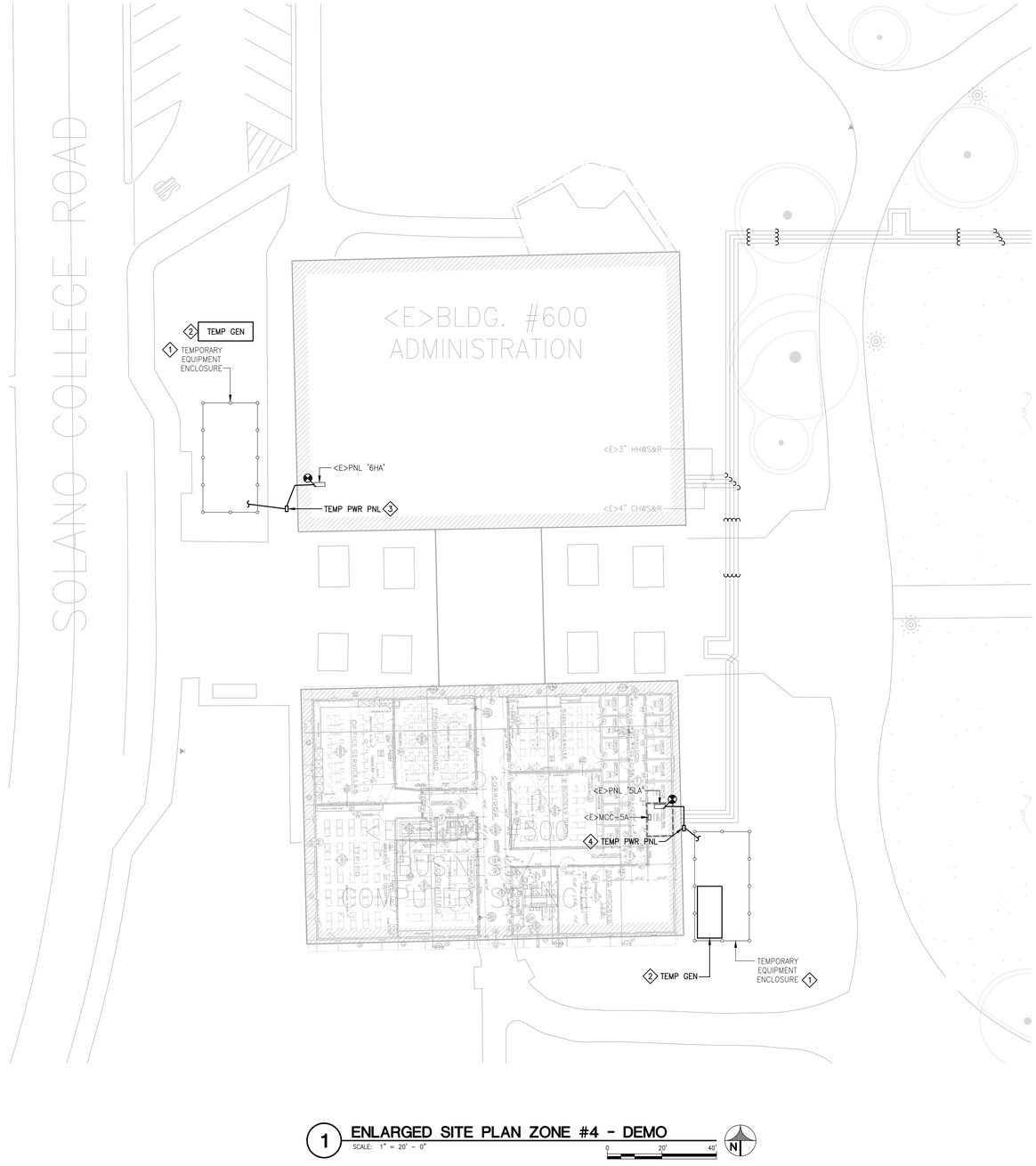
SHEET TITLE

ELECTRICAL
ENLARGED SITE PLAN
ZONE #3 (B-700, B-800, & B-900)
NEW
(NOT IN CONTRACT)

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

E-1.3
SHEET OF –

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1 ENLARGED SITE PLAN ZONE #4 - DEMO
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. CONTRACTOR TO PROVIDE HEAVY DUTY CABLE PROTECTOR AT PARKING & DRIVE AISLE WITH SLIP RESISTANT ADA ACCESSIBILITY PEDESTRIAN RAMP. PROVIDE COMPLETE MODULAR DESIGN WITH INTERLOCKING 'T' SYSTEM, END CAPS AND END RAILS FOR ALL AREAS OF WORK. WHEN TEMPORARY CABLES CROSS FIRE ACCESS LANES, PROTECTION SHALL BE RATED FOR 32,000 LBS. PER AXLE. WHEN TEMPORARY CABLES CROSS ACCESSIBLE PATHS OF TRAVEL, PROTECTION SHALL MEET CODE REQUIRED SLOPES AND ELEVATION CHANGES.

B. WHEN PENETRATING INTO EXISTING ELECTRICAL EQUIPMENT OR ENCLOSURES, ALL PENETRATIONS SHALL BE SEALED AND PROTECTED AS NEEDED.

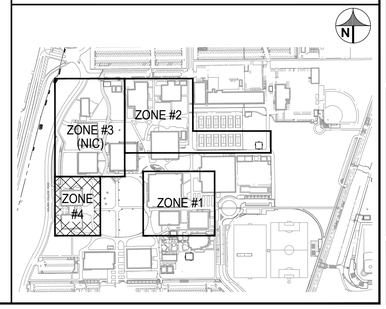
C. WHEN TEMPORARY POWER IS REMOVED, ALL EQUIPMENT, BUILDING, AND SITE CONDITIONS SHALL BE RETURNED TO THE SAME CONDITIONS AS THEY WERE PRIOR TO CONSTRUCTION.

D. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. PROVIDE POWER TO TEMPORARY MECHANICAL EQUIPMENT. CHILLER AND CHILLED WATER PUMP SHALL BE FED BY A TEMPORARY POWER DISTRIBUTION PANEL CONNECTED TO THE EXISTING MAIN PANEL IN THE BUILDING BEING SERVED. BOILER AND HOT WATER PUMP SHALL BE FED BY A TEMPORARY GENERATOR SIZED ADEQUATELY FOR THE EXPECTED LOADS.
2. 300KW, 480V, 3-PHASE, 4-WIRE PORTABLE GENERATOR. GENERATOR TO BE REFUELED AS NEEDED TO MAINTAIN RUNTIME OF 16 HOURS PER DAY, 5 DAYS A WEEK, FOR THE DURATION OF WORK AT THE BUILDING. GENERATOR TO BE SKID MOUNTED AND SECURED PER DETAIL 9/S-5.3.
3. MOUNT PANEL ON FREESTANDING STRUCTURE. REFER TO DETAIL 4/E-5.1. STRUCTURE TO BE DEMOLISHED AND REMOVED AFTER COMPLETION OF WORK.
4. MOUNT PANEL ON FREESTANDING STRUCTURE. REFER TO DETAIL 3/E-5.1. STRUCTURE TO BE DEMOLISHED AND REMOVED AFTER COMPLETION OF WORK.

KEY PLAN



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HENRY L. KING
No. E20630
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE
4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

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	10/24/25	50% CD
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	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

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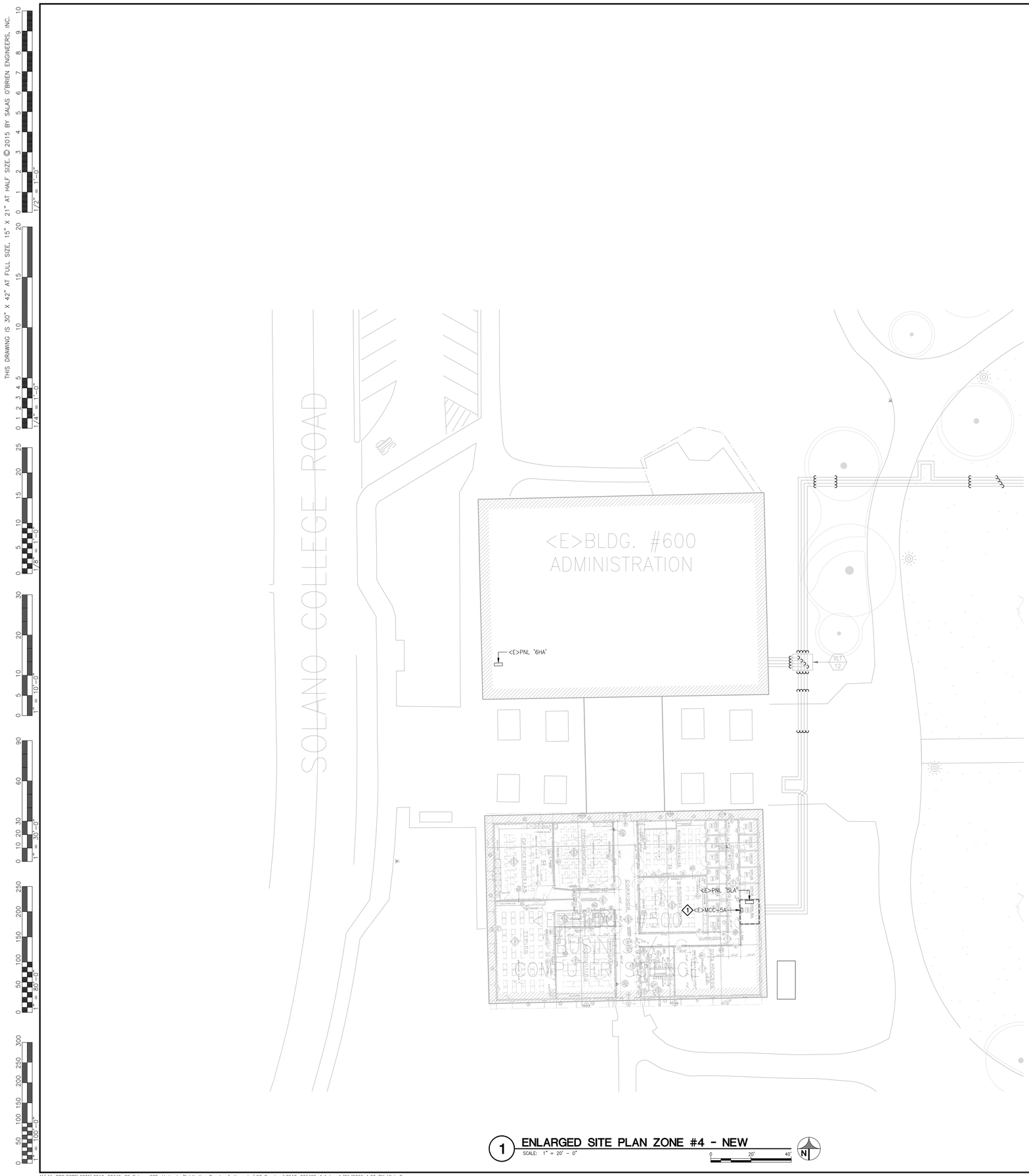
SHEET TITLE

ELECTRICAL ENLARGED SITE PLAN ZONE #4 (B-500, & B-600) DEMO

SCALE: AS NOTED
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ED-1.4
SHEET OF –

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1 ENLARGED SITE PLAN ZONE #4 - NEW
SCALE: 1" = 20' - 0"

GENERAL SHEET NOTES

A. CONTRACTOR TO PROVIDE HEAVY DUTY CABLE PROTECTOR AT PARKING & DRIVE AISLE WITH SLIP RESISTANT ADA ACCESSIBILITY PEDESTRIAN RAMP. PROVIDE COMPLETE MODULAR DESIGN WITH INTERLOCKING 'T' SYSTEM, END CAPS AND END RAILS FOR ALL AREAS OF WORK. WHEN TEMPORARY CABLES CROSS FIRE ACCESS LANES, PROTECTION SHALL BE RATED FOR 32,000 LBS. PER AXLE. WHEN TEMPORARY CABLES CROSS ACCESSIBLE PATHS OF TRAVEL, PROTECTION SHALL MEET CODE REQUIRED SLOPES AND ELEVATION CHANGES.

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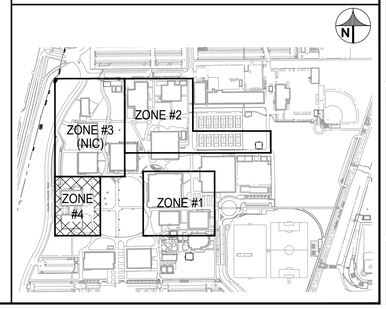
C. WHEN TEMPORARY POWER IS REMOVED, ALL EQUIPMENT, BUILDING, AND SITE CONDITIONS SHALL BE RETURNED TO THE SAME CONDITIONS AS THEY WERE PRIOR TO CONSTRUCTION.

D. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. EXISTING HHWP TO BE REPLACED WITH NEW. INTERCEPT AND EXTEND EXISTING FEEDER AS NECESSARY TO CONNECT TO NEW PUMP.

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SHEET TITLE

ELECTRICAL
ENLARGED SITE PLAN
ZONE #4 (B-500, & B-600)
NEW

SCALE: AS NOTED
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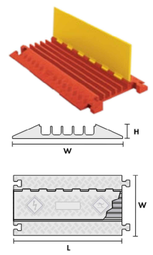
E-1.4
SHEET OF –

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5-Channel Heavy Duty

- Standard high-visibility yellow lid/orange base color
- Add accessories to create turns and jogs



Product	Model No.	Maximum OD	Load Capacity (per axle)	# of Channels
Heavy Duty 5-Channel	CP5X125	1.35 in (3.43 cm)	40,300 lb (18,280 kg)	5

Accessories

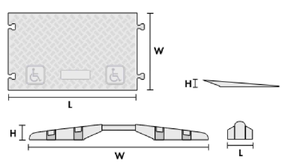


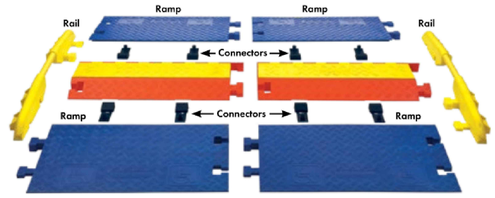
Model	Description	Length	Width	Height	Channel Width	Maximum OD	Weight
5-Channel Cable Protector							
CP5X125-Y/O	5-CH LB HD	36 in (91.4 cm)	20 in (50.8 cm)	2.31 in (5.72 cm)	1.35 in (3.43 cm)	1.35 in (3.43 cm)	25 lb (11.3 kg)

Accessibility Ramps and Rails

- Gradual slope and slip-resistant surface is ADA and DDA compliant
- Add ramps and rails while still having access to cables and cords; one person installation, no tools required

For 5-Channel, 4-Channel Heavy Duty

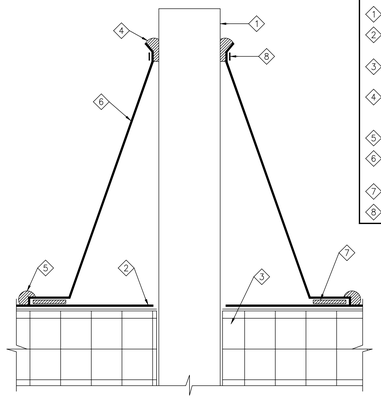




System shown with 2 Heavy Duty Linebackers, 2 Pairs of Ramps and 8 Connectors.
Ramps available standard in blue and rails available only in yellow.

Model	Description	Length	Width	Height	Weight
5-Channel, 4-Channel Accessibility Ramps and Rails					
CPRP-4/5-BLU	ADA Ramp (2 ramps & 4 connectors)	36 in (91.44 cm) (single)	21.88 in (55.58 cm) (single)	2 in (5.08 cm)	40 lb (18.1 kg) (pair)
CPRL-4/5-Y	ADA Ramp Rail (each)	1.5 in (3.18 cm)	55.5 in (140.97 cm)	2 in (5.08 cm)	12.75 lb (5.8 kg)

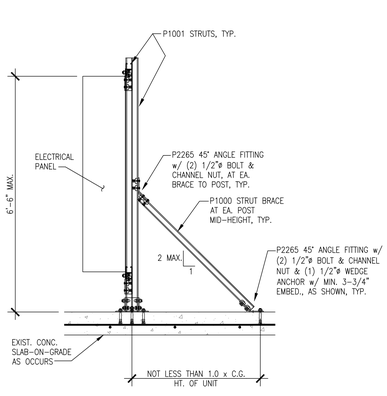
5 CABLE PROTECTOR
SCALE: N.T.S.

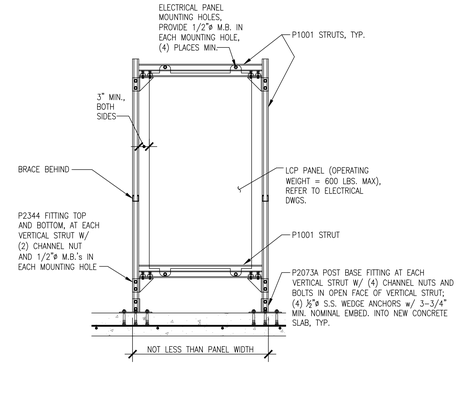


DETAIL NOTES

1. CONDUIT (SIZE AS REQ'D)
2. SINGLE PLY ROOF MEMBRANE MATCHING EXISTING.
3. <E>PLYWOOD ROOF SHEATHING W/ SINGLE PLY ROOF MEMBRANE.
4. LAP SEALANT ALL AROUND BETWEEN CONDUIT AND PREFABRICATED MEMBRANE FLASHING.
5. SEALANT.
6. PRE-FABRICATED MEMBRANE FLASHING, 8" MIN. HEIGHT.
7. HOT AIR-WELD, 1-1/2" MIN.
8. DRAWBAND

6 CONDUIT ROOF PENETRATION
SCALE: N.T.S.

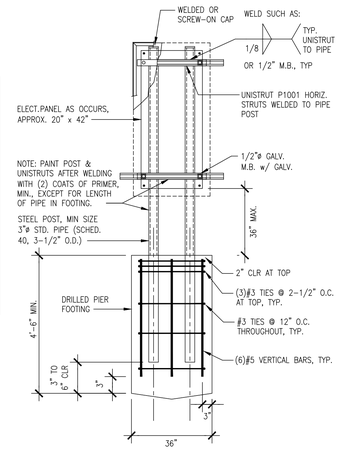




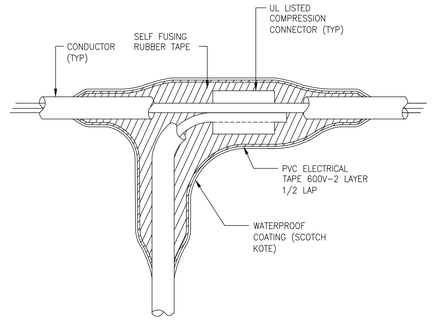
4 PANEL ON UNISTRUT - SLAB
SCALE: N.T.S.

NOTES:

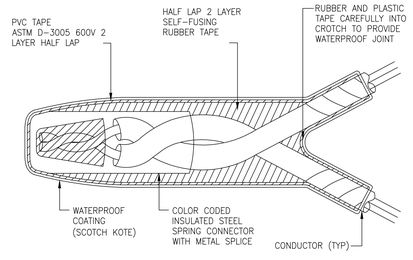
1. CIDH PIER FOOTING DESIGNED USING SOIL CRITERIA PER CBC 1806A.2.
2. CONCRETE TO BE MIN. 5-SACK MIX, 3/4" TO 1-1/2" COARSE AGGREGATE, WITH 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI MIN.
3. ASTM F1083, REGULAR GRADE 30 KSI YIELD STRENGTH, SCHEDULE 40.
4. BOLTS TO BE GALVANIZED ASTM A307 GRADE A, A653 FOR NUTS.
5. CHANNEL STRUTS SHALL BE 12 GA. PRE-GALVANIZED CHANNELS, UNISTRUT P1001 OR EQUAL.
6. WELDING ELECTRODES TO BE E70XX.



3 PANEL ON UNISTRUT - PIER
SCALE: N.T.S.



2 TYPICAL T-TAP SPLICE
SCALE: N.T.S.



NOTE:

FOR WIRES IN SIZES FROM #18 TO #8 AWG ONLY.

1 TYPICAL SPLICE W/ INSULATED SPRING
SCALE: N.T.S.

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SHEET TITLE

ELECTRICAL DETAILS

SCALE: AS NOTED

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E-5.1

SHEET OF –

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LOAD CALCULATION
BUILDING 500

EXISTING PANELBOARD '5LA', 600A RATED, 3P, 4W, 480Y/277V, SCCR: ##kAIC, FED BY SUBSTATION 4 (600A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
PANEL '5LB' (100A)	83.14	0.50	41.57
MCC '5A'			
SF (25 HP)	28.27	1.25	35.33
RF (10 HP)	11.64	1.00	11.64
CHWP P-1 (2 HP) [NIU WITH TEMP PUMP]			
AC-501 (OFF)	0.00	1.00	0.00
AC-502 (OFF)	0.00	1.00	0.00
AC-507 (OFF)	0.00	1.00	0.00
WATER HEATER (UNCONFIRMED)	6.00	0.80	4.80
PANEL '5RA' (400A, 112.5kVA XFMR)	112.50	0.60	67.50
PANEL '5RB'			
PANEL '5RC'			
PANEL '5RD'			
PANEL '5RE'			
PANEL '5RF'			
PANEL '5RG'			
FACP			
EXIT LIGHTS			
SUB-TOTAL OF EXISTING LOAD:			**160.84**
B. DEMOLISHED LOAD			
HWP P-2 (1.5 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF DEMOLISHED LOAD:			**0.00**
C. NEW ADDITIONAL LOAD			
HHWP (1.5 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF NEW LOAD:			**0.00**
D. TEMPORARY LOAD			
TEMP CHILLER (60 tons)	105.88	1.00	105.88
TEMP CHWP (2 HP)	2.83	1.00	2.83
TEMP HHWP (2 HP)	2.83	1.00	2.83
SUB-TOTAL OF NEW LOAD:			**111.54**
TOTAL DEMAND LOAD:			**272.38**
TOTAL DEMAND LOAD			**327.63 AMPS**
600A @ 100% (NEC) ALLOWABLE LOAD			**600 AMPS**

LOAD CALCULATION
BUILDING 800

EXISTING PANEL 'HC', 400A RATED, 3P, 4W, 480Y/277V, SCCR: 14kAIC, FED BY SUBSTATION 1 (400A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
MCC '8'			
SF1 (10 HP)	11.64	1.25	14.55
SF2 (10 HP)	11.64	1.00	11.64
RF1 (2 HP)	2.83	1.00	2.83
RF2 (3 HP)	3.99	1.00	3.99
HWP (1.5 HP) [NIU WITH TEMP PUMP]			
PANEL 'HB' (100A)	83.14	1.00	83.14
WATER HEATER (4500W)	4.50	1.00	4.50
PANEL 'LA' (225A, 45kVA XFMR)	45.00	1.00	45.00
PANEL 'LB'			
PANEL 'LC'			
PANEL 'LD'			
SUB-TOTAL OF EXISTING LOAD:			**165.64**
B. DEMOLISHED LOAD			
CHWP (2 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF DEMOLISHED LOAD:			**0.00**
C. NEW ADDITIONAL LOAD			
CHWP (2 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF NEW LOAD:			**0.00**
D. TEMPORARY LOAD			
TEMP CHILLER (60 tons)	105.88	1.00	105.88
TEMP CHWP (2 HP)	2.83	1.00	2.83
TEMP HHWP (1.5 HP)	2.49	1.00	2.49
SUB-TOTAL OF NEW LOAD:			**111.20**
TOTAL DEMAND LOAD:			**276.84**
TOTAL DEMAND LOAD			**333.00 AMPS**
400A @ 100% (NEC) ALLOWABLE LOAD			**400 AMPS**

LOAD CALCULATION
BUILDING 1500

EXISTING PANEL '15LA', 400A RATED, 3P, 4W, 480Y/277V, SCCR: ##kAIC, FED BY SUBSTATION 4 (350A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
PANEL '15LB' (100A)	83.14	0.50	41.57
MCC '15A'			
RF R-1 (DNE?)			
SF S-1 (DNE?)			
CHWP P-1 (2 HP) [NIU WITH TEMP PUMP]			
HWP P-2 (1.5 HP) [NIU WITH TEMP PUMP]			
AHU-1500			
SF (25 HP)	28.27	1.25	35.33
RF (10 HP)	11.64	1.00	11.64
WATER HEATER (6000W MAX)	6.00	1.00	6.00
PANEL '15RA' (225A, 45kVA XFMR)	45.00	0.60	27.00
PANEL '15RB'			
PANEL '15RC'			
AHU BMS			
<E>PORTABLES DIST PANEL (200A, 150kVA XFMR)	41.57	0.80	33.25
<E>PORTABLES PANEL (200A)			
SUB-TOTAL OF EXISTING LOAD:			**154.79**
D. TEMPORARY LOAD			
TEMP CHILLER (60 tons)	105.88	0.00	0.00
TEMP BOILER (500 MBH)	172.40	1.00	172.40
TEMP CHWP (2 HP)	2.83	1.00	2.83
TEMP HHWP (1.5 HP)	2.49	1.00	2.49
SUB-TOTAL OF NEW LOAD:			**177.72**
TOTAL DEMAND LOAD:			**332.52**
TOTAL DEMAND LOAD			**399.97 AMPS**
400A @ 100% (NEC) ALLOWABLE LOAD			**400 AMPS**

LOAD CALCULATION
BUILDING 2700

EXISTING MAIN SWITCHBOARD 'MSB', 1000A RATED, 3P, 4W, 480Y/277V, SCCR: 35kAIC, FED BY SUBSTATION 4 (1000A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
BASED ON MAX 1-PHASE AMPS METER DATA AS OF 9/22/25	142.77	1.25	178.46
25% OF PEAK LOAD DEMAND PER NEC 220.87			
CHWP [NIU WITH TEMP PUMP]	9.14	-1.00	-9.14
B. DEMOLISHED LOAD			
HHWP-S1 (5 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF DEMOLISHED LOAD:			**0.00**
C. NEW ADDITIONAL LOAD			
HHWP-S1 (5 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF NEW LOAD:			**0.00**
D. TEMPORARY LOAD			
TEMP CHILLER (290 tons)	511.76	1.00	511.76
TEMP CHWP (7.5 HP)	9.14	1.00	9.14
TEMP HHWP (5 HP)	6.32	1.00	6.32
SUB-TOTAL OF NEW LOAD:			**527.23**
TOTAL DEMAND LOAD:			**705.69**
TOTAL DEMAND LOAD			**848.83 AMPS**
1000A @ 100% (NEC) ALLOWABLE LOAD			**1,000 AMPS**

LOAD CALCULATION
BUILDING 600

EXISTING PANEL '6HA', 300A RATED, 3P, 4W, 480Y/277V, SCCR: ##kAIC, FED BY SUBSTATION 4 (300A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
PANEL 'M1'	37.30	1.00	37.30
LARGEST MOTOR (AHU-1 SF)	17.60	1.25	22.00
[HWP-1 & CHWP-1 NIU WITH TEMP PUMP]	9.00	-1.00	-9.00
LIGHTING	11.50	1.25	14.38
PANEL '6LA' (350A, 112.5kVA XFMR)	23.80	1.00	23.80
PANEL '6LB'	11.90	1.00	11.90
PANEL '6LC'	16.70	1.00	16.70
PANEL '6LD'	16.30	1.00	16.30
SUB-TOTAL OF EXISTING LOAD:			**133.38**
B. TEMPORARY LOAD			
TEMP CHILLER (60 tons)	105.88	1.00	105.88
TEMP CHWP (5 HP)	6.32	1.00	6.32
TEMP HHWP (2 HP)	2.83	1.00	2.83
SUB-TOTAL OF NEW LOAD:			**115.03**
TOTAL DEMAND LOAD:			**248.40**
TOTAL DEMAND LOAD			**298.79 AMPS**
300A @ 100% (NEC) ALLOWABLE LOAD			**300 AMPS**

LOAD CALCULATION
BUILDING 900

EXISTING PANEL 'FM', 225A RATED, 3P, 4W, 480Y/277V, SCCR: ##kAIC, FED BY SUBSTATION 1 (225A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
AHU-1			
SF	11.70	1.25	14.63
RF	4.00	1.00	4.00
HWP-1 [NIU WITH TEMP PUMP]			
CWP-1 [NIU WITH TEMP PUMP]			
PANEL 'FL' (Lighting)	5.90	1.25	7.38
PANEL 'FR' (30kVA XFMR)	23.40	1.00	23.40
SUB-TOTAL OF EXISTING LOAD:			**49.40**
B. TEMPORARY LOAD			
TEMP CHILLER (60 tons)	105.88	1.00	105.88
TEMP CHWP (2 HP)	2.83	1.00	2.83
TEMP HHWP (2 HP)	2.83	1.00	2.83
SUB-TOTAL OF NEW LOAD:			**111.54**
TOTAL DEMAND LOAD:			**160.93**
TOTAL DEMAND LOAD			**193.58 AMPS**
225A @ 100% (NEC) ALLOWABLE LOAD			**225 AMPS**

LOAD CALCULATION
BUILDING 1600

EXISTING PANEL '16LA', 800A RATED, 3P, 4W, 480Y/277V, SCCR: 65kAIC, FED BY SUBSTATION 4 (800A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
PANEL '16LB'	5.76	1.00	5.76
WATER HEATER	53.21	1.00	53.21
PANEL 'HCCA'			
MCC '16A'			
SF S-1 (20 HP)	22.45	1.00	22.45
RF R-1 (5 HP)	6.32	1.00	6.32
EF E-1 (1 HP)	1.75	1.00	1.75
EF E-2 (2 HP)	2.83	1.00	2.83
CHWP P-1 (3 HP) [NIU WITH TEMP PUMP]			
PANEL '16RA' (600A, 150kVA XFMR)	73.84	1.00	73.84
PANEL '16RB'			
PANEL '16RC'			
PANEL '16RD'			
PANEL '16RE'			
SUB-TOTAL OF EXISTING LOAD:			**166.15**
B. DEMOLISHED LOAD			
HWP P-2 (2 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF DEMOLISHED LOAD:			**0.00**
C. NEW ADDITIONAL LOAD			
HHWP (2 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF DEMOLISHED LOAD:			**0.00**
D. TEMPORARY LOAD			
TEMP CHILLER (100 Tons)	176.47	0.00	0.00
TEMP BOILER (300 kW)	300.00	1.00	300.00
TEMP CHWP (5 HP)	6.32	1.00	6.32
TEMP HHWP (2 HP)	2.83	1.00	2.83
SUB-TOTAL OF NEW LOAD:			**309.14**
TOTAL DEMAND LOAD:			**475.30**
TOTAL DEMAND LOAD			**571.71 AMPS**
800A @ 100% (NEC) ALLOWABLE LOAD			**800 AMPS**

LOAD CALCULATION
BUILDING 700

EXISTING PANEL 'LA', 400A RATED, 3P, 4W, 480Y/277V, SCCR: ##kAIC, FED BY SUBSTATION 1 (300A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
MCC '7'			
CHWP P-1 (3 HP) [NIU WITH TEMP PUMP]			
HWP P-2 (2 HP) [NIU WITH TEMP PUMP]			
PANEL '7LB' (100A)	83.14	0.50	41.57
WATER HEATER (4500W)	4.50	1.00	4.50
AC ROOM 743 (40A)	33.25	1.00	33.25
UNKNOWN LOAD (100A)	83.14	1.00	83.14
PANEL '7RA' (400A, 75kVA XFMR)	75.00	0.60	45.00
PANEL '7RB'			
PANEL '7RC'			
PANEL '7RD'			
PANEL '7RE'			
SUB-TOTAL OF EXISTING LOAD:			**207.46**
B. TEMPORARY LOAD			
TEMP CHILLER (60 tons)	105.88	1.00	105.88
TEMP CHWP (3 HP)	3.99	1.00	3.99
TEMP HHWP (2 HP)	2.83	1.00	2.83
SUB-TOTAL OF NEW LOAD:			**112.70**
TOTAL DEMAND LOAD:			**320.16**
TOTAL DEMAND LOAD			**385.10 AMPS**
400A @ 100% (NEC) ALLOWABLE LOAD			**400 AMPS**

LOAD CALCULATION
BUILDING 1300

EXISTING PANEL 'HC', 400A RATED, 3P, 4W, 480Y/277V, SCCR: ##kAIC, FED BY SUBSTATION 1 (400A).

	CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
A. EXISTING LOAD			
AHU-1 SF (4 x 5HP)	25.27	1.25	31.59
AHU-1 RF (2 x 3HP)	7.98	1.00	7.98
WELDER OUTLET	15.00	0.80	12.00
DC-1 (5 HP)	6.32	1.00	6.32
EXISTING LOAD (15A)	12.47	0.00	0.00
PANEL 'HD'	10.50	1.25	13.13
PANEL 'LD' (600A, 150kVA XFMR)	149.00	1.00	149.00
PANEL 'LC'			
PANEL 'W'			
PANEL 'LE'			
PANEL 'LF'			
PANEL 'LG'			
SUB-TOTAL OF EXISTING LOAD:			**220.02**
B. DEMOLISHED LOAD			
CHP-1 (2 HP) [NIU WITH TEMP PUMP]			
HWP-1 (1.5 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF DEMOLISHED LOAD:			**0.00**
C. NEW ADDITIONAL LOAD			
CHP-1 (2 HP) [NIU WITH TEMP PUMP]			
HWP-1 (1.5 HP) [NIU WITH TEMP PUMP]			
SUB-TOTAL OF NEW LOAD:			**0.00**
D. TEMPORARY LOAD			
TEMP CHILLER (60 tons)	105.88	1.00	105.88
TEMP CHWP (2 HP)	2.83	1.00	2.83
TEMP HHWP (1.5 HP)	2.49	1.00	2.49
SUB-TOTAL OF NEW LOAD:			**111.20**
TOTAL DEMAND LOAD:			**331.22**
TOTAL DEMAND LOAD			**398.41 AMPS**
400A @ 100% (NEC) ALLOWABLE LOAD			**400 AMPS**

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National **Strength.**
Local **Action.**

REGISTERED PROFESSIONAL ENGINEER — HSIAW L. KING — No. E20539 — ELECTRICAL — STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
DRAWN BY:	
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APPROVED BY:	HK

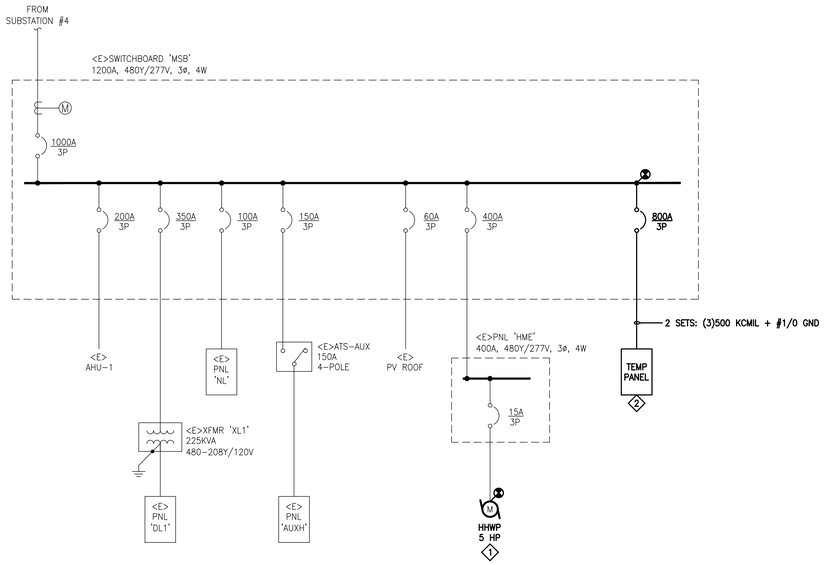
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ELECTRICAL LOAD CALCULATIONS

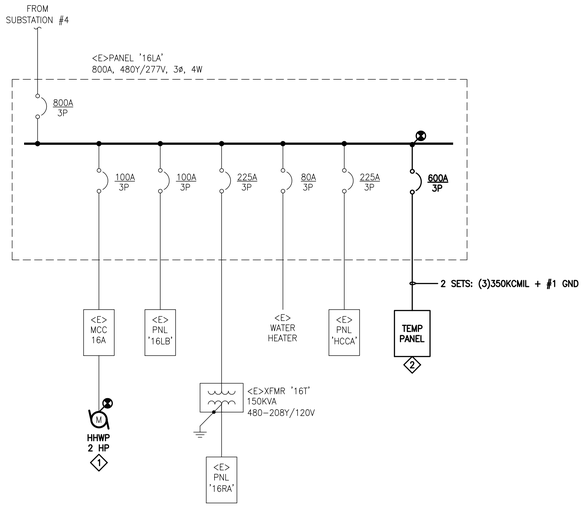
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E-6.1
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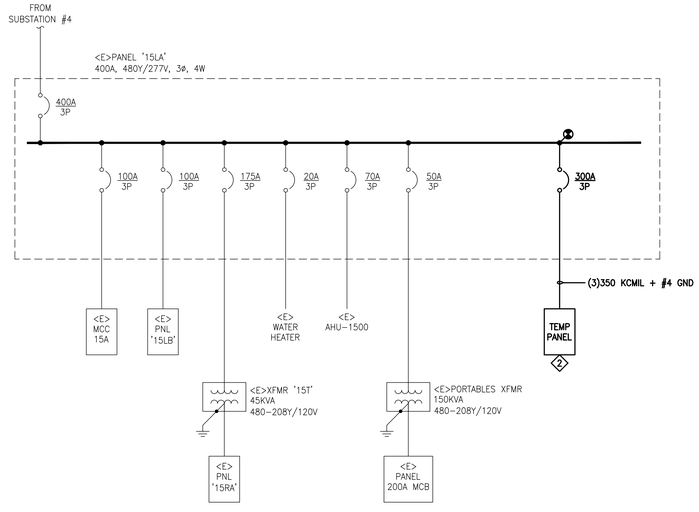
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3 SINGLE LINE DIAGRAM - BUILDING 2700
SCHEMATIC



2 SINGLE LINE DIAGRAM - BUILDING 1600
SCHEMATIC



1 SINGLE LINE DIAGRAM - BUILDING 1500
SCHEMATIC

GENERAL SHEET NOTES

A. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. INTERCEPT AND EXTEND EXISTING FEEDERS AS NECESSARY TO CONNECT TO NEW PUMPS.
2. PROVIDE TEMPORARY POWER DISTRIBUTION PANEL. PANEL, CABLES, AND BREAKER TO BE REMOVED WHEN WORK IS COMPLETED.

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Local **Action.**

REGISTERED PROFESSIONAL ENGINEER
HSIEW L. K'NG
No. E20530
ELECTRICAL
STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
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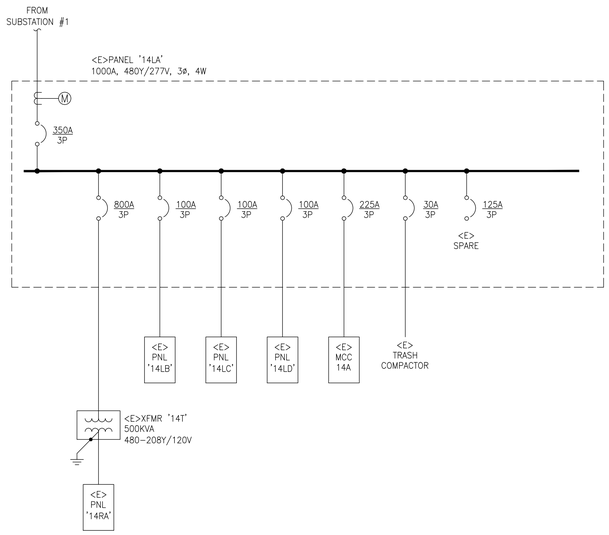
SHEET TITLE

ELECTRICAL SINGLE LINE DIAGRAM ZONE #1

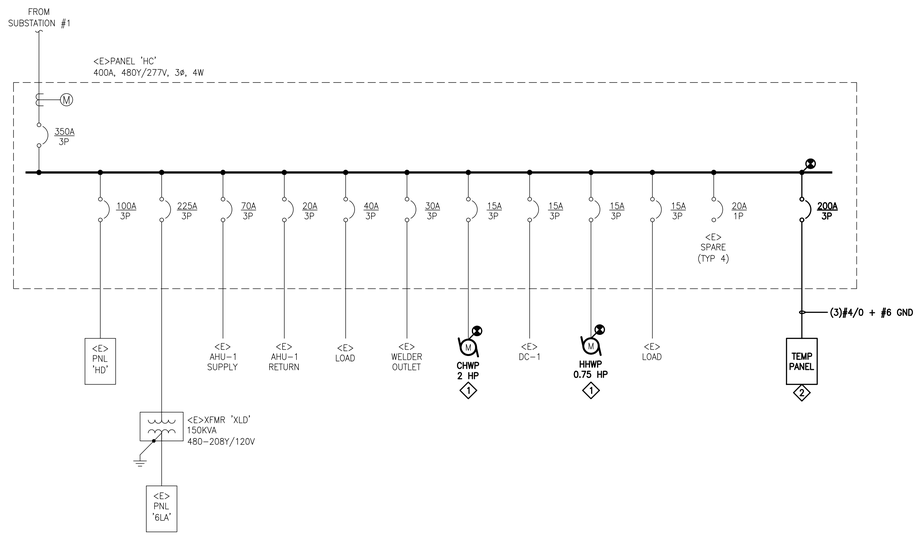
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E-7.1
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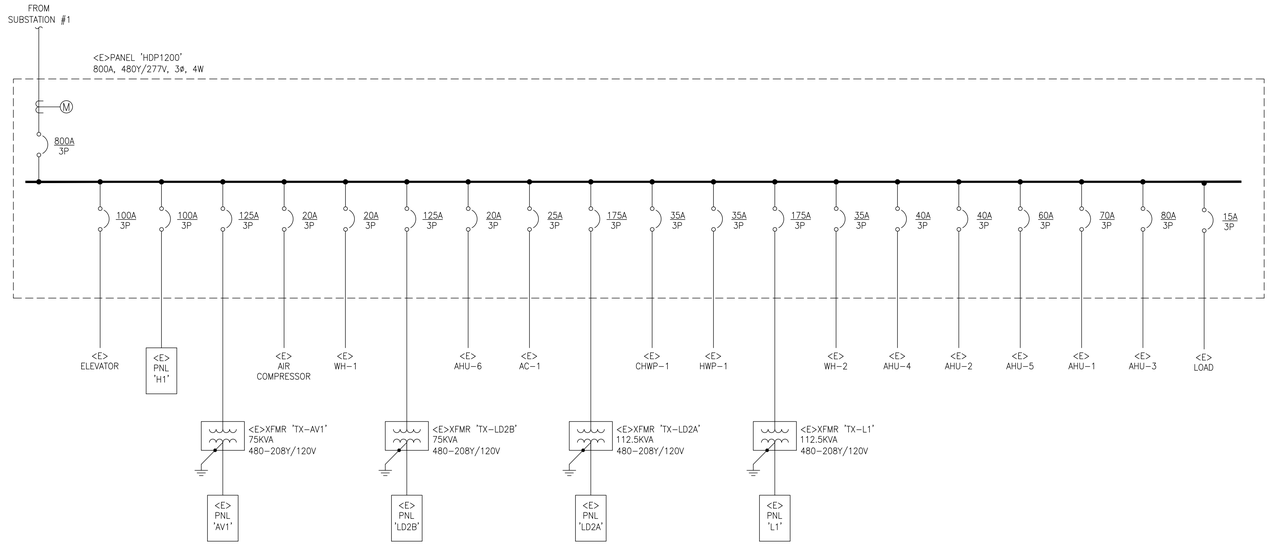
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3 SINGLE LINE DIAGRAM - BUILDING 1400
SCHEMATIC



2 SINGLE LINE DIAGRAM - BUILDING 1300
SCHEMATIC



1 SINGLE LINE DIAGRAM - BUILDING 1200
SCHEMATIC

GENERAL SHEET NOTES

A. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. INTERCEPT AND EXTEND EXISTING FEEDERS AS NECESSARY TO CONNECT TO NEW PUMPS.
2. PROVIDE TEMPORARY POWER DISTRIBUTION PANEL. PANEL, CABLES, AND BREAKER TO BE REMOVED WHEN WORK IS COMPLETED.

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National Strength. Local Action.

REGISTERED PROFESSIONAL ENGINEER
HSIEN L. KING
No. E20530
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

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SHEET TITLE
ELECTRICAL SINGLE LINE DIAGRAM ZONE #2

SCALE: AS NOTED
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SHEET OF –

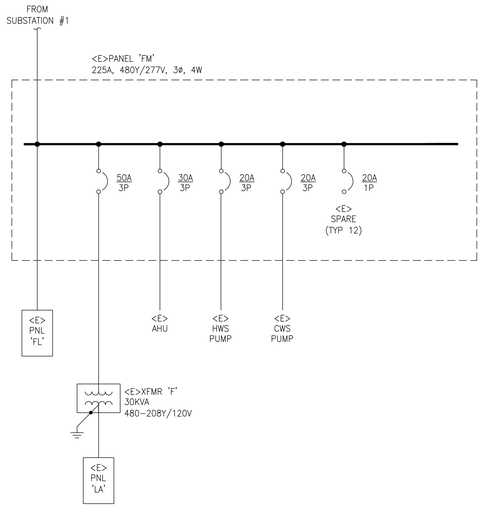
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GENERAL SHEET NOTES

A. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

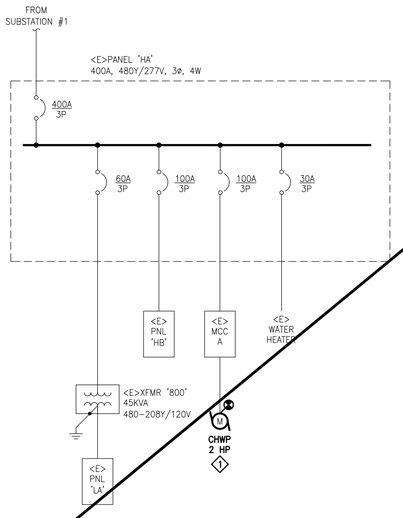
REFERENCE SHEET NOTES

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2. PROVIDE TEMPORARY POWER DISTRIBUTION PANEL. PANEL, CABLES, AND BREAKER TO BE REMOVED WHEN WORK IS COMPLETED.

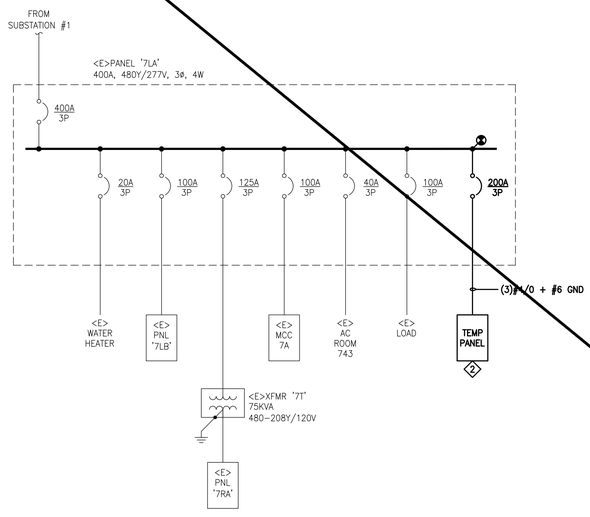


3 SINGLE LINE DIAGRAM - BUILDING 900
SCHEMATIC

NOT IN CONTRACT



2 SINGLE LINE DIAGRAM - BUILDING 800
SCHEMATIC



1 SINGLE LINE DIAGRAM - BUILDING 700
SCHEMATIC

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REGISTERED PROFESSIONAL ENGINEER
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ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE
4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE MARK	DATE	DESCRIPTION
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	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
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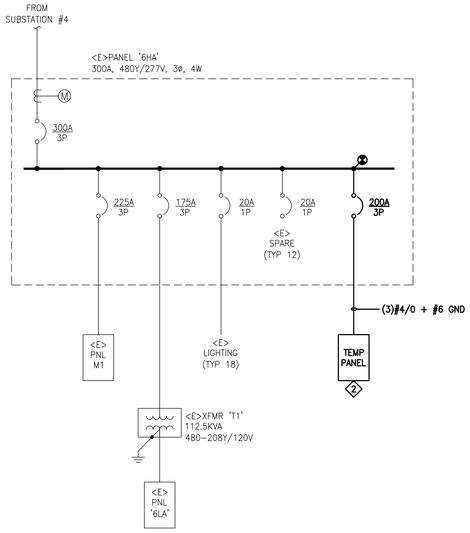
SHEET TITLE

ELECTRICAL SINGLE LINE DIAGRAM ZONE #3 (NOT IN CONTRACT)

SCALE: AS NOTED
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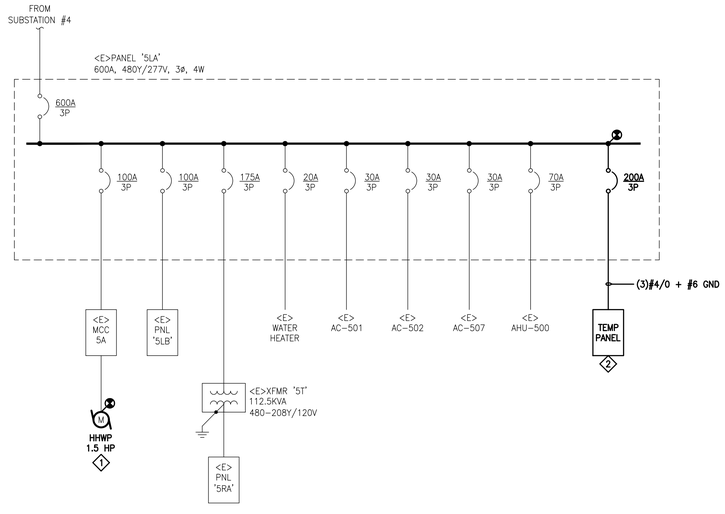
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2 SINGLE LINE DIAGRAM - BUILDING 600

SCHEMATIC



1 SINGLE LINE DIAGRAM - BUILDING 500

SCHEMATIC

GENERAL SHEET NOTES

A. TEMPORARY POWER CABLE TO BE TYPE DLO OR TYPE W SIZED FOR EQUIPMENT LOAD BEING SERVED.

REFERENCE SHEET NOTES

1. INTERCEPT AND EXTEND EXISTING FEEDERS AS NECESSARY TO CONNECT TO NEW PUMPS.
2. PROVIDE TEMPORARY POWER DISTRIBUTION PANEL. PANEL, CABLES, AND BREAKER TO BE REMOVED WHEN WORK IS COMPLETED.

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DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

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HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

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	11/12/25	PROGRESS SET
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	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/23/26
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ELECTRICAL
SINGLE LINE DIAGRAM
ZONE #4

SCALE: AS NOTED
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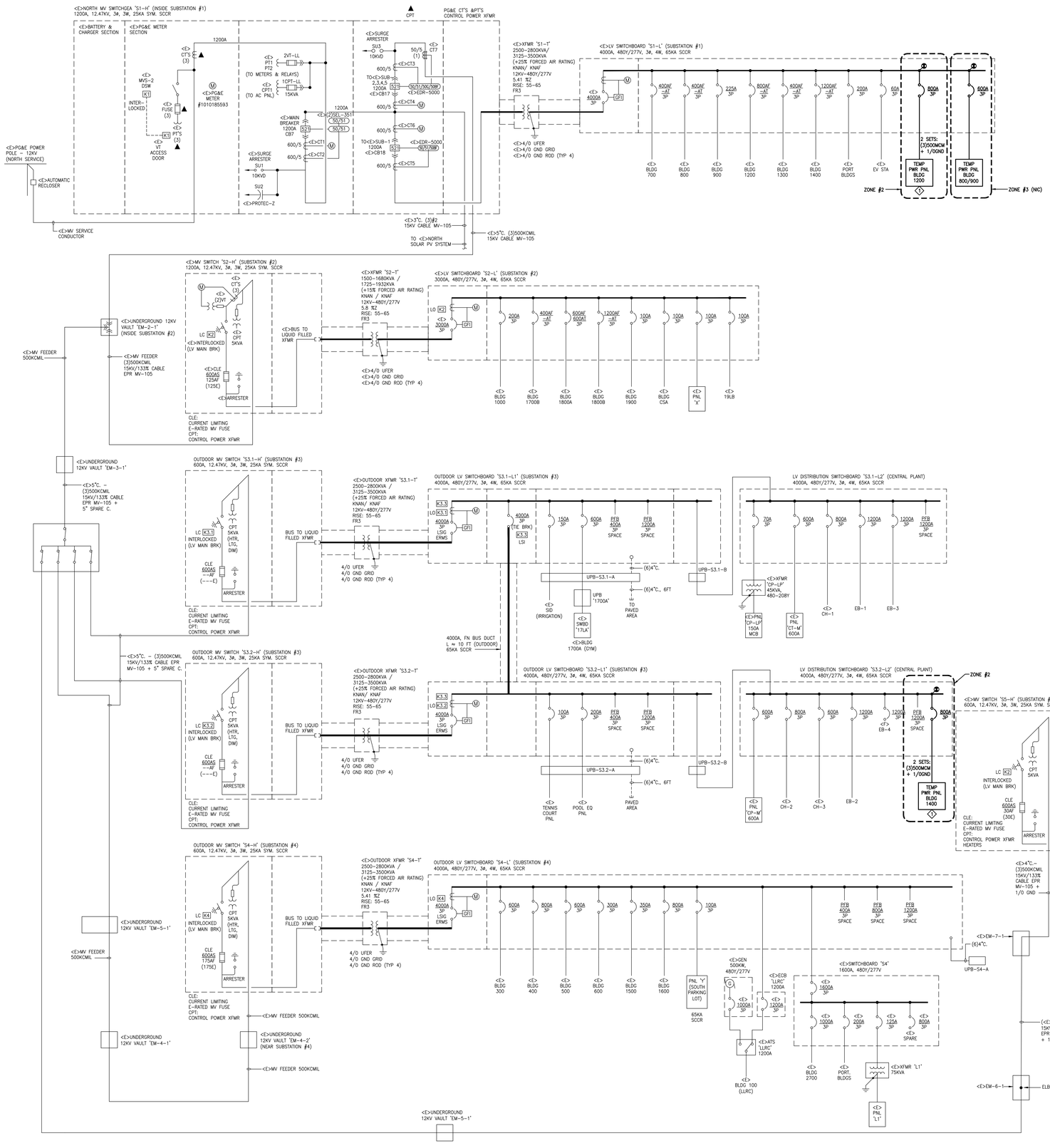
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REFERENCE SHEET NOTES

1. PROVIDE TEMPORARY POWER DISTRIBUTION PANEL. PANEL, CABLES, AND BREAKER TO BE REMOVED WHEN WORK IS COMPLETED.



1 CAMPUS SINGLE LINE DIAGRAM

SCHEMATIC

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No. E20630
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STATE OF CALIFORNIA

DATE SIGNED: 01/23/26

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE

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	01/23/26	DSA BACKCHECK

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SHEET TITLE

ELECTRICAL
CAMPUS SINGLE LINE DIAGRAM

SCALE: AS NOTED
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E-7.5
SHEET OF –

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1/2" = 1'-0" | 1" = 1'-0" | 1/4" = 1'-0" | 1" = 1'-0" | 1" = 1'-0" | 1/8" = 1'-0" | 1" = 1'-0" | 1" = 1'-0"

GENERAL

1. ALL CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE 2022 CALIFORNIA BUILDING CODE (CBC), TITLE 24, PART 2, VOLUMES 1–2 (2021 INTERNATIONAL BUILDING CODE (IBC) WITH 2022 CALIFORNIA AMENDMENTS, INCLUDING SECTIONS AND 'A' CHAPTERS PERTAINING TO DSA-SS).

2. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR DIRECTION PRIOR TO PROCEEDING.

3. DETAILS OF CONSTRUCTION ARE TYPICAL, UNLESS NOTED OTHERWISE, AND SHALL APPLY AT ALL LOCATIONS OF SIMILAR CONSTRUCTION. TYPICAL DETAILS ARE NOT CUT AT EVERY APPLICABLE LOCATION ON THE PLANS.

4. DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION.

5. SHORING, TEMPORARY BRACING AND OTHER METHODS AND MEANS OF CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR, AND IS NOT INCLUDED IN THE SCOPE OF THE STRUCTURAL DRAWINGS.

6. THE FOLLOWING NOTES ARE FOR GENERAL MATERIAL GRADES AND PROCEDURES. SEE SPECIFICATIONS AND REMAINDER OF DRAWINGS FOR COMPLETE REQUIREMENTS. ITEMS NOTED IN PLANS, SECTIONS AND DETAILS TAKE PRECEDENCE OVER GENERAL NOTES.

7. LOADS:
   - A) LIVE:
     - ROOF: 20 PSF (REDUCIBLE)
   - B) WIND:
     - EXPOSURE C, 95 MPH BASIC WIND SPEED
     - DIRECTIONAL PROCEDURE
   - C) SEISMIC:
     - BUILDING RISK CATEGORY II
     - EQUIVALENT LATERAL FORCE PROCEDURE (ASCE 7–16 SECTION 12.8)
     - LATITUDE: 38.2361, LONGITUDE: −122.1192
     - SEISMIC DESIGN CATEGORY (SDC) D
     - SITE CLASS D
     - S_S=1.532, S_1=0.600; F_a=1.200, F_v=1.500;
     - S_{MS}=1.838, S_{M1}=0.900; S_{DS}=1.226, S_{D1}=0.600
     - IMPORTANCE FACTOR: I_e=1.00
     - C_s=2.5, R_s=6.0 (AIR–SIDE HVAC – WORST–CASE)
     - C_s=1.0, R_s=2.5 (WET–SIDE HVAC & PUMPS)
     - C_s=2.5, R_s=2.0 (SPRING ISOLATED UNITS)
     - C_s=0.613 (STRENGTH), 0.438 (ALLOWABLE) (WALL–MOUNTED UNITS)
     - C_s=0.368 (STRENGTH), 0.263 (ALLOWABLE) (GRADE–MOUNTED UNITS w/o ISOLATORS)
     - C_s=0.613 (STRENGTH), 0.438 (ALLOWABLE) (GRADE–MOUNTED UNITS w/ ISOLATORS)
     - C_v=0.245 (STRENGTH), 0.175 (ALLOWABLE STRESS) (VERTICAL FORCE).
   - D) WOOD FRAMING:
     - ROOF FRAMING DESIGNED FOR (1) RE–ROOFING.
     - LOAD DURATION FACTOR (C_D) USED, WITH SHORT–TERM INCREASES.
     - REPETITIVE MEMBER STRESSES NOT USED.
   - E) LOAD COMBINATIONS FOR DESIGN:
     - CONCRETE: PER ASCE 7 SECTION 2.3 FOR STRENGTH DESIGN.
     - FOUNDATIONS: PER CBC SECTION 1605A.2 FOR ALLOWABLE STRESS DESIGN.
     - ALL OTHERS: PER ASCE 7 SECTION 2.4 FOR ALLOWABLE STRESS DESIGN.

DSA SUPPLEMENTARY CONDITIONS

1. THE FOLLOWING INFORMATION FROM THE 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), TITLE 24, PART 1, C.C.R., SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS.

2. ALL ADDENDA AS PER CAC SECTION 4–338(b), SHALL BE SIGNED BY ARCHITECT OR ENGINEER IN GENERAL RESPONSIBLE CHARGE AND BY ARCHITECT, STRUCTURAL ENGINEER OR DELEGATED PROFESSIONAL ENGINEER, AND APPROVED BY DSA.

3. ALL CONSTRUCTION CHANGE DOCUMENTS (CCD) AS PER CAC SECTION 4–338(c), MUST BE SIGNED BY ALL OF THE FOLLOWING:
   - A) ARCHITECT OR ENGINEER IN GENERAL RESPONSIBLE CHARGE,
   - B) STRUCTURAL ENGINEER (WHEN APPLICABLE),
   - C) DELEGATED PROFESSIONAL ENGINEER (WHEN APPLICABLE).

4. ALL SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE OR ADDENDA, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION (CAC SECTIONS 4–338(b) AND 4–338(c), DSA IR A–6). SUBSTITUTIONS SHALL BE FOR ANY MATERIAL, SYSTEM OR PRODUCT THAT WOULD OTHERWISE BE REGULATED BY DSA.

5. PROJECT INSPECTOR AND TESTING LAB MUST BE EMPLOYED BY THE OWNER AND APPROVED BY ALL OF THE FOLLOWING:
   - A) ARCHITECT OR ENGINEER IN GENERAL RESPONSIBLE CHARGE,
   - B) STRUCTURAL ENGINEER (WHEN APPLICABLE),
   - C) DSA.

6. CONTRACTOR SHALL SUBMIT VERIFIED REPORT PER CAC SECTIONS 4–336 AND 4–343(c).

7. ADMINISTRATION OF CONSTRUCTION PER 2025 CALIFORNIA ADMINISTRATIVE CODE (CAC), TITLE 24, PART 1, C.C.R.
   - A) DUTIES OF ARCHITECT, STRUCTURAL ENGINEER, OR PROFESSIONAL ENGINEER PER CAC SECTIONS 4–333(a) AND 4–341,
   - B) DUTIES OF PROJECT INSPECTOR PER CAC SECTIONS 4–333(b) AND 4–342,
   - C) DUTIES OF CONTRACTOR PER CAC SECTION 4–343,
   - D) VERIFIED REPORTS PER CAC SECTION 4–336.

8. A COPY OF PART 1 THROUGH 5 OF TITLE 24 SHALL BE KEPT AND AVAILABLE IN THE FIELD DURING CONSTRUCTION. PROJECT SHALL COMPLY WITH PARTS 1 THROUGH 6 AND 9 OF TITLE 24.

9. DSA SHALL BE NOTIFIED ON START OF CONSTRUCTION PER CAC SECTION 4–331.

10. SUPERVISION BY DSA PER CAC SECTION 4–334.

11. DSA IS NOT SUBJECT TO ARBITRATION.

12. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT WORK OF THE ADDITION, ALTERATION, REHABILITATION OR RECONSTRUCTION PROPOSED IS TO BE IN ACCORDANCE WITH CAC SECTION 4–317(c). SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON–COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK.

STRUCTURAL CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO CHAPTER 19A OF THE 2019 CALIFORNIA BUILDING CODE (CBC) AND 2014 ACI STANDARD 318 AND ASTM C94, SPECIFICATION FOR READY–MIX CONCRETE. CEMENT SHALL BE PORTLAND CEMENT TYPE II AND SHALL COMPLY WITH ASTM C150. CALCIUM CHLORIDE SHALL NOT BE USED. COARSE AND FINE AGGREGATE SHALL COMPLY WITH ASTM C33. CONCRETE MIX DESIGNS SHALL BE SUBMITTED TO AND APPROVED BY TESTING AGENCY PRIOR TO ORDERING CONCRETE.

2. ALL STRUCTURAL CONCRETE MIXES SHALL HAVE MIN. FIVE (5) SACKS CEMENT PER CU. YARD AND MAX. WATER–TO–CEMENT RATIO OF 0.60. CONCRETE MIX PROPERTIES SHALL BE AS FOLLOWS:
   - A) FOUNDATION PADS & CONCRETE WALLS:
     - 28–DAY COMP. STRENGTH: 3,000 PSI
     - LARGE AGGREGATE SIZE: 1/2" – 1"
     - MAX. SLUMP: 4"
     - DENSITY: 145 – 150 PCF (NORMAL WEIGHT, HARD ROCK AGGREGATE)
     - EXPOSURE CLASS: C0, S1 (ACI 318 TABLE 19.3.1.1)

3. STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615, GR. 60 U.N.O. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

4. CURING COMPOUND SHALL BE APPROVED BY ENGINEER, AND APPLIED PER MANUFACTURER'S RECOMMENDATIONS.

5. REINFORCING STEEL SHALL BE CONTINUOUS WHERE POSSIBLE. SPLICE WITH CONTACT LAP–SPLICES. STAGGER ALL SPLICES. SPLICE LENGTHS SHALL BE 57 BAR–DIAMETERS MINIMUM. WELDED WIRE FABRIC SHALL BE LAPPED TWO (2) FULL SQUARES, BUT NOT LESS THAN 12".

6. WELDING OF REINFORCING SHALL NOT BE ALLOWED.

GEOTECHNICAL & FOUNDATIONS

1. GEOTECHNICAL REPORT NOT PROVIDED. FOUNDATIONS DESIGNED IN ACCORDANCE WITH MINIMUM PRESUMPTIVE LOAD–BEARING CRITERIA PER CBC §1806A. CRITERIA USED FOR FOUNDATION DESIGN:

   - C) ALLOWABLE SOIL PRESSURES USED FOR FOUNDATION DESIGN:
     - DEAD PLUS LIVE LOAD: 1500 PSF
     - TOTAL LOAD W/ SEISMIC OR WIND: 2000 PSF w/ 1/3 INCREASE FOR SHORT TERM LOADING.
     - (NOTE: INCREASED ALLOWABLE BEARING PRESSURE IS PERMITTED ONLY WHEN USING ALTERNATIVE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS THAT INCLUDE WIND OR SEISMIC EFFECTS)

POST–INSTALLED ANCHORS & DOWELS

A. GENERAL – APPLICABLE TO ALL ANCHORS AND DOWELS:

1. ANCHORS SHALL BE INSTALLED ONLY WHERE SPECIFIED ON DRAWINGS, PER MANUFACTURER'S INSTRUCTIONS, USING MANUFACTURER'S EQUIPMENT, WHERE APPLICABLE. INSTALLER SHALL HAVE ON SITE A COPY OF MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ICC–ES OR IAPMO–UES REPORT.

2. ANCHORS SHALL BE INSTALLED ONLY INTO CURED CONCRETE OR MASONRY GROUT THAT HAS ATTAINED THE MIN. DESIGN COMPRESSIVE STRENGTH AT MIN. 28 DAY AGE, EXCEPT AS NOTED BELOW FOR ADHESIVE ANCHORS. IF INSTALLATION OF ANCHORS INTO CONCRETE OR MASONRY ELEMENTS PRIOR TO 28–DAY AGE IS ANTICIPATED, CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO INSTALLATION IN ORDER TO ALLOW SPECIFYING PROVISIONS FOR SUCH. PROVISIONS MAY INCLUDE COMPRESSION TEST CYLINDERS BE FIELD–CURED IN CONDITIONS MATCHING SUBJECT CONCRETE OR MASONRY ELEMENTS, PLUS USE OF CEMENT TYPES AND/OR ADMIXTURES IN MIX DESIGNS TO PROVIDE THE REQUIRED COMPRESSIVE STRENGTHS AT ANTICIPATED AGES LESS THAN 28 DAYS. INSTALLATION OF ANCHORS INTO CONCRETE OR MASONRY GROUT BEFORE CURING FOR 28 DAYS WILL NOT BE APPROVED WITHOUT THESE PROVISIONS BEING SPECIFIED, AND MET BY CONTRACTOR.

3. WHERE POST–INSTALLED ANCHORS ARE USED TO MITIGATE OMITTED OR MISPLACED CAST–IN–PLACE ANCHORS, ADDED SPECIAL INSPECTION AND TESTING COSTS ASSOCIATED WITH THE POST–INSTALLED ANCHORS WILL BE PAID FOR BY THE DISTRICT, HOWEVER, SUCH COSTS WILL BE BACK–CHARGED TO THE CONTRACTOR.

4. PRIOR TO DRILLING HOLES FOR ANY POST–INSTALLED ANCHORS INTO NEW OR EXISTING CONCRETE OR MASONRY, ALL REINFORCING BARS IN AREA OF NEW ANCHORAGE HOLES SHALL BE LOCATED WITH PACHOMETER OR OTHER SUITABLE DEVICE AND CLEARLY MARKED IN THE FIELD. NEW ANCHORS SHALL BE INSTALLED NOT LESS THAN 1" CLEAR FROM REINFORCING. WHERE REINFORCING BARS CANNOT BE LOCATED, CARE SHALL BE TAKEN WHILE DRILLING HOLES SO THAT REINFORCING BARS ARE NOT CUT OR DAMAGED AND HOLES SHALL BE REPAIRED & RELOCATED AS REQUIRED. USE OF DRILLS WITH GROUND FAULT INTERRUPTERS (GFI) IS RECOMMENDED.

5. PROVIDE TESTING AND INSPECTIONS OF ANCHOR INSTALLATIONS PER TESTING AND SPECIAL INSPECTION NOTES, THIS SHEET.

6. ANCHORS OTHER THAN THOSE SPECIFIED BELOW MAY BE USED ONLY WHEN CURRENT ICC–ES OR IAPMO–UES REPORT FOR SUCH IS SUBMITTED FOR REVIEW AND APPROVAL IN WRITING. ANCHORS SHALL NOT BE INSTALLED UNTIL ANCHORS ARE APPROVED BY STRUCTURAL ENGINEER AND DSA, AND TEST LOADS ARE DETERMINED AND ISSUED.

7. ANCHORS IN CONTACT WITH PRESERVATIVE–TREATED AND FIRE–RETARDANT–TREATED WOOD SHALL BE OF HOT–DIPPED ZINC–COATED GALVANIZED STEEL OR STAINLESS STEEL. ANCHORS EXPOSED TO WEATHER OR REQUIRED TO BE CORROSION RESISTANT SHALL BE OF HOT–DIPPED ZINC–COATED GALVANIZED STEEL OR STAINLESS STEEL.

B. EXPANSION ANCHORS:

1. EXPANSION ANCHORS SHALL BE WEDGE TYPE ANCHORS ONLY AND SHALL HAVE ICC–ES OR IAPMO–UES APPROVAL, INCLUDING APPROVAL FOR RESISTANCE TO SEISMIC AND WIND LOADS, PASSING ICC–ES CRITERIA AC193 (CONCRETE) & ACO1 (MASONRY). USE ONE OF THE FOLLOWING ICC–ES OR IAPMO–UES APPROVED SYSTEMS:
   - CONCRETE:
     - a) HILTI KWIK BOLT TZ2 (ESR–4266). (TYP. ANCHOR SPECIFIED U.N.O.)
     - b) SIMPSON STRONG–BOLT 2 ANCHORS (ESR–3037),
     - c) DEWALT/POWERS POWER–STUD+ SD2, SD4 & SD6 ANCHORS (ESR–2502).
   - MASONRY:
     - a) HILTI KWIK BOLT TZ2 (ESR–4561). (TYP. ANCHOR SPECIFIED U.N.O.)
     - b) SIMPSON STRONG–BOLT 2 ANCHORS (ER–240),
     - c) ITW RED HEAD TRUBOLT+ WEDGE ANCHORS (ESR–4058).

NOTE: OTHER EXPANSION ANCHORS MAY BE USED ONLY WHEN ICC–ES OR IAPMO–UES REPORT FOR SUCH IS SUBMITTED TO AND APPROVED BY ENGINEER AND DSA AND TEST LOADS ARE DETERMINED AND ISSUED.

2. EXPANSION ANCHORS SHALL HAVE EMBEDMENT NOT LESS THAN EIGHT (8) ANCHOR DIAMETERS, OR AS OTHERWISE SPECIFIED IN DETAILS. TORQUE ANCHORS DURING INSTALLATION TO THE RECOMMENDED INSTALLATION TORQUE VALUES SPECIFIED IN MANUFACTURER'S ICC–ES OR IAPMO–UES REPORT.

C. CHEMICAL ADHESIVE ANCHORS AND DOWELS:

1. ALL THREADED RODS AND REBAR DOWELS INSTALLED IN HARDENED CONCRETE OR MASONRY GROUT WITH "ADHESIVE" SHALL BE A TWO–PART NOZZLE–MIXED ICC–ES OR IAPMO–UES APPROVED CHEMICAL ADHESIVE SYSTEM, PASSING ICC–ES CRITERIA AC308 (CONCRETE) & AC58 (MASONRY). USE ONE OF THE FOLLOWING ICC–ES OR IAPMO–UES APPROVED SYSTEMS:
   - CONCRETE:
     - a) HILTI "HIT–RE 500–V3" ADHESIVE ANCHOR SYSTEM (ESR–3814). (SPECIFIED U.N.O.)
     - b) SIMPSON "SET–3G" ADHESIVE ANCHOR SYSTEM (ESR–4057),
     - c) DEWALT/POWERS "PURE110+" ADHESIVE ANCHOR SYSTEM (ESR–3298),
     - d) ITW RED HEAD "CB+" ADHESIVE ANCHOR SYSTEM (ESR–4046).
   - MASONRY:
     - a) HILTI "HIT" SYSTEM WITH HY–270 ADHESIVE (ESR–4143).(SPECIFIED U.N.O.)
     - b) SIMPSON "SET–3G" ADHESIVE ANCHOR SYSTEM (ESR–4844),
     - c) DEWALT/POWERS "AC100+ GOLD" ADHESIVE ANCHOR SYSTEM (ESR–3200).

NOTE: OTHER CHEMICAL ADHESIVE ANCHOR SYSTEMS MAY BE USED ONLY WHEN ICC–ES OR IAPMO–UES REPORT FOR SUCH IS SUBMITTED TO AND APPROVED BY ENGINEER AND DSA AND TEST LOADS ARE DETERMINED AND ISSUED.

2. ANCHORS SHALL BE INSTALLED ONLY INTO CURED CONCRETE OR MASONRY GROUT OF MIN. 21 DAY AGE. IF INSTALLATION OF ANCHORS INTO CONCRETE OR MASONRY ELEMENTS PRIOR TO 21–DAY AGE IS ANTICIPATED, CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO INSTALLATION FOR DIRECTION.

3. INSTALLATION OF CHEMICAL ADHESIVE ANCHORS IN HORIZONTAL OR OVERHEAD APPLICATIONS SHALL BE INSTALLED BY AN ACI/CSRI CERTIFIED ADHESIVE ANCHOR INSTALLER.

4. HOLES SHALL BE DRILLED 1/8" TO 1/4" LARGER IN DIAMETER THAN ROD OR BAR OUTER DIAMETER, AS SPECIFIED IN ICC–ES OR IAPMO–UES REPORT.

5. BARS/RODS SHALL HAVE EMBEDMENT IN ADHESIVE NOT LESS THAN TEN (10) NOMINAL BAR/ROD DIAMETERS IN CONCRETE AND NINE (9) NOMINAL BAR/ROD DIAMETERS IN MASONRY, OR AS OTHERWISE SPECIFIED IN DETAILS.

6. INSTALLATION TORQUE FOR ALL ANCHORS SHALL BE REDUCED ACCORDING TO MANUFACTURER'S RECOMMENDATION DUE TO THE VICINITY OF ANCHOR TO EDGE OF CONCRETE.

7. THE BOND STRESSES AS SPECIFIED IN ICC–ES OR IAPMO–UES REPORT SHALL BE BASED ON LONG TERM ELEVATED TEMPERATURES OF NOT LESS THAN 110 DEGREES F.

STRUCTURAL STEEL

1. ALL STEEL AND MISC. IRON SHALL BE FABRICATED AND ERECTED IN CONFORMANCE WITH AISC 360 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.

2. STEEL MATERIAL SHALL BE AS FOLLOWS:
   - PLATES, CHANNELS & ANGLES: ASTM A36 UNLESS NOTED OTHERWISE
   - MACHINE BOLTS (M.B.): ASTM A307 GRADE A, A563 FOR NUTS, F844 FOR WASHERS
   - THREADED RODS: ASTM A307 OR A36 (MAY BE THREADED FOR ENTIRE LENGTH)

3. MINIMUM SPACING OF ALL BOLTS, 7/8"ø AND SMALLER IN STEEL SHALL BE 3" o.c. AND THE MINIMUM EDGE DISTANCE FROM CENTERLINE OF HOLE TO EDGE OF PLATE OR MEMBER SHALL BE 1–1/2", UNLESS NOTED OTHERWISE ON DRAWINGS. WHERE HOLES ARE INSTALLED THROUGH FLANGES OF "W" OR SIMILAR SHAPES, THE BOLT GAGE SHALL BE AS RECOMMENDED BY AISC.

4. HOLES FOR BOLTS IN STEEL SHALL BE 1/16" MAXIMUM LARGER IN DIAMETER THAN BOLTS. HOLES FOR ANCHOR BOLTS SHALL NOT BE MORE THAN 1/8" LARGER FOR A.B.'S UP TO 1"ø, AND NOT MORE THAN 1/2" LARGER FOR A.B.'S OVER 1"ø. ALL HOLES SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES IS NOT ALLOWED, WHETHER IN FIELD OR SHOP.

5. BEVELED WASHERS SHALL BE USED WHEN THE SURFACE AGAINST WHICH BOLT HEAD OR NUT BEARS IS SLOPED MORE THAN 1:20. BEVELED WASHERS SHALL BE SQUARE OR RECTANGULAR.

6. WASHERS THAT COVER ENTIRE SLOT SHALL BE USED OVER SMALL SLOTTED HOLES. PLATE WASHERS THAT COVER ENTIRE SLOT SHALL BE USED OVER LONG–SLOTTED HOLES.

8. ALL STRUCTURAL STEEL IN EXTERIOR SPACES OR EXPOSED TO VIEW IN INTERIOR SPACES SHALL BE PAINTED WITH TWO (2) COATS OF ALKYD RED OXIDE PRIMER, COMPLYING WITH SSPC–PAINT 25 OR U.S. FEDERAL SPEC TT–P–645, WITH MIN. DRY THICKNESS OF 2 MILS. SEE ARCHITECTURAL SPECS FOR FINISH PAINTING. STRUCTURAL STEEL IN ENCLOSED SPACES AND NOT EXPOSED TO WEATHER NEED NOT BE PAINTED OR PRIMED UNLESS NOTED OTHERWISE. STEEL TO BE EMBEDDED IN CONCRETE SHALL NOT BE PAINTED.

9. ALL NON–PAINTED STEEL FASTENERS EXPOSED TO WEATHER OR IN UNENCLOSED SPACES SHALL BE HOT–DIPPED GALVANIZED, UNLESS NOTED OTHERWISE. GALVANIZED BOLTS AND NUTS SHALL BE PROVIDED BY SAME MANUFACTURER.

10. ALL STRUCTURAL STEEL SPECIFIED ON DRAWINGS TO BE GALVANIZED SHALL BE HOT–DIPPED ZINC GALVANIZED WITH MIN. 1.8 OZ./SQ. FT. ON ALL SURFACES. GALVANIZING SHALL BE TOUCHED UP AT FIELD–WELDED CONNECTIONS, FIELD–DRILLED HOLES, OR FIELD–CUT EDGES WITH A HIGH–ZINC DUST–CONTENT PAINT.

CHANNEL STRUTS & SYSTEMS

1. ALL CHANNEL STRUTS, ASSOCIATED FIXTURES, BRACKETS AND FASTENERS SHALL BE AS MANUFACTURED BY UNISTRUT CORPORATION, OR APPROVED EQUIVALENT.

2. CHANNEL STRUTS SHALL BE P1000 OR P1001; 12 GA. x 1–5/8" SQ. PRE–GALVANIZED CHANNELS. WHERE STRUTS ARE TO BE PRE–DRILLED, USE 'HS' PRE–DRILLED STRUTS (9/16"ø ROUND HOLES @ 1–7/8" o.c. USE OF STRUTS WITH SLOTTED HOLES IS NOT ALLOWED).

3. ALL BOLTS, NUTS & WASHERS THROUGH STRUTS SHALL BE 1/2"ø ASTM A576, GR. 1015, ELECTRO GALVANIZED PER ASTM B633, AS MFRD. BY UNISTRUT. NUTS FOR BOLTS THROUGH OPEN SIDE OF CHANNEL SHALL BE P1010 NUTS. ALL NUTS SHALL BE TORQUED TO 50 – 65 FT–LBS. NON–UNISTRUT BOLTS & NUTS SHALL BE ASTM A307, H.D. GALVANIZED. ALL BOLTS, NUTS & WASHERS EXPOSED TO WEATHER SHALL BE HOT–DIPPED GALVANIZED.

4. ALL FIXTURES & BRACKETS SHALL BE INSTALLED WITH ALL HOLES FILLED w/ 1/2"ø FASTENERS UNLESS NOTED OTHERWISE. DRILL 9/16"ø HOLES IN CLOSED SIDES OF CHANNELS WHERE NECESSARY, AT CENTERLINE OF STRUT.

WOOD

1. ALL WOOD FRAMING SHALL CONFORM TO CHAPTER 23 OF THE 2022 CALIFORNIA BUILDING CODE (CBC), INCLUDING SECTIONS PERTAINING TO DSA–SS.

2. ALL FRAMING LUMBER, UNLESS SPECIFIED OTHERWISE ON DRAWINGS, SHALL BE DOUGLAS FIR–LARCH, WITH STRESS GRADES AS FOLLOWS:
   - 2x JOISTS OR BLOCKING: NO. 1
   - PLYWOOD SHEATHING: ALL SHEATHING SHALL BE APA–RATED C–D SHEATHING AND SHALL HAVE EXTERIOR GLUE. SEE PLANS/SCHEDULES FOR THICKNESS AND GRADES.

ALL SOLID SAWN LUMBER SHALL HAVE A MOISTURE CONTENT OF NOT GREATER THAN 19% AT THE TIME OF INSTALLATION.

3. ALL NAILS SHALL BE COMMON WIRE TYPE. ALL NAILS INSTALLED IN PRESSURE–TREATED MEMBERS OR EXPOSED TO WEATHER SHALL BE HOT–DIPPED GALVANIZED STEEL. WHERE NAILS TEND TO SPLIT FRAMING, HOLES SHALL BE PRE–BORED.

4. UNLESS SPECIFIED OTHERWISE, BOLTS AND THREADED RODS THROUGH WOOD MEMBERS SHALL CONFORM TO ASTM A307 OR A36.

5. ALL BOLT HOLES IN WOOD SHALL BE DRILLED 1/32" OVERSIZE. THE LENGTH OF THE THREADED PORTION SHALL BE SUCH THAT THE THREADS DO NOT BEAR AGAINST THE WOOD. OVERSIZE HOLES WILL NOT BE ALLOWED.

6. HEAVY CUT STEEL WASHERS SHALL BE PROVIDED BETWEEN BOLT HEADS/NUTS AND WOOD.

7. PREDRILL LAG SCREW HOLES WITH BIT SIZE 40% TO 70% OF THE SHANK DIAMETER FOR THE THREADED PORTION. DRILL THE LEAD HOLE FOR THE SHANK THE SAME DIAMETER AND LENGTH AS THE SHANK. LAGS SHALL BE SCREWED, NOT DRIVEN, INTO PLACE.

8. NAILS THROUGH PLYWOOD SHEATHING SHALL BE 3/8" OR 1/2" FROM PLYWOOD EDGES INTO 2x OR 3x FRAMING, RESPECTIVELY. ALL NAILS THAT SPLIT OR MISS FRAMING SHALL BE REMOVED AND RENAILED.

9. FASTENERS IN CONTACT WITH PRESERVATIVE–TREATED AND FIRE–RETARDANT–TREATED WOOD SHALL BE OF HOT–DIPPED ZINC–COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. FASTENERS FOR WOOD FOUNDATIONS SHALL BE AS REQUIRED PER AF&PA PERMANENT WOOD FOUNDATIONS. FASTENERS EXPOSED TO WEATHER OR REQUIRED TO BE CORROSION RESISTANT SHALL BE OF HOT–DIPPED ZINC–COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.

10. ALL PRESSURE–PRESERVATIVE TREATED WOOD THAT IS RIPPED, NOTCHED, BORED OR CUT SHALL BE FIELD–TREATED.

TESTING AND SPECIAL INSPECTIONS

1. GENERAL
   - A) ALL TESTS AND SPECIAL INSPECTIONS SHALL CONFORM TO APPLICABLE REQUIREMENTS OF 2022 CALIFORNIA BUILDING CODE (CBC) SECTION 1701A AND APPROVED FORM DSA–103, "LISTING OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS."
   - B) ALL TESTS OF MATERIALS AND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH 2025 CALIFORNIA ADMINISTRATIVE CODE (CAC) SECTION 4–335.
   - C) THE OWNER SHALL EMPLOY AND PAY THE INSPECTION/TESTING LABORATORY. COSTS OF RE–TESTING MAY BE BACK–CHARGED TO THE CONTRACTOR.
   - D) INSPECTOR SHALL BE APPROVED BY DSA. INSPECTIONS SHALL BE IN ACCORDANCE WITH CAC SECTION 4–333(b), AND THE DUTY OF THE INSPECTOR SHALL BE IN ACCORDANCE WITH CAC SECTION 4–342.
   - E) COPIES OF ALL TEST/INSPECTION REPORTS SHALL BE SUBMITTED TO ARCHITECT, STRUCTURAL ENGINEER, PROJECT INSPECTOR. AND DSA–SS.

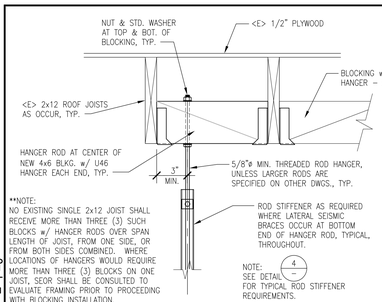
2. FOUNDATIONS (DRILLED PIERS, FOOTINGS, GRADE BEAMS), WALLS AND SLABS–ON–GRADE:
   - A) NOTIFY ENGINEER AND PROJECT INSPECTOR 48 HOURS BEFORE CONCRETE IS TO BE PLACED OR FORMS CLOSED TO ALLOW FOR INSPECTION OF EXCAVATIONS AND REINFORCING PLACEMENT.
   - B) SPECIAL INSPECTION IS REQUIRED PER CBC SECTION 1705A.3, 1705A.6 AND 1705A.8.
   - C) THE TESTING AGENCY SHALL PERFORM THE FOLLOWING:
     - REVIEW ALL CONCRETE MIX DESIGNS. ALL DESIGNS SHALL BE SUBMITTED TO AND APPROVED BY TESTING AGENCY PRIOR TO ORDERING CONCRETE.
     - FOR EACH CONCRETE MIX PLACED, AGENCY SHALL CAST (4) TEST CYLINDERS IN ACCORDANCE WITH ASTM C31 FOR EACH 50 CUBIC YARDS OR 2000 SQUARE FEET, OR FRACTION THEREOF, OF CONCRETE PLACED EACH DAY, AND TRANSPORT CYLINDERS TO LAB. TEST CYLINDERS IN ACCORDANCE WITH ASTM C39. TEST (1) CYLINDER AT 7 DAYS AND (2) CYLINDERS AT 28 DAYS. HOLD LAST TEST CYLINDER FOR 60 DAYS.
     - INSPECT FINAL PLACEMENT OF ALL REINFORCING AND STEEL EMBEDS AS INDICATED ON DETAILS PRIOR TO CONCRETE PLACEMENT.
     - CONTINUOUS INSPECTION OF CONCRETE PLACEMENT.

3. POST–INSTALLED ANCHORS IN CONCRETE AND CONCRETE MASONRY:
   - A) GENERAL – APPLICABLE TO ALL ANCHORS AND DOWELS:
     - 1) ALL EXPANSION ANCHORS, SCREW ANCHORS AND ADHESIVE ANCHOR SYSTEMS USED SHALL HAVE ICC–ES OR IAPMO–UES APPROVAL.
     - 2) PERIODIC SPECIAL INSPECTION IS REQUIRED FOR ALL ANCHORS.
   - B) EXPANSION ANCHORS IN CONCRETE & MASONRY:
     - 1) PULL–TEST OR TORQUE–TEST 100% OF ANCHORS EXCEPT AS NOTED; PULL–TEST OR TORQUE–TEST 10% OF SILL PLATE ANCHOR BOLTS AND 50% OR ALTERNATE ANCHORS FOR EQUIPMENT ANCHORAGE AND IN NON–STRUCTURAL APPLICATIONS.
     - 2) PULL–TEST LOAD VALUES SPECIFIED BELOW ARE BASED ON (1–1/4) TIMES THE MAXIMUM DESIGN TENSION STRENGTHS AS PROVIDED IN THE ICC–ES REPORT FOR HILTI KWIK–BOLT TZ2 (ESR–4266) IN CONCRETE, IN ACCORDANCE WITH CBC SECTION 1910A.5.4, AND (2) TIMES THE MAXIMUM ALLOWABLE TENSION LOADS AS PROVIDED IN THE ICC–ES REPORT FOR HILTI KWIK–BOLT TZ2 (ESR–4561) IN MASONRY.
     - 3) PULL–TEST ANCHORS IN TENSION WITH CALIBRATED HYDRAULIC RAM TO VALUES SPECIFIED BELOW.

ANCHOR NOMINAL DIAMETER	EMBEDMENT (CONC./MASONRY)	CONC. TENSION TEST LOAD (LBS.)	MASONRY TENSION TEST LOAD (LBS.)
3/8"	2½" / 3"	1905	1180*(790**)
½"	3¼" / 3¾"*(3½"**)	4050	1280*(970**)
5/8"	4½" / 4½"*(4½"**)	5525	1880*(1730**)
¾"	5½" / 5½"	7150	2770*

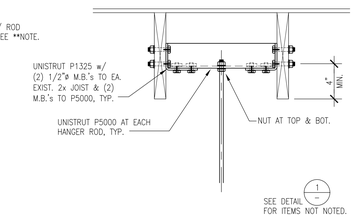
CONC. INSTALLATION TORQUE (FT.–LBS.)	CMU INSTALLATION TORQUE (FT.–LBS.)	ANCHOR DIAMETER
30(C.S. & S.S.)	15(C.S. & S.S.)	3/8"ø
50(C.S.) & 40(S.S.)	25(C.S.) & 15(S.S.)	1/2"ø
40(C.S.) & 60(S.S.)	30(C.S.) & 35(S.S.)	5/8"ø
110(C.S.) & 125(S.S.)	50(C.S. & S.S.)	¾"ø

   - * – AT ANCHOR INSTALLED IN THE FACE OF GROUT–FILLED MASONRY
   - ** – AT ANCHOR INSTALLED IN THE TOP OF GROUT–FILLED MASONRY
   - *** – INSTALLATION TORQUE FOR STAINLESS STEEL ANCHORS
     - 4) ALTERNATIVELY, TORQUE–TEST ANCHORS WITH CALIBRATED TORQUE WRENCH TO VALUES SPECIFIED IN MANUFACTURER'S ICC–ES OR IAPMO–UES REPORT FOR RECOMMENDED INSTALLATION TORQUE WITHIN 1/4 TURN OF THE NUT FOR 3/8"ø SLEEVE ANCHOR ONLY AND WITHIN 1/2 TURN OF THE NUT FOR ALL OTHER ANCHORS.
   - C) RODS & DOWELS WITH CHEMICAL ADHESIVE IN CONCRETE & MASONRY:
     - 1) PULL–TESTING OF RODS INSTALLED IN CHEMICAL ADHESIVE IS REQUIRED FOR ALL ANCHORS. TESTING OF REBAR USED ONLY AS SHEAR DOWELS ACROSS COLD JOINTS IN SLABS–ON–GRADE, WHERE SLAB IS NOT PART OF THE LATERAL FORCE–RESISTING SYSTEM, IS NOT REQUIRED.
     - 2) PULL–TEST LOAD VALUES SPECIFIED BELOW ARE BASED ON (1–1/4) TIMES THE MAXIMUM DESIGN TENSION STRENGTHS AS PROVIDED IN THE ICC–ES REPORT FOR HILTI HIT–RE 500–V3 (ESR–3814) IN CONCRETE, IN ACCORDANCE WITH CBC



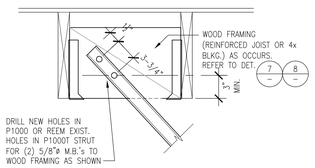
1 HANGER ROD TO WOOD FRAMING

SCALE: 1-1/2"=1' 0"



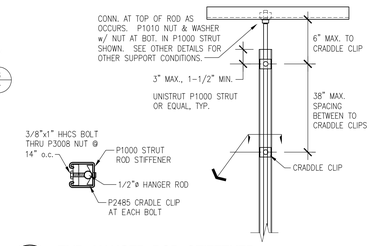
2 HANGER ROD TO WOOD FRAMING

SCALE: 1-1/2"=1' 0"



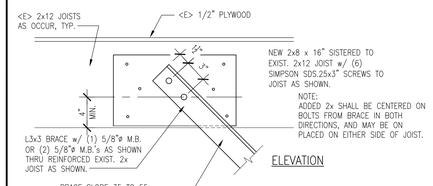
3 UNISTRUT BRACE CONN. TO WOOD

SCALE: 1-1/2"=1' 0"



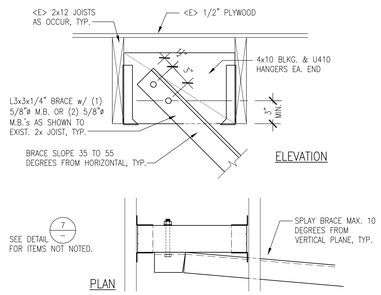
4 TYP. HANGER ROD STIFFENER

SCALE: 1-1/2"=1' 0"



7 BRACE TO WOOD FRAMING - PAR. TO JOISTS

SCALE: 1-1/2"=1' 0"



8 BRACE TO WOOD FRAMING - PERP. TO JOISTS

SCALE: 1"=1' 0"

PIPE/CONDUIT SUPPORT AND LATERAL BRACING

A. HANGER RODS:

1. VERTICAL HANGER RODS SHALL BE 5/8" ø ASTM A36, A307 OR F1554 GR. 36 THREADED ROD. SEE MECHANICAL DRAWINGS FOR CONNECTION OF HANGER ROD TO PIPE CLEVIS/CLAMP BEING SUPPORTED. SEE **NOTE AT DETAIL 1/SS.2 FOR LIMITATIONS ON NUMBER OF HANGER RODS SUPPORTED SUPPORTED BY INDIVIDUAL JOISTS.
2. HANGER RODS SHALL BE SLOPED NOT MORE THAN 5% FROM VERTICAL (1H:20V).
3. HANGER RODS SHALL BE ATTACHED TO FRAMING AT ROOF LEVEL PER DETAILS 1 THROUGH 2 ON SS.2 AS APPROPRIATE ACCORDING TO WHERE TOP OF ROD OCCURS RELATIVE TO SPECIFIC FRAMING MEMBERS.
4. WHERE LATERAL BRACES OCCUR AT BOTTOM OF HANGER RODS, RODS SHALL HAVE CONTIGUOUS STIFFENERS PER DETAIL 4/SS.2.

B. LATERAL BRACES:

1. LATERAL BRACES SHALL BE ONE OF THE FOLLOWING:
   - ASTM A36 L3-1/2"x3-1/2"x1/4" - OUTSTANDING ANGLE LEGS SHALL OCCUR AT TOP SIDE OF SLOPED BRACES
   - UNISTRUT P1000 OR P1000T OR EQUIVALENT; 1-5/8" SQ. X 12 GA. CHANNEL STRUT
2. CONNECTIONS OF LATERAL BRACES TO WOOD FRAMING SHALL USE NOT LESS THAN TWO (2) ⅝"ø BOLTS TO WOOD MEMBERS, AND ONE ⅝"ø BOLT TO STEEL MEMBERS. CONNECTION AT BOTTOM OF BRACES SHALL USE (1) 5/8"ø M.B. TO PIPE CLEVIS/CLAMP AS SHOWN ON MECHANICAL DRAWINGS.
3. SEE MECHANICAL DRAWINGS FOR ATTACHMENT OF LATERAL BRACES TO PIPES/CONDUITS BEING BRACED.
4. SLOPE OF LATERAL BRACES SHALL BE BETWEEN 35 AND 55 DEGREES FROM HORIZONTAL.
5. LATERAL BRACES SHALL GENERALLY OCCUR IN A VERTICAL PLANE PERPENDICULAR TO AXIS OF SUBJECT PIPE/CONDUIT. BRACES SHALL BE SPLAYED NOT MORE THAN 10 DEGREES FROM THIS VERTICAL PLANE PERPENDICULAR TO PIPE/CONDUIT AXIS.

C. PIPE HANGER AND BRACE LEGEND AND NOTES:

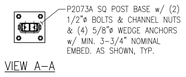
1. LATERAL (DIAGONAL) BRACES MAY EXTEND UP FROM PIPES IN EITHER TRANSVERSE DIRECTION. GENERALLY, BRACE DIRECTION CHOSEN SHOULD PROVIDE SHORTEST POSSIBLE LENGTH OF BRACE TO ROOF FRAMING.
2. REFER TO MECHANICAL PLANS FOR LOCATIONS.

HANGER ROD LOCATIONS ON PLAN ARE SHOWN THUS:



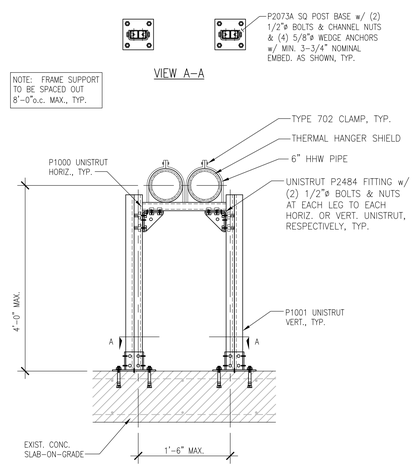
LATERAL BRACE LOCATIONS ON PLAN ARE SHOWN THUS:





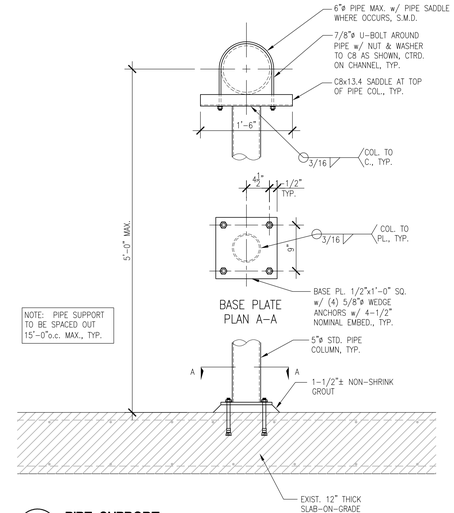
25 PIPE SUPPORT FRAME & ANCHORAGE TO SLAB & WALL

SCALE: 1"=1' 0"



27 PIPE SUPPORT FRAME & ANCHORAGE TO SLAB

SCALE: 1"=1' 0"



30 PIPE SUPPORT

PS-2

SCALE: 1-1/2"=1' 0"

AKH
Structural Engineers, Inc
275 Tennant Avenue, Ste. 204 ph: 408.978.1970
Morgan Hill, CA 95037 AKHSE.com Job 25161

REGISTERED PROFESSIONAL ENGINEER TIMOTHY D. HYDE No. S3260 EXP. 3/31/27 STRUCTURAL CIVIL

SOLANO COMMUNITY COLLEGE DISTRICT

SOLANO COMMUNITY COLLEGE

4000 SUISUN VALLEY RD
FAIRFIELD, CA 94534

HYDRONIC SYSTEM MODERNIZATION

DSA APPL #02-123745

ISSUE		
MARK	DATE	DESCRIPTION
	10/03/25	100% SD
	10/24/25	50% CD
	11/12/25	PROGRESS SET
	12/01/25	DSA SUBMITTAL
	01/23/26	DSA BACKCHECK

SOBE PROJECT NO:	2510-00649
DATE:	01/22/26
DRAWN BY:	JJQ, TDH
CHECKED BY:	TDH
APPROVED BY:	

SHEET TITLE

STRUCTURAL HANGERS & BRACES SUPPORT DETAILS AND ANCHORAGE DETAILS

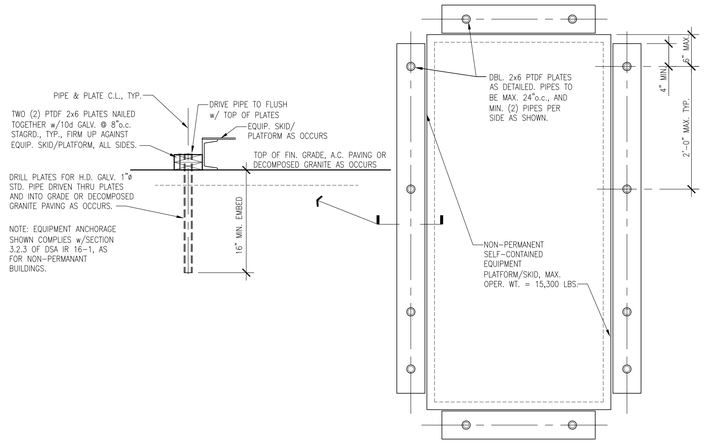
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THIS DRAWING IS 30" X 42" AT FULL SIZE	

S-5.2

SHEET OF -

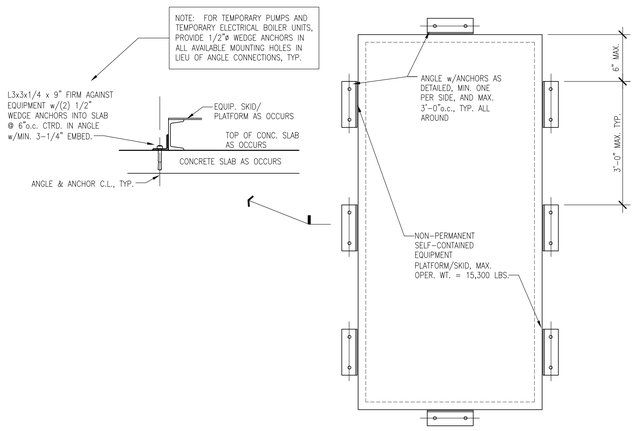
THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. @ 2015 BY SAAS O'BRIEN ENGINEERS, INC.

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SAJAS O'BRIEN ENGINEERS, INC.



9 NON-PERMANENT EQUIPMENT ANCHORAGE DETAILS - OPTION 1

SCALE: 1"=1' 0"



11 NON-PERMANENT EQUIPMENT ANCHORAGE DETAILS - OPTION 2

SCALE: 1"=1' 0"

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REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

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APPROVED BY:	

SHEET TITLE

STRUCTURAL NON-PERMANENT EQUIPMENT ANCHORAGE DETAILS

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

S-5.3

SHEET OF –