STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION
STOCKTON UNIFIED SCHOOL DISTRICT

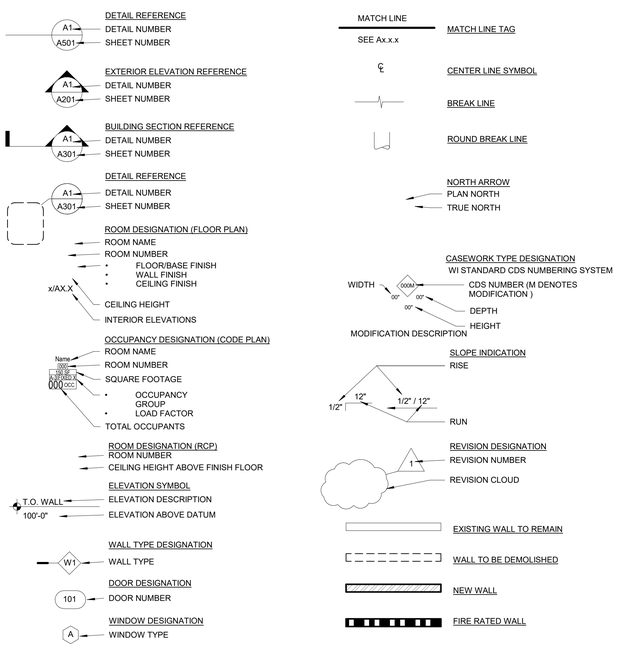
DSA APP: 02-122192 **FILE NO: 39-H7**

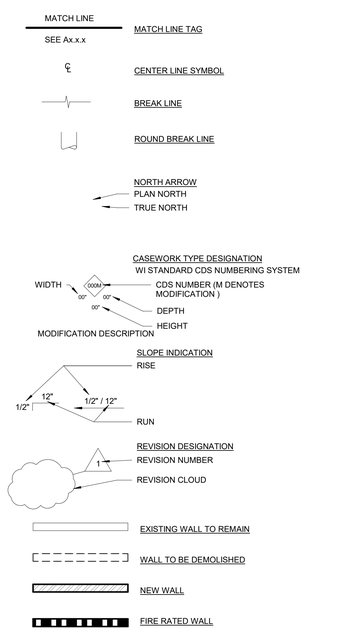
LIST OF ABBREVIATIONS

A		FO	FINISHED OPENING	PLUMB	PLUMBING
A/C	AIR CONDITIONING	FOC	FACE OF CONCRETE	PR	PAIR
AD	AREA DRAIN	FOM	FACE OF MASONRY	PSI	POUNDS PER SQUARE INCH
AFF	ABOVE FINISHED FLOOR	FOS	FACE OF STUD	PSF	POUNDS PER SQUARE FOOT
AHU	AIR HANDLING UNIT	FOW	FACE OF WALL	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	FRG	FIBER REINFORCED GYPSUM		
ANOD	ANODIZED	FSP	FIRE STANDPIPE	**Q**	
ARCH	ARCHITECT	FT	FEET	QT	QUARRY TILE
@	AT	FV	FIELD VERIFY		
				R	
B		**G**		R	RISER OR RADIUS
BD	BOARD	GA	GAUGE	RAD	RADIUS
BLDG	BUILDING	GALV	GALVANIZED	RCP	REFLECTED CEILING PLAN
BO	BOTTOM OF	GFRC	GLASS-FIBER-REINFORCED CONCRETE	RD	ROOF DRAIN
				REF	REFRIGERATOR
C		GFRG	GLASS-FIBER-REINFORCED GYPSUM	REQD	REQUIRED
C	CELSIUS	GL	GLASS	REV	REVISION
CH	COAT HOOK	GWB	GYPSUM WALL BOARD		
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	GYP	GYPSUM	RH	RELATIVE HUMIDITY
				RM	ROOM
CG	CORNER GUARD	**H**		RO	ROUGH OPENING
CI	CONTINUOUS INSULATION	H	HIGH	RTU	ROOF TOP UNIT
CJ	CONTROL JOINT	HB	HOSE BIBB	RWL	RAIN WATER LEADER
CL	CENTERLINE	HDR	HEADER		
CLG	CEILING	HM	HOLLOW METAL	**S**	
CLO	CLOSET	HPT	HIGH POINT	S	SMOKE DETECTOR
CLR	CLEAR	HR	HOUR	SAM	SELF ADHESIVE MEMBRANE
CMU	CONCRETE MASONRY UNIT	HT	HEIGHT		SCHED SCHEDULE
COL	COLUMN			SECT	SECTION
CONC	CONCRETE	**I**		SIM	SIMILAR
CONT	CONTINUOUS	ID	INSIDE DIAMETER; INSIDE DIMENSION	SPEC	SPECIFICATION
CORR	CORRIDOR			SS	STAINLESS STEEL
CT	CERAMIC TILE	IN	INCH	STD	STANDARD
CTJ	CONSTRUCTION JOINT	INFO	INFORMATION	STS	SELF TAPPING SCREW
CUH	CABINET UNIT HEATER	INT	INTERIOR	STRUCT	STRUCTURAL
D		**J**		**T**	
D	DEEP	JAN	JANITOR	T	TREAD
DEG	DEGREE			TEL	TELEPHONE
DEMO	DEMOLITION	**K**	(NOT USED)	TEMP	TEMPORARY
DF	DRINKING FOUNTAIN			THK	THICK
DIA	DIAMETER	**L**		TOC	TOP OF CONCRETE
DIM	DIMENSION	LAB	LABORATORY	TOM	TOP OF MASONRY
DN	DOWN	LAV	LAVATORY	TOP	TOP OF PARAPET
DS	DOWNSPOUT	LBS	POUNDS	TOS	TOP OF SLAB; TOP OF STEEL
DWGS	DRAWINGS	LLH	LONG LEG HORIZONTAL	TOW	TOP OF WALL
		LLV	LONG LEG VERTICAL	TYP	TYPICAL
E		LPT	LOW POINT	TO	TOP OF
EA	EACH				
EJ	EXPANSION JOINT	**M**		**U**	
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	MACH RM	MACHINE ROOM	UL	UNDERWRITER'S LABORATORIES
		MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
EL	ELEVATION	MFR	MANUFACTURER		
ELEC	ELECTRICAL	MECH	MECHANICAL	**V**	
		MEZZ	MEZZANINE	VCT	VINYL COMPOSITE TILE
ELEV	ELEVATOR	MIN	MINIMUM	VERT	VERTICAL
EOS	EDGE OF SLAB	MO	MASONRY OPENING	VEST	VESTIBULE
ERD	EXISTING ROOF DRAIN			VIF	VERIFY IN FIELD
EQ	EQUAL	**N**			
EQUIP	EQUIPMENT	NA	NOT APPLICABLE	**W**	
EWC	ELECTRIC WATER COOLER	NIC	NOT IN CONTRACT	W/	WITH
EXIST	EXISTING	NOM	NOMINAL	W/O	WITHOUT
EXP	EXPOSED	NTS	NOT TO SCALE	WD	WOOD
EXT	EXTERIOR			WH	WALL HYDRANT
		O		WP	WORKING POINT
F		OC	ON CENTER	WRB	WEATHER RESISTIVE BARRIER
F	FAHRENHEIT	OD	OUTSIDE DIAMETER; OUTSIDE DIMENSION		
FA	FIRE ALARM			**X,Y,Z**	(NOT USED)
FACP	FIRE ALARM CONTROL PANEL	OFD	OVERFLOW DRAIN		
FDC	FIRE DEPARTMENT CONNECTION	OH DR	OVERHEAD DOOR		
FD	FLOOR DRAIN	OPH	OPPOSITE HAND		
FEC	FIRE EXTINGUISHER CABINET	OPP	OPPOSITE		
FE	FIRE EXTINGUISHER	ORIG	ORIGINAL		
FG	FINISH GRADE				
FHC	FIRE HOSE CABINET	**P**			
FIN	FINISH	P LAM	PLASTIC LAMINATE		
FLR	FLOOR	PLAS	PLASTER		
FND	FOUNDATION				

THE PRECEDING LIST OF ABBREVIATIONS IS PRESENTED AS A GENERAL GUIDE AND DOES NOT NECESSARILY SHOW ALL ABBREVIATIONS USED. OTHER GENERALLY ACCEPTED ABBREVATIONS MAY BE FOUND AMONG THE DRAWINGS - SOME ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED WITHIN THIS DRAWING SET.

DRAWING SYMBOL LEGEND





APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2023*

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR*
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
(2021 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
(2020 NATIONAL ELECTRICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
(2021 IAPMO UNIFORM MECHANICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
(2021 IAPMO UNIFORM PLUMBING CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
(2021 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
(2021 INTERNATIONAL EXISTING BUILDING CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
2017 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS *(PER 2022 CBC PART 2 CH 35)*
NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED).....2022 EDITION
NFPA 14 - STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (CA AMENDED)....2019 EDITION
NFPA 17 - STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS.....2021 EDITION
NFPA 17A - STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS.....2021 EDITION
NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION.....2019 EDITION
NFPA 22 - STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION.....2018 EDITION
NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (CA AMENDED).....2019 EDITION
NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED).....2022 EDITION
NFPA 80 - STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES.....2019 EDITION
NFPA 2001 - STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED).....2018 EDITION
UL 300 - STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT.....2005 (R2010)
UL 464 - AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES.....2003 EDITION
UL 521 - STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.....1999 EDITION
UL 1971 - STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED.....2002 (R2010)
ICC 300 - STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS.....2017 EDITION
FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.
SEE CALIFORNIA BUILDING CODE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.
*ALL PARTS OF THE 2022 CALIFORNIA BUILDING CODE BECOME EFFECTIVE JANUARY 1, 2023 EXCEPT THE EFFECTIVE DATE FOR THE USE OF THE 2022 BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 1, CHAPTER 10) IS JULY 12, 2023 AND THE EFFECTIVE DATE FOR THE USE OF THE CALIFORNIA ADMINISTRATIVE CODE (TITLE 24, PART 1, CHAPTER 4) IS JANUARY 1, 2023

SCOPE OF WORK

ALTERATION OF APPROXIMATELY 3,000 SF OF EXISTING AUTO SHOP/CLASSROOM INTO AN AG MECHANICS SHOP/CLASSROOM. INCLUDING ASSOCIATED SITE WORK AND PAVING AS SHOWN ON DRAWINGS AND SPECIFICATIONS.

THIS PROJECT REQUIRES A CLASS 3 PROJECT INSPECTOR

DEFERRED SUBMITTALS - NONE

FLOOR ZONE: X AREA WITH REDUCED FLOOD RISK DUE TO LEVEE

GENERAL NOTES

1. PROJECT MUST COMPLY WITH TITLE 24, PARTS 1-9 AND 12 IN ACCORDANCE WITH TITLE 24, PART 1, 4-305
2. CONTRACTOR TO BE IN COMPLIANCE WITH CFC CH. 33 - FIRE SAFETY DURING CONSTRUCTION & DEMOLITION.
3. TITLE 24, PARTS 1-5 MUST BE KEPT ON THE SITE DURING CONSTRUCTION.
4. CHANGES TO STRUCTURAL, ACCESSIBILITY OR FIRE LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS AFTER THE WORK HAS BEEN LET SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN SECTION 4-338, PART 1, CAC, AND SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK. CONSTRUCTION CHANGE DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE WITH DSA INTERPRETATION OF REGULATION IR A-6.
5. ALL ADDENDA MUST BE STAMPED AND SIGNED BY ARCHITECT/ENGINEER OF RECORD AND DELEGATED DESIGN PROFESSIONAL WHEN APPLICABLE, AND APPROVED BY DSA.
6. ALL SUBSTITUTIONS AND REQUESTS FOR INFORMATION (RFI'S) THAT AFFECT STRUCTURAL SAFETY, FIRE LIFE SAFETY, ACCESS COMPLIANCE OR ENERGY (AS APPLICABLE) SHALL BE SUBMITTED TO DSA FOR REVIEW AND APPROVAL AS A CONSTRUCTION CHANGE DOCUMENT.
7. A "DSA CERTIFIED" 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.
8. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
9. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE SITE AND SHALL REPORT ANY DISCREPANCIES IN WRITING TO THE ARCHITECT BY THE MEANS OF A REQUEST FOR INFORMATION (RFI) OR AS PART OF THE APPLICABLE SHOP DRAWING / SUBMITTAL.
10. CONTRACTOR IS RESPONSIBLE FOR INCIDENTAL WORK NECESSARY TO COMPLETE THE INSTALLATION OF NEW WORK. THIS INCLUDES, BUT IS NOT LIMITED TO, THE REMOVAL AND/OR REINSTALLATION OF ALL EXISTING ITEMS, OR PORTIONS OF THE EXISTING CONSTRUCTION WHETHER SHOWN OR NOT.
11. ALL WORK SHALL BE IN COMPLETE CONFORMANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OR AS OTHERWISE OUTLINED IN THE SPECIFICATIONS.
12. USE OF ANY MATERIALS CONTAINING LEAD OR ASBESTOS IS PROHIBITED.
13. THE TERM "TYPICAL" OR "(TYP.)" SHALL BE CONSTRUED TO MEAN APPLYING TO ALL LIKE OR SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE.

PROJECT TEAM

OWNER

STOCKTON UNIFIED SCHOOL DISTRICT
56 SOUTH LINCOLN ST,
STOCKTON, CA 95203

ALAN COX
FACILITIES AND PLANNING
209-933-0745
ADCox@stocktonusd.net

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3701 BUSINESS DRIVE, SUITE 200
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SACRAMENTO, CA 95820

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CIVIL ENGINEER

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1117 WINDFIELD WAY, SUITE 110
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11020 SUN CENTER DRIVE, SUITE 100
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DAVID YU
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David.Yu@capital-engineering.com

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RANCHO CORDOVA, CA 95670

RICHARD LINGO
(916) 851-3531
rlingo@capital-engineering.com

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G1.1 CODE ANALYSIS AND SITE ACCESS
G2.1 EXITING AND OCC. PLAN AND CODE REVIEW

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C3.1 DETAILS

ARCHITECTURAL
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A1.3 ENLARGED SITE PLAN AND SITE DETAILS
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A3.1 AG SHOP CEILING PLANS
A4.1 AG SHOP ROOF PLANS
A5.1 SECTIONS AND EXTERIOR ELEVATIONS
A7.1 EXISTING INTERIOR PHOTOS
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S2.1 ROOF FRAMING PLAN
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E6.0 TITLE 24 LTO FORMS
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TOTAL NUMBER OF SHEETS: 62

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE
3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANDY
No. C32876
EXP. 03/31/25
STATE OF CALIFORNIA

SUSD
55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

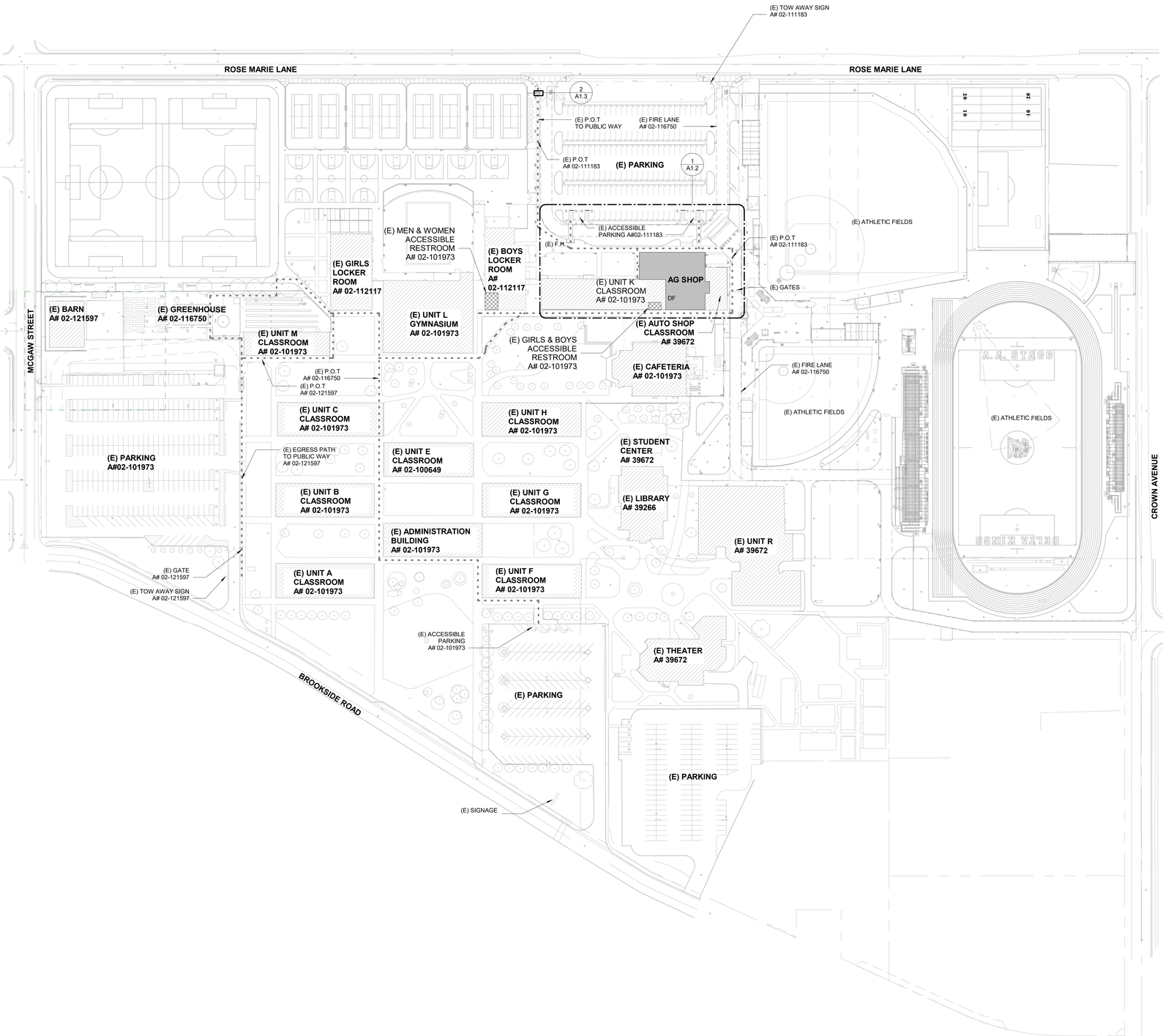
No.	Description	Date

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

COVER SHEET

G0.1



ACCESS COMPLIANCE STATEMENT

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATES:

THE PATH OF TRAVEL (POT) IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH 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 POT THAT WERE DETERMINED TO BE NONCOMPLIANT HAVE:

1. BEEN IDENTIFIED ON THESE PLANS
2. THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THE PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATION 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 SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

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

ACCESSIBLE ROUTE COMPONENTS INCLUDE BUT ARE NOT LIMIT TO:

- AT LEAST 48" IN WIDTH; OR AS APPROVED BY CODE;
- WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES EXCEEDING 1/4";
- WITH A FIRM, STABLE AND SLIP RESISTANT WALKING SURFACE;
- WITH A RUNNING SLOPE OF 1:20 OR LESS;
- WITH RUNNING SLOPE OF CODE COMPLIANT RAMPS, NOT TO EXCEED 8.33% (1:12), (RAMPS COMPLY WITH 11B-405);
- WITH REQUIRED LANDINGS AND LEVEL AREAS WITH SLOPE 1:48 (1/4"/FT.) OR LESS;
- WITH A CROSS SLOPE OF 1:48 (1/4"/FT.) OR LESS;
- WITH OPENINGS IN DRAINS AND GRATING NOT TO EXCEED ½" IN PREDOMINANT DIRECTION OF TRAVEL;
- IS FREE OF OVERHEAD OBSTRUCTIONS WITHIN 80" ABOVE THE WALKING SURFACE; AND
- IS FREE OF OBJECTS WHICH PROTRUDE MORE THAN 4" BETWEEN THE HEIGHTS OF 27" AND 80" ABOVE THE WALKING SURFACE

SITE PARKING ANALYSIS

TOTAL PARKING STALLS: 557 SPACES — 35 ACCESS TOTAL, 6 VAN ACCESS

REQ'D NO. OF ACCESSIBLE PARKING STALLS PER CBC TABLE 11B-208.2 = 2% OF TOTAL (12)

NO. OF ACCESSIBLE PARKING PROVIDED = 35

REQ'D NO. OF VAN ACCESSIBLE PARKING STALLS PER CBC TABLE 11B-208.2.4 = 2

NO. OF VAN ACCESSIBLE PARKING PROVIDED = 6

SITE LEGEND

ACCESSIBLE ROUTE
SLOPE <5%
CROSS SLOPE <2%
EGRESS PATH TO PUBLIC WAK

EXISTING BUILDING N.I.C
LIMITS OF WORK
(E) ACCESSIBLE BOY'S & GIRL'S TOILET ROOMS
(E) ACCESSIBLE ALL STAFF TOILET ROOM
DF — ACCESSIBLE DRINKING FOUNTAIN

(E) ACCESSIBLE ROUTE
(E) EGRESS PATH TO PUBLIC WAK

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	Stockton Unified School District
Project Name/School	Stagg High School
Project Address	1621 Brookside Road Stockton CA 95207

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: http://egis.fire.ca.gov/FHSZ/	Moderate ☐	High ☐	Very High ☐
	Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)*			WIFA ☐

CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT — WATER DIVISION

City of Stockton
Municipal Utilities Department
Water Field Office
7600 West Ln.
Stockton, CA 95210
(209) 937-7601
FAX: (209) 937-8656

WATERFLOW INFORMATION

Date: 4/20/23
Requesting Company: COMMUNITY ARCHITECTURE
Contact Name: MILY HOSTETLER
Email: mily@communityarch.net
Telephone/FAX: 916.266.8995
Mailing Address: 3701 Business Dr, Sacramento CA 95820

Project Name: Livestock Facility Project
Project Location: 1621 Brookside Rd, Stockton CA 95207

City use only below this line.

Fire Department Dist #: 405 J
Nearest Flow Hydrant: Brookside/Program
Water Main Size: 8"

Flow Date	Static Pressure	Residual Pressure	Discharge Size	Pitot Pressure	Flow	Flow Avail. @ 20
5-17-23	50	35	4"	17	1771	2575

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55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date

PROJECT No.: 2023-014.00

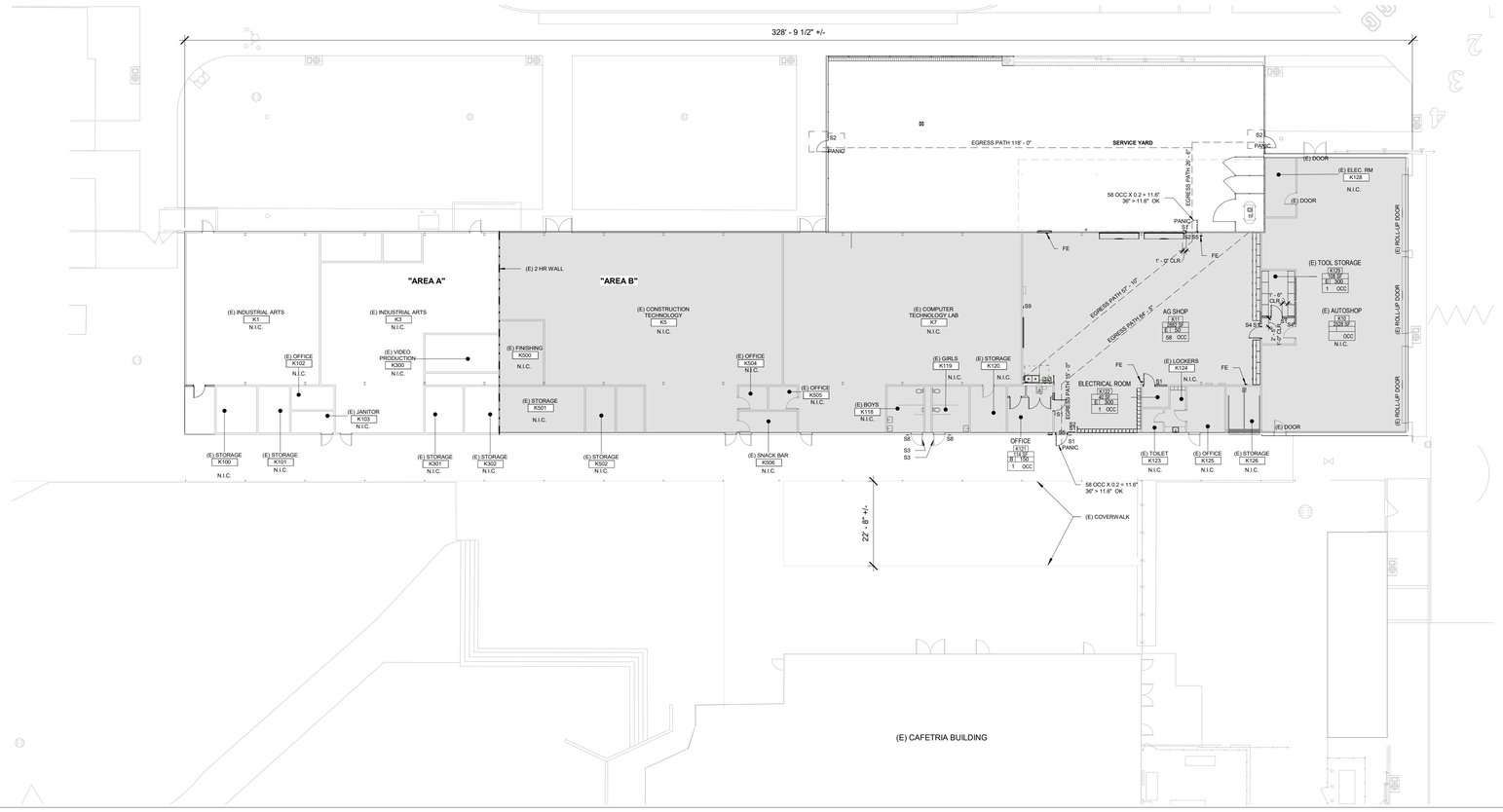
CONSTRUCTION DOCUMENTS

CODE ANALYSIS AND SITE ACCESS

G1.1

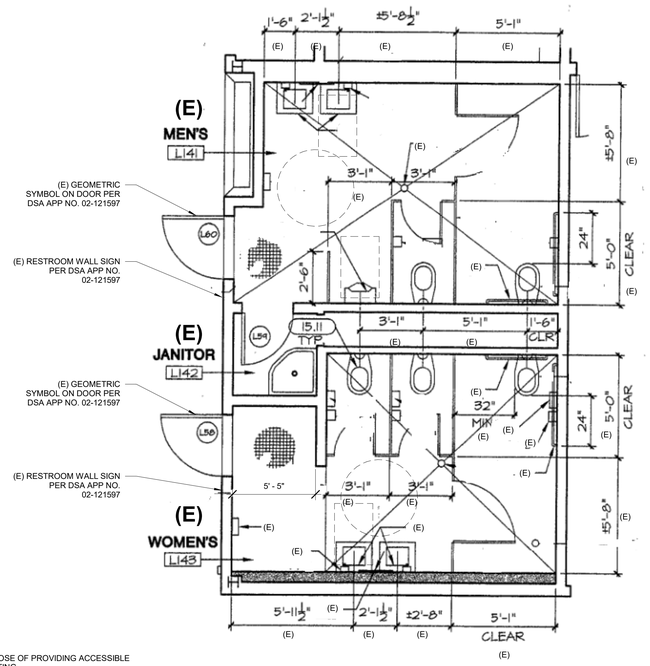
SITE PLAN 1" = 80'-0" 10

WATER FLOW INFORMATION 1" = 1'-0" 5



AG SHOP FLOOR CODE PLAN

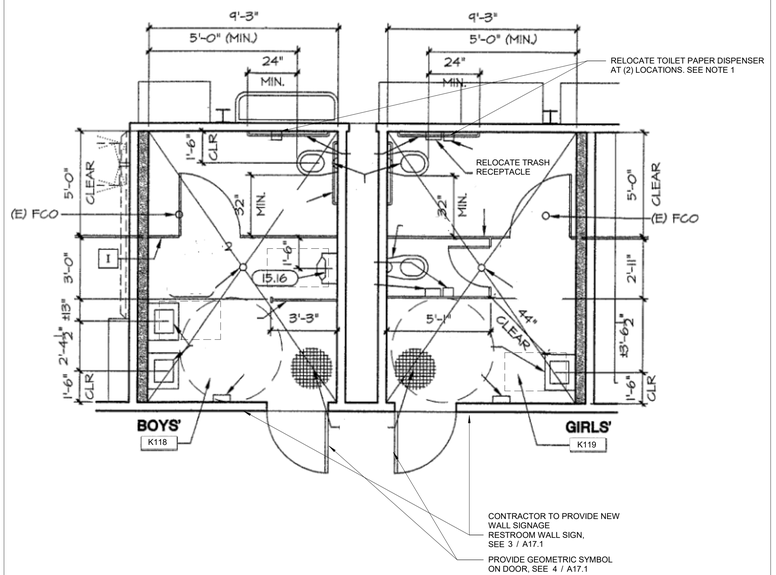
1/16" = 1'-0" | 2



NOTE:
1. THIS FLOOR PLAN IS AN EXCERPT FROM DSA A#02-101973; AND IS SHOWN FOR THE SOLE PURPOSE OF PROVIDING ACCESSIBLE COMPLIANCE INFORMATION. TOILET ROOMS ARE EXISTING. ALL DIMENSIONS SHOWN ARE EXISTING.
2. REFER TO TYPICAL MOUNTING HEIGHTS DETAIL SHEET A17.1

(E) STAFF ACCESSIBLE RESTROOMS A# 02-101973

1/4" = 1'-0" | 7



NOTES:
1. CONTRACTOR TO CORRECT LOCATION FOR TOILET PAPER DISPENSER TO COMPLY WITH CURRENT BUILDING CODE. (E) TOILET PAPER DISPENSER SHOULD BE LOCATED 7" TO 9" FROM THE FRONT OF THE TOILET TO CENTER LINE OF TOILET PAPER
2. THIS FLOOR PLAN IS AN EXERPT FROM DSA A#02-101973 , AND IS SHOWN FOR THE SOLE PURPOSE OF PROVIDING ACCESSIBLE COMPLIANCE INFORMATION. TOILET ROOMS ARE EXISTING. ALL DIMENSIONS SHOWN ARE EXISTING.

(E) ACCESSIBLE RESTROOMS A#02-101973

1/4" = 1'-0" | 6

DOOR SIGN LEGEND

CONTRACTOR TO SUPPLY AND INSTALL THE FOLLOWING SIGNS AT THE LOCATIONS INDICATED ON THE DRAWINGS

- **S1** ROOM IDENTIFICATION WALL SIGN, SEE 5 / A17.1
- **S2** EXIT WALL SIGN, SEE 10 / A17.1
- **S3** RESTROOM DOOR SIGN, SEE 4 / A17.1
- **S4** NOT AN EXIT SIGN, SEE 15 / A17.1
- **S5** EXIT SIGN, SEE ELECTRICAL DRAWINGS
- **S8** RESTROOM WALL SIGN, SEE 3 / A17.1
- **S9** ROOM OCCUPANCY SIGN, SEE 14 / A17.1
- **S11** ASSISTED LISTENING SYSTEM (ALS) SIGN, SEE 13 / A17.1

FIRE EXTINGUISHER NOTES

FE 5 LB UL LISTED DRY-CHEMICAL FIRE EXTINGUISHER. MINIMUM DESIGNATION TO BE 4A 40B/C. PROVIDE WALL MOUNTING BRACKET, HANDLE AT 48" A.F.F.
PROVIDE SIGN PER DETAIL 6 / A17.1

CONTRACTOR TO ENSURE NO FIRE EXTINGUISHER IS FURTHER THEN 75'-0" WALKING RADIUS TO ANY POINT IN THE BUILDING.

CODE ANALYSIS

(E) INDUSTRIAL ARTS WING K :	CLASSROOMS
(E) OCCUPANCY :	E
(E) CONSTRUCTION TYPE :	V-B NON- SPRINKLERED

NO CHANGE TO USE OF (E) SPACE

EXIT ANALYSIS

EXIT SIZING CBC 1005.3.2: 0.2 INCH PER OCCUPANT

NUMBER OF EXITS CBC 1006.2.1: (2) EXITS OR EXIT ACCESS PATHWAYS SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OF 49 FOR E OCCUPANCY IS EXCEEDED PER TABLE 1006.2.1

PROVIDED: (2) EXIT - ALL EXITS ARE ACCESSIBLE MEANS OF EGRESS

SEE INDIVIDUAL EXITS FOR EXIT WIDTH CALCULATIONS

OCCUPANT LOAD FACTORS PER CBC TABLE 1004.5 - MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

CLASSROOMS - AREA PER OCCUPANT 50 SF

AG SHOP CLASSROOM 2,881 SF / 50SF = 58 OCC.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE
3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANDY
No. C32876
EXP. 03/31/25
STATE OF CALIFORNIA

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

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EXITING AND OCC. PLAN AND CODE REVIEW

G2.1

ABBREVIATIONS

NOTE: NOT ALL ABBREVIATIONS MAY BE USED ON THESE PLANS.

AB	AGGREGATE BASE
AC	ASPHALTIC CONCRETE
AD	AREA DRAIN
APN	ASSESSOR'S PARCEL NUMBER
ARV	AIR RELEASE VALVE
ASB	AGGREGATE SUB-BASE
BO	BLOW-OFF VALVE
BV	BUTTERFLY VALVE
BW	BACK OF WALK
C/L	CENTERLINE
CB	CATCH BASIN
CJ	CONTROL JOINT
CL	CLASS
CMP	CORRUGATED METAL PIPE
CATV	CABLE TELEVISION
CO	CLEANOUT
COMM	COMMUNICATION
CONC.	CONCRETE
CONST.	CONSTRUCT
CR	CURB RETURN
CS	CONCRETE SURFACE
DC	DOUBLE CHECK VALVE
DDC	DOUBLE DETECTOR CHECK VALVE
DG	DECOMPOSED GRANITE
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
DS	DOWNSPOUT
E	ELECTRIC
EJ	EXPANSION JOINT
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX	EXISTING
FS	FIRE SERVICE LINE
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOWLINE
FM	SANITARY SEWER FORCE MAIN
FF	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
G	GAS
GB	GRADE BREAK
GR	GRATE ELEVATION
GRD	GRADE ELEVATION
GV	GATE VALVE
HB	HOSE BIBB
HBD	HEADER BOARD
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
INV	PIPE INVERT ELEVATION
JP	JOINT UTILITY POLE
LF	LINEAL FEET
LIP	LIP OF GUTTER
LT	LEFT
MS	MOWSTRIP
NTS	NOT TO SCALE
OH	OVERHEAD
PAD	BUILDING PAD
PCC	PORTLAND CEMENT CONCRETE
PD	PLANTER DRAIN
PIV	POST INDICATOR VALVE
P/L	PROPERTY LINE
PP	POWER POLE
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
R	RADIUS
RIM	MANHOLE RIM ELEVATION (SOLID COVER)
RP	REDUCED PRESSURE BACKFLOW PREVENTER
RW	RIGHT OF WAY
SCH	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SG	SUBGRADE ELEVATION
SP	FIRE SPRINKLER SERVICE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
S/W	SIDEWALK
T	TELEPHONE
TC	TOP OF CURB
TD	TRENCH DRAIN
TDCB	TRENCH DRAIN CATCH BASIN
TP	TELEPHONE POLE
TRW	TOP OF RETAINING WALL
TSW	TOP OF SEAT WALL
TW	TOP OF WALK ELEVATION
U	UTILITY
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
VCP	VITRIFIED CLAY PIPE
W	WATER
W/	WITH
W/O	WITHOUT
WV	WATER VALVE

LEGEND

NOTE: NOT ALL SYMBOLS MAY BE USED ON THESE PLANS.

PROPOSED GRADING & DRAINAGE SYMBOLS:

8" SD	STORM DRAIN LINE (SIZE AND FLOW SHOWN)
	STORM DRAIN MANHOLE (SDMH)
	CATCH BASIN (CB)
	DROP INLET (DI)
	AREA DRAIN (AD)
	PLANTER DRAIN (PD) OR FLOOR DRAIN (FD)
CO	STORM DRAIN CLEANOUT
99.99	ELEVATION
FF=100.00	FINISHED FLOOR ELEVATION
PAD=99.33	BUILDING PAD ELEVATION
	CONCRETE SIDEWALK
	GRADED DIRECTION FOR DRAINAGE FLOW
	SWALE
	SLOPE
	TREE TO BE REMOVED
	RETAINING WALL

PROPOSED SANITARY SEWER SYMBOLS:

6" SS	SANITARY SEWER LINE (SIZE AND FLOW SHOWN)
	SANITARY SEWER MANHOLE (SSMH)
CO	SEWER CLEANOUT FLUSHER BRANCH

PROPOSED WATER SYMBOLS:

8" W	WATER LINE & SIZE
8" FS	FIRE LINE & SIZE
8" DW	DOMESTIC WATER LINE & SIZE
8" RW	RECLAIMED WATER LINE & SIZE
8" IRR	IRRIGATION SERVICE LINE & SIZE
8" NP	NON POTABLE WATER LINE & SIZE
8" SP	FIRE SPRINKLER SERVICE LINE & SIZE
	GATE VALVE
M	WATER METER
FH	FIRE HYDRANT ASSEMBLY
FDC	FIRE DEPARTMENT CONNECTION
DC	DETECTOR CHECK VALVE
DDC	DOUBLE DETECTOR CHECK VALVE
RP	REDUCED PRESSURE BACKFLOW PREVENTER
	BUTTERFLY VALVE
1"	AIR RELEASE VALVE + SIZE
1"	BLOW-OFF VALVE + SIZE
PIV	POST INDICATOR VALVE

GENERAL NOTES

1. THE TYPES, LOCATIONS, SIZES, AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, WARREN CONSULTING ENGINEERS CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY MEMBERS OF UNDERGROUND SERVICE ALERT (USA) TWO (2) WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING TOLL FREE 1-800-227-2600, OR 811.

811 Know what's below. Call before you dig.

2. WARREN CONSULTING ENGINEERS, INC. (WCE) ASSUMES NO RESPONSIBILITY FOR ERRORS IN PHYSICAL LOCATION OF IMPROVEMENTS, HORIZONTAL OR VERTICAL. IN ADDITION, ANY SUCH ERRORS IN PHYSICAL LOCATION MAY AFFECT THE INTENDED DESIGN OF SUCH IMPROVEMENTS AND WCE CANNOT BE HELD RESPONSIBLE FOR SUCH CONDITIONS WHICH ARE A RESULT OF ERRORS IN SURVEYING, OR IMPROPER CONSTRUCTION.
3. IF SUBSURFACE CULTURAL RESOURCES, REMAINS, AND/OR ARTIFACTS ARE UNCOVERED DURING PROJECT CONSTRUCTION, ALL WORK IN THE VICINITY SHALL BE STOPPED UNTIL SUCH ITEMS CAN BE ASSESSED BY AN APPROPRIATE MEMBER OF THE COUNTY ENVIRONMENTAL IMPACT SECTION STAFF.
4. CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS: AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
5. THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY FOR ALL EXCAVATIONS OF 5 FEET OR MORE IN DEPTH.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE NECESSARY PRE-CONSTRUCTION SITE REVIEWS TO DETERMINE NECESSARY MEANS AND METHODS TO COMPLETE THE IMPROVEMENTS SHOWN ON THESE PLANS.
7. WHERE IMPROVEMENTS LIE WITHIN AN EXISTING DEVELOPED AREA, CONTRACTOR SHALL USE CAUTION WHEN ACCESSING THE SITE THROUGH THESE EXISTING IMPROVEMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT ANY SUCH EXISTING IMPROVEMENTS OUTSIDE THE PROJECT BOUNDARY, OR EXISTING IMPROVEMENTS WITHIN THE BOUNDARY WHICH ARE TO REMAIN. PROPER PRECAUTIONS SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP DETAILED RECORDS OF MINOR CHANGES OR ADJUSTMENTS MADE DURING CONSTRUCTION (WHICH WERE NOT FORMALLY ISSUED). UPON PROJECT COMPLETION, THESE RECORDS AND/OR INFORMATION SHALL BE PROVIDED TO THE OWNER AND WARREN CONSULTING ENGINEERS, INC. UNLESS AN OFFICIAL "AS-BUILT" SET OF PLANS IS A REQUIREMENT OF THE CONTRACT. IF AS-BUILT PLANS ARE A REQUIREMENT OF THE CONTRACT, REFER TO SPECIFICATIONS FOR AS-BUILT DELIVERABLE REQUIREMENTS.
9. IN VEHICULAR PATHWAYS, EXISTING ASPHALTIC AND/OR CONCRETE SURFACES SHALL BE CUT TO A NEAT AND STRAIGHT LINE, PARALLEL OR PERPENDICULAR TO THE VEHICULAR TRAVELED PATH. THIS IS TYPICALLY THE ROADWAY CENTERLINE, BUT MAY VARY. THAT SAWCUT EDGE SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION SO A CLEAN EDGE REMAINS FOR PATCH BACK.. IF EDGE IS DAMAGED, A NEW SAW CUT WILL BE REQUIRED. THE EXPOSED EDGE SHALL BE "TACKED" WITH EMULSION PRIOR TO PAVING.
10. NO BURNING OR BLASTING SHALL BE ALLOWED ONSITE UNLESS SPECIFICALLY ADDRESSED ON PLANS, OR SPECIFICALLY APPROVED AND COORDINATED WITH THE ARCHITECT, ENGINEER, AND LOCAL AGENCY OR OTHER ADMINISTRATIVE AUTHORITY.
11. SUBGRADE AND RESULTING FINISHED GRADE SHALL BE CONSTRUCTED SMOOTH AND UNIFORM BETWEEN SPOT ELEVATIONS, CONTOURS OR OTHER STRUCTURE ELEVATIONS SHOWN ON GRADING OR OTHER PLANS. NO MOUNDS, RUTS, DEPRESSIONS OR OTHER GRADING DEFICIENCIES WILL BE ALLOWED UNLESS SPECIFICALLY SHOWN ON PLANS.
12. ON NEW WATER SYSTEMS, SERVICE LATERALS SHALL BE MADE USING APPROPRIATE "TEE" AND "WYE" FITTINGS. SADDLE TAPS WILL ONLY BE ALLOWED WHEN MAKING CONNECTIONS TO EXISTING WATER MAINS.
13. CURING COMPOUND SHALL BE APPLIED IN A CONTINUOUS SOLID WET FLOWING COAT. ANY "SPOTTY" APPLICATIONS SHALL BE RECOATED IMMEDIATELY. APPLICATION SHALL BE INSPECTED BY PROJECT INSPECTOR DURING APPLICATION.
14. EMBEDMENT OF FEATURES IN CONCRETE PAVING, CURBS, OR WALLS, SUCH AS SQUARE OR ROUND TUBING, POSTS, OR COLUMNS, STEEL BOLTED PLATES, OR OTHER STRUCTURES, SHALL REQUIRE ADDITIONAL SCORE OR EXPANSION JOINTS TO PREVENT UNCONTROLLED CRACKING. THOSE ADDITIONAL JOINTS MAY OR MAY NOT BE SPECIFICALLY SHOWN ON PLANS BUT SHALL BE PROVIDED BY THE CONTRACTOR.
15. EMBEDMENT OF FEATURES IN CONCRETE PAVING, CURBS, OR WALLS, SUCH AS SQUARE OR ROUND TUBING, POSTS, OR COLUMNS, STEEL BOLTED PLATES, OR OTHER STRUCTURES, SHALL REQUIRE A MINOR ADJUSTMENT OF REBAR WITHIN CONCRETE TO ALLOW FOR SUCH STRUCTURE. THAT REBAR ADJUSTMENT MAY NOT BE SPECIFICALLY SHOWN ON PLANS.
16. NO MORE THAN 1 GALLON OF WATER PER YARD OF CONCRETE CAN BE ADDED TO THE TRUCK AFTER ARRIVAL TO PROJECT SITE. THE ADDITION OF WATER CAN ONLY BE ADDED UNDER THE SUPERVISION OF THE CONCRETE INSPECTOR OR LABORATORY TECHNICIAN.
17. WHEN PUMPING CONCRETE FOR PLACEMENT, ABSOLUTELY NO WATER IS TO BE ADDED TO PUMP HOPPER. ANY WATER ADDED TO HOPPER WILL BE REASON FOR CONCRETE REJECTION AT THE CONTRACTORS EXPENSE.
18. ALL CONTRACTION/CONSTRUCTION JOINTS "CJ" SHALL BE 1/4 THE SLAB THICKNESS DEEP, BUT NO LESS THAN 1" FOR CONTROLLING OF CRACKING. CONTRACTOR SHALL EXERCISE CAUTION WHEN FINAL TROWELING OF CONCRETE SO AS NOT TO FILL IN THESE JOINTS WITH CONCRETE CREAM. ANY CRACKS OUTSIDE OF JOINTS WHICH WERE CONSTRUCTED LESS THAN 1" DEEP, SHALL BE CAUSE FOR CONCRETE SLAB(S) TO BE REMOVED AND REPLACE AT CONTRACTORS EXPENSE.
19. ANY SCREED BOARDS SET WITHIN CONCRETE SLABS SHALL BE AN "OVERHEAD SCREED" SO THERE IS NO INTERFERENCE WITH THE PLACEMENT AND ALIGNMENT OF SLAB REINFORCING.
20. 3-1/2" FELT JOINTS WILL NOT BE ACCEPTED. PROVIDE A FULL 4" FELT JOINT FOR 4" SLAB CONSTRUCTION, AND A 6" FELT JOINT FOR A 6" SLAB SLAB CONSTRUCTION.
21. SHOULD ANY SHRINKAGE CRACKS OCCUR OUTSIDE OF EITHER THE EXPANSION JOINTS OR CRACK CONTROL JOINTS, THEN THE CONCRETE SLAB SHALL BE SAWCUT AT THE NEAREST JOINTS ON EACH SIDE OF THE CRACK AND THE CONCRETE SECTION SHALL BE, REMOVED AND REPLACED. NEW CONCRETE SHALL BE DOWELED INTO EXISTING CONCRETE PER DRAWING DETAIL.
22. ALL AREAS DISTURBED BY GRADING OPERATIONS WHETHER SHOWN ON THE DRAWINGS OR NOT SHALL BE HYDROSEEDED UNLESS OTHERWISE NOTED. HYDRO SEEDING SHALL CONFORM TO LOCAL CITY/COUNTY STANDARDS.
23. REPAIR OR PATCHING OF GALVANIZED METALS, SUCH AS AFTER WELDING GALVANIZED COMPONENTS, SHALL BE MADE USING A ZINC COMPOSITION "HOT STICK" APPLICATION PER ASTM A 780-01. GALVANIZING PAINTS WILL NOT BE ALLOWED.
24. AT LIMITS OF NEW PAVEMENT OR CURBS ADJACENT TO LANDSCAPING PROVIDE A 4:1 MINIMUM TRANSITION TO EXISTING GRADE WITH TOPSOIL. ADJUST EXISTING IRRIGATION HEADS TO FINISH GRADE AND PROVIDE SOD IN GRASS AREAS TO RESTORE TO EXISTING CONDITION.
25. WITHIN LIMITS OF WORK THERE MAY BE EXISTING IRRIGATION LINES NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL REMOVE LATERAL LINES AND HEADS ENCOUNTERED. MAIN LINES AND CONTROL WIRES MAY ONLY BE REMOVED PROVIDED THAT ROUTING IS KNOWN AND REMOVAL WILL NOT DEACTIVATE AN IRRIGATION SYSTEMS INTENDED TO REMAIN. IF CONFLICT IS FOUND, CONTACT THE ARCHITECT FOR DIRECTION.
26. GENERAL CONTRACTOR IS REQUIRED TO HIRE A LANDSCAPE SUBCONTRACTOR TO PERFORM ALL LANDSCAPE AND IRRIGATION REPAIRS.
27. ALL TRANSITIONS TO EXISTING PAVEMENT SHAL BE A SMOOTH AND LEVEL TRANSITION.
28. WIDTH OF NEW SIDEWALKS SHALL MATCH WIDTH OF EXISTING, ADJACENT, SIDEWALKS.
29. SEE ARCHITECTURAL PLANS FOR EXPANSION AND CONTROL JOINT LAYOUT.
30. ADJUST TO FINISH GRADE ALL UTILITY BOXES, FRAMES, COVERS SLEEVES, POST HOLES GRATES, ETC. FOUND IN AREA OF WORK, WHETHER SHOWN OR NOT. CLEAN OR REPLACE AS NECESSARY TO ENSURE PROPER SEATING.
31. FOR ACCESSIBLE PATH OF TRAVEL REQUIREMENTS SEE ARCHITECTURAL SHEETS.
32. PERCENT OF SLOPE SHOWN ON ARROWS ARE MAXIMUM SLOPES AND NOT INTENDED TO SUPERCEDE SLOPES DEFINED BY SPOT ELEVATIONS. 0.0% MAX.
33. WITHIN THE LIMITS OF ACCESSIBLE PARKING AREA AND ACCESSIBLE DROP OFF ZONE THE SLOPE OF PAVEMENT SHALL NOT EXCEED 1.8% IN ANY DIRECTION.
34. TRANSITIONS BETWEEN CONCRETE AND OR ASPHALT SURFACES SHALL BE FLUSH, UNLESS NOTED OTHERWISE BY CURB OR STEP.
35. TRANSITION BETWEEN PAVED SURFACES AND LANDSCAPE AREAS SHALL BE NO GREATER THAN 1", UNLESS NOTED OTHERWISE.
36. THE MINIMUM SLOPE AWAY FROM THE BUILDING ON PAVED SURFACES SHALL BE 1%.

SHEET INDEX

C0.1 CIVIL COVER SHEET
C1.1 DEMOLITION, GRADING, DRAINAGE, AND PAVING PLAN
C3.1 DETAILS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE
3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT CHARLES ERIC DANDY No. C32876 EXP. 03/31/25 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER ANTHONY J. TASSANO NO. C74696 CIVIL STATE OF CALIFORNIA

WCE
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

SUSD
55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
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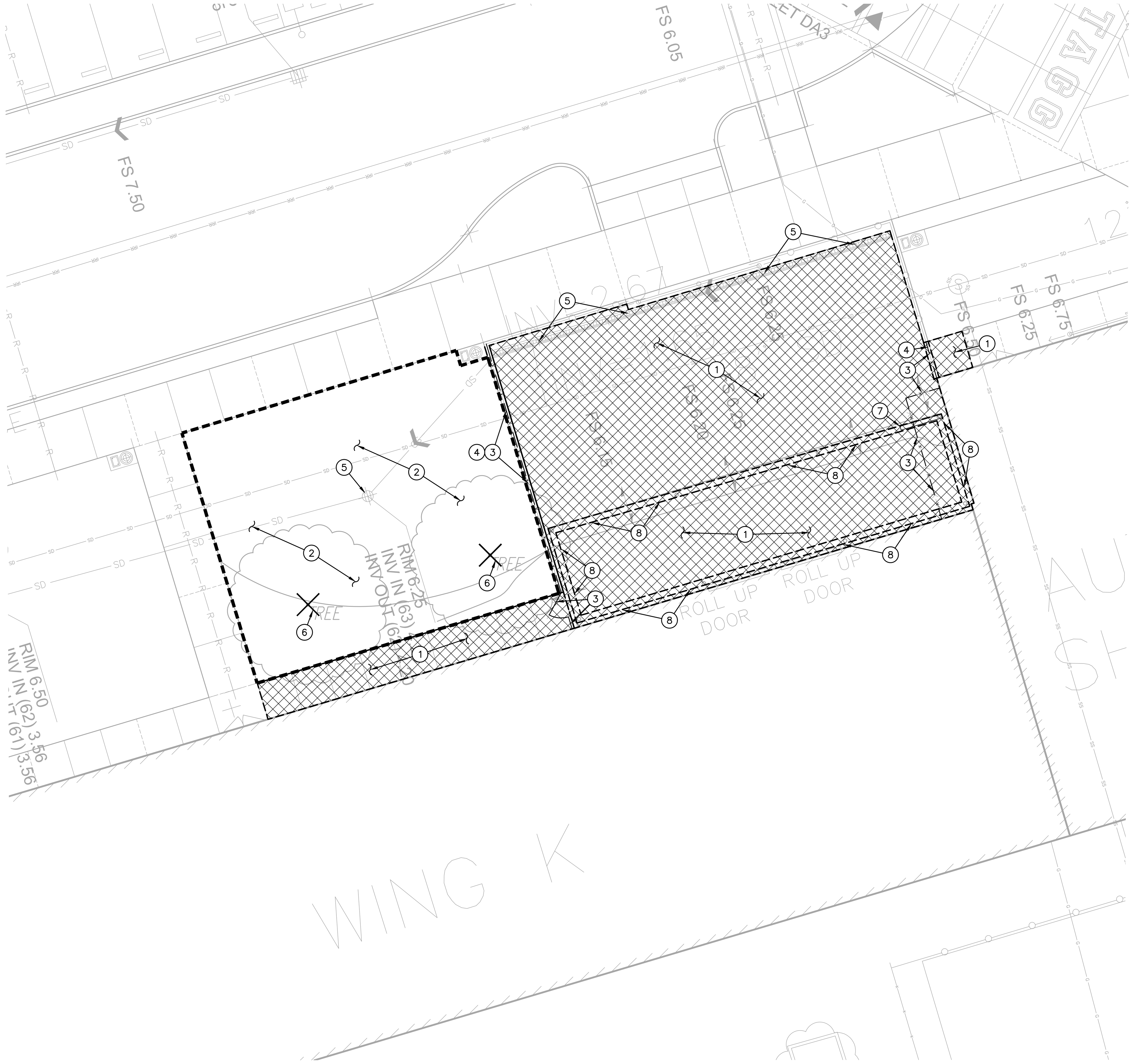
PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

COVER SHEET

C0.1



DEMOLITION PLAN

DEMOLITION GENERAL NOTES

1. REFER TO ARCHITECTURAL, ELECTRICAL AND PLUMBING PLANS FOR ADDITIONAL DEMOLITION ITEMS.
2. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THE GEOTECHNICAL INVESTIGATION REPORT OR ARE ENCOUNTERED DURING GRADING OPERATIONS THE GEOTECHNICAL ENGINEER AND THE ARCHITECT SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTIONS.
3. ADDITIONAL DEMOLITION INFORMATION MAY BE SHOWN ON THE GRADING, DRAINAGE, AND UTILITY PLANS, AND THOSE PLANS PREPARED BY OTHER DISCIPLINES FOR THIS PROJECT.
4. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF OFFSITE AT A SUITABLE, LEGAL, DUMP SITE OR OTHER FACILITY.
5. ALL DISPOSED OF MATERIALS SHALL BE RECYCLED IF POSSIBLE.
6. THE SCHOOL DISTRICT SHALL HAVE SALVAGE RIGHTS TO ANY DEMOLISHED ITEMS SHOWN HEREON. THE CONTRACTOR SHALL GIVE THE DISTRICT NOTICE 7 DAYS PRIOR TO THE START OF DEMOLITION. THE DISTRICT SHALL MOVE ANY RETAINED ITEMS OUT OF THE CONTRACTORS WORK AREA, UNLESS ANOTHER ARRANGEMENT IS MADE WITH THE CONTRACTOR. ANY REMAINING ITEMS BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ANY ITEMS NOT SHOWN FOR REMOVAL SHALL REMAIN AND SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION TO A REASONABLE EXTENT.
7. EXISTING UTILITY STRUCTURES IN AREAS OF NEW PAVING SHALL BE REMOVED AND REPLACED WITH NEW BOX/COVER AT NEW GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
8. ITEMS OUTSIDE THE LIMITS OF DEMOLITION SHALL REMAIN AND BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
9. EXISTING UTILITY STRUCTURES AND PIPING NOT SHOWN ON DEMOLITION PLAN TO BE REMOVED SHALL REMAIN AND BE PROTECTED.
10. SAWCUTS AND SUBSEQUENT PATCH BACK OF CONCRETE WALKS, SHALL BE TO THE EXISTING CONCRETE JOINT BEYOND THE NEAREST LOCATION OF DEMOLITION AS SHOWN. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE, SHOW AND COORDINATE WITH EXISTING JOINTS, HOWEVER IF FIELD CONDITIONS ARE OTHERWISE, IT IS UNDERSTOOD TO REMOVE AND PATCH BACK TO THE NEAREST JOINTS BEYOND DEMOLITION.
11. PRIOR TO THE START OF CONSTRUCTION, VERIFY AND POTHOLE ALL UTILITY POINTS OF CONNECTION FOR LOCATION, DEPTH, AND SIZE. IF CONFLICT IS FOUND, CONTACT THE ENGINEER IMMEDIATELY FOR DIRECTION.
12. WITHIN LANDSCAPE AREAS TO BE DEMOLISHED THERE MAY BE EXISTING IRRIGATION LINES NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL REMOVE LATERAL LINES AND HEADS ENCOUNTERED. MAIN LINES AND CONTROL WIRES MAY ONLY BE REMOVED PROVIDED THAT ROUTING IS KNOWN AND REMOVAL WILL NOT DEACTIVATE AN IRRIGATION SYSTEMS INTENDED TO REMAIN. IF CONFLICT IS FOUND, CONTACT THE ENGINEER FOR DIRECTION.

DEMOLITION NOTES

1. SAWCUT, REMOVE AND DISPOSE OF EXISTING CONCRETE PAVING AND ASSOCIATED AGGREGATE BASE. SAWCUT SHALL BE A NEAT STRAIGHT LINE, MAINTAIN CLEAN, STRAIGHT CUT EDGE UNTIL NEW PAVING IS PLACED. COORDINATE WITH STRUCTURAL DRAWING S2.0.
2. REMOVE AND DISPOSE OF EXISTING IRRIGATION SYSTEM. CLEAR, GRUB AND REMOVE EXISTING VEGETATION.
3. REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE, POSTS AND ASSOCIATED FOOTINGS TO EXTENT SHOWN.
4. REMOVE AND DISPOSE OF EXISTING CONCRETE BAND.
5. REMOVE AND DISPOSE OF EXISTING DRAIN STRUCTURE.
6. REMOVE AND DISPOSE OF EXISTING TREE AND ASSOCIATED ROOTS
7. REMOVE AND DISPOSE OF EXISTING CMU WALL AND ASSOCIATED FOOTING.
8. EXISTING CANOPY GRADE BEAM TO BE PARTIALLY DEMOLISHED WHILE PRESERVING REBAR PER STRUCTURAL PLANS. CONTRACTOR TO CONFIRM GRADE BEAM LOCATION.

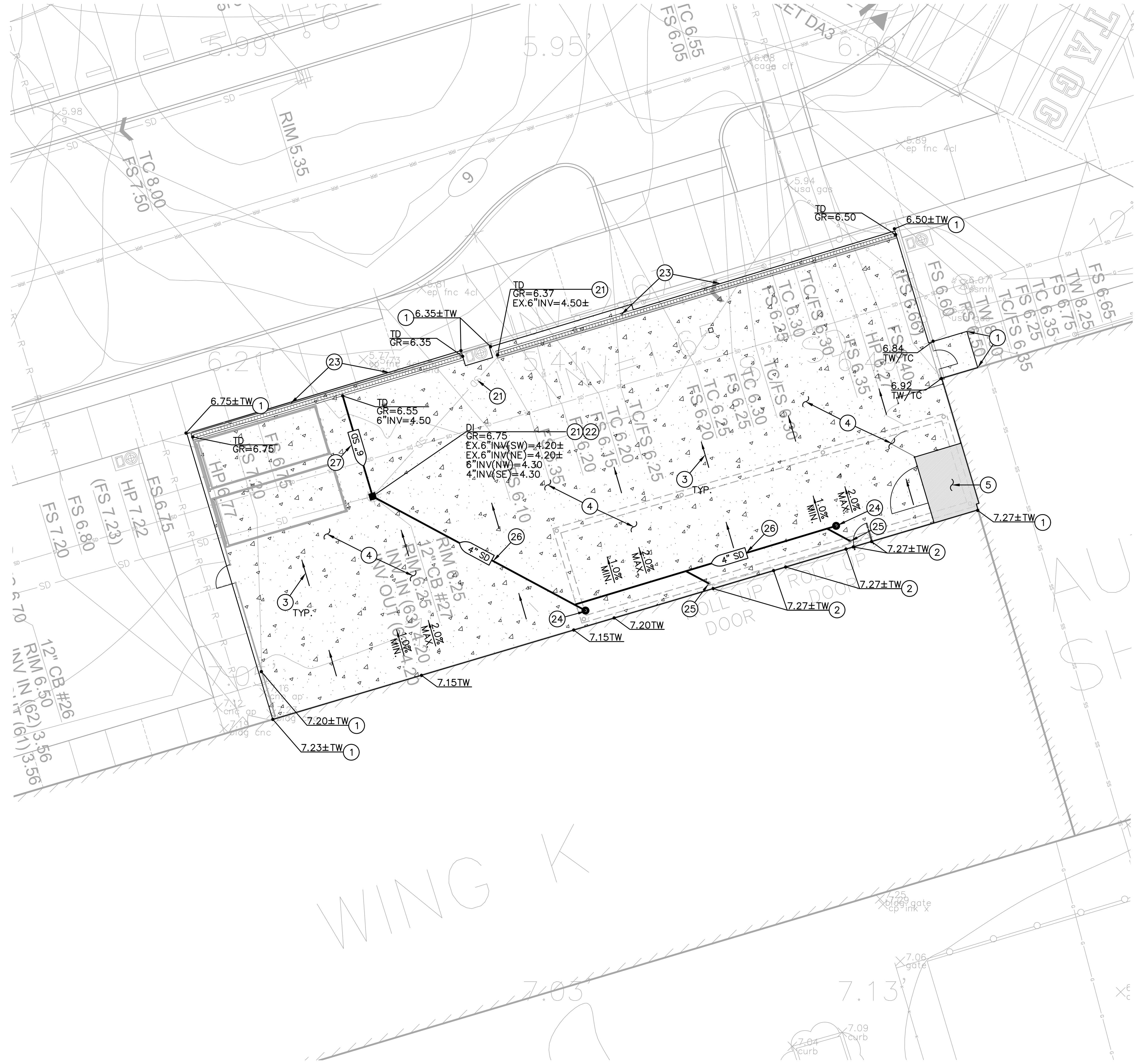
GRAPHIC SCALE

10' 0 5' 10' 20'

(IN FEET) 1 inch = 10 feet

NORTH

THIS DRAWING MAY HAVE BEEN ENLARGED OR REDUCED.



GRADING, DRAINAGE AND PAVING PLAN

PAVING GENERAL NOTES:

1. ASPHALT MIX SHALL MEET CALTRANS SPECIFICATIONS FOR TYPE B ASPHALTIC CONCRETE. REFERENCE CALTRANS AND PROJECT SPECIFICATIONS.
2. AGGREGATE BASE SHALL MEET CALTRANS SPECIFICATIONS FOR CLASS II AGGREGATE BASE.
3. ALL AGGREGATE BASE SHALL BE MOISTURE CONDITIONED TO, OR SLIGHTLY ABOVE, OPTIMUM MOISTURE CONTENT AND COMPACTED TO 95% RELATIVE COMPACTION.
4. RECYCLED ASPHALT MAY BE USED AS CONCRETE AND ASPHALT BASE MATERIAL PROVIDED IT MEETS CITY OF SACRAMENTO SPECIFICATIONS FOR CLASS II AB.
5. PAVEMENT SUBGRADE PREPARATION, I.E. SCARIFICATION, MOISTURE CONDITIONING, AND COMPACTION SHALL BE PERFORMED AFTER;
   A. POT HOLING ALL EXISTING UTILITIES.
   B. THE INSTALLATION OF UNDERGROUND UTILITIES AND TRENCHES BACKFILLED IN ACCORDANCE WITH THESE PLANS.
6. ALL AREAS DISTURBED BY GRADING, DEMOLITION, OR CONSTRUCTION ACCESS, WHICH ARE NOT SURFACED BY THIS SET OF PLANS, SHALL BE RESTORED.
7. REFER TO GRADING PLANS FOR CURBS, CURB GUTTERS, VALLEY GUTTERS, AND OTHER CONCRETE STRUCTURES AND PAVING FEATURES NOT SPECIFICALLY NOTED ON THIS PLAN.
8. ADJUST TO FINISH GRADE ALL BOXES, FRAMES, COVERS SLEEVES, POST HOLES, GRATES, ETC. FOUND IN NEW ASPHALT OR CONCRETE PAVING AREAS, WHICH ARE NOT NOTED FOR REMOVAL. CLEAN/OR REPLACE AS NECESSARY TO ENSURE PROPER SEATING.
9. ALL NEW ASPHALT PAVING TO RECEIVE TWO APPLICATIONS OF SEAL COAT.

GRADING AND PAVING NOTES

1. MATCH EXISTING GRADE/ELEVATION.
2. MATCH EXISTING FINISH FLOOR GRADE/ELEVATION.
3. GRADE UNIFORML TOWARDS INLET OR SWALE.
4. PLACE 6" PCC OVER WITH #4 REBAR @ 18" O.C.E.W. OVER 6" CLASS II AB ON SUBGRADE TREATED/COMPACTED PER SPECIFICATIONS. (1/C3.1)
5. PLACE 8" PCC OVER WITH #4 REBAR @ 12" O.C.E.W. OVER 6" CLASS II AB ON SUBGRADE TREATED/COMPACTED PER SPECIFICATIONS. (1/C3.1)

DRAINAGE NOTES

21. CONNECT TO EXISTING STORM DRAIN LINE OR STRUCTURE. POTHOLE TO VERIFY DEPTH AND LOCATION PRIOR TO TRENCHING.
22. CONSTRUCT DRAIN INLET PER. (2/C3.1)
23. CONSTRUCT TRENCH PER. (3/C3.1)
24. CONSTRUCT CLEANOUT PER. (5/C3.1)
25. CONNECT TO EXISTING DOWNSPOUTS C, CONTRACTOR TO PROVIDE ALL FITTING REQUIRED TO MAKE CONNECTION.
26. PLACE 4" STORM DRAIN PER. (4/C3.1)
27. PLACE 6" STORM DRAIN PER. (4/C3.1)

GRAPHIC SCALE

10' 0 5' 10' 20'

(IN FEET) 1 inch = 10 feet

NORTH

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COMMUNITY ARCHITECTURE
3701 Business Drive Suite 200
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Phone: (916) 365-9655

LICENSED ARCHITECT CHARLES ERIC DANIEL C32876 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER ANTHONY J. TASSANO NO. C74696 STATE OF CALIFORNIA

WARREN CONSULTING ENGINEERS, INC.

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

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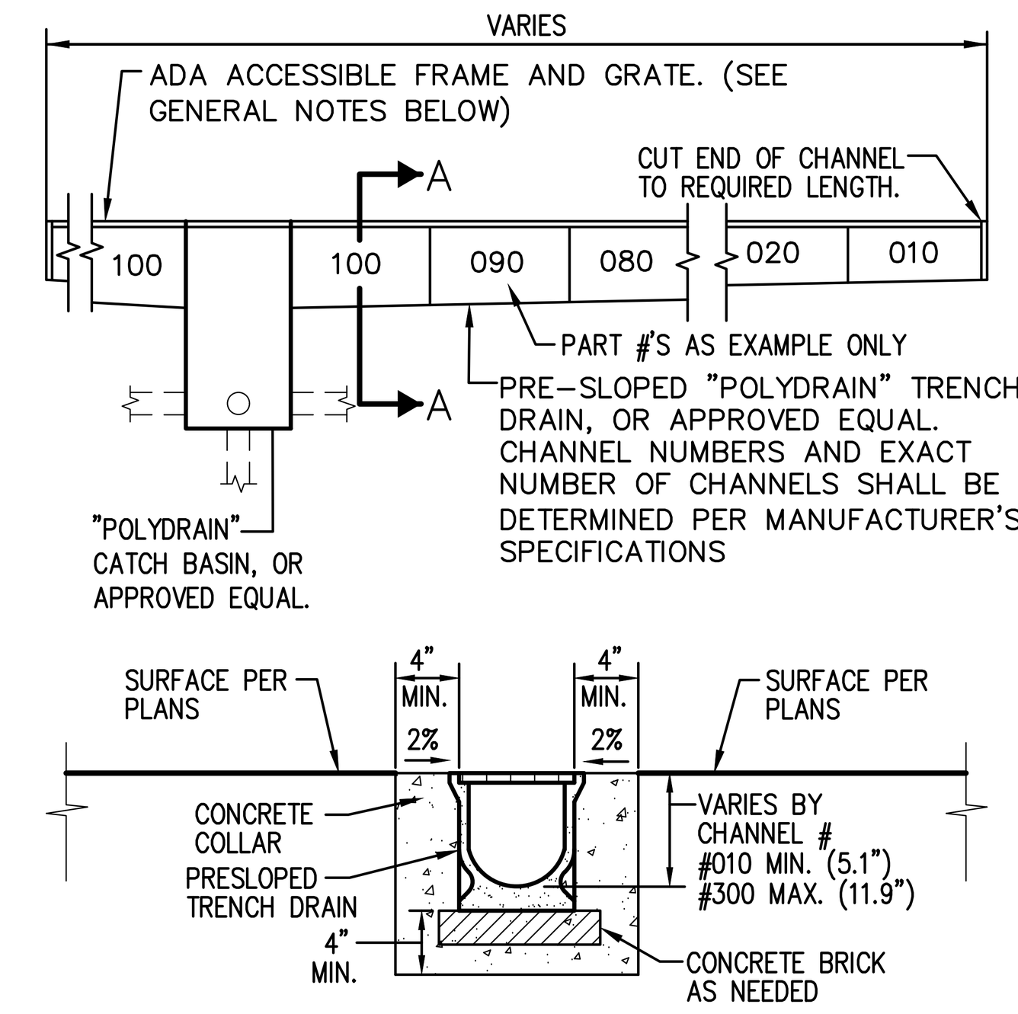
CONSTRUCTION DOCUMENTS

DEMOLITION, GRADING, DRAINGE, AND PAVING PLAN

C1.1

FILENAME: I:\23-193\CIVIL\DWG\23-193 C1.1.DWG

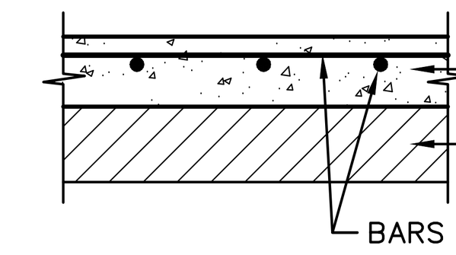


SECTION A–A

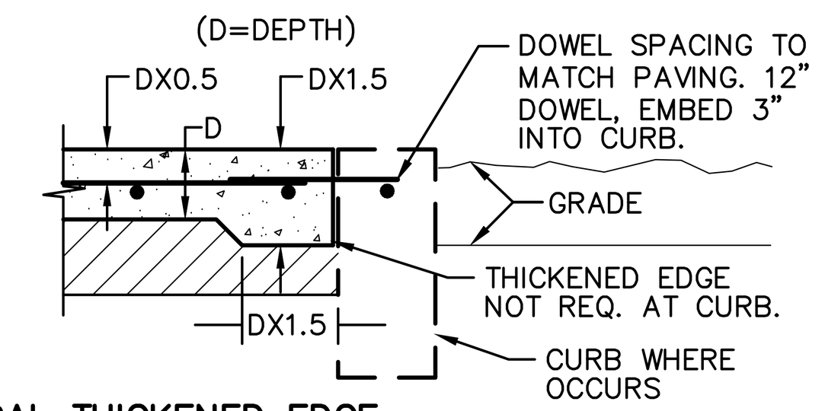
GENERAL NOTES:

1. GRATE SHALL ADA ACCESSIBLE, POLYDRAIN MODEL 2412 OR APPROVED EQUAL. IF PLACED IN FIRE LANE OR AREA DESIGNATED FOR VEHICLE TRAFFIC PROVIDE POLYDRAIN MODEL 2506.
2. IF TRENCH DRAIN IS PLACED IN FIRE LANE OR AREA DESIGNATED FOR VEHICLE TRAFFIC PROVIDE GALVANIZED STEEL "OVERLAY RAILS" AS SUPPLIED BY POLYDRAIN, OR APPROVED EQUAL.
3. CONTRACTOR SHALL FURNISH AND INSTALL A MODEL 2811B LOCKING DEVICE, OR APPROVED EQUAL, FOR ALL TRENCH DRAIN GRATES.
4. CONTRACTOR SHALL FURNISH AND INSTALL A TRASH BUCKET, MODEL 2900, IN ALL TRENCH DRAIN CATCH BASINS.
5. CONTRACTOR SHALL PURCHASE AND FURNISH THE MAINTINENCE/OPERATIONS DEPARTMENT OF THE SCHOOL WITH 2 MODEL 2231 TRENCH DRAIN SHOVEL HEADS, WITH STANDARD WOOD, OR COMPOSITE HANDLES.
6. ALL MITERED JOINTS SHALL BE SEALED WITH POLYDRAIN "POLYSEAL" CAULKING OR APPROVED EQUAL.

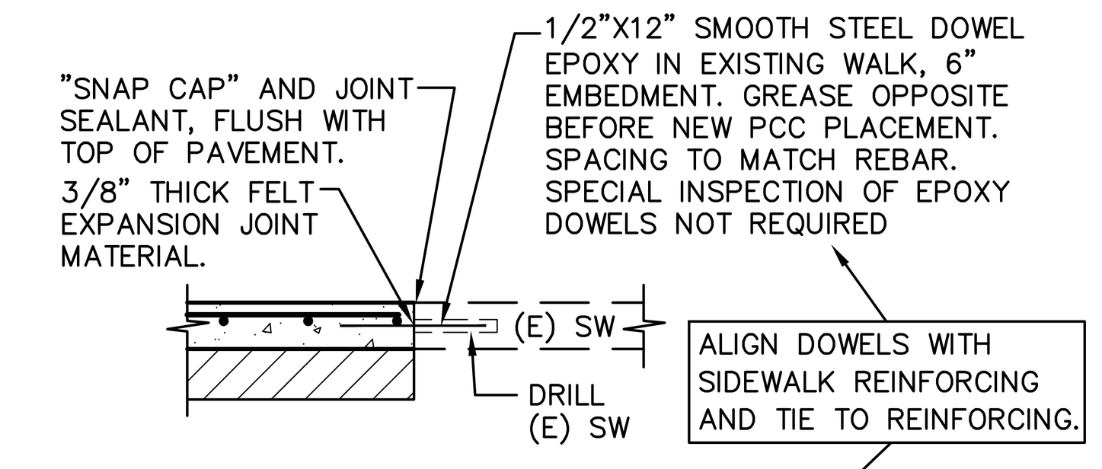
3 / C3.1 TRENCH DRAIN DETAIL — NO SCALE



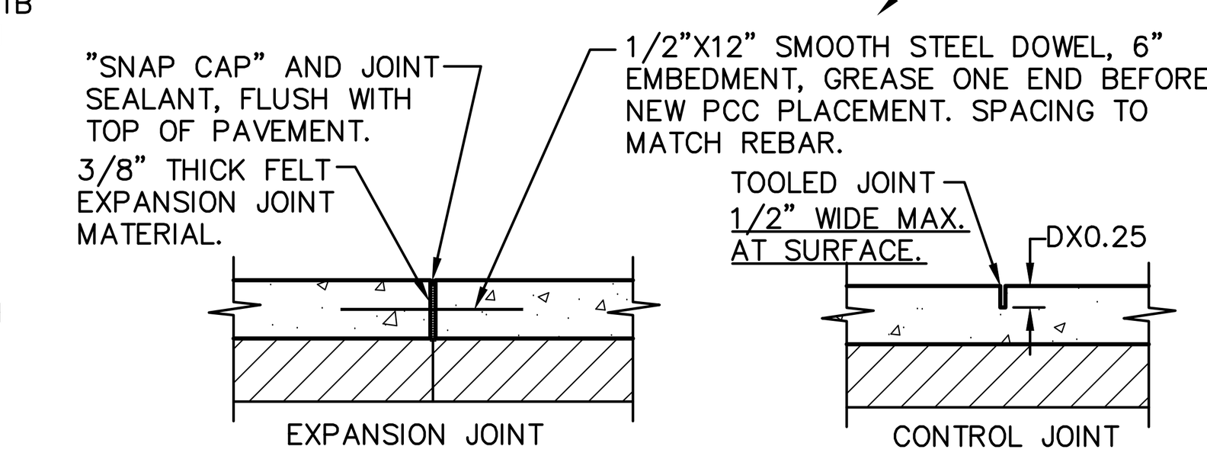
TYPICAL SECTION



TYPICAL THICKENED EDGE



CONNECTION TO (E) CONCRETE

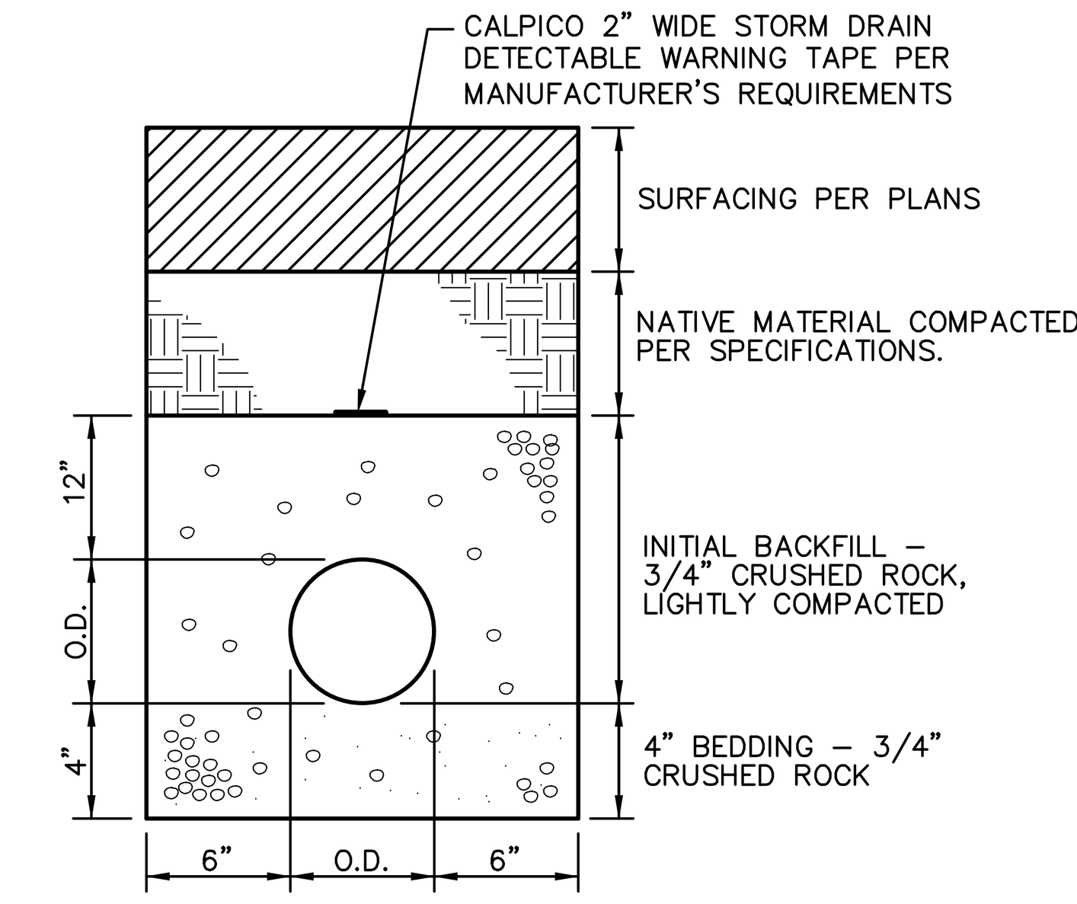


TYPICAL JOINTS

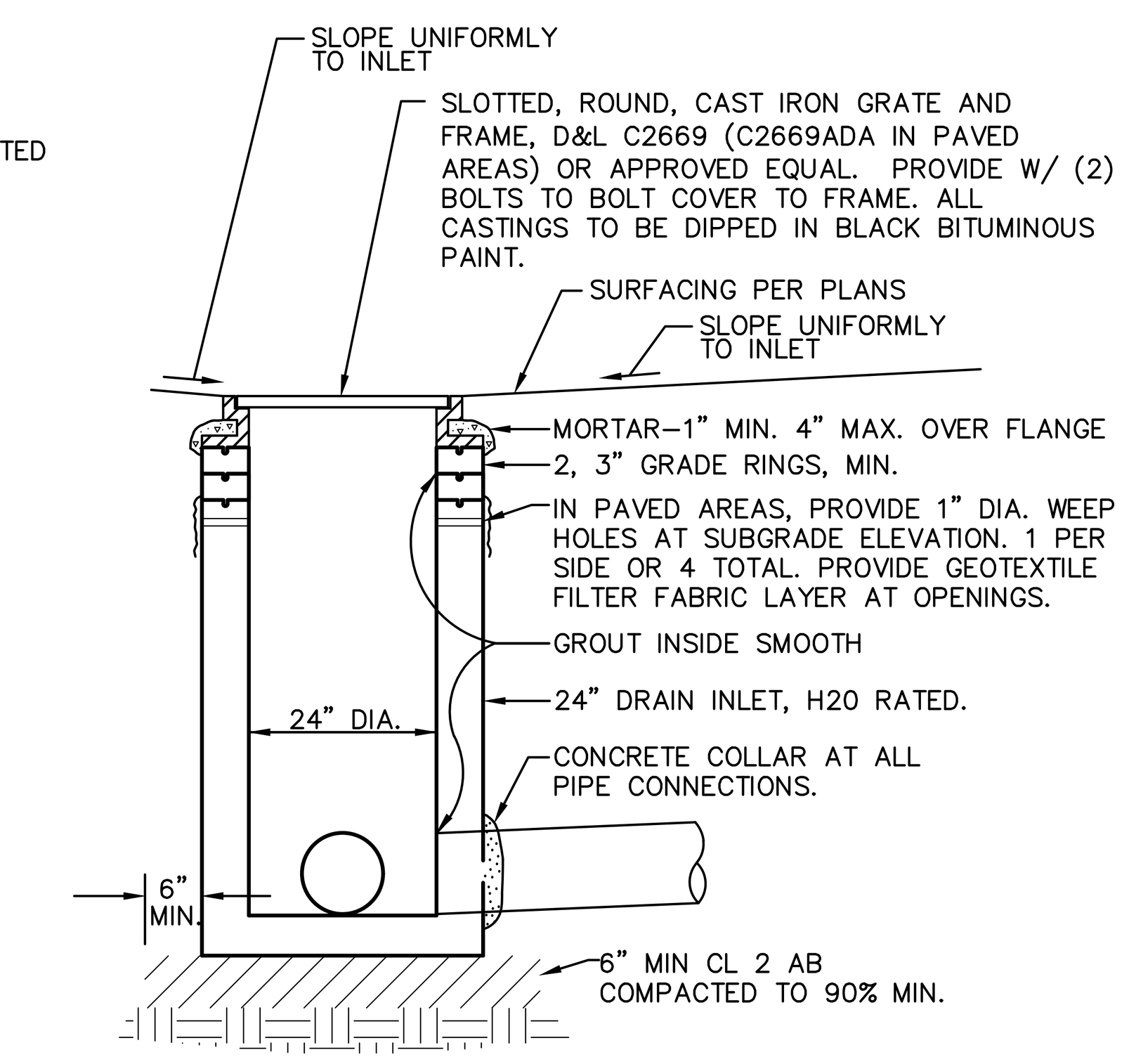
NOTES:

1. PROVIDE FELT EXPANSION JOINTS AT 20 FEET O.C. MAX. SEE PLAN FOR LAYOUT.
2. PROVIDE CONTROL JOINTS AT 10 FEET O.C. MAX. SEE PLAN FOR LAYOUT.
3. EXPANSION OR CONTROL JOINTS SHALL NOT EXCEED 1/2" IN SURFACE WIDTH.

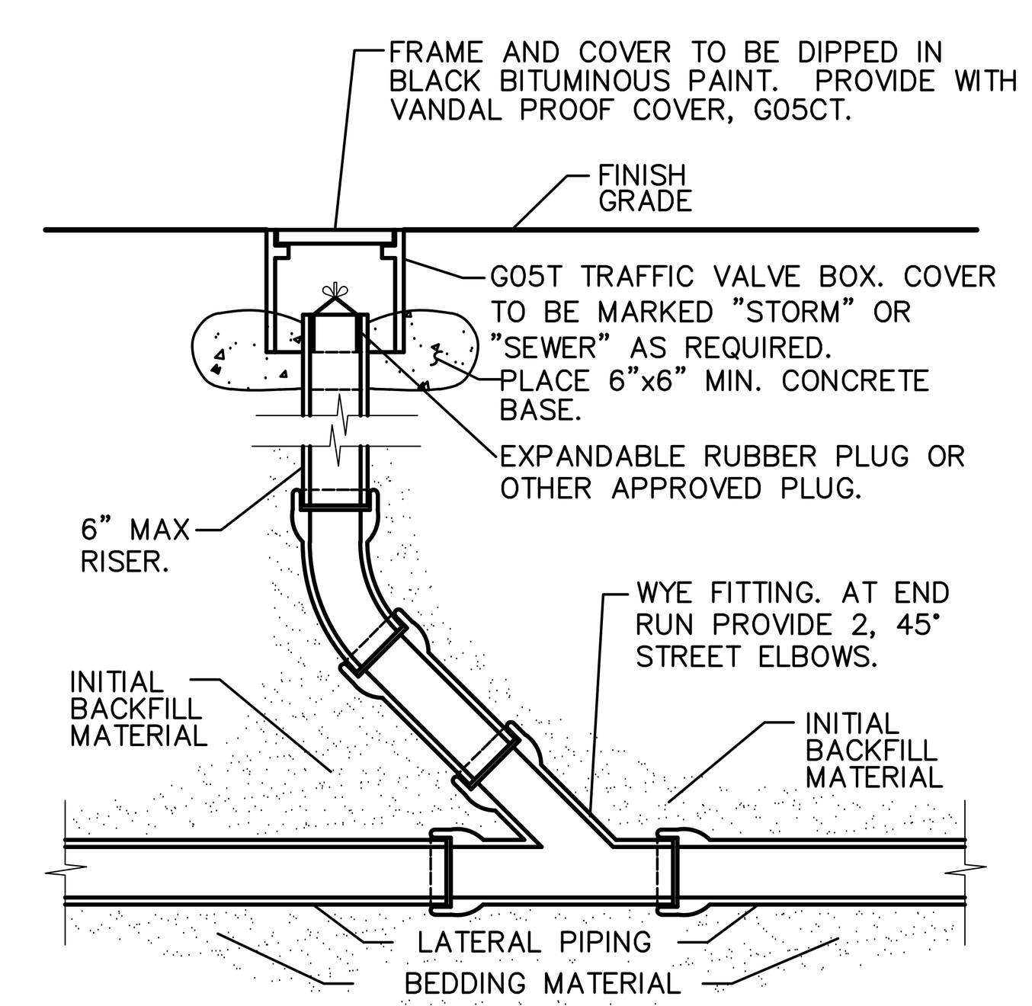
1 / C3.1 CONCRETE SIDEWALK — NO SCALE



4 / C3.1 STORM DRAIN TRENCH — NO SCALE



2 / C3.1 DROP INLET — NO SCALE



5 / C3.1 CLEANOUT — NO SCALE

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LICENSED ARCHITECT — CHARLES ERIC ... — No. C32876 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — ANTHONY J. TASSANO — NO. C74696 — STATE OF CALIFORNIA

WCE
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

SUSD

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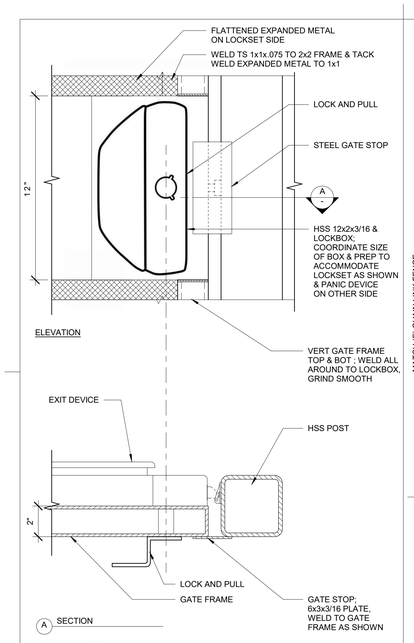
CONSTRUCTION DOCUMENTS

DETAILS

C3.1

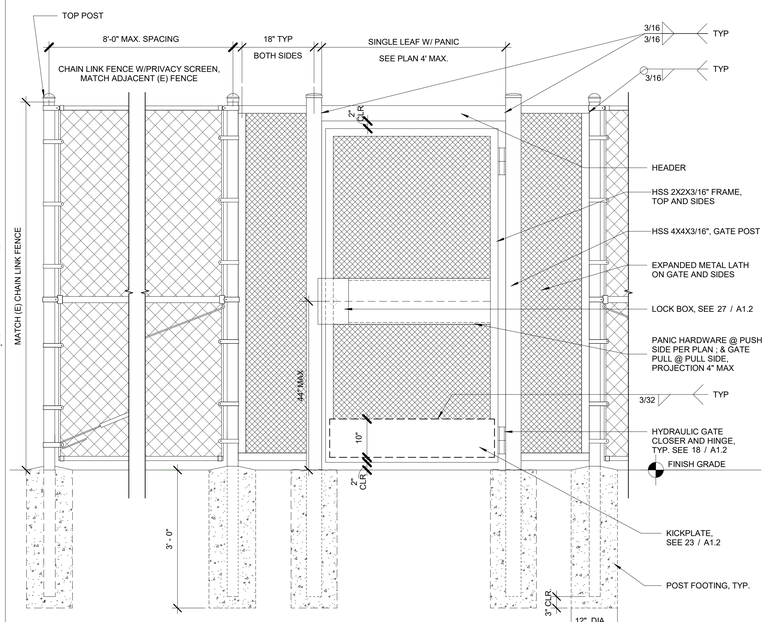
FILENAME: I:\23-193\CIVIL\DWG\23-193 C3.1.DWG



NOTE:
NO OTHER HARDWARE SHALL BE INSTALLED IN CONFLICT WITH THE FUNCTION/PURPOSE OF THE PANIC DEVICE.

EXIT GATE LATCH

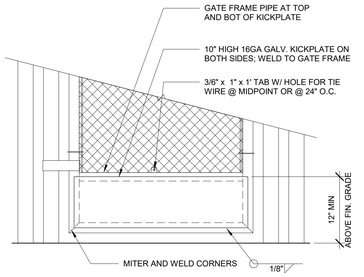
3" = 1'-0" | 27



NOTES:
1. CHAIN LINK GATE POST SIZE, DIAMETER PER DIVISION 32, SECTION "CHAIN LINK FENCING AND GATES"
2. SPECIAL INSPECTION IS NOT REQUIRED OF FENCING AND METAL GATES.

CHAIN LINK FENCE AND METAL GATE ELEVATION

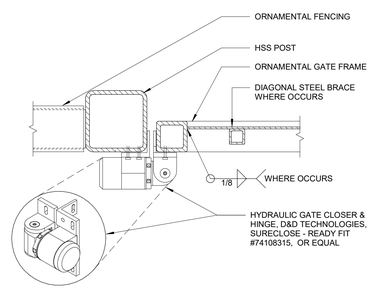
3/4" = 1'-0" | 17



NOTE: SPECIAL INSPECTION IS NOT REQUIRED OF FENCING AND METAL GATES.

KICKPLATE ON METAL GATE

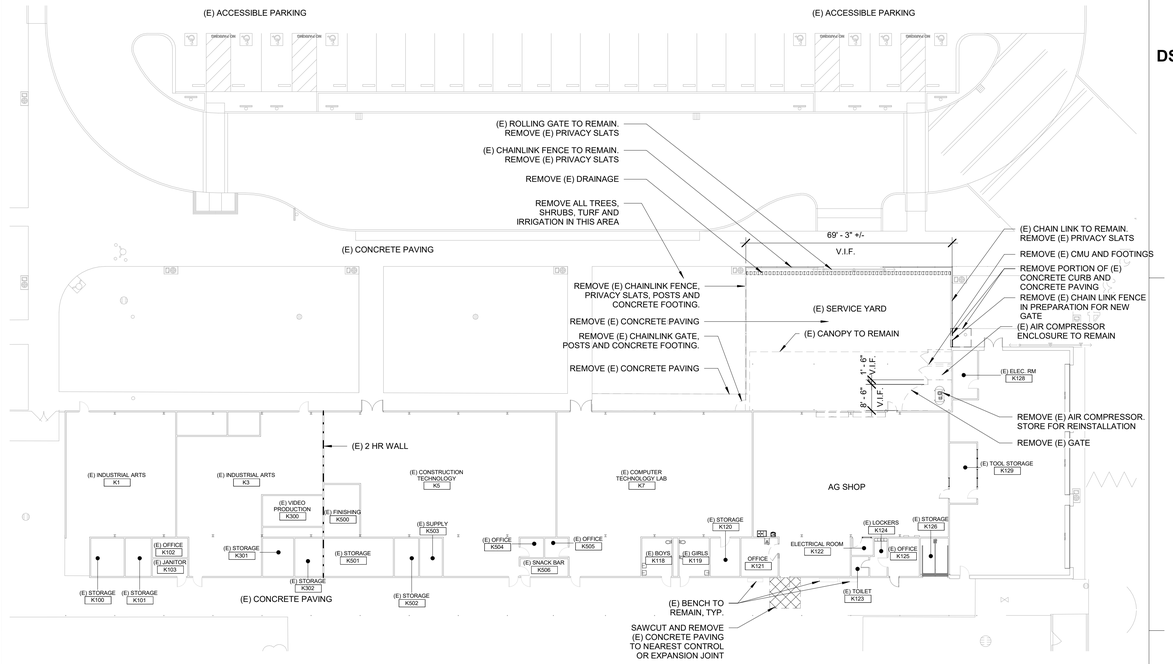
1" = 1'-0" | 23



NOTE: SPECIAL INSPECTION IS NOT REQUIRED OF FENCING AND METAL GATES.

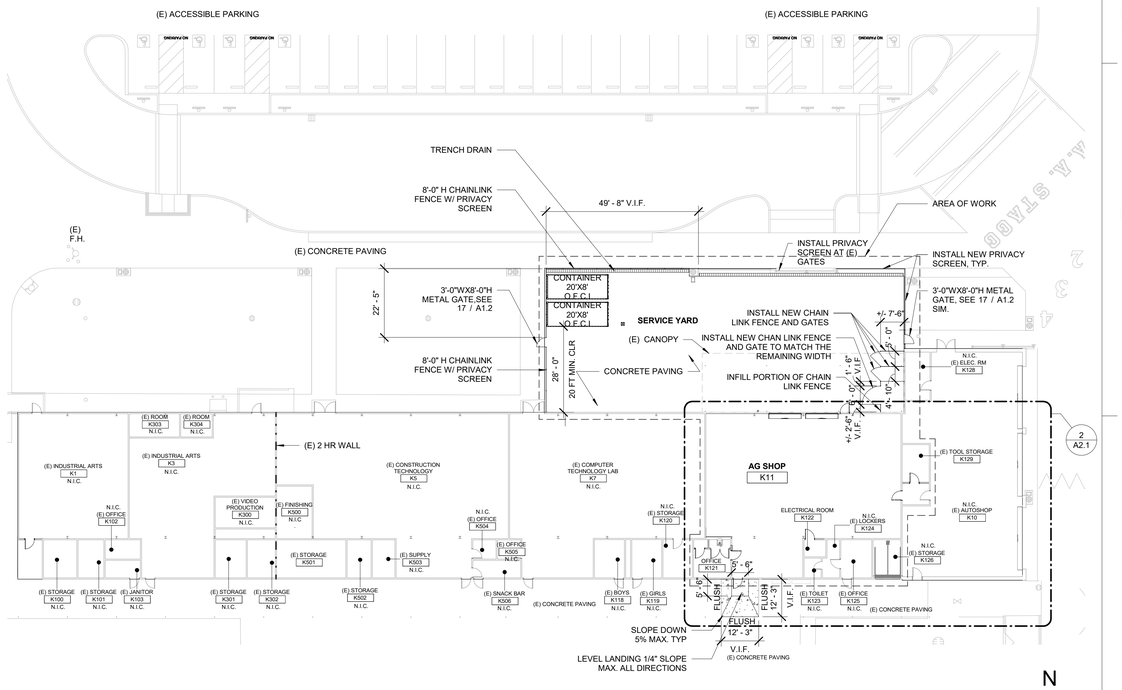
METAL GATE HINGE POST

3" = 1'-0" | 18



PARTIAL DEMO SITE PLAN

1" = 20'-0" | 1



PARTIAL SITE PLAN

1" = 20'-0" | 5

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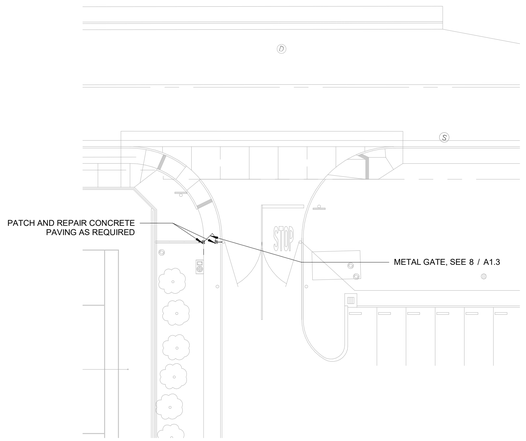
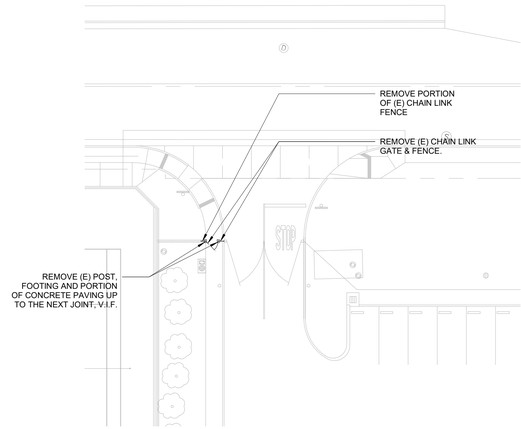
PARTIAL SITE PLAN AND SITE DETAILS

A1.2



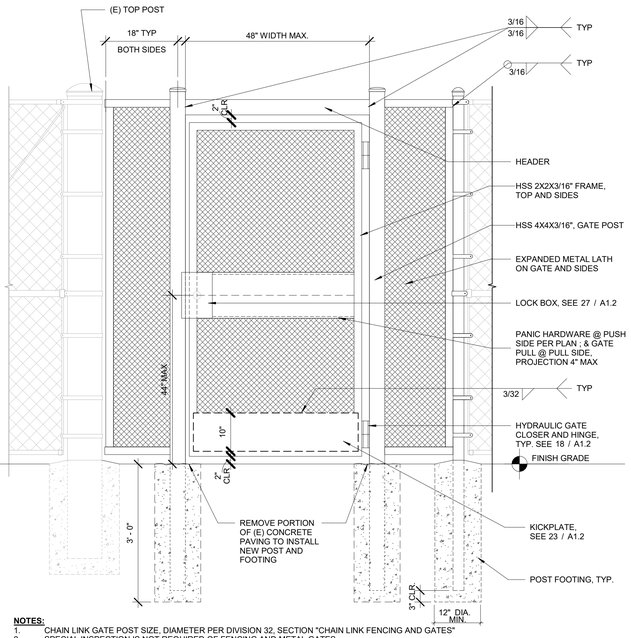
ENLARGED SITE PLAN

1" = 20'-0" | 7



ENLARGED DEMO SITE PLAN

1" = 20'-0" | 2



NOTES:
1. CHAIN LINK GATE POST SIZE, DIAMETER PER DIVISION 32, SECTION "CHAIN LINK FENCING AND GATES"
2. SPECIAL INSPECTION IS NOT REQUIRED OF FENCING AND METAL GATES.

EGRESS METAL GATE

3/4" = 1'-0" | 8

EXISTING DEMO EGRESS GATE

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

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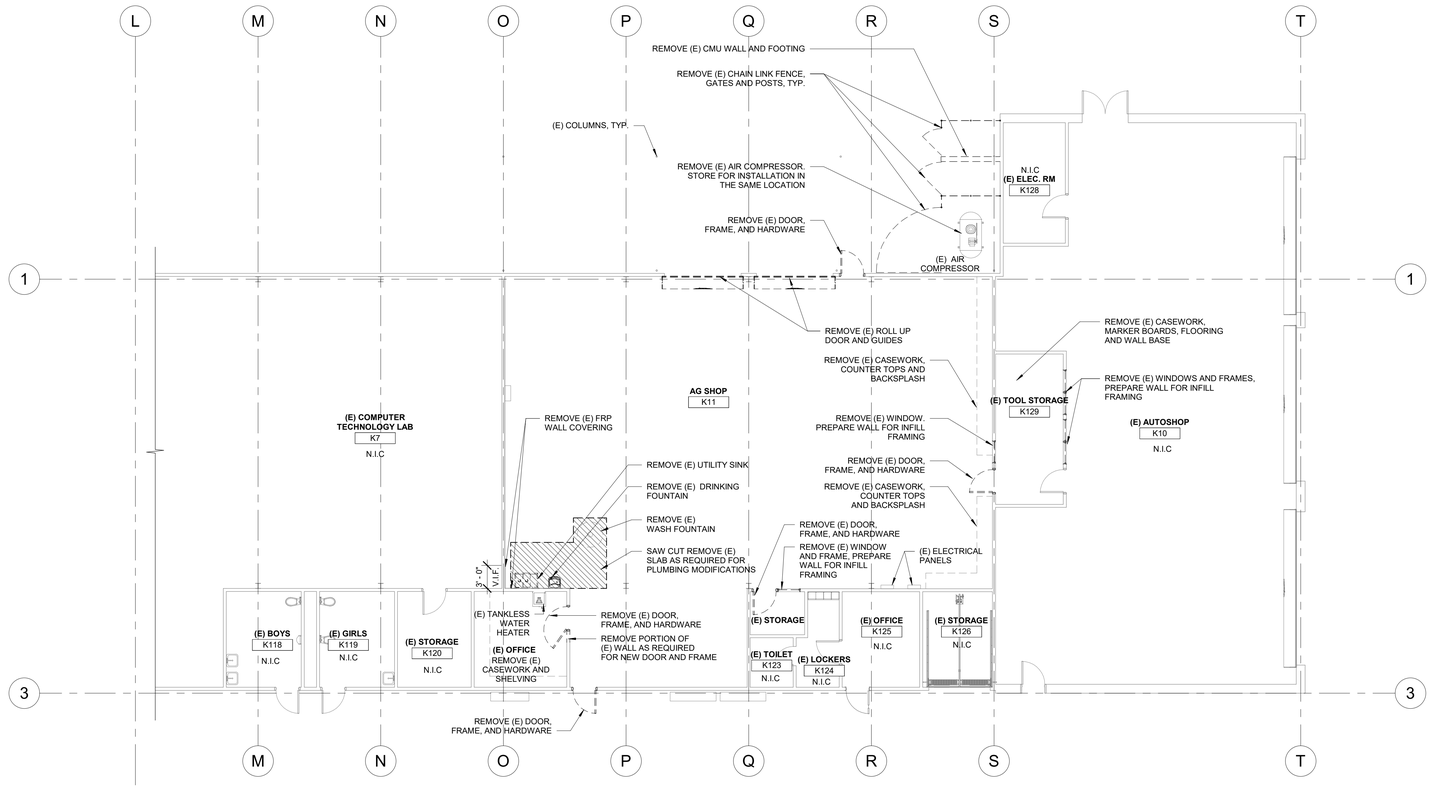
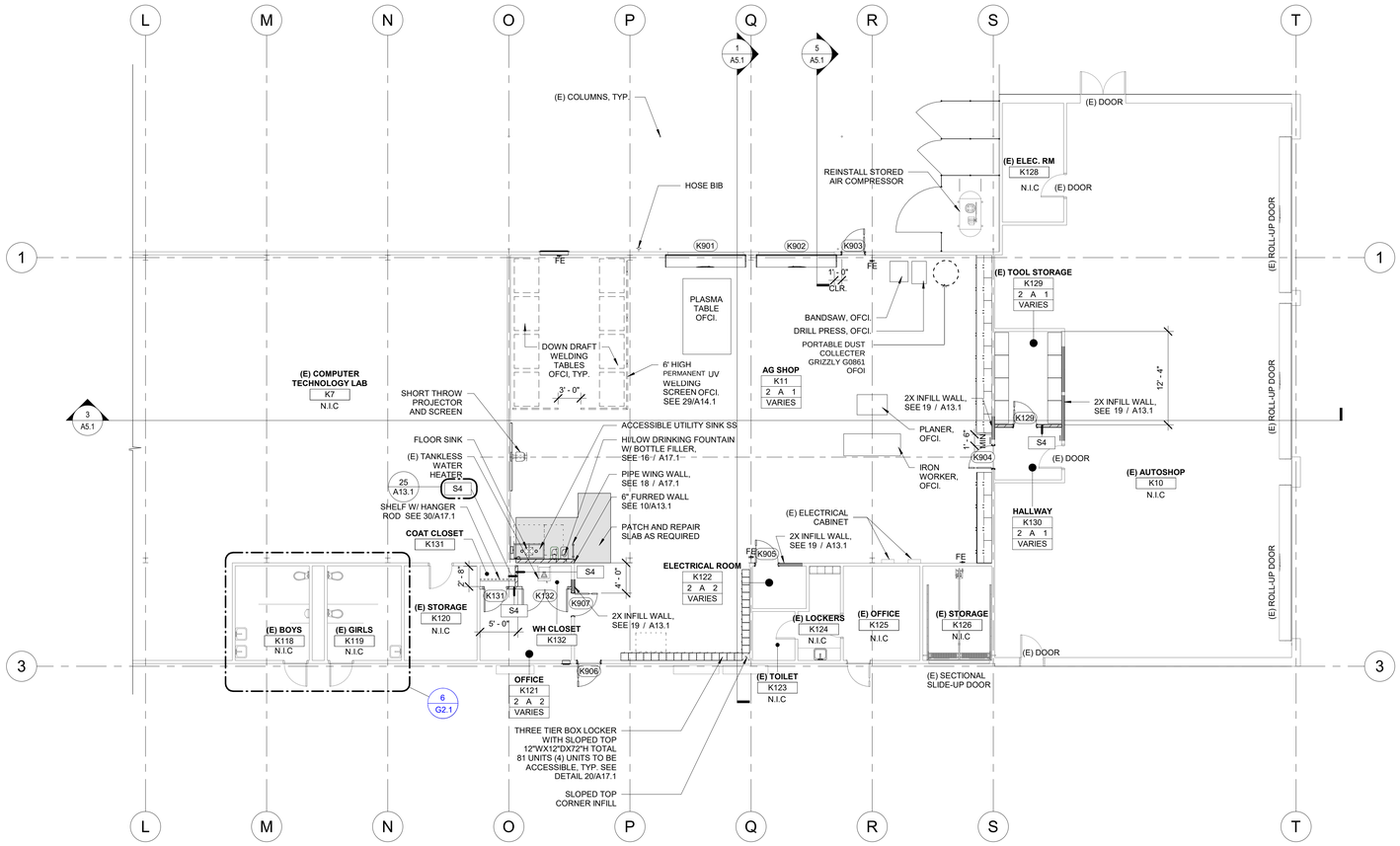
ENLARGED SITE PLAN AND SITE DETAILS

A1.3



DEMOLITION FLOOR PLAN — 1/8" = 1'-0" — **1**



NEW FLOOR PLAN — 1/8" = 1'-0" — **2**

FINISH SCHEDULE

REFERENCE ROOM DESIGNATION TAGS FOR FINISH CALL-OUTS

FLOOR/BASE		WALL		CEILING	
0	SEE PLAN	0	SEE PLAN	0	SEE RCP PLAN
1	EXISTING FLOOR AND BASE TO REMAIN	A	(E) GYPSUM WALL BOARD TO REMAIN, PATCH, REPAIR, AND PAINT	1	(E) NAIL ON ACOUSTICAL TILE TO REMAIN, PATCH, REPAIR AND PAINT
2	(E) CONCRETE, CLEAN (E) CONC. FLOORS / RESILIENT BASE	B	GYPSUM WALL BOARD TO BE REMOVED	2	(E) GYP. BOARD CLG. PATCH, REPAIR AND PAINT

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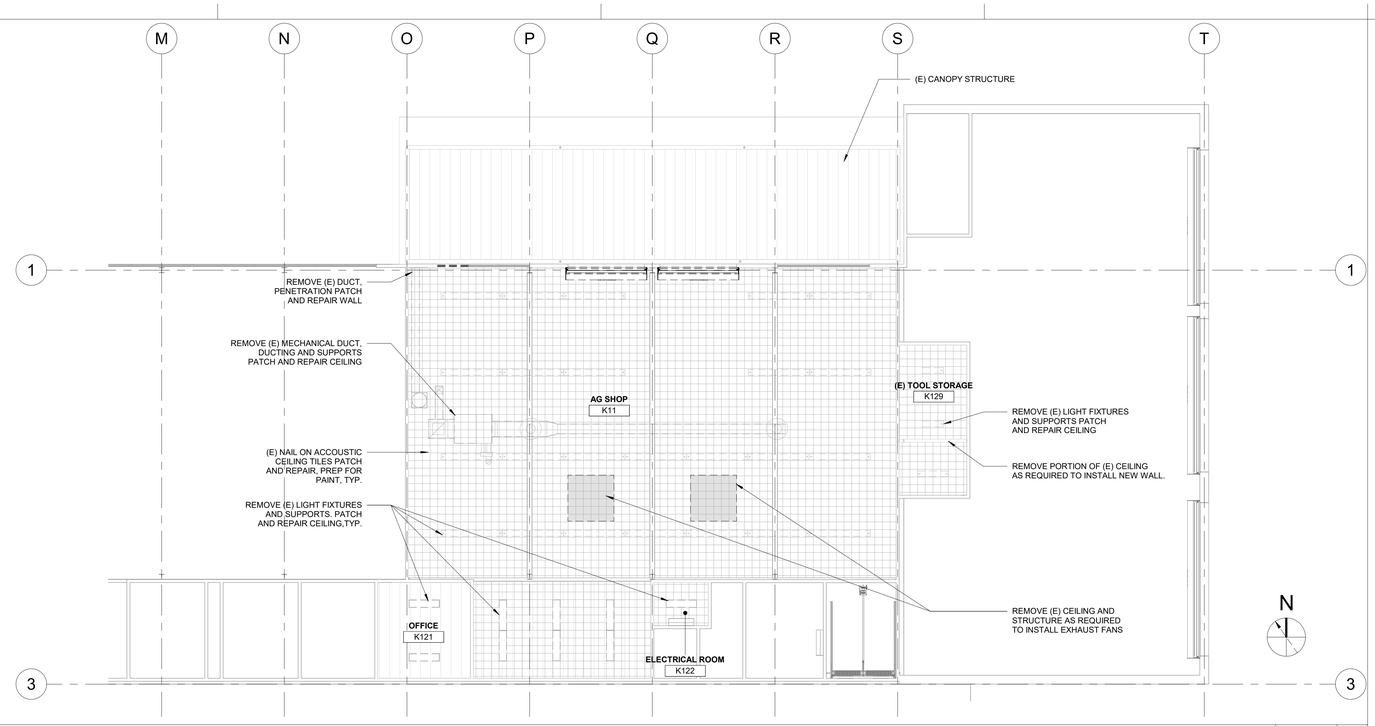
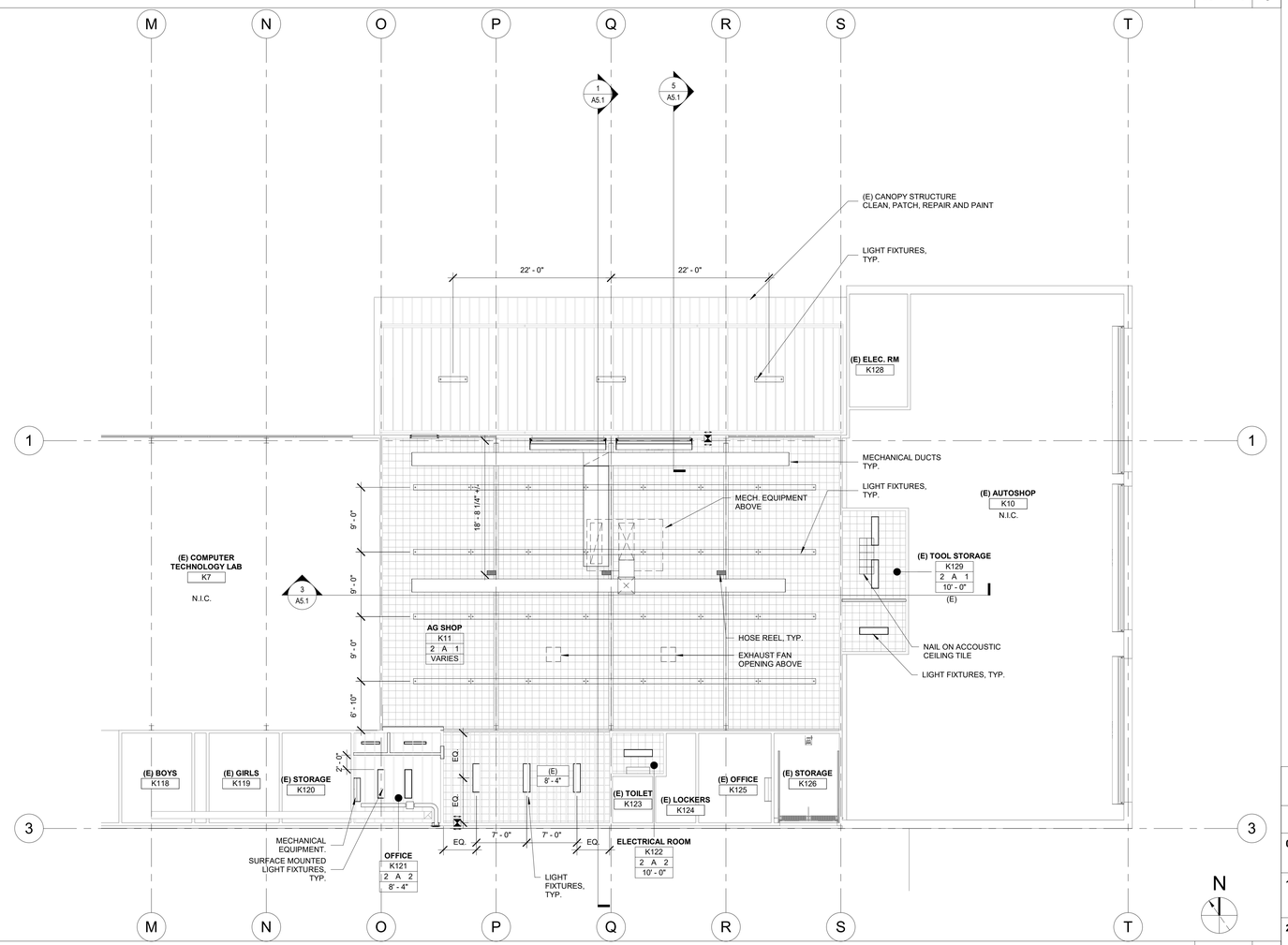
AG SHOP FLOOR PLANS

A2.1



DEMO REFLECTED CEILING PLAN

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



REFLECTED CEILING PLAN

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

FINISH SCHEDULE

REFERENCE ROOM DESIGNATION TAGS FOR FINISH CALL-OUTS

FLOOR/BASE		WALL		CEILING	
0	SEE PLAN	0	SEE PLAN	0	SEE RCP PLAN
1	EXISTING FLOOR AND BASE TO REMAIN	A	EXISTING GYPSUM WALL BOARD TO REMAIN - NEW PAINT	1	NAIL ON ACCOUSTIC TILE TO REMAIN, PATCH AND REPAIR - NEW PAINT
2	RESILIENT BASE	B	GYPSUM WALL BOARD TO BE REMOVED	2	(E) GYPSUM BOARD CEILING. PATCH AND REPAIR, PAINT.

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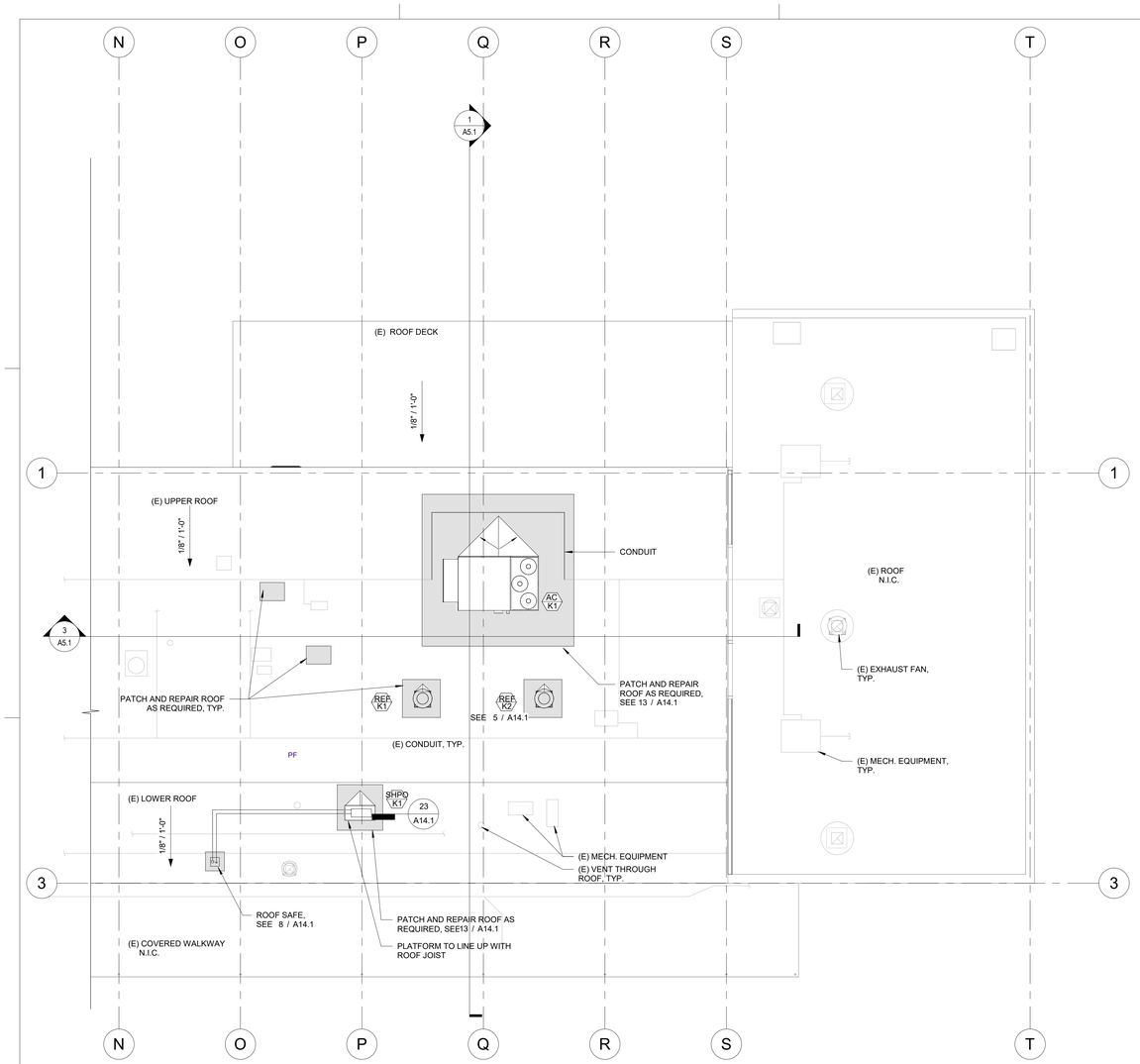
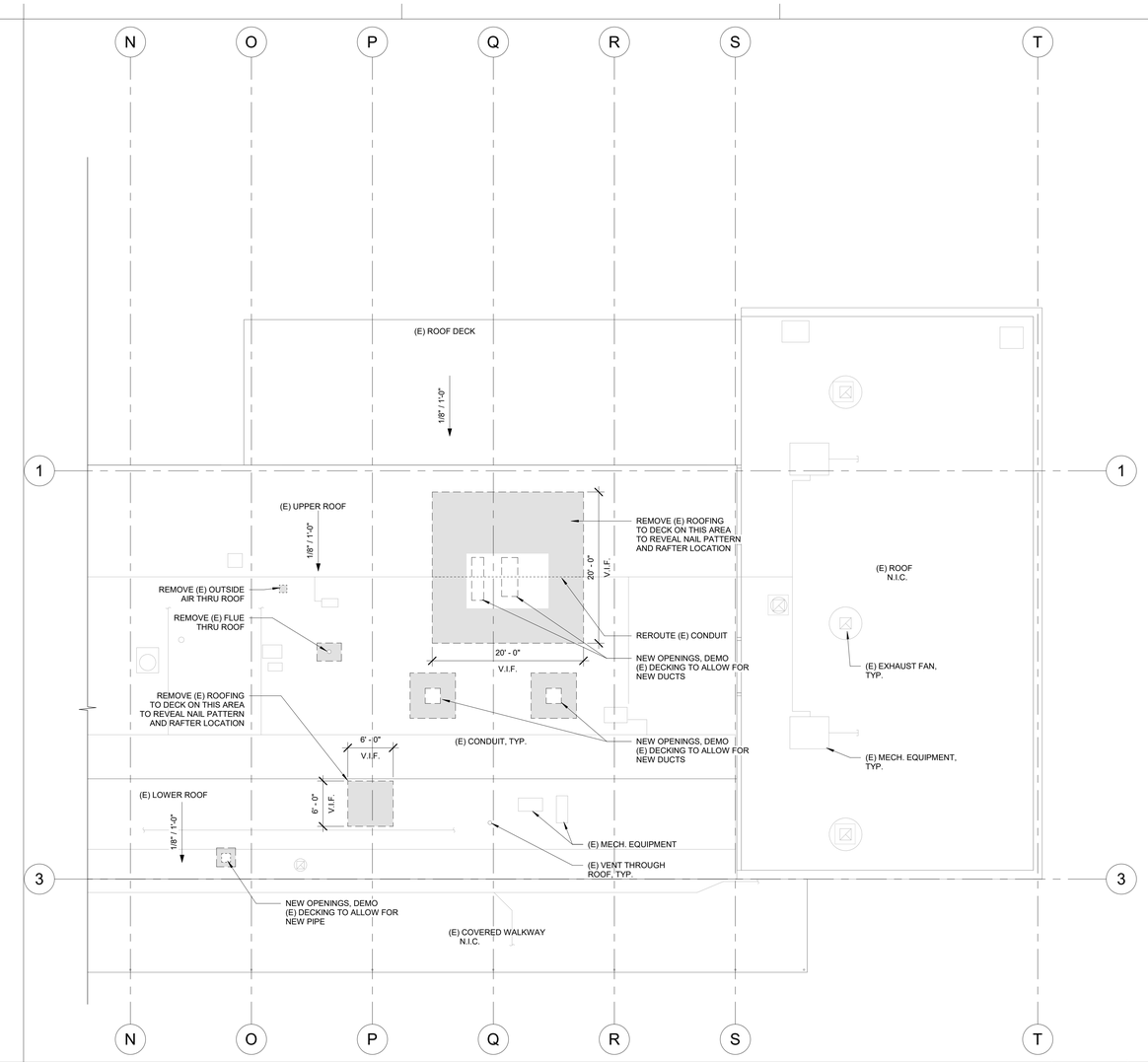
AG SHOP CEILING PLANS

A3.1



NEW ROOF PLAN 1/8" = 1'-0" **18**



DEMOLITION ROOF PLAN 1/8" = 1'-0" **1**

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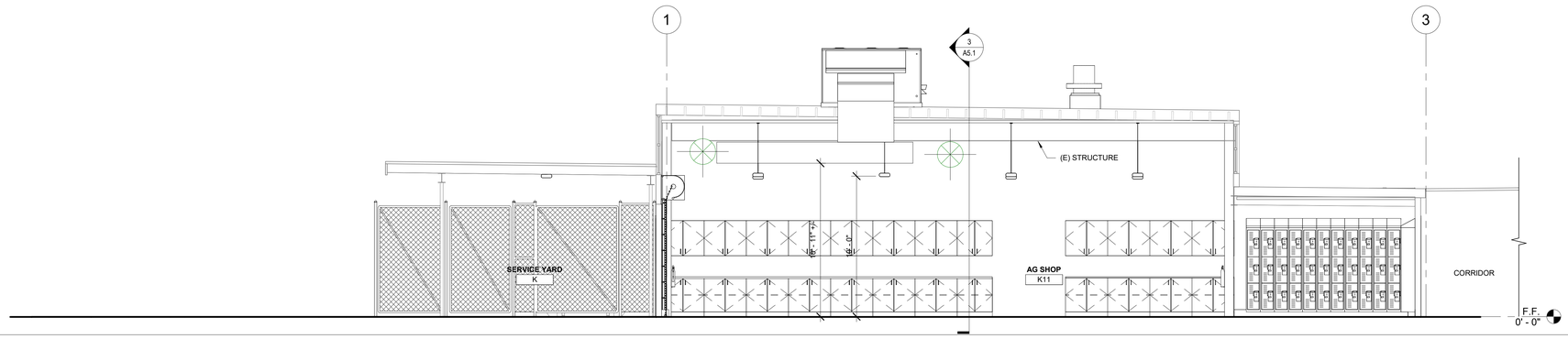
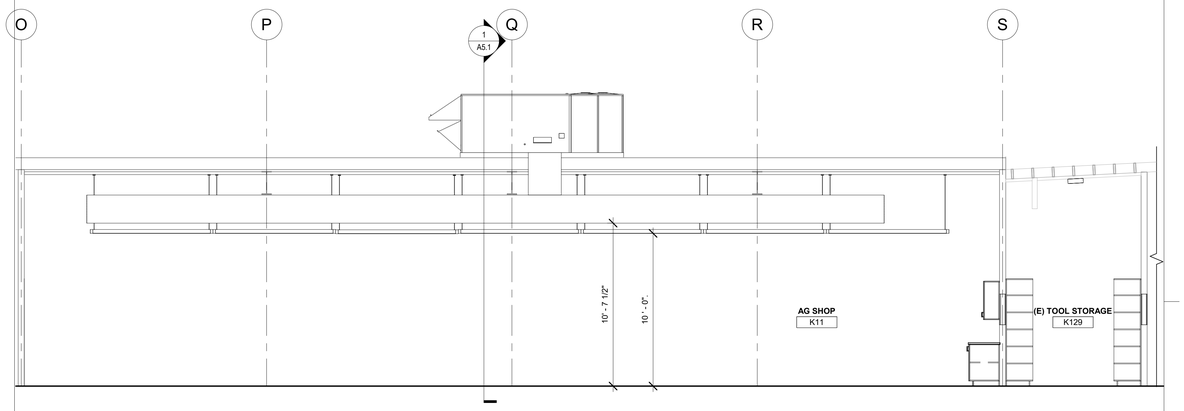
AG SHOP ROOF PLANS

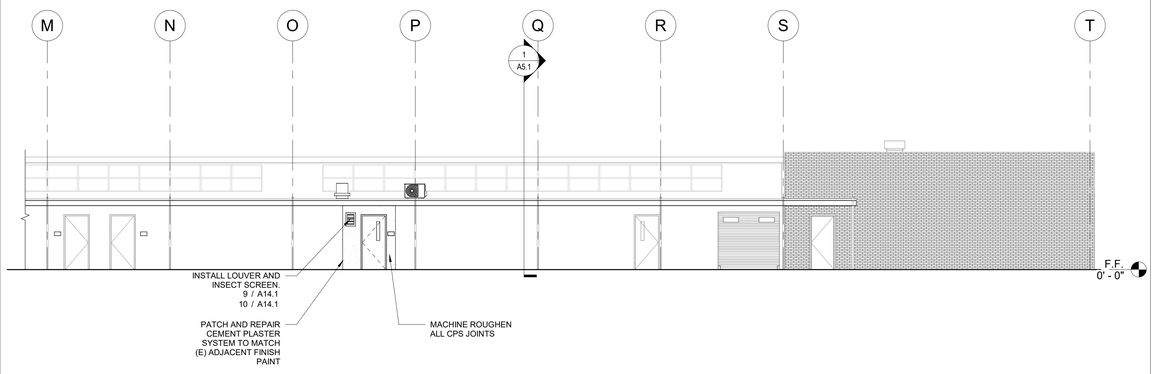
A4.1



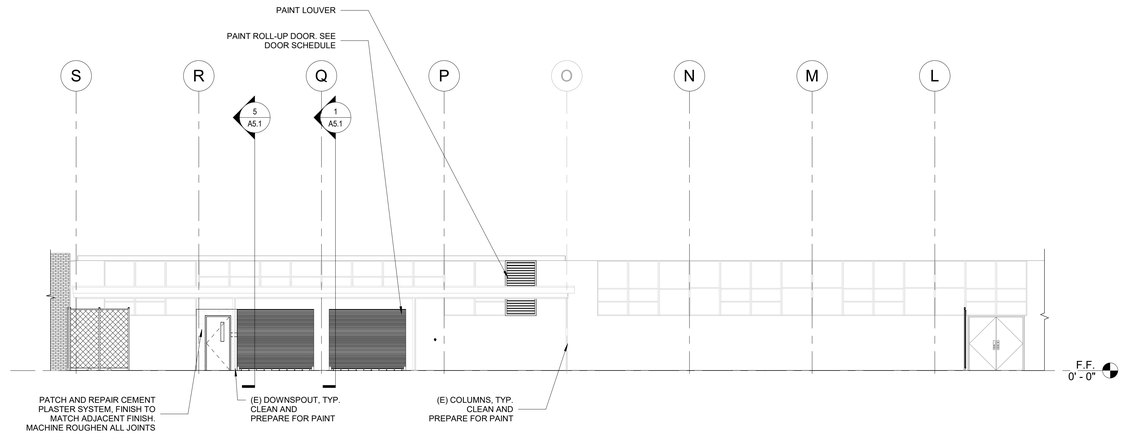
AG SHOP SECTION 1/4" = 1'-0" **1**



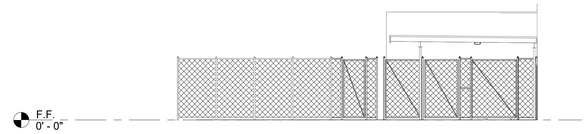
AG SHOP SECTION 1/4" = 1'-0" **3**



PARTIAL EXTERIOR ELEVATION - SOUTH 1/8" = 1'-0" **19**



PARTIAL EXTERIOR ELEVATION - NORTH 1/8" = 1'-0" **4**



PARTIAL EXTERIOR ELEVATION - WEST 1/8" = 1'-0" **5**

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COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
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Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANDY
No. C32876
EXP. 03/31/25
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SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

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STOCKTON UNIFIED SCHOOL DISTRICT

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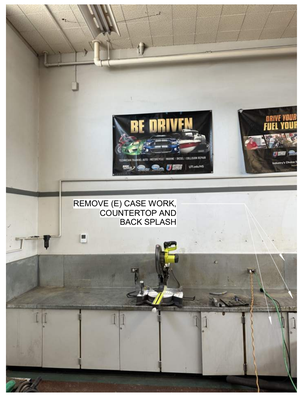
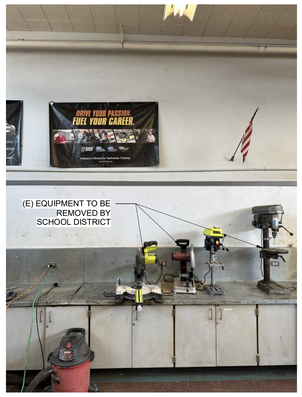
CONSTRUCTION DOCUMENTS

SECTIONS AND EXTERIOR ELEVATIONS

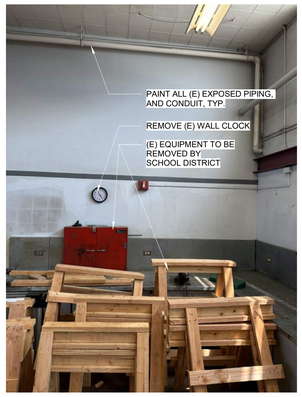
A5.1

NORTH WALL

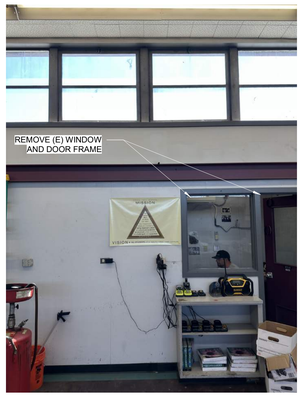


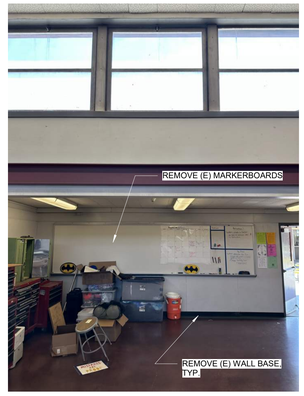


EAST WALL



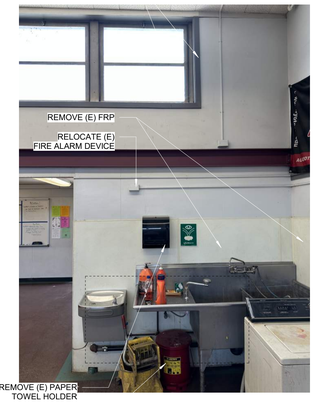
SOUTH WALL





PAINT ALL (E) EXPOSED PIPING, AND CONDUIT, TYP.

CLEAN (E) WINDOWS AND FRAMES, PREP FRAMES AND TRIM FOR PAINT, TYP.



OPEN WALL AS REQUIRED TO INSTALL NEW PLUMBING

WEST WALL

EXISTING AG SHOP INTERIOR PHOTOS | 1/2" = 1'-0" | 2

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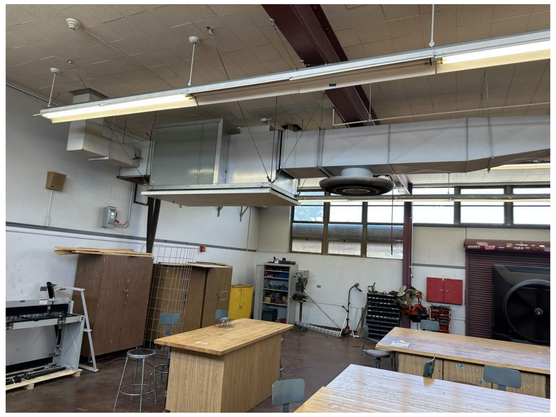
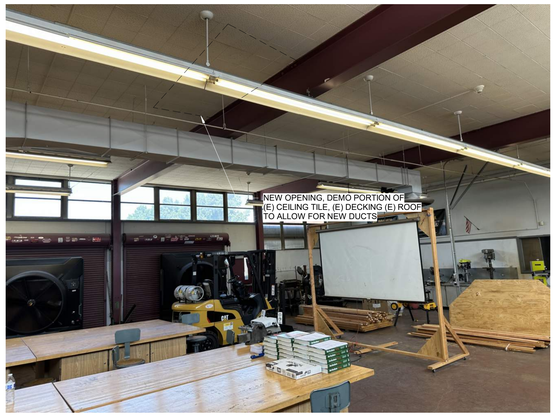
EXISTING INTERIOR PHOTOS

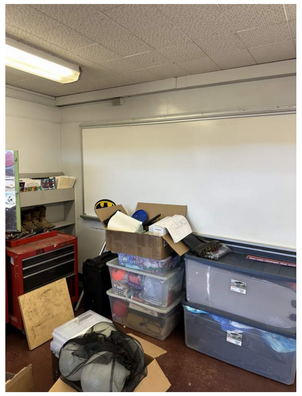
A7.1

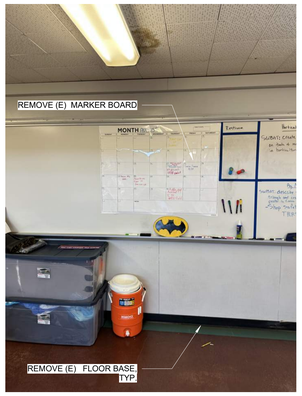


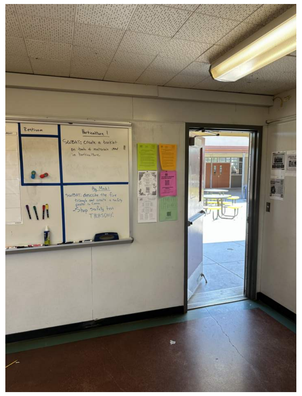


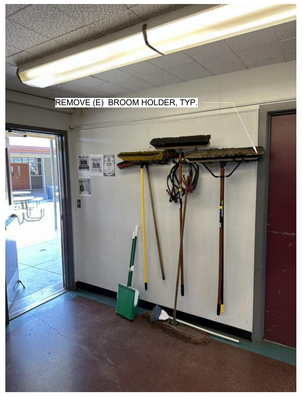
EXISTING AG SHOP INTERIOR PHOTOS

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



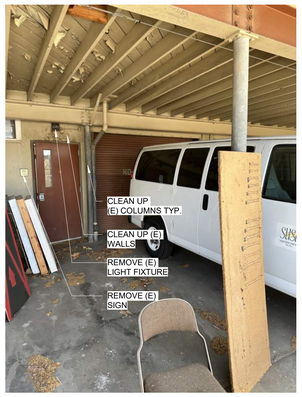


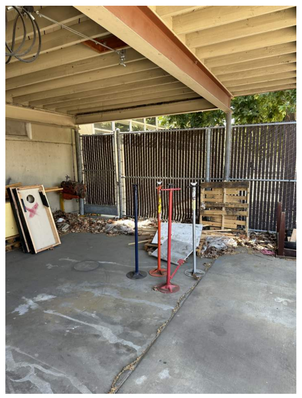


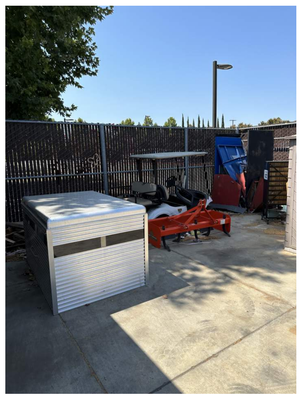


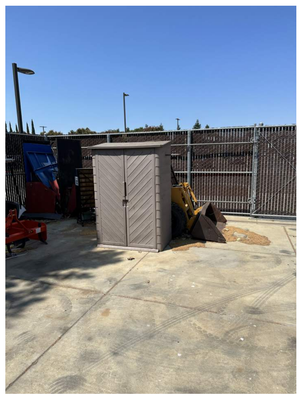
EXISTING LOBBY INTERIOR PHOTOS

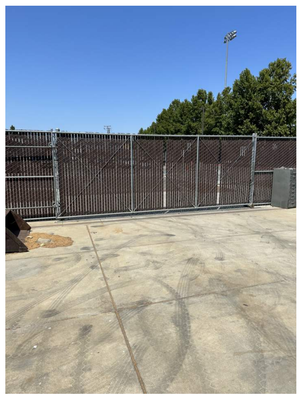
1/2" = 1'-0" | 3

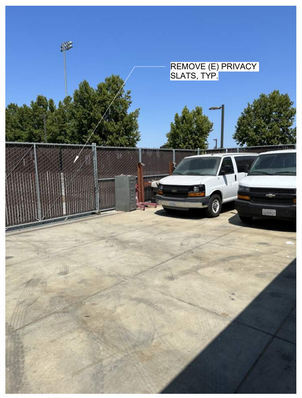












EXISTING EXTERIOR PHOTOS

1/2" = 1'-0" | 5

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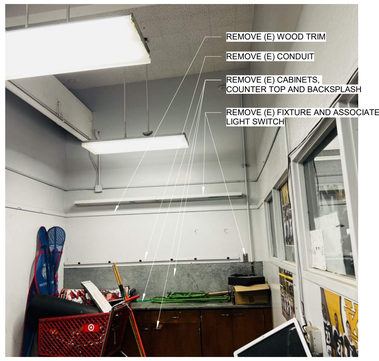
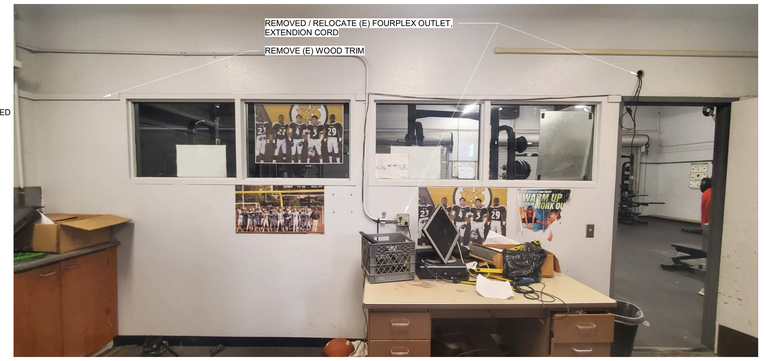
EXISTING INTERIOR PHOTOS

A7.2



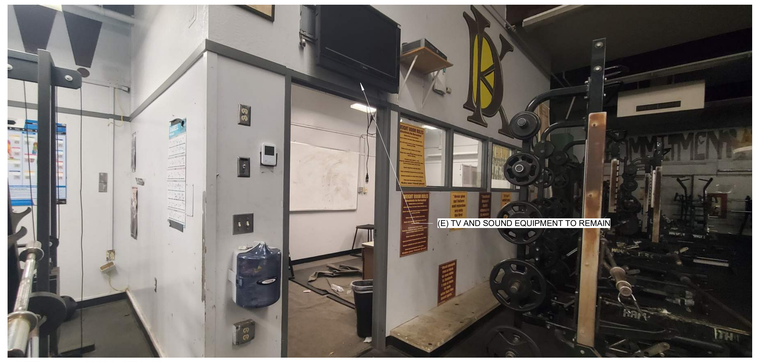
NORTH WALL



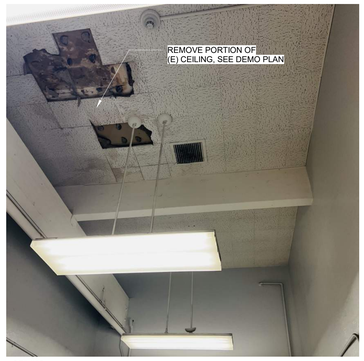
EAST WALL

SOUTH WALL

WEST WALL



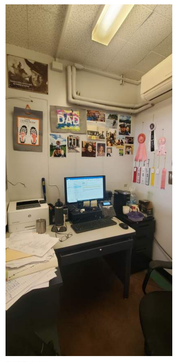
EXTERNAL WALL OF TOOL STORAGE



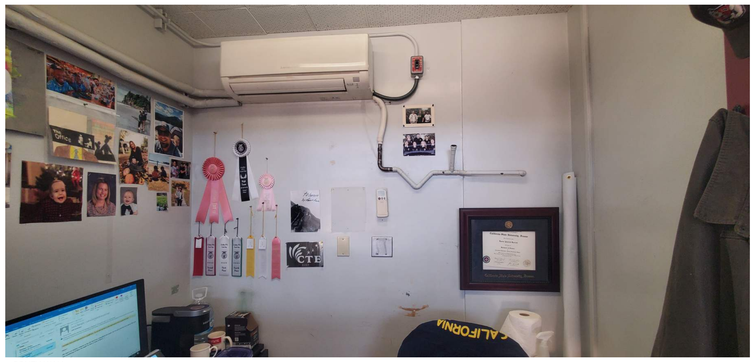
CEILING

EXISTING TOOL STORAGE INTERIOR PHOTOS

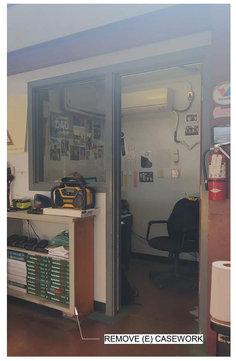
1/2" = 1'-0" | 12



EAST WALL

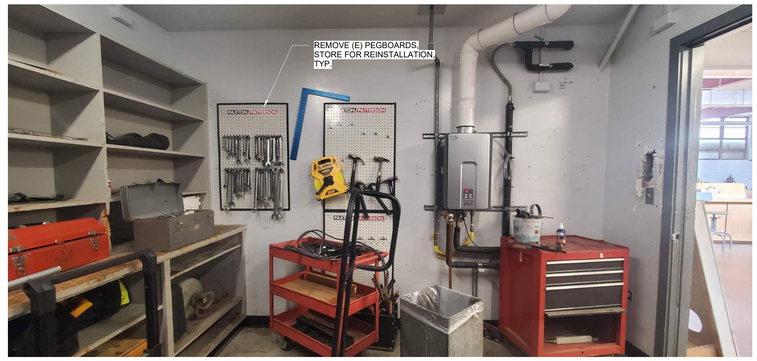


SOUTH WALL

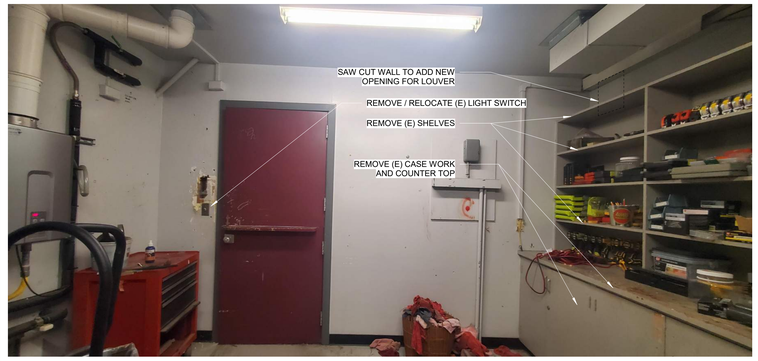


EXISTING STORAGE INTERIOR PHOTOS

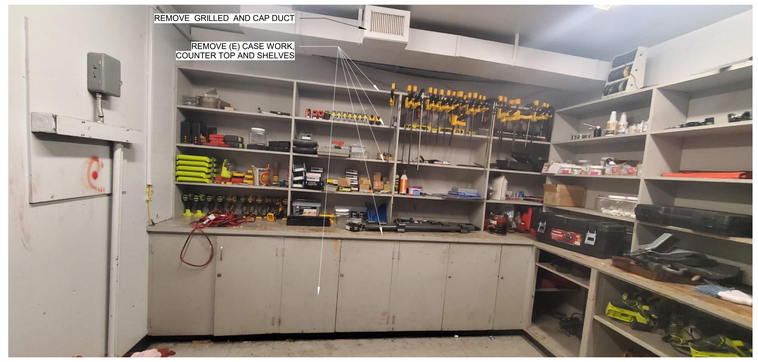
1/2" = 1'-0" | 14



NORTH WALL



EAST WALL



SOUTH WALL

WEST WALL

EXISTING OFFICE INTERIOR PHOTOS

1/2" = 1'-0" | 5

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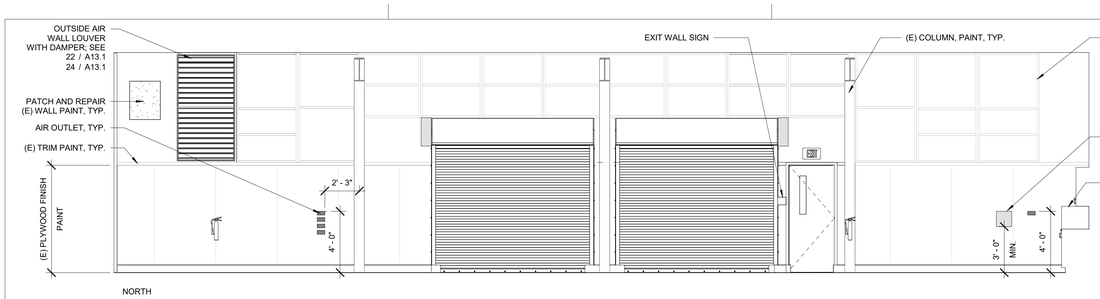
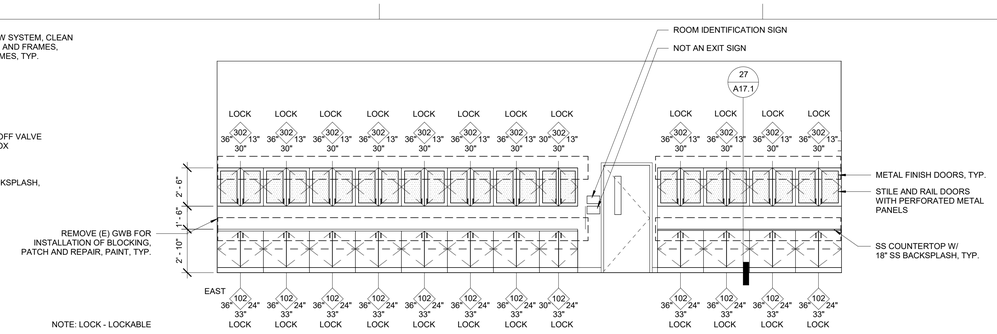
EXISTING INTERIOR PHOTOS

A7.3

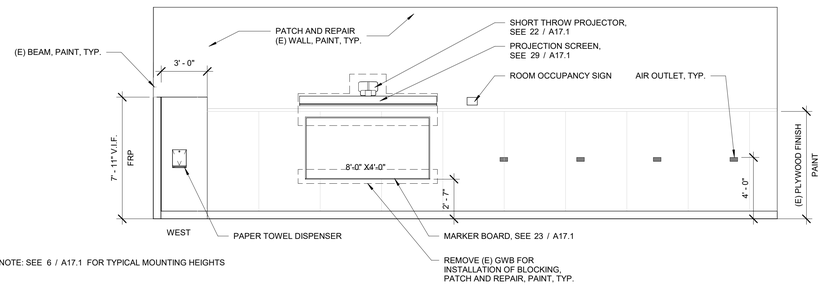




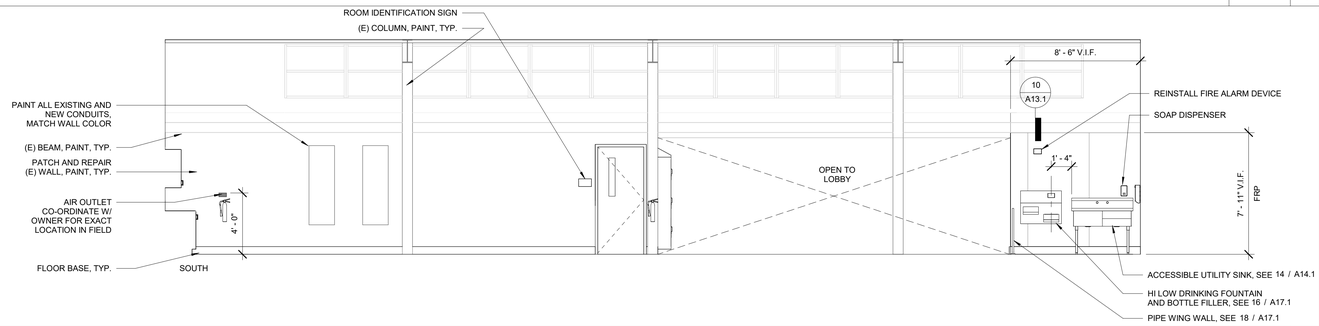
NOTE: LOCK - LOCKABLE

AG SHOP - INTERIOR ELEVATIONS

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

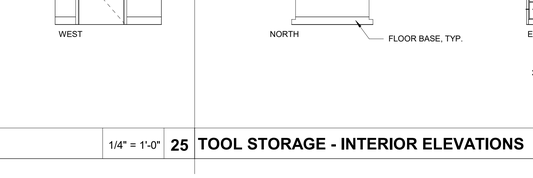


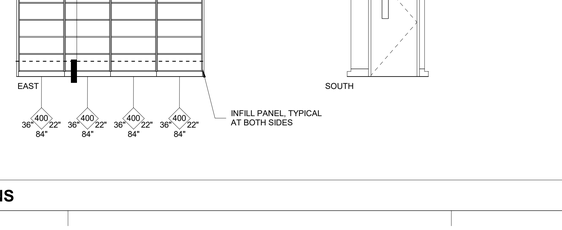
NOTE: SEE 6 / A17.1 FOR TYPICAL MOUNTING HEIGHTS



AG SHOP - INTERIOR ELEVATIONS

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





LOBBY - INTERIOR ELEVATIONS

1/4" = 1'-0" | 3

ELECTRICAL ROOM - INTERIOR ELEVATIONS

1/4" = 1'-0" | 24

OFFICE - INTERIOR ELEVATIONS

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

HALLWAY - INTERIOR ELEVATIONS

1/4" = 1'-0" | 25

TOOL STORAGE - INTERIOR ELEVATIONS

1/4" = 1'-0" | 5

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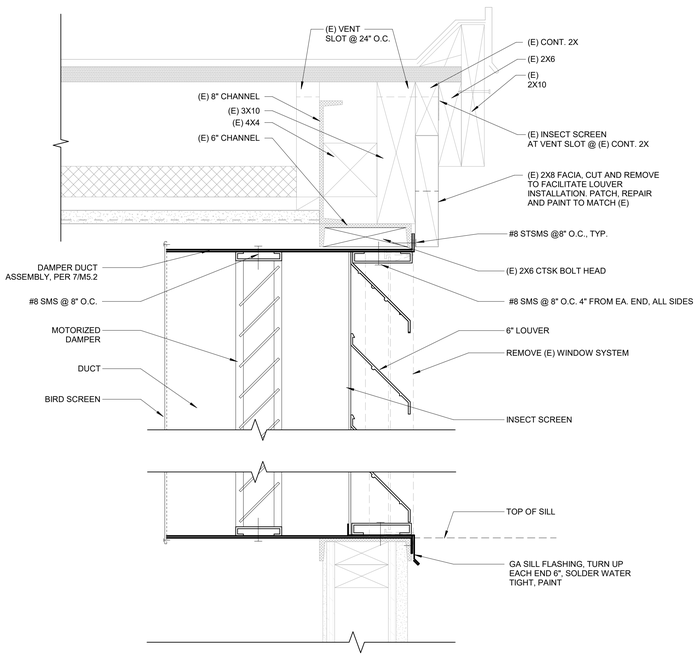
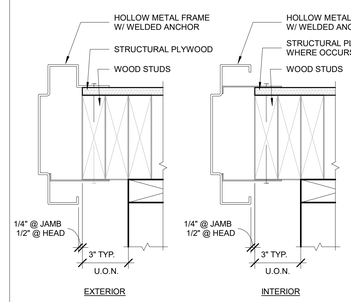
INTERIOR ELEVATIONS

A7.4



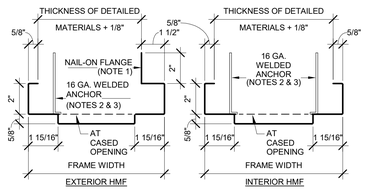
LOUVER IN (E) WINDOW HEAD

3" = 1'-0" | 22



FRAMING AT HMF

3" = 1'-0" | 16



NOTES:

1. NAIL-ON FLANGE AT JAMBS AND HEAD ON EXTERIOR SIDE. ATTACH WITH 8d NAILS @ 8"O.C.
2. LOCATION OF WELDED ANCHORS:
   JAMBS: 6" FROM TOP OF FRAME; 9" FROM BOTTOM OF FRAME; 24" MAX. O.C.
   HEAD: 6" FROM EACH END OF FRAME; 24" MAX O.C.
3. ATTACH TO FRAMING WITH (2) 8d NAILS PER ANCHOR

TYPICAL HOLLOW METAL FRAME

3" = 1'-0" | 17

DOOR SCHEDULE - AG SHOP

NUMBER	DOOR Finish	DOOR HEIGHT	DOOR WIDTH	DOOR TYPE	GLAZING	FRAME TYPE	FRAME FINISH	FRAME DETAIL HEAD	FRAME DETAIL JAMB	FRAME DETAIL THRES	DOOR HARDWARE	FIRE RATING	REMARKS
K129	PT	7' - 0"	3' - 0"	WD01	GL-1	HMF01	PT	8/A13.1	8/A13.1		55.04.60	NONE	
K131	PT	7' - 0"	3' - 0"	WD02		HMF01	PT	8/A13.1	8/A13.1		55.95.50	NONE	
K132	PT	7' - 0"	6' - 0"	WD03		HMF02	PT	8/A13.1	8/A13.1		55.04/MFB.15	NONE	
K901	PT	8' - 0"	10' - 0"	OHSD		EXISTING	PT	13/A13.1	14/A13.1	15/A13.1	95.0	NONE	
K902	PT	8' - 0"	10' - 0"	OHSD		EXISTING	PT	13/A13.1	14/A13.1	15/A13.1	95.0	NONE	
K903	PT	7' - 0"	3' - 0"	HM01		HMF01	PT	3/A13.1	4/A13.1	5/A13.1	45.13.73	NONE	1
K904	PT	7' - 0"	3' - 0"	WD01	GL-1	HMF01	PT	8/A13.1	8/A13.1		55.38.50	NONE	
K905	PT	7' - 0"	3' - 0"	WD01	GL-1	HMF01	PT	8/A13.1	8/A13.1		55.04.62	NONE	
K906	PT	7' - 0"	3' - 0"	HM01	GL-1	HMF01	PT	3/A13.1	4/A13.1	5/A13.1	45.13.74	NONE	1
K907	PT	7' - 0"	3' - 0"	WD01	GL-1	HMF01	PT	8/A13.1	8/A13.1		55.05.56	NONE	

ABBREVIATIONS

FINISHES	
MP1	FACTORY PAINT -COLOR SELECTION -
SS	STEEL - FACTORY PAINT - COLOR SELECTION-
PT	PAINT, COLOR TO BE SELECTED

DOOR SCHEDULE REMARKS

1	PANIC HARDWARE

FIRE & LIFE SAFETY NOTES

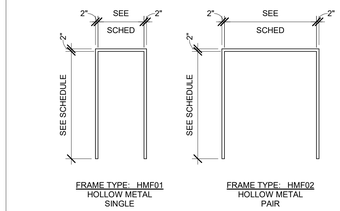
A. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 #s FOR EXTERIOR DOORS. 5 #s FOR INTERIOR DOORS PER 2022 CBC 11B-404.2.9
B. ALL RATED DOORS SHALL PROVIDE POSITIVE LATCHING PER SECTION 716.5.9.1
C. FIRE DOOR ASSEMBLIES SHALL BE LABELED BY AN APPROVED AGENCY. THE LABELS SHALL COMPLY WITH NFPA 80, AND SHALL BE PERMANENTLY AFFIXED TO THE DOOR OR FRAME PER SECTION 716.5.7
D. ALL RATED DOORS ASSEMBLIES SHALL BE PROVIDED WITH APPROVED GASKETING MATERIAL SO WHEN INSTALLED IS TO PROVIDE A SEAL WHERE THE DOOR MEETS THE STOP ON BOTH SIDES AND ACROSS THE TOP PER SECTION 716.5.3
E. SIZE OF GLAZED OPENING IN FIRE DOORS AND FIRE WINDOWS SHALL MEET THE REQUIREMENTS OF SECTIONS 716.5.8 (DOORS) & 716.6 (WINDOWS)
F. ALL DOORS TO ROOMS OR SPACES THAT HAVE AN OCCUPANT LOAD OF 5 OR MORE SHALL BE EQUIPPED WITH HARDWARE THAT IS LOCKABLE FROM THE INSIDE PER CBC 1010.2.8.2

SHEET NOTES

S1	SEE SPEC SECTION 08 71 00 FOR DOOR HARDWARE GROUPS
S2	THE PANIC DEVICE SHALL BE MOUNTED 3'-4" A.F.F (TOP SHALL NOT EXCEED 3'-6" A.F.F.) LEVER PLACEMENT SHALL BE 3'-4" A.F.F
S3	PROVIDE DOOR STOPS, PROVIDE BACKING

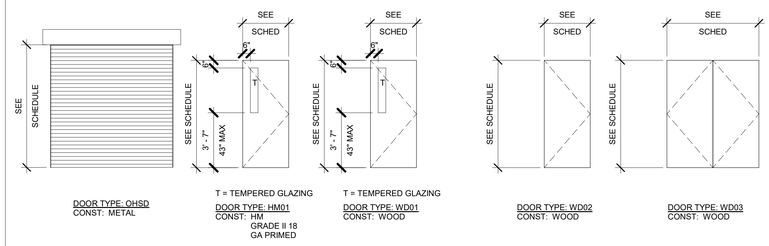
FRAME TYPES

1/4" = 1'-0" | 12



DOOR LEGEND

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



LOUVER IN (E) WINDOW JAMB

3" = 1'-0" | 24

VISIBLE LITE

3" = 1'-0" | 18

NOTE: MAX WEIGHT 484 LBS

ROLL UP - HEAD

1 1/2" = 1'-0" | 13

HMF INTERIOR HEAD, JAMB SIM.

3" = 1'-0" | 8

HMF @ (E) WALL - HEAD EXTERIOR

3" = 1'-0" | 3

WALL TYPES

1 1/2" = 1'-0" | 25

WALL INFILL

1 1/2" = 1'-0" | 19

ROLL-UP - JAMB

3" = 1'-0" | 14

FURRED WALL AT BEAM

3" = 1'-0" | 10

HMF @ (E) WALL JAMB

3" = 1'-0" | 4

FLOOR BASE

1 1/2" = 1'-0" | 20

ROLL-UP -THRESHOLD

1 1/2" = 1'-0" | 15

DOOR THRESHOLD

3" = 1'-0" | 5

IDENTIFICATION STAMP
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COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANDY
No. C32876
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SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

OPENINGS DETAILS AND DOOR SCHEDULE

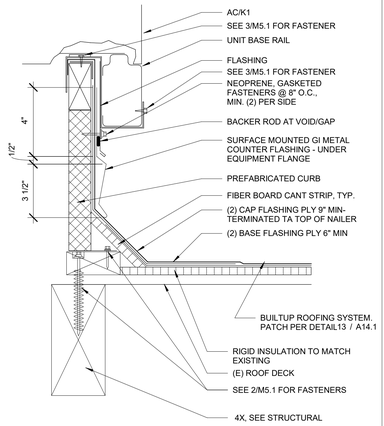
A13.1

NOT USED

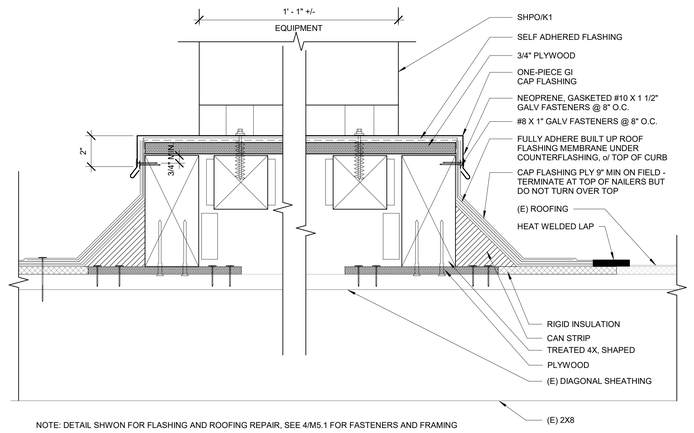
NOT USED

NOT USED

NOT USED

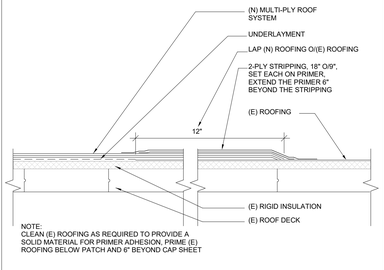


FLASHING @ HVAC CURB | 3" = 1'-0" | **17**



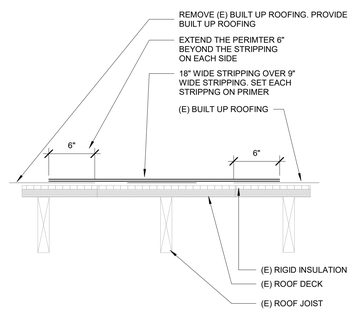
NOTE: DETAIL SHWON FOR FLASHING AND ROOFING REPAIR, SEE 4/M5.1 FOR FASTENERS AND FRAMING

EQUIPMENT PLATFORM 1 | 3" = 1'-0" | **23**



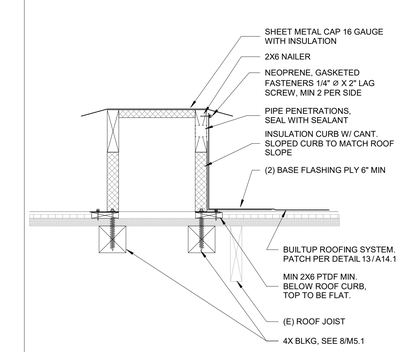
NOTE:
CLEAN (E) ROOFING AS REQUIRED TO PROVIDE A SOLID MATERIAL FOR PRIMER ADHESION. PRIME (E) ROOFING BELOW PATCH AND 6" BEYOND CAP SHEET

NEW TO EXISTING ROOF | 3" = 1'-0" | **18**



NOTES:
1. (E) BUILT UP ROOFING TO BE PATCHED WITH 2 PLY MODIFIED MEMBRANE ROOFING SYSTEM W/FIELD APPLIED COATING.
2. PROVIDE A MINIMUN CLASS 'B' ROOF SYSTEM
3. ROOFING SYSTEM OVER 1/2" MIN RIGID ROOF INSULATION. TO MATCH EXISTING CONDITIONS.
4. PROVIDE NEW PLYWOOD SHEATHING TO MATCH EXISTING WHERE OCCURS.
5. PROVIDE NEW RIGID INSULATION TO MATCH EXISTING WHERE OCCURS.

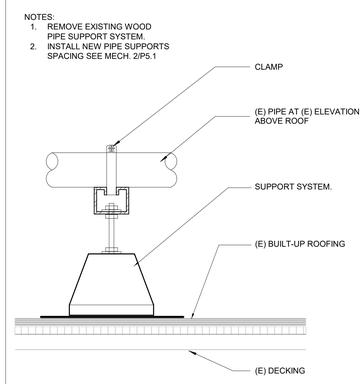
BUILT UP ROOFING JOINT | 1 1/2" = 1'-0" | **13**



NOTE: SEE 8/M5.1 FOR FASTENERS AND LEVELING BLOCK

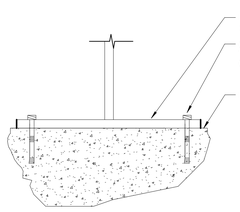
ROOF SAFE ENCLOSURE DETAIL | 1 1/2" = 1'-0" | **8**

NOTES:
1. REMOVE EXISTING WOOD PIPE SUPPORT SYSTEM.
2. INSTALL NEW PIPE SUPPORTS SPACING SEE MECH. 2/P5.1

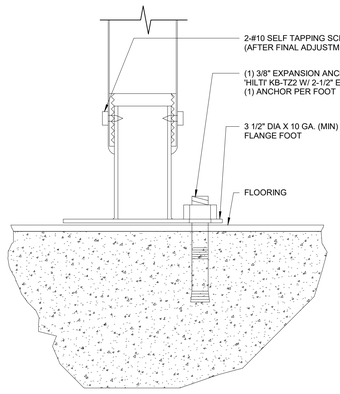


SEE 6/M5.1 FOR MORE INFORMATION

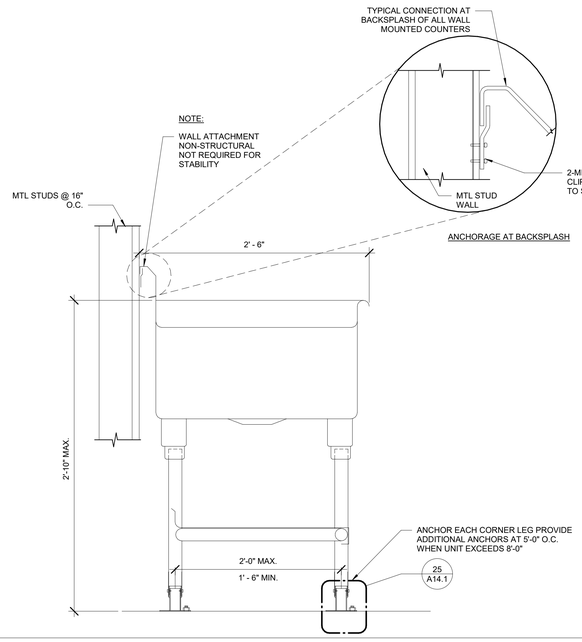
INTERMIDIATE PIPE SUPPORT | 3" = 1'-0" | **3**



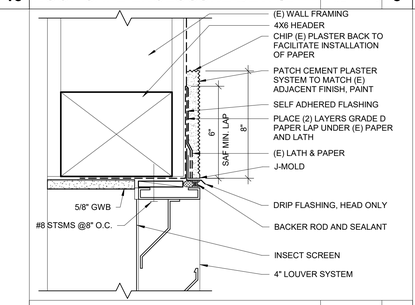
FOOT ANCHORAGE DETAIL | 1 1/2" = 1'-0" | **29**



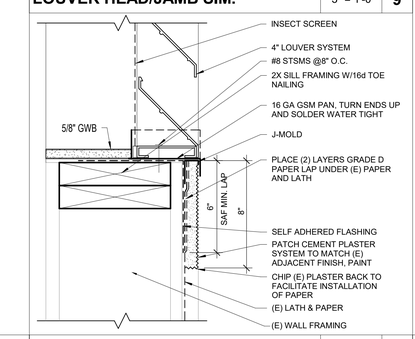
FOOT ANCHORAGE DETAIL | 3" = 1'-0" | **25**



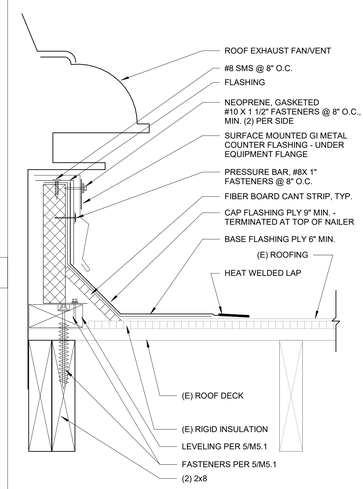
FLOOR MOUNTED SINK AT WALL | 1 1/2" = 1'-0" | **14**



LOUVER HEAD/JAMB SIM. | 3" = 1'-0" | **9**



LOUVER SILL | 3" = 1'-0" | **10**



ROOF EXHAUST FAN CURB | 3" = 1'-0" | **5**

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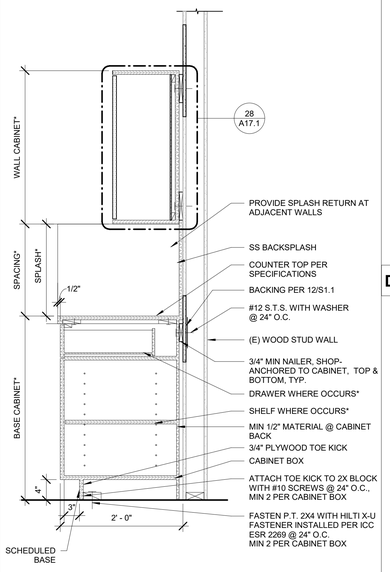
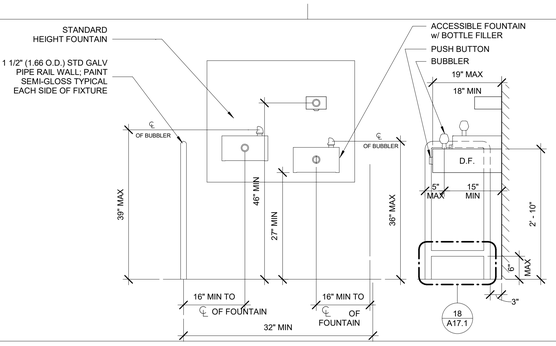
ROOF DETAILS

A14.1

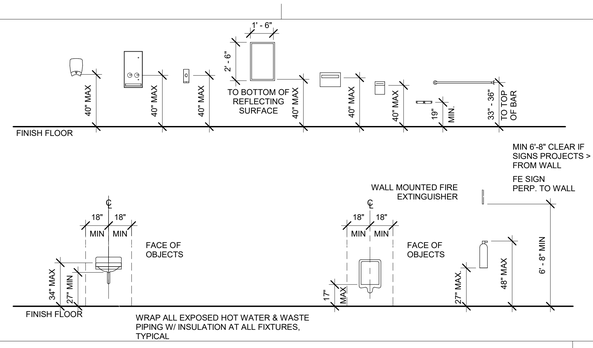


ASTERISK (*) INDICATES
"SEE INTERIOR ELEVATIONS FOR OCCURRENCE AND/OR DIMENSION"

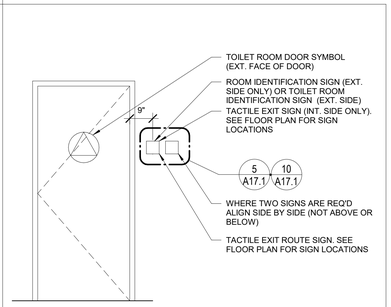
TOOL STORAGE BASE CABINET 1" = 1'-0" **27**



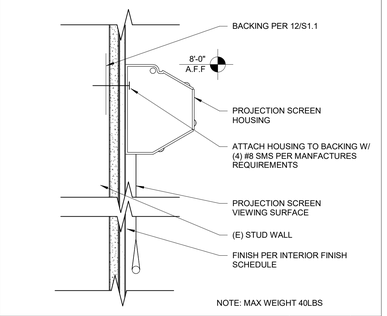
DRINKING FOUNTAIN HI-LO 3/4" = 1'-0" **16**



TYPICAL MOUNTING HEIGHTS 1/4" = 1'-0" **6**

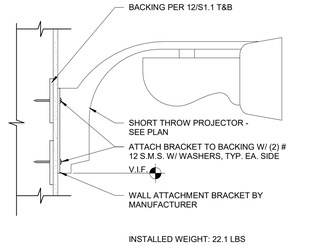


SIGN MOUNTING HEIGHTS 1/2" = 1'-0" **1**



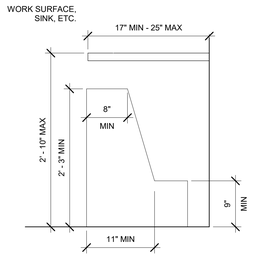
NOTE: MAX WEIGHT 40LBS

PROJECTION SCREEN DETAIL 3" = 1'-0" **29**

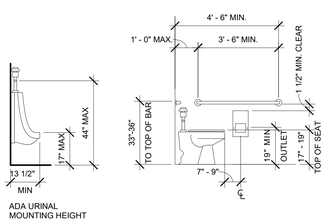


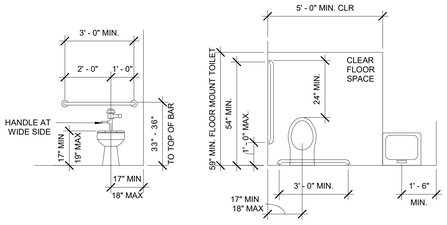
INSTALLED WEIGHT: 22.1 LBS

SHORT THROW PROJECTOR 1 1/2" = 1'-0" **22**

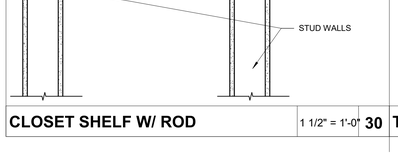


KNEE CLEARANCE DETAIL 1" = 1'-0" **17**

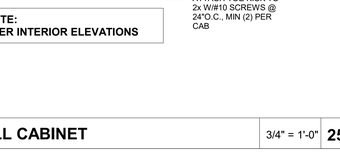




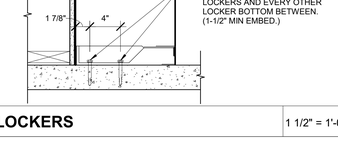
ACCESSIBLE FLOOR MOUNTED TOILET - STAFF 3/8" = 1'-0" **2**



TOOL STORAGE UPPER CABINET 1 1/2" = 1'-0" **28**

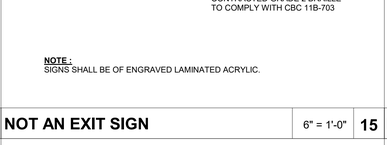


MARKERBOARD 3" = 1'-0" **23**

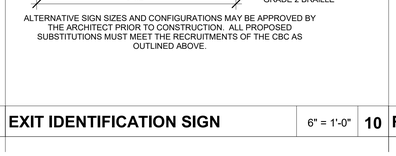


PIPE WING WALL 1" = 1'-0" **18**

NOTE:
1. SIGN TYPE IS ACRYLIC WITH SUBSURFACE COPY.

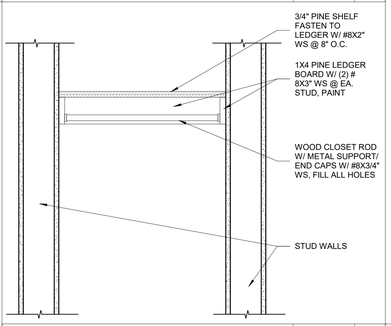


ALS SIGN IDENTIFICATION 3" = 1'-0" **13**

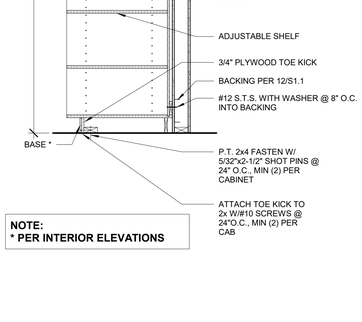


ALTERNATIVE SIGN SIZES AND CONFIGURATIONS MAY BE APPROVED BY THE ARCHITECT PRIOR TO CONSTRUCTION. ALL PROPOSED SUBSTITUTIONS MUST MEET THE RECRUITMENTS OF THE CBC AS OUTLINED ABOVE.

RESTROOM WALL SIGN 3" = 1'-0" **3**

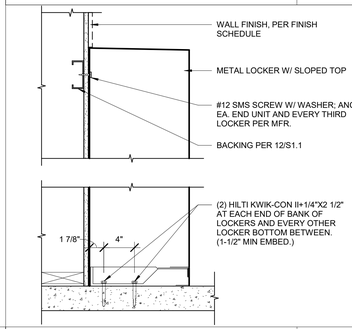


CLOSET SHELF W/ ROD 1 1/2" = 1'-0" **30**



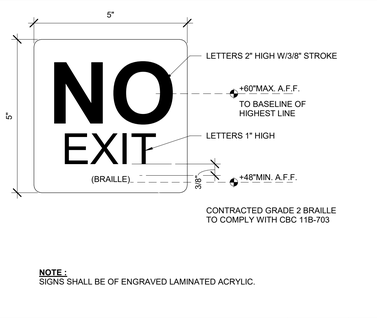
NOTE:
*** PER INTERIOR ELEVATIONS**

TALL CABINET 3/4" = 1'-0" **25**



PIPE SLEEVE 3" = 1'-0" **19**

LOCKERS 1 1/2" = 1'-0" **20**

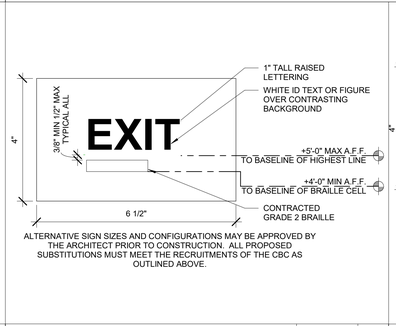


ALTERNATIVE SIGN SIZES AND CONFIGURATIONS MAY BE APPROVED BY THE ARCHITECT PRIOR TO CONSTRUCTION. ALL PROPOSED SUBSTITUTIONS MUST MEET THE RECRUITMENTS OF THE CBC AS OUTLINED ABOVE.

CAPACITY SIGN 6" = 1'-0" **14**

NOTE :
SIGNS SHALL BE OF ENGRAVED LAMINATED ACRYLIC.

NOT AN EXIT SIGN 6" = 1'-0" **15**

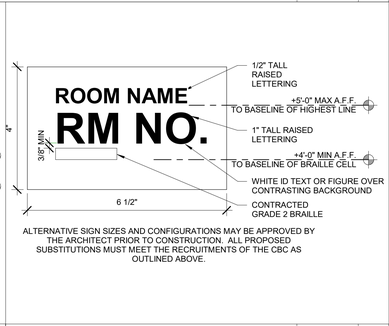


NOTE: ATTACH SIGN USING THREE FLATHEAD SELF-TAPING SCREWS (COUNTERSUNK) AND ADHESIVE. SIGN SHALL BE CENTERED ON DOOR AND MOUNTED 60" ABOVE THE FLOOR. MAINTAIN REQ'D EDGE TREATMENT PER CBC CH. 11B-703.7.2.6.4

RESTROOM GEOMETRIC SYMBOL 3" = 1'-0" **4**

ALTERNATIVE SIGN SIZES AND CONFIGURATIONS MAY BE APPROVED BY THE ARCHITECT PRIOR TO CONSTRUCTION. ALL PROPOSED SUBSTITUTIONS MUST MEET THE RECRUITMENTS OF THE CBC AS OUTLINED ABOVE.

EXIT IDENTIFICATION SIGN 6" = 1'-0" **10**



ALTERNATIVE SIGN SIZES AND CONFIGURATIONS MAY BE APPROVED BY THE ARCHITECT PRIOR TO CONSTRUCTION. ALL PROPOSED SUBSTITUTIONS MUST MEET THE RECRUITMENTS OF THE CBC AS OUTLINED ABOVE.

ROOM IDENTIFICATION SIGN 6" = 1'-0" **5**

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Phone: (916) 365-9655

LICENSED ARCHITECT CHARLES ERIC DANDY No. C32876 EXP. 03/31/25 STATE OF CALIFORNIA

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ACCESSIBILITY DETAILS

A17.1

STRUCTURAL ABBREVIATIONS

@	AT	LFRS	LATERAL FORCE RESISTING SYTEM
AB	ANCHOR BOLTS	LLH	LONG LEG HORIZONTAL
AC	ASPHALTIC CONCRETE	LLV	LONG LEG VERTICAL
AFF	ABOVE FINISH FLOOR	LP	LOW POINT
BN	BOUNDARY NAILING	LS	LAG SCREW
BEV	BEVELED	LT WT	LIGHT WEIGHT
BOC	BOTTOM OF CONCRETE	LVL	LAMINATED VENEER LUMBER
BOF	BOTTOM OF FOOTING	MU	MECHANICAL UNIT
		(N)	NEW
CIP	CAST IN PLACE	NIC	NOT IN CONTRACT
CJ	CONSTRUCTION JOINT	NTS	NOT TO SCALE
		NSG	NON SHRINK GROUT
CJP	COMPLETE JOINT PENETRATION	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
CMU	CONCRETE MASONRY UNIT	OSB	ORIENTED STRAND BOARD
COL	COLUMN	OWSG	OPEN WEB STEEL GIRDER
CONC	CONCRETE	OWSJ	OPEN WEB STEEL JOIST
CONN	CONNECTION		
CONT	CONTINUOUS	OH	OPPOSITE HAND
DF	DOUGLAS FIR	PCC	PRECAST CONCRETE
		PSF	POUNDS PER SQUARE FOOT
(E)	EXISTING		
EF	EACH FACE	PSI	POUNDS PER SQUARE INCH
EW	EACH WAY		
EJ	EXPANSION JOINT	PT	PRESSURE TREATED
EOS	EDGE OF SLAB		POINT
EN	EDGE NAILING	PW	PLYWOOD
ES	EACH SIDE	R	RADIUS
FA	FRAMING ANCHOR	SAD	SEE ARCHITECTURAL DRAWINGS
FD	FLOOR DRAIN		
FF	FINISH FLOOR	SDST	SELF DRILLING SELF TAPPING
FLG	FLANGE		
FN	FIELD NAILING	SIM	SIMILAR
FOC	FACE OF CONCRETE	SCJ	SLIP CONTROL JOINT
FOM	FACE OF MASONRY	SLH	SHORT LEG HORIZONTAL
FOS	FACE OF STUD	SLV	SHORT LEG VERTICAL
GLB	GLUE LAMINATED BEAM	SOG	SLAB ON GRADE
GSM	GALVANIZED SHEET METAL	SP	STRUCTURAL PLYWOOD
GT	GIRDER TRUSS	SS	STAINLESS STEEL
HAS	HEADED ANCHOR STUD	T24	TITLE 24 CALIFORNIA CODE
HDG	HOT DIPPED GALVANIZED	TOC	TOP OF CONCRETE
		TOF	TOP OF FOOTING
HP	HIGH POINT		TOP OF FRAMING
HSB	HIGH STRENGTH BOLT	TOM	TOP OF MASONRY
		T.O. SLAB	TOP OF SLAB
HSS	HOLLOW STRUCTURAL SECTION	TOS	TOP OF STEEL
		TOW	TOP OF WALL
HT	HIP TRUSS	UNO	UNLESS NOTED OTHERWISE
ID	INSIDE DIAMETER	VIF	VERIFY IN FIELD
JT	JACK TRUSS	WS	WATER STOP
		WWF	WELDED WIRE FABRIC
		WPJ	WEAKENED PLANE JOINT

EXPANSION ANCHOR & ADHESIVE ANCHOR NOTES

1. WHERE "EPOXY" OR "EXPANSION" ANCHORS ARE INDICATED IN DRAWINGS THESE NOTES & SCHEDULE (A S1.0) (B S1.0) SHALL APPLY.
2. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN THE ICC REPORT.
3. PERIODIC SPECIAL INSPECTION IS REQUIRED, UNLESS NOTED OTHERWISE IN THESE DRAWINGS, VERIFICATION OF THE FOLLOWING IS REQUIRED DURING SPECIAL INSPECTION:
   A. ANCHOR TYPE AND DIMENSIONS.
   B. CONCRETE TYPE AND COMPRESSIVE STRENGTH.
   C. HOLE DIMENSIONS AND HOLE CLEANING PROCEDURES.
   D. ANCHOR SPACING, EDGE DISTANCES, CONCRETE/MASONRY THICKNESS, AND ANCHOR EMBEDMENT DEPTH.
   E. TIGHTENING TORQUE.
   F. COMPLIANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.
4. WHEN INSTALLING DRILLED IN ANCHORS IN EXISTING CONCRETE OR MASONRY, USE CARE & CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS.
5. ALL POST INSTALLED EXPANSION & ADHESIVE ANCHORS SHALL BE TESTED TO THE VALUES GIVEN IN THE SCHEDULE.
   EXCEPTIONS:
   a. SILL BOLTING APPLICATIONS: 10% OF THE ANCHORS SHALL BE TESTED.
   b. NON STRUCTURAL APPLICATIONS: 50% OF THE ANCHORS SHALL BE TESTED.
   IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED SHALL BE TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TESTING FREQUENCY.
6. THE TESTING OF THE ANCHORS SHALL BE DONE BY THE TESTING LABORATORY IN THE PRESENCE OF THE PROJECT INSPECTOR & A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE GOVERNING AGENCY AND ARCHITECT/STRUCTURAL ENGINEER.

HAMMER DRILLED

(A S1.0) ADHESIVE ANCHORS

HIT-RE 500-V3 EPOXY ADHESIVE ANCHOR
ICC ESR #3814 REISSUED 2021

REBAR/BOLT SIZE	MINIMUM EMBEDMENT*	MINIMUM CONCRETE THICKNESS	MAX EMBEDMENT	NORMAL WEIGHT CONCRETE (145 PCF): MINIMUM SPACING AND EDGE DISTANCE	NORMAL WEIGHT CONCRETE (145 PCF): FULL TEST VALUE AT MIN EMBEDMENT (LBS)
#3 OR 3/8	2 3/8"	3 5/8"	7 1/2"	1 7/8"	1600
#4 OR 1/2	2 3/4"	4"	10"	2 1/2"	2250
#5 OR 5/8	3 1/8"	4 5/8"	12 1/2"	3 1/8"	2900
#6 OR 3/4	3 1/2"	5 1/2"	15"	3 3/4"	3600
#7 OR 7/8	3 1/2"	5 1/2"	17 1/2"	4 3/8"	4000
#8 OR 1	4"	6 1/4"	20"	5"	4850

NOTES
1. MINIMUM F'C = 2500 PSI.
2. DESIGN BASED ON CRACKED CONCRETE.
3. VALUES FOR REBAR, ASTM A615-GRADE 60 MIN.
4. ASSUMES ALL HOLES TO BE DRILLED BY A HAMMER DRILL WITH A CARBIDE BIT.
5. *FOR DEEPER EMBEDMENTS THE MINIMUM MEMBER THICKNESS MUST BE INCREASED BY THE SAME AMOUNT.
6. PULL TEST VALUES FOR EMBEDMENTS GREATER THAN MIN ARE INDICATED IN PLANS.

(B S1.0) EXPANSION ANCHORS

HILTI KWIK BOLT-TZ 2
ICC ESR #4266

SIZE	NOMINAL EMBEDMENT	MINIMUM CONCRETE THICKNESS	MINIMUM EDGE DISTANCE	NORMAL WEIGHT CONCRETE (145 PCF): TORQUE TEST VALUE CARBON STEEL (FT-LBS)	NORMAL WEIGHT CONCRETE (145 PCF): TORQUE TEST VALUE STAINLESS STEEL (FT-LBS)
1/4"	1 3/4"	3 1/4"	1 1/2"	4	6
3/8"	2 1/2"	4"	4 3/8"	30	30
1/2"	2 1/2"	4"	5 1/2"	50	40
5/8"	3 3/4"	5 1/2"	11 1/2"	40	60
3/4"	4 1/2"	6"	10"	110	125

NOTES
1. MINIMUM F'C = 2500 PSI
2. DESIGN BASED ON CRACKED CONCRETE.
3. SPACING BETWEEN ANCHORS IS 12 DIAMETERS OR MORE.

WOOD:

(SUBMIT SHOP DRAWINGS BEFORE FABRICATION OF GLU-LAM MEMBERS)

1. ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS:
   DOUGLAS FIR- LARCH — WESTERN LUMBER GRADING RULES NWPA.
   PLYWOOD — U.S. PRODUCT STANDARD PS 1-19 FOR SOFT PLYWOOD.
2. MINIMUM GRADES SHALL BE:
   STRUCTURAL FRAMING — DF#1 TYPICAL. MOISTURE CONTENT TO BE < 19% AT TIME OF CONSTRUCTION
   STRUCTURAL PLYWOOD (UNO) — WALL PLYWOOD, 15/32" APA RATED STRUCT I SHEATHING, 5 PLY 32/16, EXPOSURE 1. ROOF PLYWOOD, 15/32" APA RATED STRUCT I SHEATHING, 5 PLY, 32/16, EXPOSURE 1.
3. WALLS SHALL HAVE DOUBLE TOP PLATES, LAPPED AT WALL & PARTITION INTERSECTION WITH 8-16d NAILS. SPLICE UPPER AND LOWER PLATES WITH MIN' SPLICE AS SHOWN IN TYPICAL DETAIL, UNO.
4. PROVIDE SOLID BLKG BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.
5. NOTCHING OF WOOD JOISTS IS NOT PERMITTED UNLESS APPROVED BY THE SEOR. HOLES BORED IN JOISTS AND RAFTERS SHALL NOT EXCEED ONE FORTH THE DEPTH OF THE MEMBER DEPTH AND SHALL BE THROUGH CENTERLINE OF THE MEMBER.
6. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".
7. HOLES FOR LAG SCREWS SHALL BE FIRST BORED TO THE SAME NOMINAL DIAMETER & DEPTH AS THE UNTHREADED SHANK. THE REMAINDER OF THE HOLE SHALL BE 40% TO 70% OF THE SHANK DIAMETER IN WOOD.
8. LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE.
9. ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS & NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO INSERTED EXPANDING FASTENERS - KWIK-BOLT, STRONG BOLT, ETC.

BOLT-DIA	ROUND WASHER	SQUARE WASHER
1/2"	3" DIA x 3/16"	3" SQ x .165"
5/8"	3" DIA x 1/4"	3" SQ x .25"
3/4"	3" DIA x 1/4"	3" SQ x .315"
7/8"	3 1/2" DIA x 5/16"	3" SQ x .315"
1"	4" DIA x 3/8"	3 1/2" SQ x .391"

10. ALL BOLT & LAG SCREWS SHALL BE TIGHTENED AT TIME OF INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
11. LAY ALL STRUCTURAL PLYWOOD ON ROOF AND FLOORS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
12. BLOCK SP JOINTS WITH 3x4 FLAT BLOCKING WHERE NOTED ON FRAMING PLANS AND WITH BLOCKING SAME SIZE AS STUDS AT WALLS.
13. CROSS BRIDGING OR FULL DEPTH BLOCKING BETWEEN JOISTS OR RAFTERS 2x10 & LARGER REQUIRED AT 8'-0" O.C. MAXIMUM.
14. WHERE FRAMING HANGERS ARE REQUIRED & ARE NOT SHOWN ON SECTIONS, DETAILS OR PLANS, THE FOLLOWING SIMPSON HANGERS SHALL BE USED. SLOPE, SKEW, TURN IN FLANGES & PROVIDE TOP FLANGE HANGERS AS REQD.

2x & 3x MEMBERS	U HANGERS
4x MEMBERS	HU HANGERS
6x MEMBERS	HUTF HANGERS
I JOIST MEMBERS	BA HANGERS
GLU LAM MEMBERS	LEG HANGERS
4x POSTS	PCZ/EPCZ POST CAPS

15. ALL METAL HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY, ALL ITEMS SHALL BE INSTALLED PER SIMPSON SPECIFICATIONS. FILL ALL HOLES OF METAL HARDWARE WITH SPECIFIED FASTENERS, UNO.
16. WOOD SYMBOLS: ☒ CONTINUOUS ☒ BLOCKING
17. NAILS FOR ALL STRUCTURAL FRAMING SHALL BE AS SPECIFIED BELOW, STRUCTURAL NAILS

MARK	NAIL TYPE	DIA.	LENGTH
8d	8d COMM	0.131"	2 1/2"
10d	10d COMM	0.148"	3"
16d	16d COMM	0.162"	3 1/2"
20d	20d COMM	0.192"	4"

18. ALL FASTENERS FOR PRESSURE-PRESERVATIVE TREATED & FIRE-RETARDANT TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.
19. SILL BOLTS TO HAVE SQUARE STEEL WASHERS AS INDICATED IN TABLE ABOVE.
20. ALL WOOD MEMBERS IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. MATERIAL TREATED W/ ARSENIC CONTENT ARE NOT NOT PERMITTED (CCA & ACA).
21. MINIMUM FASTENING OF SHEATHING TO SUPPORTING MEMBERS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON DRAWINGS.

SHEATHING THICKNESS 't'	EDGE FASTENING	FIELD FASTENING	
't' ≤ 3/8"	8d @ 6" O.C.	8d @ 12" O.C.	WOOD
3/8" < 't' < 3/4"	10d @ 6" O.C.	10d @ 12" O.C.	
't' ≤ 3/8"	#8 FLATHEAD SDS @ 6" O.C.	#8 FLATHEAD SDS @ 12" O.C.	COLD FORMED STEEL
3/8" < 't' < 3/4"	#8 FLATHEAD SDS @ 6" O.C.	#8 FLATHEAD SDS @ 12" O.C.	

COLD FORMED METAL STUD & JOIST NOTES:

GAUGE	20		18		16		14	
MIN. THICK	0.0330		0.0430		0.0540		0.0680	
DEPTH "D"	Sx	Ix	Sx	Ix	Sx	Ix	Sx	Ix
2 1/2"	0.188	0.235	0.242	0.302	0.296	0.370	0.360	0.450
3 5/8"	0.304	0.551	0.392	0.710	0.481	0.873	0.590	1.069
4"	0.346	0.692	0.446	0.892	0.549	1.098	0.673	1.346
6"	0.598	1.793	0.772	2.316	0.953	2.860	1.178	3.525
8"	0.896	3.562	1.158	4.633	1.434	5.736	1.772	7.084
10"	-	-	1.605	8.025	1.990	9.950	2.465	12.325
12"	-	-	-	-	2.622	15.730	3.253	19.518

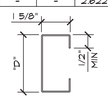

FIG. Z-Z

PER ICC ESR-3064P
1. ALL FRAMING SHALL BE FORMED FROM CORROSION RESISTANT STEEL CONFORMING TO ASTM A-653, W/ MIN YIELD STRENGTH OF 33 KSI FOR 18 GA & LIGHTER & 50 KSI FOR 16 GA & HEAVIER.
2. METAL STUDS SHALL BE OF SIZE AND GAUGE SHOWN ON DRAWINGS W/ THE MIN EFFECTIVE SECTION PROPERTIES SHOWN IN THE TABLE ABOVE, & CHANNEL TYPE SECTIONS W/ STIFFENED FLANGES AS SHOWN IN FIG. Z-Z.
3. MIN THICKNESS SHOWN IN TABLE FOR THE GAUGE SPECIFIED REPRESENTS 95% OF DESIGN THICKNESS PER 2016 AISI CODE, SECTION B71.1.
4. METAL FRAMING SHALL BE PER ICC ESR NO. 3064P. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AGENCY APPROVAL FOR ANY SUBSTITUTIONS.
5. WELDING SHALL BE IN ACCORDANCE W/ AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL" WELDERS SHALL BE AWS CERTIFIED. WELDING RODS: E-70 SERIES.
6. METAL TRACKS SHALL BE SAME GAUGE AS STUDS WHICH IT SUPPORTS. UNPUNCHED, W/ MIN FLANGE WIDTH OF 1 1/4", EXCEPT WHERE SLOTTED SLIP TRACKS ARE REQ'D UNLESS NOTED OTHERWISE ON PLANS. SEE TYPICAL DETAILS.
7. METAL STUDS SHALL NOT HAVE PUNCH-OUTS CLOSER THAN 12" FROM THE END OF THE STUD TO THE CENTER OF THE PUNCH-OUT.
8. SIZES INDICATED IN THESE DRAWINGS ASSUME THE COMPRESSION FLANGE IS ADEQUATELY BRACED BY THE WALL FINISH OR OTHER APPROVED METHOD, AT 4'-0" MIN O.C., FOR FULL HEIGHT OF STUD.
9. STUD TO STUD CONNS TO BE MADE W/ (4) #10 SMS @ EA CONTACT TYP UNO.
10. UNLESS INDICATED OTHERWISE BRACING OF METAL STUDS TO BE PER ICC ESR-3064P.
11. FRAMING SYSTEMS ARE NOT FULLY DETAILED ON THE DRAWINGS, BUT ARE GIVEN TO PROVIDE DESIGN INTENT. IT IS THE CONTRACTORS RESPONSIBILITY TO FABRICATE & INSTALL THE COLD FORMED METAL FRAMING ASSEMBLIES IN ACCORDANCE WITH THESE DOCUMENTS AND THE APPLICABLE CODE. All SUBSTITUTIONS FROM THE APPROVED DOCUMENTS MUST BE APPROVED BY ENGINEER AND DSA PRIOR TO INSTALLATION.
12. STUDS SHALL BE MIN 18GA (43 MILS) THICKNESS @ 16" OC SPACING UNO IN THESE DRAWINGS. 12" STUDS SHALL BE MIN. 16ga (54 MILS) THICKNESS @ 16" OC SPACING U.N.O. IN THESE DRAWINGS.

CONCRETE AND REINFORCING STEEL:

(SUBMIT REBAR SHOP DRAWINGS PRIOR TO FABRICATION)

1. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-19 AS MODIFIED BY CBC.
2. THE MINIMUM 28 DAY STRENSTH AND TYPE OF CONCRETE SHALL BE AS FOLLOWS:
   SLAB INFILL — 3000 PSI (150 PCF)
3. CEMENT SHALL CONFORM TO ASTM C150-18, TYPE II - V.
4. CONCRETE AGGREGATES:
   NATURAL SAND AND ROCK AGGREGATES SHALL CONFORM TO ASTM C33-18.
5. REINFORCING STEEL SHALL CONFORM TO ASTM A615 -- GRADE 60 UNO
6. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4-18 USING PROPER LOW HYDROGEN ELECTRODES. TACK WELDING TO REBAR IS STRICTLY PROHIBITED. SEE REBAR WELDING NOTE.
7. REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED ACCORDING TO 'MANUAL OF STANDARD PRACTICE OF REINFORCED CONCRETE CONSTRUCTION' BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
8. WIRE FABRIC SHALL CONFORM TO ASTM A1064-17.
9. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF MAIN BARS AND DENOTE CLEAR COVERAGE. CONCRETE COVERAGE SHALL BE AS FOLLOWS, UNO ON DRAWINGS:
   CONCRETE DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT SLABS) ..... 3"
   CONCRETE EXPOSED TO GROUND BUT PLACED IN FORMS ..... 2"
   SLABS (ON GROUND) ..... POSITION IN CENTER OF SLAB
10. ALL BARS SHALL HAVE A CLASS B MINIMUM SPLICE LAP UNO. SEE TABLE IN THESE DRAWINGS.
11. GENERAL:
    A. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
    B. REFER TO ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL MOULDS, GROOVES, ORNAMENTS, CLIPS AND BOLTS TO BE SET IN CONCRETE.
12. CONSTRUCTION JOINTS SHALL BE MADE ROUGH AND ALL LAITANCE REMOVED FROM THE SURFACE. CONCRETE MAY BE ROUGHENED BY CHIPPING THE ENTIRE SURFACE, SANDBLASTING OR HOSING THE SURFACE 4 TO 6 HOURS AFTER THE POUR WITH A FINE SPRAY.
13. REMOVE ALL DEBRIS FROM THE FORMS BEFORE PLACING ANY CONCRETE.
14. REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE. OBTAIN APPROVAL OF ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
15. MAXIMUM FREE FALL OF CONCRETE SHALL BE 4'-0".
16. NO WOOD SPREADERS ALLOWED. NO WOOD STAKES ALLOWED IN AREAS TO BE COVERED W/ CONCRETE
17. CONCRETE MIX DESIGN SHALL BE PREPARED PER CBC CHAPTER 19 AND REVIEWED BY THE STRUCTURAL ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO PLACEMENT.
18. NOTIFY THE STRUCTURAL ENGINEER 48 HOURS PRIOR TO PLACING CONCRETE.
19. CONTRACTOR TO SUBMIT PROPOSED CONTROL AND CONSTRUCTION JT LOCATION TO STRUCTURAL ENGINEER PRIOR TO CONCRETE POUR. SPACING SHALL BE BETWEEN 24 AND 30 TIMES THE SLAB THICKNESS MAXIMUM.

POWDER ACTUATED FASTENERS (SHOT PINS)

1. THESE NOTES GOVERN ALL CONDITIONS CALLED OUT ON THE PLANS AS "SHOT PINS" UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ALL SHOT PINS SHALL BE AS MANUFACTURED BY HILTI INC. OR DEWALT. REFERENCE SHALL BE MADE TO THE 'PRODUCT TECHNICAL GUIDE'. FOR ADDITIONAL INFORMATION ICC ESR 2269 (HILTI) OR ICC ESR 2024 (DEWALT).
3. SHOT PINS DRIVEN INTO STEEL BASE MATERIAL SHALL BE X-U-P8 (HILTI) OR CSI (DEWALT) TYPE. LENGTH OF PIN SHALL BE AS REQ'D TO PENETRATE THROUGH THE STEEL BASE MATERIAL. MIN EDGE DISTANCE TO ANY CONNECTED PART SHALL BE 1/2" AND MIN FASTENER SPACING SHALL BE 1".
4. SHOT PINS DRIVEN INTO CONCRETE BASE MATERIAL SHALL BE X-U-P8 (HILTI) OR CSI (DEWALT) TYPE. LENGTH OF PIN SHALL BE AS REQ'D TO PENETRATE 1" INTO THE CONC BASE MATERIAL. MIN EDGE DISTANCE TO ANY CONC MATERIAL SHALL BE 3" AND MIN FASTENER SPACING SHALL BE 4" MINIMUM CONCRETE THICKNESS=4 1/2"
5. SHOT PINS DRIVEN INTO CONCRETE BASE MATERIAL THROUGH METAL DECK SHALL BE X-U-P8 (HILTI) OR CSI (DEWALT) TYPE. LENGTH OF PIN SHALL BE AS REQ'D TO PENETRATE 1" INTO THE CONC THROUGH THE LOW FLUTE. PIN SHALL BE CENTERED IN THE LOW FLUTE & MIN FASTENER SPACING SHALL BE 1 1/4" CONCRETE MUST HAVE F'c=3000 PSI MIN AND BE 2 1/2" THICK ABOVE TOP OF STEEL DECK.
6. SHOT PINS DRIVEN INTO GROUT FILLED CMU SHALL BE X-U-P8 (HILTI) OR CSI (DEWALT) TYPE. LENGTH OF PIN SHALL BE AS REQD TO PENETRATE 1" INTO THE FACE SHELL. DO NOT INSTALL IN ANY VERTICAL MORTAR JOINTS. FASTENERS SHALL BE SPACED NO CLOSER THAN 4" AND NO CLOSER THAN 4" FROM ANY EDGE.
7. SHOT PINS IN CONCRETE OR STEEL SHALL NOT BE USED FOR SUSTAINED LOADS IN TENSION OR BRACE APPLICATIONS IN SEISMIC DESIGN CATEGORIES D, E, & F PER ASCE 7-16 SECTION 13.4.5
8. SHOT PINS NOT ALLOWED FOR EXTERIOR ANCHORAGE.
9. SHOT PINS PENETRATION INTO CONCRETE SHALL NOT EXCEED 1/3 OF SLAB THICKNESS.
10. SHOT PINS CONNECTING COLD FORMED METAL TO CONCRETE OR STEEL SHALL HAVE WASHERS.

TYPICAL NOTES

APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE

GENERAL NOTES:

1. CONSTRUCTION SHALL CONFORM TO THE 2022 CALIFORNIA BUILDING CODE, CBC.
2. NOTES AND DETAILS ON TYPICAL SHEETS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON PLANS.
3. CONTRACTOR SHALL NOT SCALE DRAWINGS FOR SIZES, LENGTHS, CLEARANCES, ETC.
4. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR A SIMILAR CONDITION.
5. PRIOR TO FABRICATION, SHOP DRAWINGS, SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER ON ALL STRUCTURAL STEEL, REINFORCING STEEL, CONCRETE MIX PROPORTIONS.
   SHOP DRAWINGS: SHOP DRAWINS SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS AND THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL HE INTENDS TO FURNISH AND INSTALL AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS INTENDED FOR USE. DUPLICATION OF DESIGN DRAWINGS FOR THE PURPOSE OF SHOP DRAWINGS IS NOT ACCEPTABLE. AND CAUSE FOR REJECTION.
6. SAFETY NOTE:
   A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
   B. THE STRUCTURAL ENGINEER DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
   C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.
7. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
8. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE BUILDINGS THAT IS IN CONFLICT UNTIL SAID CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES. IF NOT RESOLVED PRIOR TO BID, THE MOST STRINGENT CONDITION WILL APPLY.

DESIGN LOADS:

CODE: 2022 CALIFORNIA BUILDING CODE (CBC)

LIVE LOADS:

ROOF . . . . . 20.0 PSF (REDUCIBLE)

WIND:

BASIC WIND SPEED V (3 SEC GUST)= 93 MPH
RISK CATEGORY: ☐ I ■ II ☐ III ☐ IV
EXPOSURE C

ENCLOSURE CLASSIFICATION:	INTERNAL PRESSURE COEFFICIENT (GCpi)
☐ ENCLOSED	+0.18, -0.18
☐ PARTIALLY ENCLOSED	+0.55, -0.55
☐ PARTIALLY OPEN	+0.18, -0.18
■ OPEN	0.00

VELOCITY PRESSURE q_h = 16.1 PSF

COMPONENTS & CLADDING:

*WIND PRESSURE FOR BUILDING ELEMENTS (16.0 PSF MINIMUM)

DESIGN WIND PRESSURE (PSF)	
ROOF	
ZONE 1	16, -17.5
ZONE 2	16, -26.3
ZONE 3	16, -52.5

* DESIGN PRESSURE IS FOR EFFECTIVE WIND AREA < 10 SQ FT. PRESSURE CAN BE REDUCED FOR LARGER AREAS AS PER ASCE 7-16
** - PRESSURE FOR < 2.0 SQ FT EFF AREA

SEISMIC:

SEISMIC DEMANDS ON NON-STRUCTURAL COMPONENTS
BUILDING LOCATION:
LATITUDE: 37.98 °N
LONGITUDE: -121.32 °W

SITE CLASS	RISK CATEGORY	SEISMIC DESIGN CATEGORY	SEISMIC COMPONENT IMPORTANCE FACTOR Ip
☐ A	☐ I	☐ A	■ 1.00
☐ B	■ II	☐ B	☐ 1.50
☐ C	☐ III	☐ C	
■ D	☐ IV	■ D	
☐ E		☐ E	
☐ F		☐ F	

DESIGN SPECTRAL RESPONSE ACCELERATIONS PARAMETERS:
S_{DS} = .596
S_{D1} = .389

COMPONENT COEFFICIENTS
a_p= 2.5
R_p= 6
Ω= 2
$\frac{z}{h}$ = 1

ANALYSIS PROCEDURE: DESIGN FORCE $F_p = \frac{0.4 a_p S_{DS} W_p}{\left(\frac{R_p}{I_p}\right)}\left(1+2\frac{z}{h}\right)$

USE F_p = .3 W_p

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

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SACRAMENTO, CA. 95820
(916)-452-8200
(916)-452-8212 (FAX)

6/5/24

REGISTERED PROFESSIONAL ENGINEER
BRAD J. ROLUND
2837
STRUCTURAL
STATE OF CALIFORNIA

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55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date

PROJECT No.: 2023-065

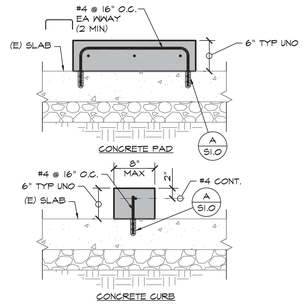
CONSTRUCTION DOCUMENTS

TYPICAL NOTES

S1.0

TYPICAL DETAILS

APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE

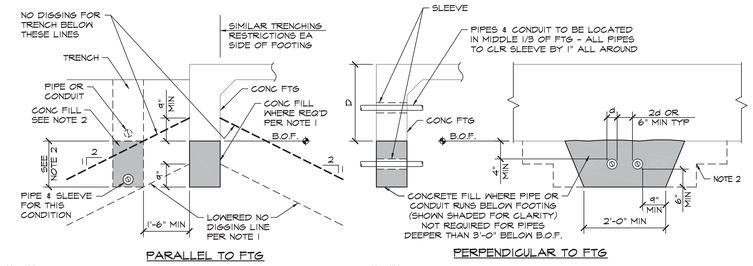


14 / S1.1 DETAIL

1" = 1'-0" CONC5

A / S1.1 NOT USED

1" = 1'-0"



NOTES:
1. WHERE TRENCH OCCURS BELOW "NO DIGGING LINE" (SHOWN AS HEAVY DASHED LINE), LOWER BOTTOM OF FTG WITH CONC FILL TO LOWER NO DIGGING LINE AS REQ'D (SHOWN AS LT DASHED LINE).
2. IN LIEU OF LOWERING BOTT OF FTG WHERE TRENCH OCCURS BELOW NO DIGGING LINE, FILL PORTION OF TRENCH BELOW NO DIGGING LINE W/ CONC FILL PRIOR TO EXCAVATING FTG. PROVIDE SLEEVE W/ 1" CLR AROUND PIPE ENCASED IN CONC.
3. SEE PIPES PERPENDICULAR TO FOOTING FOR ADDITIONAL NOTES.

NOTES:
1. CONCRETE FILL SHALL HAVE f'c @ 28 DAYS > 1500 PSI.
2. CONCRETE FILL TO BE SAME WIDTH AS FTG AND FULL WIDTH OF PIPE TRENCH. STEP FILL IF PIPE IS MORE THAN 2'-0" BELOW BOTT OF FTG.
3. NO PIPE SHALL BE PLACED BELOW SPREAD FTGS - TYP.
4. IF PIPE IS IN PLACE PRIOR TO CASTING CONCRETE, WRAP PIPE W/ 1" THICK GLASS WOOL INSULATION IN LIEU OF SLEEVE.
5. PROVIDE 2" CLR MINIMUM, BETWEEN PIPES OR CONDUIT & REINFORCING.
6. NO PIPES UNDER PRESSURE ALLOWED WITHIN FTG IN LONGITUDINAL DIRECTION.
7. CONDUITS WITHIN FTG SHALL BE LOCATED SUCH THAT VERTICAL RISERS DO NOT CROSS ADJACENT HORIZONTAL CONDUIT. MINIMUM COVER SHALL BE 1 1/2" AND 2d MINIMUM SEPARATION.

4 / S1.1 PIPE & CONDUIT DETAIL

1/2" = 1'-0" CONC6

BAR SIZE	MAIN REINFORCEMENT 90° HOOK LENGTH "L"	MAIN REINFORCEMENT INSIDE DIA. "DI"	MAIN REINFORCEMENT 180° HOOK LENGTH "L"	STIRRUPS & TIES 90° HOOK LENGTH "L"	STIRRUPS & TIES INSIDE DIA. "D2"	STIRRUPS & TIES 135° HOOK LENGTH "L"
#3	4 1/2"	2 1/4"	2 1/2"	3"	1 1/2"	3"
#4	6"	3"	2 1/2"	3"	2"	3"
#5	7 1/2"	3 3/4"	2 1/2"	3 3/4"	2 1/2"	3 3/4"
#6	9"	4 1/2"	3"	9"	4 1/2"	4 1/2"
#7	10 1/2"	5 1/4"	3 1/2"	10 1/2"	5 1/4"	5 1/4"
#8	1'-0"	6"	4"	1'-0"	6"	6"
#9	1'-1 1/2"	9 1/2"	4 1/2"	-	-	-
#10	1'-3 1/4"	10 3/4"	5 1/4"	-	-	-
#11	1'-5"	1'-0"	5 3/4"	-	-	-

1 / S1.1 STANDARD HOOKS

1" = 1'-0"

10 / S1.1 NOT USED

1" = 1'-0"

11 / S1.1 DETAIL

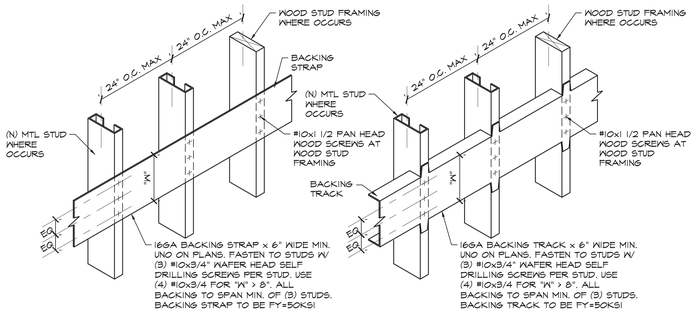
1" = 1'-0" CONC11A

CONCRETE STRENGTH	f'c = 3000 PSI				f'c = 4000 PSI			
CLASS OF LAP SPLICE	CLASS "A"		CLASS "B"		CLASS "A"		CLASS "B"	
BAR SIZE	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	1'-10"	1'-5"	2'-4"	1'-10"	1'-7"	1'-5"	2'-1"	1'-7"
#4	2'-5"	1'-10"	3'-1"	2'-5"	2'-1"	1'-7"	2'-8"	2'-1"
#5	3'-0"	2'-4"	3'-11"	3'-0"	2'-7"	2'-0"	3'-5"	2'-7"
#6	3'-7"	2'-8"	4'-8"	3'-7"	3'-1"	2'-5"	4'-1"	3'-1"
#7	5'-5"	4'-0"	6'-8"	5'-2"	4'-6"	3'-6"	5'-11"	4'-6"
#8	6'-0"	4'-7"	7'-8"	6'-0"	5'-2"	4'-0"	6'-8"	5'-2"
#9	6'-8"	5'-2"	8'-8"	6'-8"	5'-10"	4'-6"	7'-7"	5'-10"
#10	7'-7"	5'-10"	9'-10"	7'-7"	6'-7"	5'-1"	8'-6"	6'-7"
#11	8'-5"	6'-6"	10'-11"	8'-5"	7'-3"	5'-7"	9'-5"	7'-3"

6
LAP

NOTES:
1. UNLESS INDICATED OTHERWISE, USE CLASS "B" LAP SPLICE LENGTHS, MULTIPLIED BY THE APPLICABLE FACTORS(S) LISTED BELOW.
2. WHERE THE CLEAR SPACING OF BARS BEING SPLICED IS LESS THAN 2 BAR DIAMETERS, INCREASE THE LAP LENGTH BY 50%.
3. WHERE THE BAR COVER IS LESS THAN OR EQUAL TO THE BAR DIAMETER, INCREASE THE LAP LENGTH BY 50%
4. A CLASS "A" SPLICE MAY BE USED ONLY WHERE NOTED ON THE DRAWINGS. WHERE DEVELOPMENT LENGTH (Ld) IS REQUIRED OR CALLED OUT ON THE DRAWINGS, USE CLASS "A" LAP SPLICE LENGTH.
5. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
6. LAP SPLICE LENGTHS IN TABLE ARE FOR NORMAL WEIGHT CONCRETE. WHERE LIGHTWEIGHT AGGREGATE CONCRETE IS USED, INCREASE LAP SPLICE LENGTH BY 33%
7. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
8. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.

2 / S1.1 REBAR OFFSET & LAP SPLICES



A STRAP BACKING: USE FOR THE FOLLOWING ITEMS.
1. FLOOR MOUNTED BASE CABINETS.
2. WALL MOUNTED DISPENSERS AND HARDWARE WEIGHING 40 LBS OR LESS.
3. MIRRORS
4. BACKING AT THE BOTTOM OF WALL HUNG CABINETS LESS THAN 15" IN DEPTH.

B TRACK BACKING: USE FOR THE FOLLOWING ITEMS.
1. HANDRAILS AND GRAB BARS.
2. FLOOR MOUNTED CABINETS GREATER THAN 9'-0" IN HEIGHT.
3. WALL HUNG CABINETS GREATER THAN 15" IN DEPTH AND AT THE TOP OF WALL HUNG CABINETS LESS THAN 15" IN DEPTH
4. A ITEMS (OPTIONAL)

TYPICAL BACKING

12 / S1.1 DETAIL

1" = 1'-0" MTL565

5 / S1.1 NOT USED

1" = 1'-0"

8 / S1.1 NOT USED

1" = 1'-0"

6 / S1.1 NOT USED

1" = 1'-0"

13 / S1.1 NOT USED

1" = 1'-0"

9 / S1.1 NOT USED

1" = 1'-0"

7 / S1.1 NOT USED

1" = 1'-0"

3 / S1.1 NOT USED

1" = 1'-0"

IDENTIFICATION STAMP
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APP: 02-122192 INC:
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DATE: 06/27/2024

DSA APP. NO: 02-122192

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6/5/24

REGISTERED PROFESSIONAL ENGINEER BRAD J. ROLUND 2837 CIVIL STATE OF CALIFORNIA

SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

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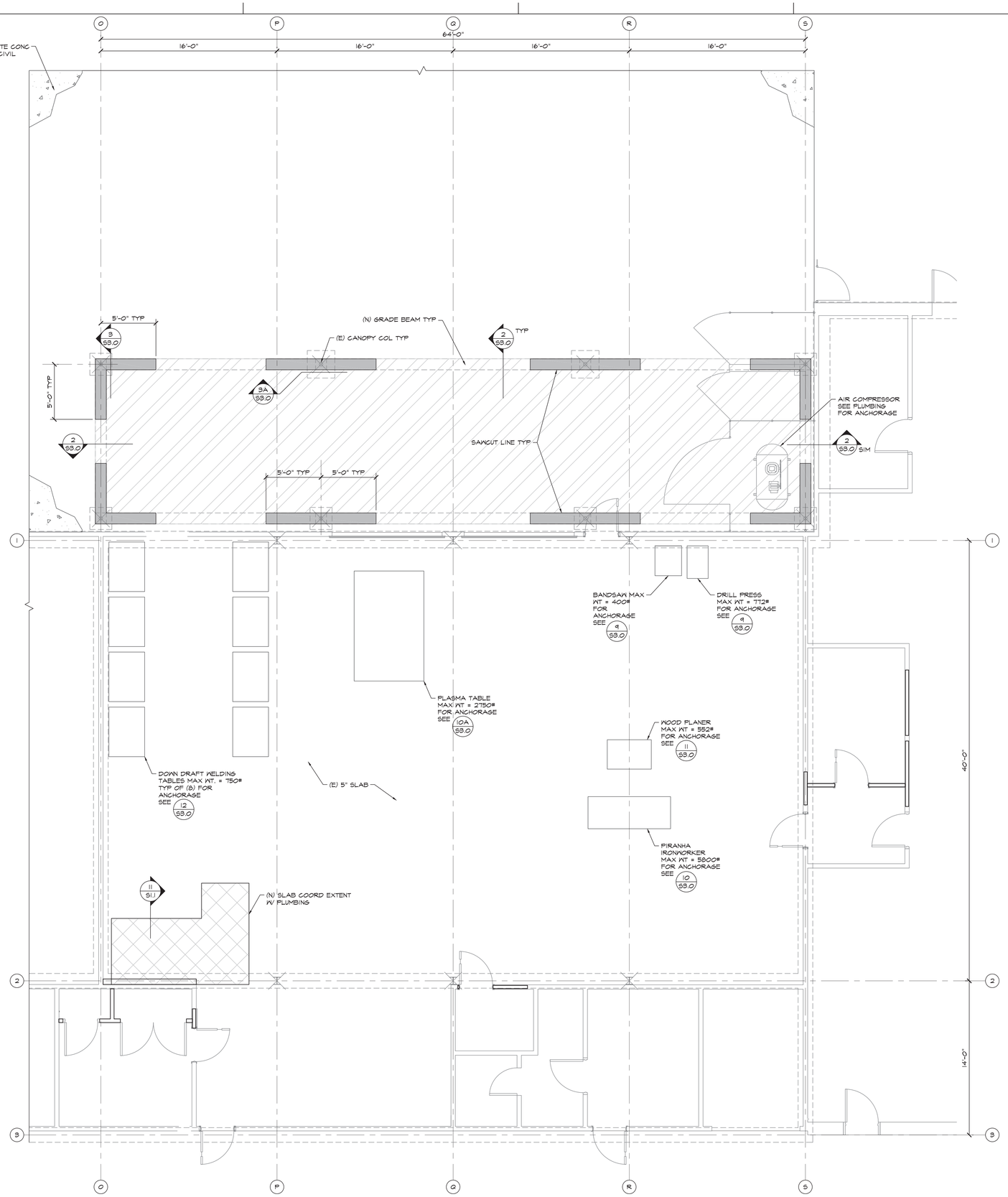
No.	Description	Date

PROJECT No.: 2023-065

CONSTRUCTION DOCUMENTS

TYPICAL DETAILS

S1.1



A S2.0 FOUNDATION PLAN

1/4" = 1'-0"

TRUE NORTH

FOUNDATION NOTES

1. FINISH FLOOR EL = +0'-0" (REF) = +7.21' DATUM
2. DIMENSIONS FOR EXISTING STRUCTURE ARE FROM ORIGINAL DRAWINGS DATED 09/11/1956. THESE DIMENSIONS SHALL BE FIELD VERIFIED.
3. COLUMNS ARE CENTERED ON GRID LINES OR CENTERED ON WALL TYP, U.N.O.
4. FOOTINGS ARE CENTERED ON COLUMNS TYP UNO
5. SEE TYPICAL NOTES & DETAILS ON SHEETS S1.0 - S1.1
6. CONTRACTOR SHALL CHECK FRAMING DIMENSIONS AGAINST THE ARCHITECTURAL PLANS AND NOTIFY ARCHITECT AND ENGINEER OF ANY DIMENSIONS AND/OR DISCREPANCIES BEFORE STARTING WORK.
7. DIMENSIONS ARE TO FACE OF STUD OR ℄ OF COLUMN UNO

LEGEND

- INDICATES EXISTING STEEL COLUMN
- INDICATES EXISTING STRUCTURE
- INDICATES (N) NON STRUCTURAL FRAMING SAD
- INDICATES (E) FTG
- GRID — TO FACE OF STUD
- GRID — TO CENTERLINE OF STUD/COLUMN
- INDICATES (N) 5" SLAB ON GRADE INFILL W/ #4 @ 16" O.C. EA WAY @ MID DEPTH OVER 4" CRUSHED ROCK OVER VAPOR BARRIER
- INDICATES SELECTIVE REMOVAL OF (E) CONCRETE SLAB. SEE CIVIL FOR REPLACEMENT SLAB.
- INDICATES HAND DEMO OF CONCRETE ONLY. DO NOT CUT EXISTING REBAR IN THESE AREAS SEE 2 S3.0 & 3 S3.0

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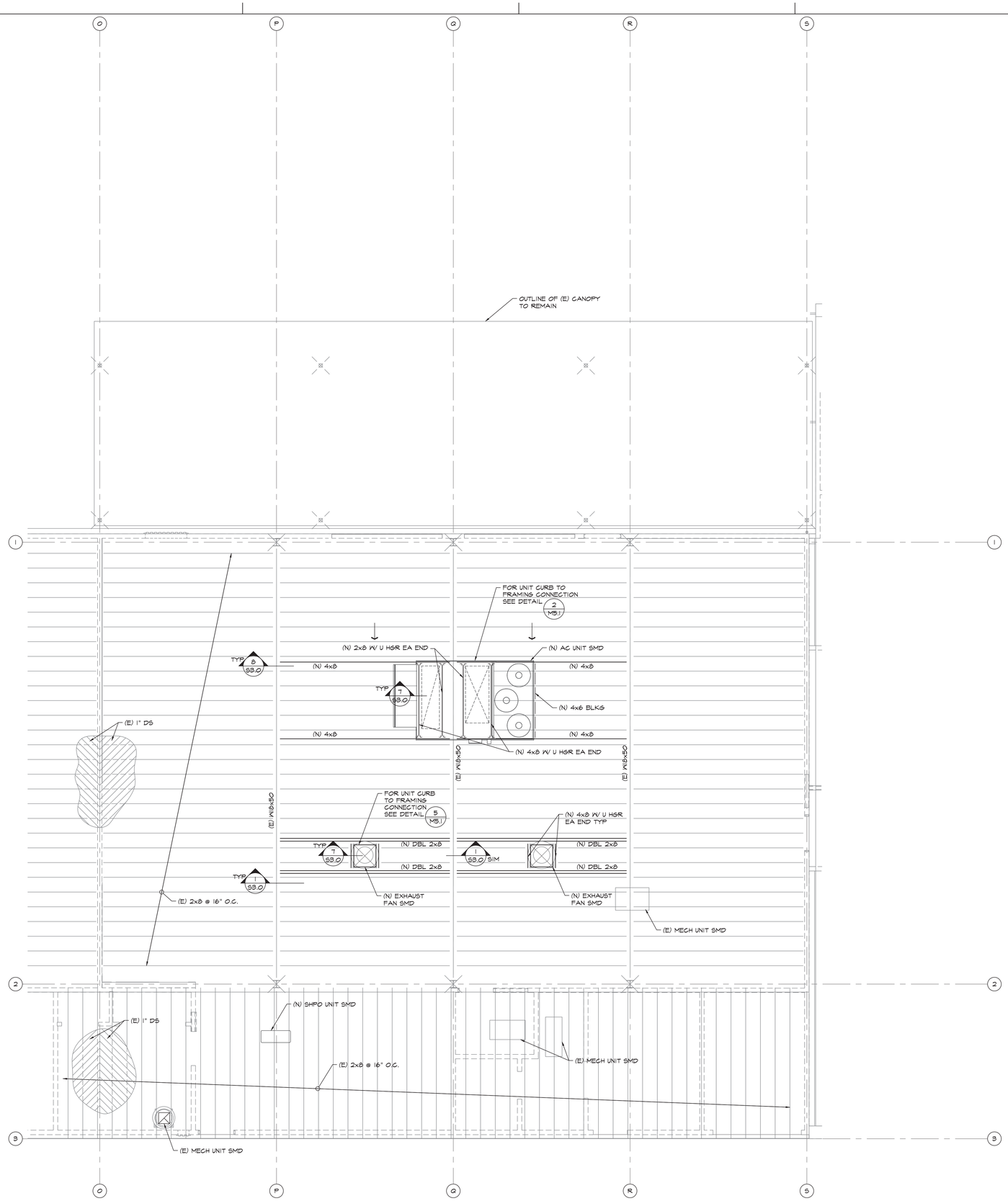
CONSTRUCTION DOCUMENTS

FOUNDATION PLAN

S2.0



B S2.1 ROOF FRAMING PLAN

1/4" = 1'-0"

N TRUE NORTH

ROOF FRAMING NOTES

1. COORDINATE W/ MECH CONTRACTOR & ELEC CONTRACTOR SUPPLIERS FOR LOCATION AND DIMS OF EQUIPMENT AND OPENINGS.
2. CONTRACTOR SHALL CHECK ROOF FRAMING DIMENSIONS AGAINST THE ARCHITECTURAL PLANS AND NOTIFY ARCHITECT AND ENGINEER OF ANY DIMENSIONS AND/OR DISCREPANCIES BEFORE STARTING WORK.

LEGEND

- INDICATES SLOPE DOWN DIRECTION
- INDICATES EXISTING STEEL COLUMN
- INDICATES EXISTING STRUCTURE

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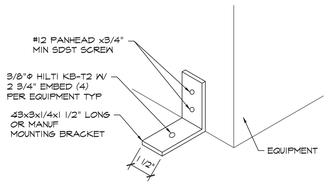
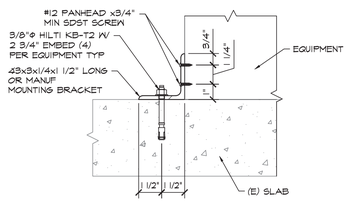
CONSTRUCTION DOCUMENTS

ROOF FRAMING PLAN

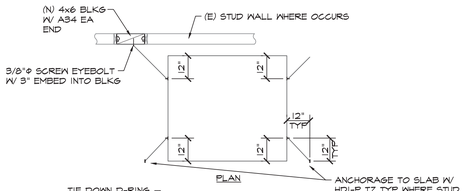
S2.1

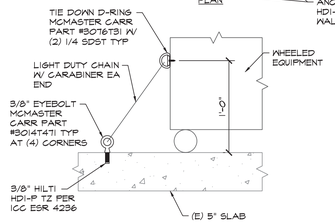


NOTE:
1. INSTALL IN ACCORDANCE WITH MANUFACTURERS PUBLISHED INSTALLATION INSTRUCTIONS AND ESR4266



11 / S3.0 DETAIL
3" = 1'-0" 06SDET012

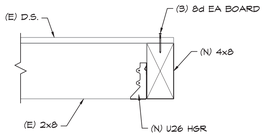




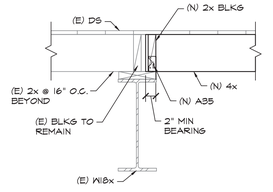
12 / S3.0 DETAIL
1 1/2"= 1'-0" 06SDET013

13 / S3.0 NOT USED
= 1'-0"

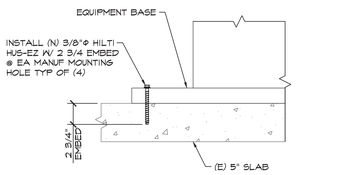
6 / S3.0 NOT USED
= 1'-0"



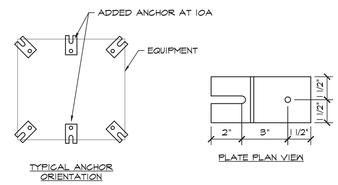
7 / S3.0 DETAIL
1 1/2"= 1'-0" 06SDET007



8 / S3.0 DETAIL
1" = 1'-0" 06SDET008

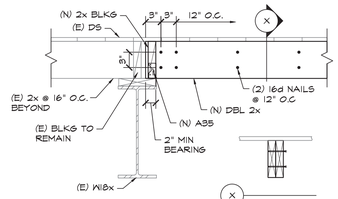


9 / S3.0 DETAIL
1 1/2"= 1'-0" 06SDET010

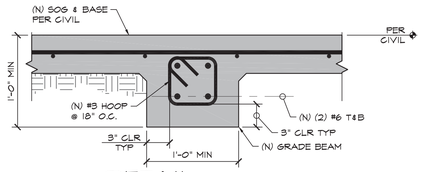


NOTE:
1. (4) CONNECTORS PER EQUIPMENT REQUIRED (6 AT 10A)

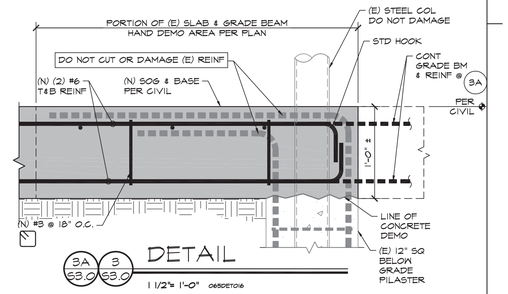
10A / S3.0 10 / S3.0 DETAIL
3" = 1'-0" 06SDET011



1 / S3.0 DETAIL
1" = 1'-0" 06SDET001



2 / S3.0 DETAIL
1 1/2"= 1'-0" 06SDET015



3A / S3.0 3 / S3.0 DETAIL
1 1/2"= 1'-0" 06SDET016

4 / S3.0 NOT USED
= 1'-0"

5 / S3.0 NOT USED
= 1'-0"

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DETAILS

S3.0

QC	
INI	%

DIFFUSER, REGISTER & GRILLE SCHEDULE

SYMBOL	DESCRIPTION	KRUEGER	METALAIRE	NAILOR	TITUS	TUTTLE & BAILEY
CD	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER BEVEL FRAME 3/4" DROP	1240 FRAME 21 - 1 1/4"	9000-2	7500-S	MCD BORDER TYPE 6	SQD-SB
CR, CT, CE	CEILING RETURN, TRANSFER OR EXHAUST WITH " EGG CRATE CORE SURFACE MOUNT	EGC-5	CC5D	61 EC-S	MODEL 50 F BORDER TYPE 1	CRE500-SF
SDS	DOUBLE DEFLECTION SPIRAL DUCT MOUNTED SUPPLY GRILLE WITH CURVED FRAME, AIR SCOOP EXTRACTOR, VERTICAL FRONT BLADES, 3/4" SPACING.	--	--	--	S300FS	--
SDR, SDE	PERFORATED FACE SPIRAL DUCT MOUNTED RETURN OR EXHAUST GRILLE WITH CURVED FRAME.	--	--	--	S8F	--

NOTES:

1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.
2. ALL SUPPLY AIR DIFFUSERS ARE 4 WAY BLOW UNLESS SHOWN OTHERWISE.
3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.
4. COORDINATE DIFFUSER TYPE WITH ARCHITECTURAL REFLECTED CEILING PLAN.
5. OPPOSED BLADE DAMPERS ARE NOT REQUIRED AT DIFFUSERS, REGISTERS OR GRILLES.
6. PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.

* ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS

MECHANICAL GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES AND INDUSTRY STANDARDS.
2. VERIFY EXACT LOCATION OF ALL (E) EQUIPMENT, DUCTWORK, DIFFUSERS, REGISTERS AND GRILLES. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN (E) SYSTEMS AND DRAWINGS.
3. COORDINATE EXACT LOCATION OF EQUIPMENT AND ALL PENETRATIONS THROUGH ROOF, FLOORS AND WALLS WITH ARCHITECTURAL STRUCTURAL SYSTEMS PRIOR TO COMMENCING WORK.
4. COORDINATE EXACT SIZE AND ROUTING OF DUCTWORK WITH ARCHITECTURAL PLANS, STRUCTURE AND EQUIPMENT PRIOR TO COMMENCING WORK.
5. COORDINATE CEILING DIFFUSERS, REGISTERS AND GRILLES WITH ARCHITECTURAL CEILING PLAN SHEET A3.1..
6. FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DUFFUSER.
7. FLEXIBLE DUCTWORK CONNECTIONS TO CEILING DIFFUSERS ARE LIMITED TO 5' MAXIMUM LENGTH.
8. ALL DUCTWORK, CEILING DIFFUSERS/REGISTERS/GRILLES, EQUIPMENT, PIPING ETC., ARE NEW U.O.N. (SHOWN HEAVY). (E) DUCTWORK, PIPING ETC. IS SHOWN LIGHT. SEE LEGEND.
9. (E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN CROSSED ("X") OUT, SEE LEGEND, COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
10. WHERE INLET DUCT DIAMETER AND DIFFUSER NECK SIZE ARE THE SAME (I.E. 9"∅ & 9x9) CONTRACTOR SHALL OVERSIZE THE SHEET METAL PLENUM TO ACCOMODATE THE ROUND DUCT CONNECTION.
11. THERMOSTATS AND ROOM TEMPERATURE SENSORS SHALL BE INSTALLED AT 46" ABOVE FINISHED FLOOR (TO TOP OF DEVICE). DO NOT INSTALL THERMOSTATS AND ROOM TEMPERATURE SENSORS ABOVE CASEWORK, SHELVING OR OTHER OBSTRUCTIONS OVER 24" IN DEPTH AND 34" IN HEIGHT.

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 SECTIONS 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. 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.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 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 SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

MP☒ MD☒ PP☐ E☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH HCAI (OSHPD) PREAPPROVAL (OPM #) # 0043-13.

DUCT LEGEND

SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
24x12	24x12	RECTANGULAR DUCT - WIDTH x DEPTH (PLAN VIEW) DEPTH x WIDTH (SECTION VIEW)
26x14L	26x14L	ACOUSTICALLY LINED RECTANGULAR DUCT, 1" THICK INTERNAL LINER, DIMENSIONS ARE OUTSIDE
28x16L2	28x16L2	ACOUSTICALLY LINED RECTANGULAR DUCT, 2" THICK INTERNAL LINER, DIMENSIONS ARE OUTSIDE
		MANUAL AIR DAMPER
R OR D	RISE OR DROP	RISE OR DROP DUCT IN DIRECTION OF AIR FLOW
	OR	RECTANGULAR TO RECTANGULAR TRANSISTION , MAX. SLOPE OF 1:3 RECTANGULAR TO ROUND TRANSITION , MAX. SLOPE OF 1:3
	W, R, R/W = 1.5	ELBOW, RECTANGULAR, SMOOTH RADIUS, WITHOUT TURNING VANES
		SQUARE/RECTANGULAR DUCT ELBOW WITH TURNING VANES
		CONVERGING OR DIVERGING TEE, 45° ENTRY, RECTANGULAR MAIN AND BRANCH. WHEN REDUCING MAIN, SIDE OF TAKE OFF OR ENTRY BRANCH TO BE FLAT, OTHER SIDES MAX. SLOPE OF 1:3
		RECTANGULAR DUCT TEE MAD'S ON THE 2 BRANCHES, THROAT SIZED FOR EQUAL PRESSURE DROP
		RECTANGULAR DUCT SPLIT MAD'S, THROAT SIZED FOR EQUAL PRESSURE DROP
		3-WAY RECTANGULAR SPLIT WITH TWO TRANSITIONAL ELBOWS AND TRANSITIONING MAIN. DOWNSTREAM MAD'S ON THE TREE BRANCHES. THROATS SIZED FOR EQUAL PRESSURE DROP.
		FOR CONCEALED DUCT: DROP TO DIFFUSER SHALL BE FULL SIZE OF DIFFUSER NECK. FOR EXPOSED DUCT: DROP SHALL BE FULL SIZE OF OD DIFFUSER FRAME, FLANGE FOR MOUNITING DIFFUSER TURNED IN. AIR EXTRACTOR AND EQUALIZER GRID AT CONNECTION TO MAIN.
		SUPPLY AIR, SUPPLY AIR DUCT IN SECTION, SUPPLY DROP
		RETURN AIR, RETURN AND OUTSIDE AIR DUCT IN SECTION, RETURN AIR DROP
		EXHAUST AIR, EXHAUST AIR DUCT IN SECTION, EXHAUST AIR DROP

CALIFORNIA ENERGY CODE - ACCEPTANCE TESTING

1. THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.

LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).

MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.

ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ ARCHITECT OF RECORD OR THE OWNER'S AGENT.

A LISTING OF CERTIFIED ATT CAN BE FOUND AT HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE

THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.

PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

OPM DETAIL REFERENCES FOR OPTION 2 SCHEDULE

1. PROVIDE SUPPORT AND SEISMIC BRACING PER OPM #0043-13 REFER TO M5.3 AND M5.4 FOR OPM DETAILS D4.10, D4.11, D4.12, D4.20, D4.21, D4.22, D6.10, D6.11, D6.12, D6.20, D6.21, D6.22, M3.10, M3.11, M3.12, M3.14, N3.11, N3.13, M4.10, N4.10, P1.10, P1.11, P1.12.

FOR RECTANGULAR DUCTWORK GREATER THAN 6 SQ FT CROSS SECTIONAL AREA AND ROUND DUCTWORK GREATER THAN 26" DIAMETER. PROVIDE SUPPORT AND SEISMIC BRACING PER OPM #0043-13 PAGES D4.10 THRU D4.12, D6.10 THRU D6.12.

MECHANICAL LEGEND cont'd

SYMBOL	ABBREVIATION	DESCRIPTION
	ABV	ABOVE
	ABC	ABOVE CEILING
	AF	ABOVE FLOOR
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AC	AIR CONDITIONING
	APD	AIR PRESSURE DROP, INCHES WATER COLUMN
	BDD	BACK DRAFT DAMPER
	BHP	BRAKE HORSE POWER
	BOD	BOTTOM OF DUCT ELEVATION ABOVE FINISHED FLOOR
	BTU(H)	BRITISH THERMAL UNITS (PER HOUR)
CO2	CO2	CARBON DIOXIDE (CO2) SENSOR, INSTALLED AT +66" AFF (TO TOP OF DEVICE, EXCEPT WHEN INTEGRAL TO T-STAT OR TEMPERATURE SENSOR)
	CC	CENTER TO CENTER
	CLG	CEILING
	CFM	CUBIC FEET OF AIR FLOW PER MINUTE
	DPR	DAMPER
°F		DEGREES FAHRENHEIT
	DIA	DIAMETER , PHASE
	DL	DOOR LOUVER
	DB	DRY BULB (DEGREES FAHRENHEIT)
	EP	ELECTRICAL PANEL
	EL	ELEVATION
	ENT	ENTERING
	EDB	ENTERING DRY BULB
	EW	ENTERING WATER
	EWT	ENTERING WATER TEMPERATURE
	EWB	ENTERING WET BULB
	EVAP	EVAPORATOR
	EA	EXHAUST AIR
	EAD	EXHAUST AIR DAMPER
	EF	EXHAUST FAN
	(E), EXIST	EXISTING
	(E)	EXISTING TO BE REMOVED
	ESP	EXTERNAL STATIC PRESSURE
	FPM	FEET PER MINUTE
	FC	FLEXIBLE CONNECTION
	FLR	FLOOR
	FA	FROM ABOVE
	FB	FROM BELOW
	FLA	FULL LOAD AMPS
	GALV	GALVANIZED
	GI	GALVANIZED IRON
	GA	GAUGE
	HTG	HEATING
	KW	KILOWATTS
	KWH	KILOWATT HOUR
	LDB	LEAVING DRY BULB IN DEGREES FAHRENHEIT
	LWB	LEAVING WET BULB IN DEGREES FAHRENHEIT
	LRA	LOCKED ROTOR AMPERES
	LVR	LOUVER
	MAD	MANUAL AIR DAMPER
	MFR	MANUFACTURER
	MAX	MAXIMUM
	MIN	MINIMUM
M	MCC	MOTOR CONTROL CENTER
	MCD	MOTORIZED CONTROL DAMPER
	(N)	NEW
OCC	OCC	OCCUPANCY SENSOR
	OC	ON CENTER
	OA	OUTSIDE AIR
	OAD	OUTSIDE AIR DAMPER
	OD	OUTSIDE DIAMETER
	OV	OUTLET VELOCITY
	OH	OVERHEAD
		PIPE DROP
		PIPE GUIDE
		PIPE RISE
		PITCH DOWN IN DIRECTION OF FLOW
	POC	POINT OF CONNECTION
	LBS	POUNDS
	PSI (G) (A)	POUNDS PER SQUARE INCH (GAUGE) (ABSOLUTE)
	PD	PRESSURE DROP
RG	RG	REFRIGERANT GAS PIPING
RS	RS	REFRIGERANT SUCTION PIPING
RL	RL	REFRIGERANT LIQUID PIPING
	RA	RETURN AIR
	RAD	RETURN AIR DAMPER
	RPM	REVOLUTIONS PER MINUTE
	RLA	RUNNING LOAD AMPERES
	SQFT	SQUARE FEET
	SQIN	SQUARE INCHES
	SP	STATIC PRESSURE
	SPD	STATIC PRESSURE DROP
	SA	SUPPLY AIR
	SF	SUPPLY FAN
	TCP	TEMPERATURE CONTROL PANEL
	TCV	TEMPERATURE CONTROL VALVE
X	T	THERMOSTAT. "X" INDICATES SYSTEM CONTROLLED, INSTALLED AT +46" AFF (TO TOP OF DEVICE)
	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
	TA	TO ABOVE
	TB	TO BELOW
	TP	TOTAL PRESSURE
	TSP	TOTAL STATIC PRESSURE
	TYP	TYPICAL
	UCD	UNDER CUT DOOR
	UON	UNLESS OTHERWISE NOTED
	W	WATTS
	WT	WEIGHT
	WB	WET BULB

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capital engineering
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STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

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REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

MECHANICAL LEGEND & NOTES

M0.1

QC	
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AIR CONDITIONING UNIT SCHEDULE

UNIT	SERVES	"CARRIER" MODEL NO. U.N.O.	NOM. TONS	CFM	MIN. O.A. (CFM)	ESP (IN. W.G.)	DX COOLING					GAS HEATING			AC UNIT ELECTRICAL DATA											PWR. EXH. ECON. ELECTRICAL DATA					EFFICIENCY					OPERATING WEIGHT (LBS.)				MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
							LOW CFM (66%)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EVAP. EDB (°F)	EVAP. EWB (°F)	INPUT (MBH)	OUTPUT (MBH)	HX EDB (°F)	VOLT/PH	SUPPLY FAN BHP	SUPPLY FAN FLA	COMPRESSOR QTY	COMPRESSOR RLA	COMPRESSOR LRA	COND. FAN QTY	COND. FAN FLA	COMB. FAN FLA	MCA	MOCP	VOLT/PH	EXHAUST FAN HP	EXHAUST FAN FLA	MCA	MOCP	COOLING SEER	COOLING EER	HEATING IEER	HEATING AFUE	HEATING TE	AC UNIT	PWR. EXH. ECON.	ROOF CURB	TOTAL			
AC K1	AG SHOP K9	48GCDM17A2M6-0A0A0	15.0	5100	UPPER 1000 LOWER 440	0.6	3340	164.33	169.58	81.6	65.8	176 / 220	142/ 178	60.2	460/3	1.80	3	2	12.8 / 8.2	100 / 66	3	0.9	0.25 EA.	32.9	45	460/3	2.0	3.1	3.875	3.975	--	11.10	16.5	81.0	--	1824	736	267	2882	1, 2, 3 M5.1	2 M6.1	1 2 3 4 5 6 7 8

NOTES:

1. UNITS SELECTED AT 103 F DB / 72 F WB SUMMER AMBIENT, 24 F DB WINTER AMBIENT AIR TEMPERATURES. COOLING CAPACITIES SCHEDULED ARE NET SENSIBLE & NET TOTAL CAPACITIES.
2. PROVIDE UNIT WITH CONDENSER COIL GUARDS, HINGED ACCESS DOORS, AND 2" THICK MERV 13 DISPOSABLE PLEATED MEDIA FILTER(S). THE ESP SCHEDULED ABOVE INCLUDES AIR PRESSURE DROP THRU FILTER(S).
3. PROVIDE UNIT WITH "MICROMETL" 100% MODULATING POWER EXHAUST ECONOMIZER WITH VFD, DIFFERENTIAL PRESSURE TRANSDUCER, ROOM PRESSURE TUBING, AND "BELIMO" LF SERIES ACTUATORS. NOTE THAT SEPARATE POWER CONNECTIONS ARE REQUIRED TO THE AC UNIT AND TO THE MODULATING POWER EXHAUST ECONOMIZER. ELECTRICAL LOADS OF EACH DEVICE ARE SCHEDULED, ELECTRICAL CONTRACTOR SHALL PROVIDE SEPARATE POWER CONNECTIONS, APPROPRIATE CIRCUIT BREAKER(S), FEEDER(S), AND DISCONNECT(S) AS REQUIRED BY CODE.
4. PROVIDE "MICROMETL" STRUCTURALLY CALC'D 14" TALL STANDARD ROOF CURB.
5. R-410A REFRIGERANT (SAFETY GROUP A1, LOW-PROBABILITY SYSTEM).
6. LOWER OUTSIDE AIR POSITION INDICATED IS BASED ON 0.15 CFM/SQ.FT., ALLOWABLE FOR CO2 DEMAND CONTROL VENTILATION SYSTEMS AT MINIMUM OCCUPANCY. UPPER OUTSIDE AIR POSITION INDICATED IS BASED ON 15 CFM/OCCUPANT WHEN SPACE IS AT MAXIMUM OCCUPANCY, UNLESS SYSTEM IS IN ECONOMIZER MODE. SEE CONTROLS FOR SEQUENCE OF OPERATION. FOR THESE UNITS WITH DEMAND CONTROL VENTILATION, ENTERING TEMPERATURES SCHEDULED REPRESENT CONDITIONS AT UPPER OSA POSITION.
7. FOR UNITS WITH NOM. COOLING CAPACITY OF 6 TONS AND LARGER, PROVIDE UNIT WITH FACTORY INSTALLED VFD ON SUPPLY FAN AND MINIMUM 2-STAGES OF MECHANICAL COOLING CAPACITY. SEE SCHEDULE FOR LOW SUPPLY AIRFLOW CFM (66%). SEE CONTROLS FOR SEQUENCE OF OPERATION.
8. AUTOMATIC SHUTDOWN OF HVAC SYSTEM IS NOT REQUIRED PER 2022 CMC, SECTION 609.1, EXCEPTION 2: ALL ROOMS HAVE DIRECT EXIT TO OUTSIDE WITH TRAVEL DISTANCE LESS THAN 100 FEET.

SPLIT SYSTEM HP UNIT SCHEDULE

UNIT	LOCATION	TYPE	"MANUFACTURER"	MODEL NUMBER	CFM	MIN. O.A. (CFM)	BOOSTER HEATER (kW)	FAN FLA	MCA	VOLT/PH	OPER. WT. (LBS.)	MOUNTING DETAIL	UNIT	"MANUFACTURER" MODEL NO. INDOOR UNIT	TOTAL COOLING CAPACITY (MBH)	TOTAL HEATING CAPACITY (MBH)	COMPRESSOR RLA	COMPRESSOR LRA	MCA	MOCP	FAN FLA	VOLT/PH	SEER	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
SHPI K1	OFFICE K121	WALL MOUNTED	"CARRIER"	40MAHBQ12XA3	176 TO 382	NA	NA	NA	0.3125	208/1	25	6 M5.2	SHPO K1	"CARRIER" 38MARBQ12AA3	12.0	18.0	8.5	NA	15	15	NA	208/1	25.5	80	4 M5.1	3 M6.1	1, 2, 3, 4

NOTES:

1. PROVIDE WITH FACTORY WASHABLE FILTERS.
2. PROVIDE ALL INDOOR UNITS WITH THERMOSTAT, HARD WIRED, WALL MOUNTED.
3. INDOOR FAN COIL POWERED BY CONDENSING UNIT, REFER TO MRF'S INSTALLATION DATA.
4. PROVIDE "REFCO" MODEL GOBI II CONDENSATE PUMP, 120V/1PH/60HZ, 12 WATT POWER CONSUMPTION, 6.3 AMPS ALARM RELAY, 3.17 GAL/HR CAPACITY, 65.6FT MAX. VERTICAL HEAD. INSTALL PUMP ON WALL BRACKET BELOW INDOOR UNIT. UNIT WEIGHT = 3 LBS.

FAN SCHEDULE

UNIT	LOCATION	"MFR" MODEL NO.	CFM (LOW) STD	SP (IN. W.G.)	DUTY	STYLE	FAN WHEEL DIA.	RPM	HP	VOLT/PH	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
REF K1	AG SHOP K9	GREENHECK G-240-VG	(1740) 2900	0.20	E	RE	--	417	2.0	208/3	250	5 M5.1	4 M6.1	1, 2, 3
REF K2	AG SHOP K9	GREENHECK G-240-VG	(1740) 2900	0.20	E	RE	--	417	2.0	208/3	250	5 M5.1	4 M6.1	1, 2, 3

LEGEND

DUTY: S-SUPPLY, R-RETURN, E-EXHAUST
STYLE: BI-BACKWARD INCLINED, FC-FORWARD CURVED, AF-AIRFOIL, RD-RADIAL, TU-TUBULAR, IL-INLINE, VS-VENT SET, VA-VANE AXIAL, TA-TUBE AXIAL, PP-PROPELLAR, RE-ROOF EXHAUST, WE-WALL EXHAUST, CA-CABINET, CE-CEILING

NOTES:

1. PROVIDE WITH FACTORY 12" TALL ROOF CURB.
2. PROVIDE WITH THERMAL OVERLOAD PROTECTED MOTOR.
3. DIV. 23 TO PROVIDE MOTOR STARTER & WALL SWITCH, DIV. 26 TO PROVIDE LINE VOLTAGE POWER TO MOTOR STARTER LOCATION AND INSTALL MOTOR STARTER & SWITCH.

OUTSIDE AIR FAN SCHEDULE

UNIT	LOCATION	"S&P" MODEL NO.	CFM	SP (IN. W.G.)	DUTY	STYLE	VOLT/PH	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	INTERLOCK	NOTES
OAF K1	OFFICE K121	RF8-120EC	45	0.02	OUTSIDE AIR	INLINE	120/1	14	8 M5.2	3 M6.1	SHPI/K1	1 2

NOTES:

1. INTERLOCK WITH ASSOCIATED SPLIT SYSTEM.
2. PROVIDE WITH MERV 13 8" X 8" X 2" FILTER.

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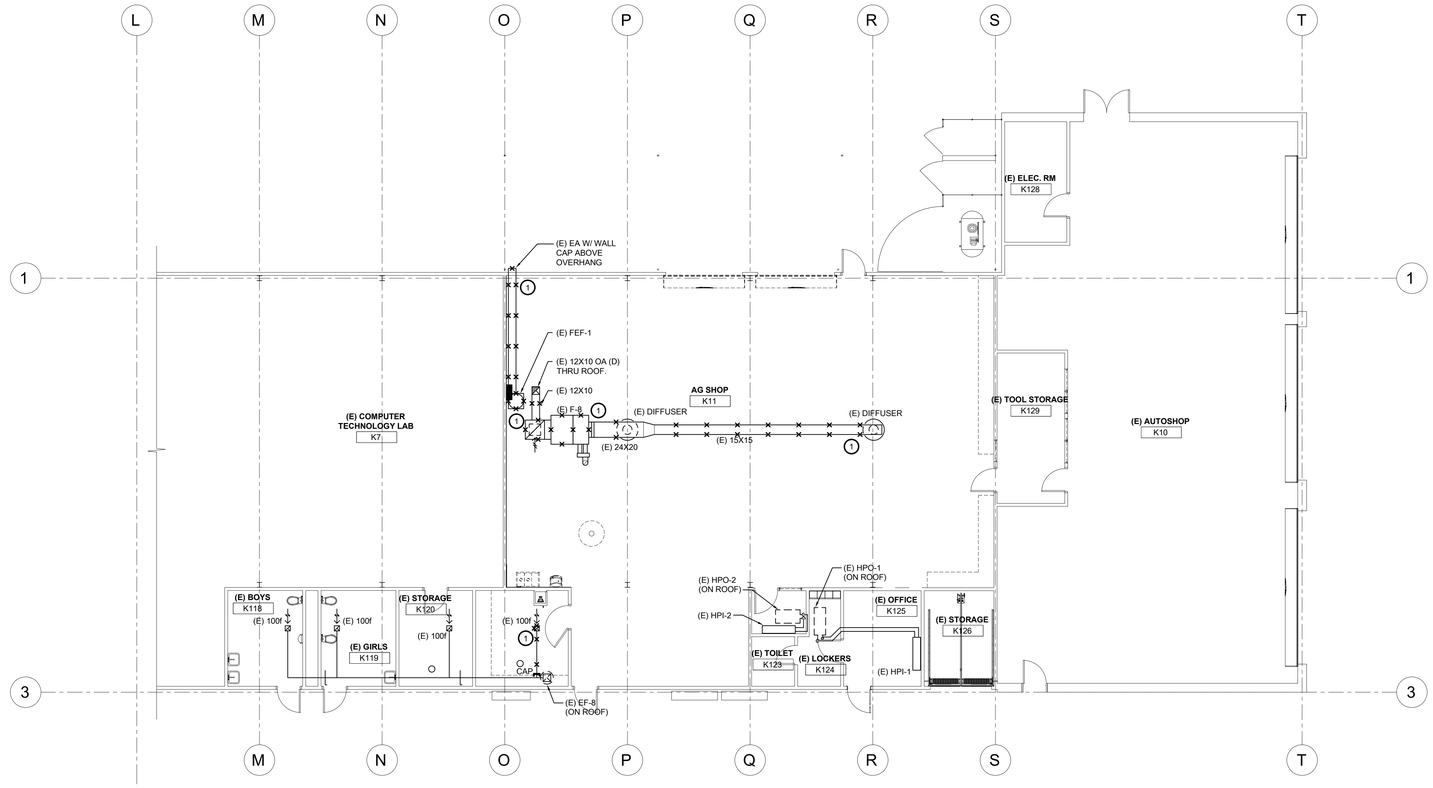
CONSTRUCTION DOCUMENTS

MECHANICAL SCHEDULE AND NOTES

M0.2

QC	
INI	%



MECHANICAL DEMO FLOOR PLAN

SCALE : 1/8" = 1'-0"

1
M2.0

GENERAL NOTES

1. REMOVE DUCT SUPPORTS WHERE DUCTWORK IS BEING REMOVED.

SHEET NOTES:

1. REMOVE EQUIPMENT, DUCTWORK, SUPPORTS AND PATCH ANY OPENINGS TO MATCH SURROUNDING SURFACES.

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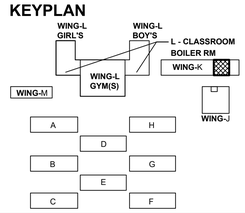
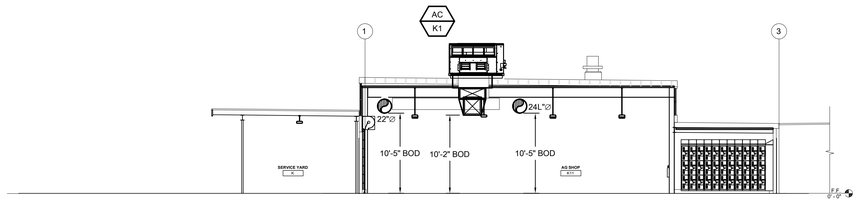
MECHANICAL DEMO FLOOR PLAN

M2.0

KEYPLAN

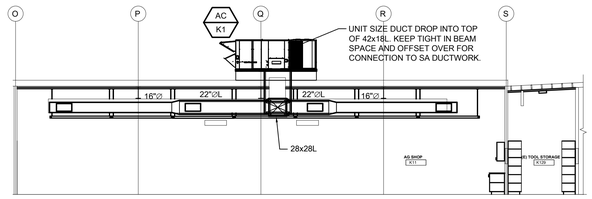




MECHANICAL SECTION AT COLUMN Q

SCALE : 1/8" = 1'-0"

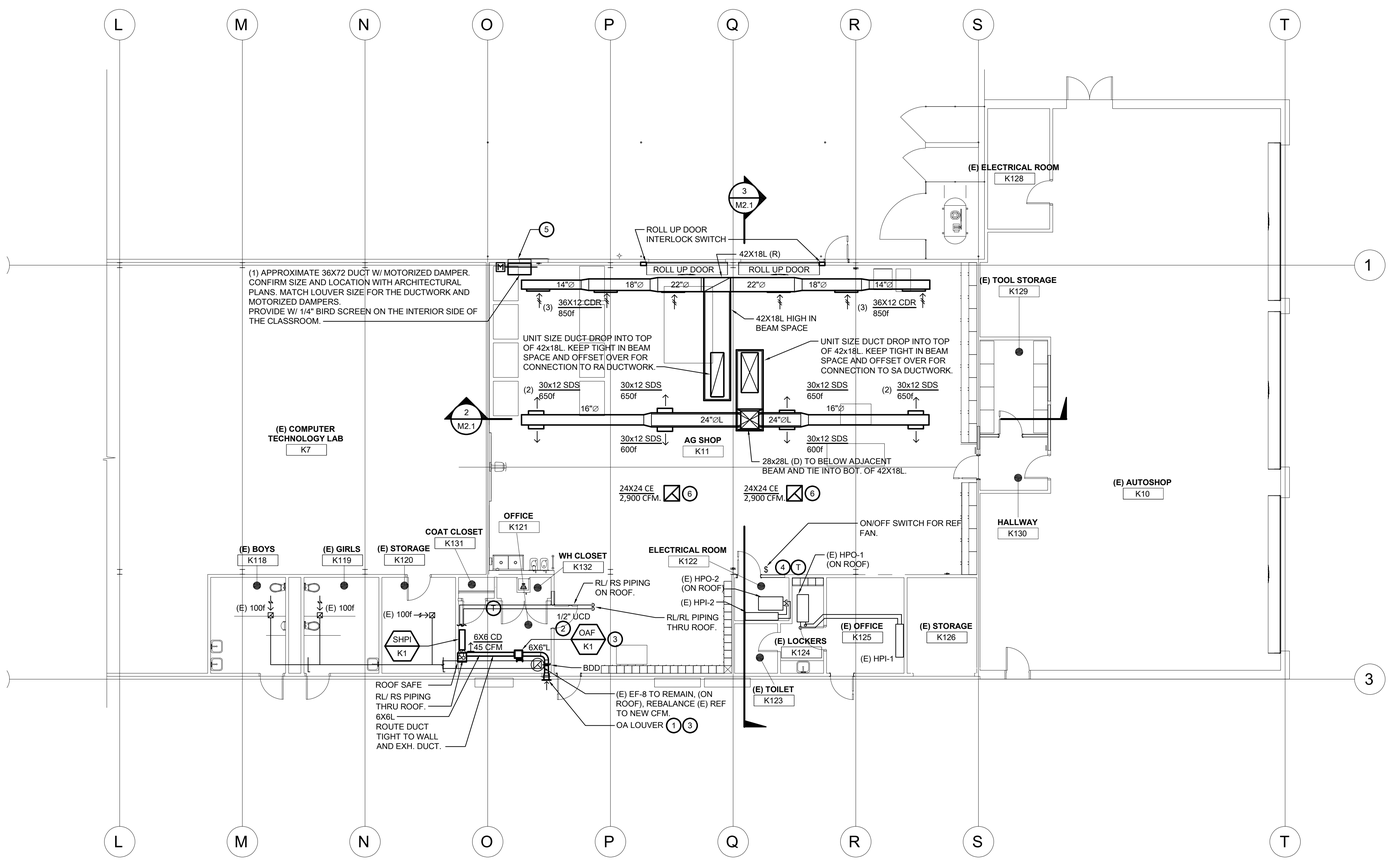
3 / M2.1



MECHANICAL SECTION AT COLUMN 1.4

SCALE : 1/8" = 1'-0"

2 / M2.1



MECHANICAL FLOOR PLAN

SCALE : 1/8" = 1'-0"

1 / M2.1

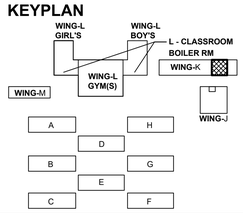
GENERAL NOTES

1. COORDINATE DUCT ROUTING WITHIN SPACE WITH STRUCTURE.

SHEET NOTES:

1. OUTSIDE AIR WALL LOUVER, MIN. 0.12 SQ. FT. FREE AREA. REFER TO ARCHITECTURAL PLANS FOR LOUVER DETAILS.
2. UNDER CUT DOOR 0.5", COORDINATE WITH ARCHITECTURAL PLANS.
3. OAF-K1, "S&P" INLINE FAN W/ FILTER (MODEL RF8-120AC-ES24V). COORDINATE EXACT LOCATION OF OAF WITH EXISTING LIGHTING AND DUCT LOCATION. CONNECT TO OA LOUVER. CONNECT 10X6L DUCT TO LOUVER AND TRANSITION TO 6X6L. RISE UP AND TIGHT TO CEILING. OFFSET OVER TO OAF/K1. PROVIDE DUCT CONNECTION AND GRILLE PER PLAN.
4. REF/K1 AND REF/K2, TEACHER ON/ OFF SWITCH FOR 100% OF DESIGN CFM. INTERLOCK WITH ROLL UP DOOR AND LOUVER.
5. OUTSIDE AIR WALL LOUVER, MIN. 5.9 SQ. FT. FREE AREA. REFER TO ARCHITECTURAL PLANS FOR LOUVER DETAILS. DUCT TO MATCH LOUVER SIZE. PROVIDE MULTIPLE MOTORIZED DAMPERS AS REQUIRED TO FILL AN APPROXIMATE DUCT SIZE OF 36X72. REFER TO 7/M5.2 FOR DETAIL.
6. TRANSITION FROM UNIT CONNECTION SIZE TO 24X24L IN DROP TO GRILLE WITHIN CEILING. PROVIDE 24X24 CE/ 2,900 CFM.
T. THERMOSTAT, "T" INDICATES DEVICE CONTROLLED. 46" AFF (TO TOP OF STAT)

KEYPLAN



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Exp. 9/30/24
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 06/06/2024

capital engineering
RANCHO CORDOVA, CALIFORNIA
RL — PM - DESIGN TEAM
23207300 — PROJECT NO.

SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

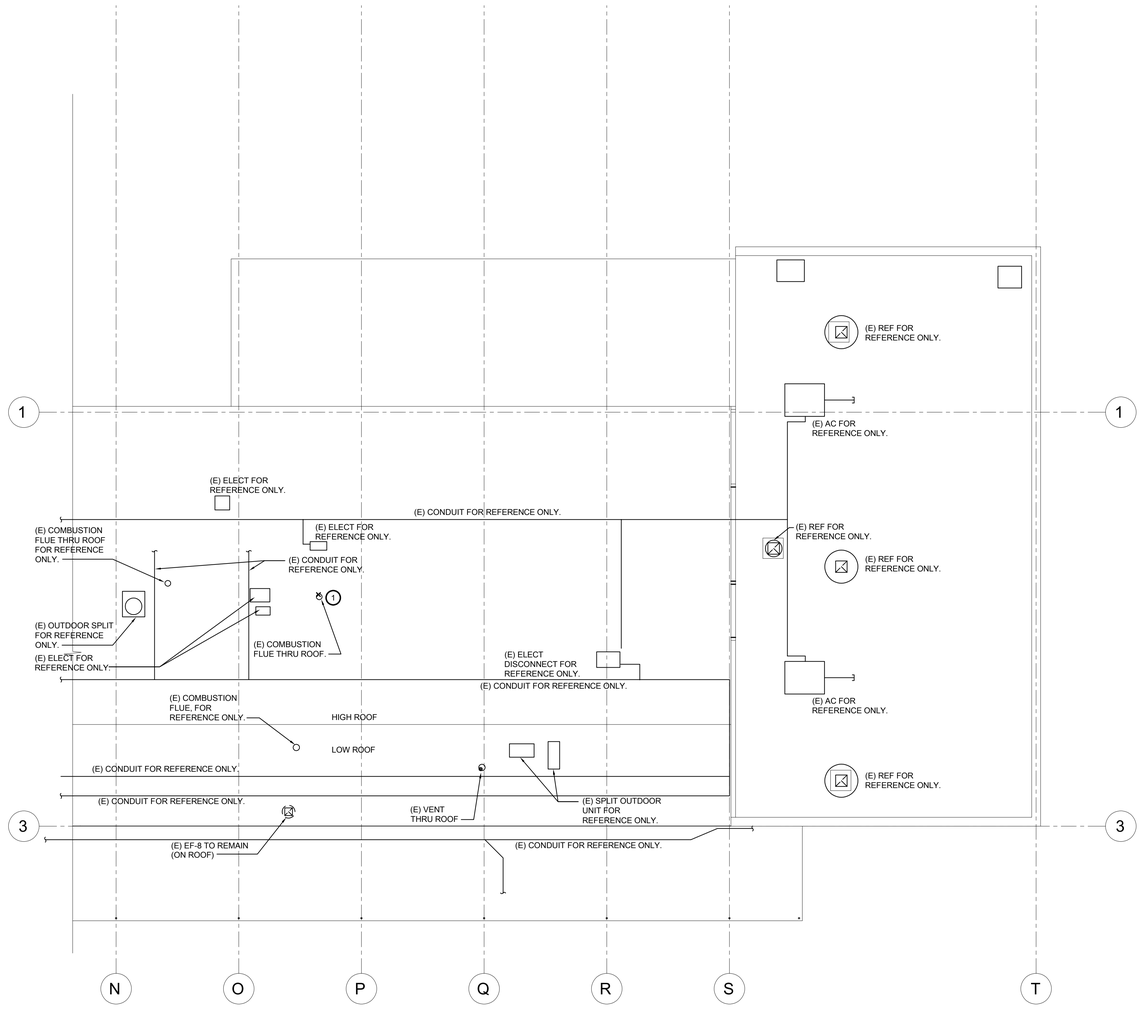
CONSTRUCTION DOCUMENTS

MECHANICAL FLOOR PLAN

M2.1

QC	
INI	%

QC	
INI	%



SHEET NOTES:

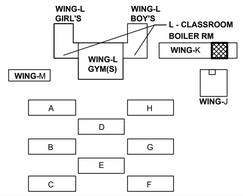
1. (E) COMBUSTION FLUE THRU ROOF TO BE REMOVED. PATCH OPENING AND ROOF TO MATCH SURROUNDING SURFACES. REFER TO ARCHITECTURAL PLANS.

MECHANICAL DEMO ROOF PLAN

SCALE : 1/8" = 1'-0"

1 / M3.0

KEYPLAN



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANDY
No. C32876
EXP. 03/31/25
STATE OF CALIFORNIA

M. 32408
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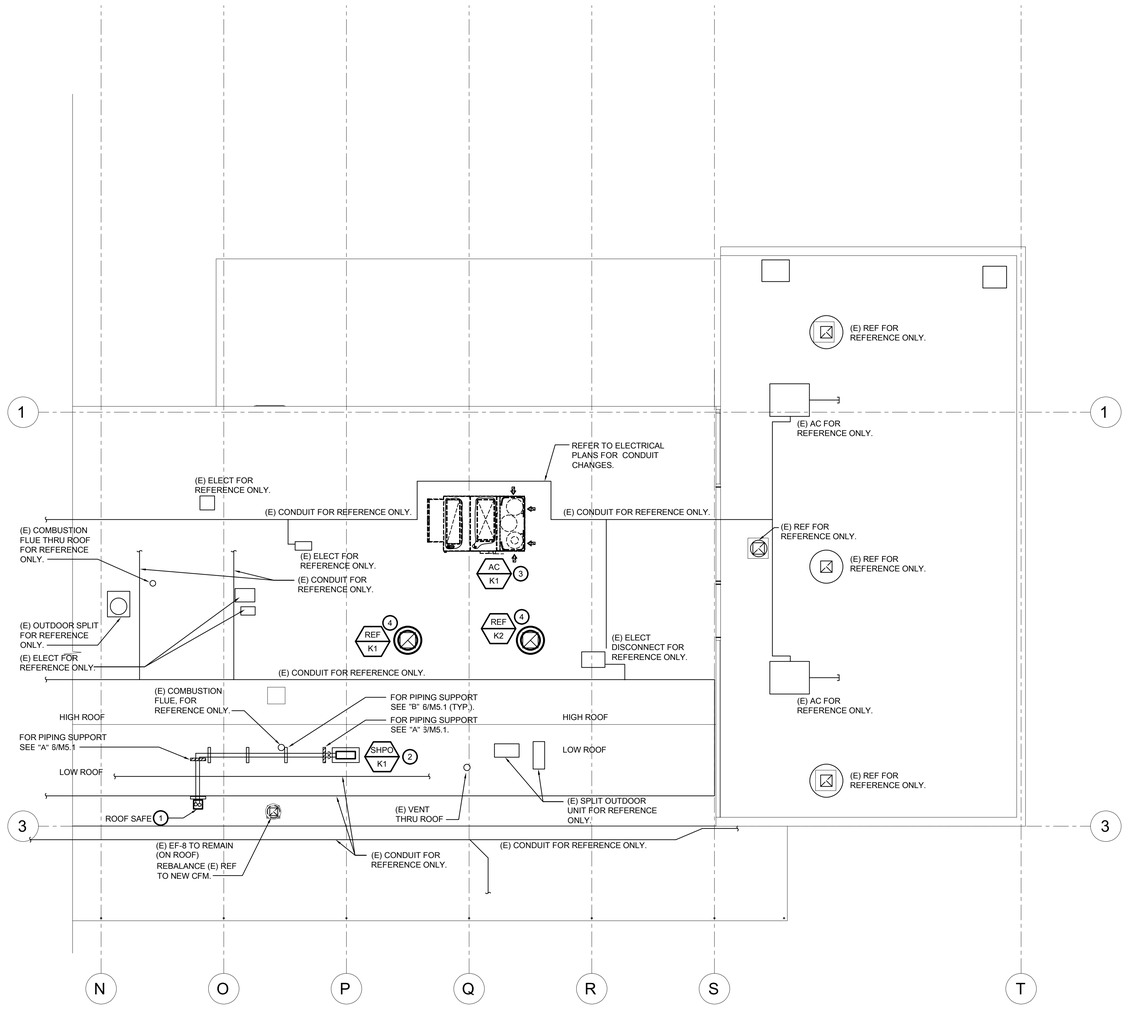
MECHANICAL DEMO ROOF PLAN

M3.0

QC	
INI	%



MECHANICAL ROOF PLAN

SCALE : 1/8" = 1'-0"

1 / M3.1

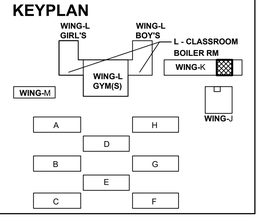
GENERAL NOTES

1. (E) ELECTRICAL DEVICES AND CONDUIT SHOWN ONLY FOR REFERENCE AND SHALL BE CONFIRMED IN THE FIELD FOR THE COORDINATION FOR THE LOCATION AND INSTALLATION OF NEW EQUIPMENT.

SHEET NOTES:

1. ROOF SAFE, FOR DETAIL SEE 8/M5.1.
2. SPLIT OUTDOOR HEAT PUMP (SHPO), FOR DETAIL SEE 4/M5.1.
3. PACKAGED AC UNIT, FOR DETAIL SEE 1, 2, 3/M5.1.
4. ROOF EXHAUST FAN, FOR DETAIL SEE 5/M5.1.

KEYPLAN



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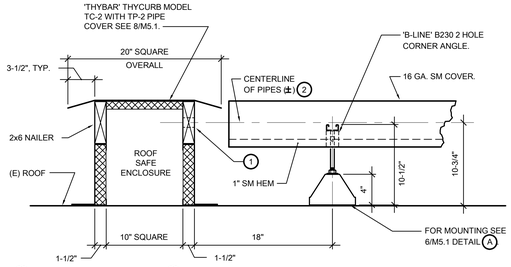
M3.1

QC	
INI	%



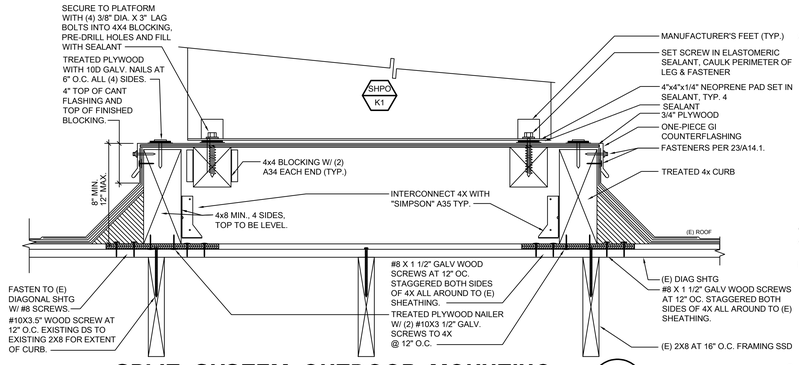
1 DRILL 2x6 FOR PIPES, 1/8" (±) LARGER THAN OD. SEAL PIPE PENETRATIONS WITH SEALANT, SPACE PIPES OVER 10" WIDTH

2 SINGLE SET =
1 RL
1 RS
1 CONTROL CONDUIT

NOTES:
1. SUPPORT TO BE AT MAX. 6'-0" SPACING.
2. ALL EXPOSED METAL PARTS INCLUDING SHEET METAL COVER SHALL BE PRIMED AND PAINTED TO MATCH ROOF SURFACE.
3. FOR ALL ROOF SAFE ANCHORAGE DETAILS SEE 8/M5.1.

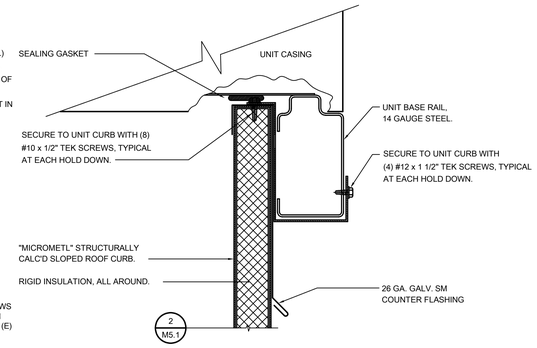
PIPE ON ROOF MOUNTING — 7 / M5.1

SCALE : NONE



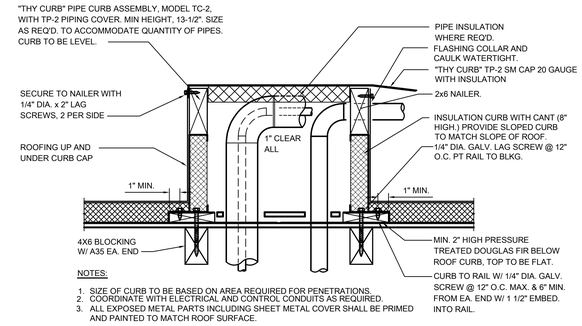
SPLIT SYSTEM OUTDOOR MOUNTING — 4 / M5.1

SCALE : NONE



AC UNIT TO CURB MOUNTING — 1 / M5.1

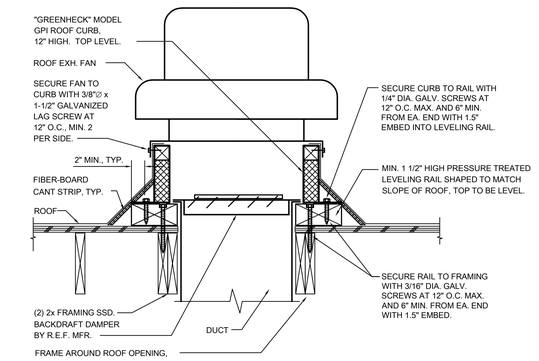
SCALE : NONE



NOTES:
1. SIZE OF CURB TO BE BASED ON AREA REQUIRED FOR PENETRATIONS.
2. COORDINATE WITH ELECTRICAL AND CONTROL CONDUITS AS REQUIRED.
3. ALL EXPOSED METAL PARTS INCLUDING SHEET METAL COVER SHALL BE PRIMED AND PAINTED TO MATCH ROOF SURFACE..

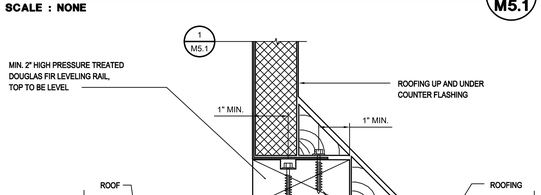
PIPE THRU ROOF SAFE DETAIL — 8 / M5.1

SCALE : NONE



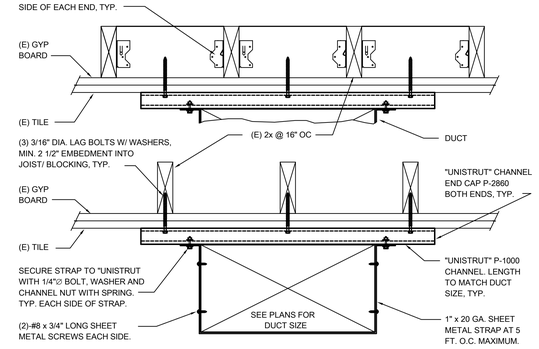
TYPICAL REF MOUNTING — 5 / M5.1

SCALE : NONE



CURB TO STRUCTURE MOUNTING — 2 / M5.1

SCALE : NONE

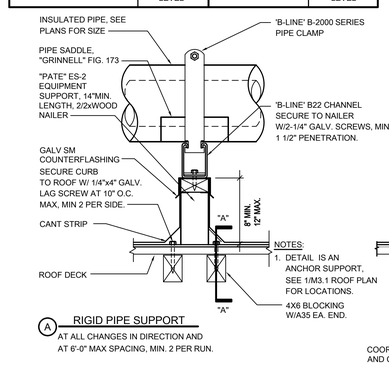


NOTE:
(E) ACOUSTIC TILE CEILING TO REMAIN.

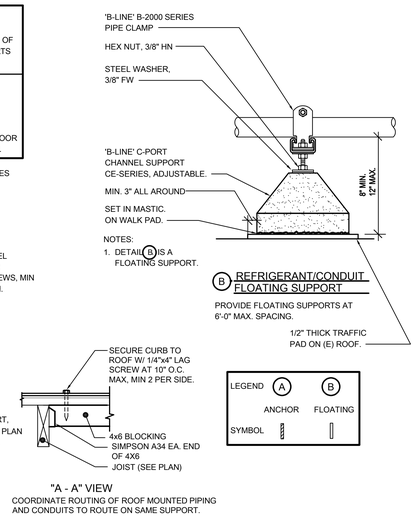
RECTANGULAR DUCT SUPPORT — 9 / M5.1

SCALE : NONE

STEEL PIPE, NOMINAL SIZE OF PIPE (IN.)	SPACING OF SUPPORTS (FT.)	NOMINAL SIZE OF TUBING SMOOTH-WALL (IN. O.D.)	SPACING OF SUPPORTS (FT.)
1/2	6	1/2	4
3/4 OR 1	8	5/8 OR 3/4	6
1 1/4 OR LARGER (HORZ.)	10	1 OR LARGER (HORIZ.)	8
1 1/4 OR LARGER (VERT.)	EVERY FLOOR LEVEL	1 OR LARGER (VERT.)	EVERY FLOOR LEVEL



A RIGID PIPE SUPPORT
AT ALL CHANGES IN DIRECTION AND AT 6'-0" MAX SPACING, MIN. 2 PER RUN.



"A - A" VIEW
COORDINATE ROUTING OF ROOF MOUNTED PIPING AND CONDUITS TO ROUTE ON SAME SUPPORT.

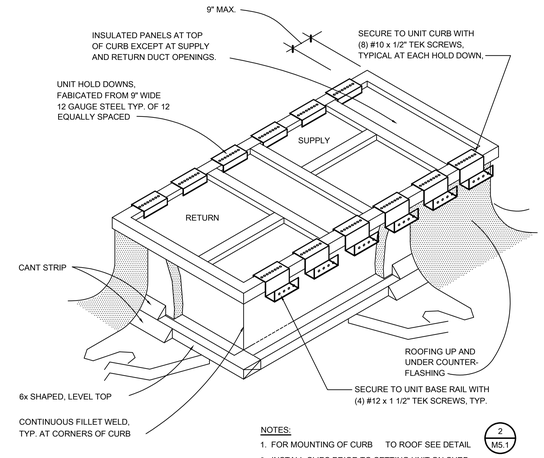
NOTE: DETAIL DOES NOT SHOW THE 16 GA. SM COVER FOR CLARITY. FOR COVER REFER TO 7/M5.1.

REFRIGERANT PIPE ON ROOF DETAIL — 6 / M5.1

SCALE : NONE

(N) UNIT HOLD DOWN BRACKET

NOTE: FIELD COORDINATE (N) HOLD DOWN BRACKET LOCATIONS WITH AC UNIT'S BASE RAIL FORK HOLES AND ANY OTHER BASE RAIL HOLES AS REQUIRED. ALL TEK SCREWS SHOWN SHALL LAND IN UNIT BASE RAIL.



NOTES:
1. FOR MOUNTING OF CURB TO ROOF SEE DETAIL 2/M5.1
2. INSTALL CLIPS PRIOR TO SETTING UNIT ON CURB.

HOLD DOWN BRACKET MOUNTING DETAIL — 3 / M5.1

SCALE : NONE

IDENTIFICATION STAMP
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APP: 02-122192 INC: A
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

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M 32408 Exp. 9/30/24 MECHANICAL STATE OF CALIFORNIA REG

DATE SIGNED: 06/06/2024
Date Signed: 9/9/24

capital engineering
RANCHO CORDOVA, CALIFORNIA
RL — PM - DESIGN TEAM
23073.00 — PROJECT NO.

SUSD
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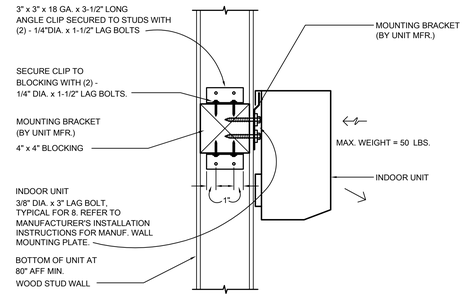
CONSTRUCTION DOCUMENTS

MECHANICAL DETAILS

M5.1

QC	
INI	%

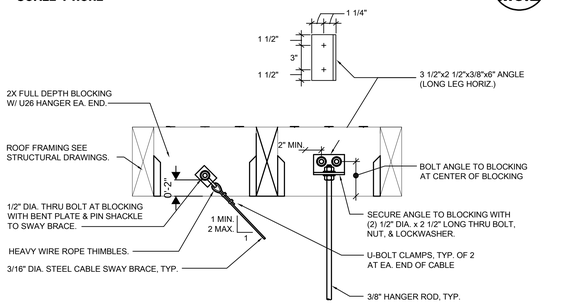


SHPI MOUNTING AT WOOD STUD WALL

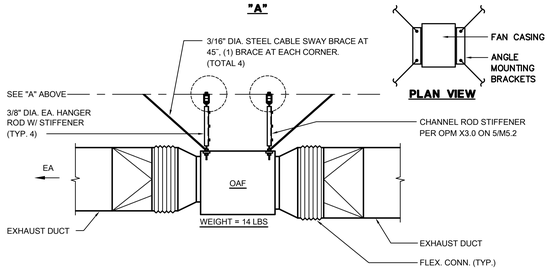
INDOOR SPLIT SYSTEM MOUNTING

SCALE : NONE

6 / M5.2



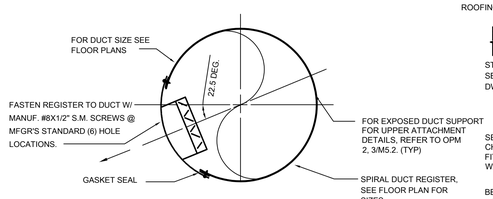
"A"



IN-LINE OA FAN MOUNTING

SCALE : NONE

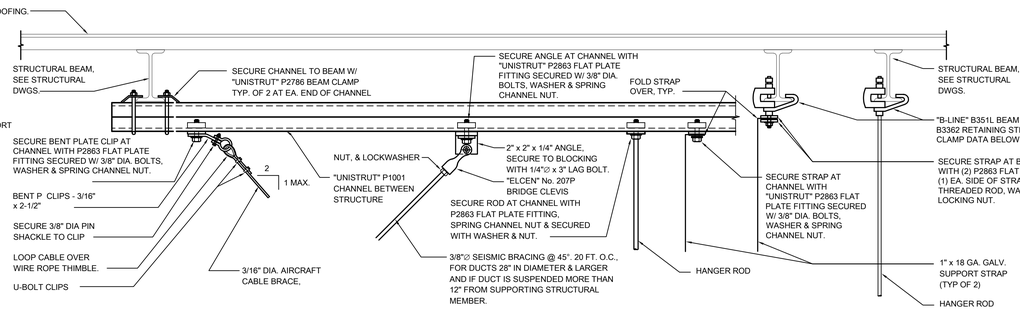
8 / M5.2



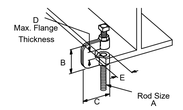
EXPOSED DUCT REGISTER (SDS)

SCALE : NONE

4 / M5.2

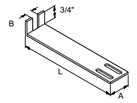


NOTE: PROVIDE BRACING AS NOTED ABOVE AND PER 2022 CBC 1617A.1.25, EXCEPTION 2 FOR DUCTWORK OR 1617A.1.26, EXCEPTION 2 FOR PIPING, AS REQUIRED TO AVOID IMPACT WITH ADJACENT DUCTS AND/OR MECHANICAL COMPONENTS.



BEAM CLAMP DATA

BEAM CLAMP DATA						
Part No.	Rod Size 'A'	'B' In.	'C' In.	'D' In.	'E' In.	Design Load Lbs.
B351L-3/8	3/8"-16	2 3/8"	2 3/8"	3/4"	1 3/8"	230
B351L-1/2	1/2"-13	2 3/8"	2 3/8"	3/4"	1 3/8"	380
B351L-5/8	5/8"-11	2 3/8"	2 1/4"	3/4"	1 3/8"	550
B351L-3/4	3/4"-10	2 3/8"	3 1/4"	3/4"	1 3/8"	630
B351L-7/8	7/8"-9	3"	3 1/4"	1"	1 7/8"	1200



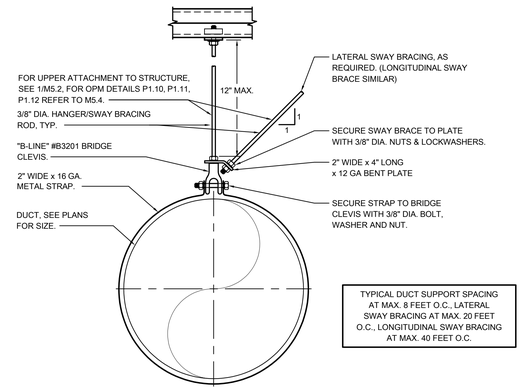
RETAINING STRAP

RETAINING STRAP								
Part No.	For Use With	WT./C FOR LENGTH OF 6" = LBS	8" = LBS	10" = LBS	12" = LBS	'A' in.	'B' in.
B3362-L	B351L-3/8" & 1/2"	17	24	31	38	1.250"	7/16"
B3363-L	B351L-5/8" & 3/4" - B3036L-5/8" & 1/2"	16	23	30	37	1.250"	5/8"
B3364-L	B3036L-5/8" & 3/4"	16	23	30	37	1.250"	11/16"
B3365-L	B351L-7/8"	21	29	37	46	1.500"	3/4"

UPPER ATTACHMENT AT STRUCTURE

SCALE : NONE

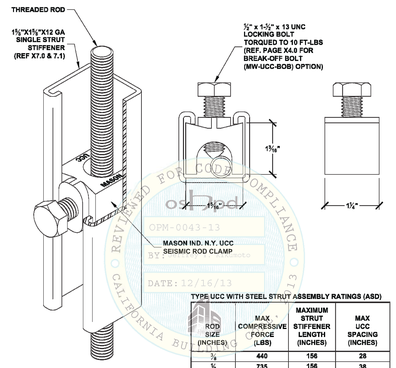
1 / M5.2



TYPICAL DUCT SUPPORT SPACING AT MAX. 8 FEET O.C., LATERAL SWAY BRACING AT MAX. 20 FEET O.C., LONGITUDINAL SWAY BRACING AT MAX. 40 FEET O.C.

ROUND DUCTWORK (UP TO 26" DIA.)

MASON IND. N.Y. UCC - SEISMIC ROD CLAMPS FOR STRUT CHANNELS



TYPE UCC WITH STEEL STRUT ASSEMBLY RATINGS (ASD)

ROD SIZE (INCHES)	MAX. COMPRESSIVE FORCE (LBS)	MAXIMUM STRUT STIFFENER LENGTH (INCHES)	MAX UCC SPACING (INCHES)
¾	440	156	28
½	735	156	38
⅝	1155	156	48
¾	1700	156	57

MASON WEST, INC.
1601 E. Miraloma Ave. Placentia, CA 92870
TEL (714) 630 - 0701, www.masonwest.com

Jimmy Y.C. Wong, SE
California SE No. S4744

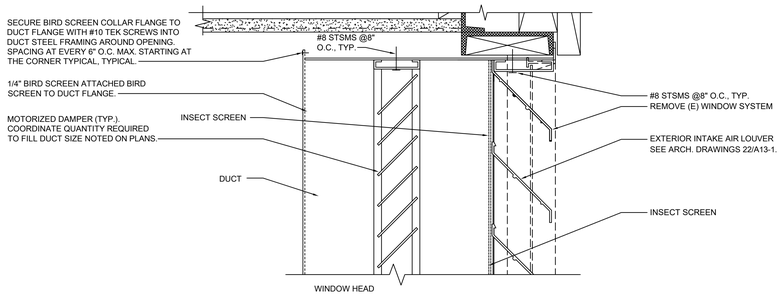
PAGE X3.0

12/16/2013 OPM-0043-13: Reviewed for Code Compliance by Jeffrey Y. Kikumoto Page 343 of 369

ROD STIFFENER DETAIL

SCALE : NONE

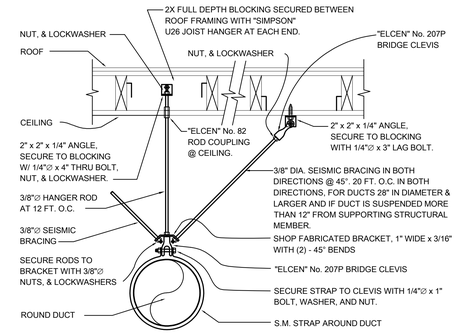
5 / M5.2



INTAKE AIR AT WINDOW AND EXTERIOR WALL - SECTION

SCALE : NONE

7 / M5.2



PROVIDE ROD STIFFENER WHEN TOP OF SHOP FABRICATED BRACKET IS GREATER THAN 18" TOP OF BRACKET TO UNDERSIDE OF 4X4 BLOCKING.

DUCT HANGER DETAIL

SCALE : NONE

3 / M5.2

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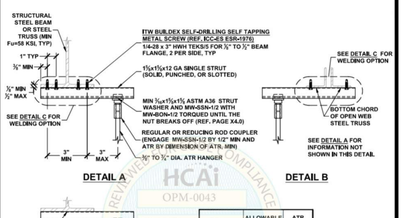
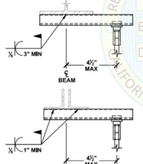
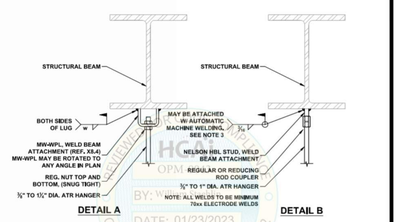
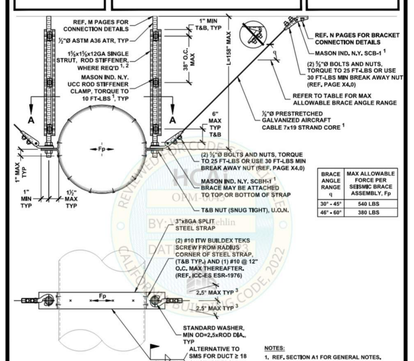
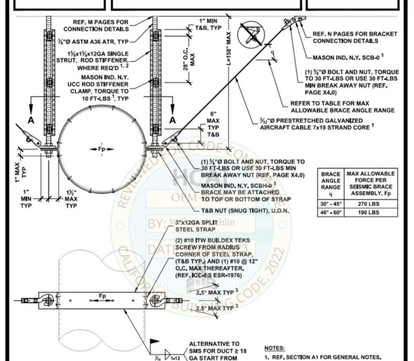
M5.2

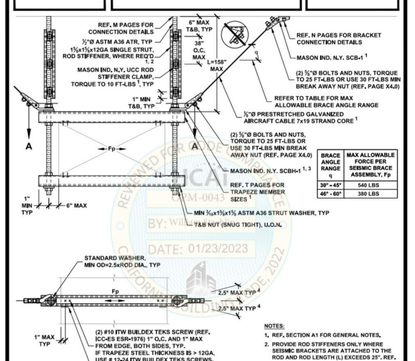


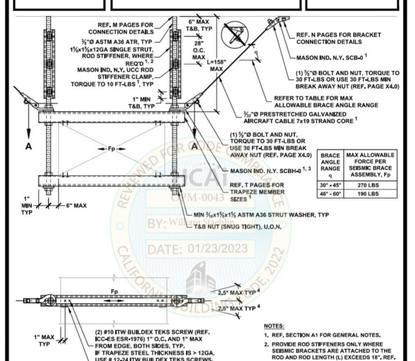


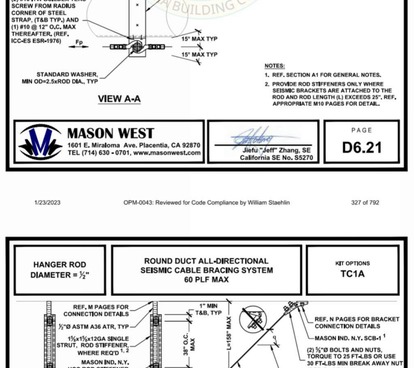


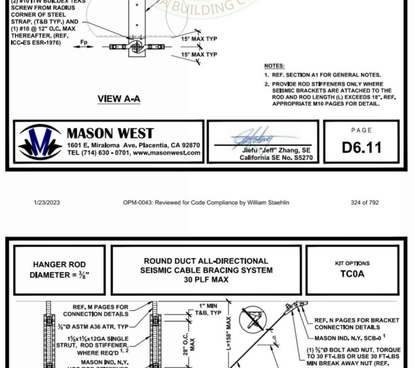


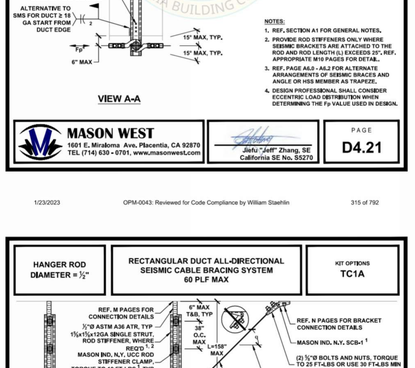


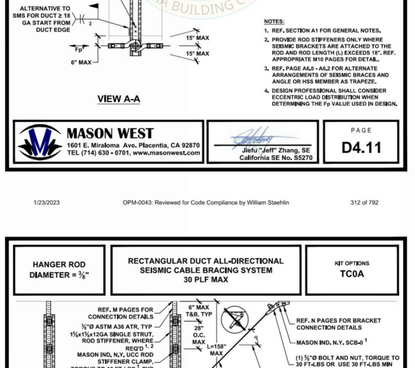


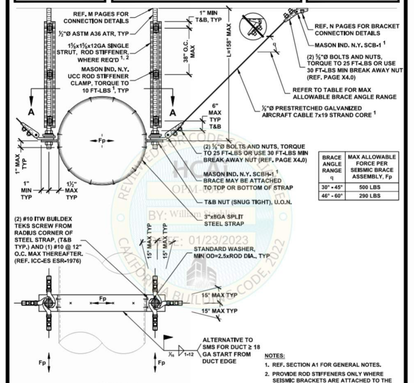












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1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 551 of 792

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
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CHARLES ERIC DANDY
No. C32876
EXP. 03/31/25

M 33498
Exp. 9/30/24

DATE SIGNED: 06/06/2024

capital engineering
RANCHO CORDOVA, CALIFORNIA

RL	232073.00
PM - DESIGN TEAM	PROJECT NO.

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

MECHANICAL DETAILS

M5.3

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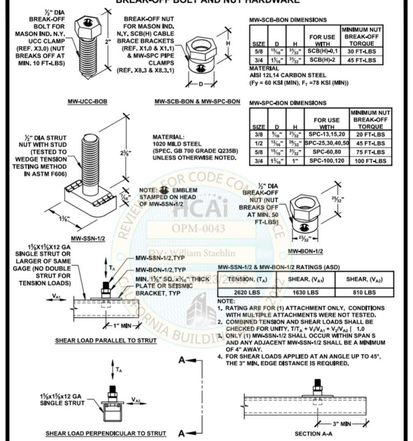
BREAK-OFF BOLT AND NUT HARDWARE



MW-SCB-BON DIMENSIONS

SIZE	D	H	FOR USE WITH	MINIMUM NUT BREAK-OFF TORQUE
5/8	1⅛"	1⅝"	SCB(H)-0,1	30 FT-LBS
3/4	1⅛"	1⅝"	SCB(H)-2	45 FT-LBS

MATERIAL
ABI 125,14 CARBON STEEL (Fy = 60 KSI (MIN), F, =78 KSI (MIN))

MW-SCB-BON & MW-SPC-BON DIMENSIONS

SIZE	D	H	FOR USE WITH	MINIMUM NUT BREAK-OFF TORQUE
3/8	1⅛"	1⅝"	SPC-13,15,20	20 FT-LBS
1/2	1⅛"	1⅝"	SPC-25,30,40,50	45 FT-LBS
5/8	1⅛"	1⅝"	SPC-60,80	75 FT-LBS
3/4	1⅛"	1"	SPC-100,120	100 FT-LBS

MW-SSN-1/2 & MW-BON-1/2 RATINGS (ASD)

TENSION, (T_a)	SHEAR, (V_{sa})	SHEAR, (V_{sa})
2620 LBS	1630 LBS	810 LBS

NOTE:
1. RATING ARE FOR (1) ATTACHMENT ONLY. CONDITIONS WITH MULTIPLE ATTACHMENTS WERE NOT TESTED.
2. COMBINED TENSION AND SHEAR LOADS SHALL BE CHECKED FOR UNITY: $T_a' + V_{sa}' \leq 1.0$
3. ONLY (1) MW-SSN-1/2 SHALL OCCUR WITHIN SPAN S AND ANY ADJACENT MW-SSN-1/2 SHALL BE A MINIMUM OF 4" AWAY.
4. FOR SHEAR LOADS APPLIED AT AN ANGLE UP TO 45°, THE 3" MIN. EDGE DISTANCE IS REQUIRED.

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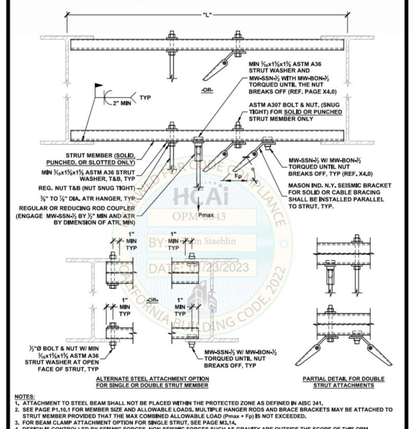
SUPPLEMENTAL STEEL DETAIL



NOTES:
1. ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
2. SEE PAGE P1.10.1 FOR MEMBER SIZE AND ALLOWABLE LOADS, MULTIPLE HANGER RODS AND BRACE BRACKETS MAY BE ATTACHED TO STRUT MEMBER PROVIDED THAT THE MAX COMBINED ALLOWABLE LOAD (Pmax + Fp) IS NOT EXCEEDED.
3. FOR BEAM CLAMP ATTACHMENT OPTION FOR SINGLE STRUT, SEE PAGE M1.14.
4. DESIGN IS CONTROLLED BY SEISMIC FORCES, NON-SEISMIC FORCES SUCH AS GRAVITY ARE OUTSIDE THE SCOPE OF THIS OPM.

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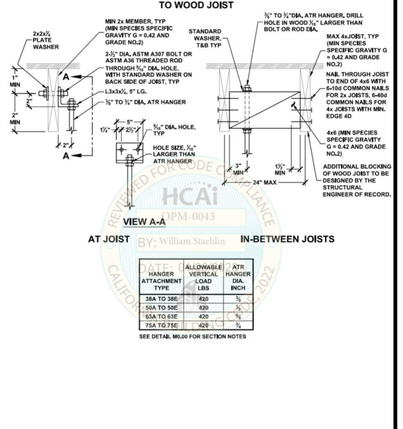
HANGER ATTACHMENT TO WOOD JOIST



HANGER ATTACHMENT TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA, INCH
38A TO 38S	820	⅜
50A TO 50S	420	½
63A TO 63S	420	½
75A TO 75S	420	½

SEE DETAIL M0.00 FOR SECTION NOTES

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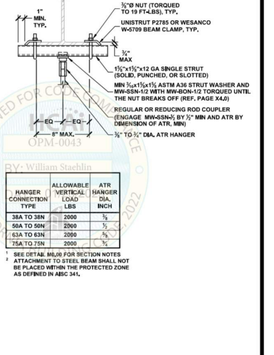
ATR HANGER ATTACHMENT TO STEEL BEAM WITH STEEL BEAM CLAMPS



HANGER CONNECTION TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA, INCH
38A TO 38N	2000	⅜
50A TO 50N	2900	½
63A TO 63N	2000	½
75A TO 75N	2000	½

1 SEE DETAIL M0.00 FOR SECTION NOTES
2 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.

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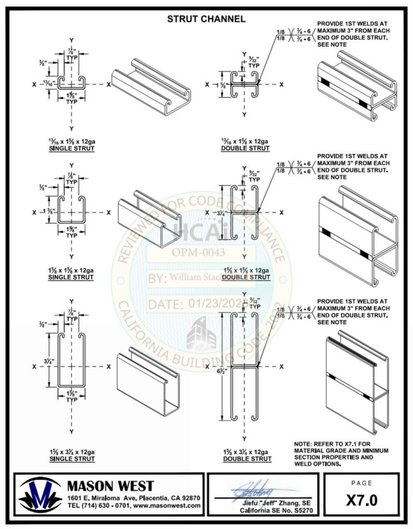
STRUT CHANNEL



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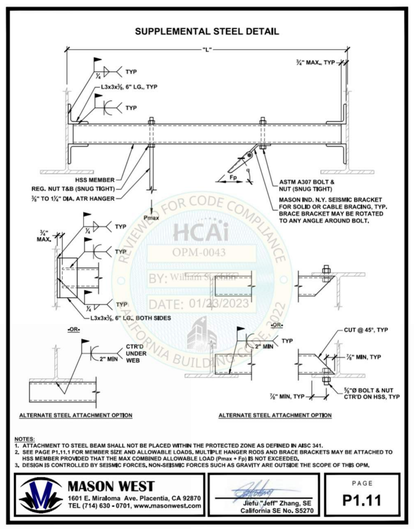
SUPPLEMENTAL STEEL DETAIL



NOTES:
1. ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN ABC 341.
2. SEE PAGE P1.11 FOR MEMBER SIZE AND ALLOWABLE LOADS, MULTIPLE HANGER RODS AND BRACE BRACKETS MAY BE ATTACHED TO HSS MEMBER PROVIDED THAT THE MAX COMBINED ALLOWABLE LOAD (Pmax + Fp) IS NOT EXCEEDED.
3. DESIGN IS CONTROLLED BY SEISMIC FORCES, NON-SEISMIC FORCES SUCH AS GRAVITY ARE OUTSIDE THE SCOPE OF THIS OPM.

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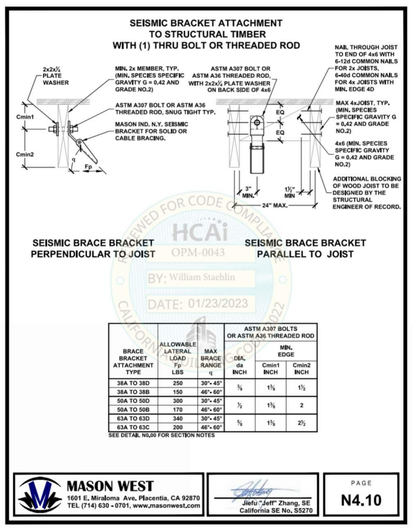
SEISMIC BRACKET ATTACHMENT TO STRUCTURAL TIMBER WITH (1) THRU BOLT OR THREADED ROD



BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE q	ASTM A307 BOLTS OR ASTM A36 THREADED ROD MIN. EDGE DIA, da INCH	Cmin1 INCH	Cmin2 INCH
38A TO 38D	250	30°-45°	⅜	1⅛	1½
38A TO 38B	150	46°-60°			
50A TO 50D	300	30°-45°	½	1⅛	2
50A TO 50B	170	46°-60°			
63A TO 63D	340	30°-45°	⅝	1⅛	2½
63A TO 63C	200	46°-60°			

SEE DETAIL M0,00 FOR SECTION NOTES

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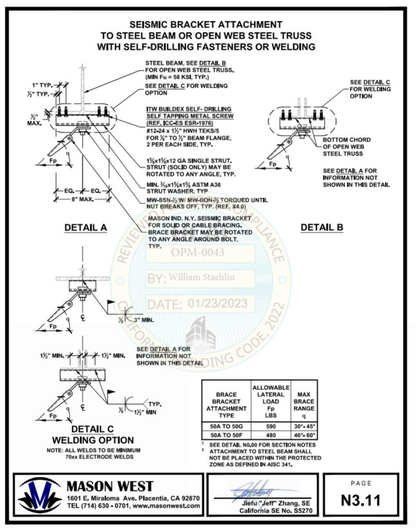
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 687 of 792

SEISMIC BRACKET ATTACHMENT TO STEEL BEAM OR OPEN WEB STEEL TRUSS WITH SELF-DRILLING FASTENERS OR WELDING



BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE q
50A TO 50G	590	30°-45°
50A TO 50F	480	46°-60°

1 SEE DETAIL M0,00 FOR SECTION NOTES
2 ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN ABC 341.

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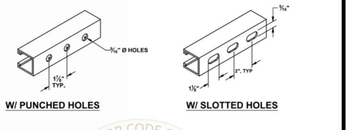
STRUT CHANNEL SECTION PROPERTIES



MINIMUM STRUT CHANNEL SECTION PROPERTIES

STRUT MEMBER	WEIGHT (LBS/FT)	A(GA - IN)	I_x (IN⁴)	S_x (IN³)	r_x (IN)	I_y (IN⁴)	S_y (IN³)	r_y (IN)	UNISTRUT/POWER-STRUT ALTERNATIVE[4]
1⅝"x1⅝"x12GA SINGLE STRUT	1,37	0,374	0,090	0,062	0,283	0,135	0,166	0,600	N/A
1⅝"x1⅝"x12GA DOUBLE STRUT	2,70	0,748	0,140	0,184	0,432	0,270	0,332	0,600	P4521/PS 520 2T3
1⅝"x1⅝"x12GA DOUBLE STRUT	1,89	0,544	0,180	0,195	0,575	0,233	0,287	0,655	N/A
1⅝"x1⅝"x12GA DOUBLE STRUT	3,78	1,088	0,896	0,570	0,908	0,466	0,574	0,655	P1001/PS 200 2T3
1⅝"x3⅝"x12GA SINGLE STRUT	3,05	0,844	1,075	0,609	1,102	0,429	0,529	0,696	N/A
1⅝"x3⅝"x12GA DOUBLE STRUT	6,10	1,768	6,064	1,896	1,852	0,859	1,057	0,696	P5001/PS 100 2 T3

NOTES
1. STRUT MATERIAL TO BE MANUFACTURED OF COLD ROLLED MILD STEEL MEETING ASTM-A1011SS GRADE 33.
2. ½"Ø STRUT MAY BE SUBSTITUTED WITH ⅝" STRUT OF SAME 1⅝" HEIGHT AND 12 ga THICKNESS MATERIAL.
3. RATED LOADS AT BOLTED CONNECTIONS SHOWN IN OPM-0043 ARE NOT VALID AT SLOTTED HOLES IN STRUT CHANNEL. ALL BOLT HOLES SHALL BE STANDARD HOLES (BOLT DIA. + ⅛").
4. UNISTRUT P4521, P1001, AND/OR POWER-STRUT PS 520 2T3, PS 200 2T3, AND PS 100 2T3 DOUBLE STRUT MEMBERS WITH FACTORY SPOT WELDING ARE ACCEPTABLE IN LIEU OF STITCH WELDING OF OUTER STRUT WALLS, CONTRACTOR MAY USE OTHER MANUFACTURERS IF SPOT WELDING TESTING IS PROVIDED, SUBJECT TO REVIEW AND APPROVAL BY MASON WEST AND THE AUTHORITY HAVING JURISDICTION.

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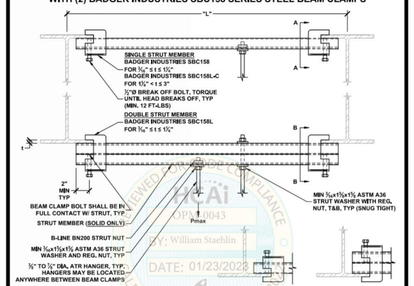
SUPPLEMENTAL STEEL DETAIL WITH (2) BADGER INDUSTRIES SBC158 SERIES STEEL BEAM CLAMPS



SUPPLEMENTAL STEEL MEMBER	MAX BEAM LENGTH "L" FT	ALLOWABLE VERTICAL LOAD Pmax LBS
1⅝"x1⅝"x12GA SINGLE CHANNEL STRUT	4	350
	6	200
	8	110
	10	70
1⅝"x1⅝"x12GA DOUBLE CHANNEL STRUT	4	1010
	6	620
	8	500
	10	360

FASTENER WITH STRUT NUT	
DIA, INCH	TORQUE REQ'D FT-LBS
⅜	15
½ - ⅝	50

NOTES:
1. ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.
2. TWO TRIPLE HANGER RODS MAY BE ATTACHED TO STRUT MEMBER PROVIDED THE MAX ALLOWABLE LOAD (Pmax) IS NOT EXCEEDED.

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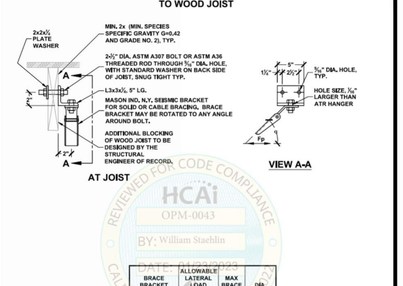
SEISMIC BRACKET ATTACHMENT TO WOOD JOIST



BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE q	DBA, da INCH
38A TO 38E	420	30°-45°	⅜
38A TO 38D	300	46°-60°	
50A TO 50E	420	30°-45°	½
50A TO 50D	300	46°-60°	
63A TO 63E	420	30°-45°	⅝
63A TO 63D	300	46°-60°	

SEE DETAIL M0,00 FOR SECTION NOTES

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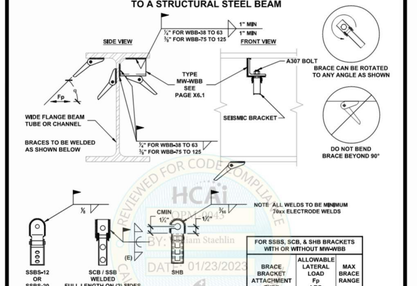
1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 690 of 792

SEISMIC BRACKET WELDED ATTACHMENT TO A STRUCTURAL STEEL BEAM



BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE q
38A TO 38K	1120	30°-45°
38A TO 38J	890	46°-60°
50A TO 50N	2000	30°-45°
50A TO 50L	1240	46°-60°
63A TO 63N	2150	30°-45°
63A TO 63M	1240	46°-60°
75A TO 75N	2320	30°-45°
75A TO 75M	1700	46°-60°

1 SEE DETAIL M0,00 FOR SECTION NOTES
2 WELDED ATTACHMENT TO STEEL BEAM SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE AS DEFINED IN AISC 341.

FOR SSB BRACKETS [1]			
ALLOWABLE LATERAL LOAD, Fp LBS	ALLOWABLE LATERAL LOAD, Fp LBS		MAX BRACE RANGE q
BRACE BRACKET ATTACHMENT TYPE	BRACE BRACKET ATTACHMENT TYPE	WELD TO STEEL	ATTACHMENT WITH MW-WBB
75A TO 75Q	4440	75A TO 75Q	3800	30°-45°
75A TO 75P	3360	75A TO 75N	2190	46°-60°
100A TO 100R	6410	100A TO 100Q	3800	30°-45°
100A TO 100Q	4280	100A TO 100N	2190	46°-60°
125A TO 125R	6410	125A TO 125Q	3800	30°-45°
125A TO 125Q	4280	125A TO 125N	2190	46°-60°

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PAGE N3.13

1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 681 of 792

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANOFF
No. C 32876
EXP. 03/31/25
STATE OF CALIFORNIA

M 32408
Exp. 9/30/24
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 06/06/2024

capital engineering
RANCHO CORDOVA, CALIFORNIA

RL	232073.00
PM - DESIGN TEAM	PROJECT NO.

SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

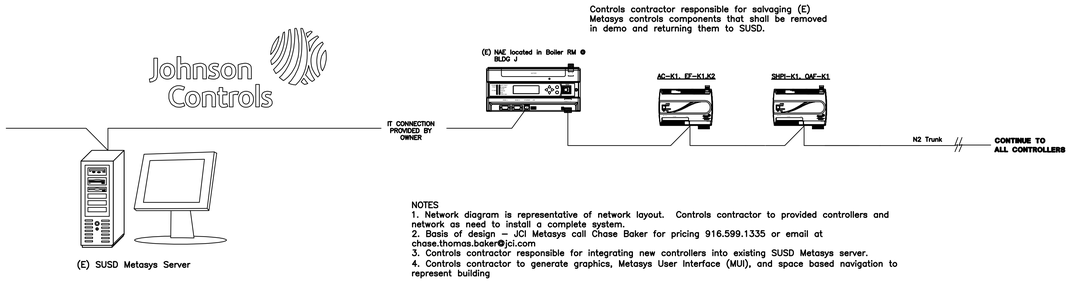
No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

MECHANICAL DETAILS

M5.4

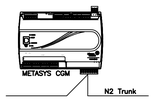


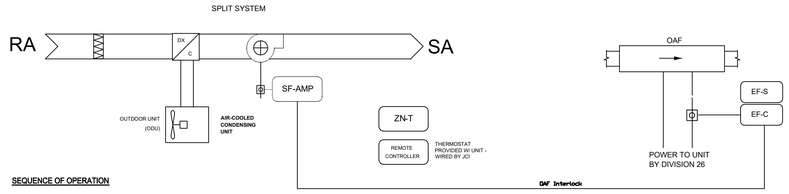
NOTES
1. Network diagram is representative of network layout. Controls contractor to provided controllers and network as need to install a complete system.
2. Basis of design – JCI Metasys call Chase Baker for pricing 916.599.1335 or email at chase.thomas.baker@jci.com
3. Controls contractor responsible for integrating new controllers into existing SUSD Metasys server.
4. Controls contractor to generate graphics, Metasys User Interface (MUI), and space based navigation to represent building

NETWORK RISER DIAGRAM- (SUSD) STAGG HS

1 M6.1

SCALE : NONE





SEQUENCE OF OPERATION

PROGRAM CONTROL:
THE SPLIT SYSTEM UNIT WILL OPERATE STAND ALONE VIA ITS MANUFACTURE PROVIDED THERMOSTAT TO MAINTAIN AN ADJUSTABLE ZONE TEMPERATURE SET POINT OF 75.

OAF INTERLOCK:
THE OAF IS TO BE COMMANDED ON (EF-C) ANYTIME THE SPLIT SYSTEMS SUPPLY FAN "SF-AMP" IS ACTIVATED. THE OAF WILL BE COMMANDED OFF (EF-C) ANYTIME THE SPLIT SYSTEM SUPPLY FAN "SF-AMP" DEACTIVATES.

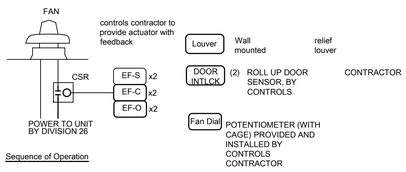
ALARMS:
METASYS SHALL INSTALL AN ADDITIONAL ZONE TEMPERATURE SENSOR AND ALARM THE BAS WHEN THE ZONE TEMPERATURE IS ABOVE 80F

IF THE (EF-S) DOES NOT MATCH (EF-C) ON THE OAF, METASYS SHALL ENABLE AN ALARM ON THE BAS.

SPLIT SYSTEM (SHPI-K1) & OAF CONTROL (OAF-K1)

3 M6.1

SCALE : NONE



Sequence of Operation

FAN CONTROL:
THE EXHAUST FANS WILL BE COMMANDED ON AND OFF (EF-C) VIA A 0-10V DC SIGNAL FROM THE BMS. THE BMS WILL RECEIVE A SINGULAR LOCAL VARIABLE SIGNAL FROM A WALL MOUNTED POTENTIOMETER.

ROLL UP INTERLOCK:

THE BMS WILL MONITOR THE (2) ROLL UP DOORS OF THE SPACE. WHENEVER A DOOR IS OPEN THE BMS WILL COMMAND THE EF ON (EF-C). SPEED TO BE DETERMINED DURING BALANCING. WHENEVER THE DOOR CLOSES THE BMS WILL COMMAND THE EF OFF (EF-C).

LOUVER INTERLOCK:

THE BMS WILL OPEN THE RELIEF LOUVER ON THE STATUS THAT THE ROLL UP DOORS ARE SHUT BUT THE EFS ARE ON (EF-S). IF THE EFS STATUS (EF-S) ARE FOUND TO BE OFF THEN THE RELIEF LOUVER IS TO BE CLOSED BY COMMAND FROM THE BMS.

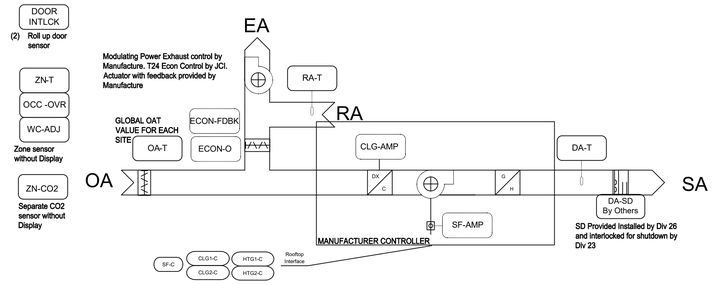
ALARMS:

IF THE (EF-S) DOES NOT MATCH (EF-C), METASYS SHALL ENABLE AN ALARM. IF THE (LVR-FDBK) DOES NOT MATCH (LVR-C), METASYS SHALL ENABLE AN ALARM.

ROOFTOP 3 PHASE EXHAUST FAN CONTROL (REF-K1, K2)

4 M6.1

SCALE : NONE



SUPPLY FAN CONTROL:
THE SUPPLY FAN (SF-C) WILL BE STARTED BASED ON OCCUPANCY SCHEDULE. WHEN THE SUPPLY FAN STATUS (SF-AMP) INDICATES THE FAN STARTED, THE CONTROL SEQUENCE WILL BE ENABLED. UPON A LOSS OF AIRFLOW (SF-AMP), THE SUPPLY FAN WILL ATTEMPT TO AUTOMATICALLY RESTART UNTIL POSITIVE STATUS IS RECEIVED.

SINGLE ZONE VAV CONTROL
UPON A CALL FOR COOLING - THE MANUFACTURE CONTROL BOARD SHALL STAGE THE SUPPLY FAN IN SEQUENCE WITH THE COOLING PER THE SINGLE ZONE VAV GUIDELINES IN ASHRAE 90.1

ECONOMIZER CONTROL:
THE BMS CONTRACTOR SHALL PROVIDE THE TITLE 24 FDD ECONOMIZER CONTROL WITH ASSOCIATED SENSORS AND LOGIC FOR A FUNCTIONAL SYSTEM. THIS INCLUDES GLOBAL OUTSIDE AIR TEMP (OA-T, UNIQUE TO THE SITE), RETURN AIR TEMP (RA-T), DISCHARGE AIR TEMP (DA-T) AND A DAMPER ACTUATOR/COMMAND (ECON-O) AND DAMPER ACTUATOR FEEDBACK (ECON-FDBK) FOR TYPICAL DRY BULB CONTROL. THE BMS WILL GENERATE THE FAULTS AS PER THE T24 CODE AND DISPLAY THEM AS AN ALARM AT THE OWS. THE FAULTS ARE TO BE 1. AIR TEMPERATURE SENSOR FAILURE/FAULT 2. NOT ECONOMIZING WHEN IT SHOULD 3. ECONOMIZING WHEN IT SHOULD NOT 4. DAMPERS NOT MODULATING 5. EXCESS OUTDOOR AIR. THE ECONOMIZER WILL BE ENABLED WHENEVER THE OAT IS LOWER THAN THE ECON ENABLE SET POINT.

TEMPERATURE CONTROL:
THE UNIT WILL CONTROL TO MAINTAIN THE LOCALLY ADJUSTABLE ZONE TEMPERATURE SETPOINT (ZN-SP) (WC-ADJ) AS SENSED BY THE ZONE TEMPERATURE (ZN-T) SENSOR.

OCCUPIED MODE:
THE OCCUPANCY MODE WILL BE CONTROLLED VIA A NETWORK INPUT (OCC-SCHEDULE). THE OCCUPANCY MODE CAN ALSO BE OVERRIDDEN BY A NETWORK INPUT (OCC-OVERRIDE). IT CAN ALSO BE OVERRIDDEN BY A TEMPORARY OCCUPANCY BUTTON (OCC-OVR) ON THE ZONE SENSOR WILL PLACE THE UNIT IN OCCUPIED MODE FOR AN ADJUSTABLE TIME - USER ADJUSTABLE INITIALLY SET FOR 2 HOURS. WHEN IN OCCUPIED MODE THE FAN FAN WILL RUN CONTINUOUSLY.

UNOCCUPIED MODE:
THE UNIT WILL CYCLE TO MAINTAIN UNOCCUPIED ZONE SETPOINTS (CLGUNOCC-SP & HTGUNOCC-SP) DURING UNOCCUPIED PERIODS. THE FAN WILL ONLY BE ON WHEN THERE IS A CALL FOR COOLING OR HEATING AND A COMPRESSOR OR HEATER IS ENABLED. THE FAN WILL BE OFF AT ALL OTHER TIMES.

COOLING COIL:
THE COOLING COIL (CLGX-C) WILL BE STAGED IN SEQUENCE TO MAINTAIN THE TEMPERATURE SETPOINT INITIALLY SET AT 73 AND VARIABLE AT THE ZONE FROM 73-77.

GAS FURNACE HEATING COIL:
THE REHEAT COIL (HTGX-C) WILL BE STAGED IN SEQUENCE TO MAINTAIN THE TEMPERATURE SETPOINT INITIALLY SET AT 69 AND VARIABLE AT THE ZONE FROM 65-69. IF THE UNIT IS SUPPLIED WITH KW HEAT STRIPS IT WILL CONTROL THEM PER THE MANUFACTURE SOO FOR DEFROST OR SUPPLEMENTAL HEAT TO MEET HEATING REQUESTS FROM THE BMS.

UNOCCUPIED SETPOINTS:
WHEN UNOCCUPIED THE COOLING SET POINT IS 90F (FIXED VALUE WITH NO RANGE, USER ADJUSTABLE)
WHEN UNOCCUPIED THE HEATING SET POINT IS 50F (FIXED VALUE WITH NO RANGE, USER ADJUSTABLE)

ZONE PRESSURE CONTROL
THE AC UNITS ARE EQUIPPED WITH A MODULATING POWER EXHAUST ECONOMIZER. THE MODULATING POWER EXHAUST ECONOMIZER WITH FACTORY PROVIDED CONTROLLER WILL MODULATE THE EXHAUST FAN TO MAINTAIN THE ZONE PRESSURE SETPOINT. THE CONTROLS CONTRACTOR IS TO RUN THE PRESSURE TUBING TO ENSURE FACTORY PROVIDED MODULATING POWER EXHAUST CONTROLLER IS READING ACCURATE VALUES.

ROLL UP DOOR STATUS MONITORING:
THE BMS WILL MONITOR THE (2) ROLL UP DOORS OF THE SPACE SERVED BY THE PACKAGE AC UNIT. WHENEVER A DOOR IS OPEN FOR 7.5 MIN THE BMS WILL DISABLE HEATING AND COOLING ON THE UNIT, BUT KEEP FAN OPERATION. WHENEVER THE DOOR CLOSES THE BMS WILL REVERT BACK TO NORMAL OCCUPIED OPERATION. SEE M SHEET 2.1 FOR DETAILS.

CO2 VENTILATION:
THE BMS WILL UTILIZE A ZONE CO2 SENSOR SENSOR TO MONITOR SPACE CO2 VALUE. THE BMS WILL ALARM IF THE ZONE CO2 VALUE EVER RISES ABOVE 1,000 PPM. AFTER ALARMING, THE BMS WILL MODULATE THE OSA DAMPER FOR THE COMMON PLENUM OPEN 10% EVERY 5 MIN UNTIL THE ZONE CO2 SET POINT FALLS BELOW THE SET POINT OF 1,000 PPM AT WHICH POINT THE OSA DAMPER WILL REVERT BACK TO ITS DEFAULT POSITION. THIS SOO WILL BE APPLICABLE IF ANY OF THE CONNECTED SYSTEMS IS ABOVE SET POI.

ALARMS
THE BMS SYSTEM SHALL GENERATE AN ALARM IF:
-THE ZONE TEMPERATURE IS 6 DEGREES AWAY FROM SET POINT.
-THE FAN COMMAND DOES NOT MATCH ITS STATUS
-THE COOLING COMMAND DOES NOT MATCH ITS STATUS

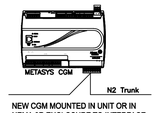
THE BMS WILL DISABLE ALL ALARMS DURING UNOCCUPIED MODE.

ADDITIONAL POINTS MONITORED BY THE BMS:
SUPPLY FAN AMPERAGE (SF-AMP)
DISCHARGE AIR TEMPERATURE (DA-T)
COMPRESSOR AMPERAGE (CLG-AMP)
RETURN AIR TEMPERATURE SENSOR (RA-T)
ZONE CO2 - (ZN-CO2)
ECONOMIZER POSITION FEEDBACK (ECON-FDBK)

AC UNIT CONTROL (AC-K1)

2 M6.1

SCALE : NONE



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANDY
No. C32876
EXP. 03/31/25
STATE OF CALIFORNIA

M 32408
Exp. 9/30/24
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 06/06/2024

capital engineering
RANCHO CORDOVA, CALIFORNIA
RL — PM - DESIGN TEAM
232073.00 — PROJECT NO.

SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

MECHANICAL CONTROLS

M6.1

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.

A. GENERAL INFORMATION

01	Project Location (city)	Stockton	04	Total Conditioned Floor Area	2998
02	Climate Zone	12	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

● Classroom ● Office

B. PROJECT SCOPE

This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01 Air System(s)	02 Wet System Components	03 Dry System Components
☒ Heating Air System	☐ Water Economizer	☒ Air Economizer
☒ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☒ Fan Systems
☒ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☒ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)										COMPLIES					

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01 System Name	02 Quantity	03 System Serving	04 System Status	05 Space Type	06 Utilizing Recovered Heat
AC-K1	1	Single zone	New/ Addition		☐
SHPO-SHPI-K1	1	Single zone	New/ Addition		☐

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01 Name or Item Tag	02 Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	03 Equipment Type per Tables 110.2 and Title 20	04 Smallest Size Available[1] 140.4(a) and 170.2(c)1	05 Equipment Size per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2 Heating Output[2,3] Per Design (kBtu/h)	06 Heating Output[2,3] Rated (kBtu/h)	07 Heating Output[2,3] Supp. Heating Output (kBtu/h)	08 Cooling Output[2,3] Sensible Per Design (kBtu/h)	09 Cooling Output[2,3] Rated (kBtu/h)	10 Load Calculations[3,4] Total Heating Load (kBtu/h)	11 Load Calculations[3,4] Total Sensible Cooling Load (kBtu/h)
AC-K1	Furnace + AC	AC, air cooled, single pkg + warm-air central furnace, gas-fired	Yes	178	178	0	164.45	135	147.59	162.97
SHPO-SHPI-K1	Unitary Heat Pumps	Air-cooled, split (3 phase)	Yes	8.33	12	0	9.53	9	5.49	6.69

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).*

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01 Name or Item Tag	02 Size Category (Btu/h)	03 Heating Mode Rating Condition (°F)	04 Heating Mode Efficiency Unit	05 Heating Mode Minimum Efficiency Required per Tables 110.2 / Title 20	06 Heating Mode Design Efficiency	07 Cooling Mode Efficiency Unit	08 Cooling Mode Minimum Efficiency Required per Tables 110.2 / Title 20	09 Cooling Mode Design Efficiency
AC-K1	>=135,000 and <240,000		AFUE	0.8	0.81	EER IEER	10.8 14	10.8 14
SHPO-SHPI-K1	<65,000		HSPF2	7.5	6	SEER2	14.3	15

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

01 System Name	02	03 Quantity	04				05 System Zoning	05 all other systems	06 Serving Dwelling Units	07 Not Serving Dwelling Units	08 Fan System Airflow (cfm)	09			10	11 Differential Temperature
AC-K1		1	Fan System Status: New								5,100	Site Elevation: 84		Economizer		
04 Fan Name or Item Tag	04 Fan Type	04 Qty	04 Component				05 Airflow through Component (%)		06 Water Gauge (w.g)	07 Allowance: Component Allowance	08 Allowance: Fan Allowance (watt/cfm)[3]	09 Design: Design Electrical Input Power Method			10 Design: Motor Nameplate Horsepower	11 Design: Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away				5,100			1306		Manufacturer provided				1.55
			MERV 13-16 Filter upstream of thermal conditioning equipment				5,100			612						
			Gas heat				5,100			306						
			Hydronic/DX cooling coil or heat pump coil				5,100			612						
			Economizer Return Damper				5,100			204						
RF	Return	1	Exhaust System Base Allowance				4,000			736		Manufacturer provided				0
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)							Fan System Allowance (kW)[3]		3.78		Fan System Electrical Output (kW)		1.55

H. FAN SYSTEMS & AIR ECONOMIZERS

01 System Name	02 SHPO-SHPI-K1	03 Quantity	04				05 System Zoning	05 all other systems	06 Serving Dwelling Units	07 Not Serving Dwelling Units	08 Fan System Airflow (cfm)	09			10	11
		1	Fan System Status: New								400	Site Elevation: 84		Economizer		NA: <=33 kBtu/h cooling
04 Fan Name or Item Tag	04 Fan Type	04 Qty	04 Component				05 Airflow through Component (%)		06 Water Gauge (w.g)	07 Allowance: Component Allowance	08 Allowance: Fan Allowance (watt/cfm)[3]	09 Design: Design Electrical Input Power Method			10 Design: Motor Nameplate Horsepower	11 Design: Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away				400			93		Manufacturer provided				0.15
			MERV 13-16 Filter upstream of thermal conditioning equipment				400			56						
			Hydronic/DX cooling coil or heat pump coil				400			56						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)							Fan System Allowance (kW)[3]		1		Fan System Electrical Output (kW)		0.15

[1] *FOOTNOTES: Fans serving spaces with design background noise goals below NC35*
[2] *Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.*
[3] *Fan system allowance includes fan system base allowance.*
[4] *Filter pressure loss can only be counted once per fan system.*
[5] *Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.*
[6] *Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document.*

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

01	02	03	04	05	06	07	08	09	10	11

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass

Fan Energy Index (FEI)

01 Name or Item Tag	02 FEI Exception	03 FEI
AC-K1	Embedded Fan <5HP or <4.1kW	
SHPO-SHPI-K1	Embedded Fan <5HP or <4.1kW	

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01 System Name	02 System Zoning	03 Conditioned Floor Area Being Served (ft²)	04 Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	05 Shut-Off Controls 120.2(e) & 160.3(a)2D	06 Isolation Zone Controls 120.2(g) & 160.3(a)2F	07 Demand Response 110.12 120.2(b) & 160.3(a)2B	08 Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	09 Window Interlocks per 140.4(n) & 170.2(c)4D
AC-K1	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	NA: Serves < 25k ft²	EMCS	Included	NA: Alteration Project
SHPO-SHPI-K1	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	NA: Serves < 25k ft²	EMCS	Included	NA: Alteration Project

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and d:t24refnolink/]160.2, 160 3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04		05			06			07
System Name	AC-K1	System Design OA CFM Airflow[1]		1082	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3 Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Exh. Vent per 120.1(c)4 & 160.2(c)4 Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D
K11 AG Shop	General Manufacturing- non chemical	2884			432.6	0	0	DCV: NA: Not required per §120.1(d)3
								Occ Sensor: NA: Not required space type
17	Total System Required Min OA CFM				433	18	Ventilation for this System Complies?	Yes
04		05			06			07
System Name	SHPO-SHPI-K1	System Design OA CFM Airflow[1]		17	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3 Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Required Min CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D
K121 Office	Office space	114			17.1	0	0	DCV: NA: Not required per §120.1(d)3
								Occ Sensor: NA: Not required space type
17	Total System Required Min OA CFM				17	18	Ventilation for this System Complies?	Yes

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system*
[2] *Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[4] *See Standards Tables 120.1-A and 120.1-B.*
[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[6] *120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).*

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

L. DISTRIBUTION (DUCTWORK and PIPING)

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	AC-K1	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No
		Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
		Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes

11	No	The scope of the project includes only duct systems serving healthcare facilities
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A
18		All ductwork is an extension of an existing duct system
19		Ductwork serving individual dwelling unit
20		< 25 ft of new or replacement space conditioning ducts installed
21	R-8	Duct Insulation R-value
22		
23		

The answers to the questions below apply to the following duct systems:	SHPO-SHPI-K1	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

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COMMUNITY ARCHITECTURE
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EXP. 03/31/25
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M 32408
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MECHANICAL
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capital engineering
RANCHO CORDOVA, CALIFORNIA
RL — PM - DESIGN TEAM
232073.00 — PROJECT NO.

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

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CONSTRUCTION DOCUMENTS

T24 DOCUMENTATION

M7.1

L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for these systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	AC-K1 15 tons; SHPI K1;
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	SHPI K1;
NRCA-MCH-05-A - Air Economizer Controls	AC-K1 15 tons;
NRCA-MCH-07-A Supply Fan Variable Flow Controls	AC-K1 15 tons;
NRCA-MCH-11-A Automatic Demand Shed Controls	AC-K1 15 tons; SHPI K1;
NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	AC-K1 15 tons;
NRCA-MCH-18-A Energy Management Control Systems	AC-K1 15 tons; SHPI K1;

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location M-Sheets

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Aaron Wintersmith	Documentation Author Signature:
Company: Capital Engineering Consultants Inc.	Signature Date: 02/15/2024
Address: 11020 Sun Center Dr #100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3500

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Kevin Stillman	Responsible Designer Signature:
Company: Capital Engineering Consultants, Inc	Date Signed: 2024-02-15
Address: 11020 Sun Center Dr., Suite 100	License: M 33498
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3500

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CONSTRUCTION DOCUMENTS

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M7.2

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PLUMBING GENERAL NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS AND EXACT LOCATIONS OF PLUMBING FIXTURES.
2. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO TRENCHING OR INSTALLING PIPING AND ASSOCIATED ITEMS.
3. COORDINATE LOCATION OF PIPING WITH OTHER TRADES ON THIS PROJECT.
4. CONCEAL ALL PIPING IN WALL FURRING, PARTITIONS, ETC., EXCEPT AT MECHANICAL ROOMS.
5. PROVIDE BALL VALVES ON WATER PIPE BRANCHES TO EQUIPMENT AND PLUMBING FIXTURES. PROVIDE ACCESS PANELS WHEN LOCATED IN FURRED SPACES OR ABOVE NON-REMOVABLE CEILINGS. ALL VALVES SHALL BE FULL LINE SIZE.
6. SEAL ALL PIPE PENETRATIONS THRU FLOORS WATERTIGHT.
7. PROVIDE GAS SHUT-OFF VALVE, UNION AND DIRT LEG AT EACH GAS CONNECTION TO MECHANICAL EQUIPMENT.
9. PRIOR TO ANY SOLENOID VALVE, QUICK CLOSING VALVE, ETC. PROVIDE AND INSTALL SHOCK ABSORBER OF REQUIRED SIZE.
10. OFFSET VENTS THRU ROOF 10 FEET MINIMUM FROM AIR INTAKES AND 4 FEET FROM OUTSIDE WALLS.
11. CONDENSATE DRAIN LINE CONNECTIONS TO MECHANICAL UNITS SHALL INCLUDE MINIMUM 4" DEEP "P" TRAP AND CLEANOUTS AT ALL OFFSETS.
12. ALL MECHANICAL UNITS ARE SHOWN FOR REFERENCE AND COORDINATION ONLY. SEE "M" SHEETS.
13. OFFSET ALL RISERS AND DROPS TO AVOID PENETRATIONS AT TOP PLATES.
14. FIELD VERIFY EXACT SIZES, LOCATIONS AND ELEVATIONS OF ALL PIPING CONNECTIONS, OTHER WORK, ETC., PRIOR TO TRENCHING OR INSTALLING OF ANY NEW WORK.
15. ALL FLOOR MOUNTED FIXTURES, CLEAN OUTS & FLOOR DRAINS TO BE FLUSH MOUNTED WITH 2% MAX. SLOPE.
16. ALL FLOOR DRAINS LOCATED IN CERAMIC TILE SHALL HAVE A SQUARE TOP.
17. CONCRETE ANCHORS SHALL BE PER B/S1.0 EXPANSION ANCHORS, HILTI, KWIK BOLT KB TZ2 3/8" DIA. WITH 2-1/2" MIN. EMBEDMENT. ANCHORS SHALL BE TESTED PER IR 26-6, INTERPRETATIVE REGULATION FOR EXPANSION ANCHORS IN HARDENED CONCRETE.
18. PROVIDE AND INSTALL 20 GAGE GALV. SHT. MTL. OVERFLOW PAN UNDER ENTIRE UNIT AND COIL. PAN SHALL EXTEND A MIN. OF 6" PAST ALL SIDES OF UNIT AND COIL. SIDES SHALL EXTEND UP TWO INCHES AND SHALL HAVE EDGES TURNED UNDER. ALL SEAMS SHALL BE CONTINUOUSLY WELDED. PROVIDE 3/4" DRAIN OUTLET IN SIDE OF PAN. SLOPE PAN BACK TO OUTLET. NOTE: SECONDARY DRAIN FROM FURNACE COOLING COIL SHALL DISCHARGE TO OVERFLOW DRAIN PAN.

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 SECTIONS 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. 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.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 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 SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

MP☐ MD☐ PP☒ E☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH HCAI (OSHPD) PREAPPROVAL (OPM #) # 0043-13.

CALIFORNIA ENERGY CODE ACCEPTANCE TESTING

THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.

LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).

MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.

A LISTING OF CERTIFIED ATT CAN BE FOUND AT:
HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE
THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.

PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

OPM DETAIL REFERENCES FOR OPTION 2 SCHEDULE

1. PROVIDE SUPPORT AND SEISMIC BRACING PER OPM #0043-13 REFER TO P5.2, AND P5.3 FOR OPM DETAILS C2.10, C2.11, M3.10, M3.11, M3.12, M3.14, N3.11, N3.13, P1.10, P1.11, P1.12, M4.10, N4.10, N4.13.

SHEET LIST

P0.1 PLUMBING LEGEND & NOTES
P0.2 PLUMBING FIXTURE SPEC. & CONN. SCHEDULE
P2.0 PLUMBING DEMO FLOOR PLAN
P2.1 PLUMBING FLOOR PLAN
P3.1 PLUMBING ROOF PLAN
P5.1 PLUMBING DETAILS
P5.2 PLUMBING DETAILS
P5.3 PLUMBING DETAILS

PLUMBING LEGEND cont'd

SYMBOL	ABBREVIATION	DESCRIPTION
	ABC	ABOVE CEILING
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AF , BF	ABOVE FLOOR , BELOW FLOOR
	AD , AP	ACCESS DOOR , ACCESS PANEL
	AD	AREA DRAIN
	BV	BALL VALVE
		BRANCH - TOP CONNECTION
		BRANCH - BOTTOM CONNECTION
or		BRANCH - SIDE CONNECTION
	BFV	BUTTERFLY VALVE
	CBV	CALIBRATED BALANCE VALVE
	COP	CAP ON END OF PIPE
	CKV	CHECK VALVE
	CP	CIRCULATING PUMP
	CW	COLD WATER
	CWD	COLD WATER DROP
	CWR	COLD WATER RISE
A	A	COMPRESSED AIR
	CR	CONCENTRIC REDUCER
CD	CD	CONDENSATE DRAIN LINE
CO CO	CO	CLEANOUT
°F		DEGREES FAHRENHEIT
	DIA.	DIAMETER , SQUARE (FEET)
	ER	ECCENTRIC REDUCER
	(E)	EXISTING TO BE REMOVED
FF=		FINISHED FLOOR ELEVATION
FU		FIXTURE UNIT
	FC	FLEXIBLE CONNECTOR
Ø	CO	CLEANOUT
	FD	FLOOR DRAIN
	FS	FLOOR SINK
		FLOW IN DIRECTION OF ARROW
	FLV	FLOW LIMITING VALVE
FV , FT		FLUSH VALVE , FLUSH TANK
(FA) , (TA)		FROM ABOVE , TO ABOVE
(FB) , (TB)		FROM BELOW , TO BELOW
	GCK	GAGE COCK
	GSCK , PC	GAS COCK , PLUG COCK
	GV	GATE VALVE
	GPM	GALLONS PER MINUTE
	GLV	GLOBE VALVE
Ø	CO	CLEANOUT
	HD	HOPPER DRAIN , HUB DRAIN
	HB	HOSE BIBB
	HW	HOT WATER PIPING
	HWR	HOT WATER PIPING RISE
	HWD	HOT WATER PIPING DROP
	HWRET	HOT WATER RETURN
	HWRET(R)	HOT WATER RETURN RISE
	HWRET(D)	HOT WATER RETURN DROP
( )	( ) HW	HOT WATER (TEMP. °F)
( )	( ) HWR	HOT WATER RETURN (TEMP. °F)
	(N) , (E)	NEW , EXISTING
	(NTS)	NOT TO SCALE
	AN	PIPE ANCHOR
		PIPE GUIDE
		PIPE IN SLEEVE
		PITCH DOWN IN DIRECTION OF FLOW
	POC	POINT OF CONNECTION
P & TRV	P & TRV	PRESSURE & TEMPERATURE RELIEF VALVE PIPING
	PRV	PRESSURE REDUCING VALVE
PD	PD	PUMP DISCHARGE LINE
RWL	RWL	RAINWATER LEADER
	WH	RECESSED BOX HOSE BIBB OR WALL HYDRANT
	RV or P&TRV	RELIEF VALVE OR PRESSURE & TEMPERATURE RELIEF VALVE
	RET	RETURN
	RE , IE	RIM ELEVATION , INVERT ELEVATION
	(R) , (D)	RISE , DROP
		RISER DOWN (ELBOW)
		RISER UP (ELBOW)
	R , D	RISE OR DROP
	RD	ROOF DRAIN
	S, W	SOIL, WASTE OR SANITARY SEWER ABOVE FLOOR
	S, W	SOIL, WASTE OR SANITARY SEWER BELOW FLOOR
	TP	TRAP PRIMER
TP		TRAP PRIMER PIPING
	TYP	TYPICAL
	UN	UNION OR FLANGE
	VB	VALVE IN VALVE BOX (VALVE TYPE SYMBOL AS REQUIRED FOR VALVE TYPE USED)
	V	VENT PIPING
V , VR , VTR		VENT , VENT RISER , VENT THRU ROOF
	WCO	WALL CLEANOUT
	WHA	WATER HAMMER ARRESTER

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PLUMBING LEGEND & NOTES

P0.1

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PLUMBING FIXTURE SPECIFICATION & CONNECTION SCHEDULE

ADA	SYMBOL	FIXTURE	FIXTURE MANUFACTURER AND MODEL No.	FAUCET OR VALVE MANUFACTURER AND MODEL No.	TRIM MANUFACTURER AND MODEL No.	REMARKS	VENT	WASTE		COLD WATER		HOT WATER	
								BRANCH	OUTLET	BRANCH	OUTLET	BRANCH	OUTLET
	S-1	SINK FREE STANDING DEEP BOWL H & CW AG SHOP	"ELKAY" MODEL RNSF82362, 47-1/4" x 29-3/4" x 42-1/4" SINK DIMENSIONS, BOWL 1 & 2 AT 18" x 24" x 12-3/4" EACH 16 GAUGE STAINLESS STEEL, TWO COMPARTMENT WITH LEDGE BACK, SELF-RIM. PROVIDE FAUCET HOLES ON 8" CENTERS. PROVIDE REAR DRAIN LOCATION FOR BOTH COMPARTMENTS. PROVIDE EACH BOWL WITH INDIVIDUAL FAUCETS, (2) PLACES.	(2) "CHICAGO" ECAST MODEL 1100-E35-317ABCP (VVAVVP), WITH INDEXED WRIST BLADE HANDLES, 8" LONG SWIVEL SPOUT AND 1.5 GPM VANDAL RESISTANT LAMINAR FLOW AERATOR.	"ELKAY" MODEL LK18, OFFSET CRUMB CUP STRAINER WITH REMOVABLE BASKET AND P-TRAP FOR EACH COMPARTMENT. INSTALL P-TRAP FLUSH TO WALL.	2-COMP SINK, MODIFY TO PROVIDE FAUCET HOLE(S) CENTERED ABOVE EACH COMPARTMENT.	1-1/2"	2"	1-1/2"	3/4"	1/2"	3/4"	1/2"
	DF-1	**DRINKING FOUNTAIN** WALL MOUNTED STD/ACCESSIBLE DUAL HEIGHT W/BOTTLE FILLER	"ELKAY" MODEL 1119-1920, STAINLESS STEEL DUAL HEIGHT, WALL MOUNTED STAINLESS STEEL BACK PANEL. WITH BOTTLE FILLER.	INTEGRAL	WITH P-TRAP	PROVIDE MANUFACTURER'S INTERNAL SUPPORT SYSTEM. WHERE INSTALLED ON CONCRETE OR CMU WALL, PROVIDE TWO MOUNTING PLATES AND INSTALL WITH ONE PLATE ON EACH SIDE OF WALL. SET AT HEIGHT INDICATED ON ARCH DRAWINGS.	1-1/2"	2"	1-1/2"	3/4"	1/2"	-	-
	FS	FLOOR SINK	MECHANICAL SPACES - ZURN MODEL ZN-1901-KC-2, OR EQUAL, 12 INCH x 12 INCH x 8 INCH DEEP, A.R.E. INTERIOR WITH NICKEL BRONZE RIM, HALF GRATE AND DOME STRAINER. OTHER APPROVED EQUAL MANUFACTURERS INCLUDE: JAY R. SMITH, WATTS & MIFAB.	PROVIDE SEEPAGE PAN AND CLAMPING COLLAR.		COORDINATE & PROVIDE GRATES	2" 3"	2" 3"	2" 3"	- -	- -	- -	- -
	HB	HOSE BIBB	INTERIOR WALL MOUNTED - ACORN MODEL 8121CP-LF	WITH INTEGRAL VACUUM BREAKER PROTECTED, CARTRIDGE OPERATED HOSE VALVE WITH LOCK SHIELD BONNET AND REMOVABLE KEY HANDLE.		SET HEIGHT AT 18" ABOVE FINISHED FLOOR	-	-	-	3/4"	3/4"	-	-
	TP	TRAP PRIMER	MIFAB "M-500" SERIES, PRECISION PLUMBING PRODUCTS "PRIME-RITE" OR SIOUX CHIEF MANUFACTURING CO. "PRIME PERFECT" PRECISION PLUMBING PRODUCTS "PR-500" (1 DRAIN), "PR-500-DU-4/DU-U" (2 DRAINS), "P1-500-DU-4/DU-U" (3-4 DRAINS)				-	-	-	1/2"	1/2"	-	-
	HR	HOSE REEL	HOSE REELS: LINCOLN MODEL 83754 RETRACTABLE AIR HOSE 1/2" REEL W/ 50 FT OF HOSE, GROVER OR EQUAL. PROVIDE HEAVY-DUTY TYPE WITH DELIVERY HOSE, UNIVERSAL SWIVEL, BALL STOP, SHUT-OFF VALVE, CONTROL VALVE AND FILTER AS REQUIRED. CONNECT SERVICES TO REELS WITH BALL VALVE. REEL WEIGHT = 37 LBS, 1/2" X 50' HOSE WEIGHT = 9 LBS, TOTAL 46 LBS			AIR HOSE VALVE: LINCOLN 815 COUPLER AND 11659 NIPPLE, GROVER, OR EQUAL, WITH BALL VALVE ON INLET. REFER TO DRAWING DETAILS FOR ADDITIONAL REQUIREMENTS. PROVIDE WILKERSON MODEL CB6-04-000 AIR PRESSURE REGULATOR, OR EQUAL.					
	AO	AIR OUTLET AG SHOP	"CHICAGO" DECK MOUNTED MODEL 980-VR909CAGCP, WALL MOUNTED 986-937CHAGVCP VANDAL RESISTANT TURRET WITH SINGLE BALL VALVE	"CHICAGO" MODEL 980-WS909AGVCP, WITH TURRET AND SERRATED NOZZLE.									

GAS PRESSURE REGULATOR SCHEDULE

UNIT	LOCATION	"MFR" MODEL NO.	MIN. CAPACITY (MBH)	INLET PRESSURE RANGE MAX/MIN	OUTLET PRESSURE	NOTES
GPR K1	ROOF	AMERICAN METER COMPANY SERIES 1813B	220	5 PSIG	7" WC	PROVIDE WITH HI AND LOW PRESSURE TEST PORTS

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3701 Business Drive Suite 200
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Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANDY
No. C32876
EXP. 03/31/25
STATE OF CALIFORNIA

M 32408
Exp. 9/30/24
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 06/06/2024

capital engineering
RANCHO CORDOVA, CALIFORNIA

RL	232073.00
PM - DESIGN TEAM	PROJECT NO.

SUSD
55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

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1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

PLUMBING FIXTURE SPEC. & CONN. SCHEDULE

P0.2

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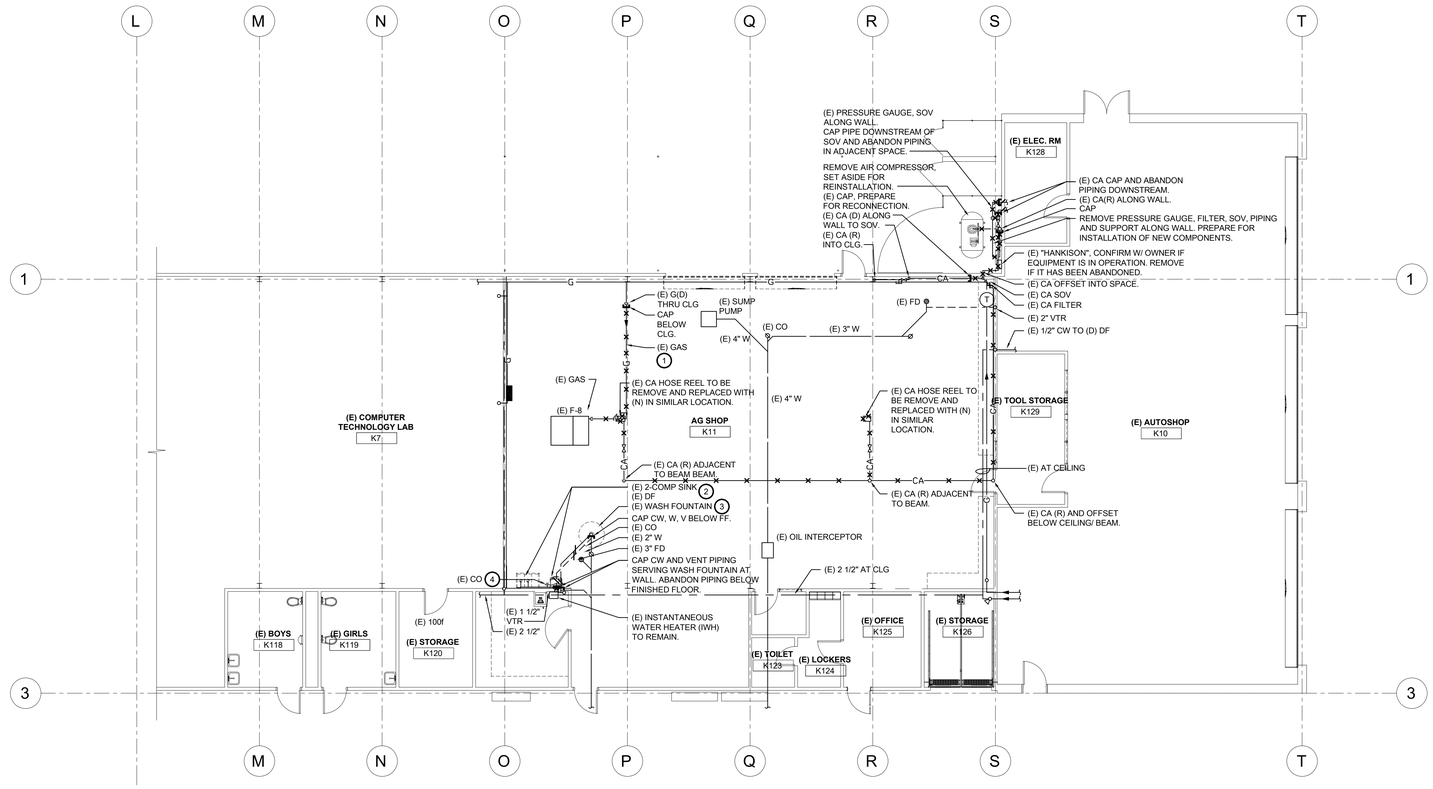


PLUMBING DEMO FLOOR PLAN

SCALE : 1/8" = 1'-0"

1 / P2.0

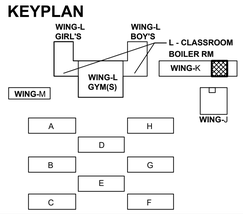
GENERAL NOTES

1. WHERE PIPING IS BEING REMOVED, REMOVE AND PATCH SURFACES WHERE SUPPORTS ARE ARE REMOVED.

SHEET NOTES:

1. CAP GAS AS NOTED. REMOVE GAS PIPING DOWNSTREAM OF CAP TO THE EQUIPMENT. REMOVE PIPE SUPPORTS AND PATCH OPENINGS TO MATCH SURROUNDING SURFACES.
2. REMOVE (E) 2-COMP SINK AND DRINKING FOUNTAIN (DF). CAP PIPING EXPOSED IN SPACE AND PREPARE PIPING FOR RECONNECTION TO NEW SINK AND DF.
3. REMOVE (E) WASH FOUNTAIN. CAP PIPING TO BEHIND ARCHITECTURAL SURFACES. CAP WATER PIPING AT BRANCH TAKEOFF.
4. REMOVE CLEAN OUT AND PREPARE FOR NEW CLEAN OUT IN SIMILAR LOCATION. SEE 1/P2.1.

KEYPLAN



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PLUMBING DEMO FLOOR PLAN

P2.0

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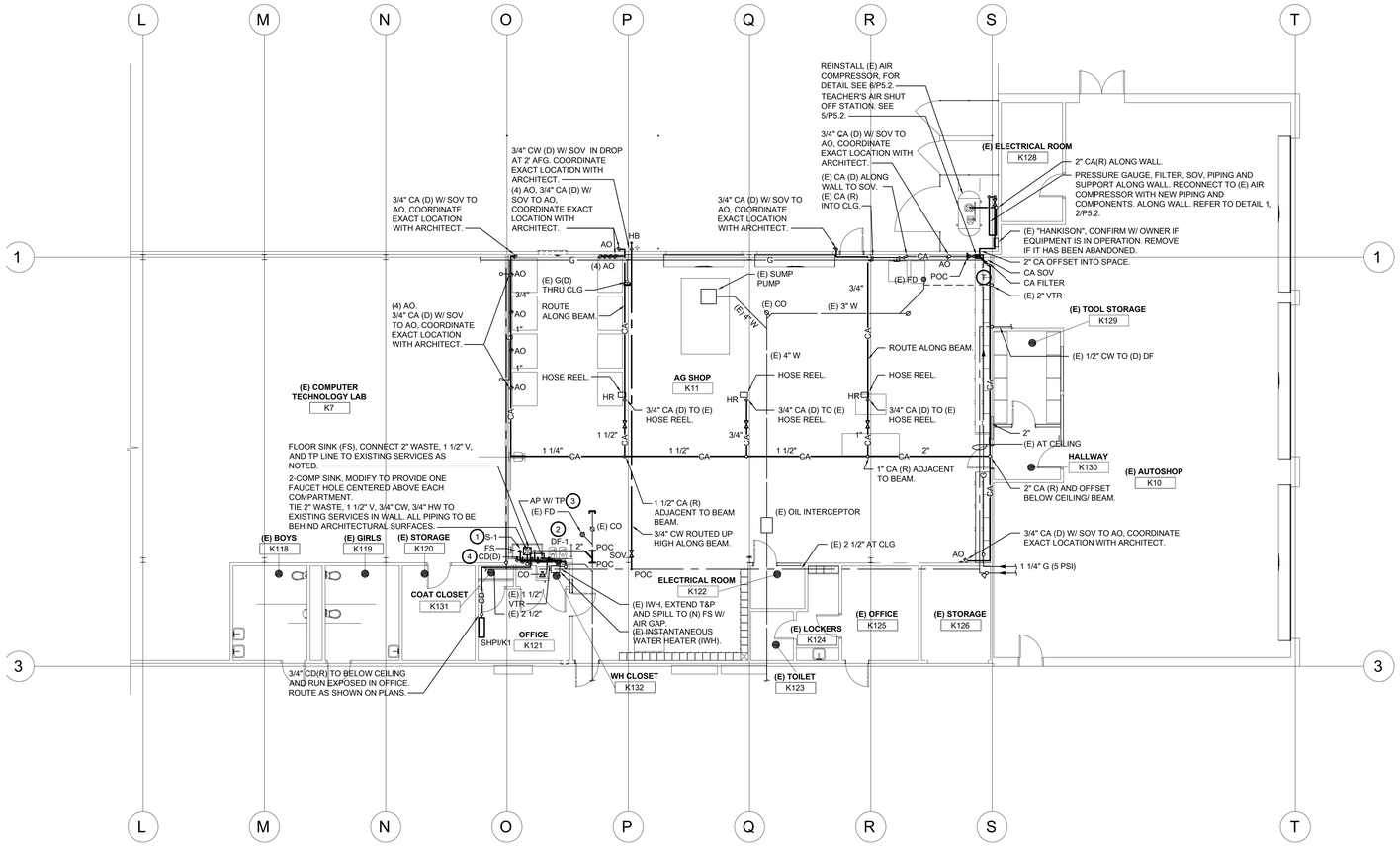


PLUMBING FLOOR PLAN

SCALE : 1/8" = 1'-0"

1 / P2.1

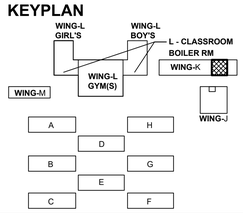
GENERAL NOTES

1. TIE VENT LINES FROM DRINKING FOUNTAIN (DF), FLOOR SINK (FS) AND SINK (S) INTO THE EXISTING VENT THROUGH THE ROOF (VTR).

SHEET NOTES:

1. SINK (S), CONNECT 2" W, 1 1/2" V, 3/4" H & CW TO EXISTING PIPING SERVICES WITHIN WALL.
2. DRINKING FOUNTAIN (DF), CONNECT 2" W, 1 1/2" V, 3/4" H & CW TO EXISTING PIPING SERVICES WITHIN WALL. PROVIDE WASTE CLEANOUT (CO) IN ACCESSIBLE LOCATION WHERE WASTE GOES THROUGH WALL NEAR DF.
   PROVIDE HOSE BIBB (HB) BELOW DF.
3. ACCESS DOOR (D) W/ TRAP PRIMER (TP) IN WALL. CONNECT (N) 3/4" CW LINE INTO (E) MIN. 3/4" CW IN WALL. 1/2" (D) FROM TP TO FS.
4. 3/4" CD(D) IN WALL AND ROUTE AND SPILL TO FS W/ AIR GAP.

KEYPLAN



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PLUMBING FLOOR PLAN

P2.1

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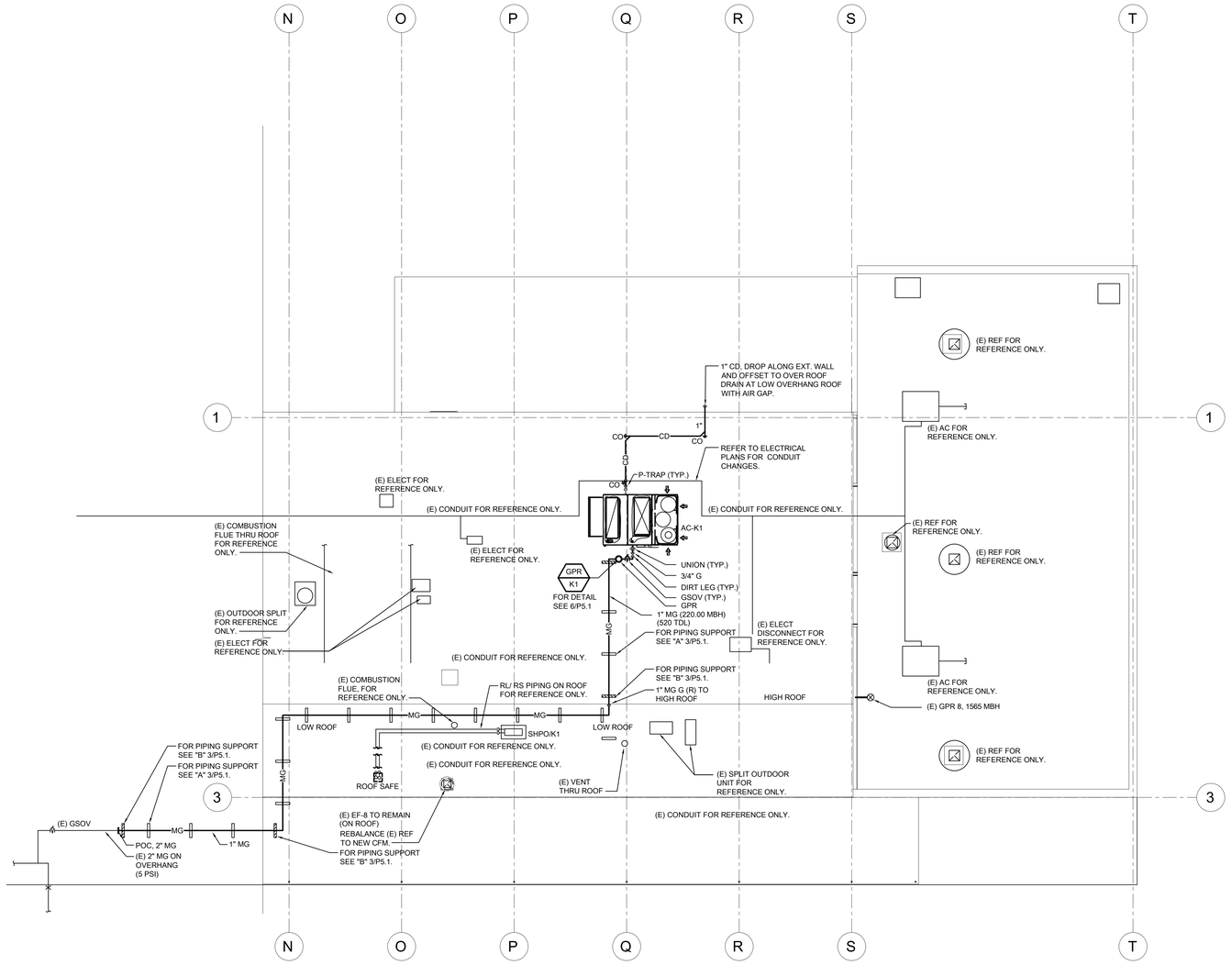


PLUMBING ROOF PLAN

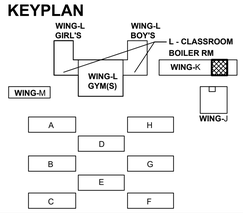
SCALE : 1/8" = 1'-0"

1 / P3.1

GENERAL NOTES

1. (E) ELECTRICAL DEVICES AND CONDUIT SHOWN ONLY FOR REFERENCE AND SHALL BE CONFIRMED IN THE FIELD FOR THE COORDINATION FOR THE LOCATION AND INSTALLATION OF NEW EQUIPMENT.
2. FOR PIPE SUPPORT SEE DETAIL 2, 3/P5.1.
3. SEE 2/P5.1 FOR GAS PIPE ANCHOR GUIDELINES.

KEYPLAN



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PLUMBING ROOF PLAN

P3.1

QC	
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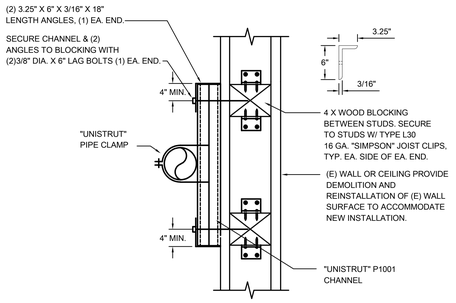
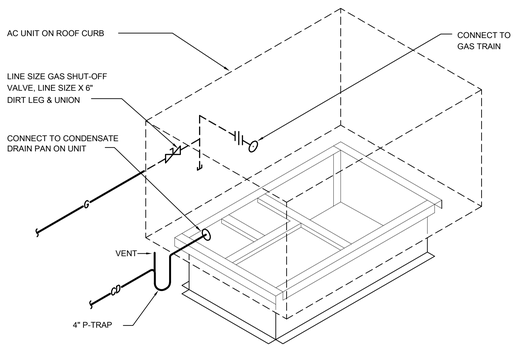


NOTES:
1. ALL CHANNELS AND FITTINGS SHALL BE ELECTRO-GALVANIZED.
2. SPACE PIPE SUPPORTS ON GRADE AT 4' O.C. MIN. 2 SUPPORTS.
3. SEE PLANS FOR NUMBER OF PIPES ON EACH SUPPORT.

PIPING MOUNTED ON WALL

SCALE : NONE

7 / P5.1



AC UNIT PIPING

SCALE : NONE

8 / P5.1

VERTICAL PIPING SUPPORT SPACING				
PIPE, NOMINAL SIZE OF PIPE (IN.)	STEEL THREADED OR WELDED	STEEL GAS	COPPER BRAZED OR SOLDERED,	CPVC & PVC,
1/2" - 1"	12', SPACING OF HANGERS AND SUPPORTS FOR PIPING ASSEMBLED WITH MECH. JOINTS IN ACCORDANCE W/ STANDARDS & AHJ.	6'	EACH FLOOR, NOT TO EXCEED 10'. SPACING OF HANGERS AND SUPPORTS FOR PIPING ASSEMBLED WITH MECH. JOINTS IN ACCORDANCE W/ STANDARDS & AHJ.	BASE AND EACH FLOOR WITH MID-STORY GUIDES.

VERTICAL PIPING SUPPORT SPACING

SCALE : NONE

9 / P5.1

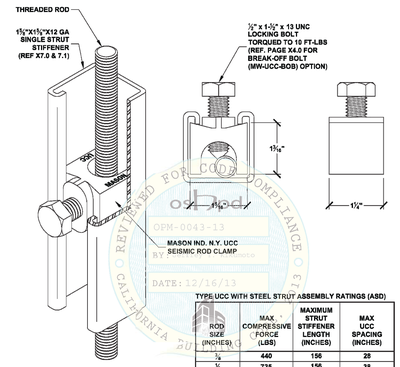
HORIZONTAL PIPING SUPPORT SPACING				
PIPE, NOMINAL SIZE OF PIPE (IN.)	STEEL THREADED OR WELDED,	STEEL GAS	COPPER BRAZED OR SOLDERED,	CPVC & PVC,
1/2" - 1"	6'	6'	5'	3'

HORIZONTAL PIPING SUPPORT SPACING

SCALE : NONE

10 / P5.1

MASON IND. N.Y. UCC - SEISMIC ROD CLAMPS FOR STRUT CHANNELS



TYPE UCC WITH STEEL STRUT ASSEMBLY RATINGS (ASD)

ROD SIZE (INCHES)	MAX COMPRESSIVE FORCE (LBS)	MAXIMUM STRUT STIFFENER LENGTH (INCHES)	MAX UCC SPACING (INCHES)
½	440	156	28
⅝	735	156	38
¾	1155	156	48
⅞	1700	156	57

MASON WEST, INC.
1601 E. Miraloma Ave. Placentia, CA 92870
TEL (714) 630 - 0701, www.masonwest.com

Jimmy Y.C. Wong, SE
California SE No. S4744

PAGE X3.0

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ROD STIFFENER DETAIL

SCALE : NONE

4 / P5.1

PIPING FROM JOIST/ CEILING STUD

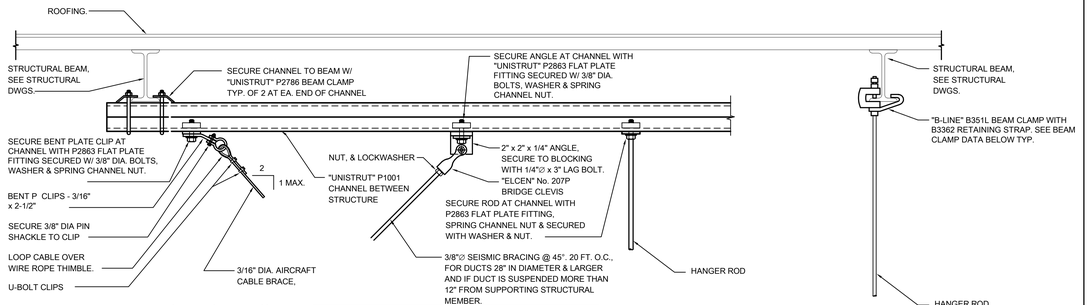
SCALE : NONE

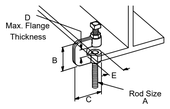
5 / P5.1

GAS PRESSURE REGULATOR ON ROOF DETAIL

SCALE : NONE

6 / P5.1

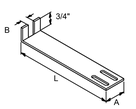




BEAM CLAMP DATA

BEAM CLAMP DATA							
Part No.	Rod Size 'A'	'B' In.	'C' In.	'D' In.	'E' In.	Design Load Lbs.
B351L-3/8	3/8"-16	2 3/8"	2 3/8"	3/4"	1 3/8"	230
B351L-1/2	1/2"-13	2 3/8"	2 3/8"	3/4"	1 3/8"	380
B351L-5/8	5/8"-11	2 3/8"	2 1/4"	3/4"	1 3/8"	550
B351L-3/4	3/4"-10	2 3/8"	3 1/4"	3/4"	1 3/8"	630
B351L-7/8	7/8"-9	3"	3 1/4"	1"	1 7/8"	1200

NOTE: PROVIDE BRACING AS NOTED ABOVE AND PER 2022 CBC 1617A.1.25, EXCEPTION 2 FOR DUCTWORK OR 1617A.1.26, EXCEPTION 2 FOR PIPING, AS REQUIRED TO AVOID IMPACT WITH ADJACENT DUCTS AND/OR MECHANICAL COMPONENTS.



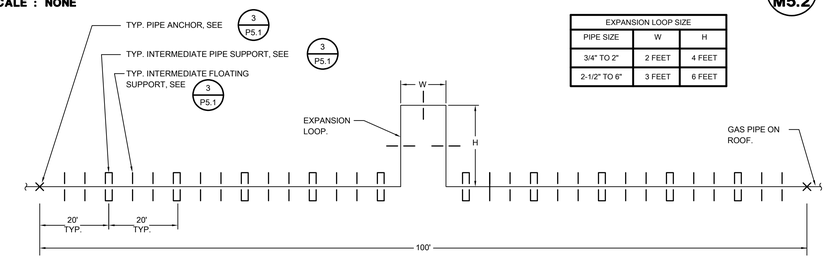
RETAINING STRAP

RETAINING STRAP								
Part No.	For Use With	WT./C FOR LENGTH OF 6" = LBS	8" = LBS	10" = LBS	12" = LBS	'A' in.	'B' in.
B3362-L	B351L-3/8" & 1/2"	17	24	31	38	1.250"	7/16"
B3363-L	B351L-5/8" & 3/4" - B3036L-5/8" & 1/2"	16	23	30	37	1.250"	5/8"
B3364-L	B3036L-5/8" & 3/4"	16	23	30	37	1.250"	11/16"
B3365-L	B351L-7/8"	21	29	37	46	1.500"	3/4"

UPPER ATTACHMENT AT STRUCTURE

SCALE : NONE

1 / M5.2



EXPANSION LOOP SIZE		
PIPE SIZE	W	H
3/4" TO 2"	2 FEET	4 FEET
2-1/2" TO 6"	3 FEET	6 FEET

NOTES:
1. INTERMEDIATE PIPE SUPPORTS SHALL BE SPACED AT 20' ON CENTER.
2. INTERMEDIATE FLOATING SUPPORTS SHALL BE SPACED BETWEEN INTERMEDIATE PIPE SUPPORTS WITH SPACING AS REQUIRED TO MEET THE MINIMUM PIPE SPACING REQUIREMENTS NOTED IN THE PIPING CHART BELOW.
3. INTERMEDIATE SUPPORTS AND INTERMEDIATE FLOATING SUPPORTS SHALL HAVE PIPE CLAMPS INSTALLED LOOSE AROUND PIPE TO ALLOW LONGITUDINAL MOVEMENT OF THE PIPE. PIPE ANCHORS SHALL HAVE PIPE CLAMPS INSTALLED TIGHT AROUND PIPE TO PROVIDE SECURE ANCHORAGE.
4. REFER TO DETAILS 9, 10/P5.1 FOR ADDITIONAL PIPE SUPPORT REQUIREMENTS.

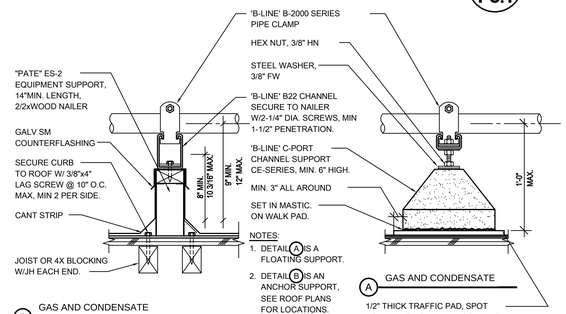
2022 CPC
TABLE 1210.2.4.1
SUPPORT OF PIPING
NFPA 547.2.5.2
TABLE 7.2.5.2
SUPPORT OF PIPING CHART

STEEL PIPE, NOMINAL SIZE OF PIPE (IN.)	SPACING OF SUPPORTS (FT.)	NOMINAL SIZE OF TUBING SMOOTH-WALL (IN. O.D.)	SPACING OF SUPPORTS (FT.)
3/4 OR 1	6	5/8 OR 3/4	6
1 1/4 OR LARGER (HORZ.)	10	1 OR LARGER (HORIZ.)	8
1 1/4 OR LARGER (VERT.)	EVERY FLOOR LEVEL	1 OR LARGER (VERT.)	EVERY FLOOR LEVEL

GAS PIPE ON ROOF SUPPORT/ANCHORAGE DETAIL

SCALE : NONE

2 / P5.1



NOTES:
1. DETAIL (A) IS A FLOATING SUPPORT.
2. DETAIL (B) IS AN ANCHOR SUPPORT, SEE ROOF PLANS FOR LOCATIONS.
3. DETAIL (A) & (B) MAX. SPACING AT 8' O.C.

(A) GAS AND CONDENSATE

1/2" THICK TRAFFIC PAD, SPOT
NOTE: AT SINGLE-PLY ROOF, PROVIDE ROOFING MFRS ACCEPTABLE PAD

(B) GAS AND CONDENSATE AT ANCHOR POINT

SEE ROOF PLANS FOR LOCATIONS AND AT 20'-0" MAX SPACING, MIN. 2 PER RUN.

NOTE: INTERMEDIATE SUPPORTS SHALL HAVE PIPE CLAMPS INSTALLED LOOSE AROUND PIPE TO ALLOW LONGITUDINAL MOVEMENT OF THE PIPE. PIPE ANCHORS SHALL HAVE PIPE CLAMPS INSTALLED TIGHT AROUND PIPE TO PROVIDE SECURE ANCHORAGE.
NOTE: FOR PIPE SUPPORT SPACING REFER TO DETAILS 2, 9, 10/ P5.1

LEGEND (B) ANCHOR (A) FLOATING
SYMBOL

NOTE: INTERMEDIATE FLOATING SUPPORTS SHALL HAVE PIPE CLAMPS INSTALLED LOOSE AROUND PIPE TO ALLOW LONGITUDINAL MOVEMENT OF THE PIPE.
NOTE: FOR PIPE SUPPORT SPACING REFER TO DETAILS 2, 9, 10/ P5.1

PIPE ON ROOF MOUNTING DETAIL

SCALE : NONE SUPPORT PER CPC 1210.2.4.1 & 1210.2.4.2 AND NFPA 54:7.2.6.2, 7.2.6.3, 7.2.6.4

3 / P5.1

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PLUMBING DETAILS

P5.1

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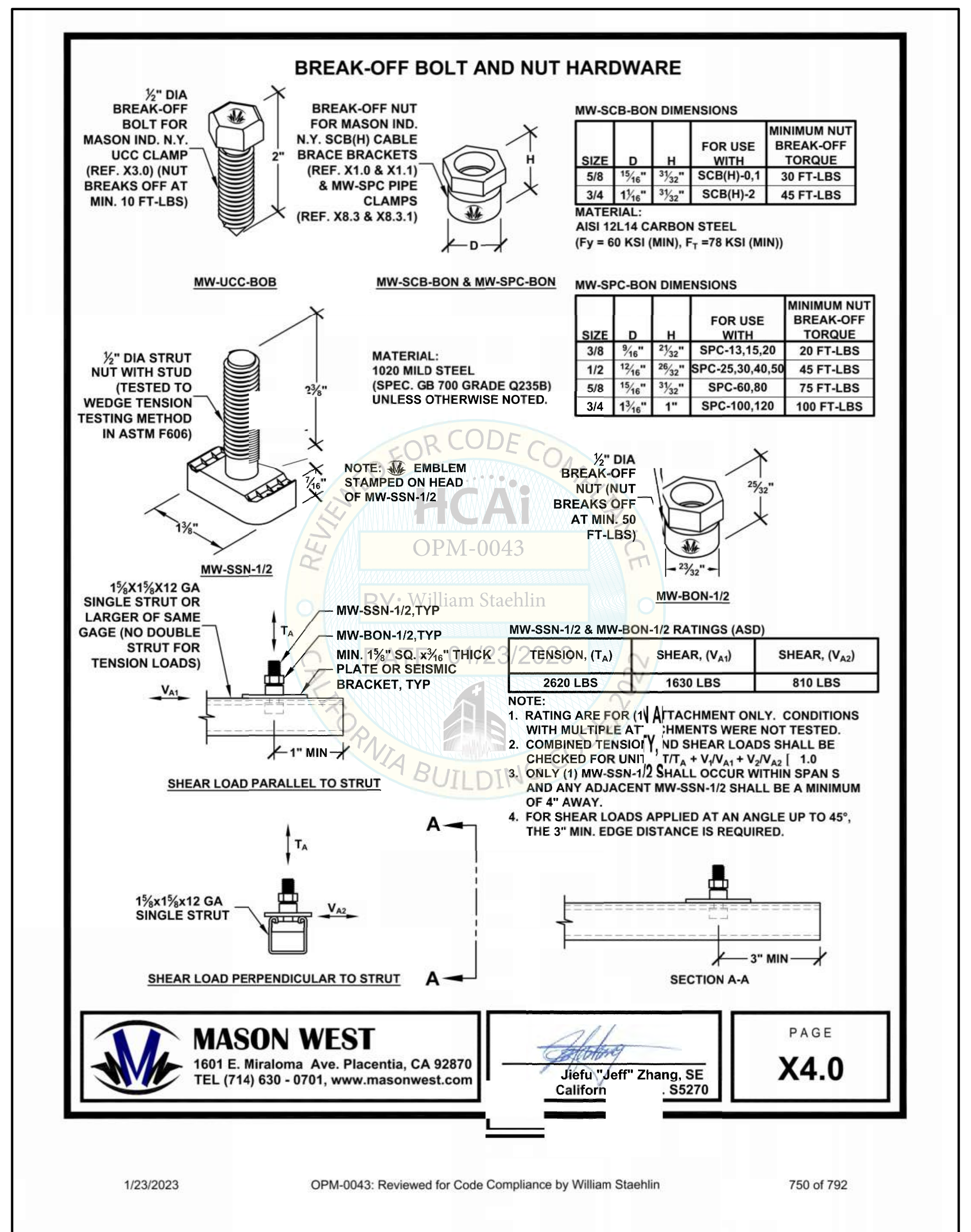

BREAK-OFF BOLT AND NUT HARDWARE
MW-UCC-BOB
MW-SCB-BON & MW-SPC-BON
MW-SSN-1/2
MW-BON-1/2
SHEAR LOAD PARALLEL TO STRUT
SHEAR LOAD PERPENDICULAR TO STRUT
SECTION A-A
MASON WEST
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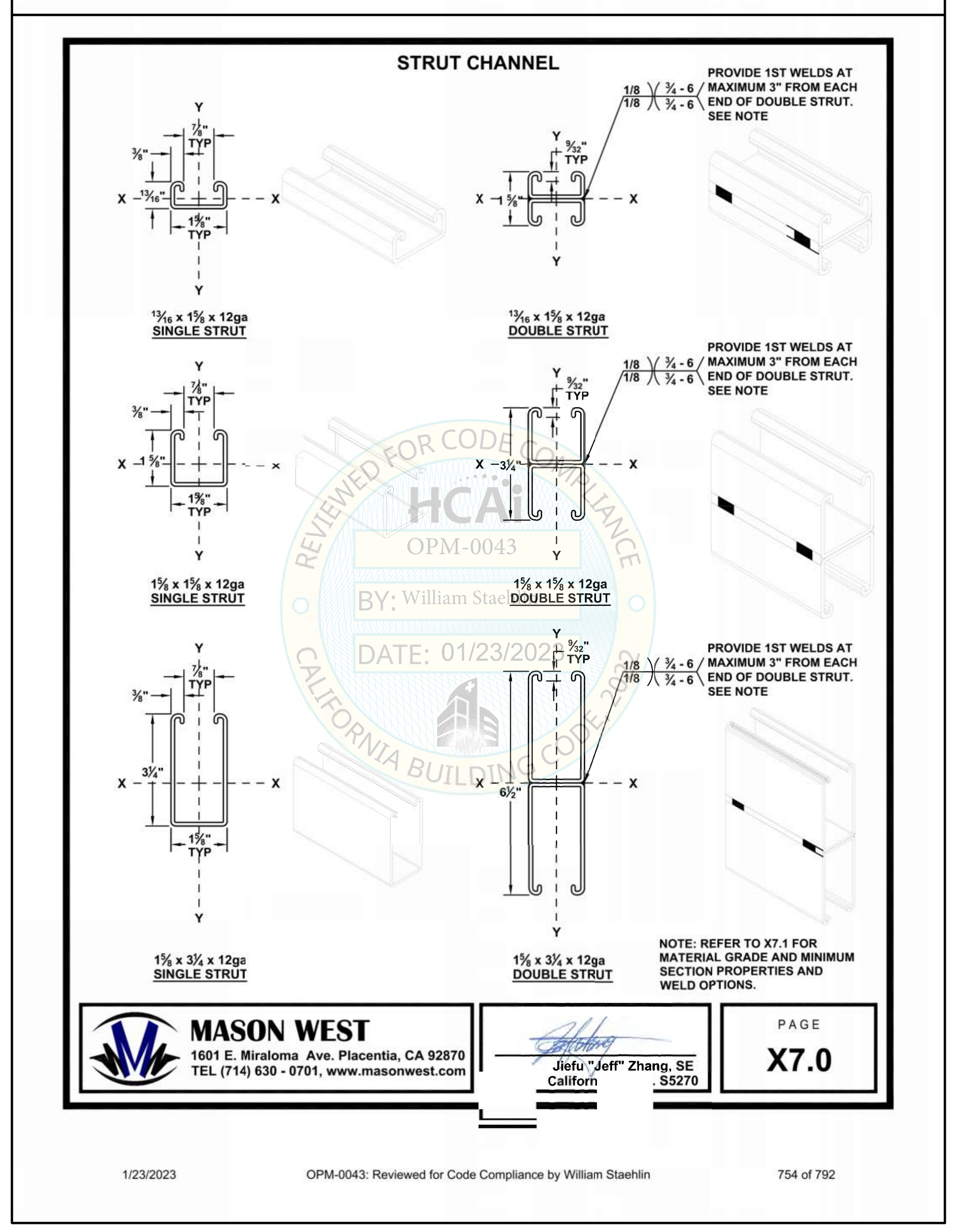

STRUT CHANNEL
SINGLE STRUT
DOUBLE STRUT
PROVIDE 1ST WELDS AT MAXIMUM 3" FROM EACH END OF DOUBLE STRUT. SEE NOTE
NOTE: REFER TO X7.1 FOR MATERIAL GRADE AND MINIMUM SECTION PROPERTIES AND WELD OPTIONS.
MASON WEST
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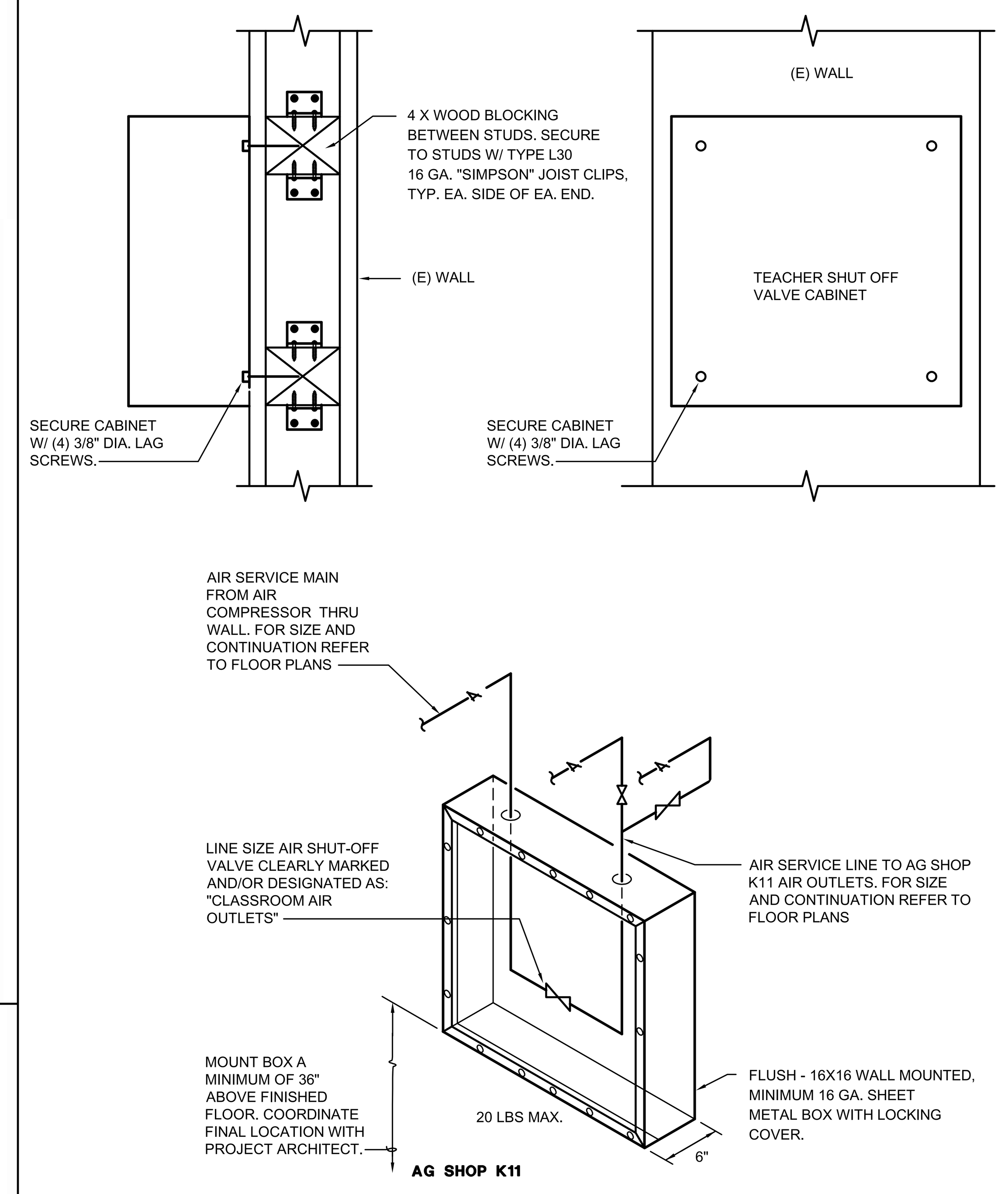
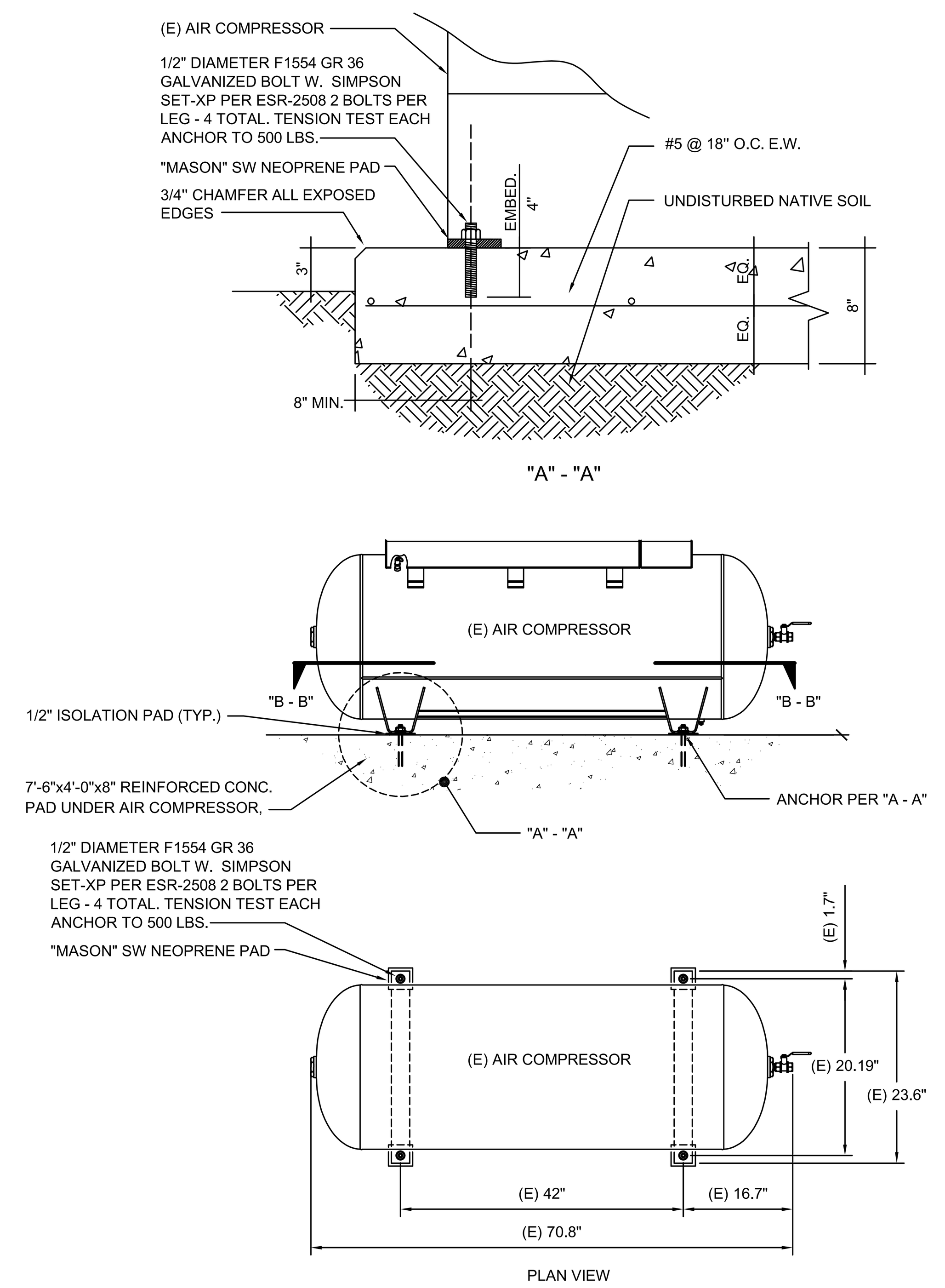


4 X WOOD BLOCKING BETWEEN STUDS. SECURE TO STUDS W/ TYPE L30 16 GA. "SIMPSON" JOIST CLIPS, TYP. EA. SIDE OF EA. END.
(E) WALL
SECURE CABINET W/ (4) 3/8" DIA. LAG SCREWS.
TEACHER SHUT OFF VALVE CABINET
AIR SERVICE MAIN FROM AIR COMPRESSOR THRU WALL. FOR SIZE AND CONTINUATION REFER TO FLOOR PLANS
LINE SIZE AIR SHUT-OFF VALVE CLEARLY MARKED AND/OR DESIGNATED AS: "CLASSROOM AIR OUTLETS"
AIR SERVICE LINE TO AG SHOP K11 AIR OUTLETS. FOR SIZE AND CONTINUATION REFER TO FLOOR PLANS
MOUNT BOX A MINIMUM OF 36" ABOVE FINISHED FLOOR. COORDINATE FINAL LOCATION WITH PROJECT ARCHITECT.
20 LBS MAX.
FLUSH - 16X16 WALL MOUNTED, MINIMUM 16 GA. SHEET METAL BOX WITH LOCKING COVER.
AG SHOP K11

TEACHER'S AIR SHUT-OFF VALVE IN WALL BOX

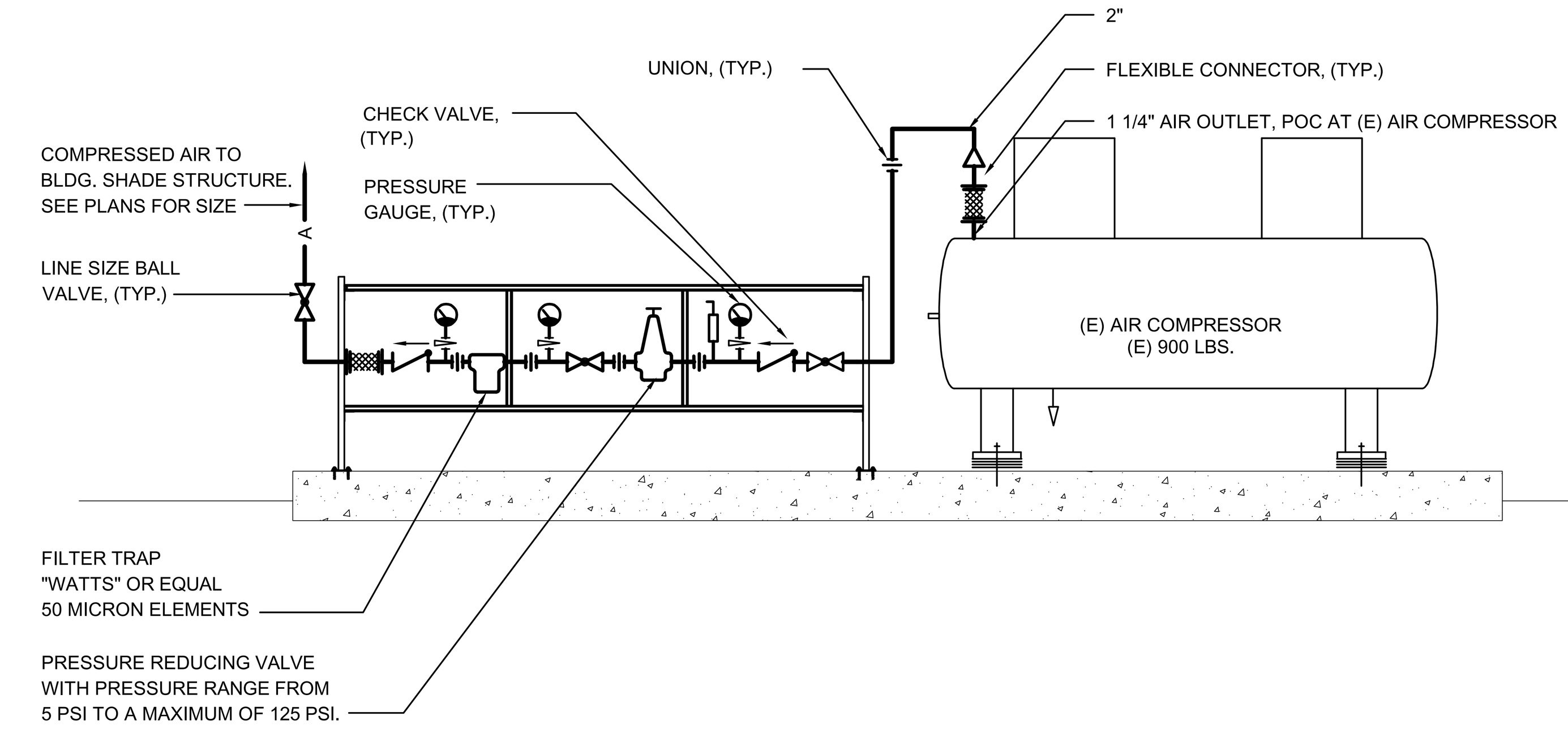
SCALE : NONE — 5 / P5.2



(E) AIR COMPRESSOR
1/2" DIAMETER F1554 GR 36 GALVANIZED BOLT W. SIMPSON SET-XP PER ESR-2508 2 BOLTS PER LEG - 4 TOTAL. TENSION TEST EACH ANCHOR TO 500 LBS.
"MASON" SW NEOPRENE PAD
3/4" CHAMFER ALL EXPOSED EDGES
#5 @ 18" O.C. E.W.
UNDISTURBED NATIVE SOIL
8" MIN.
"A" - "A"
1/2" ISOLATION PAD (TYP.)
"B - B"
7'-6"x4'-0"x8" REINFORCED CONC. PAD UNDER AIR COMPRESSOR.
ANCHOR PER "A - A"
(E) 20.19"
(E) 23.6"
(E) 42"
(E) 16.7"
(E) 70.8"
PLAN VIEW

AIR COMPRESSOR ANCHORING

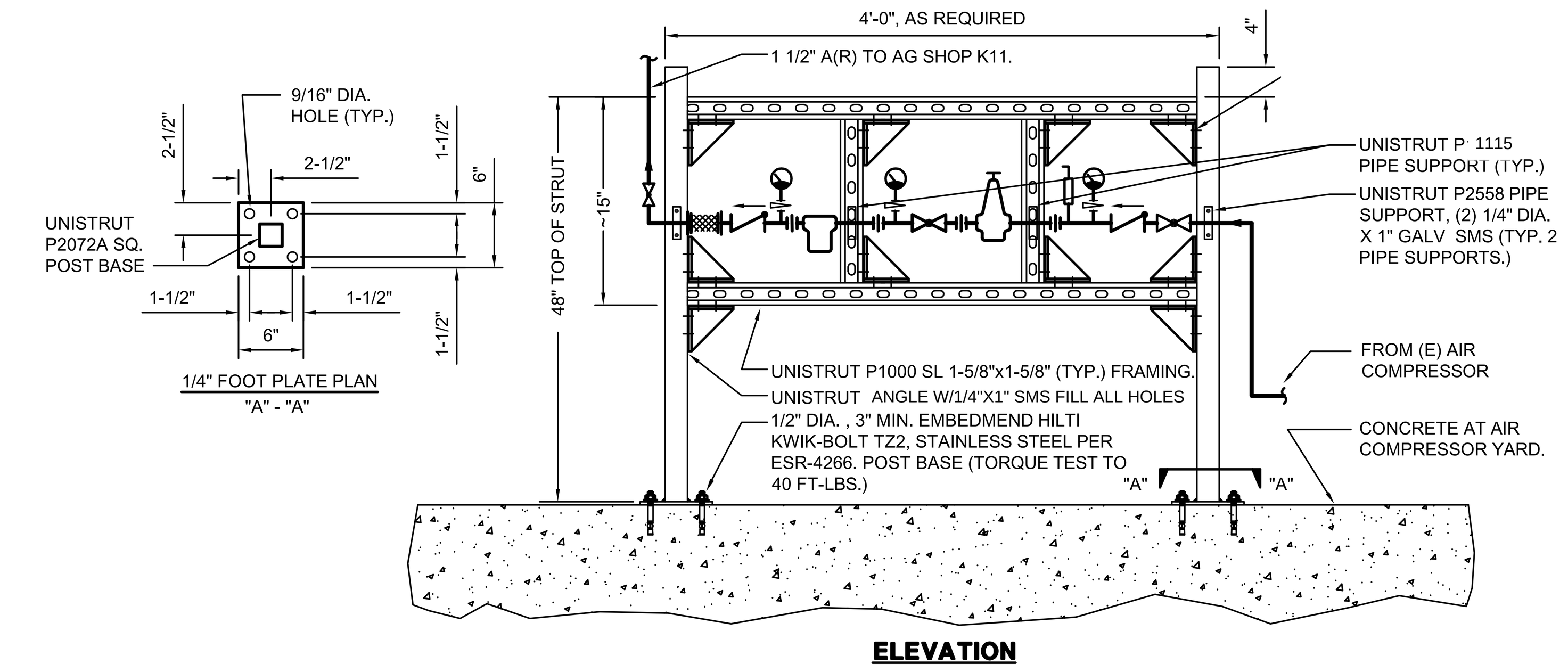
SCALE : NONE — 6 / P5.2



2"
UNION, (TYP.)
FLEXIBLE CONNECTOR, (TYP.)
1 1/4" AIR OUTLET, POC AT (E) AIR COMPRESSOR
CHECK VALVE, (TYP.)
COMPRESSED AIR TO BLDG. SHADE STRUCTURE. SEE PLANS FOR SIZE
PRESSURE GAUGE, (TYP.)
LINE SIZE BALL VALVE, (TYP.)
(E) AIR COMPRESSOR
(E) 900 LBS.
FILTER TRAP "WATTS" OR EQUAL 50 MICRON ELEMENTS
PRESSURE REDUCING VALVE WITH PRESSURE RANGE FROM 5 PSI TO A MAXIMUM OF 125 PSI.

AIR COMPRESSOR DIAGRAM AND DETAIL

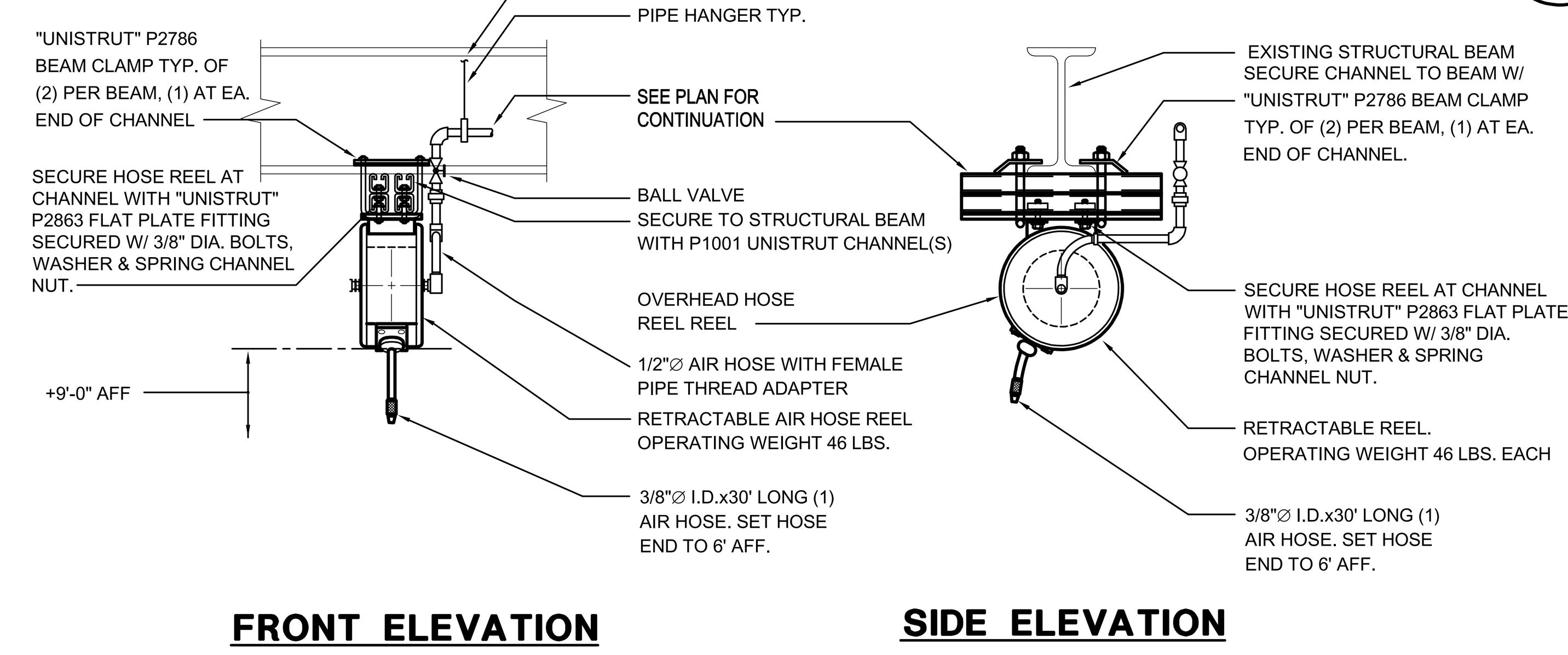
SCALE : NONE — 1 / P5.2



4'-0", AS REQUIRED
1 1/2" A(R) TO AG SHOP K11.
9/16" DIA. HOLE (TYP.)
UNISTRUT P2072A SQ. POST BASE
1/4" FOOT PLATE PLAN
"A" - "A"
48" TOP OF STRUT
UNISTRUT P 1115 PIPE SUPPORT (TYP.)
UNISTRUT P2558 PIPE SUPPORT, (2) 1/4" DIA. X 1" GALV SMS (TYP. 2 PIPE SUPPORTS.)
FROM (E) AIR COMPRESSOR
CONCRETE AT AIR COMPRESSOR YARD.
UNISTRUT P1000 SL 1-5/8"x1-5/8" (TYP.) FRAMING.
UNISTRUT ANGLE W/1/4"X1" SMS FILL ALL HOLES
1/2" DIA. , 3" MIN. EMBEDMEND HILTI KWIK-BOLT TZ2, STAINLESS STEEL PER ESR-4266, POST BASE (TORQUE TEST TO 40 FT-LBS.)
ELEVATION

FILTER RACK MOUNTING DETAIL

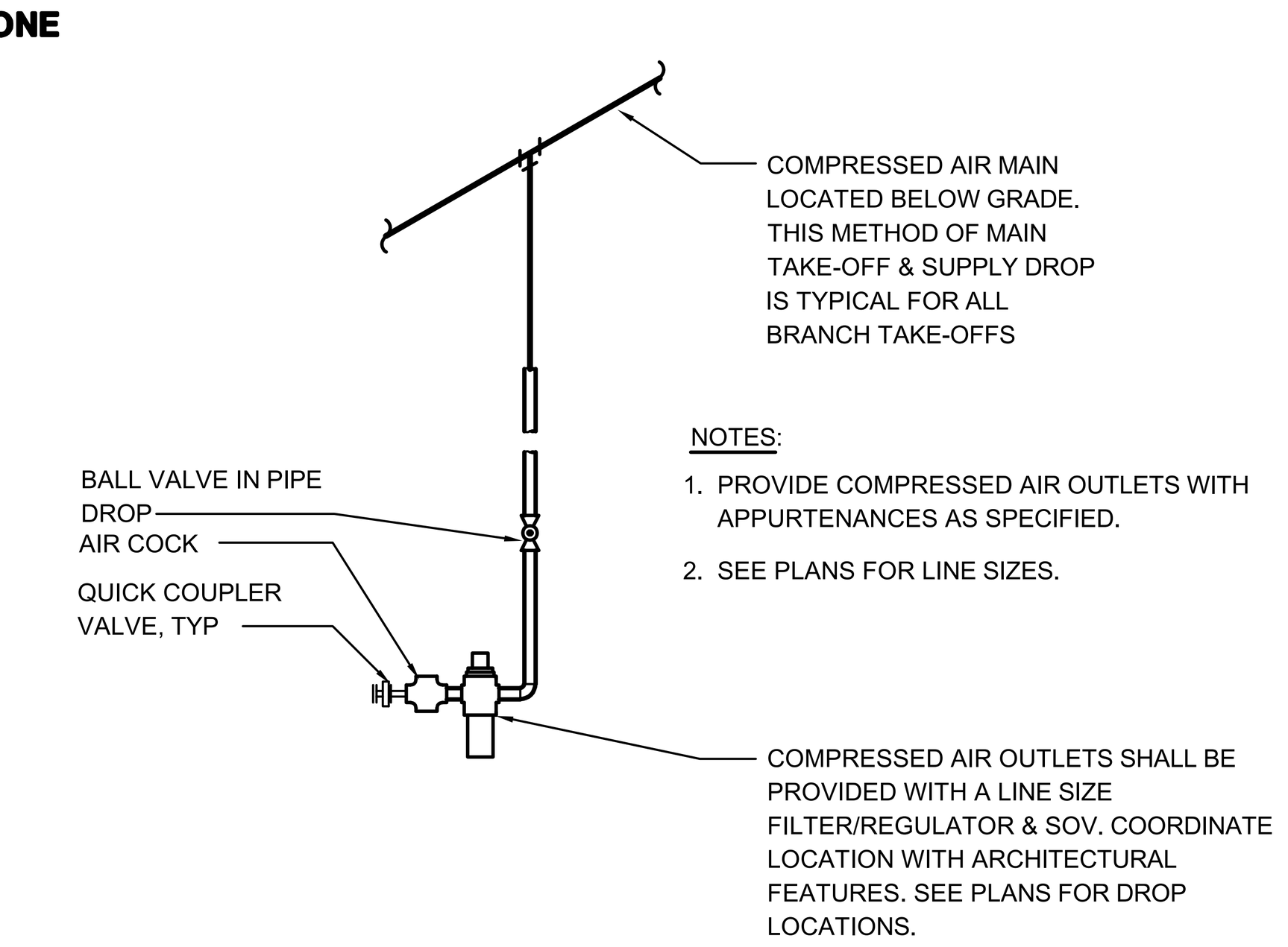
SCALE : NONE — 2 / P5.2



5/P5.1 FOR ATTACHMENT
PIPE HANGER TYP.
"UNISTRUT" P2786 BEAM CLAMP TYP. OF (2) PER BEAM, (1) AT EA. END OF CHANNEL
SEE PLAN FOR CONTINUATION
SECURE HOSE REEL AT CHANNEL WITH "UNISTRUT" P2863 FLAT PLATE FITTING SECURED W/ 3/8" DIA. BOLTS, WASHER & SPRING CHANNEL NUT.
BALL VALVE
SECURE TO STRUCTURAL BEAM WITH P1001 UNISTRUT CHANNEL(S)
OVERHEAD HOSE REEL REEL
+9'-0" AFF
1/2"Ø AIR HOSE WITH FEMALE PIPE THREAD ADAPTER
RETRACTABLE AIR HOSE REEL OPERATING WEIGHT 46 LBS.
3/8"Ø I.D.x30' LONG (1) AIR HOSE, SET HOSE END TO 6' AFF.
EXISTING STRUCTURAL BEAM SECURE CHANNEL TO BEAM W/ "UNISTRUT" P2786 BEAM CLAMP TYP. OF (2) PER BEAM, (1) AT EA. END OF CHANNEL.
SECURE HOSE REEL AT CHANNEL WITH "UNISTRUT" P2863 FLAT PLATE FITTING SECURED W/ 3/8" DIA. BOLTS, WASHER & SPRING CHANNEL NUT.
RETRACTABLE REEL. OPERATING WEIGHT 46 LBS. EACH
3/8"Ø I.D.x30' LONG (1) AIR HOSE, SET HOSE END TO 6' AFF.
FRONT ELEVATION
SIDE ELEVATION

HOSE REEL MOUNTING DETAIL

SCALE : NONE — 3 / P5.2



COMPRESSED AIR MAIN LOCATED BELOW GRADE. THIS METHOD OF MAIN TAKE-OFF & SUPPLY DROP IS TYPICAL FOR ALL BRANCH TAKE-OFFS
BALL VALVE IN PIPE DROP
AIR COCK
QUICK COUPLER VALVE, TYP
COMPRESSED AIR OUTLETS SHALL BE PROVIDED WITH A LINE SIZE FILTER/REGULATOR & SOV. COORDINATE LOCATION WITH ARCHITECTURAL FEATURES. SEE PLANS FOR DROP LOCATIONS.

NOTES:

1. PROVIDE COMPRESSED AIR OUTLETS WITH APPURTENANCES AS SPECIFIED.
2. SEE PLANS FOR LINE SIZES.

COMPRESSED AIR PIPING DETAIL AT WALL

SCALE : NONE — 4 / P5.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT CHARLES ERIC DANDY No. C32876 EXP. 03/31/25 STATE OF CALIFORNIA

M 33498 Exp. 9/30/24 MECHANICAL STATE OF CALIFORNIA
DATE SIGNED: 06/06/2024

capital engineering
Rancho Cordova, California
RL — PM - DESIGN TEAM
232073.00 — PROJECT NO.

SUSD
55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

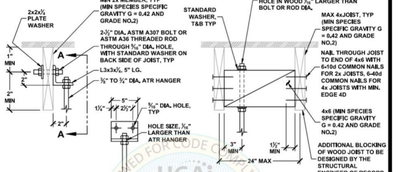
No.	Description	Date
1	Revision 1	Date 1

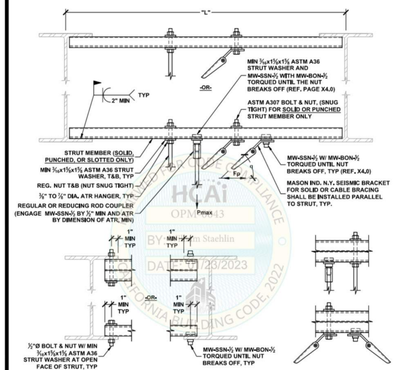
PROJECT No.: 2023-014.00

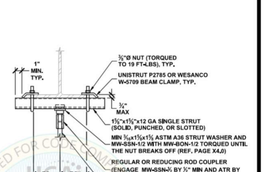
CONSTRUCTION DOCUMENTS

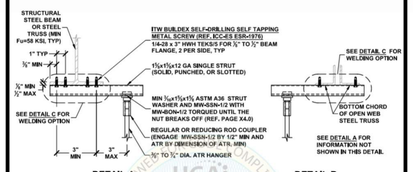
PLUMBING DETAILS

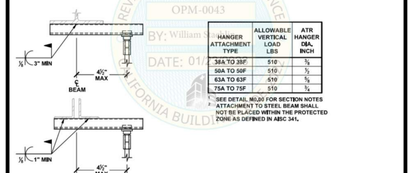
P5.2

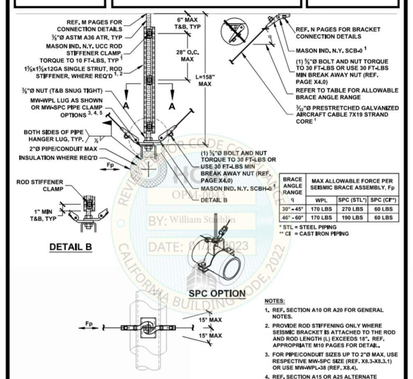


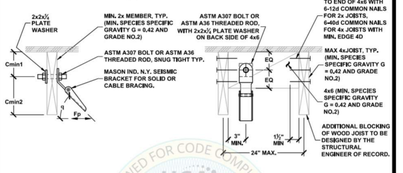


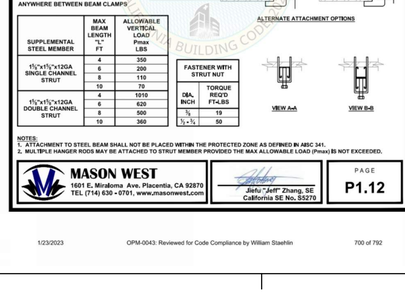


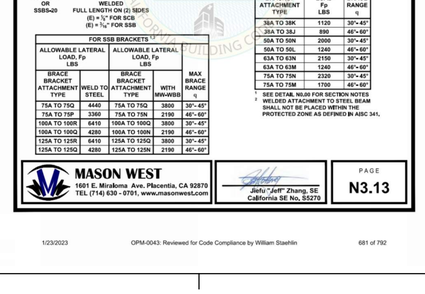


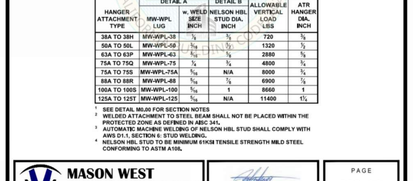


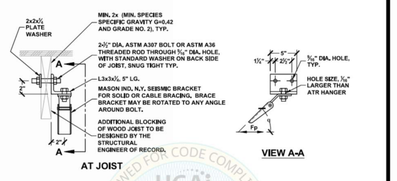


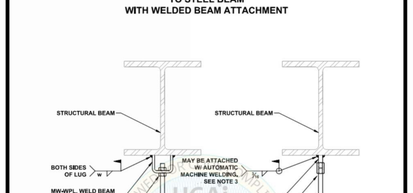












QC
INI %

HANGER ATTACHMENT TO WOOD JOIST
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
PAGE M4.10

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SUPPLEMENTAL STEEL DETAIL
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
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ATR HANGER ATTACHMENT TO STEEL BEAM WITH STEEL BEAM CLAMPS
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
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HANGER ATTACHMENT TO STEEL BEAM OR OPEN WEB STEEL TRUSS WITH SELF-DRILLING SELF-TAPPING METAL SCREWS
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
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HANGER ROD DIAMETER = ⅜"
PIPING/CONDUIT TRANSVERSE SEISMIC CABLE BRACING SYSTEM 2"Ø PIPE/CONDUIT MAX
KIT OPTIONS C0T
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
PAGE C2.10

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SEISMIC BRACKET ATTACHMENT TO STRUCTURAL TIMBER WITH (1) THRU BOLT OR THREADED ROD
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
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SUPPLEMENTAL STEEL DETAIL
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Jiefu "Jeff" Zhang, SE California SE No. S5270
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SEISMIC BRACKET ATTACHMENT TO STEEL BEAM OR OPEN WEB STEEL TRUSS WITH SELF-DRILLING FASTENERS OR WELDING
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Jiefu "Jeff" Zhang, SE California SE No. S5270
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HANGER ATTACHMENT TO STEEL BEAM OR OPEN WEB STEEL TRUSS WITH SELF-DRILLING SELF-TAPPING METAL SCREWS
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HANGER ROD DIAMETER = ⅜"
PIPING/CONDUIT LONGITUDINAL SEISMIC CABLE BRACING SYSTEM 2"Ø PIPE/CONDUIT MAX
KIT OPTIONS C0L
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
PAGE C2.11

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SEISMIC BRACKET ATTACHMENT TO WOOD JOIST
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SUPPLEMENTAL STEEL DETAIL WITH (2) BADGER INDUSTRIES SBC158 SERIES STEEL BEAM CLAMPS
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
PAGE P1.12

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SEISMIC BRACKET WELDED ATTACHMENT TO A STRUCTURAL STEEL BEAM
MASON WEST 1601 E. Miraloma Ave. Placentia, CA 92870 TEL (714) 630 - 0701, www.masonwest.com
Jiefu "Jeff" Zhang, SE California SE No. S5270
PAGE N3.13

1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 681 of 792

ATR HANGER ATTACHMENT TO STEEL BEAM WITH WELDED BEAM ATTACHMENT
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Jiefu "Jeff" Zhang, SE California SE No. S5270
PAGE M3.12

1/23/2023 OPM-0043: Reviewed for Code Compliance by William Staehlin 553 of 792

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT
CHARLES ERIC DANDY
No. C32876
EXP. 03/31/25
STATE OF CALIFORNIA

M 33498
Exp. 9/30/24
MECHANICAL
DATE SIGNED: 06/06/2024

capital engineering
RANCHO CORDOVA, CALIFORNIA
RL 232073.00
PM - DESIGN TEAM PROJECT NO.

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

PLUMBING DETAILS

P5.3

ELECTRICAL LEGEND

SYMBOL/ ABBREVIATION	DESCRIPTION
A	AMPERES, AMBER
AC	ALTERNATING CURRENT, AIR CONDITIONER
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AVAILABLE INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
C	CONDUIT, CLOSE, CONTROL
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED OWNER INSTALLED
CLG	CEILING
COM	COMMUNICATION
CT	CURRENT TRANSFORMER
CU	COPPER
DD	DROP DOWN RECEPTACLE (REFER TO 4/E0.3)
DN	DOWN
EF	EXHAUST FAN
F	FUSE
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID STEEL CONDUIT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LED	LIGHT EMITTING DIODE
MDB	MAIN DISTRIBUTION BOARD
MDP	MAIN DISTRIBUTION PANEL
MSB	MAIN SWITCHBOARD
MT, MTD	MOUNT, MOUNTED
MT	EMPTY CONDUIT WITH NYLON PULL CORD
N/A	NOT APPLICABLE
N	NEUTRAL
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OS	OCCUPANCY SENSOR
PH	PHASE
PNL	PANEL
REF	REFERENCE
REQD	REQUIRED
S	SWITCH
SIM	SIMILAR
TELE	TELEPHONE
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
V	VOLTS, VOLTAGE
W/	WITH
W	WIRE, WHITE
WP	WEATHERPROOF
XFMR	TRANSFORMER
	CONNECTIONS / EQUIPMENT
	HEAVY DUTY FUSED DISCONNECT SWITCH
J OR J	JUNCTION BOX
J	JUNCTION BOX WITH FLEX CONNECTION TO EQUIPMENT
J	WALL-MOUNTED JUNCTION BOX
	NON-FUSED DISCONNECT SWITCH
T	TRANSFORMER
M	DOORBELL - NUTONE #LA11WH +7'-6"
	DOORBELL PUSH BUTTON
	ENCLOSED CIRCUIT BREAKER

ELECTRICAL LEGEND cont'd

SYMBOL/ ABBREVIATION	DESCRIPTION
	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
RXP	SUSPENDED REMOTE POWER SUPPLY
	PHOTOELECTRIC SMOKE DETECTOR
	COMBINATION SMOKE ALARM AND CARBON MONOXIDE DETECTOR, SINGLE STATION
FS	SPRINKLER FLOW SWITCH
PIV	SPRINKLER POST INDICATOR VALVE
TS	SPRINKLER TAMPER SWITCH
M	F.A ADDRESSABLE MONITOR MODULE
C	FIRE ALARM CONTROL RELAY
15cd	STROBE WITH CANDELA RATING
15cd	HORN/STROBE WITH CANDELA RATING
	HORN
WP	EXTERIOR 120V SPRINKLER HORN/STROBE
	GENERAL
	NEW WORK
XX-X LOCATION	EQUIPMENT IDENTIFICATION
1	KEYED NOTE
LIGHTING	
	CEILING FAN
	EXIT SIGN CEILING MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN
	EXIT SIGN WALL MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN
	AREA LUMINAIRE ARM MOUNTED WITH POLE AND CONCRETE BASE
	SURFACE OR PENDANT MOUNTED LUMINAIRE
	SURFACE OR PENDANT MOUNTED LUMINAIRE CONNECTED TO EMERGENCY/LIFE SAFETY CIRCUIT OR WITH INTEGRAL EMERGENCY BATTERY CONNECTED TO UNSWITCHED CIRCUIT
	PENDENT
	WALL MOUNTED LUMINAIRE
	BOLLARD
	MISCELLANEOUS
#10 B-27,29,31.	BRANCH CIRCUIT WIRING. ARROW INDICATES HOME RUN TO PANEL WITH CIRCUITS AS NOTED. WIRE SIZE IS #12 AWG MINIMUM UNLESS NOTED OTHERWISE. SHORT TICK MARKS INDICATE PHASE CONDUCTORS. LONG TICK MARKS INDICATE NEUTRAL CONDUCTORS. A SINGLE CURVED TICK MARK INDICATES INSULATED GREEN GROUND CONDUCTOR. SECOND CURVED TICK MARK INDICATES "ISOLATED GROUND" (GREEN INSULATION WITH YELLOW STRIPE) CONDUCTOR.
	BRANCH PANEL
	CIRCUIT BREAKER
	CURRENT TRANSFORMER
M	DIGITAL TYPE METER WITH VOLTMETER, AMMETER, KW METER, KVA METER, KVAR METER, AND %THD METER
	EQUIPMENT CONNECTION ITEM. REFER TO SCHEDULE
	FLUSH MOUNT EQUIPMENT ENCLOSURE AS NOTED
	FLUSH WALL MOUNTED BRANCH PANEL
	GROUND ROD
	GROUNDING POINT
	LANDING LUG
	MAIN DISTRIBUTION PANEL / SUB DISTRIBUTION PANEL
M	METER WITH CONNECTION
	SURFACE MOUNT EQUIPMENT ENCLOSURE AS NOTED
UT	UTILITY TRANSFORMER PAD/VAULT
	WALL MOUNTING BRACKET
	WATER PIPE GROUND CONNECTION

ELECTRICAL LEGEND cont'd

SYMBOL/ ABBREVIATION	DESCRIPTION
	RACEWAYS
	CONDUIT CONCEALED IN WALL OR CEILING SPACE
	CONDUIT ROUTED BELOW FLOOR / GRADE
	CATV ROUTED BELOW FLOOR / GRADE
	TEL/DATA ROUTED BELOW FLOOR / GRADE
	CONDUIT ELLED DOWN
	CONDUIT ELLED UP
	CONDUIT/WIRING CONTINUATION
	CONDUIT/WIRING STUBBED OUT WITH END CAP OR INSULATED PLASTIC BUSHING
	FLEXIBLE CONDUIT
	TELEPHONE BACKBOARD
	SWITCHES AND RECEPTACLES
	DUPLEX RECEPTACLE (MULTIPLE LETTERS INDICATE MULTIPLE OPTIONS) A = ABOVE COUNTER B = CLOCK HANGER C = FLUSH CEILING MOUNTED DD = DROP DOWN RECEPTACLE E = EMERGENCY F = ARC FAULT PROTECTED BY BREAKER IN PANEL G = GROUND FAULT CIRCUIT INTERRUPTER H = HOSPITAL GRADE K = CHILD RESISTANT COVER L = ISOLATED GROUND P = PENDANT MOUNTED WITH CORD GRIPS. VERIFY PENDANT LENGTH S = SPLIT WIRED T = TAMPER RESISTANT SHUTTERED RECEPTACLE W = WEATHERPROOF CONTINUOUS USE COVER, GFCI PROTECTED, WITH WEATHER-RESISTANT RECEPTACLE ? = DESIGNER DEFINED
	DOUBLE DUPLEX RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS
	SINGLE RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS
	EQUIPMENT ELECTRICAL CONNECTION
$	SINGLE POLE SWITCH 2 = DOUBLE POLE SWITCH 3 = THREE-WAY SWITCH 4 = FOUR-WAY SWITCH a THRU z (LOWERCASE) = LUMINAIRE CONTROL DESIGNATION F = FAN SPEED CONTROL K = KEY OPERATED SWITCH L = LIGHTED HANDLE M = MANUAL MOTOR STARTER WITH THERMAL OVERLOAD P = SWITCH WITH PILOT LIGHT S = SENTRY SWITCH T = INTERVAL TIMER W = WEATHERPROOF SWITCH V = LOW VOLTAGE SWITCH ? = DESIGNER DEFINED SWITCH
D	MANUAL DIMMER WITH ON/OFF OVERRIDE
DS	WALL MOUNTED DUAL TECH OCCUPANCY SENSOR WITH DIMMER AND MANUAL ON/OFF OVERRIDE
	DUPLEX RECEPTACLE, FLUSH FLOOR
OS	CEILING MOUNTED OCCUPANCY SENSOR (SELF CONTAINED)
DS	CEILING MOUNTED DAYLIGHTING SENSOR
	SPECIAL PURPOSE RECEPTACLE. LETTER CODE DENOTES RECEPTACLE CONFIGURATION A = 5-30R NEMA CONFIGURATION RECEPTACLE B = 6-50R NEMA CONFIGURATION RECEPTACLE C = 18-20R NEMA CONFIGURATION RECEPTACLE D = 6-30R NEMA CONFIGURATION RECEPTACLE F = 11-30R NEMA CONFIGURATION RECEPTACLE G = 6-20R NEMA CONFIGURATION RECEPTACLE A-DD = 5-30R NEMA CONFIGURATION DROP DOWN RECEPTACLE B-DD = 6-50R NEMA CONFIGURATION DROP DOWN RECEPTACLE C-DD = 18-20R NEMA CONFIGURATION DROP DOWN RECEPTACLE D-DD = 6-30R NEMA CONFIGURATION DROP DOWN RECEPTACLE F-DD = 11-30R NEMA CONFIGURATION DROP DOWN RECEPTACLE G-DD = 6-20R NEMA CONFIGURATION DROP DOWN RECEPTACLE

DEVICE OUTLETS SHALL BE NO MORE THAN +48" AFF TO TOP OF BOX NOR LESS THAN +15"AFF TO BOTTOM OF BOX PER CBC 11B-308.1.2

ELECTRICAL GENERAL NOTES

A. ALL WORK SHALL COMPLY WITH ALL LOCAL AND STATE CODES AND AUTHORITIES HAVING JURISDICTION.

B. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND ARRANGE ALL REQUIRED INSPECTIONS.

C. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS AND TRADES.

D. THESE DRAWINGS, AS PREPARED, ARE DIAGRAMMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS CONSTRUCTION OF THE PROJECT AND THE WORK OF THE TRADES WILL PERMIT. EQUIPMENT LOCATIONS INDICATED ARE APPROXIMATE. COORDINATE EXACT LOCATIONS AND REQUIRED CLEARANCES WITH EQUIPMENT SUPPLIER AND ALL RELATED TRADES PRIOR TO INSTALLATION.

E. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE EQUIPMENT INDICATED WITHIN THESE DRAWINGS UNLESS OTHERWISE NOTED. VERIFY LOCATION AND DIMENSIONS IN THE FIELD PRIOR TO FABRICATION AND / OR INSTALLATION.

F. ALL ROOF PENETRATIONS SHALL BE AT THE CONTRACTOR'S EXPENSE. COORDINATE WITH OWNER'S ROOFING CONTRACTOR SO AS NOT TO VOID ANY EXISTING ROOF WARRANTIES.

G. THE ENTIRE INSTALLATION SHALL BE GUARANTEED FREE OF DEFECTS AND CONTRACTOR SHALL REPAIR AND / OR REPLACE ANY DEFECTIVE MATERIALS OR EQUIPMENT AT NO COST TO THE OWNER FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY ARCHITECT OR ENGINEER.

H. ALL WORK SHALL BE SUBJECT TO THE ACCEPTANCE AND APPROVAL OF THE ARCHITECT AND OWNER. THE ARCHITECT SHALL BE NOTIFIED OF ANY AND ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. FAILURE OF PROPER NOTIFICATION DOES NOT RELIEVE THE CONTRACTOR. THE CONTRACTOR SHALL CORRECT ANY AND ALL WORK ARISING FROM SUCH FAILURE TO COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.

I. ALL JUNCTION BOXES SHOWN ON THIS PLAN ARE TO BE INSTALLED ABOVE THE FINISHED CEILING.

ELECTRICAL DEMOLITION NOTES

A. THE ELECTRICAL DRAWING SET IS PREPARED BASE OF LIMITED FIELD OBSERVATION ONLY. ACTUAL CONDITIONS MAY VARY IN FIELD. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ELECTRICAL ENGINEER OF RECORD PRIOR TO BID.

B. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.

C. DISCONNECT AND MOVE ALL ELECTRICAL DEVICES AND LIGHTING FIXTURES IN DEMOLITION AREAS UNLESS NOTED OTHERWISE.

D. DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES IN WALLS TO BE DEMOLISHED. WALLS TO BE DEMOLISHED ARE SHOWN DASHED. DISCONNECT AND REMOVE ASSOCIATED CONDUIT AND WIRE BACK TO LAST REMAINING DEVICE. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY TO CONTINUITY OF CIRCUIT(S) TO ANY EXISTING DEVICES TO REMAIN. COORDINATE AND VERIFY REQUIREMENTS WITH NEW WORK IN AREA.

E. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF ANY EXISTING FEEDERS OR BRANCH CIRCUIT ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY ELECTRICAL EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

F. FURNISH AND INSTALL CONDUIT AND/OR COMMUNICATIONS/DATA WIRING AS NECESSARY FOR CONTINUITY OF ANY WIRING ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY COMMUNICATION/DATA EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

G. DISCONNECT AND REMOVE LIGHT SWITCHES IN DEMOLITION AREAS AS NECESSARY TO ACCOMMODATE NEW DOOR CONFIGURATIONS.

H. DISCONNECT AND REMOVE ANY EXISTING ELECTRICAL DEVICES AND BACK BOXES AS NECESSARY WHERE NEW WALL CONSTRUCTION WILL INTERSECT AN EXISTING WALL. FURNISH AND INSTALL CONDUIT AND WIRE AS REQUIRED FOR CONTINUITY OF CIRCUIT(S).

I. FURNISH AND INSTALL BLANK COVER PLATES OVER ALL EXISTING UNUSED OPENINGS.

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 SECTIONS 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. 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.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 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 SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

MP☐ MD☐ PP☐ E☒ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH HCAI (OSHPD) PREAPPROVAL (OPM #) # ________, AS INCLUDED IN THESE DRAWINGS WITH PROJECT-SPECIFIC NOTES AND DETAILS.

SHEET INDEX

E0.1	ELECTRICAL COVER SHEET
E0.2	ELECTRICAL ONE-LINE DIAGRAM
E0.3	ELECTRICAL DETAILS
E1.0	ELECTRICAL SITE PLAN
E2.0	ELECTRICAL DEMO POWER FLOOR PLAN
E2.1	ELECTRICAL POWER FLOOR PLAN
E2.2	ELECTRICAL DEMO POWER ROOF PLAN
E2.3	ELECTRICAL POWER ROOF PLAN
E3.0	ELECTRICAL DEMO LIGHTING FLOOR PLAN
E3.1	ELECTRICAL LIGHTING FLOOR PLAN
E4.0	SIGNAL DEMO FLOOR PLAN
E4.1	SIGNAL FLOOR PLAN
E5.0	FIRE ALARM DEMO FLOOR PLAN
E5.1	FIRE ALARM FLOOR PLAN
E5.2	FIRE ALARM GENERAL NOTES AND DETAILS
E6.0	TITLE 24 LTO FORMS
E6.1	TITLE 24 LTI FORMS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE
3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

No. C32876 Exp. 03/31/2025

REGISTERED PROFESSIONAL ENGINEER NATHAN A. HEAIN No. E 23927 3-31-2026 ELECTRICAL STATE OF CALIFORNIA

Date Signed: 6/5/24

capital engineering
RANCHO CORDOVA, CALIFORNIA
NH-JG — PM - DESIGN TEAM
232073.00 — PROJECT NO.

SUSD
55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

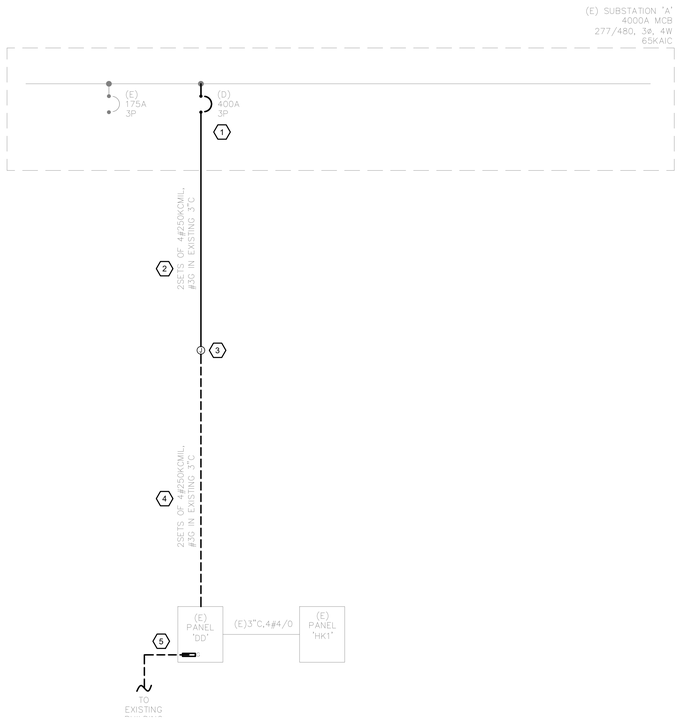
PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

ELECTRICAL COVER SHEET

E0.1

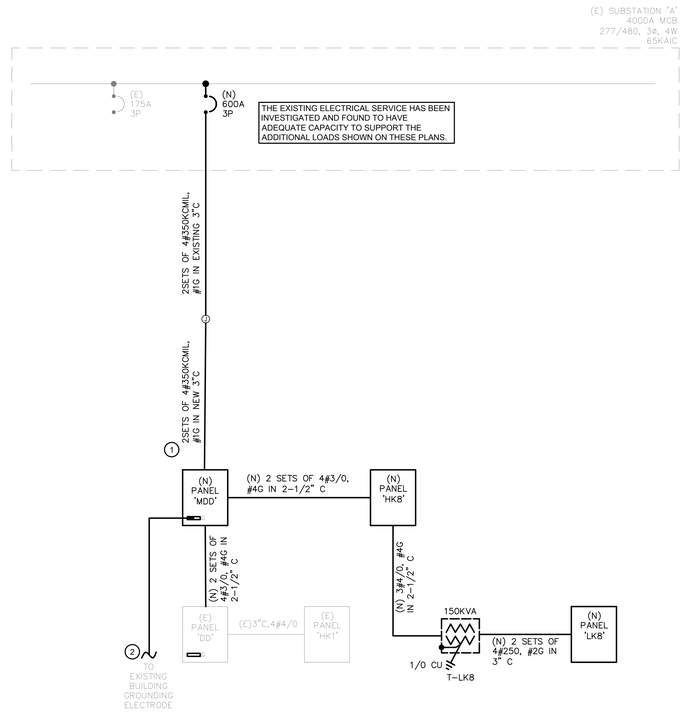
QC INI %



DEMOLITION ONE-LINE DIAGRAM

SCALE : NTS

2 / E0.2



RENOVATION ONE-LINE DIAGRAM

SCALE : NTS

1 / E0.2

PANELBOARD SCHEDULE - LK8

DESIGNATION	FEEDER NO.	POLES & AMPS	LOAD, VA LTG.	LOAD, VA RECPT.	LOAD, VA OTHER	C K	P H	C K	LOAD, VA LTG.	LOAD, VA RECPT.	LOAD, VA OTHER	POLES & AMPS	FEEDER NO.	DESIGNATION
WELDING MACHINE 120V	3	1/30		2952		1	A	2		360		1/20	1	RECEPTACLES
WELDING MACHINE 208V	4	2/40		3608.8		3	B	4		360		1/20	1	RECEPTACLES
				3608.8		5	C	6		360		1/20	1	RECEPTACLES
WELDING MACHINE 120V	3	1/30		2952		7	A	8		360		1/20	1	RECEPTACLES
WELDING MACHINE 208V	4	2/40		3608.8		9	B	10		360		1/20	1	RECEPTACLES
				3608.8		11	C	12		360		1/20	1	RECEPTACLES
WELDING MACHINE 120V	3	1/30		2952		13	A	14		2500		2/30	3	SPECIAL OUTLET
WELDING MACHINE 208V	4	2/40		3608.8		15	B	16		2500				
				3608.8		17	C	18		2500		2/30	1	SPECIAL OUTLET/DUST COLLECTOR
WELDING MACHINE 120V	3	1/30		2952		19	A	20		2500				
WELDING MACHINE 208V	4	2/40		3608.8		21	B	22		2500		2/30	3	SPECIAL OUTLET
				3608.8		23	C	24		2500				
WELDING MACHINE 120V	3	1/30		2952		25	A	26		2500		2/30	3	SPECIAL OUTLET
WELDING MACHINE 208V	4	2/40		3608.8		27	B	28		2500				
				3608.8		29	C	30		2500		2/30	3	SPECIAL OUTLET
WELDING MACHINE 120V	3	1/30		2952		31	A	32		2500				
WELDING MACHINE 208V	4	2/40		3608.8		33	B	34		2500		2/30	3	SPECIAL OUTLET/PLASMA CUTTER
				3608.8		35	C	36		2500				
WELDING MACHINE 120V	3	1/30		2952		37	A	38		2500		2/30	3	SPECIAL OUTLET
WELDING MACHINE 208V	4	2/40		3608.8		39	B	40		2500				
				3608.8		41	C	42		360		1/20		RECEPTACLES
SECTION SUB-TOTALS			0	71187.2	0				0	37520	0			SECTION SUB-TOTALS

SECTION 2

SERVES	FEEDER	POLES & AMPS	LOAD, VA LTG.	LOAD, VA RECPT.	LOAD, VA OTHER	C K.	P H.	C K.	LOAD, VA LTG.	LOAD, VA RECPT.	LOAD, VA OTHER	POLES & AMPS	FEEDER	SERVES
WELDING MACHINE 120V	3	1/30		2952		43	A	44		2500		2/30	3	SPECIAL OUTLET
WELDING MACHINE 208V	4	2/40		3608.8		45	B	46		2500				
				3608.8		47	C	48		2500		2/30	3	SPECIAL OUTLET
REF-K1	2	3/20			500	49	A	50		2500				
					500	51	B	52		180		1/20	1	RECEPTACLES
					500	53	C	54		1000		1/20**	1	FIRE ALARM PANEL
REF-K2	2	3/20			500	55	A	56		2500		2/30	3	SPECIAL OUTLET
					500	57	B	58		2500				
					500	59	C	60			500	1/20	1	CONDENSATE PUMP
OAF-K1	1				500	61	A	62		360		1/20	1	RECEPTACLES
ASTRONOMIC TIME SWITCH	1	1/20		150		63	B	64		360		1/20	1	RECEPTACLES
SHPO-K1	1	2/15			1600	65	C	66		360		1/20	1	RECEPTACLES
					1600	67	A	68		360		1/20	1	RECEPTACLES
SPECIAL OUTLET	3	2/30		2500		69	B	70		360		1/20	1	RECEPTACLES
				2500		71	C	72		360		1/20	1	RECEPTACLES
DRINKING FOUNTAIN	1	1/20			1200	73	A	74		720		1/20	1	RECEPTACLES
MOTORIZED DAMPER	1	1/20			500	75	B	76		360		1/20	1	RECEPTACLES
SPARE		1/20				77	C	78		2500				
SPARE		1/20				79	A	80		2500		3/30	5	SPECIAL OUTLET/IRONWORKER
SPARE		1/20				81	B	82		2500				
SPARE		1/20				83	C	84				1/20		SPARE
SECTION SUB-TOTALS			0	15319.6	8400				0	26920	500			SECTION SUB-TOTALS

CATEGORY	CONN. LOAD KVA	CONN. LOAD AMPS	DESIGN LOAD DIV.	DESIGN LOAD KVA	DESIGN LOAD AMPS
LIGHTING:	0.0	0.0	1.25	0.0	0.0
RECEPTACLE:	150.9	419.5	0.53	80.5	223.6
MOTORS:	8.9	24.7	1.00	8.9	24.7
SPECIAL LOADS:	0.0	0.0	1.00	0.0	0.0
ELECTRIC HEATING:	0.0	0.0	1.00	0.0	0.0
WATER HEATING:	0.0	0.0	1.00	0.0	0.0
EV/SE/EVCS	0.0	0.0	1.25	0.0	0.0
TOTAL:	159.8	444.2		89.4	248.4

MOUNTING:	SURFACE
VOLTS:	120/208
PHASE/WIRE:	3/4
MAINS SIZE:	500 AMPS
MAINS TYPE:	MCB
BUSS TYPE:	COPPER
BRKR TYPE:	BOLT-IN
A.I.C. (RMS):	10,000
A Phase	52.6 Connected Kva
B Phase	55.0 Connected Kva
C Phase	52.3 Connected Kva

REMARKS:
** - PROVIDE RED BREAKER WITH LOCK-ON CLIP

FEEDER NO.:
1 = 2 #12, #12G - 1/2"C
2 = 3 #12, #12G - 1/2"C
3 = 2 #10 #10G - 3/4"C
4 = 2 #8 #10G - 3/4"C
5 = 3 #10 #10G - 3/4"C

PANELBOARD SCHEDULE - MDD

DESIGNATION	FEEDER NO.	POLES & AMPS	LOAD, VA LTG.	LOAD, VA RECPT.	LOAD, VA OTHER	C K	P H	C K	LOAD, VA LTG.	LOAD, VA RECPT.	LOAD, VA OTHER	POLES & AMPS	FEEDER NO.	DESIGNATION
					48000	1	A	2			75146			
(E)PANEL 'DD'		3/400			48000	3	B	4			75250.4	3/400		PANEL 'HK8'
					48000	5	C	6			73370.4			
SPARE		1/20				7	A	8				1/20		SPARE
SPARE		1/20				9	B	10				1/20		SPARE
SPARE		1/20				11	C	12				1/20		SPARE
SPACE						13	A	14						SPACE
SPACE						15	B	16						SPACE
SPACE						17	C	18						SPACE
SECTION SUB-TOTALS			0	0	144000				0	0	223766.8			SECTION SUB-TOTALS

CATEGORY	CONN. LOAD KVA	CONN. LOAD AMPS	DESIGN LOAD DIV.	DESIGN LOAD KVA	DESIGN LOAD AMPS
LIGHTING:	3.2	3.9	1.25	4.0	4.8
RECEPTACLE:	171.7	206.8	0.53	90.9	109.4
MOTORS:	48.8	58.8	1.00	48.8	58.8
SPECIAL LOADS:	144.0	173.4	1.00	144.0	173.4
ELECTRIC HEATING:	0.0	0.0	1.00	0.0	0.0
WATER HEATING:	0.0	0.0	1.00	0.0	0.0
EV/SE/EVCS	0.0	0.0	1.25	0.0	0.0
TOTAL:	367.8	442.9		287.7	346.5

MOUNTING:	SURFACE
VOLTS:	277/480
PHASE/WIRE:	3/4
MAINS SIZE:	600 AMPS
MAINS TYPE:	MCB
BUSS TYPE:	COPPER
BRKR TYPE:	BOLT-IN
A.I.C. (RMS):	42,000
A. Phase	123.1 Connected Kva
B Phase	123.3 Connected Kva
C Phase	121.4 Connected Kva

REMARKS:

FEEDER NO.:
1 = 2 #12, #12G - 1/2"C
2 = 2 #10, #10G - 3/4"C

PANELBOARD SCHEDULE - HK8

DESIGNATION	FEEDER NO.	POLES & AMPS	LOAD, VA LTG.	LOAD, VA RECPT.	LOAD, VA OTHER	C K	P H	C K	LOAD, VA LTG.	LOAD, VA RECPT.	LOAD, VA OTHER	POLES & AMPS	FEEDER NO.	DESIGNATION
TRANSFORMER 'T-LK8'		3/175			52576	1	A	2		1300		2/20	1	DRAFT TABLE
					55000.4	3	B	4		1300				
					52270.4	5	C	6		1300		2/20	1	DRAFT TABLE
ROLL-UP DOOR	2	3/20			1500	7	A	8		1300				
					1500	9	B	10		1300		2/20	1	DRAFT TABLE
					1500	11	C	12		1300				
ROLL-UP DOOR	2	3/20			1500	13	A	14		1300		2/20	1	DRAFT TABLE
					1500	15	B	16		1300				
					1500	17	C	18		1300		2/20	1	DRAFT TABLE
LIGHTS	1		170			19	A	20		1300				
LIGHTS	1		450			21	B	22		1300		2/20	1	DRAFT TABLE
LIGHTS	1		1300			23	C	24		1300				
LIGHTS	1		1300			25	A	26		1300		2/20	1	DRAFT TABLE
A-CK1-PE	2	3/20			1100	27	B	28		1300				
					1100	29	C	30		1300		2/20	1	DRAFT TABLE
					1100	31	A	32		1300				
A-CK1	3	3/45			9200	33	B	34				1/20		SPARE
					9200	35	C	36				1/20		SPARE
					9200	37	A	38				1/20		SPARE
SPARE		1/20				39	B	40				1/20		SPARE
SPARE		1/20				41	C	42				1/20		SPARE
SECTION SUB-TOTALS				3220	0	199746.8			0	20800	0			SECTION SUB-TOTALS

CATEGORY	CONN. LOAD KVA	CONN. LOAD AMPS	DESIGN LOAD DIV.	DESIGN LOAD KVA	DESIGN LOAD AMPS
LIGHTING:	3.2	3.9	1.25	4.0	4.8
RECEPTACLE:	171.7	206.8	0.53	90.9	109.4
MOTORS:	48.8	58.8	1.00	48.8	58.8
SPECIAL LOADS:	0.0	0.0	1.00	0.0	0.0
ELECTRIC HEATING:	0.0	0.0	1.00	0.0	0.0
WATER HEATING:	0.0	0.0	1.00	0.0	0.0
EV/SE/EVCS	0.0	0.0	1.25	0.0	0.0
TOTAL:	223.8	269.5		143.7	173.0

MOUNTING:	SURFACE
VOLTS:	277/480
PHASE/WIRE:	3/4
MAINS SIZE:	400 AMPS
MAINS TYPE:	MCB
BUSS TYPE:	COPPER
BRKR TYPE:	BOLT-IN
A.I.C. (RMS):	42,000
A. Phase	75.1 Connected Kva
B Phase	75.3 Connected Kva
C Phase	73.4 Connected Kva

REMARKS:

FEEDER NO.:
1 = 2#12, #12G - 1/2"C
2 = 3 #12, #12G - 1/2"C
3 = 3 #6, #10G - 1-1/4"C

RENOVATION KEY NOTES:

1. PROVIDE NEW TWO 3" C FROM THE J-BOX TO THE LOCATION OF NEW PANEL 'MDD'.
2. RECONNECT GROUND BAR OF NEW PANEL 'MDD' TO THE EXISTING BUILDING GROUNDING ELECTRODE SYSTEM. PROVIDE CONNECTION TO ALL POSSIBLE POINTS OF CONNECTION TO MATCH THE EXISTING CONDITION PRIOR TO DEMOLITION. SEE KEY NOTE 5 IN THE DEMOLITION ONE-LINE DIAGRAM.

DEMOLITION KEY NOTES:

1. DISCONNECT AND REMOVE EXISTING 400A 3P FEEDER BREAKER TO MAKE SPACE FOR THE NEW 600A 3P.
2. REMOVE EXISTING CONDUCTORS IN THE EXISTING TWO 3" C.
3. INTERCEPT EXISTING TWO 3" C AND TERMINATE IT IN AN ACCESSIBLE J-BOX SIZED PER CEC 314.28(A). SEE RENOVATION ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
4. DISCONNECT AND REMOVE THE EXISTING FEEDER FROM EXISTING PANEL 'DD' TO THE ACCESSIBLE J-BOX.
5. DISCONNECT AND REMOVE EXISTING GROUNDING ELECTRODE CONDUCTOR FROM THE EXISTING PANEL 'DD' TO THE BUILDING GROUNDING ELECTRODE SYSTEM. FIELD VERIFY ALL POINTS OF CONNECTION FOR THE GROUNDING SYSTEM.

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232073.00 PROJECT NO.

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STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
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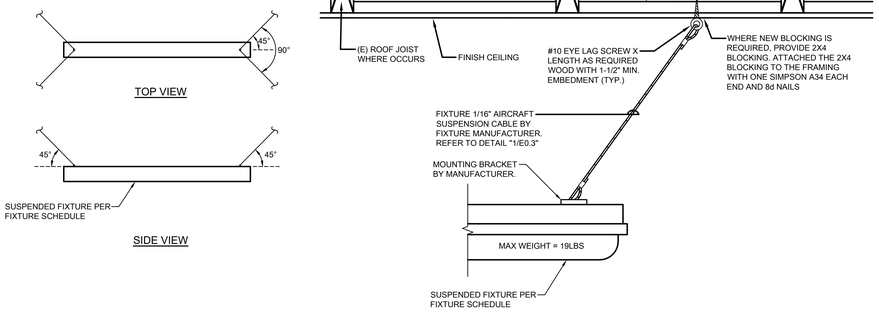
CONSTRUCTION DOCUMENTS

ELECTRICAL ONE-LINE DIAGRAM

E0.2

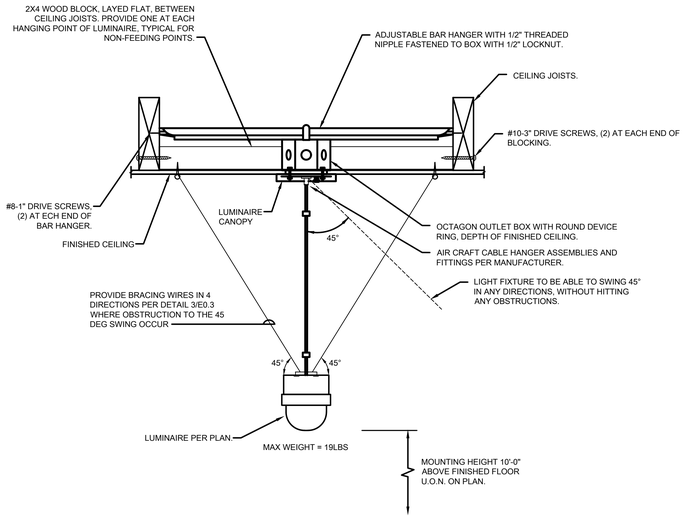
QC	
INI	%



SEISMIC BRACING DETAILS

SCALE : NTS

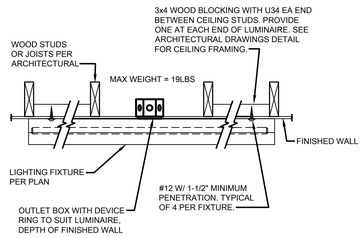
3 / E0.3



SUSPENDED LIGHTING FIXTURE MOUNTING DETAIL

SCALE : NTS

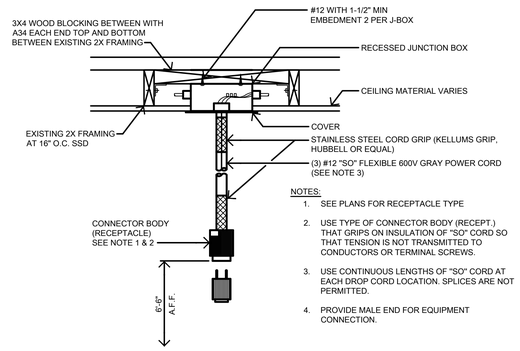
1 / E0.3



SURFACE LIGHT FIXTURE MOUNTING DETAIL (WOOD STUD)

SCALE : NTS

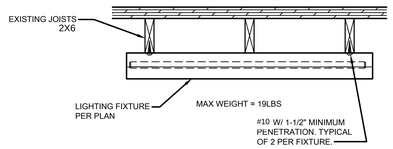
6 / E0.3



ELECTRICAL DROP CORD DETAIL

SCALE : NTS

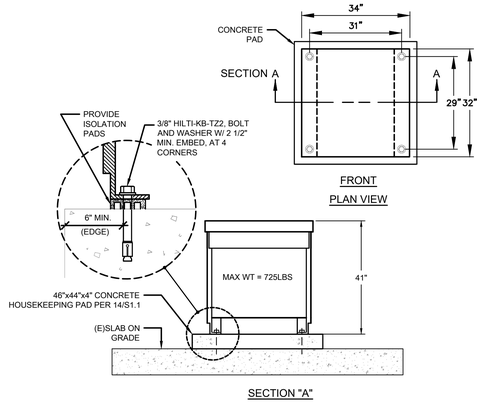
4 / E0.3



SURFACE LIGHT FIXTURE MOUNTING DETAIL (WOOD JOIST)

SCALE : NTS

7 / E0.3



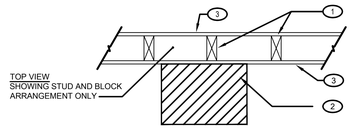
TRANSFORMER MOUNTING DETAIL

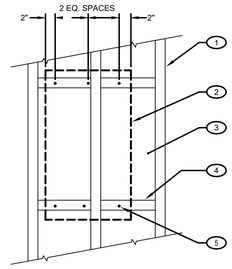
SCALE : NTS

5 / E0.3

KEY NOTES

1. EXISTING 2X WOOD STUDS AT 16" ON CENTER.
2. SURFACE MOUNTED PANEL, SEE NOTE #1
3. SHEET ROCK OR OTHER WALL SURFACE MATERIAL (SEE ARCH. DRAWINGS)
4. 4X6 WOOD BLOCKING WITH A34 FRAMING ANGLE EACH END TOP AND BOTTOM
5. 5/16" X 2 1/2" LAG SCREWS (BY ELECTRICAL CONTRACTOR)





NOTES:

1. USE FENDER WASHER ON ALL SCREWS.
2. REGULAR PANELS 150# MAX. ISOLATION PANELS 225# MAX. FACP, REMOTE ANNUNCIATORS, POWER SUPPLY PANEL 49# MAX.
3. MOUNT TERMINAL CABINETS, J-BOXES, ETC., SIMILAR TO 30 CIRCUIT PANELBOARD.
4. CENTER OF GRAVITY OF CABINET FROM TOP OF FLOOR = ±50".
5. PANELBOARD DIMENSION IS 20"WIDE X 6"DEEP X 50" HIGH

SURFACE PANEL MOUNTING DETAIL

SCALE : NTS

2 / E0.3

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CONSTRUCTION DOCUMENTS

ELECTRICAL DETAILS

E0.3

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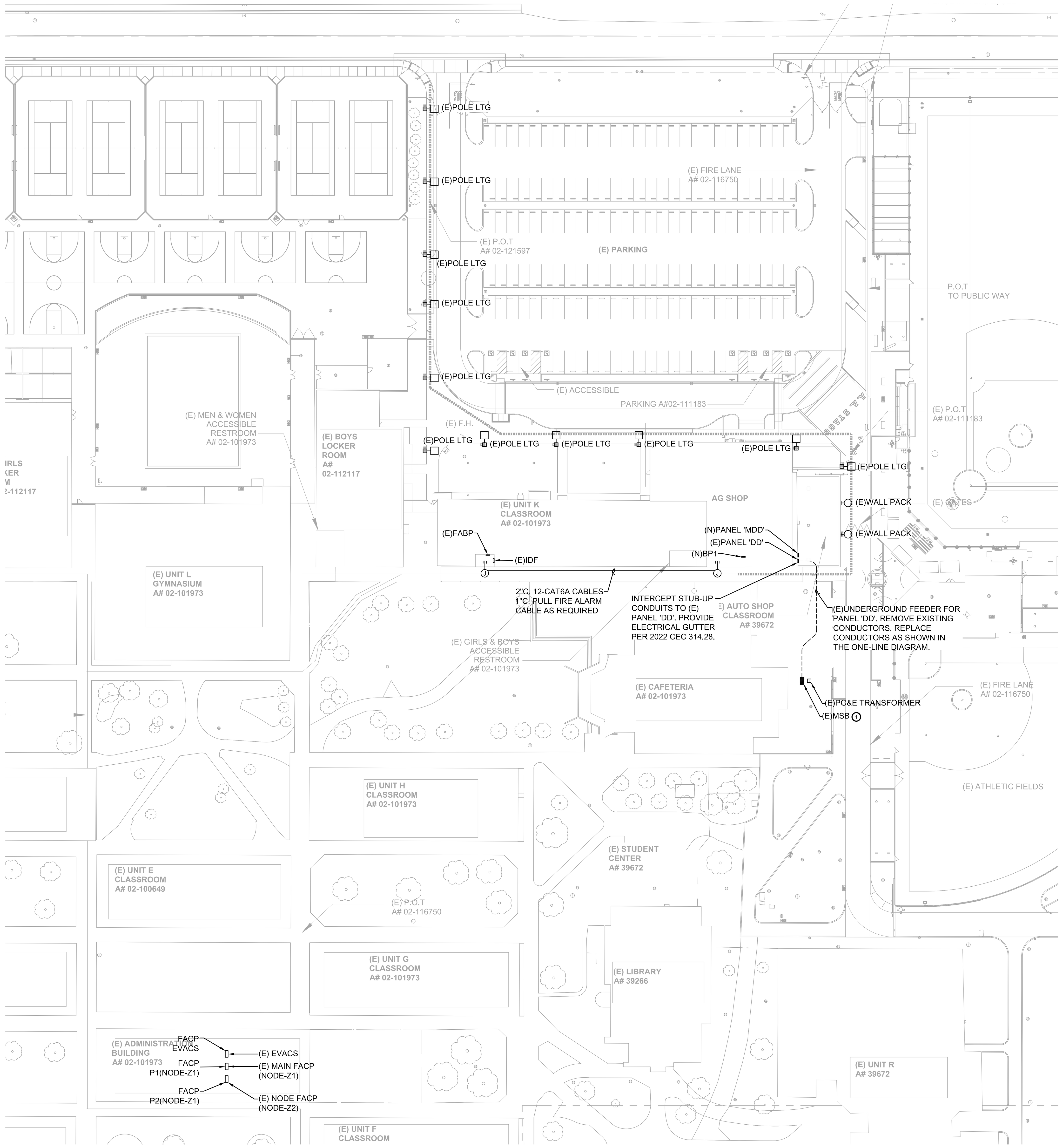
\# RENOVATION KEY NOTES:

1. SEE ONE-LINE DIAGRAM FOR EXACT SCOPE OF WORK.



ELECTRICAL SITE PLAN

SCALE : 1" = 50'-0"

1 E1.0

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ELECTRICAL SITE PLAN

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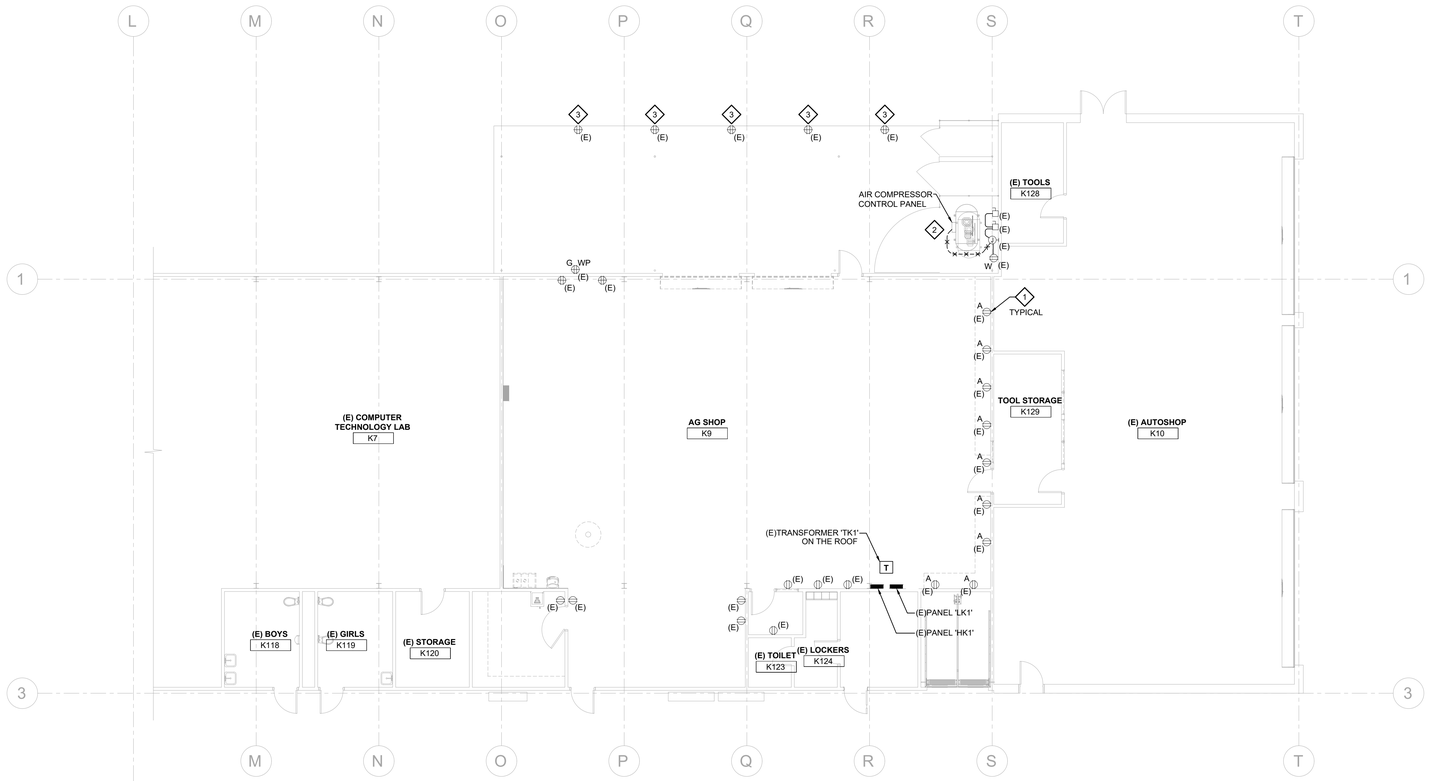
◇# DEMOLITION KEY NOTES:

1. REMOVE EXISTING ABOVE COUNTER DUPLEX RECEPTACLES AND COVER PLATES. PROTECT-IN-PLACE EXISTING ROUGH-IN AND BRANCH CIRCUIT WIRING TO BE REUSED. REFER TO RENOVATION PLAN FOR MORE INFORMATION.
2. DISCONNECT POWER TO (E)AIR COMPRESSOR CONTROL PANEL. REMOVE BRANCH CIRCUIT CONDUIT AND WIRING UP TO THE WALL MOUNTED PULLBOX. REFER TO PLUMBING DRAWINGS FOR MORE INFO.
3. EXISTING RECEPTACLES TO REMAIN.

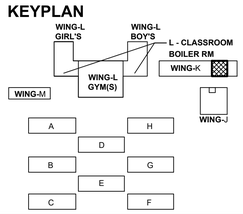


ELECTRICAL DEMO POWER FLOOR PLAN

1 / E2.0

SCALE : 1/8" = 1'-0"

KEYPLAN



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CONSTRUCTION DOCUMENTS

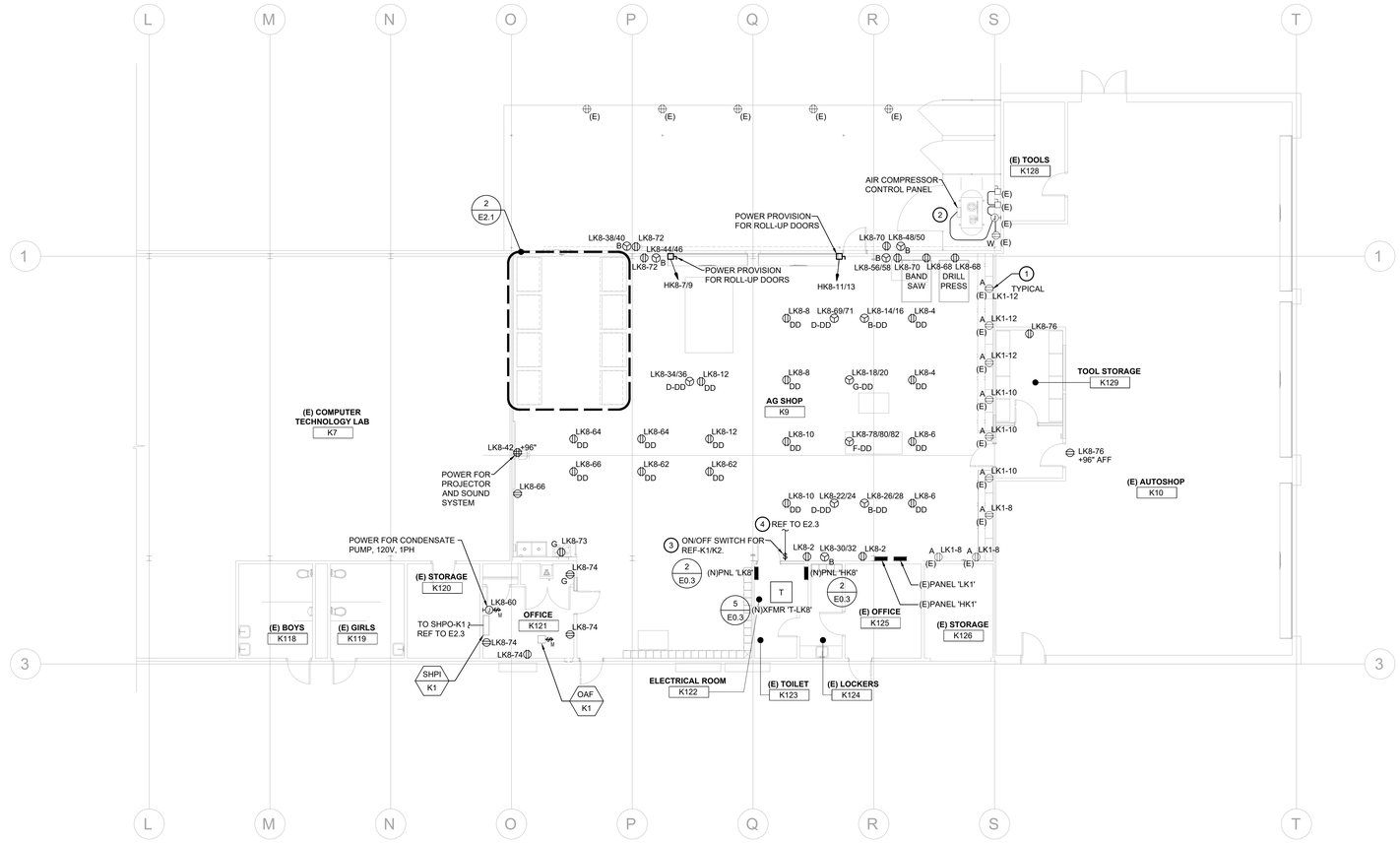
ELECTRICAL DEMO POWER FLOOR PLAN

E2.0

QC	
INI	%

RENOVATION KEY NOTES:

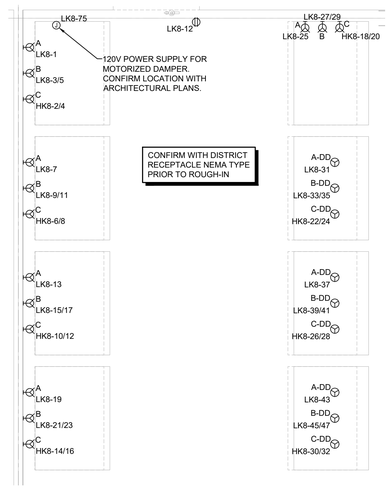
1. PROVIDE NEW ABOVE COUNTER DUPLEX RECEPTACLE AND COVER PLATES MOUNTED ON THE STAINLESS STEEL BACKSPLASH. REUSE PRESERVED ROUGH-IN AND BRANCH CIRCUIT WIRING. REFER TO DEMOLITION PLAN FOR MORE INFORMATION.
2. PROVIDE NEW BRANCH CIRCUIT CONDUIT AND WIRING FROM THE AIR COMPRESSOR CONTROL PANEL TO THE WALL MOUNTED PULLBOX. MATCH EXISTING BRANCH CIRCUIT CONDUIT AND WIRING AND MATCH EXISTING ROUTING. REFER TO PLUMBING DRAWINGS FOR MORE INFO.
3. ON/OFF SWITCH TO BE PROVIDED BY CONTROLS CONTRACTOR TO BE INSTALLED BY DIV. 26.
4. ROUTE WIRING THROUGH CONTROLS RELAY. COORDINATE WITH DIV. 23.



ELECTRICAL POWER FLOOR PLAN

SCALE : 1/8" = 1'-0"

1 E2.1



ENLARGED ELECTRICAL POWER FLOOR PLAN

SCALE : 3/8" = 1'-0"

2 E2.1

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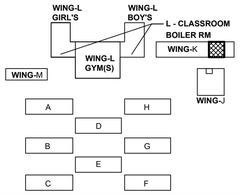
CONSTRUCTION DOCUMENTS

ELECTRICAL POWER FLOOR PLAN

E2.1

KEYPLAN



QC	
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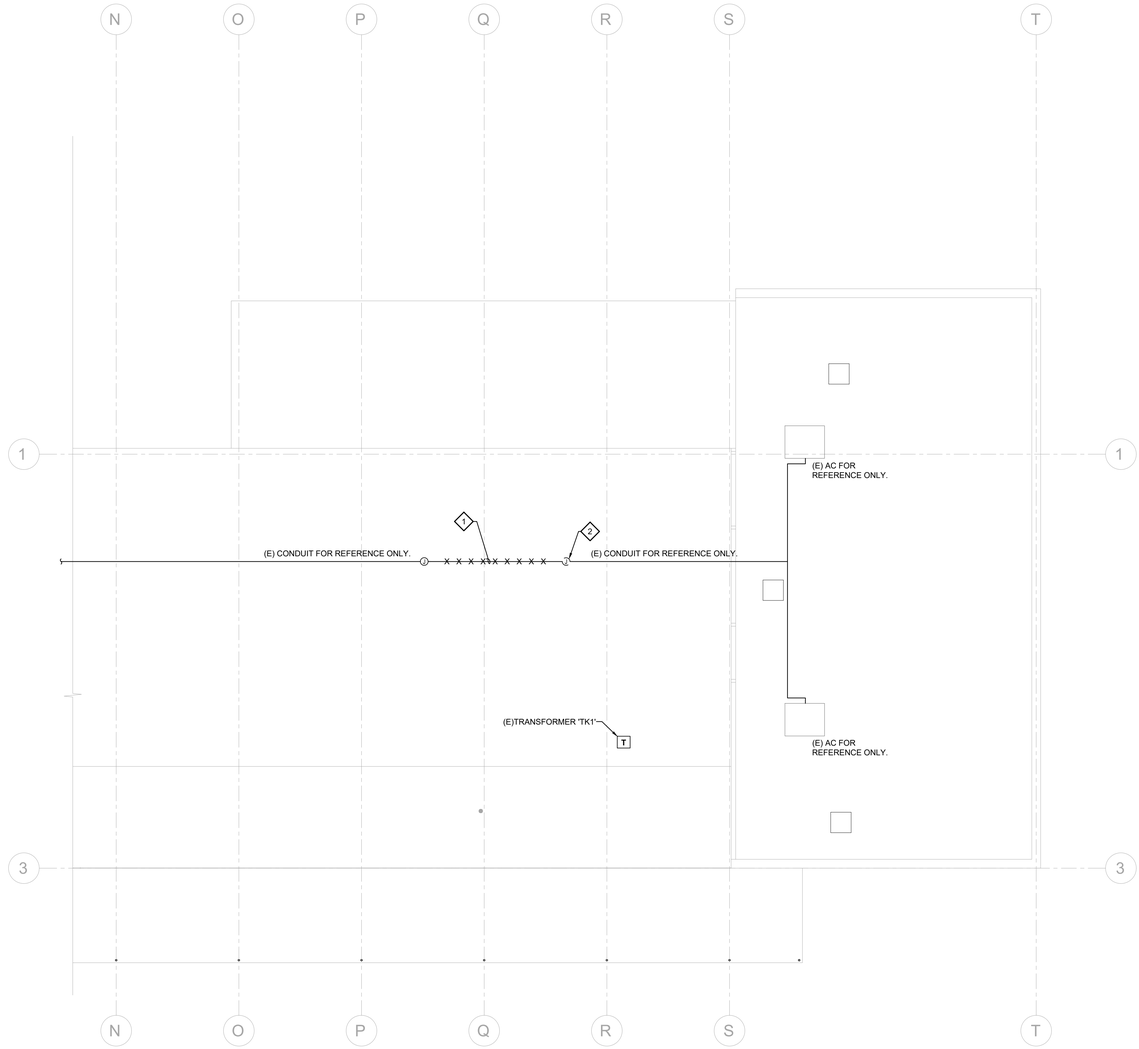
DEMOLITION KEY NOTES:

1. DEMOLISH PORTION OF EXISTING CONDUIT.
2. FUTURE SPLICE BOX TO BE PROVIDED IN THE RENOVATION PLAN. REFER TO E2.3 FOR MORE INFO.

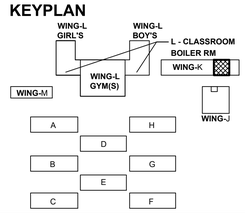


ELECTRICAL DEMO POWER ROOF PLAN

1 / E2.2

SCALE : 1/8" = 1'-0"

KEYPLAN



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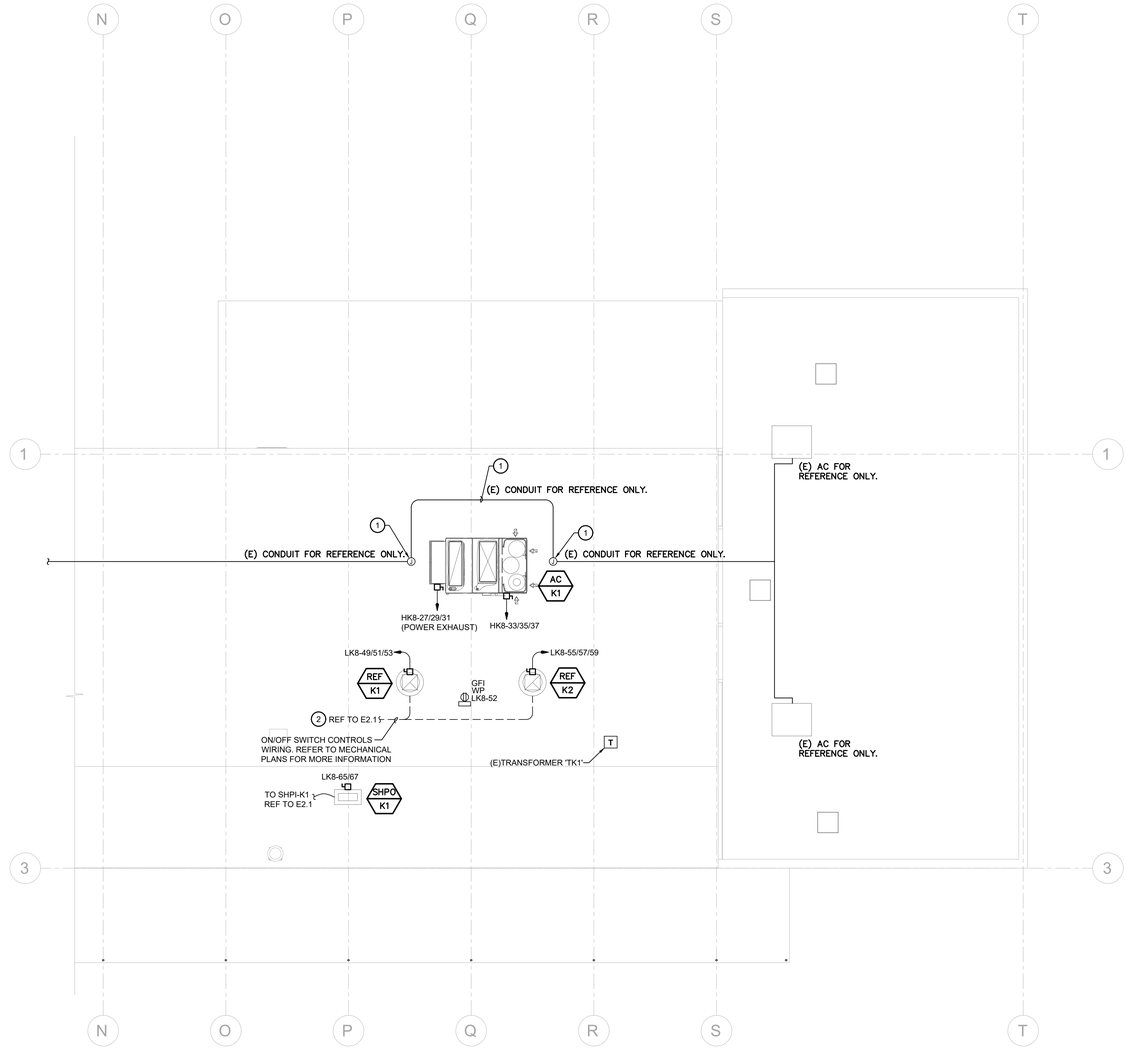
ELECTRICAL DEMO POWER ROOF PLAN

E2.2

QC	
INI	%

(#) RENOVATION KEY NOTES:

1. PROVIDE SPLICE BOX PER 2022 CEC 314.28. PROVIDE CONDUIT AND WIRING AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING LOADS. FIELD VERIFY CONDUIT AND WIRING QUANTITY AND SIZE.
2. ROUTE WIRING THROUGH CONTROLS RELAY. COORDINATE WITH DIV. 23.

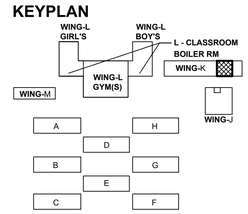


ELECTRICAL POWER ROOF PLAN

1 / E2.3

SCALE : 1/8" = 1'-0"

KEYPLAN



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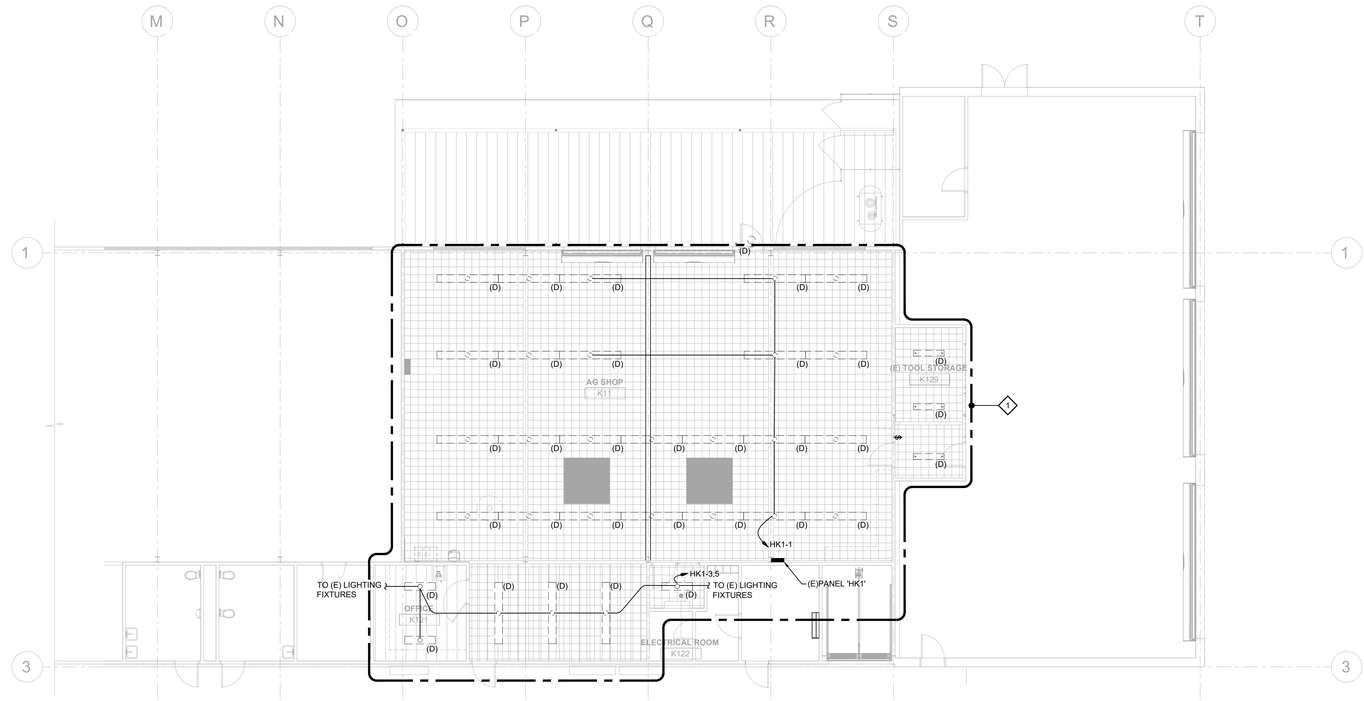
ELECTRICAL POWER ROOF PLAN

E2.3

QC	
INI	%

KEY NOTES:

1. DISCONNECT EXISTING LIGHTING FIXTURE AND ASSOCIATED LIGHTING CONTROLS. PRESERVE AND PROTECT IN PLACE EXISTING CIRCUIT AND MOUNTING HARDWARE FOR REUSE IN THE RENOVATION PLAN. SEE LIGHTING RENOVATION PLAN FOR MORE INFORMATION.

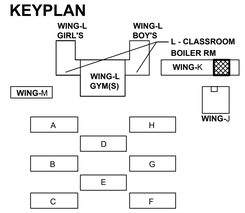


ELECTRICAL DEMO LIGHTING FLOOR PLAN

SCALE : 1/8" = 1'-0"

1
E3.0

KEYPLAN



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ELECTRICAL DEMO LIGHTING FLOOR PLAN

E3.0

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LIGHTING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	LAMPS	VOLTS	WATTS	MOUNTING	LUMENS	WEIGHT	NOTES
L1	8' MVOLT VAPOR TIGHT LED STRIP LIGHT	LITHONIA LIGHTING CSVT L96 8000LM MVOLT 40K 80CRI	LED	MVOLT	68	SUSPENDED 10'-0" AFF	8326	10 LBS	SEE DETAIL 1/E0.3
L1E	8' MVOLT VAPOR TIGHT LED STRIP LIGHT WITH BATTERY PACK	LITHONIA LIGHTING CSVT L96 8000LM MVOLT 40K 80CRI IE7WCPHE	LED	MVOLT	68	SUSPENDED 10'-0" AFF	8326	10 LBS	SEE DETAIL 1/E0.3
L2	4' MVOLT VAPOR TIGHT LED STRIP LIGHT	LITHONIA LIGHTING CSVT L48 4000LM MVOLT 40K 80CRI	LED	MVOLT	34	SURFACED	4200	5 LBS	SEE DETAIL 6/E0.3
L2E	4' MVOLT VAPOR TIGHT LED STRIP LIGHT WITH BATTERY PACK	LITHONIA LIGHTING CSVT L48 4000LM MVOLT 40K 80CRI IE7WCPHE	LED	MVOLT	34	SURFACED	4200	5 LBS	SEE DETAIL 6/E0.3
EL1	WDGE1 LED WALL SCONCE WITH BATTERY PACK	LITHONIA LIGHTING WDGE1 LED-P1-40K-80CRI-VW- MVOLT-SRM-E4WH	LED	MVOLT	4	SURFACED	1200	9 LBS	SEE DETAIL 6/E0.3
U1B	LED STRIP LIGHT 4'	LITHONIA LIGHTING ZL1N L48 3000LM FST MVOLT 40K 80CRI	LED	MVOLT	25	SURFACED	3000	10 LBS	SEE DETAIL 6/E0.3
U1C	LED STRIP LIGHT 2'	LITHONIA LIGHTING ZL1N L24 1500LM FST MVOLT 40K 80CRI	LED	MVOLT	15	SURFACED	1500	5 LBS	SEE DETAIL 6/E0.3
X	EMERGENCY/EXIT LIGHT COMBO	BREEZA BRZ-LG-U-W-AT	LED	MVOLT	5	SURFACED	1500	5 LBS	SEE DETAIL 6/E0.3

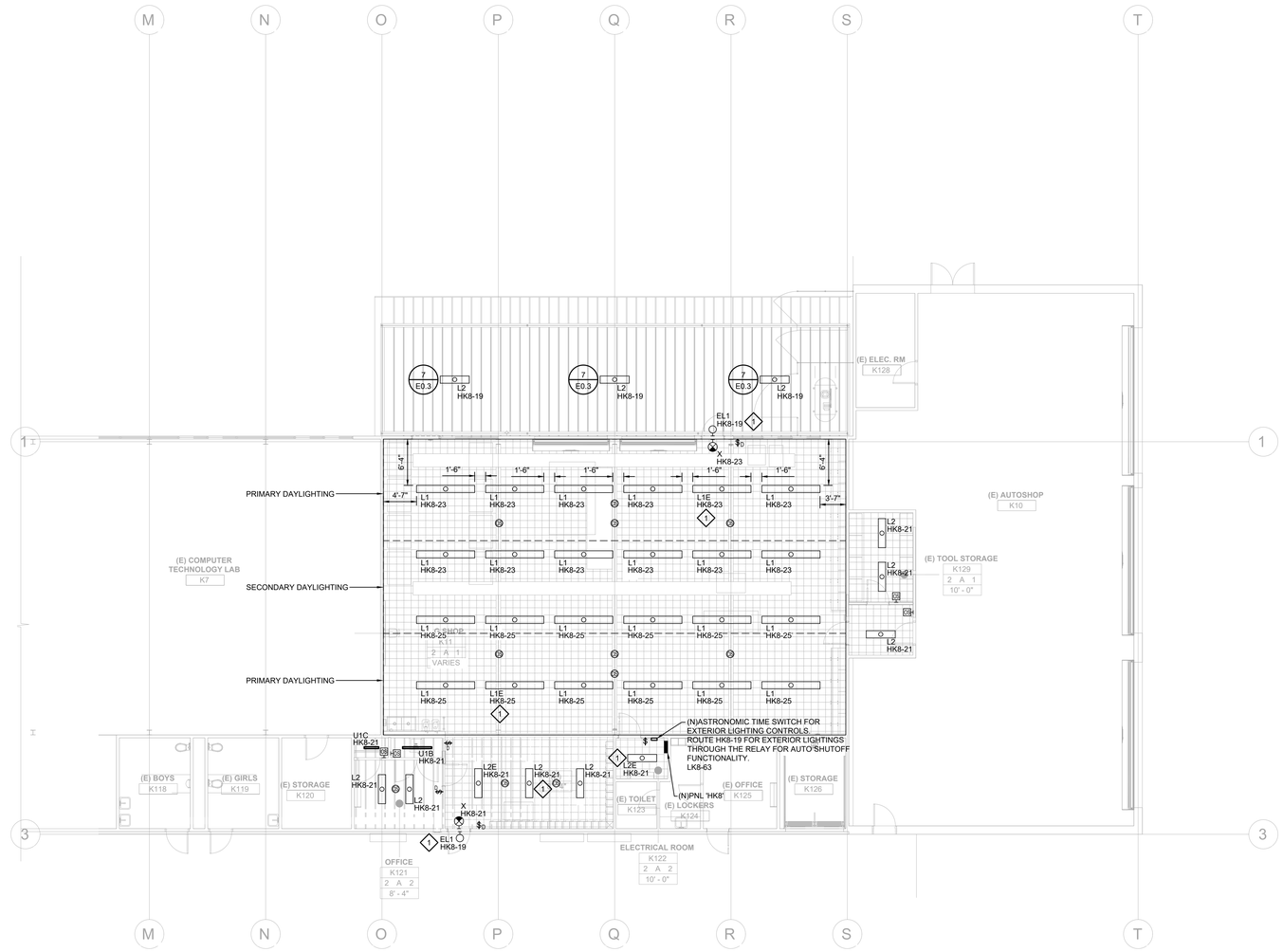
GENERAL NOTES:

A. THIS LIGHTING SCHEDULE IS NOT COMPLETE WITHOUT A COPY OF THE PROJECT MANUAL CONTAINING ELECTRICAL SPECIFICATIONS.

B. SPECIFIED MANUFACTURERS ARE APPROVED TO SUBMIT BID. INCLUSION DOES NOT RELIEVE MANUFACTURER FROM SUPPLYING PRODUCT AS DESCRIBED.

C. PROVIDE SUBMITTALS THAT INCLUDE LIGHTING FIXTURE, LED, AND DRIVER INFORMATION FOR EACH FIXTURE, WITH APPLICABLE OPTIONS CLEARLY CHECKED OR HIGHLIGHTED. SUBMITTALS NOT INCLUDING THIS INFORMATION WILL BE RETURNED AS REJECTED BY THE ENGINEER OF RECORD.

D. PROVIDE COMMISSIONING OF THE LIGHTING AND LIGHTING CONTROLS IN ACCORDANCE WITH CALIFORNIA TITLE 24 COMMISSIONING REQUIREMENTS.



ELECTRICAL LIGHTING FLOOR PLAN

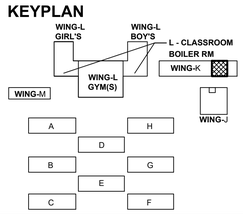
SCALE : 1/8" = 1'-0"

1 / E3.1

SHEET KEY NOTES:

1. PROVIDE UNSWITCHED HOT LEG TO THE LIGHTING FIXTURE FOR NORMAL POWER SENSING.

KEYPLAN



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

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6/5/2024

Date Signed: 6/5/24

capital engineering
RANCHO CORDOVA, CALIFORNIA
NH-JG — PM - DESIGN TEAM
232073.00 — PROJECT NO.

SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

ELECTRICAL LIGHTING FLOOR PLAN

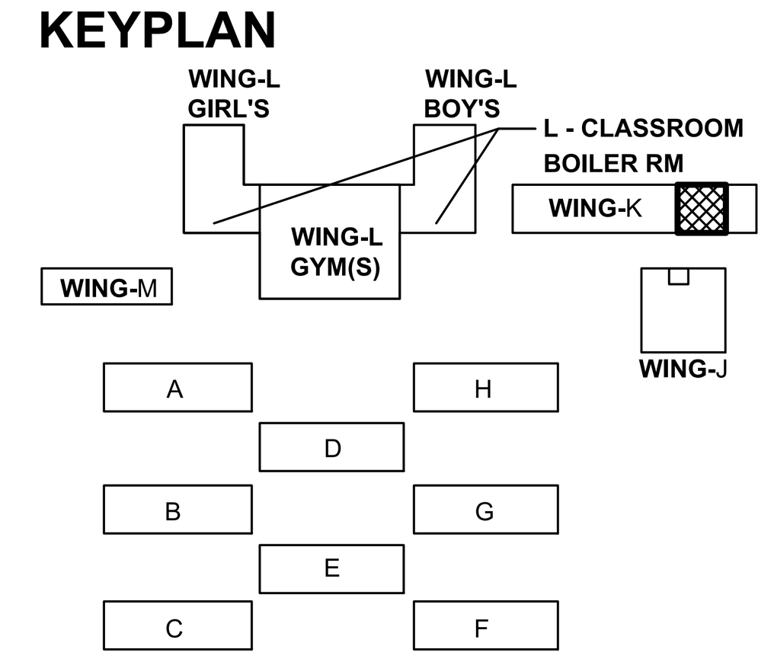
E3.1

SIGNAL DEMO FLOOR PLAN

SCALE : 1/8" = 1'-0"

1
E4.0

KEYPLAN



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SIGNAL DEMO FLOOR PLAN

E4.0

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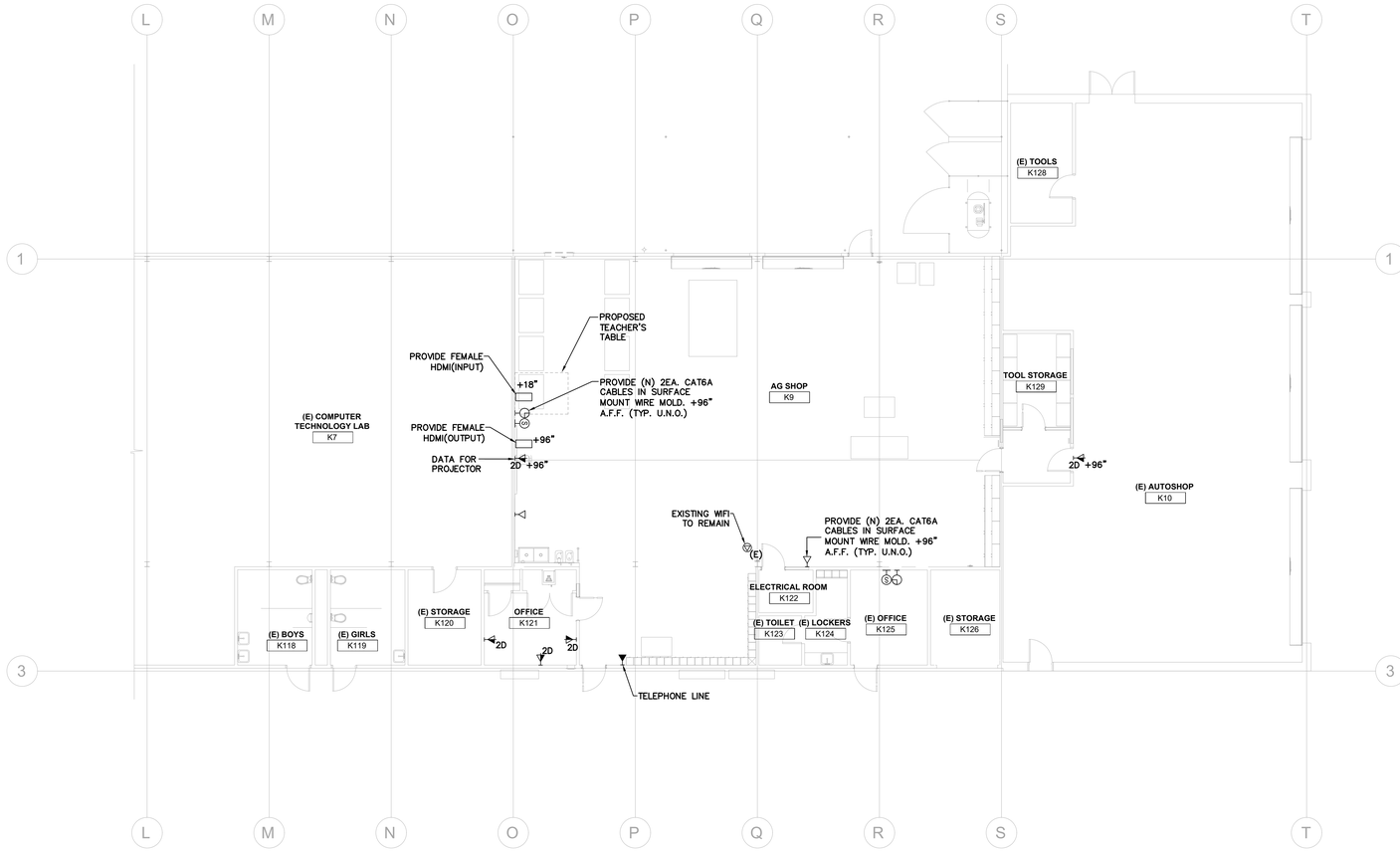
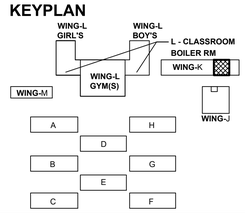


SIGNAL FLOOR PLAN

SCALE : 1/8" = 1'-0"

1
E4.1

KEYPLAN



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SIGNAL FLOOR PLAN

E4.1

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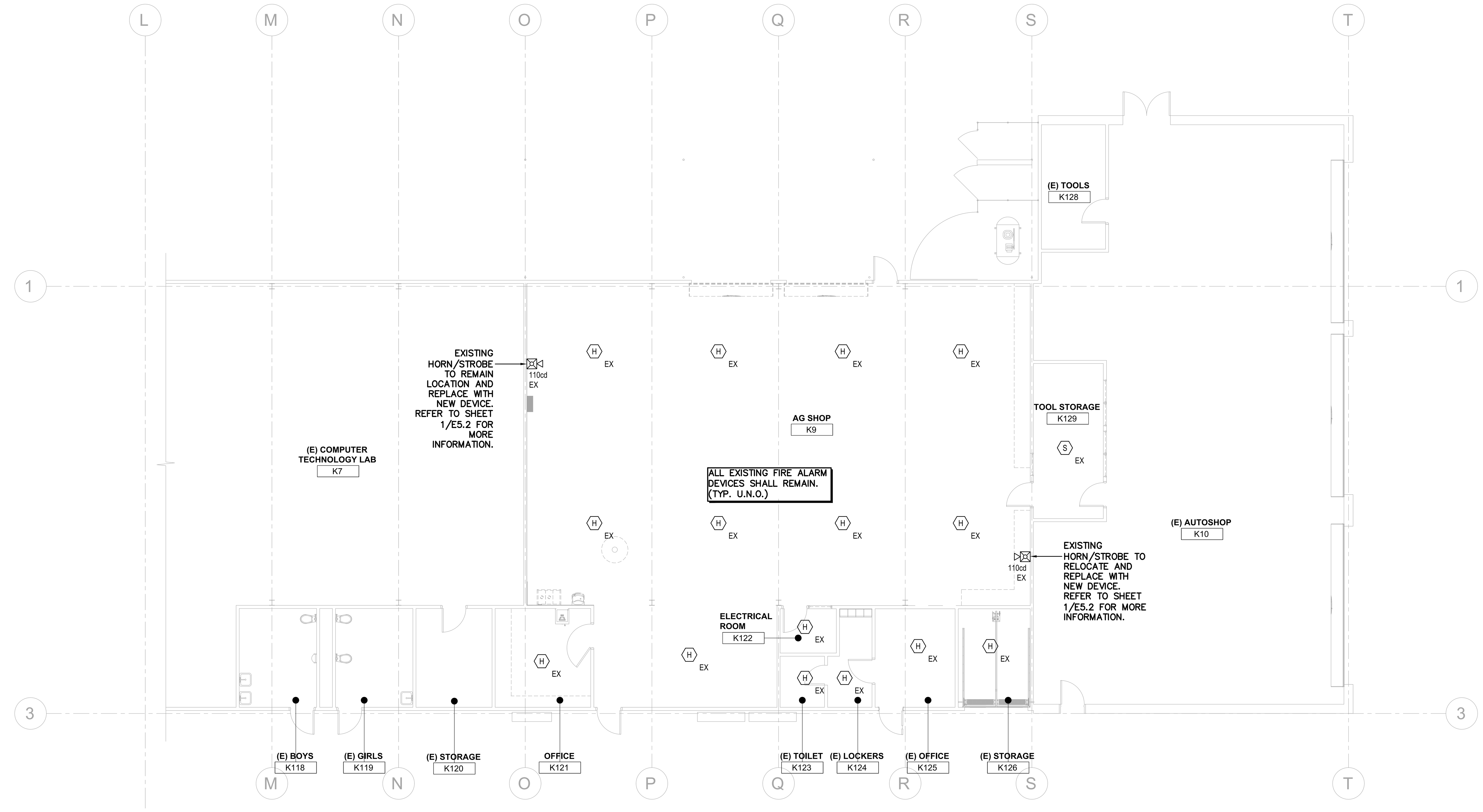
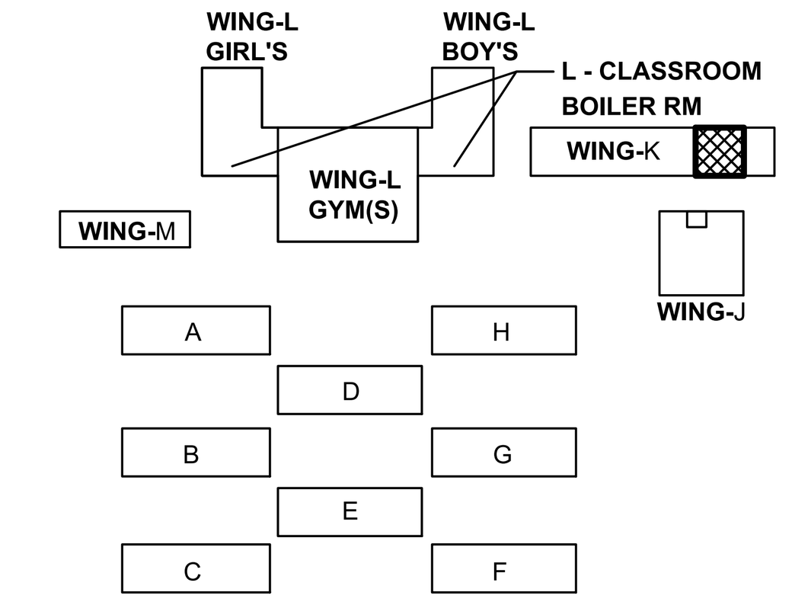


FIRE ALARM DEMO FLOOR PLAN

SCALE : 1/8" = 1'-0"

1
E5.0

KEYPLAN



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FIRE ALARM DEMO FLOOR PLAN

E5.0

DEVICE LEGEND					
SYMBOL	QTY	MANUFACTURER	PART NO	DESCRIPTION	CSFM
FACP	3	EDWARDS	(EX) EST3 MAIN FACP	(EX) FACP /W CPU, 4 LOOPS, 4 NACS, 4 3-ZA40B AMPLIFIERS, MIC, 3-CAB21	7165-1657:0186
NAC	1	EDWARDS	BPS10A	REMOTE BOOSTER POWER SUPPLY, 10A, 120VAC, RED	7300-1657:0229
	1	EDWARDS	SIGA-CC1S	SYNCHRONIZATION OUTPUT MODULE (STANDARD MOUNT) - UL/ULC LISTED	7300-1657:0121
S	1	EDWARDS	SIGA-OSD W/SIGA-SB4 BASE	INTELLIGENT OPTICAL SMOKE DETECTOR	7272-1657:0511
	2	EDWARDS	G4AVRF	WALL HORN-STROBE, RED, FIRE	7125-1657:0504

SYSTEM OUTPUTS: PANEL ANNUNCIATION (A–F) · NOTIFICATION · SAFETY CONTROL

- A — ACTUATE GENERAL ALARM AUDIBLE NOTIFICATION
- B — ACTUATE GENERAL ALARM VISUAL NOTIFICATION
- C — ACTUATE SUPERVISORY ALARM SOUNDER IN PANEL
- D — ACTUATE SUPERVISORY ALARM VISUAL INDICATOR IN PANEL
- E — ACTUATE TROUBLE ALARM SOUNDER IN PANEL
- F — ACTUATE TROUBLE ALARM VISUAL INDICATOR IN PANEL
- G — ACTUATE PANEL'S LCD DISPLAY
- H — ACTUATE AUDIBLE & VISUAL NOTIFICATION DEVICES
- I — TRANSMIT GENERAL FIRE ALARM SIGNAL TO REMOTE STATION
- J — TRANSMIT SUPERVISORY SIGNAL TO REMOTE STATION
- K — TRANSMIT TROUBLE SIGNAL TO REMOTE STATION
- P — AUDIBLE SILENCE, STROBES CONTINUE UNTIL SYSTEM RESET

	SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		REMARKS
1	ADDRESSABLE MANUAL PULL STATION(S)	●	●					●	●	●								1	EXISTING DEVICE IN ADMIN BUILDING
2	ADDRESSABLE SMOKE DETECTOR(S)	●	●					●	●	●								2	
3																		3	
4	GROUND FAULT					●	●	●				●						4	
5	OPEN CIRCUIT					●	●	●				●						5	
6	NOTIFICATION CIRCUIT TROUBLE					●	●	●				●						6	
7	FIRE ALARM PANEL LOW BATTERY					●	●	●				●						7	
8	FIRE ALARM PANEL AC POWER FAILURE					●	●	●				●						8	
9	FIRE ALARM PANEL COMMUNICATION LINE FAULT					●	●	●				●						9	
10																		10	
11	FIRE ALARM PANEL SILENCE FEATURE																●	11	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		

SEQUENCE OF OPERATIONS
SCALE : NTS — 3 / E5.1

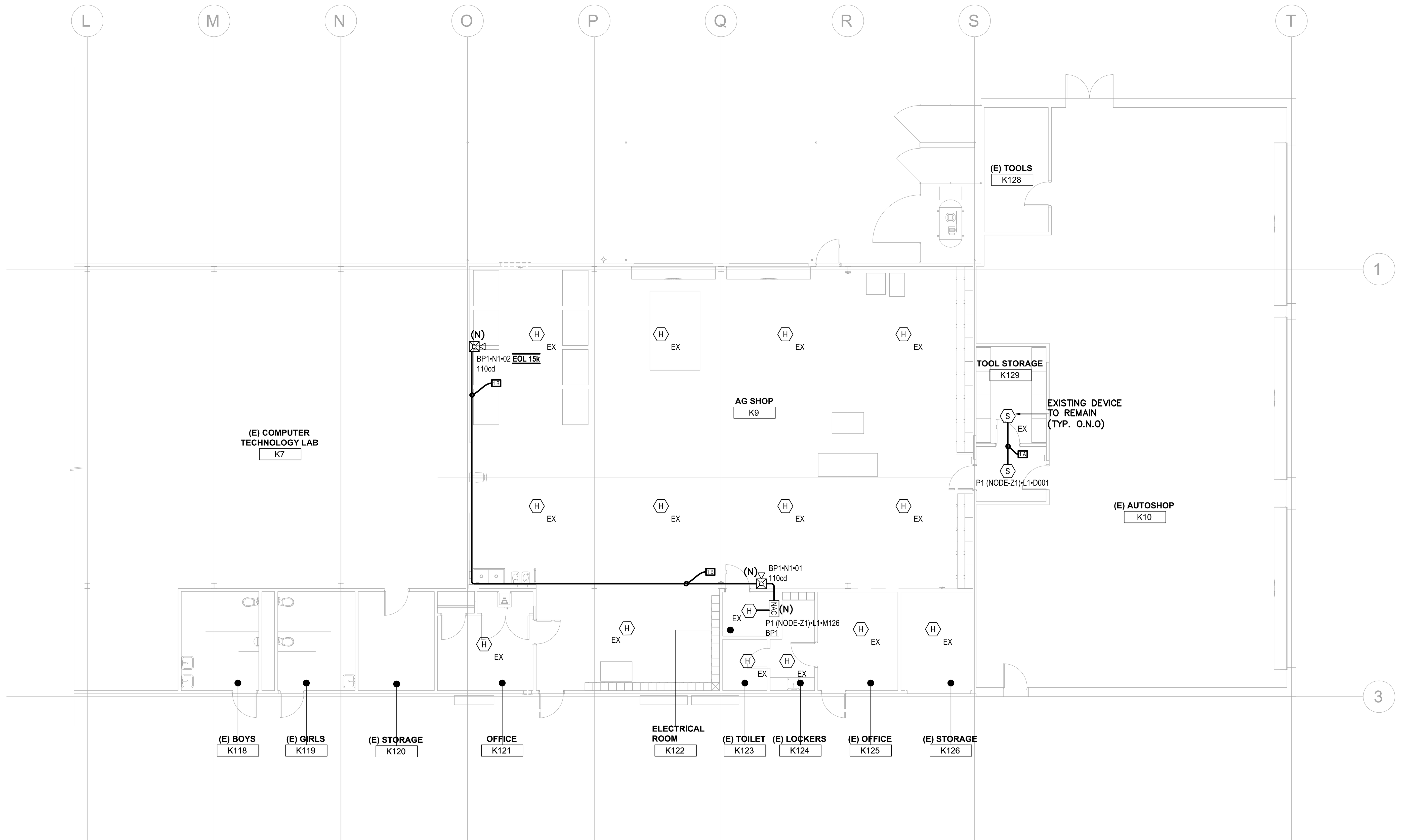
PANEL P1 (NODE-Z1) (EST3 MAIN FACP) BATTERY CALCULATION (SECONDARY POWER SOURCE REQUIREMENTS)								
					STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
PANEL COMPONENTS		QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL
		1	3-ASU/4	Audio Source Unit /w 4 Rail Spaces	0.08	**0.08**	0.08	**0.08**
		1	3-CPU3	Central Processor Module	0.155	**0.155**	0.165	**0.165**
		1	3-LCD	Liquid Crystal Display Module	0.04	**0.04**	0.042	**0.042**
		1	3-RS232	RS232 Communication Card	0.058	**0.058**	0.058	**0.058**
		1	3-RS485A	Network Communication Card, Class A	0.098	**0.098**	0.098	**0.098**
		1	3-SDDC1	Dual Signature Driver Controller. Comes with two 3-SDC1s. Mounts to Local Rail.	0.264	**0.264**	0.336	**0.336**
CIRCUIT	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
P1 (NODE-Z1)•L1	S	1	SIGA-OSD w/SIGA-SB4 BASE	Intelligent Optical Smoke Detector	0.000032	**0.000032**	0.000045	**0.000045**
					TOTAL STANDBY (A)	**0.695032**	TOTAL ALARM (A)	**0.779045**
					REQUIRED STANDBY TIME = 24 HOURS			
					REQUIRED ALARM TIME = 5 MINUTES			
SECONDARY STANDBY LOAD (A)				**0.695032**	24		**16.68**	
SECONDARY ALARM LOAD (A)				**0.779045**	0.08		**0.06**	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)					**16.75**			
DERATING FACTOR					1.25			
SECONDARY LOAD REQUIREMENTS (AMP HOURS)					**20.93**			
PROVIDE (2) 12V 55AH BATTERIES								
*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.								

PANEL BP1 (BPS10A) BATTERY CALCULATION (SECONDARY POWER SOURCE REQUIREMENTS)								
					STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
PANEL COMPONENTS		QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL
		1	BPS10A Mainboard	Mainboard for BPS10A assembly	0.07	**0.07**	0.27	**0.27**
CIRCUIT	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
BP1•N1		2	G4AVRF	Wall horn-strobe, red, FIRE 110cd	0	**0**	0.05	**0.1**
					TOTAL STANDBY (A)	**0.07**	TOTAL ALARM (A)	**0.37**
					REQUIRED STANDBY TIME = 24 HOURS			
					REQUIRED ALARM TIME = 5 MINUTES			
SECONDARY STANDBY LOAD (A)				**0.07**	24		**1.68**	
SECONDARY ALARM LOAD (A)				**0.37**	0.08		**0.03**	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)					**1.71**			
DERATING FACTOR					1.25			
SECONDARY LOAD REQUIREMENTS (AMP HOURS)					**2.14**			
PROVIDE (2) 12V 7AH BATTERIES								

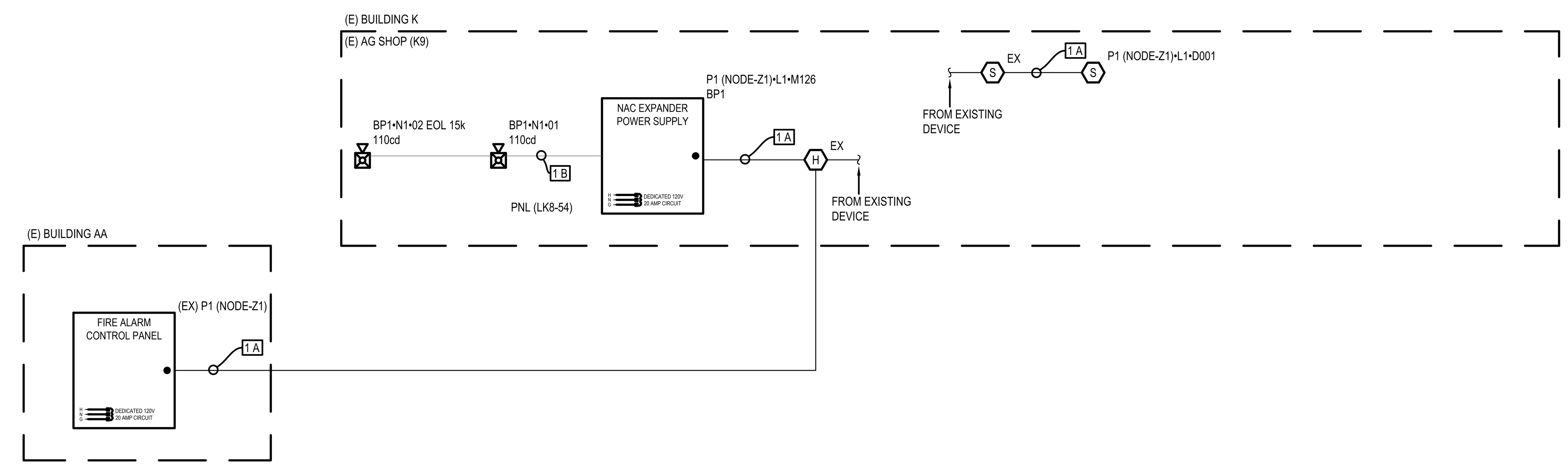
BP1 N1 POINT-TO-POINT REPORT							CIRCUIT SETTINGS		TOTALS	
							Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**0.02**
							Min. Operational Voltage:	16	End Of Line Voltage:	**19.68**
							Max. Circuit Current (A):	3	Voltage Drop Percent:	**0.12 %**
							Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.1**
Circuit Wiring Properties: 'B' 14/2 FPLR 14 AWG, 2 Cond. Solid Copper FPLR Analog Unshielded							Total Circuit Length (Ft):	75	Spare Current (A):	**2.9**
Distance measured using drawn segment lengths with 10.00 % additional length calculated							Total Circuit Resistance (Ω):	0.45966	Spare Current (A) Percent:	**96.67 %**
Device Label	**Part No.**	**Description**	**Device Current (A)**	**Remaining Current (A)**	**Dist. From Previous (Ft)**	**Resistance From Previous (Ω)**	**Voltage Drop From Previous**	**Voltage At Device**	**Total Voltage Drop**	**Voltage Drop Percent**
BP1•N1•01	G4AVRF	Wall horn-strobe, red, FIRE 110cd	0.05	**0.1**	3	**0.019838**	**0**	**19.7**	**0**	**0.01 %**
BP1•N1•02 EOL 15k	G4AVRF	Wall horn-strobe, red, FIRE 110cd	0.05	**0.05**	72	**0.439822**	**0.02**	**19.68**	**0.02**	**0.12 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

BATTERY CALCULATIONS
SCALE : NTS — 4 / E5.1



FIRE ALARM FLOOR PLAN
SCALE : 1/8" = 1'-0" — 1 / E5.1

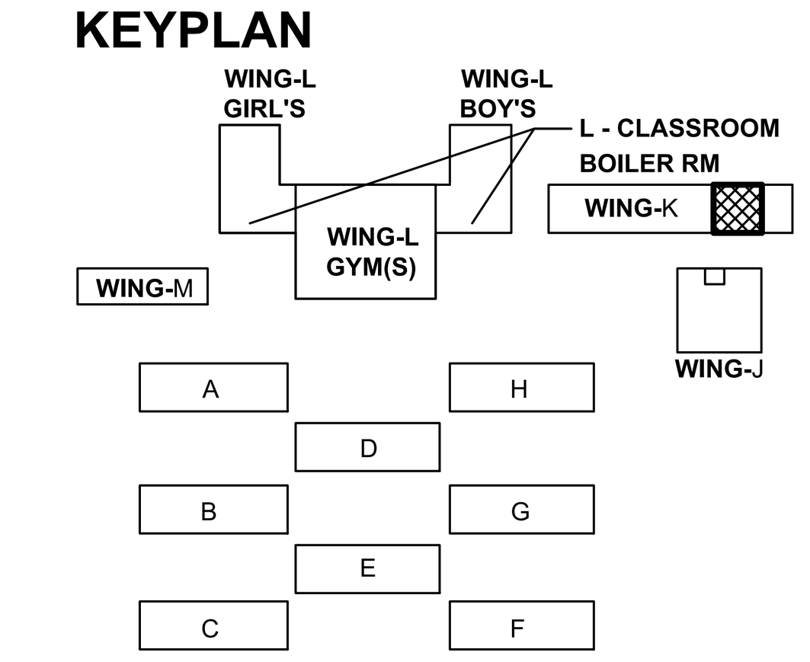


RISER DIAGRAM
SCALE : NTS — 2 / E5.1

CABLE LEGEND

LABEL	AWG	DESCRIPTION
A	16	16/2 FPLP CABLE (SLC)
B	14	14/2 FPLP CABLE (NAC)
C	14	14/2 FPLP SHIELDED CABLE (SPEAKER)
D	16	16/2 FPLP CABLE (AUX)

KEYPLAN



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6/05/2024
Date Signed: 6/5/24

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CONSTRUCTION DOCUMENTS

FIRE ALARM FLOOR PLAN

E5.1

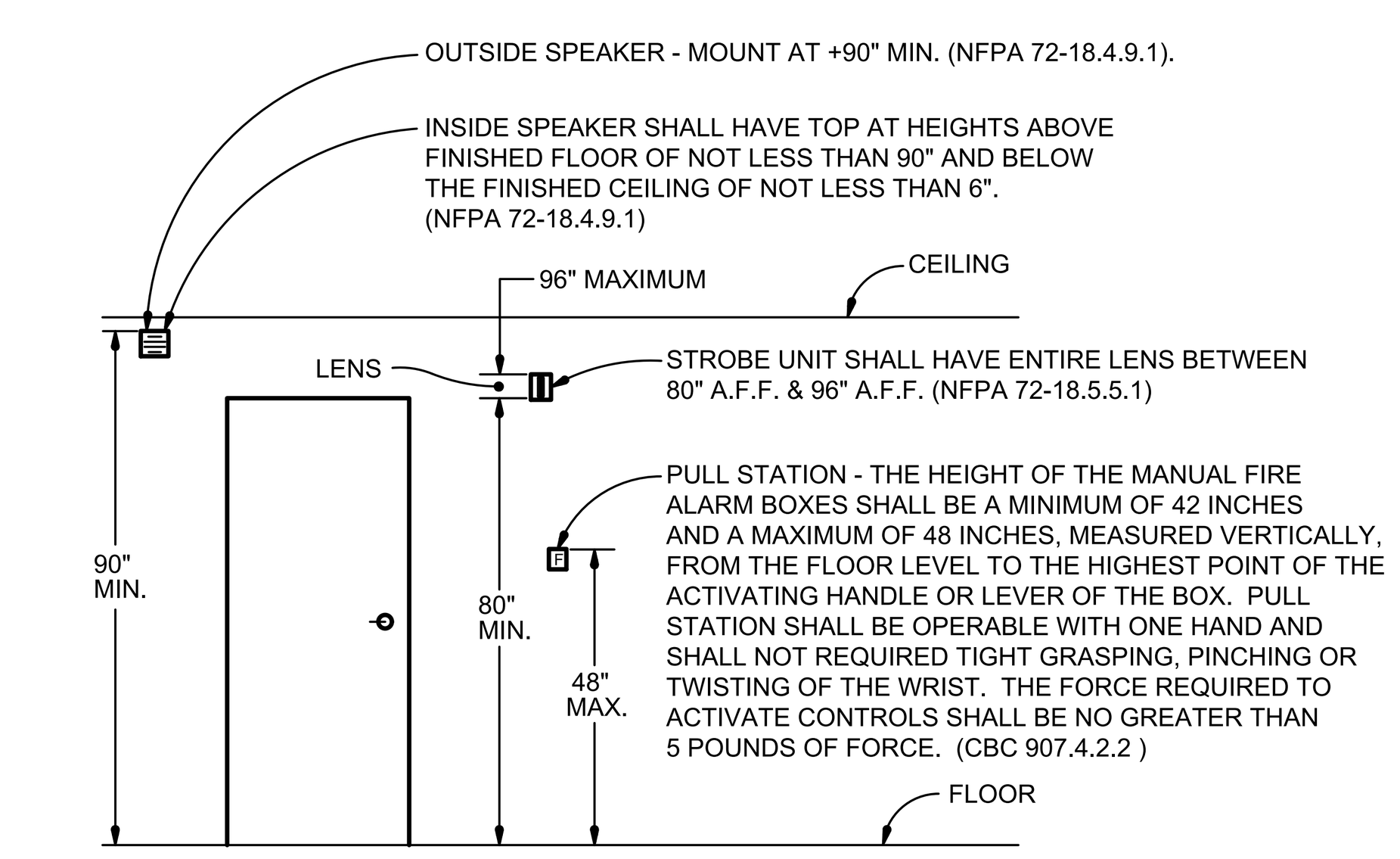
QC	
INI	%

ABBREVIATIONS

ACP	ACCESS CONTROL PROCESSOR	(N)	NEW
AFF	ABOVE FINISHED FLOOR	NC	NORMALLY CLOSED
AHJ	AUTHORITY HAVING JURISDICTION	NIC	NOT IN CONTRACT
AMP	AMPLIFIER	NO	NORMALLY OPEN
AOR	ARCHITECT OF RECORD	NTS	NOT TO SCALE
AUTO	AUTOMATIC	OC	ON CENTER
AUX	AUXILIARY	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
AWG	AMERICAN WIRE GAUGE	OFOI	OWNER FURNISHED, OWNER INSTALLED
BCT	BONDING CONDUCTOR FOR TELECOMMUNICATIONS	OSP	OUTSIDE PLANT
C	CONDUIT	PB	PULL BOX
CATV	COMMUNITY ANTENNA TELEVISION	POE	POWER OVER ETHERNET
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	PR	PAIR OF CONDUCTORS
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED	PVC	POLYVINYL CHLORIDE
CL	CENTERLINE	PWR	POWER
CSFM	CALIFORNIA STATE FIRE MARSHAL	(RR)	REMOVE AND REPLACE
DIV	DIVISION	(RL)	REMOVE AND RELOCATE
DC	DOOR CONTACT	RCP	REFLECTED CEILING PLAN
(EX)	EXISTING	RFI	REQUEST FOR INFORMATION
EC	ELECTRICAL CONTRACTOR	RMC	RIGID METALLIC CONDUIT
ECS	EMERGENCY COMMUNICATION SYSTEM	SCS	STRUCTURED CABLING SYSTEM
EF	ENTRANCE FACILITY FOR TELECOMMUNICATION	SM	SINGLE MODE
EMT	ELECTRIC METALLIC TUBING	STR	STRANDS (OF FIBER)
ER	EQUIPMENT ROOM	STP	SHIELDED TWISTED PAIR
EXT	EXTERIOR	SEC	SECURITY
(F)	FUTURE	TBB	TELECOMMUNICATIONS BONDING BACKBONE
FACP	FIRE ALARM CONTROL PANEL	TELCO	TELEPHONE COMPANY
FATC	FIRE ALARM TERMINAL CABINET	TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
FABP	FIRE ALARM BOOSTER PANEL	TMGB	TELECOMMUNICATIOIN MAIN GROUNDING BUSBAR
FB	FLOORBOX	TYP	TYPICAL
FO	FIBER OPTIC	UNO	UNLESS NOTED OTHERWISE
GC	GENERAL CONTRACTOR	UPS	UNINTERRUPTIBLE POWER SUPPLY
IDF	INTERMEDIATE DISTRIBUTION FRAME	UTP	UNSHIELDED TWISTED PAIR
INT	INTERIOR	V	VOICE
IP	INTERNET PROTOCOL	WB	WALL BOX
JB	JUNCTION BOX	WP	WEATHERPROOF
LV	LOW VOLTAGE		
MDF	MAIN DISTRIBUTION FRAME		
MIC	MICROPHONE		
MM	MULTIMODE		
MPOE	MINIMUM POINT OF ENTRY		

DSA GENERAL NOTES

1. APPLICABLE STANDARD NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35
2. AUTOMATIC FIRE ALARM SYSTEMS SHALL BE MONITORED AND SHALL TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72, AS AMENDED BY CFC CHAPTER 80. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE & PROPRIETARY) BY UNDERWRITERS LABORATORY INC. (UL) OR OTHER APPROVED LISTING AND TESTING LABORATORY OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD, FACTORY MUTUAL (FM) 3011. TERMINATION OF MONITORING SERVICES SHALL BE IN ACCORDANCE WITH CBC / CFC SECTION 907.6.6.2.
3.
4. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, HAS BEEN APPROVED BY DSA.
5. UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
6. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
7. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
8. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.
9. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.
10. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80” MINIMUM AND 96” MAXIMUM FROM FINISHED FLOOR.
11. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90” MINIMUM AND 100” MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6” TO A HORIZONTAL STRUCTURE.
12. AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (dBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR FIVE dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING.
13. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
14. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
15. VISIBLE DEVICES SHOULD NOT EXCEED TWO FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN ONE FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISIBLE DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
16. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
17. ALL FIRE ALARM WIRING SHALL BE FPLOR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE TYPE THHN OR THWN.
18. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
19. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
20. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
21. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS. REFER TO SHEET 2/E0.3 FOR MORE INFORMATION.
22. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE “ON” POSITION. THE CIRCUIT BREAKER SHALL BE LABELED “FIRE ALARM CIRCUIT CONTROL.” CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
23. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED “SYSTEM RECORD OF COMPLETION” PER NFPA 72, FIGURE 17.8.2.
24. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
25. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
26. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.



FIRE ALARM DEVICE MOUNTING DETAIL

SCALE : NTS

1
E5.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

COMMUNITY ARCHITECTURE

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

LICENSED ARCHITECT
No. C32876
EXP. 03/31/25
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
NATHAN A. HEARN
No. E 23927
3-31-2026
ELECTRICAL
STATE OF CALIFORNIA
6/05/2024
Date Signed: 6/5/24

capital engineering
RANCHO CORDOVA, CALIFORNIA

NH-JG	232073.00
PM - DESIGN TEAM	PROJECT NO.

SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

FIRE ALARM GENERAL NOTES AND DETAILS

E5.2

QC

INI	%

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Stagg HS - Agricultural Mechanics Shop Renovation	**Report Page:** (Page 3 of 7)
	Date Prepared: 6/3/2024

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
EL1	EL1	☐ Linear	4	Mfr. Spec	2	New	☐	8	NA: < 6200 lumens	☐	☐
L2	L2	☐ Linear	42	Mfr. Spec	3	New	☐	126	NA: < 6200 lumens	☐	☐
							Total Design Watts:	134			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

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C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv													Compliance Results			
01		02		03		04		05		06		07		08	09	
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**	
323	+	---	+	---	+	---	+	---	OR	---	=	323	≥	134	COMPLIES	
Shielding Compliance (See Table G for Details)															N/A	
Controls Compliance (See Table H for Details)															COMPLIES	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Stagg HS - Agricultural Mechanics Shop Renovation	**Report Page:** (Page 1 of 7)
Project Address: 1621 Brookside Road	**Date Prepared:** 6/3/2024

This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.

A. GENERAL INFORMATION

01	Project Location (city)	Stockton	04	Total Illuminated Hardscape Area (ft²)	1500
02	Climate Zone	12			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Rural Areas	☒ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
● Commercial Industrial					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02	
☐ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6	
☒ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	● Yes ○ No
03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%	0	

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

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M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	Outdoor;

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CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
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	Date Prepared: 6/3/2024

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance. Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01				
		"Use it or lose it" Allowance (select all that apply) (select all that apply)			
	☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Canopy	1463	0.021	30.7	184	0.2	36.8	68
Entrance	37	0.021	0.8	24	0.2	4.8	6
					Initial Wattage Allowance for Entire Site (Watts):		250
					Instances of Initial Wattage Allowance (LZ 0 only)[1]		
					Total General Hardscape Allowance (Watts):		323

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

STATE OF CALIFORNIA
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CALIFORNIA ENERGY COMMISSION

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	Date Prepared: 6/3/2024

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
Outdoor	Astronomical Timer	Provided	NA: Facade, etc. <=24 ft	☐	☐

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*
[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*
[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

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CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Stagg HS - Agricultural Mechanics Shop Renovation	**Report Page:** (Page 7 of 7)
Project Address: 1621 Brookside Road	**Date Prepared:** 6/3/2024

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jefferson Gulde	Documentation Author Signature:
Company: Capital Engineering Consultants Inc.	Signature Date: 2024-06-03
Address: 11020 Sun Center Drive, Suite 100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3567

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Nathan Hearn	Responsible Designer Signature:
Company: Capital Engineering Consultants Inc.	Date Signed: 2024-06-03
Address: 11020 Sun Center Dr. Suite 100	License: E23927
City/State/Zip: Rancho Cordova CA 95670	Phone: (916) 851-3568

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

Date Signed: 6/5/24

capital engineering
Rancho Cordova, California
NH-JG — PM - DESIGN TEAM
232073.00 — PROJECT NO.

SUSD

55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

TITLE 24
LTO FORMS

E6.0

QC	
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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Stagg HS - Agricultural Mechanics Shop Renovation	**Report Page:** (Page 3 of 8)
	Date Prepared: 6/3/2024

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
L1	L1	No	NA	87.9	Mfr. Spec	22	No	1,933.8	☐	☐
L1E	L1E	No	NA	87.9	Mfr. Spec	2	No	175.8	☐	☐
L2	L2	No	NA	42	Mfr. Spec	2	No	84	☐	☐
L2E	L2E	No	NA	42	Mfr. Spec	1	No	42	☐	☐
U1B	U1B	No	NA	25	Mfr. Spec	1	No	25	☐	☐
					Total Designed Watts: CONDITIONED SPACES			2,261		

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2]*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Pass	Fail

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C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)					Compliance Results
	01	02	03	04		05		06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)		Total Allowed (Watts)		Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)		Total Adjusted (Watts) *Includes Adjustments	05 must be >= 08 140.6 / 170.2(e)
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)			
Conditioned		2,890.8	0		=	2,891	≥	2,261	0	=	2261	COMPLIES
Unconditioned					=		≥			=		
									Controls Compliance (See Table H for Details)			COMPLIES
									Rated Power Reduction Compliance (See Table Q for Details)			

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Stagg HS - Agricultural Mechanics Shop Renovation	**Report Page:** (Page 1 of 8)
Project Address: 1621 Brookside Road	**Date Prepared:** 6/3/2024

This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

A. GENERAL INFORMATION

01	Project Location (city)	Stockton	04	Total Conditioned Floor Area (ft²)	3,401
02	Climate Zone	12	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Commercial Industrial

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	3401	Area Category Method	0
Total Area of Work (ft²)	3401		0	

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Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
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	Date Prepared: 6/3/2024

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

TOTALS:	3,401	2,890.8	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Stagg HS - Agricultural Mechanics Shop Renovation	**Report Page:** (Page 4 of 8)
	Date Prepared: 6/3/2024

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

NA < 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
AG Shop	Classroom, Lecture, or Training Vocational	Readily Accessible	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
Office	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: Rm < 24sf Glazing	NA: Rm < 24sf Glazing	No	☐	☐
Tool Storage	All Other Space Types	Readily Accessible	Dimmer	Occupancy Sensor	NA: Rm < 24sf Glazing	NA: Rm < 24sf Glazing	No	☐	☐
Electrical Room	Electrical Mechancial Telephone Room	Readily Accessible	NA: Enclosed area <1005F	NA: Elec. equip. rm	NA: Rm < 24sf Glazing	NA: Rm < 24sf Glazing	No	☐	☐
							13	Plan Sheet Showing Daylit Zones:	

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Mechanics Shop	General Commercial Industrial Work Area Precision	0.85	3,401	2,890.8	No	No

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CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Stagg HS - Agricultural Mechanics Shop Renovation	**Report Page:** (Page 8 of 8)
Project Address: 1621 Brookside Road	**Date Prepared:** 6/3/2024

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jefferson Gulde	Documentation Author Signature:
Company: Capital Engineering Consultants Inc.	Signature Date: 2024-06-03
Address: 11020 Sun Center Drive, Suite 100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cordova CA 95670	Phone: 916-851-3567

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Nathan Hearn	Responsible Designer Signature:
Company: Capital Engineering Consultants Inc.	Date Signed: 2024-06-03
Address: 11020 Sun Center Dr. Suite 100	License: E23927
City/State/Zip: Rancho Cordova CA 95670	Phone: (916) 851-3568

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V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	AG Shop; Office; Tool Storage;
NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	AG Shop;

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122192 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/27/2024

DSA APP. NO: 02-122192

3701 Business Drive Suite 200
Sacramento, CA 95820
Phone: (916) 365-9655

Date Signed: 6/5/24

capital engineering
Rancho Cordova, California

NH-JG	23073.00
PM - DESIGN TEAM	PROJECT NO.

SUSD
55 S LINCOLN STREET
STOCKTON UNIFIED SCHOOL DISTRICT

STAGG HIGH SCHOOL AGRICULTURAL MECHANICS SHOP RENOVATION

1621 BROOKSIDE ROAD
STOCKTON, CA 95207

STOCKTON UNIFIED SCHOOL DISTRICT

REVISIONS

No.	Description	Date
1	Revision 1	Date 1

PROJECT No.: 2023-014.00

CONSTRUCTION DOCUMENTS

TITLE 24
LTI FORMS

E6.1