DEDUCT ALTERNATES AND WORK N.I.C.

Landscape work shown in sheets L1.0, L2.0, L3.0, L4.0, L6.0, L6.1, L9.0, and L9.1 is not in the scope of this contract and will be performed by others. The General Contractor will protect the existing landscaping from damage during the new work.

DEDUCT ALTERNATES

1. All work associated with improvements to Exterior Storage #31 including, but not limited to, new walls, roof structure, roofing, new footings, and new downspouts and drainage to parking lot.

2. All work associated with the installation of new playground fencing including, but not limited to, new foundations, fence structure, and entry gate.

3. All work associated with exterior fabric structure (shade sail) including, but not limited to, the structural support column, attachment to Exterior Storage #31, fabric, and mounting/tensioning hardware.

4. Exterior courtyard canopy at Alcove #17 including, but not limited to, new steel columns, column footings, roof framing, roofing, structural modifications at existing building along line 5, and modifications to existing line 5 gutter.

FIRE SAFETY INFORMATION

Project will comply with 2019 California Fire Code

GENERAL CONTRACTOR AND SUBCONTRACTORS TO COMPLY WITH CFC CHAPTER 33 FOR SAFEGUARDS DURING CONSTRUCTION:

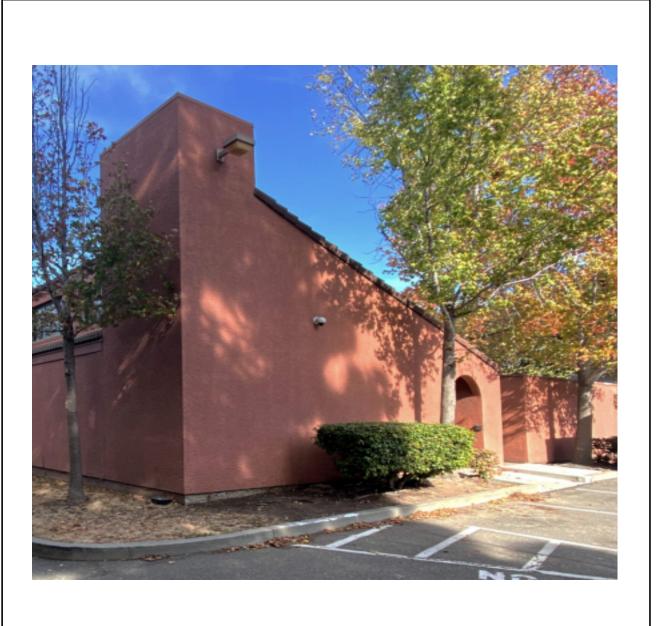
- Smoking shall be prohibited except in designated areas with approved ashtrays. All other areas must have "No Smoking" signage posted around construction areas in accordance with CFC§310. [CFC§3304.1]

- Combustible debris shall not be allowed to accumulate within building. Combustible debris, rubbish and waste material shall be removed from building at the end of each shift of work. [CFC §3304.2]

- Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. [CFC §3304.2.4]

- Operations involving the use of cutting and welding shall be done in accordance with Chapter 35. [CFC §3304.6]

- During construction, the construction site or area must be thoroughly cleaned at the end of each work day in order to provide firefighter access in the building in an event of a fire.



Cost Estimator

Leland Saylor Associates 1629 Telegraph Ave Oakland CA 94612 Tel: (510) 986-1212

Electrical

RIJA 5515 Doyle Street, #7 Emeryville CA 94608 Tel: (415) 730-7994

WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710 BID SET - 12.22.2023



PROJECT SUMMARY

THE PROJECT IS A RENOVATION OF AN EXISTING, 9,836 S.F., ONE-STORY, TYPE-V, NON-RATED, WOOD FRAMED BUILDING.

THE PROJECT SCOPE INCLUDES, BUT IS NOT LIMITED TO, NEW ROOFING, UPGRADED ELECTRICAL DISTRIBUTION SYSTEM, UPGRADED MECHANICAL SYSTEMS FOR NEW RESTROOM CONFIGURATION, MINOR INTERIOR MODIFICATIONS REQUIRED FOR ELECTRICAL AND MECHANICAL WORK, REMOVAL OF EXISTING FIRE PLACE, NEW EXTERIOR PORCH STRUCTURE, EXPANDED EXTERIOR STORAGE ENCLOSURE, AND LANDSCAPING IMPROVEMENTS.

CONTRACTOR WILL BE RESPONSIBLE FOR PREPPING ALL AREAS FOR NEW SCOPE OF WORK INCLUDING PATCHING AND REPAIRING EXISTING CONDITIONS WHERE AFFECTED BY ANY AND ALL DEMOLITION WORK.

THE WORK TO BE PERFORMED UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, SERVICES, PERMITS, TEMPORARY CONTROLS AND CONSTRUCTION FACILITIES, AND ALL GENERAL CONDITIONS, SEISMIC REQUIREMENTS, GENERAL REQUIREMENTS AND INCIDENTALS REQUIRED TO COMPLETE THE WORK ON THE PROJECT IN ITS ENTIRETY AS DESCRIBED IN THE CONTRACT DOCUMENTS.

APPLICABLE CODES

THE WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH 2022 CALIFORNIA BUILDING, RESIDENTIAL, MECHANICAL, ELECTRICAL, PLUMBING, ENERGY, EXISTING, AND GREEN BUILDING STANDARDS CODE AS AMENDED OF THE CITY OF BERKELEY, AS APPLICABLE.

MEP

EPCE Inc 274 Devonshire Street Vallejo CA 94591 Tel: (707) 980-4049

Structural **IDA Structural Engineers** Inc. 1629 Telegraph Avenue Suite 300 Oakland CA 94612-2114

Tel: (510) 834-1629

Landscape John Northmore Roberts and Associates 2927 Newberry Street, Ste B Berkeley CA 94703 Tel: (510) 843-3666

Civil

BKF Engineers 254 Shoreline Drive Suite 200 Redwood City CA 94065 Tel: (650) 482-6300

Noll & Tam Architects 729 Heinz Ave Berkeley, CA 94710 Tel: 510.542.2200 Fax: 510.542.2201

City of Berkeley

Architect

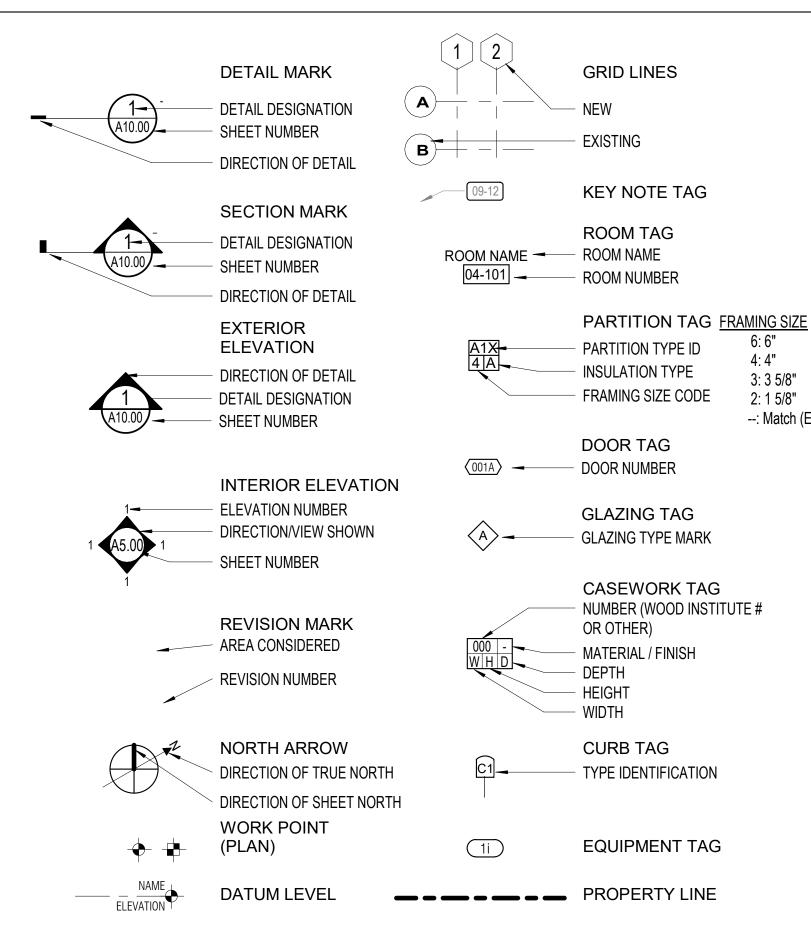
Client

City of Berkeley Public Works Department 1947 Center Street, 5th floor Tel: (510) 981-6435

NOLL ^{&} TAM
ARCHITECTS 729 Heinz Avenue Berkeley, CA 94710 tel 510.542.2200 fax 510.542.2201
JANET TAM JANET TAM No. C-14064 REN. 01-31-25 JANE OF CALIFORNIA
APPROVALS
PROJECT TITLE
City of Berkeley WEST BERKELEY SERVICE CENTER
WEST BERKELEY SERVICE
WEST BERKELEY SERVICE CENTER 1900 Sixth St
WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710
WEST BERKELES SERVICE SERVICE Service Service BID SET ISSUE DATE N&T JOB NUMBER REVISIONS Mate Date Description

G0.00

SYMBOLS LEGEND



DISP

DISPOSAL

GENERAL NOTES

- NOT CONFORMING TO THOSE CODES.
- CONSTITUTE ACCEPTANCE OF CONDITIONS.

- CLARIFICATION OF PROJECT LIMITS.

6:6"

4: 4"

3: 3 5/8"

2:15/8"

--: Match (E)

- 8. DIMENSIONS

- MAINTAINED.

- VARIATIONS OR DISCREPANCIES ARE UNCOVERED.
- CONSTRUCTION ACTIVITIES.
- DEMOLITION.

14. PROVIDE TEMPORARY BARRIERS FOR SAFETY, SECURITY & CLEANLINESS

ABBREVIATIONS

CIVIL ENGINEER

CE

&	AND	CEM	CEMENT/CEMENTITIOUS	DN	DOWN	FOC	FACE OF CONCRETE	HM	HOLLOW METAL	MTD	MOUNTED	PT	POINT/PRESSURE TREAT
(E)	EXISTING	CER	CERAMIC	DR	DOOR	FOF	FACE OF FINISH	HORIZ	HORIZONTAL	MTL	METAL	PTD	PAINTED
(N)	NEW	CFMF	COLD FORMED METAL FRAMING	DS	DOWNSPOUT	FOS	FACE OF STUD	HR	HOUR	MUL	MULLION	PVC	POLYVINYLCHLORIDE
@	AT	CI	CAST IRON	DTL	DETAIL	FR	FIRE RESISTANT/FIRE	HT	HEIGHT	Ν	NORTH	QTY	QUANTITY
AB	ANCHOR BOLT	CJ	CONTROL JOINT	DWG	DRAWING		RETARDANT	HVAC	HEATING VENTILATION & AIR	NA	NOT APPLICABLE	R	RISER
AC	ASPHALTIC CONCRETE	CLG	CEILING	DWR	DRAWER	FRP	FIBERGLASS REINFORCED		CONDITIONING	NIC	NOT IN CONTRACT	RAD	RADIUS
ACC	ACCESS	CLKG	CAULKING	Е	EAST		PANEL	ID	INSIDE DIAMETER	NO	NUMBER	RD	ROOF DRAIN
ACOUS	ACOUSTICAL	CLO	CLOSET	EA	EACH	FRT	FIRE RETARDANT TREATED	IF	INSIDE FACE	NOM	NOMINAL	REF	REFERENCE
ACT	ACOUSTIC CEIILING TILE	CLR	CLEAR	EJ	EXPANSION JOINT	FSP	FIBERGLASS SANDWICH PANEL	INC	INCANDESCENT	NTS	NOT TO SCALE	REFR	REFRIGERATOR
AD	AREA DRAIN	CMU	CONCRETE MASONRY UNIT	ELEC	ELECTRICAL	FT	FOOT/FEET	INCL	INCLUDE/INCLUDING	OA	OVERALL	REG	REGISTER
ADDL	ADDITIONAL	CNTR	COUNTER	ELEV	ELEVATION/ELEVATOR	FTG	FOOTING	INSUL	INSULATION	OC	ON CENTER	REINF	REINFORCE/REINFORCIN
ADJ	ADJACENT/ADJUSTABLE	CO	CLEAN OUT	ENLG	ENLARGED	FURN	FURNITURE	INT	INTERIOR	000	OCCUPANT	REQD	REQUIRED
AESS	ARCHITECTURAL EXPOSED	COL	COLUMN	EOS	EDGE OF SLAB	FX	FIXED	JAN	JANITOR	OD	OUTSIDE DIAMETER/OVERFLOW	REQT	REQUIREMENTS
	STRUCTURAL STEEL	CONC	CONCRETE	EP	ELECTRICAL PANEL	GA	GAUGE	JBOX	JUNCTION BOX		DRAIN	RES	RESILIENT
AFF	ABOVE FINISHED FLOOR	CONN	CONNECTION	EQ	EQUAL	GALV	GALVANIZED	JST	JOIST	OF	OUTSIDE FACE	REV	REVISION
AGG	AGGREGATE	CONT	CONTINUOUS	EQUIP	EQUIPMENT	GB	GRAB BAR	JT	JOINT	OFCI	OWNER FURNISHED	RM	ROOM
ALT	ALTERNATE	CONTR	CONTRACTOR	EWC	ELECTRIC WATER COOLER	GC	GENERAL CONTRACTOR	LAM	LAMINATE		CONTRACTOR INSTALLED	RO	ROUGH OPENING
ALUM	ALUMINUM	CORR	CORRIDOR	EXH	EXHAUST	GFI	GROUND FAULT INTERRUPT	LAV	LAVATORY	OFD	OVERFLOW DRAIN	RWL	RAIN WATER LEADER
ANOD	ANODIZED	CPT	CARPET	EXP	EXPANSION	GI	GALVANIZED IRON	LB	LAG BOLT	OFF	OFFICE	S	SOUTH
APPROX	APPROXIMATE	CSMT	CASEMENT	EXT	EXTERIOR	GL	GLASS/GLAZING	LF	LINEAR FEET	OP	OPERABLE	SASF	SELF ADHERING SHEET
AV	AUDIO VISUAL	CTR	CENTER	FA	FIRE ALARM	GLAM	GLUE LAMINATED	LKR	LOCKER	OPNG	OPENING		FLASHING
BD	BOARD	CTSK	COUNTERSINK	FD	FLOOR DRAIN	GR	GRADE	LT	LIGHT	OPP	OPPOSITE	SASM	SELF ADHERING SHEET
BLDG	BUILDING	D	DEPTH	FDN	FOUNDATION	GSM	GALVANIZED SHEET METAL	MAS	MASONRY	OPP HD	OPPOSITE HAND		MEMBRANE
BLK	BLOCK	DBL	DOUBLE	FE	FIRE EXTINGUISHER	GWB	GYPSUM WALL BOARD	MATL	MATERIAL	PA	PUBLIC ADDRESS	SC	SOLID CORE
BLKG	BLOCKING	DEMO	DEMOLITION	FEC	FIRE EXTINGUISHER CABINET	GYP	GYPSUM	MAX	MAXIMUM	PARTN	PARTITION	SCD	SEE CIVIL DRAWINGS
BM	BEAM	DEPT	DEPARTMENT	FHC	FIRE HOSE CABINET	Н	HIGH / HEIGHT	MB	MACHINE BOLT	PCP	PORTLAND CEMENT PLASTER	SCHED	SCHEDULE
BO	BOTTOM OF	DF	DOUGLAS FIR/DRINKING	FIN	FINISH	HB	HOSE BIB	MECH	MECHANICAL	PL	PLATE	SE	STRUCTURAL ENGINEER
ВОТ	воттом	51	FOUNTAIN	FIN FLR	FINISH FLOOR	HC	HOLLOW CORE	MET	METAL	PLAM	PLASTIC LAMINATE	SEC	SECTION
BUR	BUILT UP ROOF	DH	DOUBLE HUNG	FIXT	FIXTURE	HD	HEAD	MFR	MANUFACTURER	PLAS	PLASTIC	SED	SEE ELECTRICAL DRAWI
CAB	CABINET	DIA	DIAMETER	FLR	FLOOR	HDR	HEADER	MH	MANHOLE	PLY	PLYWOOD	SF	SUPPLY FAN
CB	CARRIAGE BOLT	DIM	DIMENSION	FLRG	FLOORING	HDW	HARDWARE	MIN	MINIMUM	PR	PAIR	SFRM	SPRAY-APPLIED FIRE
						סעוסע							RESISTIVE MATERIAL

HARDWOOD

HDWD

FLUOR FLUORESCENT

	SHE							
	GENERA G0.00	L COVER SHEET			A9.11 20	FINISH PLAN -	1ST FLOOR	
	G0.00 G0.01	GENERAL NOTES / SHEET IND	DEX		20			
	G1.31	CODE OCCUPANCY & EXIT PL			STRUCTU	RAL		
	G2.11	CALGREEN			S1.01	GENERAL NOT	ES	ARCHITECTS
	G3.24	MOUNTING HEIGHTS / CODE /		_	S2.00		AND FIRST FLOOR PLAN	729 Heinz Avenue
	G3.25 6	MOUNTING HEIGHTS / CODE /	AND ACCESSIBI	LITY DETAILS	S2.01 S3.01		G PLAN NDATION & CONCRETE DETAILS	Berkeley, CA 94710
	0				S4.01	SECTIONS		tel 510.542.2200 fax 510.542.2201
	CIVIL				S5.01	TYPICAL WOO	D DETAILS	Tax 510.542.2201
	C1.01	EXISTING CONDITIONS AND E			S6.01	TYPICAL STEE	L DETAILS	SEAL
	C2.01	HORIZONTAL CONTROL AND	PAVING PLAN		7			CENSED ARCHITE
	C3.01 C4.01	GRADING PLAN CONSTGRUCTION DETAILS			PLUMBIN	2		Athut this
	C5.01	EROSION CONTROL NOTES A	ND DETAILS		P1.00	-	AND GENERAL NOTES	→ JANET TAM
	C5.02	EROSION CONTROL NOTES A	ND DETAILS		P2.00	PLUMBING DE	MOLITION PLAN	REN. 01-31-25
	6				P2.10		NSTRUCTION PLAN	STATE OF CALIFORNIA
		APE - N.I.C (INCLUDED F			P3.01 P3.02	PLUMBING DE	TAILS	
	LAND307	DEMOLITION PLAN			F 3.02 5	FIATURE SUN	EDULE AND SPECIFICATIONS	
	L2.0	LAYOUT AND MATERIAL PLAN	l		•			
	L3.0	DIMENSION PLAN			MECHANI	-		
	L4.0	GRADING PLAN			M1.00		T, GENERAL NOTES	
	L6.0 L6.1	PLANTING PLAN PLANTING PLAN			M1.10 M2.00	HVAC EQUIPN HVAC DEMOLI	ENT SCHEDULE TION PLAN	
	L0.1 L9.0	DETAILS			M2.00 M2.10		RUCTION PLAN	
	L9.1	DETAILS			M3.00	HVAC DETAILS		
	8				5		1	APPROVALS
	ARCHITE				ELECTRIC		_	
	A1.31	DEMOLITION FLOOR PLAN	2		E0.1			
	A1.41 A2.01	DEMOLITION RCP- 1ST FLOOF SITE PLAN	N		E1.01 E2.01	ELECTRICAL F		
	A2.31	FLOOR PLAN- 1ST FLOOR			E3.01	DETAILS		
	A2.33	ROOF PLAN			E4.01	SPECIFICATIO	NS	
	A2.41	REFLECTED CEILING PLAN			E4.02	SPECIFICATIO		
	A2.51 A3.11	EXTERIOR - DOOR SCHEDULE EXTERIOR ELEVATIONS	E AND TYPES		E5.01 E5.02	ENERGY FORI		PROJECT TITLE
R	A3.11 A3.12	EXTERIOR ELEVATIONS and E	UILDING SECTI	ONS	E5.02 E5.03	ENERGY FOR		
	A3.13	EXTERIOR ELEVATIONS and E			E5.04	ENERGY FOR		City of Berkeley
1	A3.31	BUILDING SECTIONS and DET	AILS		ED1.01	DEMOLITION F	PLAN	WEST
	A4.11	ENLARGED PLANS- RESTROC			11			
	A4.15 A5.12	ENLARGED PLANS- RESTROC INTERIOR ELEVATIONS	JMS		ENERGY			BERKELEY
	A7.21	PLAY AREA FENCE DETAILS			ENV-1	ENERGY COM	PLIANCE	SERVICE
	A7.41	EXTERIOR - ROOF ASSEMBLI	ES AND DETAILS	6	ENV-2	ENERGY COM	PLIANCE	CENTER
	A7.43 A8.63	MISCELLANEOUS DETAILS INTERIOR - SPECIALTY & MIS		εταίι ς	2 TOTAL SH	IEETS: : 70		
	A8.64	INTERIOR - SPECIALTY & MIS			TOTAL OF			
								1900 Sixth St Berkeley, CA 94710
PT	PC	DINT/PRESSURE TREATED	SH	SINGLE HUNG		ТО	TOP OF	
PTD			SHT	SHEET		TOC	TOP OF CONCRETE/CURB	
PVC QTY		DLYVINYLCHLORIDE JANTITY	SHTG SIM	SHEATHING SIMILAR		TOP TOS	TOP OF PAVING TOP OF STEEL	
R	-	SER	SLD	SEE LANDSCAPE	DRAWINGS	TOS	TOP OF WALL	BID SET
RAD		ADIUS	SMD	SEE MECHANICA		TS	TUBE STEEL	
RD			SOG	SLAB ON GRADE		TYP	TYPICAL	ISSUE DATE 12.22.2023
REF			SP			UON	UNLESS OTHERWISE NOTED	N&T JOB NUMBER 22121
REFR REG		EFRIGERATOR EGISTER	SPA SPD	SANDWICH PANE SEE PLUMBING D		UR VCT	URINAL VINYL COMPOSITION TILE	REVISIONS
REINF		EINFORCE/REINFORCING	SPEC	SPECIFICATION		VENT	VENTILATION	DATE DESCRIPTION
REQD		EQUIRED	SQ	SQUARE		VERT	VERTICAL	
REQT			SS	STAINLESS STEE		VEST		
RES REV		ESILIENT EVISION	SSD SSGD	SEE STRUCTURA SEE SIGNAGE DR		VIF W	VERIFY IN FIELD WEST / WIDTH / WIDE	
REV		DOM	SSGD	SEE SIGNAGE DR	CONINAL	vv W/	WEST / WIDTH / WIDE WITH	
RO		DUGH OPENING	SSTL	STAINLESS STEE	L	W/O	WITHOUT	
RWL		AIN WATER LEADER	STD	STANDARD		WC	WATER CLOSET	
S Sace		OUTH TIE ADHERING SHEET	STED	SEE TELECOM DF	RAWINGS	WD WH	WOOD WATED HEATED	
SASF		ELF ADHERING SHEET ASHING	STL STOR	STEEL STORAGE		WH WIN	WATER HEATER WINDOW	SHEET TITLE
SASM	1 SE	ELF ADHERING SHEET	STRUC	STRUCTURAL		WO	WHERE OCCURS	GENERAL NOTES
00			SUSP	SUSPENDED		WP	WORK POINT	SHEET INDEX
SC SCD		DLID CORE EE CIVIL DRAWINGS	SYS	SYSTEM		WR	WATER RESISTANT	
SCHE		CHEDULE		TREAD		WT	WEIGHT	
SE		RUCTURAL ENGINEER	T&G TBD	TONGUE & GROO TO BE DETERMIN				SHEET NUMBER
SEC		ECTION	TEL	TELEPHONE				
SED		E ELECTRICAL DRAWINGS	TEMP	TEMPERED				
SF SFRM		JPPLY FAN ?RAY-APPLIED FIRE	THK	THICK/THICKNES	S			G0.01
UT TAIVI		ESISTIVE MATERIAL	THRESH TJI	THRESHOLD TRUSS JOIST				

1. WORK SHALL MEET OR EXCEED THE MINIMUM STANDARDS OF APPLICABLE CODES AND ORDINANCES AND SHALL NOT BE CONSTRUED TO PERMIT WORK

CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PROJECT SPECIFICATIONS.

3. VERIFY ALL DIMENSIONS AND INSPECT CONDITION OF IN-PLACE CONSTRUCTION BEFORE STARTING WORK. PROCEEDING WITH THE WORK SHALL

4. CONTRACTOR SHALL EXAMINE THE DOCUMENTS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO THE START OF WORK.

5. THE CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO VISIT AND INSPECT THE SITE PRIOR TO CONSTRUCTION OR ORDERING ANY MATERIALS.

6. ITEMS MARKED "NIC" ARE NOT IN CONTRACT. SUCH ITEMS ARE INCLUDED IN THE DOCUMENTS WHEN CONTRACTOR'S COORDINATION IS REQUIRED OR FOR

7. DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL SIMILAR CASES, UON.

a. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM THE DRAWINGS.

b. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO PROCEEDING WITH CONSTRUCTION.

c. ELEVATION MARKERS REFER TO THE TOP OF THE SLAB ON GRADE DATUM. FLOOR AND ROOF ELEVATIONS NOTED ARE TO TOP OF STRUCTURAL ASSEMBLY, UON. WALL HEIGHT ELEVATIONS ARE TO TOP OF FRAMING, UON.

d. STUD WALLS: ALL DIMENSIONS ARE TO THE FACE OF STUD, UON.

e. CEILING HEIGHT DIMENSIONS: ARE FROM FINISHED FLOOR TO FINISHED FACE OF CEILING, UON.

MISC

MISCELLANEOUS

PROJECT/PROJECTOR

PROJ

f. OPENINGS: DOOR DIMENSIONS ARE TO THE EDGE OF DOOR PANEL, UON. LOCATE UNDIMENSIONED DOORS 4" FROM FINISHED FACE OF INTERSECTING PARTITION TO HINGE EDGE OF DOOR PANEL. q. ALL DIMENSIONS NOTED "CLEAR" OR "CLR" INDICATE DIMENSION FROM FACE OF FINISH TO FACE OF FINISH OR OBJECT, UON AND MUST BE STRICTLY

h. ALL DIMENSIONS NOTED "VERIFY" OR "VIF" ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY VARIANCE FROM THE REQUIRED

DIMENSIONS MUST BE BROUGHT IMMEDIATELY TO THE ARCHITECT'S ATTENTION. i. COORDINATE WITH EQUIPMENT CONTRACTORS FOR ROUGH-IN DIMENSIONS AND TEMPLATES.

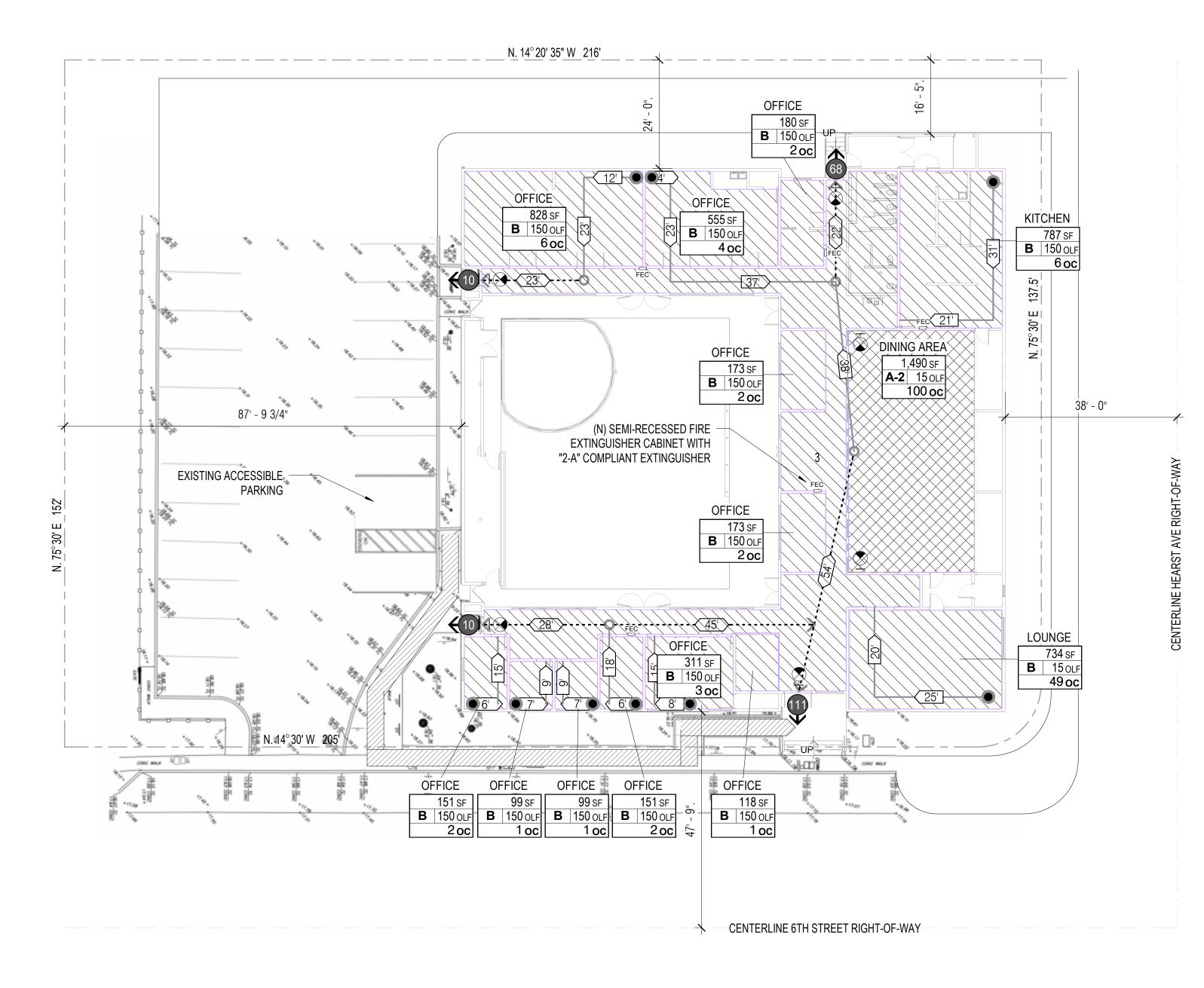
9. EXISTING BUILDING AND SITE DOCUMENTATION IS BASED ON AVAILABLE DOCUMENTATION PROVIDED BY THE OWNER AND LIMITED SITE OBSERVATION INVESTIGATIONS. AS BUILT CONDITIONS MAY VARY. CONTRACTOR IS TO USE CAUTION IN DEMOLITION AND IS TO NOTIFY ARCHITECT IMMEDIATELY IF ANY

10. CONTRACTOR TO MAINTAIN SAFE & COMPLIANT EGRESS FROM OCCUPIED AREAS TO THE PUBLIC WAY OR TO SAFE DISPERSAL AREAS DURING

11. PROTECT EXISTING CONDITIONS TO REMAIN. CONFIRM W/ ARCHITECT AND/OR OWNERS REPRESENTATIVE ITEMS TO BE SALVAGED PRIOR TO START OF

12. PROTECT ALL (E) BUILDING & SITE INFRASTRUCTURE TO REMAIN.

13. THE DRAWINGS INDICATE THE GENERAL EXTENT OF CONSTRUCTION NECESSARY FOR THE WORK BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE. ALL DEMO AND NEW WORK NECESSARY FOR A COMPLETED PROJECT IN ACCORDANCE W/ THE CONTRACT DOCUMENTS SHALL BE INCLUDED REGARDLESS OF WHETHER OR NOT SHOWN IN THE CONTRACT DOCUMENTS. THE INTEGRITY AND CONTINUITY OF ALL EXISTING FIRE, THERMAL, ACOUSTIC, & WEATHER BARRIER ASSEMBLIES IS TO BE STRICTLY MAINTAINED. SELECTIVE REMOVAL, REPLACEMENT, PATCHING & REPAIR SHALL BE PROVIDED TO MAINTAIN INTEGRITY OF EXISTING ASSEMBLIES AND FINISHES TO MATCH EXISTING ADJACENT ASSEMBLIES AND FINISHES.



T FLOOR 1 OCCUPANCY / EXITING G1.31 1/16" = 1'-0"

	AREA SCHE	DULE - OCCU	PANT LOAD		
OCC Group Description	OCC Group	Area	OCC Load Factor	Total Occupants	Area Calc
01 - FLOOR				1	
ASSEMBLY- UNCONCENTRATED	A-2	1490 SF	15 SF	100	
BUSINESS	В	555 SF	150 SF	4	
BUSINESS	В	828 SF	150 SF	6	
BUSINESS	В	180 SF	150 SF	2	
BUSINESS	В	787 SF	150 SF	6	
BUSINESS	В	151 SF	150 SF	2	
BUSINESS	В	99 SF	150 SF	1	
BUSINESS	В	99 SF	150 SF	1	
BUSINESS	В	151 SF	150 SF	2	
BUSINESS	В	311 SF	150 SF	3	
BUSINESS	В	118 SF	150 SF	1	
BUSINESS	В	173 SF	150 SF	2	
BUSINESS	В	173 SF	150 SF	2	
ASSEMBLY- UNCONCENTRATED	В	734 SF	15 SF	49	
	I	5848 SF		181	1

THE PROJECT IS A RENOVATION OF AN EXISTING, 9,836 S.F., ONE-STORY, TYPE-V, NON-RATED, WOOD FRAMED BUILDING ORIGINALLY PERMITTED IN 1976-1977. ANY NEW CONSTRUCTION WILL CONFORM TO THE EXISTING ASSEMBLIES.

THE BUILDING OCCUPANCY IS MIXED, BUT FOR THIS ANALYSIS IS CONSIDERED AS AN A-3 "NONSEPARATED" OCCUPANCY PER CBC 508.3.. BUILDING IS CONSIDERED A TYPE V-B PER CBC 602.5. CONSTRUCTION IS NOT-RATED PER CBC TABLE 601.

NO CHANGE OF USE IS PROPOSED.

PER EQUATION 5-3 WITH A FRONTAGE INCREASE THE ALLOWABE AREA IS 10,500 SF.

THE BUILDING HAS AN EXISTING FIRE-ALARM SYSTEM.

THE BUILDING DOES NOT HAVE AN AUTOMATIC SPRINKLER SYSTEM.

ACCESSIBLE PATH OF TRAVEL

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A CONTINUOUS, BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX SLOPE, OR VERTICAL CHANGES NOT EXCEEDING 1/4" MAX AND AT LEAST 44" WIDE PER CBC SECTION 11B-403.5.1. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 1:48 AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 1:20 UNLESS OTHERWISE INDICATED.

CONTRACTOR SHALL VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC.

ALL PATHS OF TRAVEL SHALL BE ACCESSIBLE.

OCCUPANCY TYPE

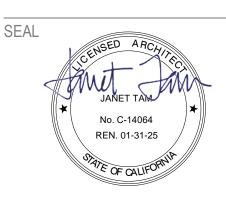
ASSEMBLY, UNCONCENTRATED (15 SF/OCC)

BUSINESS AREA (150 SF/OCC)

ACCESSORY STORAGE / MECH (300 SF/OCC)

X TAM ARCHITECTS

729 Heinz Avenue Berkeley, CA 94710 tel 510.542.2200 fax 510.542.2201



APPROVALS

SYMBOL LEGEND

ASSEMBLY- UNCONCENTRATED 4,000 SF A-3 200 OLF 20 oc	OCCUPANCY TYPE DESCRIPTION TOTAL ROOM AREA IN SQUARE FEET OCCUPANT LOAD FACTOR PER CBC TABLE 1004.5 TOTAL OCCUPANT LOAD OCCUPANCY GROUP PER CBC, SECTION 302 COMMON PATH OF EGRESS TRAVEL PER CBC TABLE 1006.2.1 EXIT ACCESS TRAVEL DISTANCE PER CBC TABLE 1017.2 1- HOUR RATED ENCLOSURE 2- HOUR RATED ENCLOSURE	PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE
	ACCESSIBLE PATH	CENTER
€6	EXIT OR EXIT ACCESS, W/ OCCUPANT COUNT	
4	NUMBER OF OCCUPANTS EXITING A SPACE	1900 Sixth St Barkelov, CA 04710
\mathbf{r}	EXISTING ILLUMINATED EXIT SIGNS	Berkeley, CA 94710
FEC	FIRE EXTINGUISHER CABINET	
	EGRESS SIZING PER CBC 1005.3.2	BID SET
	36" SINGLE DOOR CAPACITY = 168	
	72" DOUBLE DOOR CAPACITY = 342	ISSUE DATE 12.22.2023 N&T JOB NUMBER 22121 REVISIONS
	ALL EXIT DOORS MIN. 36" WIDTH ALL PATHS OF EGREES MIN 44" WIDE AND AS REQUIRED FOR EXIT LOAD	A DATE DESCRIPTION 2 09.21.2023 Plan Check 2 3 10.24.2023 Plan Check 3
	BUILDING HAS NO SPRINKLER SYSTEM	
	MAX COMMON PATH, PER CBC 1006.2.1 GROUP A,E = 75' GROUP B = 100'	
	PER CBC 1017.2 MAXIMUM PATH OF TRAVEL TO EXIT - A+E OCCUPANCIES: 250' B OCCUPANCY : 300'	SHEET TITLE CODE OCCUPANCY &
	PER CBC 1029.2 - ASSEMBLY MAIN EXIT - IF OCC LOAD > 300, THEN 1/2 OF OCC MUST EXIT THRU MAIN ENTRY	2 EXIT PLANS
	PER CBC 303.1.2 - SMALL ASSEMBLY SPACES ASSEMBLY ROOMS W/ < 50 OCC SHALL BE CLASSIFIED AS GROUP B	SHEET NUMBER
	ASSEMBLY ROOMS W/ < 750 SF SHALL BE CLASSIFIED AS GROUP B, OR OTHER ACCESSORY OCCUPANCY	G1.31



Building and Safety Permit Service Center

Projects for new buildings, additions of 1,000 square feet or greater and/or building alterations with a permit valuation of \$200,000 or above are subject to the provisions of the California Green Building Standards Code. This checklist is provided by the City of Berkeley in order to demonstrate compliance with the code and facilitate permit

approval.

Instructions: Read and understand the requirements of all mandatory measures listed in this checklist. 2. Mark all mandatory measures that are applicable to the proposed project. 3. Coordinate the construction drawings with the mandatory measures.

Incorporate this

checklist into the submitted set of construction drawings on full sized sheets.

Building and Safety 1947 Center St. 3rd floor Berkeley, CA 94704 510-981-7440 TTY 6903

buildingandsafety@ cityofberkeley.info

Code Compliance Checklist CALGREEN NON-RESIDENTIAL

Project Information

Project Address: 1900 Sixth Street, Berkeley, CA 94710 Permit Number: B2023-03107

New Building [N] Addition [A] 🖌 Alteration Planning and Design

Storm Water

- Storm water pollution prevention. Projects which disturb less than one acre of land shall prevent the pollution of stormwater runoff from the construction activities through one d vil drawing Sheets C5.01 and C5.02 describe storm water St pollution pre
 - requirements per rise in or the only or series in antispar coust. [coBSC 5.106.1.11 Best management practices (BMP). Prevent the loss of soil through wind or water
 - erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP. [CGBSC 5.106.1.2] Grading and paving. Indicate how site grading or drainage system will manage all
- surface water flows to keep water from entering buildings. [CGBSC 5.106.1.10] Bicycle Parking N

- Bicycle Parking, Projects adding 10 or more vehicular parking spaces shall comply with the the following or meet the applicable City of Berkeley ordinance, whichever is stricter. [CGBSC 5.106.4.1]
- Short-term bicycle parking. Provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5-percent of new visitor motorized vehicle parking spaces being added, with a minimum of one twobike capacity rack. [CGBSC 5.106.4.1.1]
- Long-term bicycle parking. Provide secure bicycle parking for 5-percent of the tenant vehicular parking spaces being added, with a minimum of one space. [CGBSC 5.106.4.1.2]

Vehicle Parking N/A

Designated parking. In projects that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles per CALGreen Table 5.106.5.2. Provide parking stall markings as required per CALGreen Section 5.106.5.2.1. [CGBSC 5.106.5.2] Electric Vehicle Charging

Definitions

ELECTRIC VEHICLE (EV) CHARGER. Off-board charging equipment used to charge an electric vehicle

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE). A space intended for future

installation of EV charging equipment and charging of electric vehicles. ELECTRIC VEHICLE CHARGING SPACE (EV SPACE) RACEWAY EQUIPPED. An EV Space that includes a raceway between any enclosed, inaccessible or concealed areas and the electrical service panel or subpanel. No additional electrical panel capacity is required at the time of construction.

ELECTRIC VEHICLE CHARGING STATION (EVCS). One or more electric vehicle charging spaces served by electric vehicle charger(s) or other

Code Compliance Checklist - CALG

equipment allowing charging of electric vehicles. Electric ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) equipment grounding conductors and the electric devices, power outlets, or apparatus installed spe premises wiring and the electric vehicle.

- Identification. The service panel or subpanel circ for future EV charging as "EV CAPABLE" and ide CHARGER". Raceway termination locations shall 5.106.6.3.4]
- Raceways. Listed raceways and associated cond volt branch circuit for a future EV charger. The rac Raceways shall originate at the main service or su enclosure in close proximity to the proposed locati raceway termination point. [CGBSC 5.106.5.3.1 a

Electric Vehicle Charging Stations

- Single EVCS. The service panel and/or subpanel circuit and overcurrent protective device to serve
- Multiple EVCS. Construction documents shall pro EVSE, raceway method(s), wiring schematics and service capacity and electrical system, including to simultaneously charge all EVs at the full rated a 40-ampere minimum branch circuit. [CGBSC 5.10

Accessibility

Form #165

Last Revised 05/06/20

Minimum number. Where EVCS are required, EV be provided in accordance with CBC Table 11B-2 than one vehicle, the number of EV chargers prov vehicles that can be simultaneously charged. [CB0 EV Spaces N/A

EV charging space calculation. When 10 or mor

 10 percent of the total number of parking spa a Direct Current Fast Charger with the capac EV Spaces 40 percent of the total number of parking space

supporting future EVSE. Light Pollution

Light pollution reduction. [N] Outdoor lighting s Uplight and Glare rating requirements in CALGree whichever is more stringent [CGBSC 5.106.8].

Water Efficiency and Conservation N/A

Indoor Water Use: Metering Devices

- New buildings or additions in excess of 50,000 [CGBSC 5.303.1.1]
- For each individual leased, rented, or other te 100 gal/day, including, but not limited to, spa medical or dental office, laboratory, or beauty
- subsystems: Makeup water for cooling towers where flow through is greater than 500 gpm.
- b. Makeup water for evaporative coolers greater than 6 gpm. c. Steam and hot-water boilers with energy input more than 500,000 Btu/h.

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

- Commissioning team information Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning
- shall be included. Functional performance testing. [N] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, testing methods utilized, and any readings and adjustments made. [CGBSC 5.410.2.4]
- Documentation and training. [N] A systems manual and systems operations training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), Title 8, Section 5142, and other related regulations. [CGBSC 5.410.2.5]
- Commissioning report. [N] A report of commissioning process activities undertaken through design and [CGBSC 5.410.2.6]
- HVAC systems and controls.
- Indoor and outdoor lighting and controls.
- Water heating systems.
- Renewable energy systems
- Landscape irrigation systems. Water reuse systems
- applicable standards on each system. [CGBSC 5.410.4.3]
- 5.410.3.1]
- individual responsible for performing these services. [CGBSC 5.410.4.4]
- 5.410.4.5]

Environmental Quality Fireplaces

- [CGBSC 5.503.1]
- emission limits. [CGBSC 5.503.1.1]
- Pollutant Control: Mechanical Systems
- construction. [CGBSC 5.504.1]

REEN NON-RESIDENTIAL Page 2 of 7 Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 3 of 7 Code	de Compli
ctric vehicle charging stations are not considered parking spaces. Indoor Water Use: Water Conservation	b. The do
. The conductors, including the ungrounded, grounded, and c vehicle connectors, attachment plugs, and all other fittings, actifically for the purpose of transferring energy between the Image: Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the US EPA WaterSense Specification for Tank-type Toilets. [CGBSC 5.303.3.1] See Sheet P3.02 for plumbing fixture •	c. The do d. Other i Flashing. In
the overcurrent protective device devices serving EVCS as "EV [CGBSC 5.303.3.2.1]	struction Was construction v or reuse a mini
ductors shall be sized to accommodate a dedicated 208/240- ceway shall not be less than nominal 1-inch inside diameter. ubpanel and shall terminate into a listed cabinet, box or other tion of an EV charger. Construction documents shall identify the tion of an EV charger. Construction documents shall identify the	00 percent of construction W Iniversal was Vaste items su rohibited Univ ding Maintena
I shall be provided with a 40 ampere minimum dedicated branch combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 the gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower shall be designed to allow only one shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower outlet shower outlet to be in operation at a combined flow rate of all showerheads and/or other shower outlet shower o	ecycling by one depositing, orrugated card
d electrical load calculations to verify that the electrical panel any on-site distribution transformer(s), have sufficient capacity amperage of the EVSE. Plan design shall be based upon a be 5.3.21 See Sheet P3.02 for plumbing fixture schedule	dditions. [A] acrease of 30 p commissionin e include omponer 12
VCS complying with CBC Section 11B-228.3.1 and 11B-812 shall 28.3.2.1. Where an EV charger can simultaneously charge more vided shall be considered equivalent to the number of electric CC 11B-228.3.2]	y trained overed b nergy sy wner's f the buil ocument
 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per cycle/20 [rim space (inches) at 60 psi]. [CGBSC 5.303.3.4.5] Commercial Kitchen Equipment N/A Food waste disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/noload) or shall automatically shut off after no more than 10 minutes 	Enviro Energy efficiency Indoor enviro Project prog Equipment
eystems shall be designed and installed to comply with Backlight, en Table 5.106.8 or comply with the City of Berkeley's ordinances, efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient	 Building occ asis of Desig e completed a .410.2.2] Heating, ver
Note: The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.	 Indoor lighti Water heati Renewable
0 square feet. Separate sub-meters shall be installed as follows: Material Conservation and Resource Efficiency	Landscape
Low-carbon Concrete	Water reuse
	commissionin roject will be c

· Where separate sub-meters for individual building tenants are unfeasible, for water supplied to the following

Excess consumption. [N] A separate sub-meter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day. [CGBSC 5.303.1.2]

construction phases of the building project shall be completed and provided to the owner or representative.

Testing and adjusting. Testing and adjusting of systems shall be required for newly constructed buildings less than 10,000 square feet, or new systems to serve an addition or alteration, as applicable. [CGBSC 5.410.4]

Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and

HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, balance the system in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the City of Berkeley. [CGBSC

Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the Operation and maintenance (O&M) manual. Provide the building owner or representative with detailed operating

and maintenance instructions and copies of guaranties/warranties for each system. O&M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations. [CGBSC

Fireplaces. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code Section 150.

Woodstoves. Woodstove and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the

Temporary ventilation. The permanent HVAC system shall only be used during construction if necessary to condition the building within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30-percent based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of

Covering of duct openings & protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the City of Berkeley to reduce the amount of dust, water and debris

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL which may enter the system. [CGBSC 5.504.3]

Water Resistance and Moisture Management

water intrusion into buildings as follows: [CGBSC 5.407.2.2]

one of the following: [CGBSC 5.407.2.2.1]

a. An installed awning at least 4 feet in depth

Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration edia for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual. Existing mechanical equipment excepted. [CGBSC 5.504.5.31

Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures. [CGBSC 5.407.2.1]

Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent

Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using non-

absorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least

- Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating. [CGBSC 5.504.5.3.11
- Environmental tobacco smoke (ETS) control. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of the City of Berkeley, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions. [CGBSC 5.504.7]

Pollutant Control: Finish Material

- Adhesives, sealants and caulks. Adhesives, sealants and caulks used on the project shall comply with CALGreen Table 5.504.4.1 and 5.504.4.2 for VOC limits. Product units which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces shall comply with statewide VOC standards and California Code of Regulations, Title 17. [CGBSC 5.504.4.1]
- Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in CALGreen Table 5.504.4.3 The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat -High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in CALGreen Table 5.504.4.3 shall apply. [CGBSC 5.504.4.3]
- Aerosol paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in California Code of Regulations, Title 17 and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49. [CGBSC 5.504.4.3.1]

Carpets

Page 5 of 7

- Carpet systems. All carpet installed in the building interior shall meet at least one of the following testing and product requirements: [CGBSC 5.504.4.4]
- Carpet and Rug Institute's Green Label Plus Program;
- Compliant with the VOC-emission limits and requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as CDPH Standard Method V1.1 or Specification 01350);
- NSF/ANSI 140 at the Gold level or higher;
- Scientific Certifications Systems Sustainable Choice; or
- Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 7.0 and EQ 7.1 dated July 2012 and listed in the CHPS High Performance Product Database. Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and
- Rug Institute's Green Label program. [CGBSC 5.504.4.4.1]

Carpet adhesive. All carpet adhesive shall meet the requirements of CALGreen Table 5.504.4.1. [CGBSC 5.504.4.4.21

Composite Wood Products

Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as shown in CALGreen Table 5.504.4.5. [CGBSC 5.504.4.5]

Environmental Comfort

Acoustical control. Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E90 and ASTM E413 or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in CGBSC Section 5.507.4.1 or 5.507.4.2. [CGBSC 5.507.4]

Note: This form include

Page 6 of 7

Outdoor Air Quality

ant shall comply with the t

- CFCs. [CGBSC 5.508.1.1] 5.508.1.2]

Additional:

I certify that I have read and acknowledged all of the Code Requirements noted above. I accept full responsibility for complying with all of the above requirements, as applicable to my project. I further agree that if I fail to comply with the code requirements, due to error or omission, I will correct all deficiencies prior to final inspection.

Elmar Kepfer

Name Check One: Cont

iance Checklist - CALGREEN NON-RESIDENTIAL

loor is protected by a roof overhang at least 4 feet in depth.

oor is recessed at least 4 feet.

methods which provide equivalent protection. nstall flashings integrated with a drainage plane. [CGBSC 5.407.2.2.2]

ste Reduction, Disposal and Recycling

waste management plan & excavated soil and land clearing debris. Recycle and/or salvage imum of 65 percent of the nonhazardous construction and demolition waste and a minimum of excavated soil, land-clearing debris, concrete and asphalt. Provide a completed City of Berkeley Vaste Management Plan. [CGBSC 5.408.1 and 5.408.3]

ste. [A] Additions and alterations to a building or tenant space shall require verification that Universal uch as flourescent lamps and ballast and mecury containing thermostats as well as other California versal Waste materials are disposed of properly and are diverted from landfills. [CGBSC 5.408.2] ance and Operation

occupants. Provide readily accessible areas that serve the entire building and are identified for storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, rdboard, glass, plastics, organic waste, and metals. [CGBSC 5.410.1]

All additions conducted within a 12-month period under single or multiple permits, resulting in an percent or more in floor area, shall provide recycling areas on site. [CGBSC 5.410.1.1] g. [N] N/A why constructed buildings 10,000 square feet and over, building commissioning shall

Building Commissioning Guide

For all newly constructed nonresidential buildings, commissioning shall be included in the design and construction process of the project to verify that the building's energy systems and components meet the owner's or owner representative's project requirements. For buildings less than 10,000 square feet, only the Design Phase Design Review requirements (see Section 12.4) and Commissioning Measures Shown in the Construction Documents (see Section 12.5) shall be completed.

iency goals. ironmental quality requirements.

ogram, including facility functions and hours of operation, and need for after hours operation. and systems expectations.

cupant and operation and maintenance (O&M) personnel expectations.

gn (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall at the design phase of the building project. The Basis of Design document shall cover: [CGBSC

ntilation, air conditioning systems and controls.

ting system and controls.

ng system. energy systems.

irrigation systems

e systems.

ing plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the commissioned. The commissioning plan shall include the following: [CGBSC 5.410.2.3] General project information.

 Commissioning goals. Systems to be commissioned. Plans to test systems and components shall include:

An explanation of the original design intent.

 Equipment and systems to be tested, including the extent of tests. c. Functions to be tested

Conditions under which the test shall be performed.

e. Measurable criteria for acceptable performance.

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

Page 7 of 7

Page 4 of 7

and

em:

Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression · Chlorofluorocarbons (CFCs). Install HVAC, re-frigeration & fire suppression equipment that do not contain

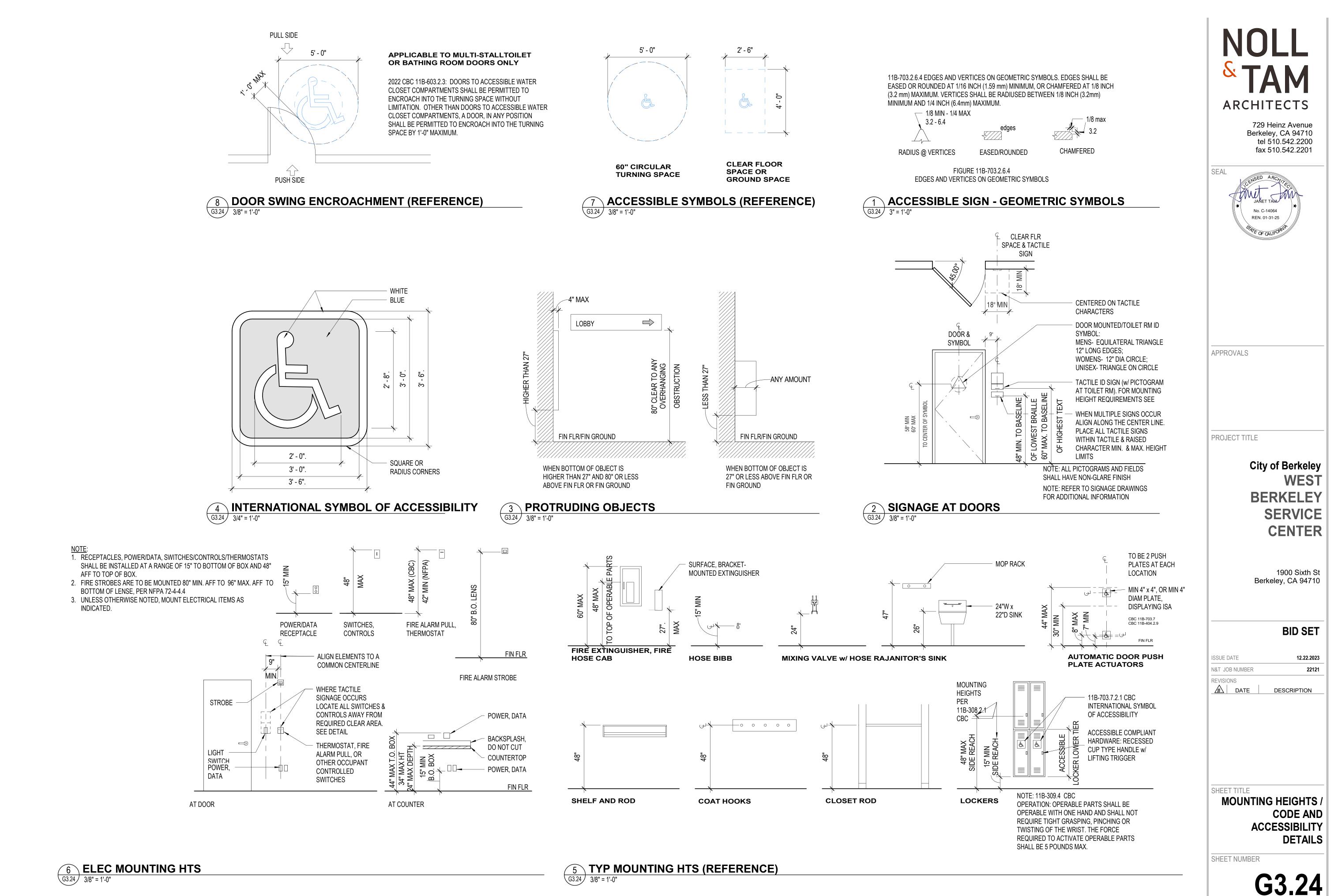
Halons. Install HVAC, refrigeration and fire suppression equipment that do not contain Halons. [CGBSC

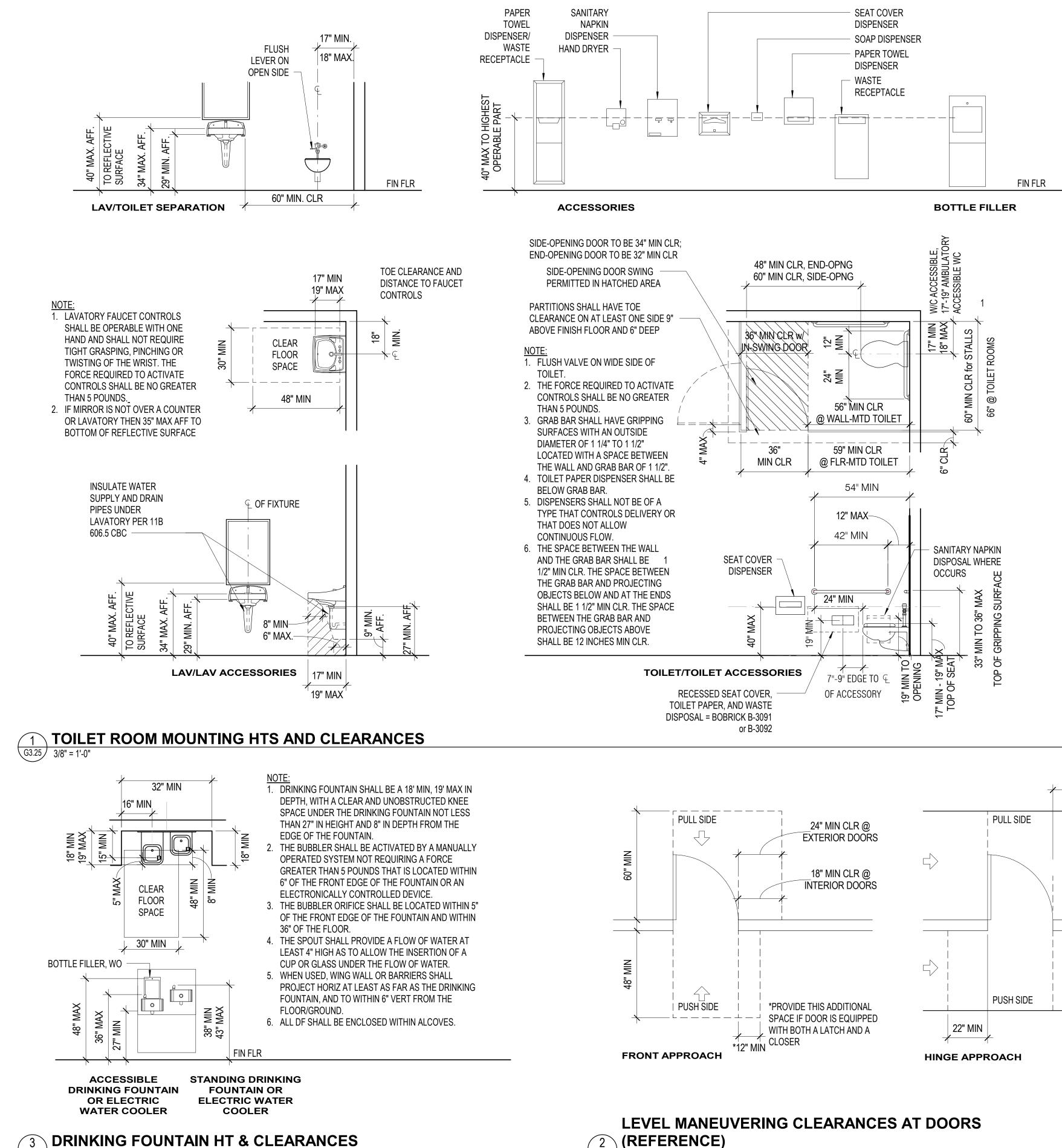
 Supermarket refrigerant leak reduction. New commercial refrigeration systems containing high-globalwarming potential refrigerants (GWP of 150 or greater) installed in retail food stores with 8,000 square feet or more of conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units shall comply with refrigerant leak reduction measures. [CGBSC 5.508.2]

		08.25.2023
	Signature	Date
ractor 🗌 Owner	Owner's Agent	
s the City of Berkeley	/'s amendments to the 2019 California Green Bu	ilding Standards Code.

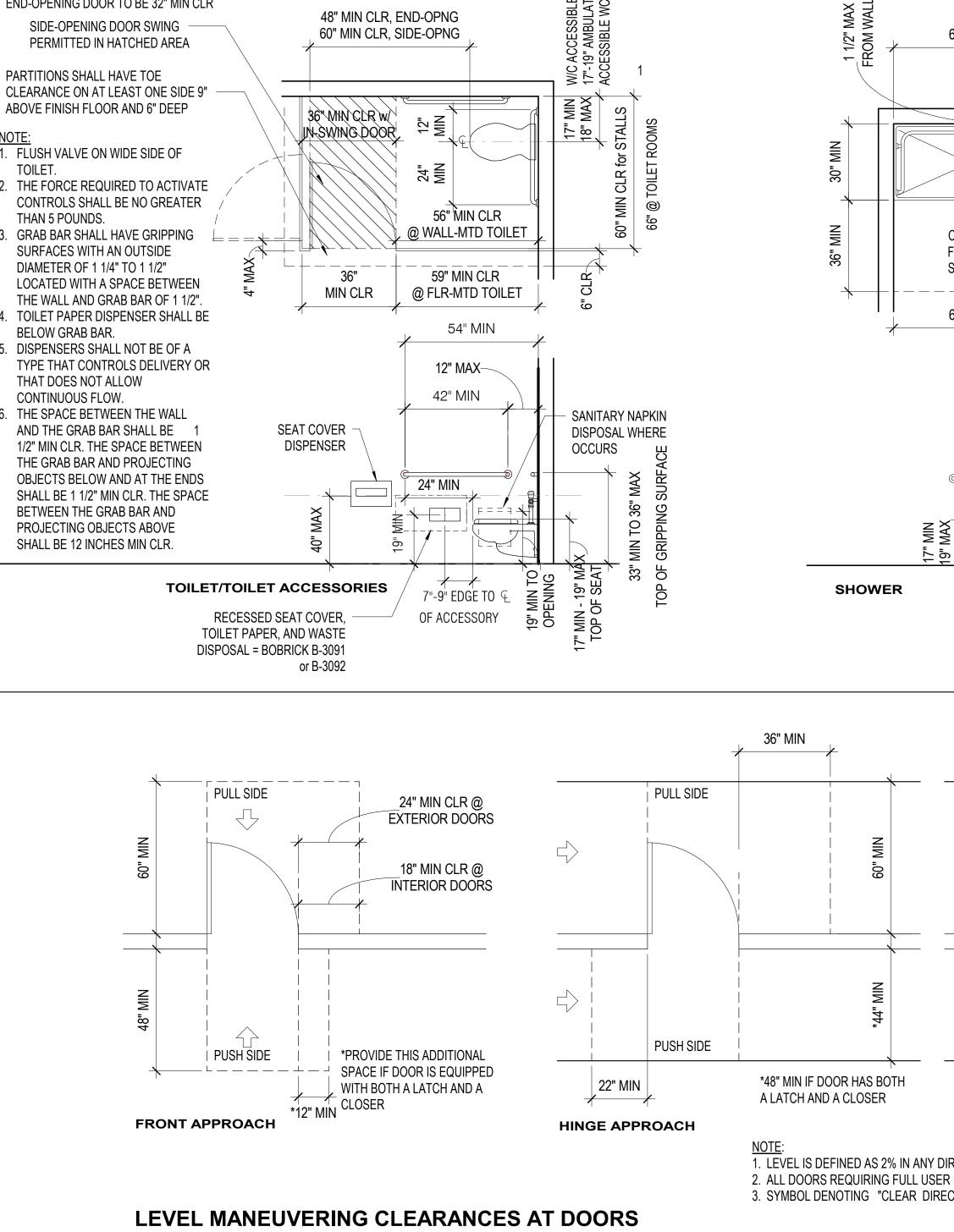
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SEAL VICENSED ARCHITCH JANET TAM No. C-14064 REN. 01-31-25 STATE OF CALIFORNIA
APPROVALS
City of Berkeley WEST BERKELEY SERVICE CENTER
1900 Sixth St Berkeley, CA 94710
ISSUE DATE 12.22.2023 N&T JOB NUMBER 22121 REVISIONS DATE DESCRIPTION 1 08.21.2023 Plan Check 1
SHEET TITLE

SHEET NUMBER



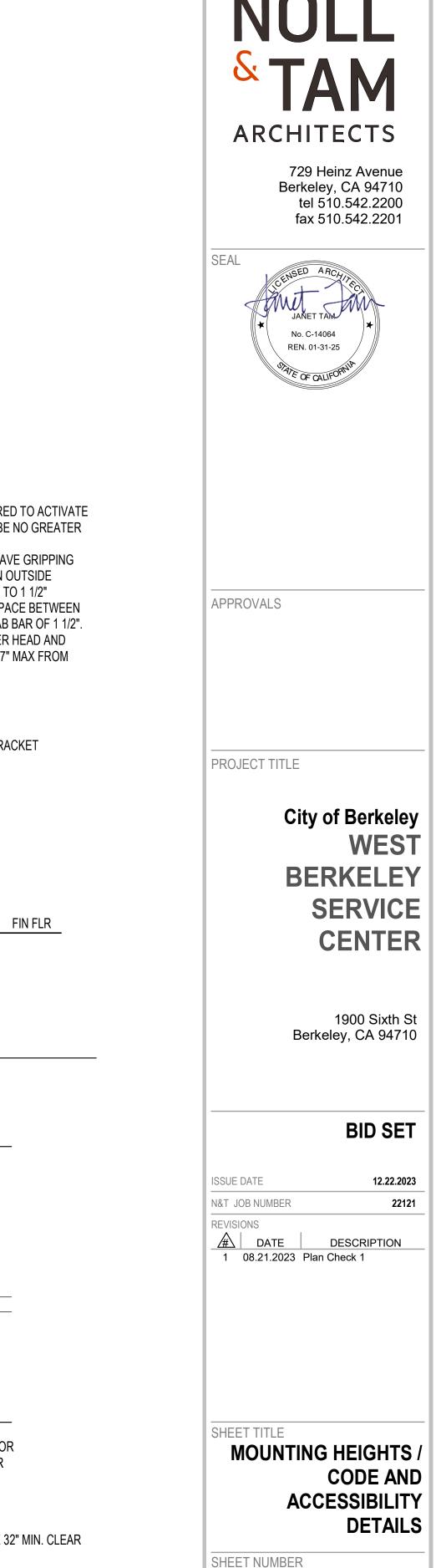


G3.25 3/8" = 1'-0"

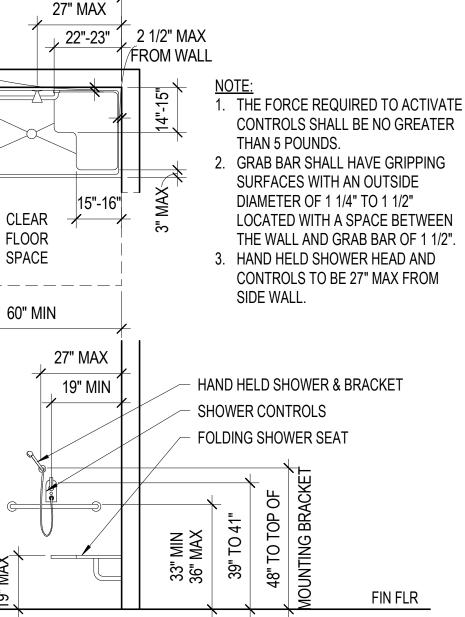


G3.25 3/8" = 1'-0"

1. LEVEL IS DEFINED AS 2% IN ANY DIRECTION. 2. ALL DOORS REQUIRING FULL USER PASSAGE MUST BE 3'-0"x6'-8" MIN OR HUNG TO PROVIDE 32" MIN. CLEAR 3. SYMBOL DENOTING "CLEAR DIRECTION OF APPROACH" \Box



G3.25



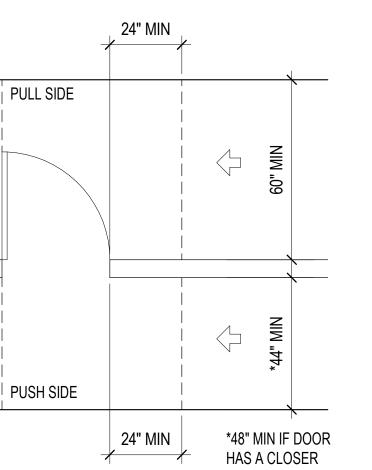
60" MIN

CLEAR

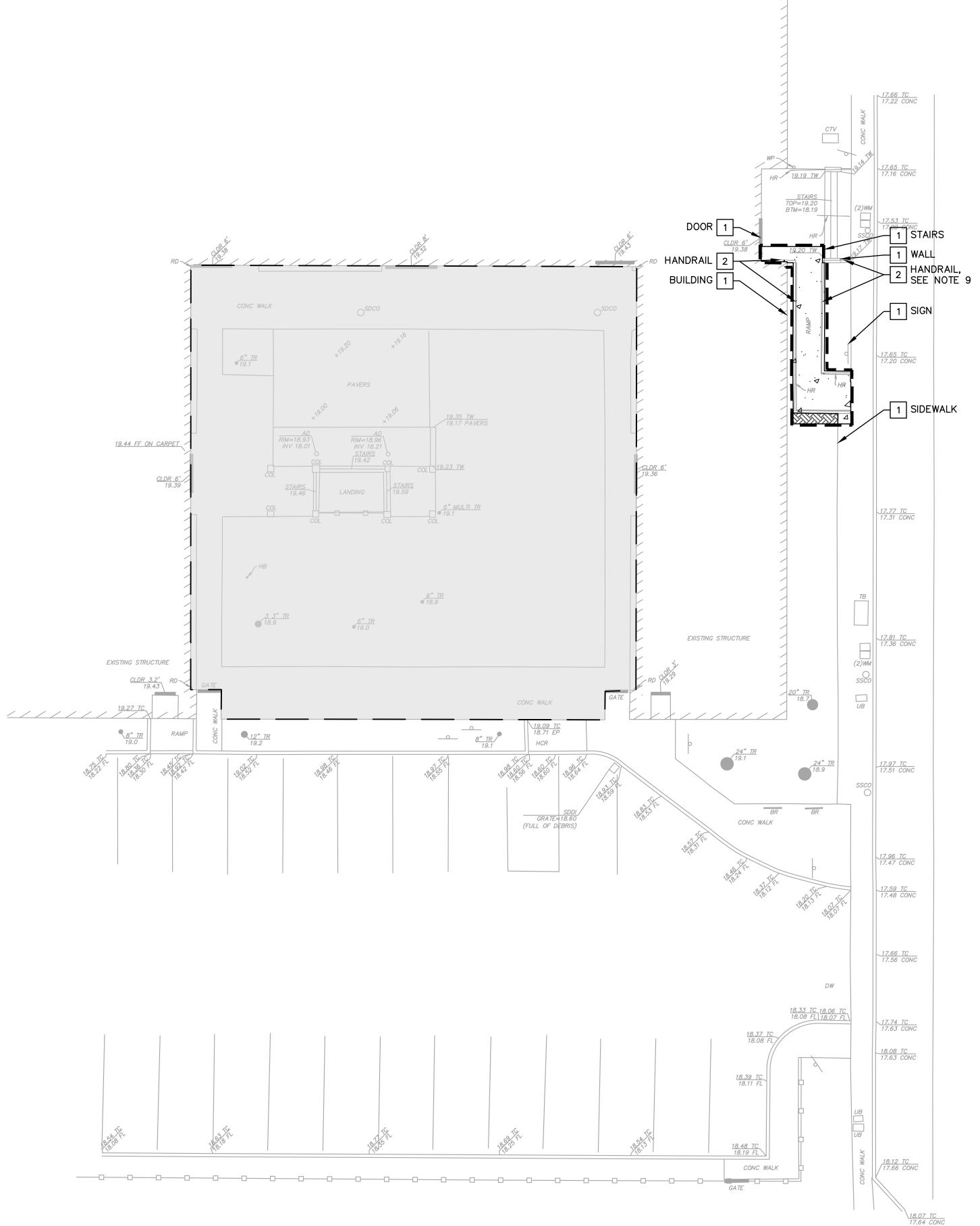
FLOOR

SPACE

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SIXTH STREET

NOTES:

- 1. EXISTING CONDITIONS OBTAINED FROM A TOPOGRAPHIC SURVEY PERFORMED BY BKF ENGINEERS, DATED 11/23/2021.
- 2. INFORMATION TAKEN REGARDING EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES SHOWN WERE DERIVED FROM RECORD DATA AND/OR SURFACE OBSERVATION AND ARE APPROXIMATE ONLY. FIELD VERIFICATION OF THE ACTUAL LOCATIONS, SIZES, AND ELEVATIONS OF EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES BY THE CONTRACTOR WILL BE REQUIRED PRIOR TO THE COMMENCEMENT OF WORK.
- 3. IF THE CONTRACTOR FAILS TO INVESTIGATE KNOWN AND UNKNOWN EXISTING SUBSURFACE IMPROVEMENTS PRIOR TO ANY CONSTRUCTION ACTIVITIES AND UNFORESEEN CONDITIONS ARISE, ALL COSTS AND SCHEDULE IMPACTS WILL BE BORNE BY THE CONTRACTOR.
- 4. BASIS OF BEARINGS: SOUTH 13°26'15" EAST, BEING THE LINE BETWEEN TWO FOUND MONUMENTS AT THE INTERSECTIONS OF SIXTH ST., HEARST AVE., AND UNIVERSITY AVE.
- 5. BENCHMARK: CITY OF BERKELEY MONUMENT "B0535" A FOUND 3/8" BRASS PIN IN A MONUMENT WELL AT THE INTERSECTION OF HEARST AVENUE AND 5TH STREET. ELEVATION = 13.85 FEET (CITY OF BERKELEY DATUM).
- CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 942-2444 AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION OR GRADING WORK.
- 7. EXISTING FEATURES TO REMAIN ARE SHOWN SHADED FOR REFERENCE. EXISTING FEATURES PROPOSED FOR DEMOLITION ARE SHOWN DARK.
- 8. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDINGS, PAVEMENT SCORE LINES, LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, AND SIDEWALKS AND AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES OR HAZARDOUS CONDITIONS.
- 9. EXISTING HANDRAIL ON EXISTING STAIRS TO REMAIN SHALL BE REMOVED AND REPLACED IN-KIND.

KEYNOTES:

1 PROTECT IN PLACE

2 REMOVE

LEGEND:

- DEMOLITION LIMITS

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AREA TO PROPOSED SUBGRADE LANDSCAPE SCOPE OF WORK, SEE LANDSCAPE DRAWINGS

SECTION TO PROPOSED SUBGRADE

DEMOLISH EXISTING CONCRETE PAVEMENT

CLEAR AND GRUB EXISTING LANDSCAPE

EXISTING STORM DRAIN LINE

------ G ------ EXISTING GAS LINE

CHAIN LINK FENCE

WOODEN FENCE

GUY WIRE

SIGN

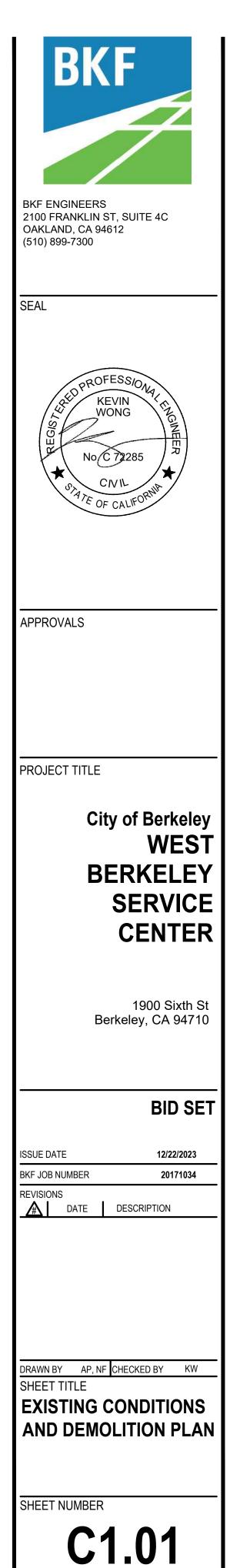
SIGNAL LIGHT SITE LIGHT

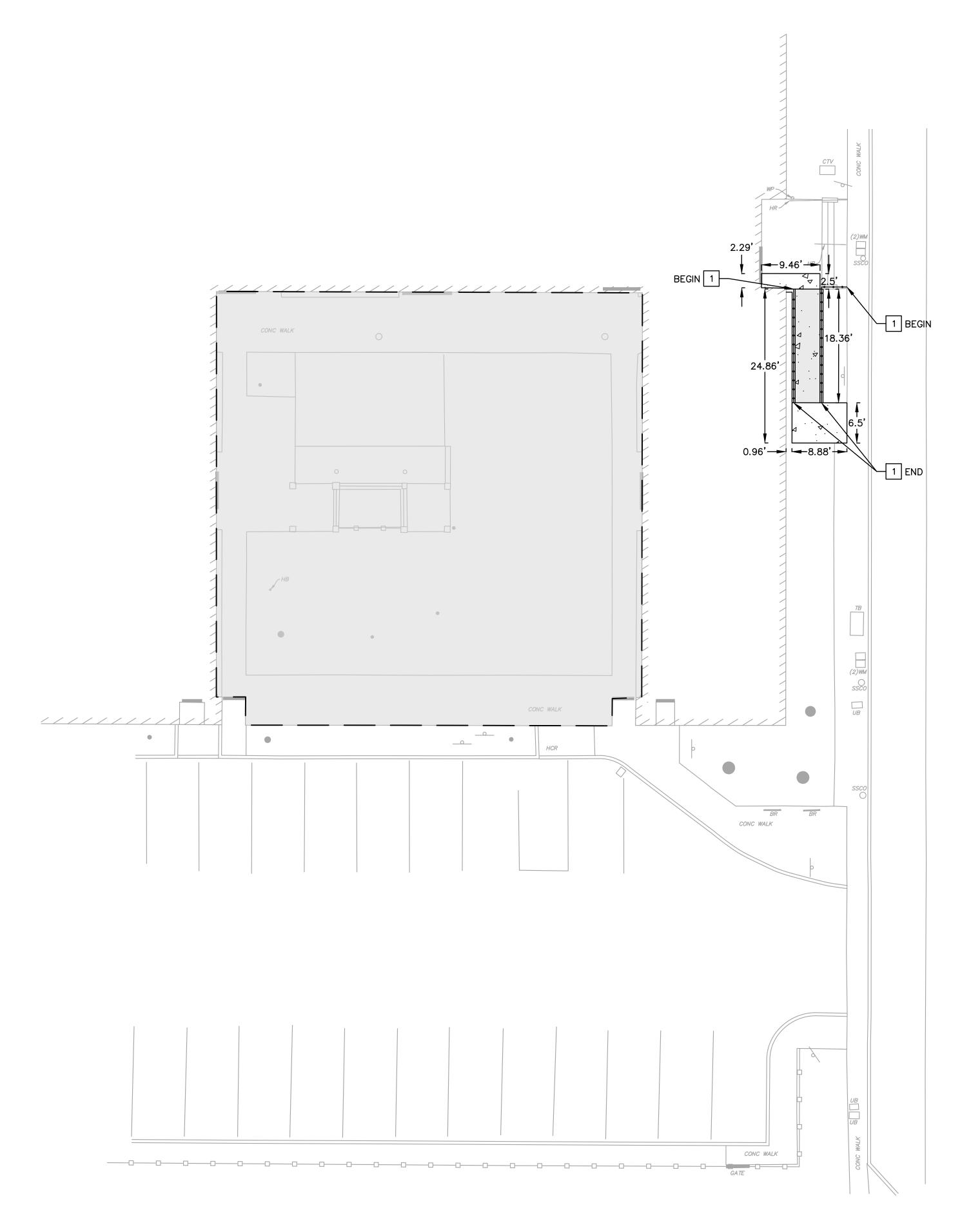
STREET LIGHT TELEPHONE POLE



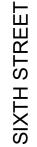
GRAPHIC SCALE

(IN FEET) 1 inch = 10 ft.





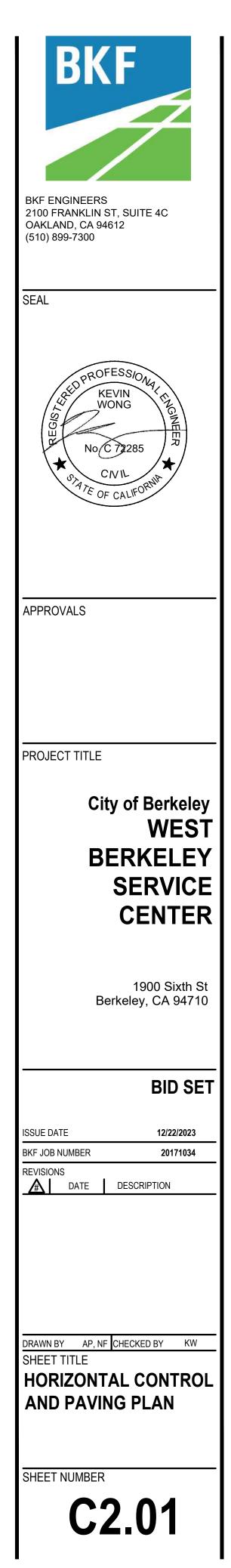




LEGEND: · \ \ ₫. · · KEYNOTES: 1 HANDRAIL 1 C4.01

PEDESTRIAN RAMP WITH HANDRAIL 4" PCC/4" CLASS II AB W/#4 BARS AT 24' O.C. E.W. PEDESTRIAN CONCRETE PAVEMENT 4" PCC/4" CLASS II AB W/#4 BARS AT 24' O.C. E.W.

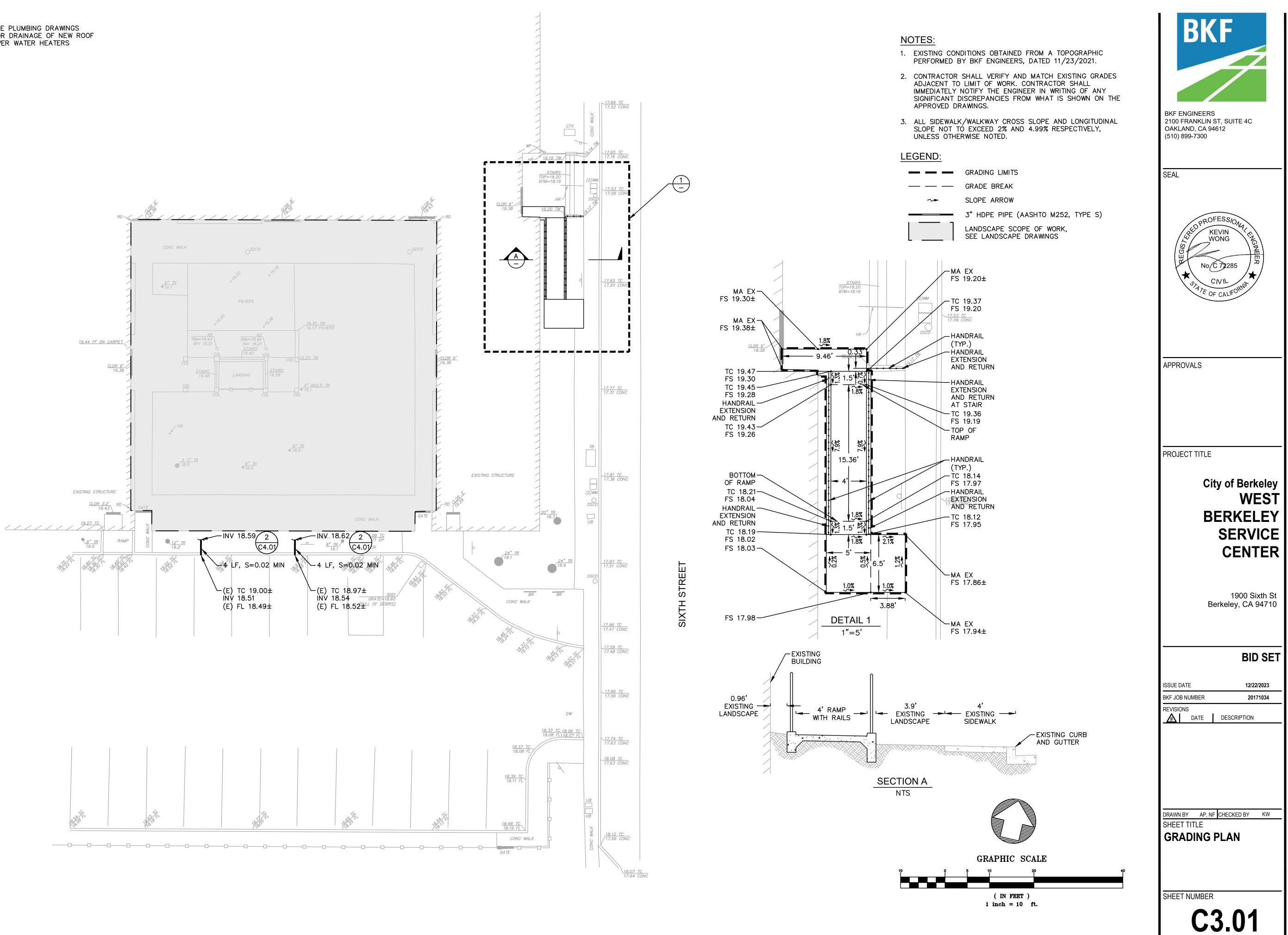
LANDSCAPE SCOPE OF WORK, SEE LANDSCAPE DRAWINGS



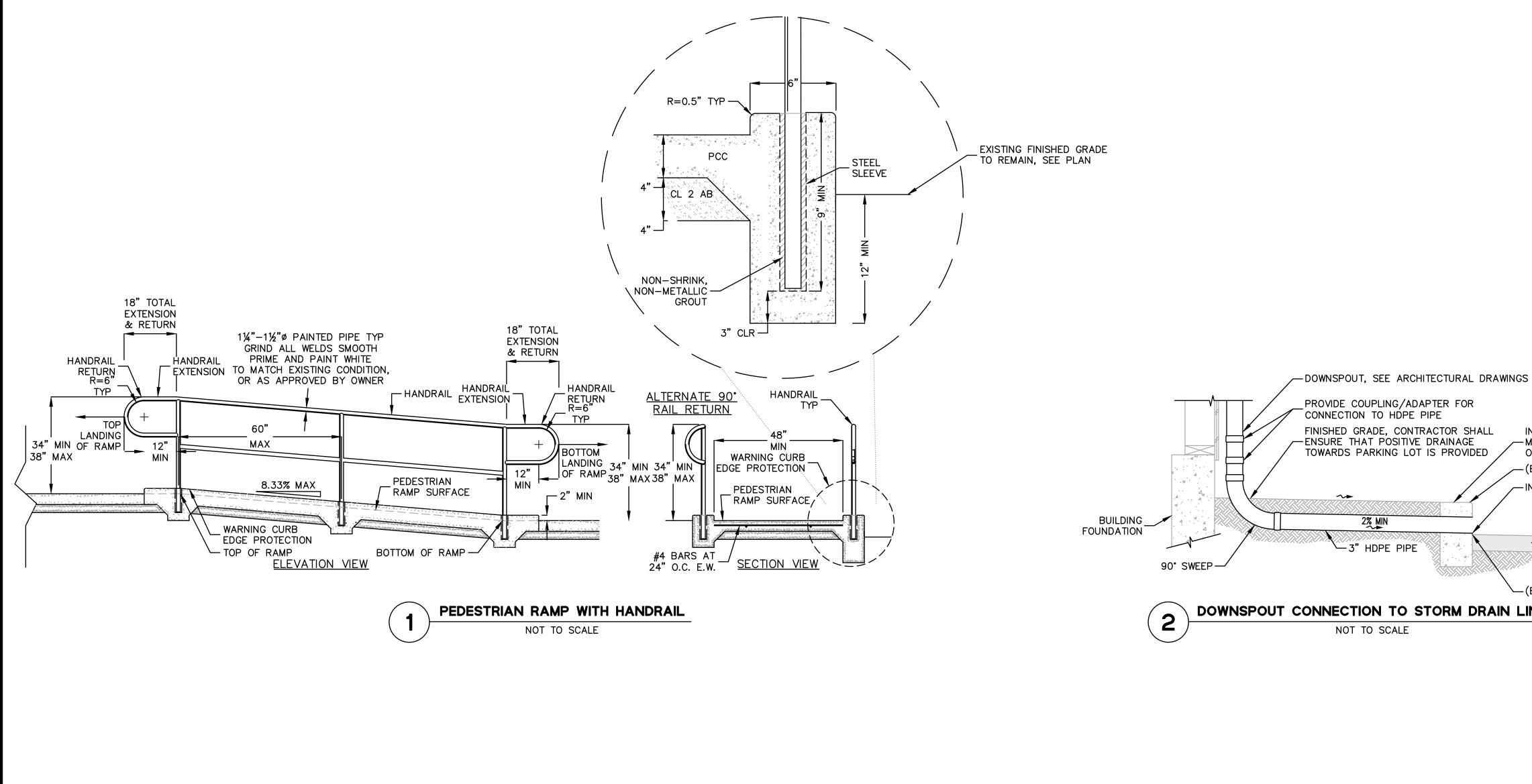
GRAPHIC SCALE

(IN FEET) 1 inch = 10 ft.

- SEE PLUMBING DRAWINGS FOR DRAINAGE OF NEW ROOF OVER WATER HEATERS

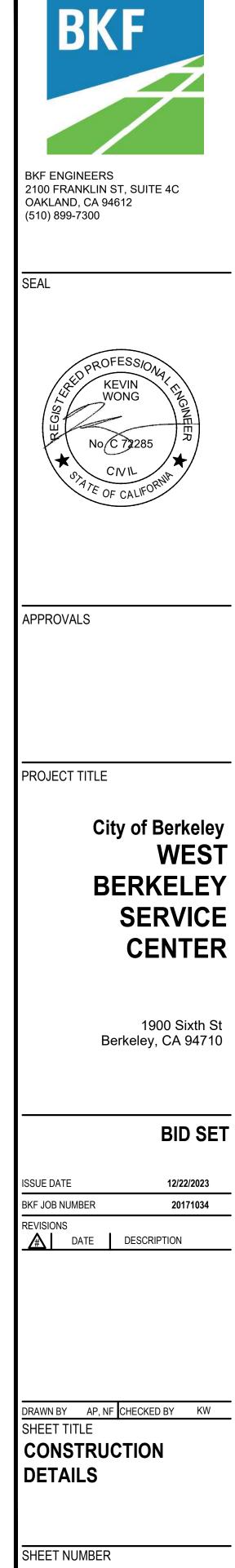




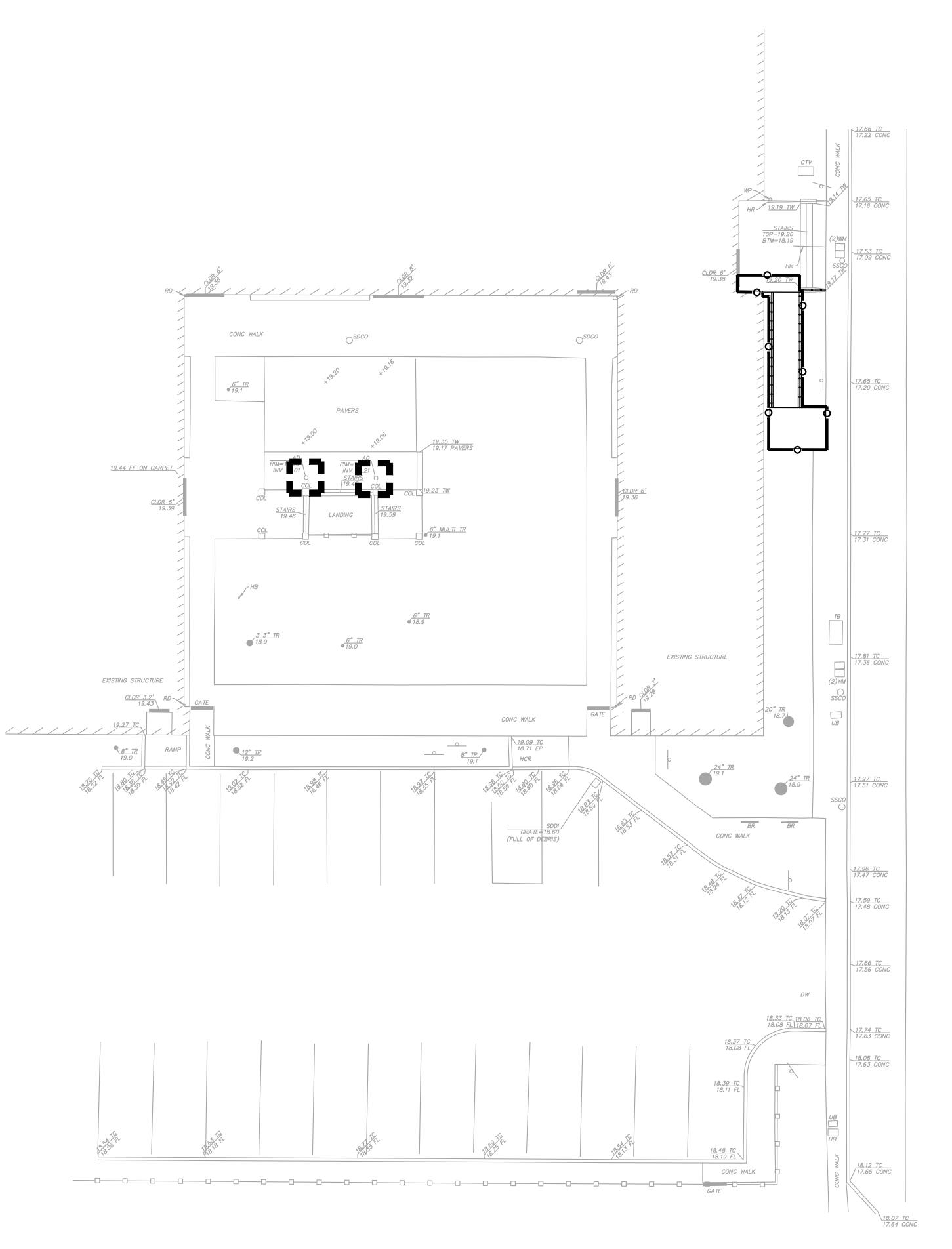




INSTALL CURB-O-LET
- MODEL NO. TCD-3RD-RFD OR APPROVED EQUAL
—(E) TC, SEE PLAN
—INV, SEE PLAN
– (E) FL, SEE PLAN LINE



C4.01





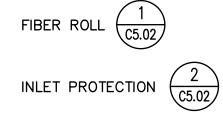
STREET SIXTH

NOTES:

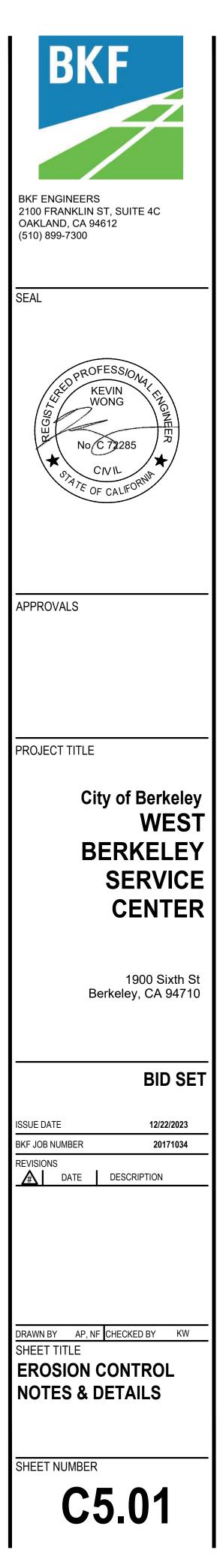
SEE SHEET C5.02 FOR EROSION CONTROL NOTES.

LEGEND:

—0— 3







GRAPHIC SCALE

(IN FEET) 1 inch = 10 ft.

EROSION AND SEDIMENT CONTROL NOTES:

1. GENERAL CONTRACTOR: TBD

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO KEEP THE ENTIRE SITE IN COMPLIANCE WITH THE SOIL EROSION CONTROL PLAN. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES AS REQUIRED BY THE CITY OF REDWOOD CITY AND/OR CRWQCB.

2. CIVIL ENGINEER: BKF ENGINEERS 2100 FRANKLIN STREET, SUITE 4C OAKLAND, CA 94612 (510) 899-7300

- 3. CONSTRUCTION SUPERINTENDENT: TBD
- 4. THE EROSION CONTROL PLAN IS INTENDED TO BE USED FOR INTERIM EROSION AND SEDIMENT CONTROL ONLY AND IS NOT TO BE USED FOR FINAL ELEVATIONS OR PERMANENT IMPROVEMENTS
- 5. OWNER WILL ENSURE THAT ALL EROSION/SEDIMENT MEASURES IDENTIFIED ON THE APPROVED EROSION CONTROL PLAN ARE IN PLACE. IF MEASURES ARE NOT IN PLACE, OWNER SHALL PROVIDE THE CITY WITH A WRITTEN EXPLANATION OF WHY THE MEASURE IS NOT IN PLACE AND WHAT WILL BE DONE TO REMEDY THIS SITUATION.
- 6. ALL EROSION CONTROL FACILITIES MUST BE MONITORED AS REQUIRED BY THE CITY OF REDWOOD CITY AND/OR THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (CRWQCB). ALL SLOPES SHALL BE REPAIRED AS SOON AS POSSIBLE WHEN DAMAGED.
- 7. EROSION CONTROL MEASURES SHOWN ON THIS PLAN SHALL BE MAINTAINED, REPAIRED AND REPLACED AFTER EACH SIGNIFICANT RAINFALL OR AS DIRECTED BY THE CITY ENGINEER AND/OR CRWQCB. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY ENGINEER AND/OR THE CRWQCB BASED ON FIELD REVIEWS OF THE SITE.
- 8. THE CONTRACTOR WILL BE LIABLE FOR ANY AND ALL DAMAGES TO PUBLIC AND/OR PRIVATE OWNED AND MAINTAINED ROADS CAUSED BY THE CONTRACTOR'S GRADING ACTIVITIES, AND WILL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY ROAD ON THE HAUL ROUTE. ADJACENT PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH WORKING DAY.
- 9. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM, INCLUDING EXISTING DRAINAGE SWALES AND WATER COURSES.
- 10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT SHALL BE COMPLIED WITH.
- 11. THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL EROSION AND SEDIMENT DURING THE RAINY SEASON, OCT. 15TH TO APRIL 15TH. FACILITIES ARE TO BE OPERABLE PRIOR TO OCT 1ST OF ANY YEAR. GRADING OPERATIONS DURING THE RAINY SEASON WHICH LEAVE DENUDED SLOPES SHALL BE PROTECTED WITH EROSION CONTROL MEASURES IMMEDIATELY FOLLOWING GRADING ON THE SLOPES.
- 12. THIS PLAN COVERS ONLY THE FIRST WINTER FOLLOWING GRADING WITH ASSUMED SITE CONDITIONS AS SHOWN ON THE EROSION CONTROL PLAN. PRIOR TO SEPT. 15TH, THE COMPLETION OF SITE IMPROVEMENTS SHALL BE EVALUATED AND REVISIONS MADE TO THIS PLAN AS NECESSARY WITH THE APPROVAL OF THE CITY ENGINEER. PLANS ARE TO BE RESUBMITTED FOR CITY APPROVAL PRIOR TO SEPT. 1ST OF EACH SUBSEQUENT YEAR UNTIL SITE IMPROVEMENTS ARE ACCEPTED BY THE CITY.
- 13. CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. ALL CONSTRUCTION TRAFFIC ENTERING ONTO THE PAVED ROADS MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE WAYS.
- 14. CONTRACTOR SHALL MAINTAIN STABILIZED ENTRANCE AT EACH VEHICLE ACCESS POINT TO EXISTING PAVED STREETS. ANY MUD OR DEBRIS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED DAILY AND AS REQUIRED BY THE CITY. ALL TRUCK TIRES SHALL BE CLEANED PRIOR TO EXITING THE PROPERTY.
- 15. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ANY SEDIMENT FROM LEAVING THE SITE. FIBER ROLLS AND SAND BAGS SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. ALL EXISTING, TEMPORARY, OR PERMANENT CATCH BASINS SHALL USE SEDIMENT BARRIERS
- 16. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OPERABLE YEAR ROUND OR UNTIL VEGETATION IS ESTABLISHED ON LANDSCAPED SURFACES. IF HYDROSEEDING IS NOT USED OR IS NOT EFFECTIVE BY 10/10, THEN OTHER IMMEDIATE METHODS SHALL BE IMPLEMENTED, SUCH AS EROSION CONTROL BLANKETS, OR A THREE-STEP APPLICATION OF 1) SEED, MULCH, FERTILIZER 2) BLOWN STRAW 3) TACKIFIER AND MULCH.
- 17. BORROW AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES (TARPS, FIBER ROLLS, ETC.) TO ENSURE SILT DOES NOT LEAVE THE SITE OR ENTER THE STORM DRAIN SYSTEM.
- 18. ALL DRAINAGE INLETS WITHIN AND NEAR THE PROJECT SITE SHALL BE PROVIDED WITH SEDIMENT TRAPS OR SEDIMENT BARRIERS AS PER THIS PLAN. INLET PROTECTION SHALL BE INSTALLED AT OPEN INLETS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. INLETS NOT USED IN CONJUNCTION WITH EROSION CONTROL ARE TO BE BLOCKED TO PREVENT ENTRY OF SEDIMENT.
- 19. DURING GRADING OPERATIONS THE SITE SHALL BE WATERED ON A DAILY BASIS TO MINIMIZE THE RELEASE OF DUST AND OTHER PARTICULATE MATTER. CONTRACTOR SHALL PROVIDE DUST CONTROL AS REQUIRED BY THE APPROPRIATE FEDERAL, STATE AND LOCAL AGENCY REQUIREMENTS.
- 20. EARTHWORK SHALL NOT BE PERFORMED DURING UNFAVORABLE CONDITIONS. AFTER INTERRUPTION OF WORK DUE TO HEAVY RAIN, THE GEOTECHNICAL ENGINEER SHALL APPROVE EARTHWORK BEFORE RESUMPTION OF EARTHMOVING OPERATIONS.
- 21. CONTRACTOR SHALL BE RESPONSIBLE FOR PUTTING IN PLACE THE NECESSARY MEANS AND EXECUTE PROPER METHODS TO PROTECT EARTHWORK AGAINST UNFAVORABLE WEATHER CONDITIONS. CONTRACTOR SHALL NOT BE PAID FOR ANY DELAY OR ADDITIONAL WORK TO REMEDY PREVIOUS EARTHWORK RESULTING FROM THE CONTRACTOR'S NEGLIGENCE TO PROTECT ITS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED WITH ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURE MAINTENANCE THROUGHOUT THE DURATION OF THE PROJECT.
- 22. THE BMPS SHOWN ON THIS PLAN ARE SUBJECT TO CHANGE. IF ADDITIONAL EROSION CONTROL MEASURES ARE NEEDED TO PROTECT THE SITE AND NEARBY AREAS, SUCH ADDITIONAL MEASURES SHALL BE INSTALLED AT THE DISCRETION OF THE CITY INSPECTOR.
- 23. IF CONSTRUCTION IS NOT COMPLETE BY THE START OF THE WET SEASON (OCTOBER 1 THROUGH APRIL 30), IMPLEMENT A WINTERIZATION PROGRAM TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENTATION. AS APPROPRIATE TO THE SITE AND STATUS OF CONSTRUCTION, WINTERIZATION REQUIREMENTS SHALL INCLUDE INSPECTING/MAINTAINING/CLEANING ALL SOIL EROSION AND SEDIMENTATION CONTROLS PRIOR TO, DURING, AND IMMEDIATELY AFTER EACH STORM EVENT; STABILIZING DISTURBED SOILS THROUGH TEMPORARY OR PERMANENT SEEDING, MULCHING, MATTING, TARPING OR OTHER PHYSICAL MEANS; ROCKING UNPAVED VEHICLE ACCESS TO LIMIT DISPERSION OF MUCH ONTO PUBLIC RIGHT-OF-WAY; AND COVERING/TARPING STORED CONSTRUCTION MATERIALS, FUELS, AND OTHER CHEMICALS. PLANS TO INCLUDE PROPOSED MEASURES TO PREVENT EROSION AND POLLUTED RUNOFF FROM ALL SITE CONDITIONS SHALL BE SUBMITTED FOR APPROVAL BY CDD PRIOR TO BEGINNING CONSTRUCTION. AS SITE CONDITIONS WARRANT, THE CITY ENGINEER MAY DIRECT THE APPLICANT TO IMPLEMENT ADDITIONAL WINTERIZATION REQUIREMENTS.

EROSION AND SEDIMENT CONTROL MAINTENANCE NOTES:

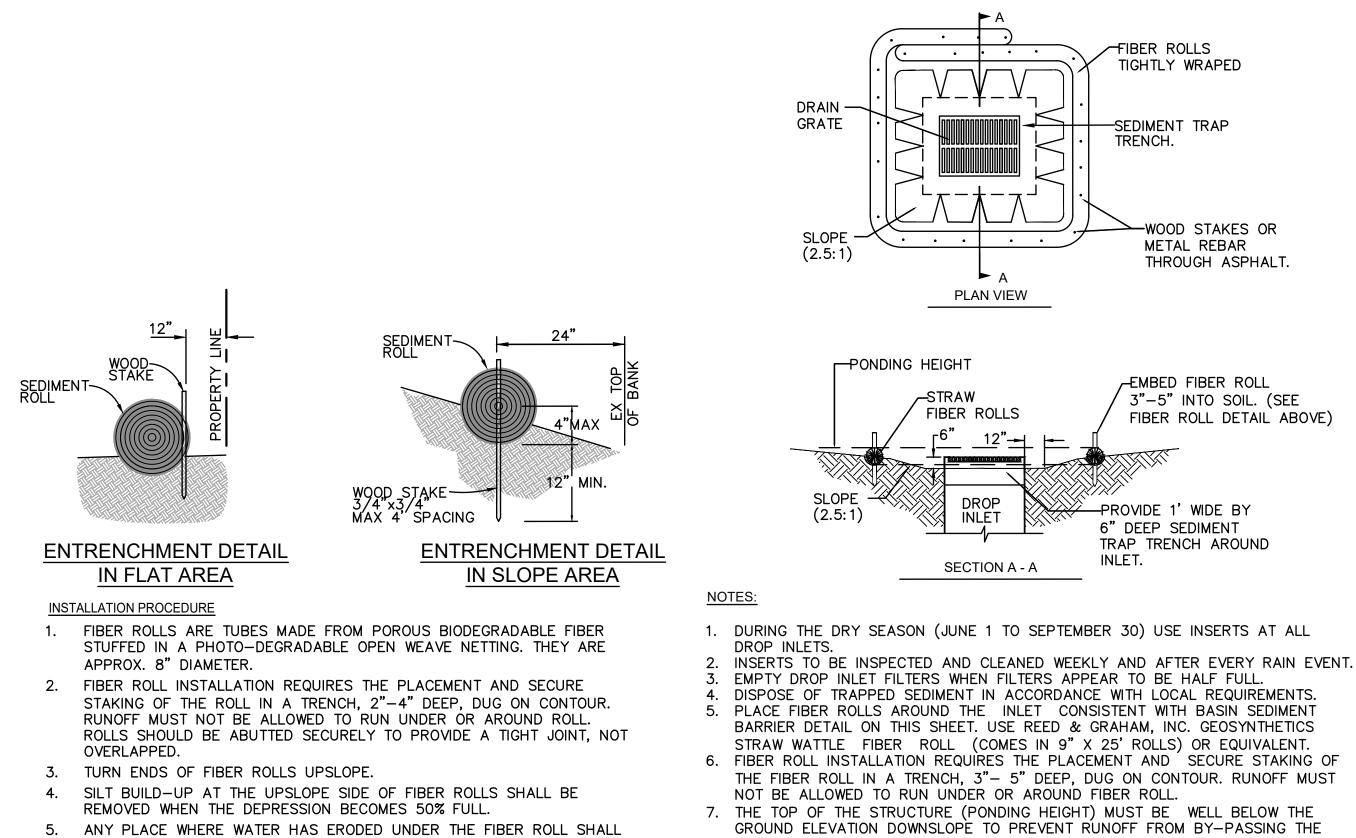
- MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:
- A. REPAIR DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION AT THE END OF EACH WORKING DAY.
- SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS NEEDED. SEDIMENT TRAPS, BERMS, AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED
- SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A DEPTH OF 1 FOOT. SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- RILLS AND GULLIES MUST BE REPAIRED.
- 2. SAND BAG INLET PROTECTION SHALL BE CLEANED OUT WHENEVER SEDIMENT DEPTH IS ONE HALF THE HEIGHT OF ONE SAND BAG.
- 3. SEDIMENT DAMS AND TRAPS SHALL BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH SIGNIFICANT RAINFALL. SEDIMENT SHALL BE REMOVED FROM THESE DEVICES WHEN IT HAS ACCUMULATED TO A DEPTH OF 1 FOOT.
- 4. DAMAGED EROSION CONTROL DEVICES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS SOON AS PRACTICAL AFTER THE DAMAGE OCCURS.
- 5. DURING PERIODS WHEN STORMS ARE FORECAST -
- A. EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREAS.
- ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY THE END OF THE DAY. WHERE STOCKPILING IS NECESSARY, USE A TARPAULIN OR SURROUND THE STOCKPILED MATERIAL WITH FIBER ROLLS OR OTHER RUNOFF CONTROLS.
- USE INLET CONTROLS (E.G. FILTER MAT) FOR STORM DRAINS ADJACENT TO STOCKPILED SOIL.
- THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
- 6. DURING PERIODS WHEN STORMS ARE NOT FORECAST -
- PREVENT STOCKPILED MATERIAL FROM ENTERING THE STORM DRAIN SYSTEM. THOROUGHLY REMOVE LOOSE SOIL VIA SWEEPING FOLLOWING REMOVAL OF DIRT.

CONSTRUCTION RELATED AIR QUALITY IMPACTS:

- ALL EXPOSED SURFACES (E.G., PARKING AREAS, STAGING AREAS, SOIL PILES, GRADED AREAS, AND UNPAVED ACCESS ROADS) SHALL BE WATERED TWO TIMES PER DAY.
- ALL HAUL TRUCKS TRANSPORTING SOIL, SAND, OR OTHER LOOSE MATERIAL OFF-SITE SHALL BE COVERED.
- ALL VISIBLE MUD OR DIRT TRACK-OUT ONTO ADJACENT PUBLIC ROADS SHALL BE REMOVED USING WET POWER VACUUM STREET SWEEPERS AT LEAST ONCE PER DAY. THE USE OF DRY POWER SWEEPING IS PROHIBITED.



- 4. ALL VEHICLE SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 15 MPH.
- ALL ROADWAYS, DRIVEWAYS, AND SIDEWALKS TO BE PAVED SHALL BE COMPLETED AS SOON AS POSSIBLE. BUILDING PADS SHALL BE LAID AS SOON AS POSSIBLE AFTER GRADING UNLESS SEEDIN OR SOIL BINDERS ARE USED.
- 6. IDLING TIMES SHALL BE MINIMIZED EITHER BY SHUTTING EQUIPMENT OFF WHEN NOT IN USE OR REDUCING THE MAXIMUM IDLING TIME TO 5 MINUTES (AS REQUIRED BY THE CALIFORNIA AIRBORNE TOXICS CONTROL MEASURE TITLE 13, SECTION 2485 OF CALIFORNIA CODE OF REGULATIONS [CCR]). CLEAR SIGNAGE SHALL BE PROVIDED FOR CONSTRUCTION WORKERS AT ALL ACCESS POINTS.
- 7. ALL CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED AND PROPERLY TUNED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL EQUIPMENT SHALL BE CHECKED BY A CERTIFIED VISIBLE EMISSIONS EVALUATOR.
- 8. A PUBLICLY VISIBLE SIGN SHALL BE POSTED WITH THE TELEPHONE NUMBER AND PERSON TO CONTACT AT THE LEAD AGENCY REGARDING DUST COMPLAINTS. THIS PERSON SHALL RESPOND AND TAKE CORRECTIVE ACTION WITHIN 48 HOURS. THE AIR DISTRICT'S PHONE NUMBER SHALL ALSO BE VISIBLE TO HELP ENSURE COMPLIANCE WITH APPLICABLE REGULATIONS.
- (a) ADDITIONAL CONSTRUCTION MEASURES FOR CONSTRUCTION ACTIVITIES WITH EMISSIONS ABOVE BAAQMD THRESHOLDS:
- ALL EXPOSED SURFACES SHALL BE WATERED AT A FREQUENCY ADEQUATE TO MAINTAIN MINIMUM SOIL MOISTURE OF 12 PERCENT. MOISTURE CONTENT CAN BE VERIFIED BY LAB SAMPLES OR 9. MOISTURE PROBE.
- 10. ALL EXCAVATION, GRADING, AND/OR DEMOLITION ACTIVITIES SHALL BE SUSPENDED WHEN AVER- AGE WIND SPEEDS EXCEED 20 MPH.
- 11. WIND BREAKS (E.G., TREES, FENCES) SHALL BE INSTALLED ON THE WINDWARD SIDE(S) OF ACTIVELY DISTURBED AREAS OF CONSTRUCTION. WIND BREAKS SHOULD HAVE AT MAXIMUM 50 PERCENT AIR POROSITY.
- 12. VEGETATIVE GROUND COVER (E.G., FAST-GERMINATING NATIVE GRASS SEED) SHALL BE PLANTED IN DISTURBED AREAS AS SOON AS POSSIBLE AND WATERED APPROPRIATELY UNTIL VEGETATION IS ESTABLISHED.
- 13. THE SIMULTANEOUS OCCURRENCE OF EXCAVATION, GRADING, AND GROUND- DISTURBING CONSTRUCTION ACTIVITIES ON THE SAME AREA AT ANY ONE TIME SHALL BE LIMITED. ACTIVITIES SHALL BE PHASED TO REDUCE THE AMOUNT OF DISTURBED SURFACES AT ANY ONE TIME.
- 14. ALL TRUCKS AND EQUIPMENT, INCLUDING THEIR TIRES, SHALL BE WASHED OFF PRIOR TO LEAVING THE SITE
- 15. SITE ACCESSES TO A DISTANCE OF 100 FEET FROM THE PAVED ROAD SHALL BE TREATED WITH A 6- TO 12-INCH COMPACTED LAYER OF WOOD CHIPS, MULCH, OR GRAVEL
- 16. SANDBAGS OR OTHER EROSION CONTROL MEASURES SHALL BE INSTALLED TO PREVENT SILT RUNOFF TO PUBLIC ROADWAYS FROM SITES WITH A SLOPE GREATER THAN ONE PERCENT.
- 17. THE IDLING TIME OF DIESEL-POWERED CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO TWO MINUTES.
- 18. THE PROJECT SHALL DEVELOP A PLAN DEMONSTRATING THAT THE OFF-ROAD EQUIPMENT (MORE THAN 50 HORSEPOWER) TO BE USED IN THE CONSTRUCTION PROJECT (I.E., OWNED, LEASED, AND SUBCONTRACTOR VEHICLES) WOULD ACHIEVE A PROJECT-WIDE FLEET-AVERAGE 20 PERCENT NOX REDUCTION AND 45 PERCENT PM REDUCTION COMPARED TO THE MOST RECENT ARB FLEET AVERAGE. ACCEPTABLE OPTIONS FOR REDUCING EMISSIONS INCLUDE THE USE OF LATE-MODEL ENGINES, LOW-EMISSION DIESEL PRODUCTS, ALTERNATIVE FUELS, ENGINE RETROFIT TECHNOLOGY. AFTER-TREATMENT PRODUCTS. ADD-ON DEVICES SUCH AS PARTICULATE FILTERS. AND/OR OTHER OPTIONS AS THEY BECOME AVAILABLE.
- 19. USE LOW-VOC (I.E., ROG) COATINGS BEYOND THE LOCAL REQUIREMENTS (I.E., REGULATION 8, RULE 3: ARCHITECTURAL COATINGS)
- 20. ALL CONSTRUCTION EQUIPMENT, DIESEL TRUCKS, AND GENERATORS SHALL BE EQUIPPED WITH BEST AVAILABLE CONTROL TECHNOLOGY FOR EMISSION REDUCTIONS OF NOX AND PM
- 21. ALL CONTRACTORS SHALL USE EQUIPMENT THAT MEETS ARB'S MOST RECENT CERTIFICATION STANDARD FOR OFF-ROAD HEAVY-DUTY DIESEL ENGINES.
- (a) PROJECT-SPECIFIC MEASURES:
- 22. FOR CONSTRUCTION, OFF-ROAD EQUIPMENT SHALL BE TIER 4 OR SHALL ACHIEVE TIER 4 PARTICULATE MATTER EMISSION LEVELS THROUGH USE OF ONE OR MORE OF THE FOLLOWING: TIER 2/TIER 3 EQUIPMENT WITH DIESEL PARTICULATE FILTERS: ALTERNATIVE FUELS (E.G. BIODIESEL OR LIQUEFIED NATURAL GAS); AND/OR ELECTRIFICATION.
- 23. FOR EACH PHASE OF PROJECT CONSTRUCTION, THE APPLICANT SHALL MAINTAIN ROG EMISSION BELOW 54 POUNDS PER DAY. THE APPLICANT MAY DEMONSTRATE COMPLIANCE WITH THIS LIMIT THROUGH ONE OR MORE OF THE FOLLOWING: STRATEGIC PROJECT PHASING, USE OF PRE-COATED BUILDING MATERIALS, AND/OR USE OF LOW-VOC COATINGS BEYOND THE REQUIREMENTS OF BAAQMD REGULATION 8, RULE 3. IMPLEMENTATION OF THESE MEASURES WOULD REDUCE PROJECT CONSTRUCTION-RELATED AIR QUALITY IMPACTS. THE MEASURES TO REDUCE LOCALIZED PM10 IMPACTS DUE TO FUGITIVE DUST WOULD BE CONSISTENT WITH BAAQMD CEQA GUIDELINES RECOMMENDATIONS AND WOULD REDUCE PM10 EMISSIONS TO ALESS-THAN-SIGNIFICANT LEVEL. BECAUSE THE ROG PERFORMANCE STANDARD WOULD MAINTAIN ROG EMISSIONS BELOW 54 POUNDS PER DAY, THIS IMPACT WOULD BE LESS-THAN-SIGNIFICANT. THE NOX EMISSIONS FROM CONSTRUCTION OF THE PROJECT WOULD BE REDUCED BY UP TO 20 PERCENT; HOWEVER, THERE IS A POTENTIAL THAT CONSTRUCTION.



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BE IMMEDIATELY FILLED AS NECESSARY TO PREVENT RECURRENCE.

FIBER ROLL

INLET. EXCAVATION OF A BASIN ADJACENT TO THE DROP INLET OR A TEMPORARY DIKE ON THE DOWNSLOPE OF THE STRUCTURE MAY BE NECESSARY.

DROP INLET SEDIMENT BARRIERS

NTS



BKF ENGINEERS 2100 FRANKLIN ST, SUITE 4C OAKLAND, CA 94612 (510) 899-7300

SEAL



APPROVALS

PROJECT TITLE

City of Berkeley WES' SERVICE CENTER

1900 Sixth St Berkeley, CA 94710

BID SET

ISSUE DATE	12/22/2023
BKF JOB NUMBER	20171034
REVISIONS	DESCRIPTION
DRAWN BY AP, NF SHEET TITLE EROSION C NOTES & D	ONTROL
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NOT IN CONTRACT

LEGEND



PAVERS TO BE SALVAGED

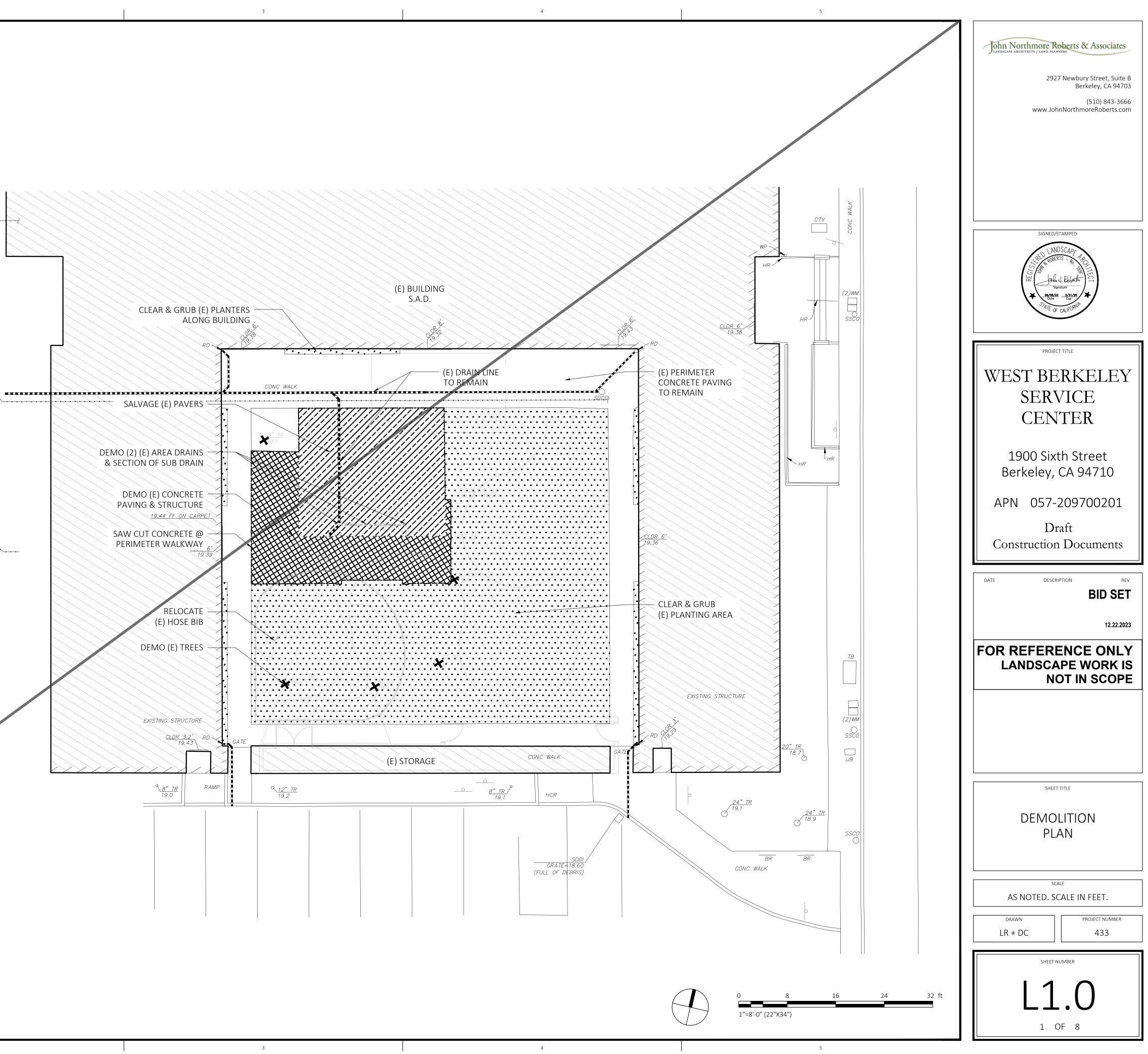


CONCRETE PAV TO BE REMOV

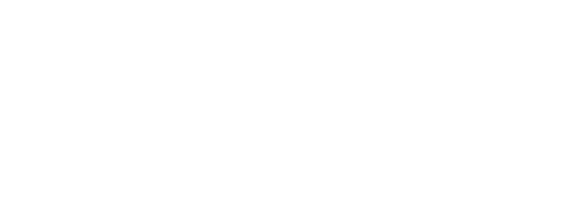


EXISTING PLANTING AREAS O BE CLEARED & GRUBBED

EXISTING TREES TO BE REMOVED



NOT IN CONTRACT



LEGEND NEW CONCRETE PAVING 4 4 TOTAL AREA ±1250 SF

REUSED PAVERS - SAND SET TOTAL AREA ±170 SF SYNTHETIC RESILIENT (////// SURFACE

PLANTING AREAS

SEE PLANTING PLAN PLAYGROUND FENCE

TOTAL AREA ±313 SF

GRAVEL MULCH - 3/8" DECORATIVE PEBBLES

TOTAL AREA ±92 SF

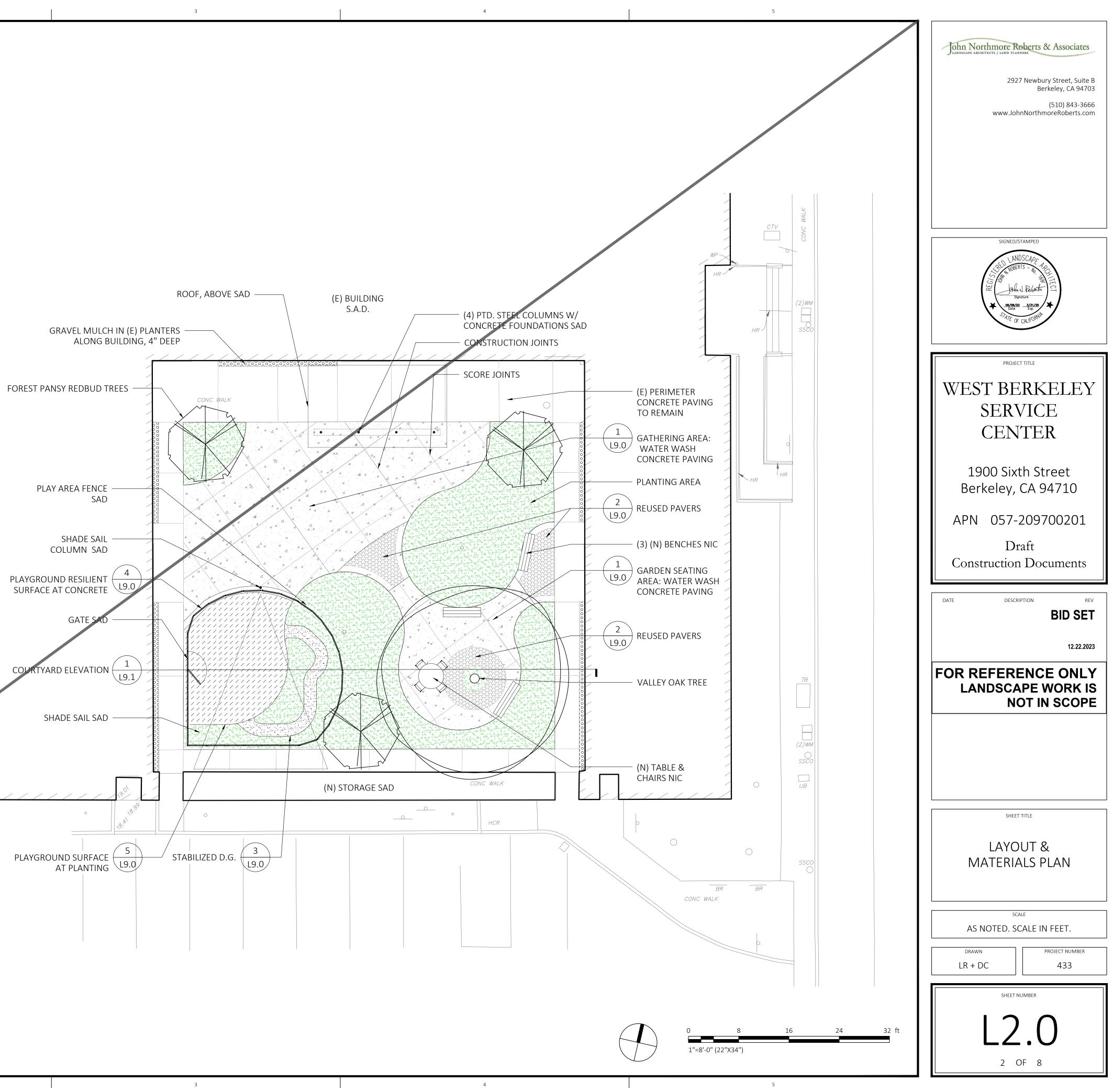
STABILIZED D.G. TOTAL AREA ±60 SF

CONCRETE CONTROL JOINT

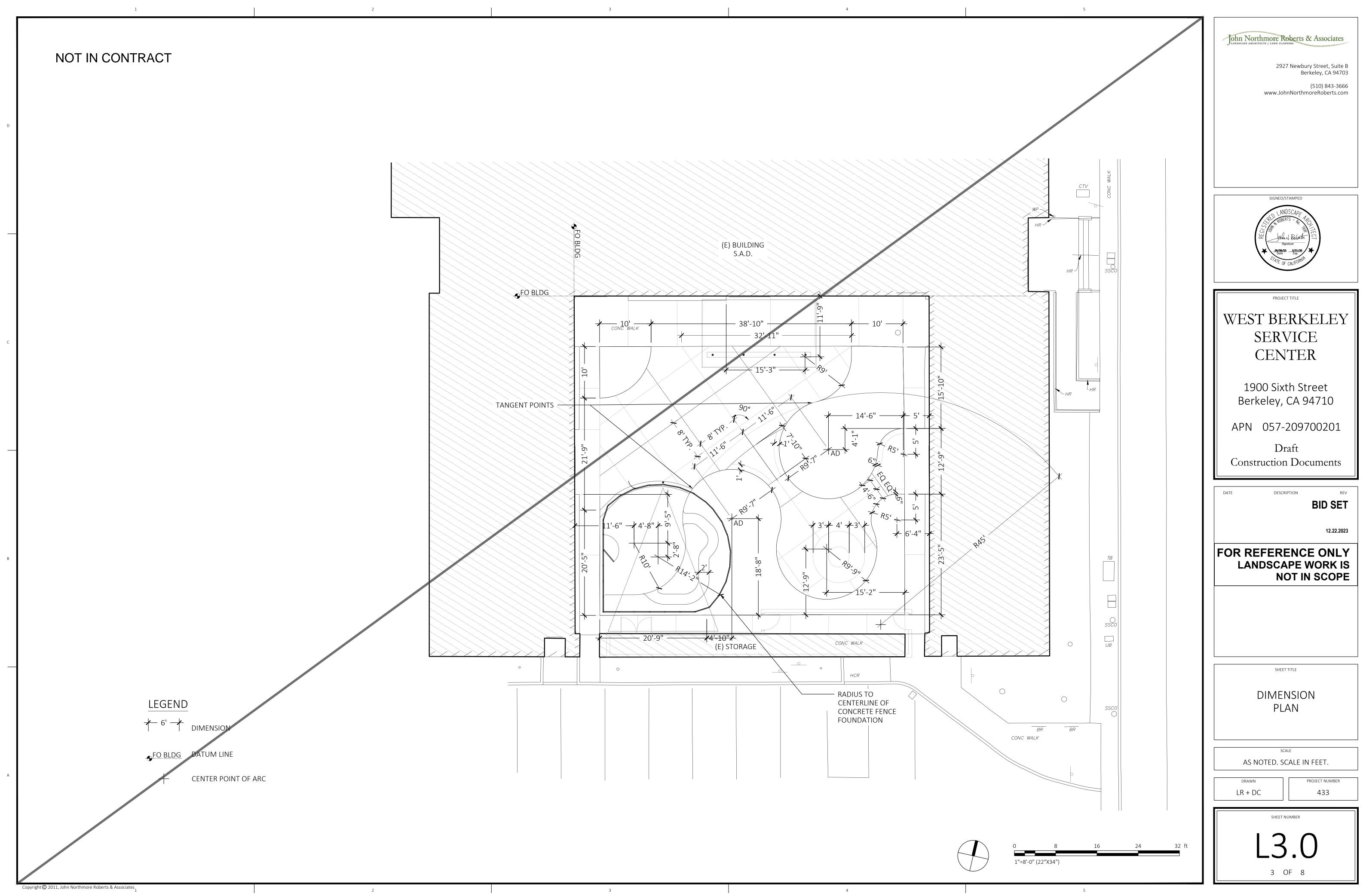
CONCRETE SCORE JOINT

2

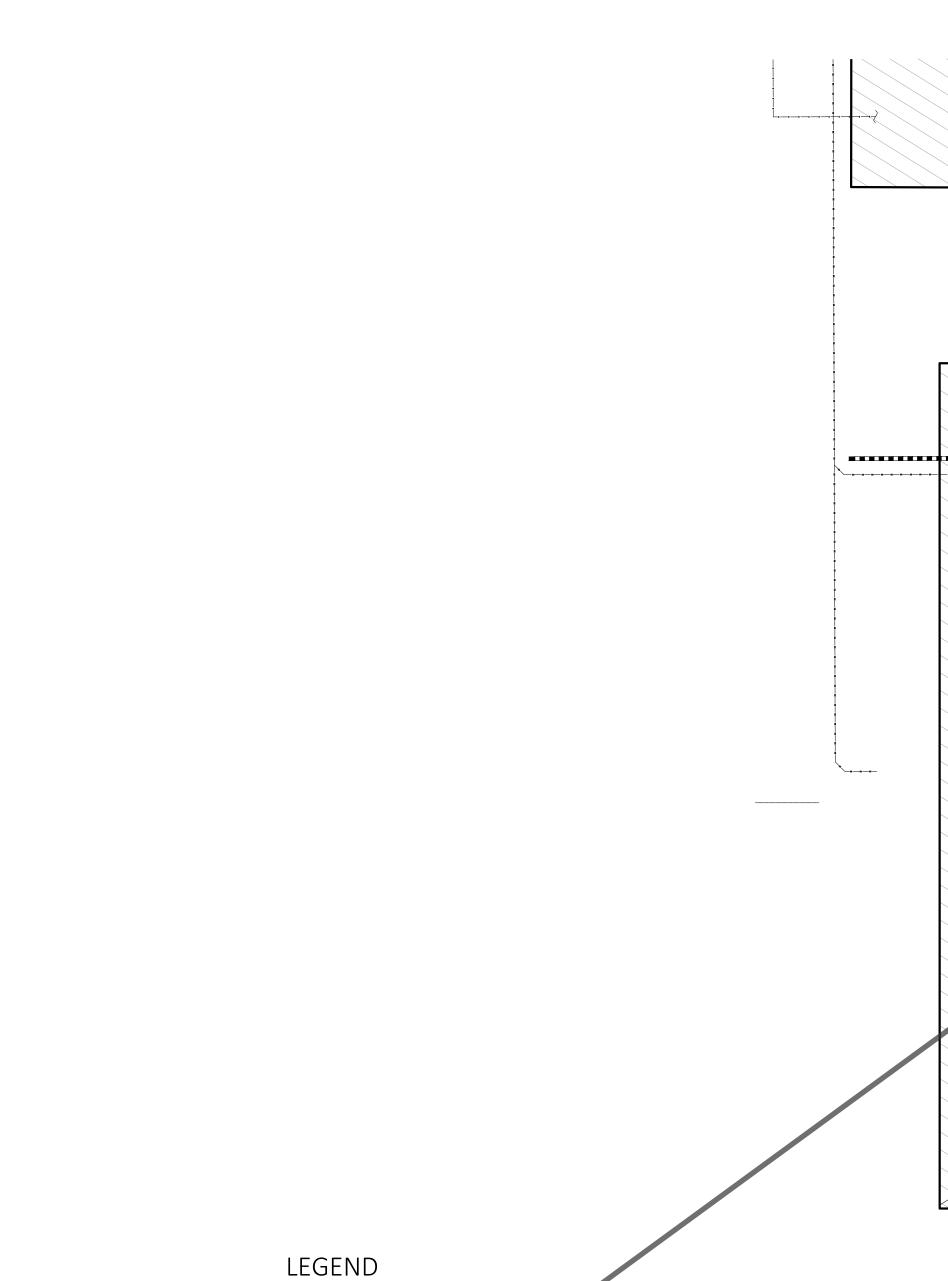
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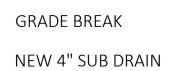


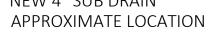


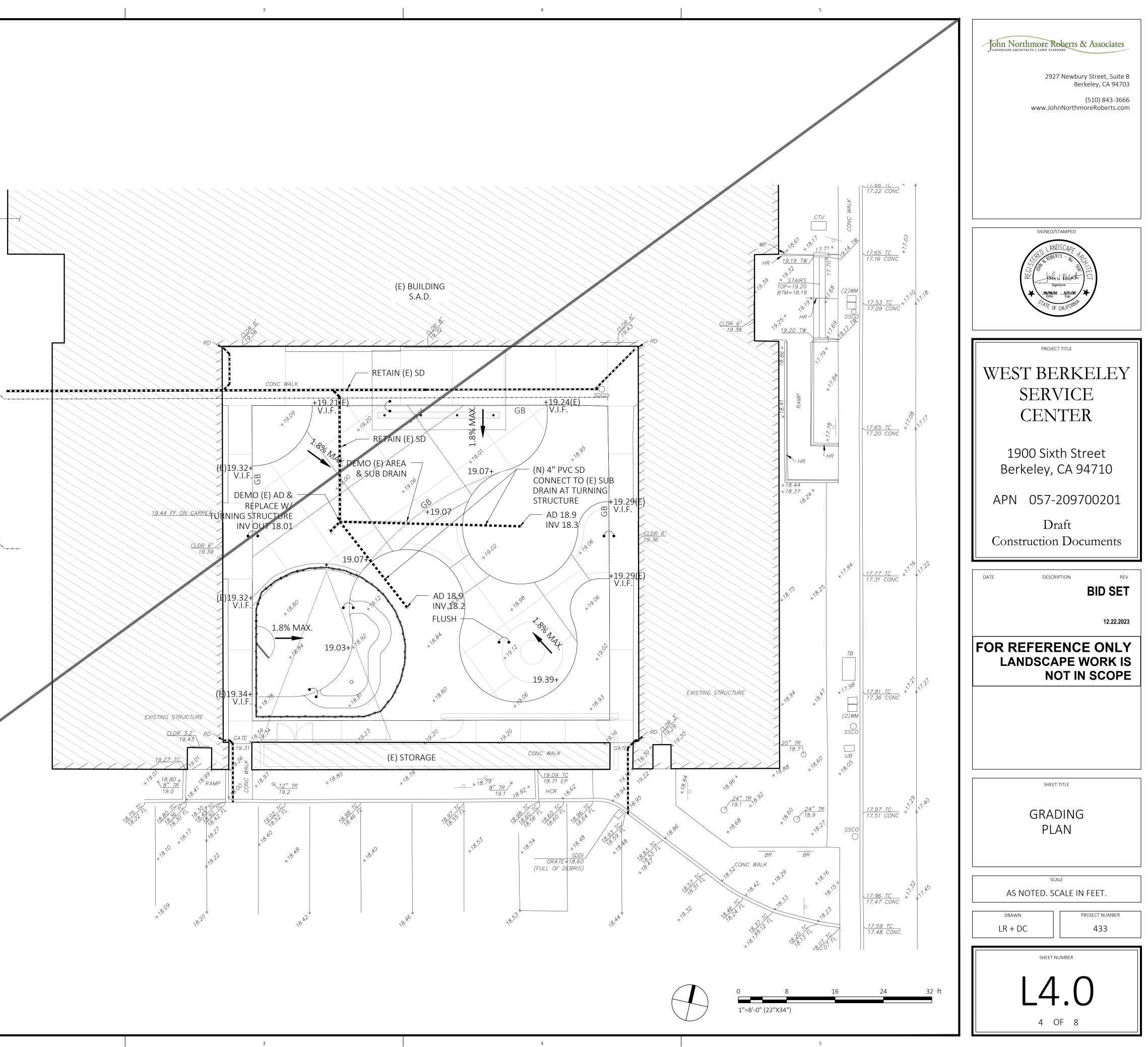












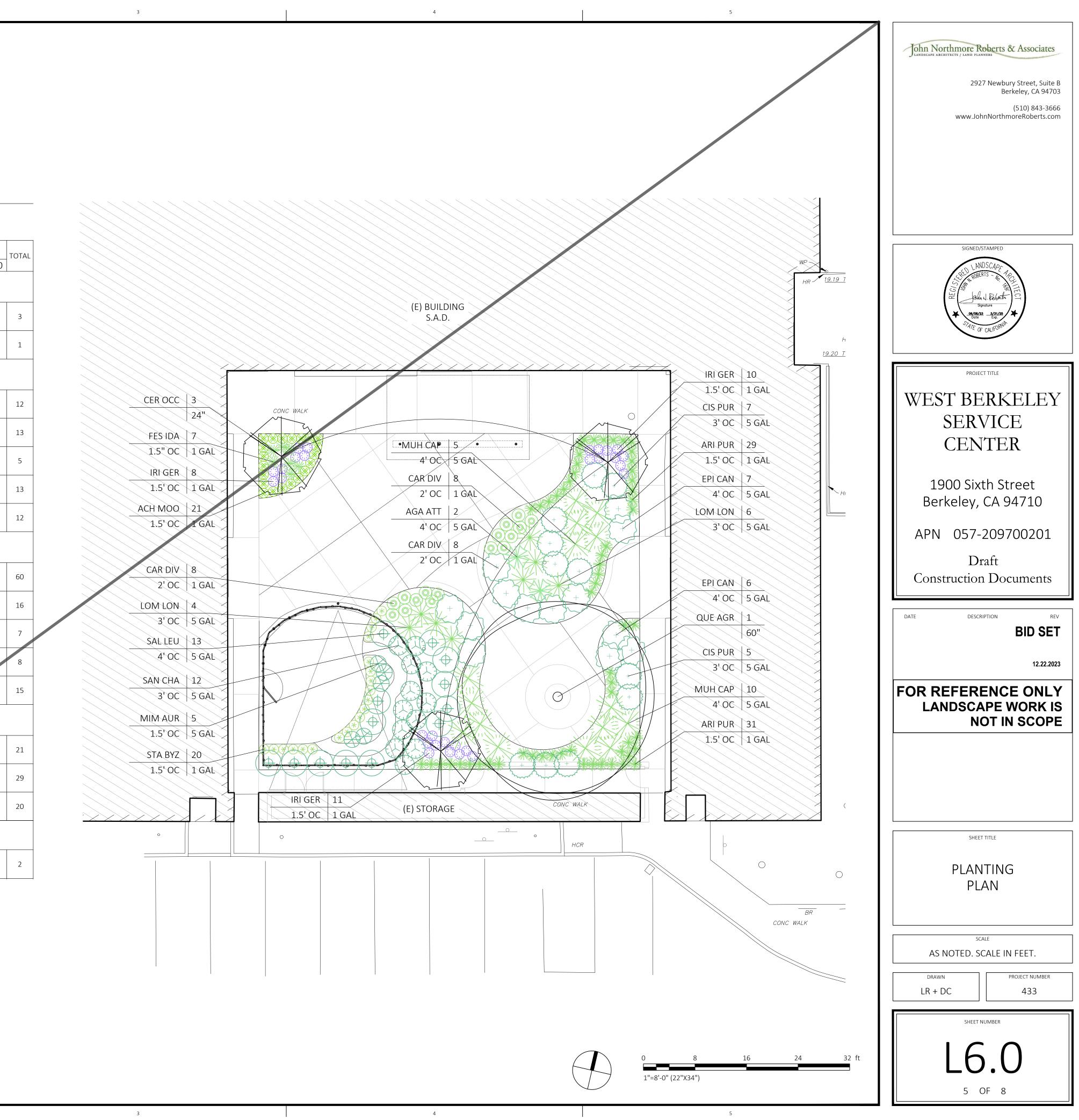
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PLANT SCHEDULE

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SYM.	ABBRV	NAME	COMMON NAME	HT (FT)	WT (FT)	SUN	WTR		QUAI		Y BY S	
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\bigcirc	QUE AGR	QUERCUS AGRIFOLIA	COAST LIVE OAK	50	50	SUN	LOW					1
SHRUBS												1
+	CIS PUR	CISTUS X PURPUREUS	PURPLE ROCKROSE	4-6	4-6	SUN	LOW		12	2		
+	EPI CAN	EPILOBIUM CANUM 'CATALINA'	CATALINA FUCHSIA	3-4	4-5	SUN	LOW		13	3		
\bigotimes	MIM AUR	MIMULUS AURANTIACUS	STICKY MONKEY-FLOWER	2-3	2-3	SUN SHD	LOW		5			
$(\begin{tabular}{c} \begin{tabular}{c} \end{tabular}$	SAL LEU	SALVIA LEUCOPHYLLA	PURPLE SAGE	3-4	4-6	SUN SHD	LOW		13	3		
	SAN CHA	SANTOLINA CHAMAECYPARISSUS	LAVENDER COTTON	1-2	3-4	SUN	LOW		12	2		
RASSES					1							
*	ARI PUR	ARISTIDA PURPUREA	PURPLE THREE-AWN	2-3	1-2	SUN	LOW	6	0			
\bigcirc	CAR DIV	CAREX DIVULSA	EUROPEAN GREY SEDGE	1-2	1-2	SUN SHD	LOW	1	6			
*	FES IDA	FESTUCA IDAHOENSIS X 'SISKIYOU BLUE'	SISKIYOU BLUE FESCUE	1-2	1-2	SUN SHD	MED		7			
*	LOM LON	LOMANDRA LONGIFOLIA	SPINY HEADED MAT RUSH	4-5	4-5	SUN SHD	LOW		8			
	MUH CAP	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	2-3	2-3	SUN	LOW		15	5		
ERENNIALS												
8	ACH MOO	ACHILLEA 'MOONSHINE'	MOONSHINE YARROW	1-2	2-3	SUN	Low	2	1			
	IRI GER	IRIS GERMANICA 'FREQUENT FLYER'	WHITE TALL BEARDED IRIS	2-3	1-2	SUN	LOW	2	9			
*	STA BYZ	STACHYS BYZANTINA	LAMB'S EAR	<1	4-5	SUN SHD	LOW	2	0			
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CERCIS OCCIDENTALIS WESTERN REDBUD



QUERCUS AGRIFOLIA COAST LIVE OAK

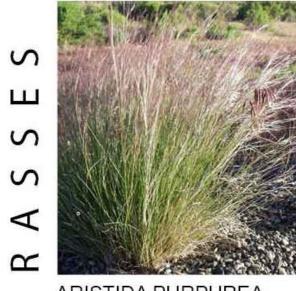


EPILOBIUM CANUM 'CATALINA' MIMULUS AURANTIACUS STICKY MONKEY-FLOWER PURPLE ROCKROSE





LAVENDER COTTON



U ARISTIDA PURPUREA PURPLE THREE-AWN



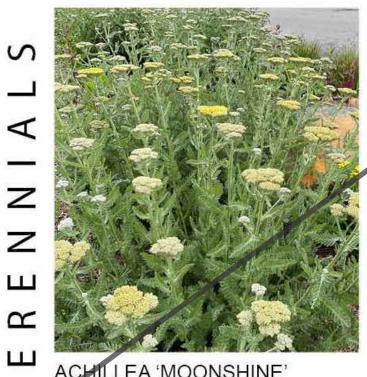
CAREX DIVULSA EUROPEAN GREY SEDGE



FESTUCA IDAHOENSIS X SISKIYOU BLUE FESCUE



LOMANDRA LONGIFOLIA SPINY HEADED MAT RUSH



ACHILLEA 'MOONSHINE' ▲ MOONSHINE YARROW

Copyright 🕲 2011, John Northmore Roberts & Associates



STACHYS BYZANTINA LAMB'S EAR



IRIS GERMANICA 'FREWHITE TALL **BEARDED IRIS**

2



AGAVE ATTENUATA FOXTAIL AGAVE

3



SANTOLINA CHAMAECYPARISSUS SALVIA LEUCOPHYLLA PURPLE SAGE

> MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS

	\bigotimes	MIM AUR
ast an	\bigoplus	SAL LEU
		SAN CHA
	GRASSES	
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PLANT SCHEDULE

ABBRV

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EPI CAN

NAME

CERCIS OCCIDENTALIS

CISTUS X PURPUREUS

EPILOBIUM CANUM

'CATALINA'

MIMULUS AURANTIACUS

SALVIA LEUCOPHYLLA

SANTOLINA

CHAMAECYPARISSUS

ARISTIDA PURPUREA

CAREX DIVULSA

QUERCUS AGR

SYM.

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SHRUBS

TREES

*	FES IDA	FESTUCA IDAHOENSIS X 'SISKIYOU BLUE'	SISKIYOU BLUE FESCUE	1-2	
*	LOM LON	LOMANDRA LONGIFOLIA	SPINY HEADED MAT RUSH	4-5	
	MUH CAP	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	2-3	
PERENNIALS					

PEREN

8	ACH MOO	ACHILLEA 'MOONSHINE'	MOONSHINE YARROW	1-2	2-3
63	IRI GER	IRIS GERMANICA 'FREQUENT FLYER'	WHITE TALL BEARDED IRIS	2-3	1-2
*	STA BYZ	STACHYS BYZANTINA	LAMB'S EAR	<1	4-5

SUCCULENTS

AGA ATT AGAVE ATTENUATA	FOXTAIL AGAVE		4	4
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4



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15

50

4-6

3-4

2-3

3-4

1-2

2-3

1-2

COMMON NAME

WESTERN REDBUD

COAST LIVE OAK

PURPLE ROCKROSE

CATALINA FUCHSIA

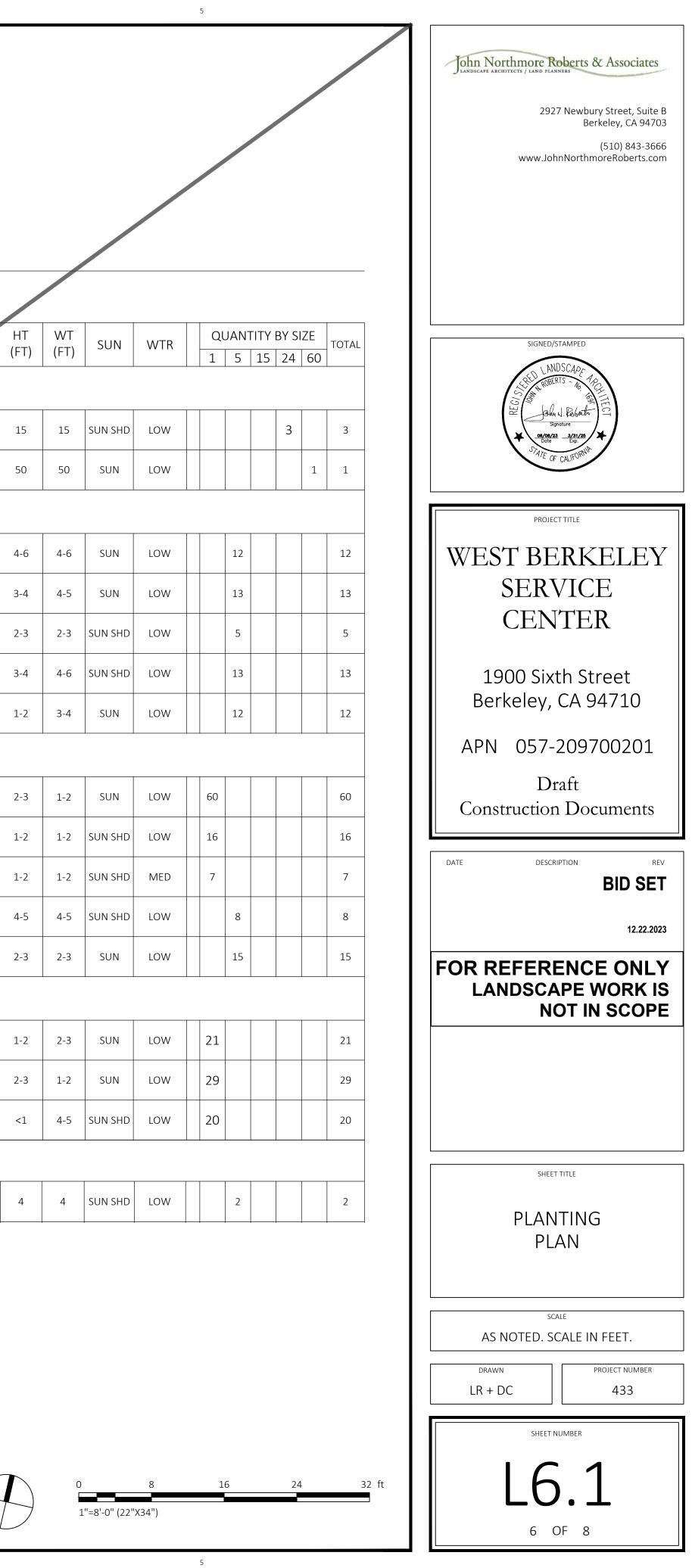
STICKY MONKEY-FLOWER

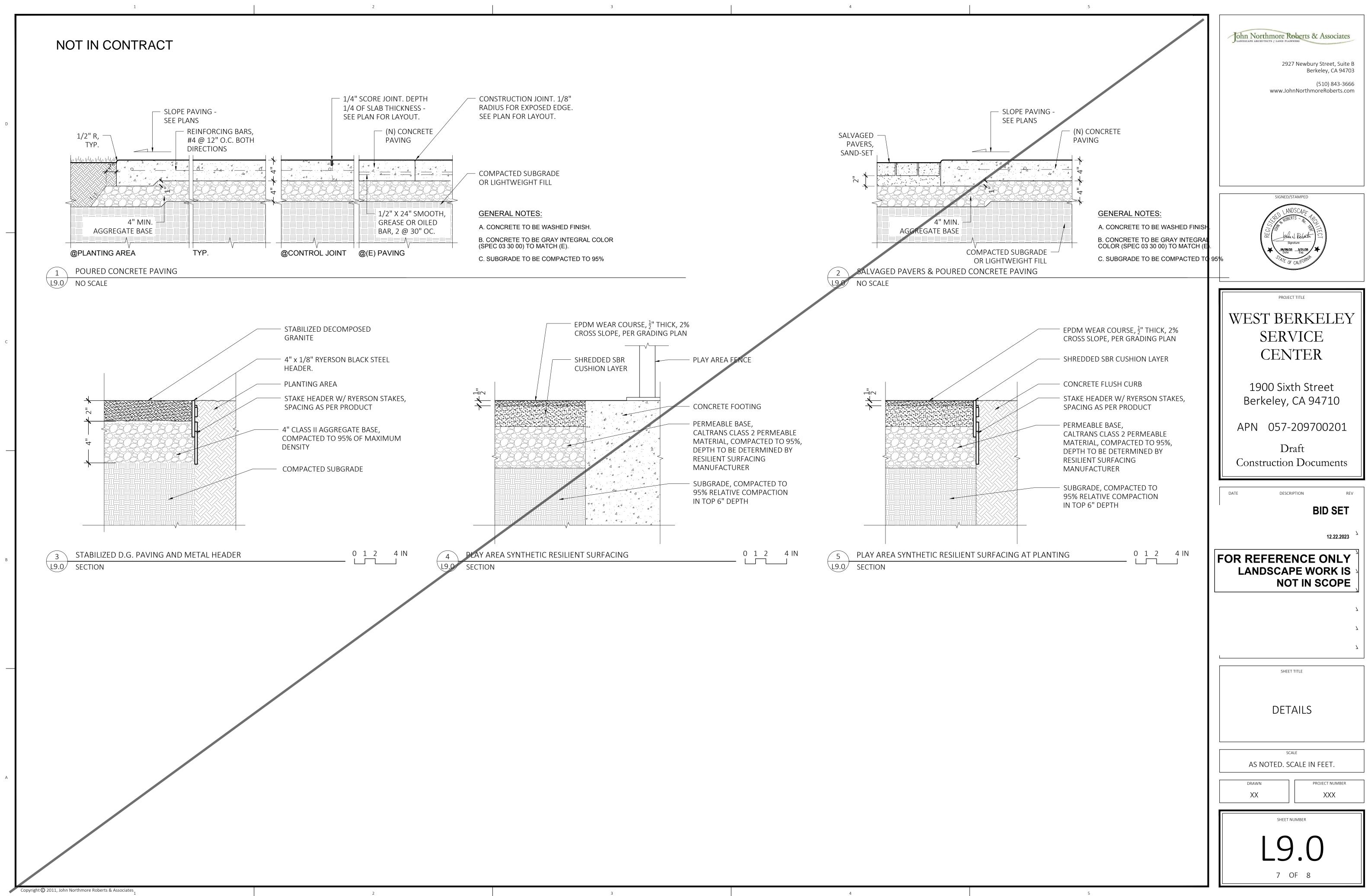
PURPLE SAGE

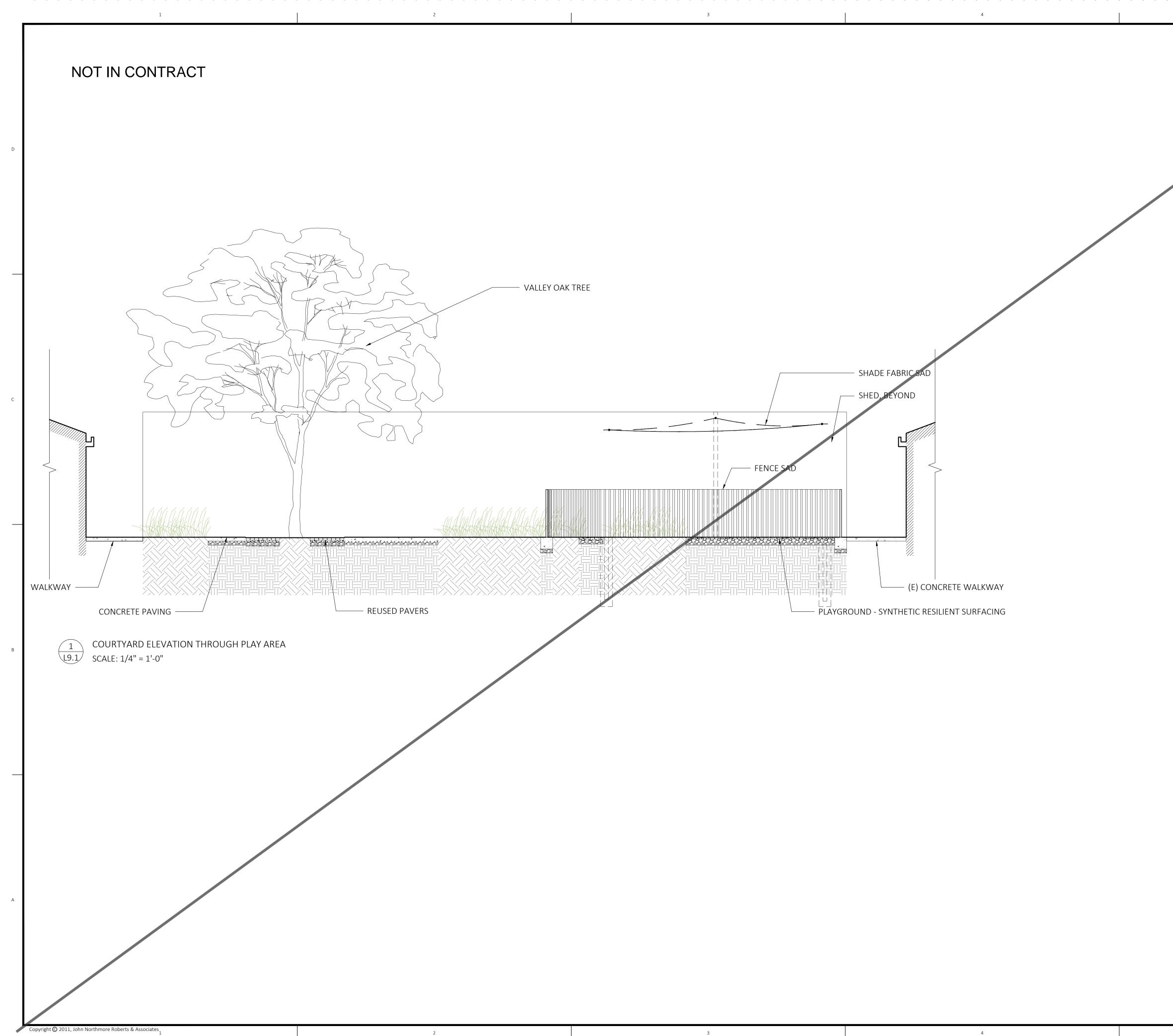
LAVENDER COTTON

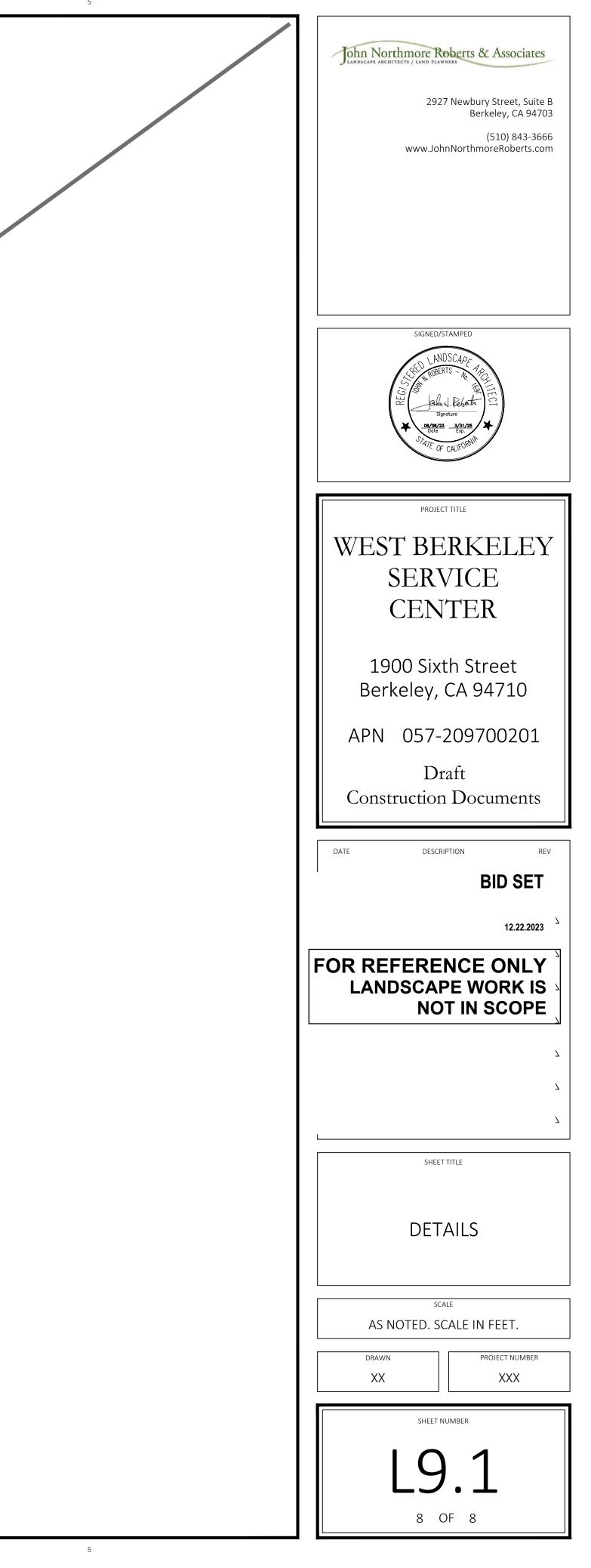
PURPLE THREE-AWN

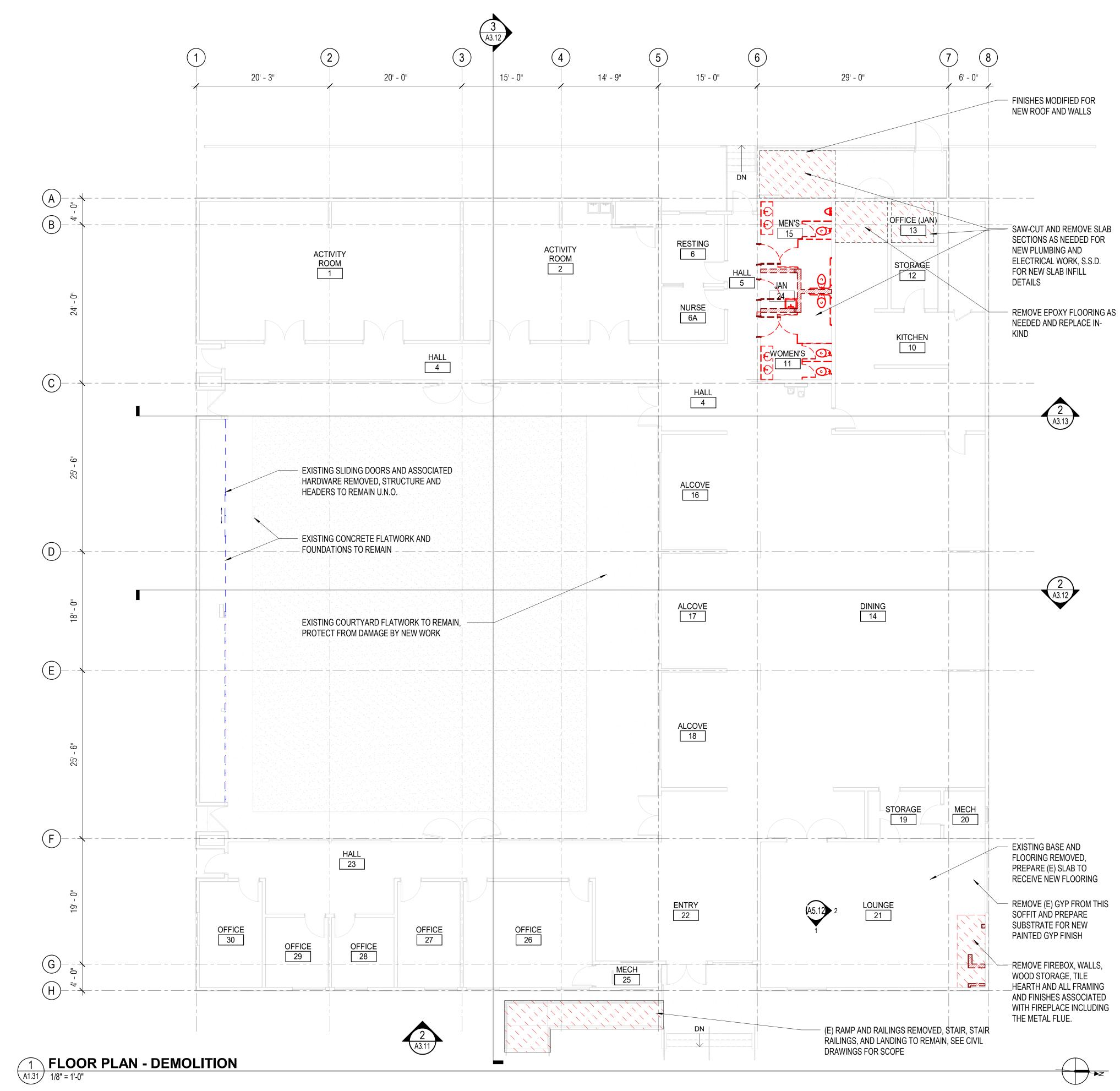
EUROPEAN GREY SEDGE





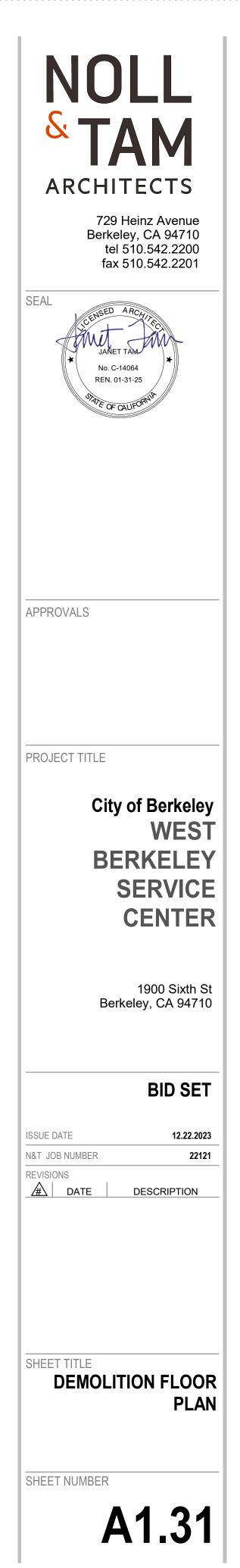


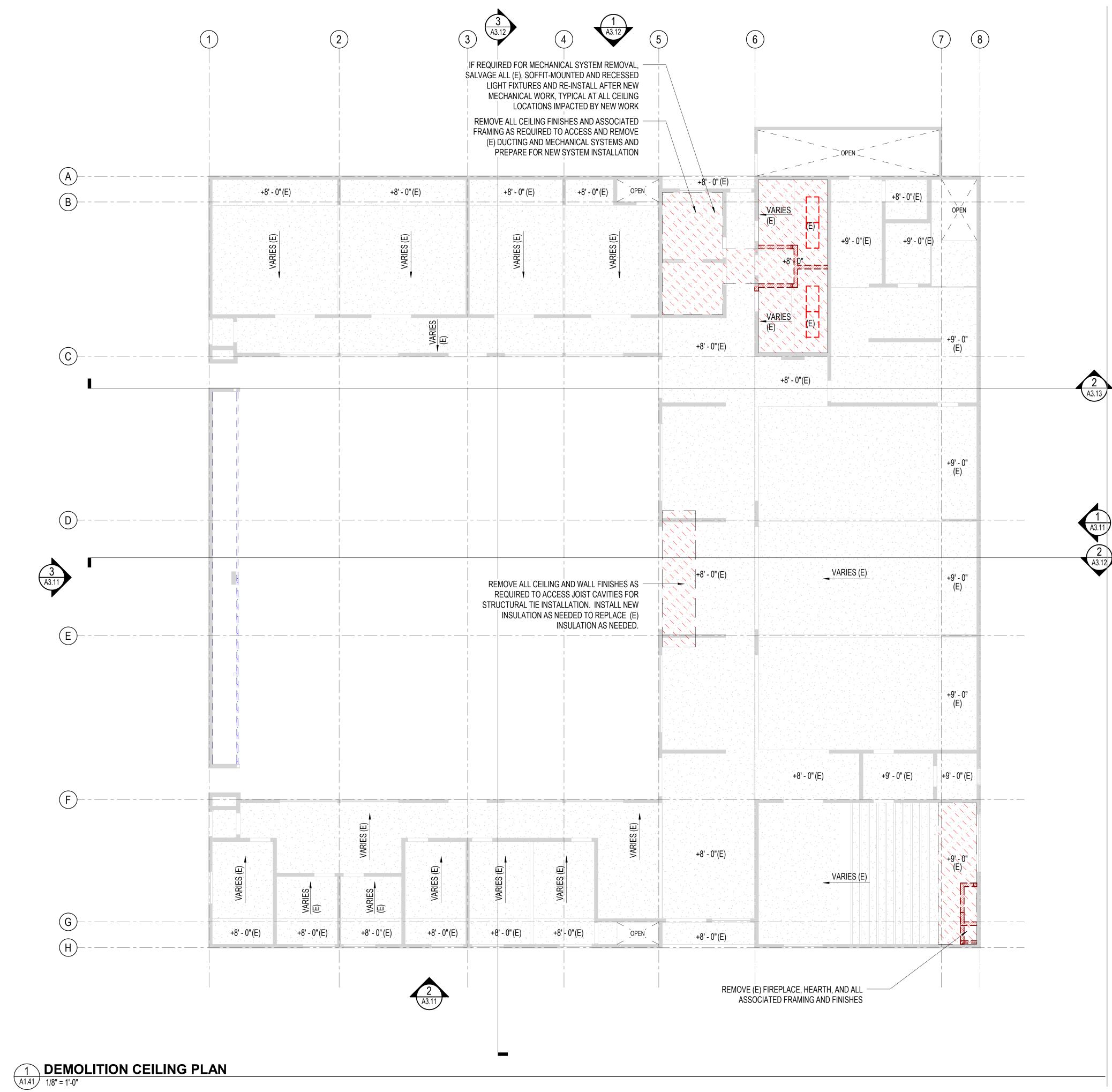




DEMOLITION NOTES

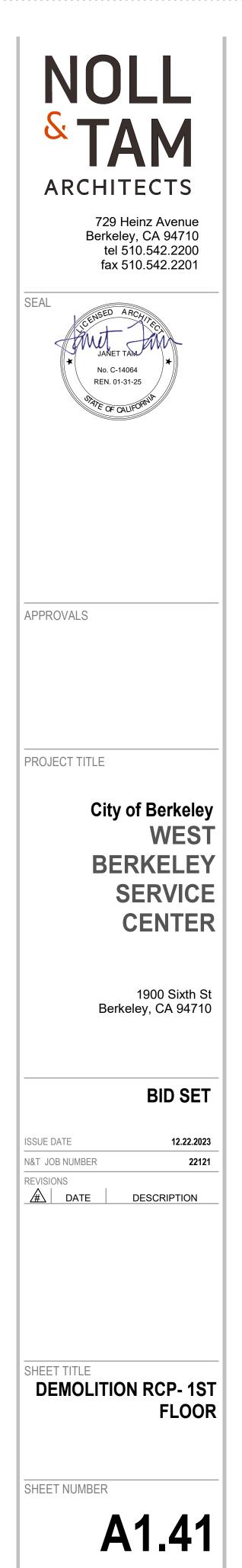
- 1. ALL EXISTING CONDITIONS TO REMAIN UNLESS OTHERWISE NOTED. 2. ALL EXISTING MECHANICAL SOFFITS AND ASSOCIATED DUCTING TO
- REMAIN UNLESS NOTED OTHERWISE. 3. REMOVAL OF EXISTING FLOORING AND BASE TO OCCUR THROUGHOUT THE BUILDING. REMOVE FLOORING AND SCRAPE EXISTING SLAB CLEAN TO PREPARE FOR NEW FLOOR FINISH INSTALLATION.
- 4. EXISTING WINDOWS AND DOORS TO REMAIN UNLESS OTHERWISE NOTED.
- 5. VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BRING ANY DISCREPANCIES FROM THE DRAWINGS AND SPECIFICATIONS TO THE ATTENTION OF THE OWNER AND ARCHITECT IMMEDIATELY. MINOR CHANGES IN THE SCOPE OF THE DEMOLITION SHALL NOT JUSTIFY ANY ADDITIONAL COST.
- 6. ALL SAW CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THE CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR TO ADJACENT CONSTRUCTION.
- 7. WHERE EXISTING PIPING, ELECTRICAL INFRASTRUCTURE AND EQUIPMENT, ETC., THAT ARE TO BE UTILIZED IN THE COMPLETED PROJECT CONFLICT WITH NEW CONSTRUING AND THE REQUIRED DEMOLITION, THEY SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICE.
- 8. ALL WORK MUST BE COORDINATED AND SCHEDULED WITH THE OWNER AND OCCUPANTS OF THIS BUILDING SO AS TO PROVIDE THE LEAST AMOUNT OF DISRUPTION OF USER ACTIVITIES AS POSSIBLE.
- 9. REFER TO FINISH PLANS AND SCHEDULE FOR EXTENTS OF PAINT AND FINISH SCOPE. TOUCH UP PAINT AT EXISTING WALLS THROUGHOUT WHERE IMPACTED BY NEW WORK.
- 10. PATCH AND REPAIR (E) FLOOR SLABS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR (N) FINISHES.
- 11. WALL THICKNESSES ARE NOMINAL, UON. 12. REFER TO SPECIFICATION FOR REQUIREMENTS FOR PATCHING
- NEW WALLS TO EXISTING WALLS. 13. REFER TO MEP AND STRUCTURAL DRAWINGS FOR ADDITIONAL
- INFORMATION.
- 14. ALL MECHANICAL AND ELECTRICAL SYSTEMS TO REMAIN UNLESS OTHERWISE NOTED AND BE PROTECTED FROM DAMAGE DURING NEW WORK.
- 15. UNLESS OTHERWISE NOTED, ALL EXISTING ROOFING, ASSOCIATED UNDERLAYMENT, AND ROOF TILE COMPONENTS ARE TO BE REMOVED AND THE EXISTING SUBSTRATES PREPARED FOR NEW ROOFING INSTALLATIONS.

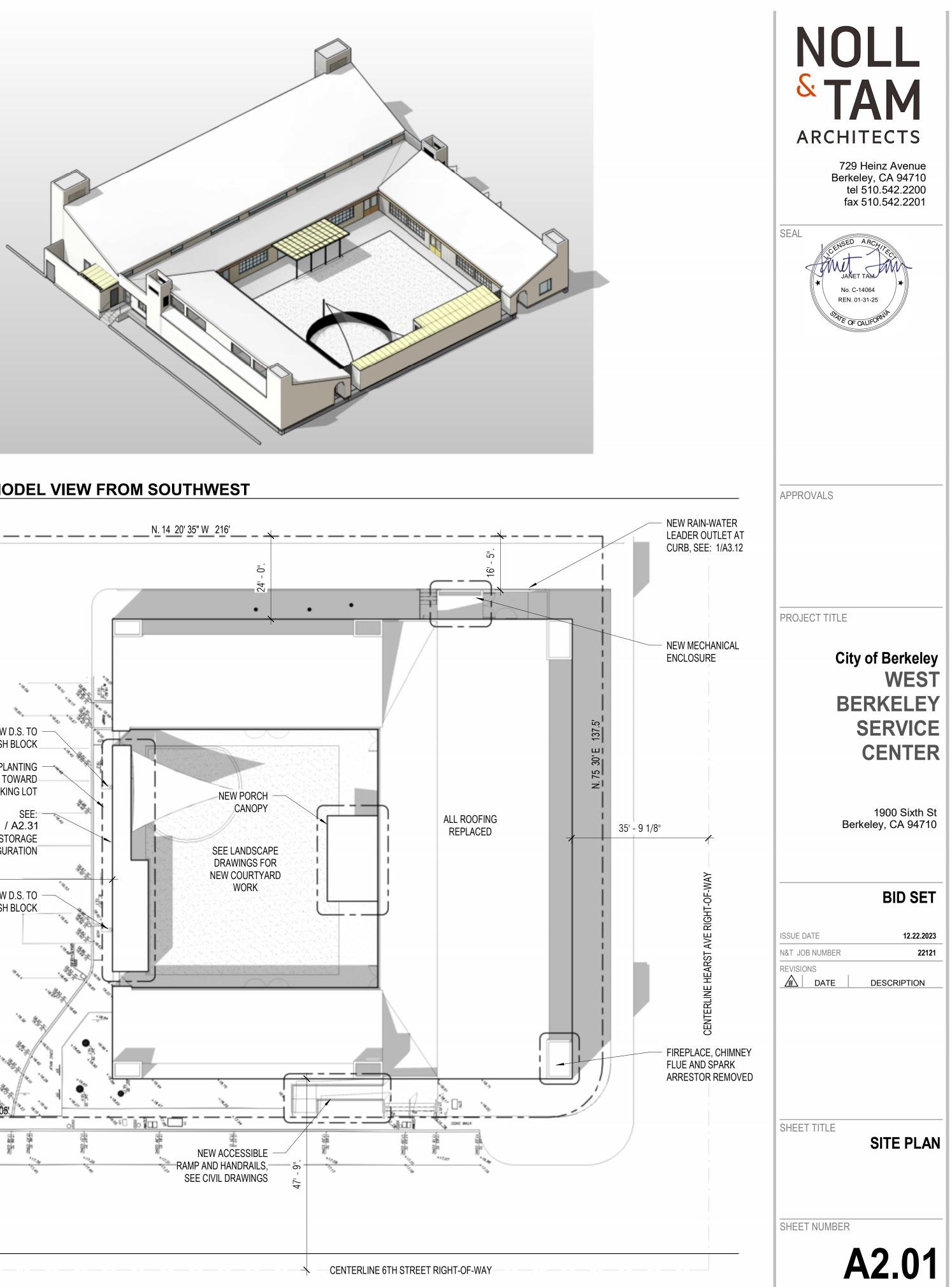


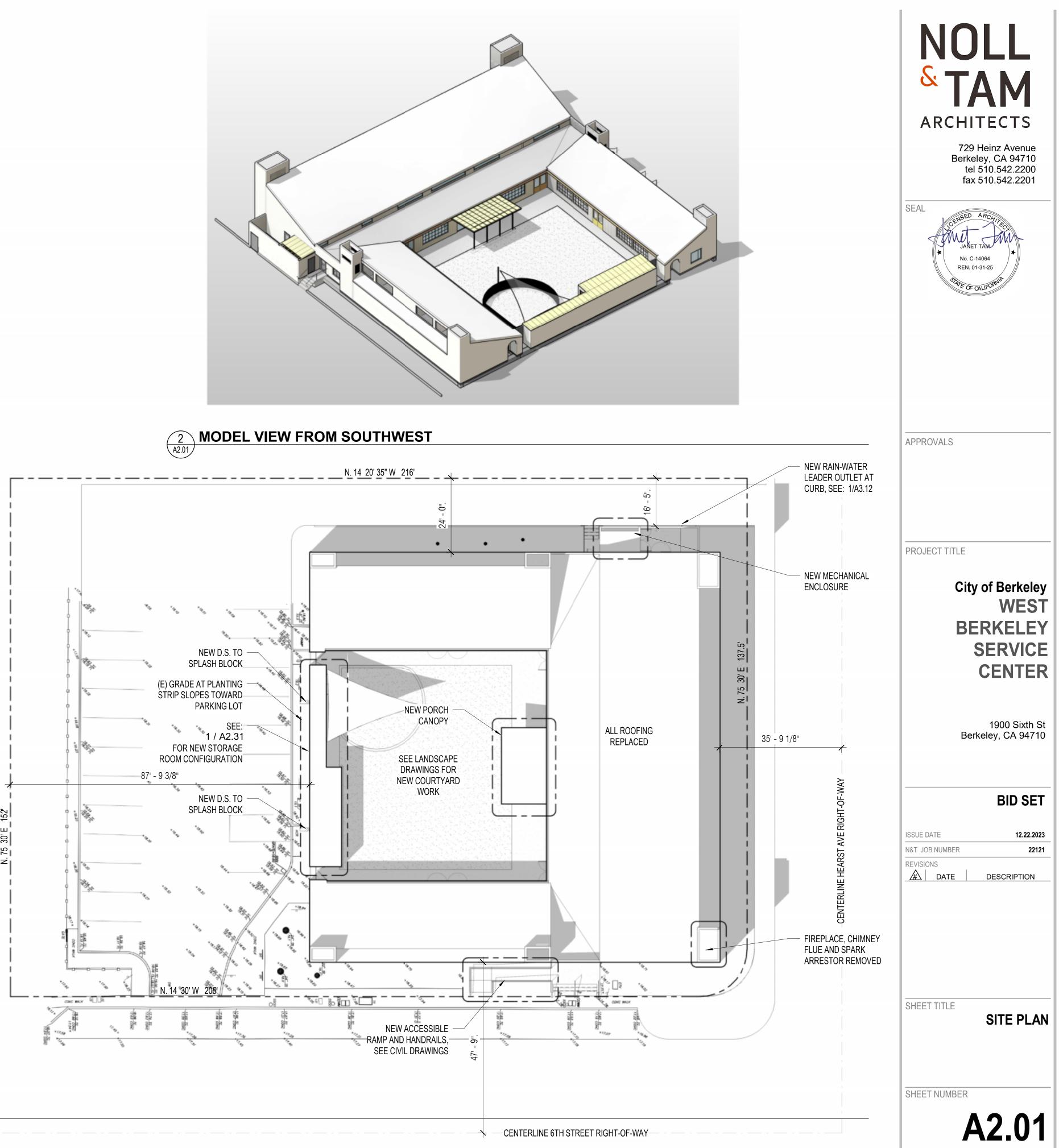


DEMOLITION NOTES

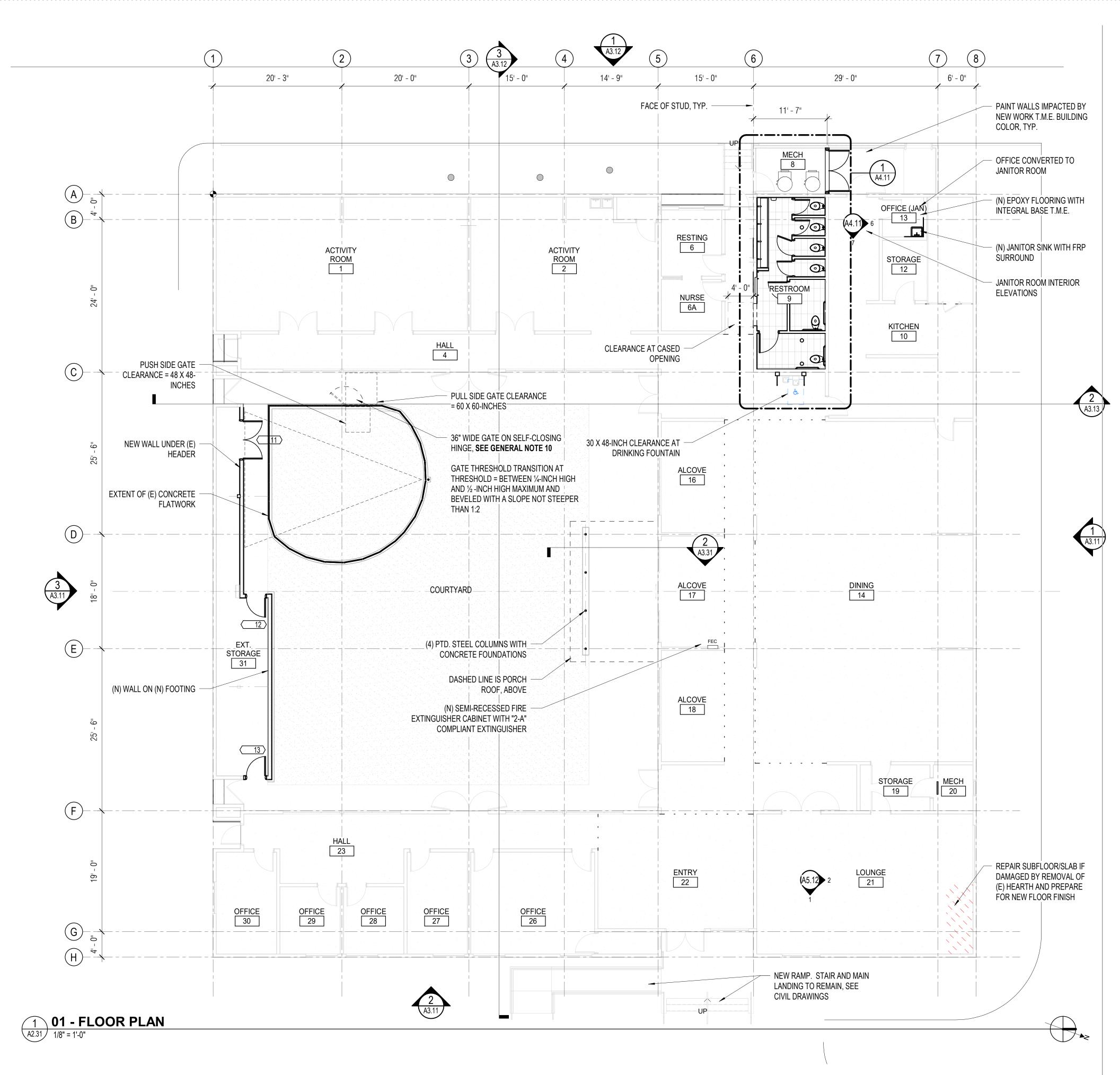
- 1. ALL EXISTING CONDITIONS TO REMAIN UNLESS OTHERWISE NOTED. 2. ALL EXISTING MECHANICAL SOFFITS AND ASSOCIATED DUCTING TO REMAIN UNLESS NOTED OTHERWISE.
- 3. REMOVAL OF EXISTING FLOORING AND BASE TO OCCUR THROUGHOUT THE BUILDING. REMOVE FLOORING AND SCRAPE EXISTING SLAB CLEAN TO PREPARE FOR NEW FLOOR FINISH INSTALLATION.
- 4. EXISTING WINDOWS AND DOORS TO REMAIN UNLESS OTHERWISE NOTED.
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- 6. ALL SAW CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THE CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR TO ADJACENT CONSTRUCTION.
- 7. WHERE EXISTING PIPING, ELECTRICAL INFRASTRUCTURE AND EQUIPMENT, ETC., THAT ARE TO BE UTILIZED IN THE COMPLETED PROJECT CONFLICT WITH NEW CONSTRUING AND THE REQUIRED DEMOLITION, THEY SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICE.
- 8. ALL WORK MUST BE COORDINATED AND SCHEDULED WITH THE OWNER AND OCCUPANTS OF THIS BUILDING SO AS TO PROVIDE THE LEAST AMOUNT OF DISRUPTION OF USER ACTIVITIES AS POSSIBLE.
- 9. REFER TO FINISH PLANS AND SCHEDULE FOR EXTENTS OF PAINT AND FINISH SCOPE. TOUCH UP PAINT AT EXISTING WALLS THROUGHOUT WHERE IMPACTED BY NEW WORK.
- 10. PATCH AND REPAIR (E) FLOOR SLABS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR (N) FINISHES.
- 11. WALL THICKNESSES ARE NOMINAL, UON.
- 12. REFER TO SPECIFICATION FOR REQUIREMENTS FOR PATCHING NEW WALLS TO EXISTING WALLS. 13. REFER TO MEP AND STRUCTURAL DRAWINGS FOR ADDITIONAL
- INFORMATION. 14. ALL MECHANICAL AND ELECTRICAL SYSTEMS TO REMAIN UNLESS
- OTHERWISE NOTED AND BE PROTECTED FROM DAMAGE DURING NEW WORK.
- 15. UNLESS OTHERWISE NOTED, ALL EXISTING ROOFING, ASSOCIATED UNDERLAYMENT, AND ROOF TILE COMPONENTS ARE TO BE REMOVED AND THE EXISTING SUBSTRATES PREPARED FOR NEW ROOFING INSTALLATIONS.











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GENERAL NOTES

1. ALL EXISTING CONDITIONS TO REMAIN UNLESS OTHERWISE NOTED.

2. ALL EXISTING MECHANICAL SOFFITS AND ASSOCIATED DUCTING TO REMAIN UNLESS NOTED OTHERWISE.

3. REFER TO FINISH PLANS AND SCHEDULE FOR EXTENTS OF PAINT AND FINISH SCOPE. TOUCH UP PAINT AT EXISTING WALLS THROUGHOUT WHERE IMPACTED BY NEW WORK.

4. PATCH AND REPAIR (E) FLOOR SLABS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR (N) FINISHES.

5. WALL THICKNESSES ARE NOMINAL, UON.

6. REFER TO SPECIFICATION FOR REQUIREMENTS FOR PATCHING NEW WALLS TO EXISTING WALLS

7. REFER TO MEP AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

8. ALL MECHANICAL AND ELECTRICAL SYSTEMS TO REMAIN AND BE PROTECTED FROM DAMAGE DURING NEW WORK.

9. ALL RESTROOM FINISHES REMOVED AND SUBSTRATES PREPARED FOR NEW GYP AND TILE UNLESS NOTED OTHERWISE.

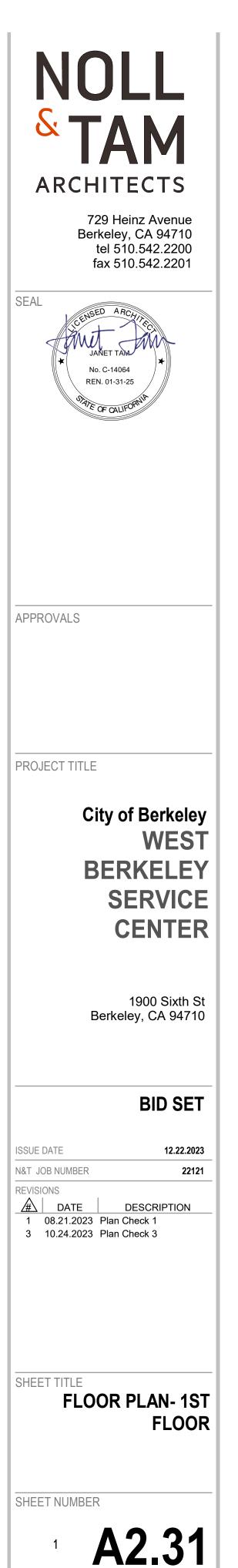
10. PLAY AREA GATE: SINGLE-LEAF, 36" WIDE, SINGLE LEAF ACCESS GATE WITH A SELF-CLOSING AND SELF-LATCHING DEVICE.

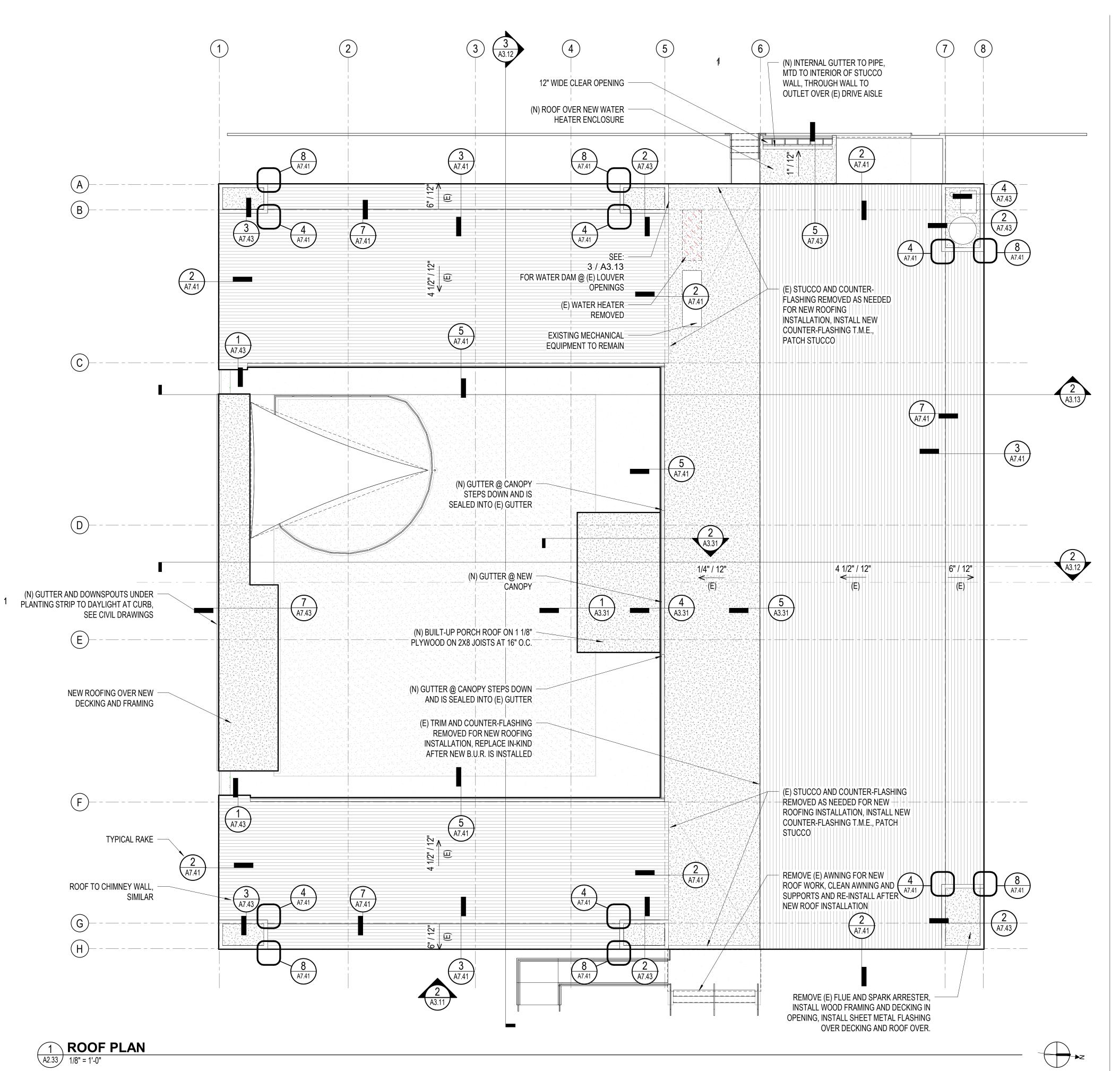
A. SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70-DEGREES, THE GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM.

B. OPENING FORCE TO BE 5-POUNDS MAXIMUM.

C. GATE HARDWARE:

- a. Hinge closer: Tiger-180; LOX, finish = 630
- b. Panic Hardware: PA-AX-98-L-BE-06-1609-WH; VON, finish = 626





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1. ALL EXISTING ROOFING REMOVED AND REPLACED, UNLESS NOTED OTHERWISE.

Flat [low-slope] roof: Minimum Solar Reflectance = 0.63.
 Install 1.75", R-10 polyiso rigid insulation over existing decking.
 Slope rigid insulation at roof edges where required for drainage.

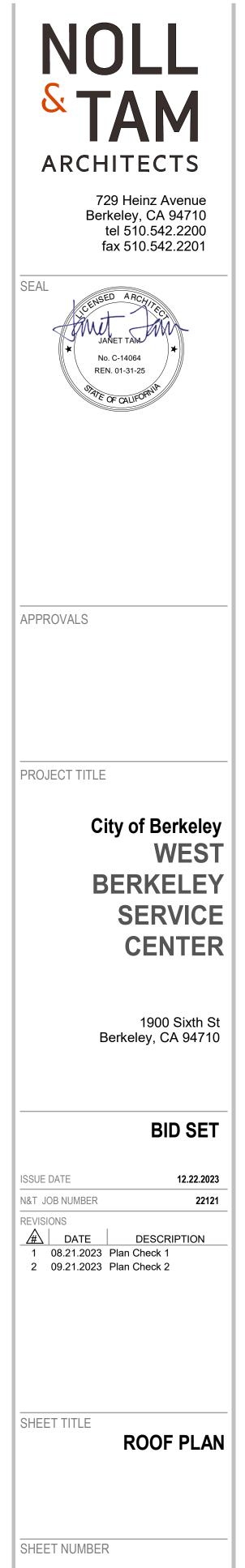
3. Existing roofs have R-19 fiberglass insulation installed in the framing cavity. Replace in-kind where impacted by new work.

Sloped asphalt shingle roofs: Minimum Solar Reflectance = 0.20.

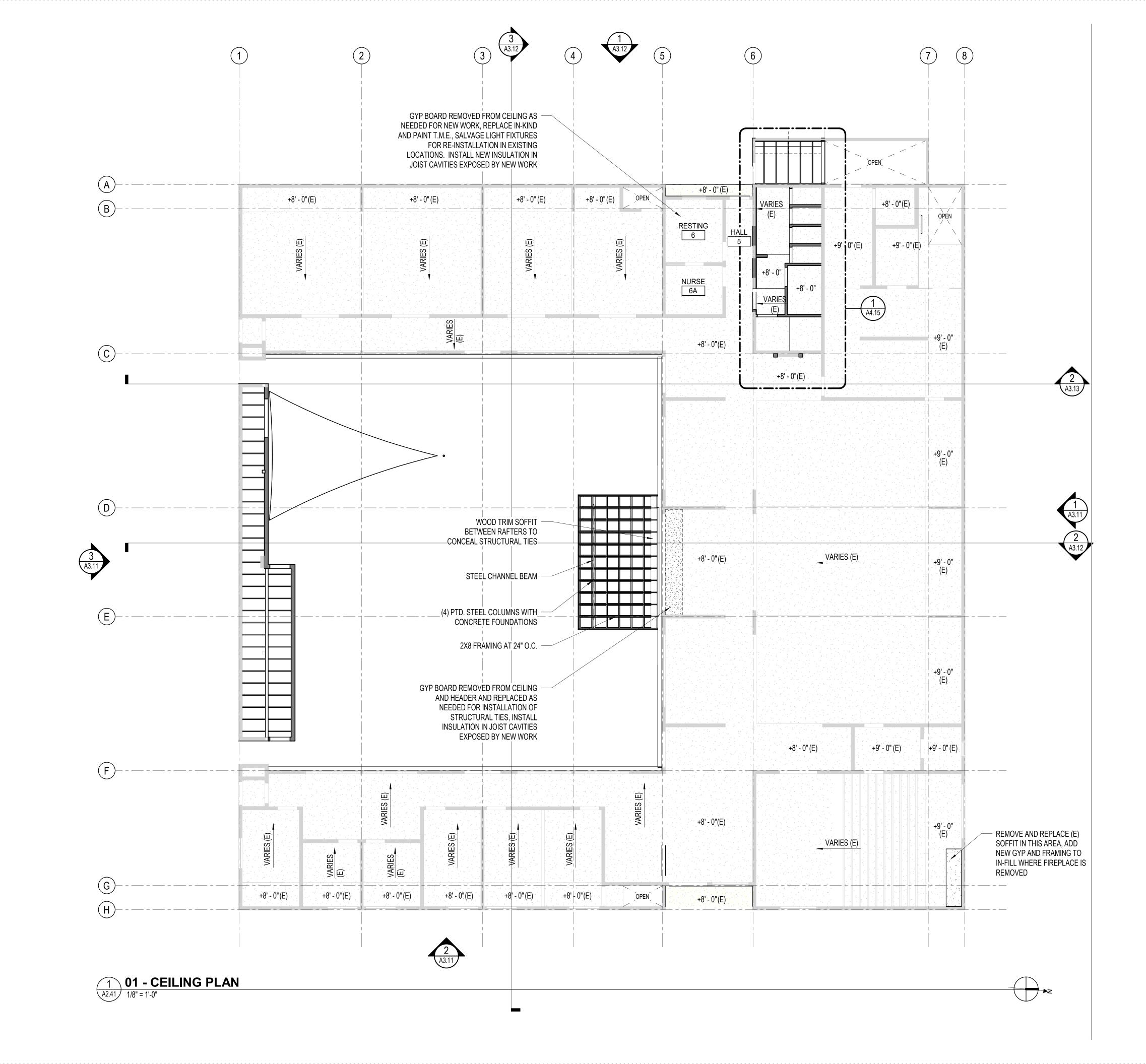
New/replacement Awning windows: 0.58 maximum U-Factor;
 0.38 maximum SHGC; 0.44 minimum VT.

New/replacement Fixed windows: 0.55 maximum U-Factor;
 0.40 maximum SHGC; 0.48 minimum VT.

7. All existing roof penetration flashing to be replaced where impacted by roof replacement.

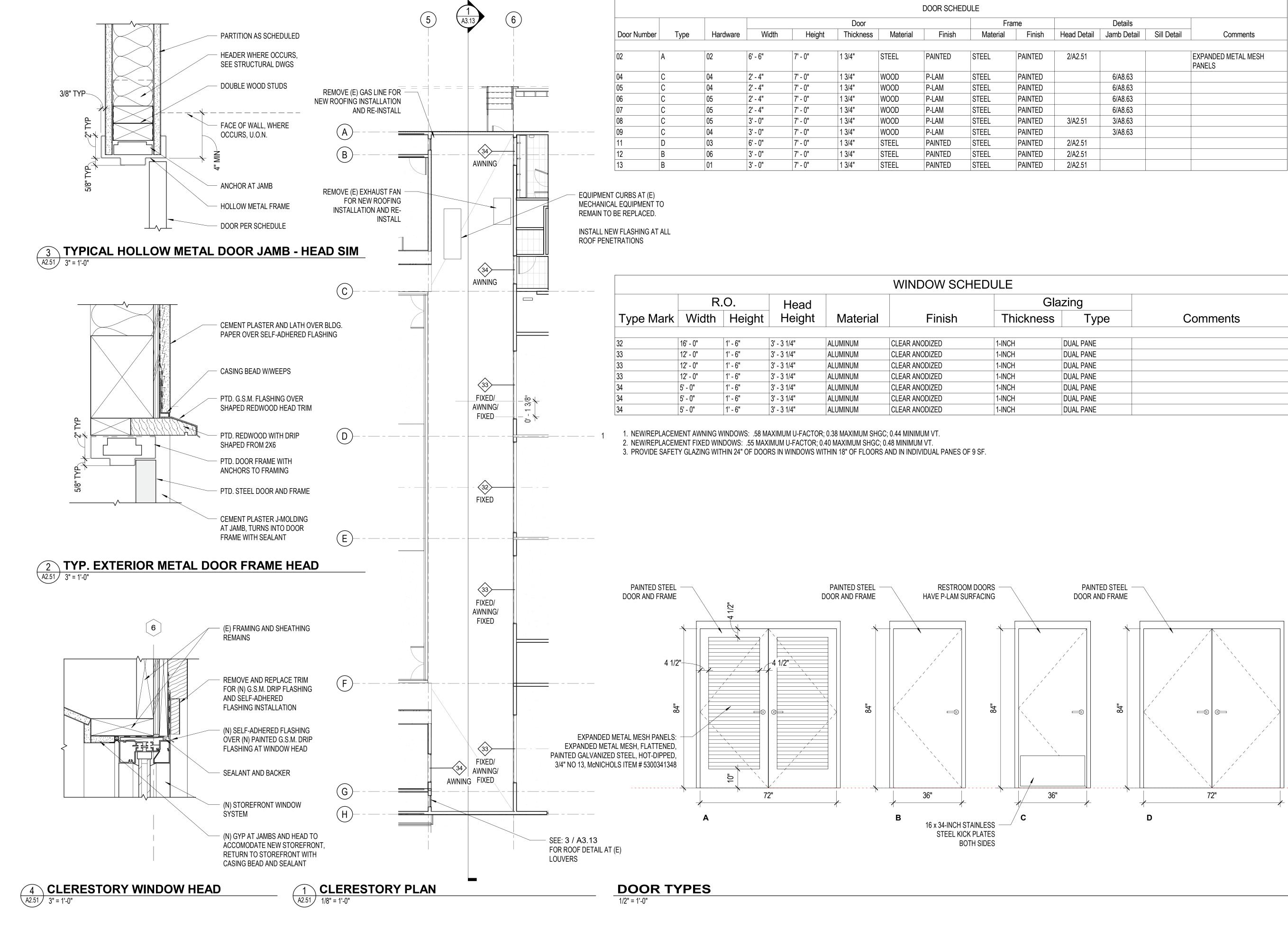






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NOLL S S ADA ADA ARCHITECTSV29 Heinz Avenue Berkeley, CA 94710 tel 510.542.2200 fax 510.542.2201	
SEAL JANET TAM No. C-14064 REN. 01-31-25 STATE OF CALIFORNIA	
APPROVALS	
PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE CENTER	Γ Γ Ξ
1900 Sixth St Berkeley, CA 94710	
BID SET	3
SHEET TITLE REFLECTED CEILING PLAN	
1	



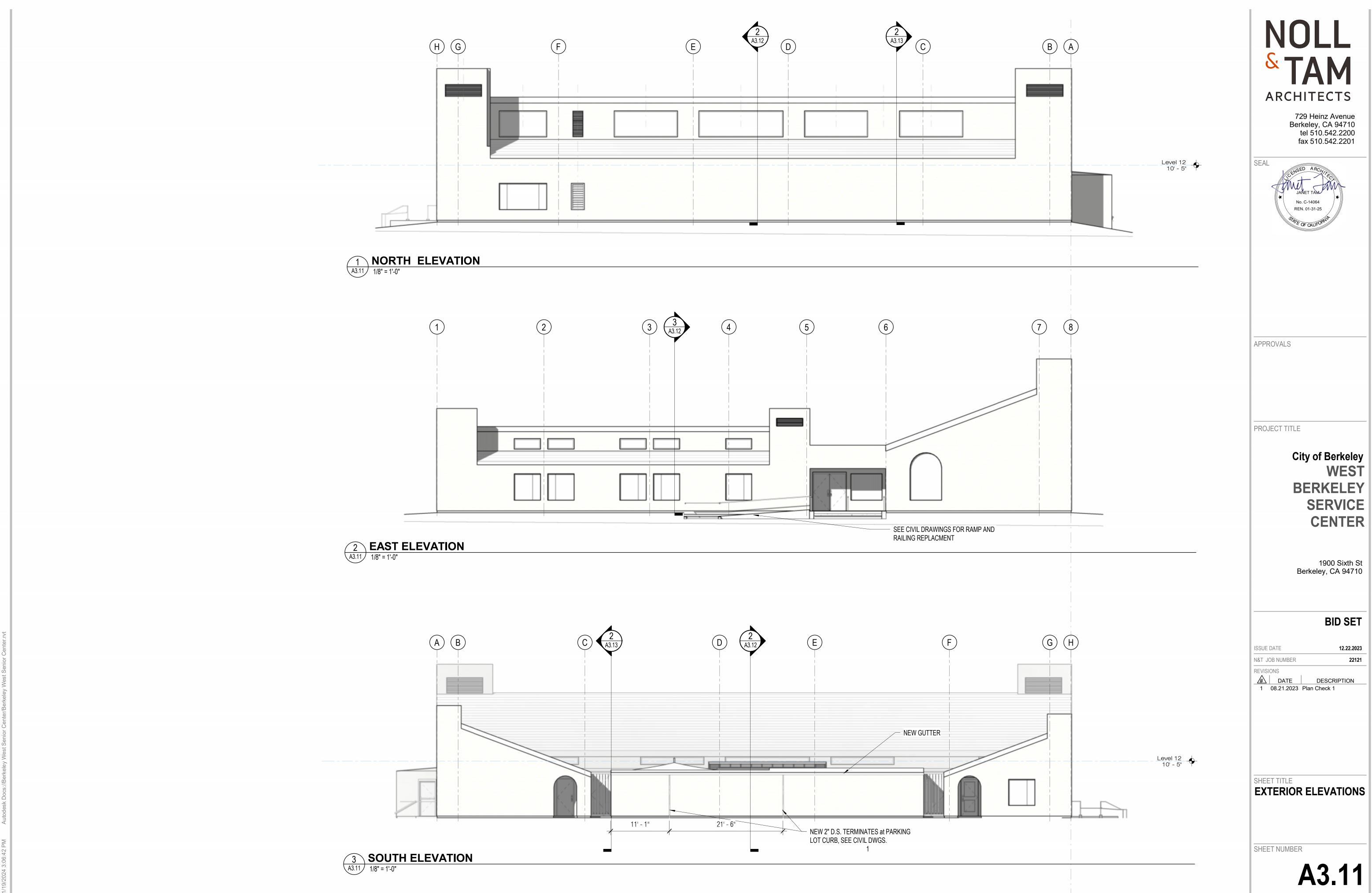
							DOOR SCHEI	DULE		
					Door			Fra	Frame	
Door Number	Туре	Hardware	Width	Height	Thickness	Material	Finish	Material	Finish	Hea
02	A	02	6' - 6"	7' - 0"	1 3/4"	STEEL	PAINTED	STEEL	PAINTED	2//
04	С	04	2' - 4"	7' - 0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED	
05	С	04	2' - 4"	7' - 0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED	
06	С	05	2' - 4"	7' - 0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED	
07	С	05	2' - 4"	7' - 0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED	
08	С	05	3' - 0"	7' - 0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED	3//
09	С	04	3' - 0"	7' - 0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED	
11	D	03	6' - 0"	7' - 0"	1 3/4"	STEEL	PAINTED	STEEL	PAINTED	2/
12	В	06	3' - 0"	7' - 0"	1 3/4"	STEEL	PAINTED	STEEL	PAINTED	2/
13	В	01	3' - 0"	7' - 0"	1 3/4"	STEEL	PAINTED	STEEL	PAINTED	2//

					WINDOW SCHI	EDULE		
	R	.0.	Head			Gla	azing	
Type Mark	Width	Height	Height	Material	Finish	Thickness	Туре	Comments
32	16' - 0"	1' - 6"	3' - 3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
33	12' - 0"	1' - 6"	3' - 3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
33	12' - 0"	1' - 6"	3' - 3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
33	12' - 0"	1' - 6"	3' - 3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
34	5' - 0"	1' - 6"	3' - 3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
34	5' - 0"	1' - 6"	3' - 3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
34	5' - 0"	1' - 6"	3' - 3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	

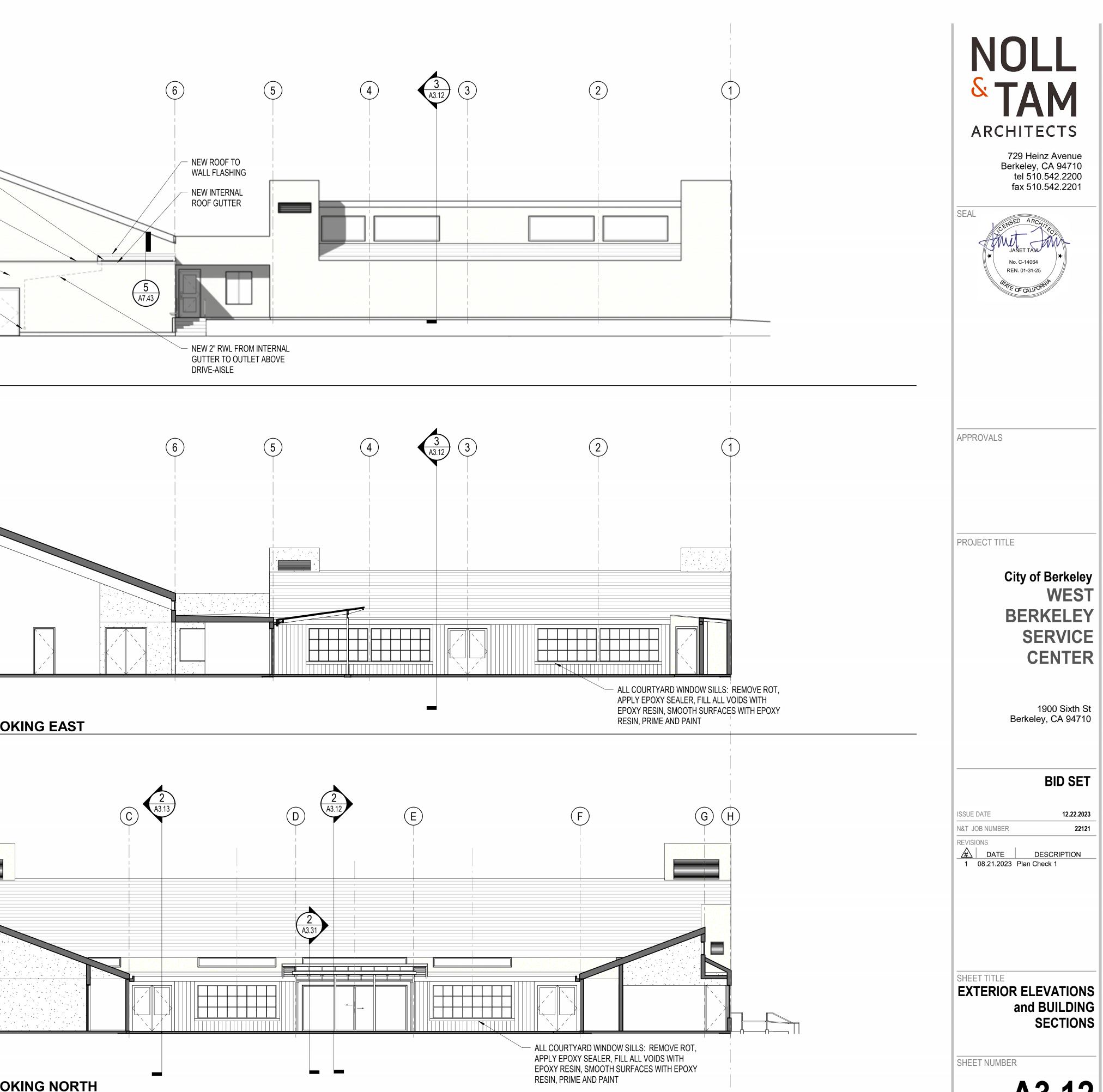
	Details		
ead Detail	Jamb Detail	Sill Detail	Comments
2/A2.51			EXPANDED METAL MESH PANELS
	6/A8.63		
3/A2.51	3/A8.63		
	3/A8.63		
2/A2.51			
2/A2.51			
2/A2.51			

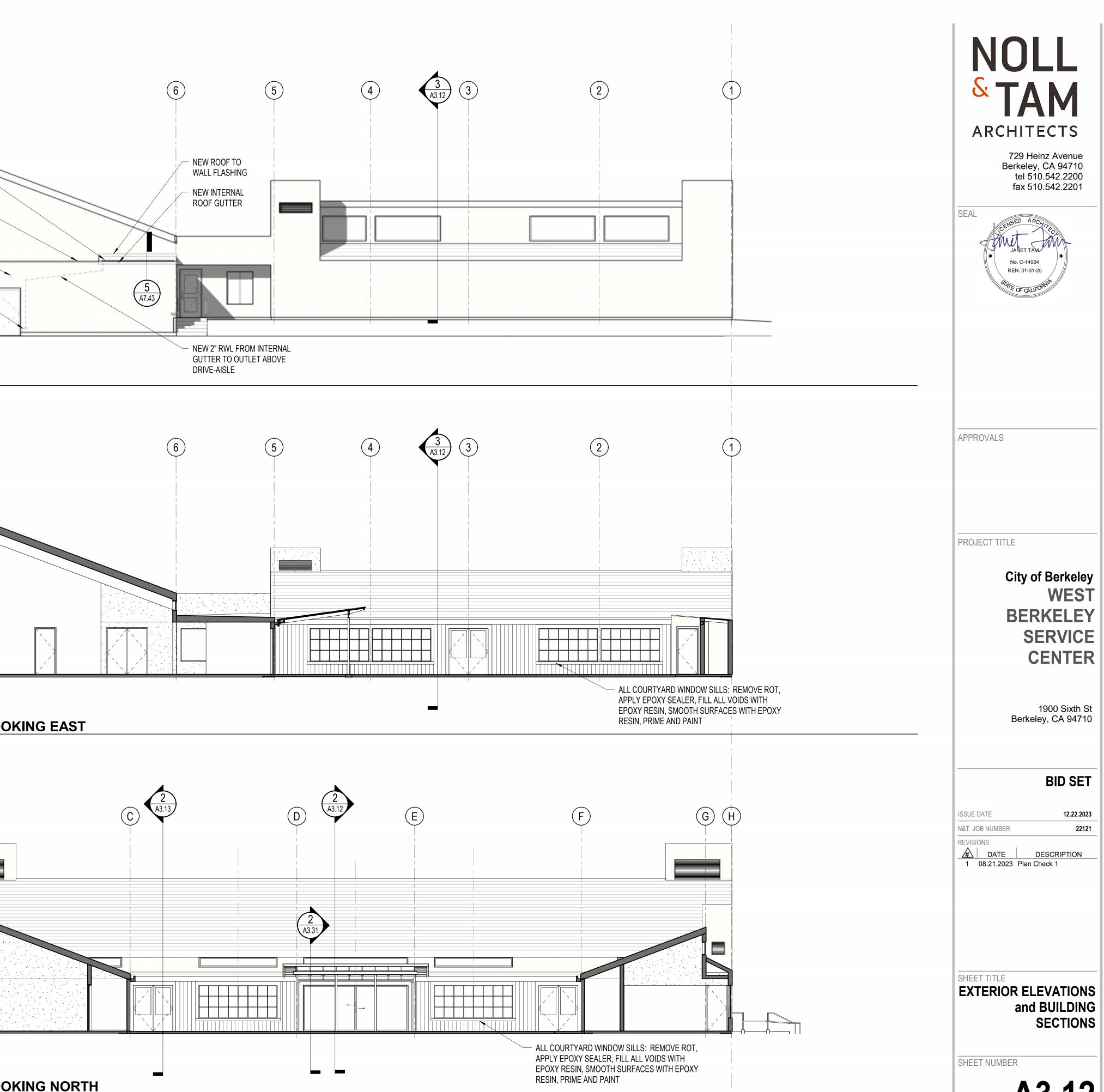
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APPROVALS
PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE CENTER
1900 Sixth St Berkeley, CA 94710
BID SET ISSUE DATE 12.22.2023 N&T JOB NUMBER 22121 REVISIONS ATE DESCRIPTION 1 08.21.2023 Plan Check 1
SHEET TITLE EXTERIOR - DOOR SCHEDULE AND TYPES SHEET NUMBER

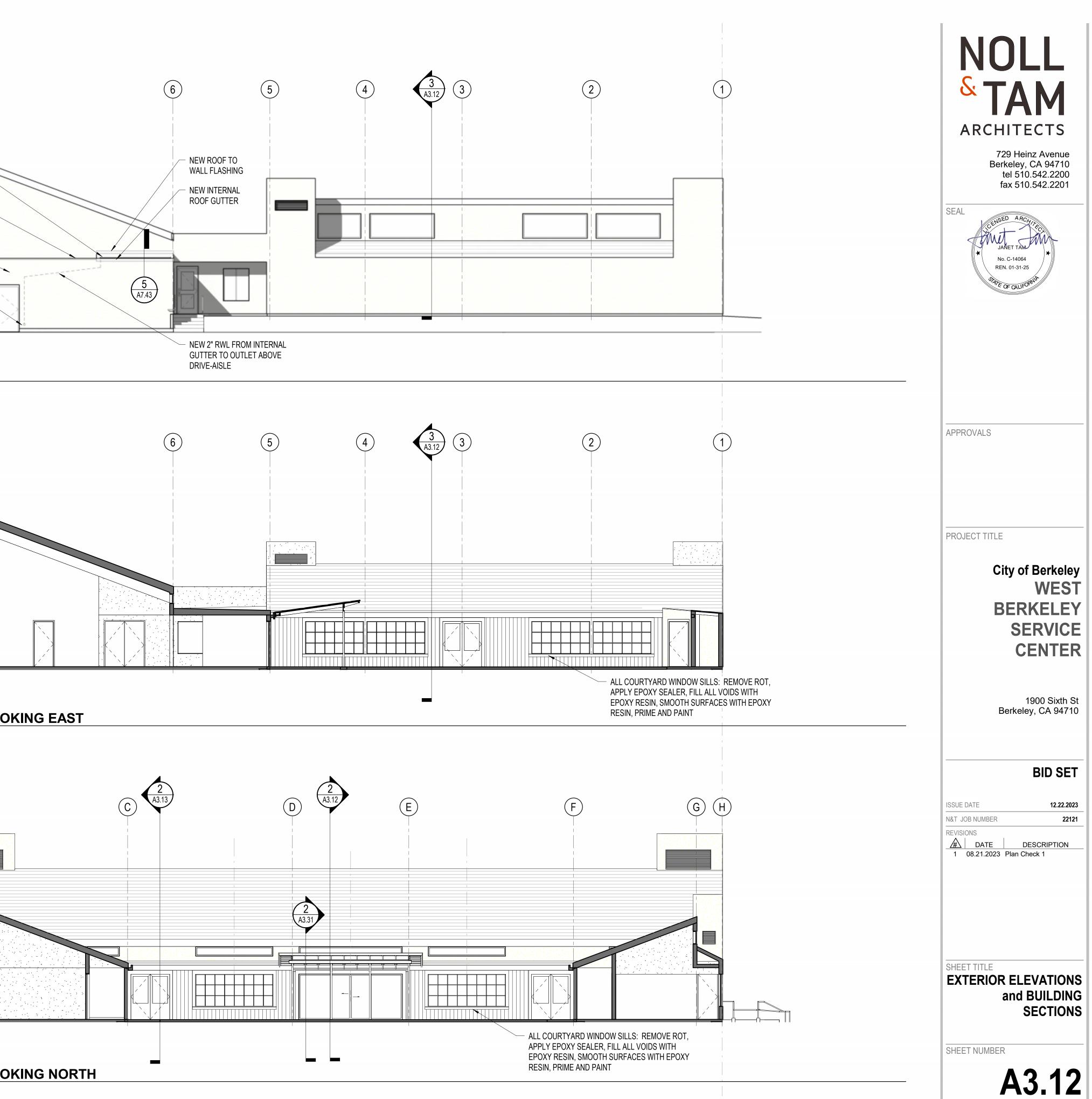




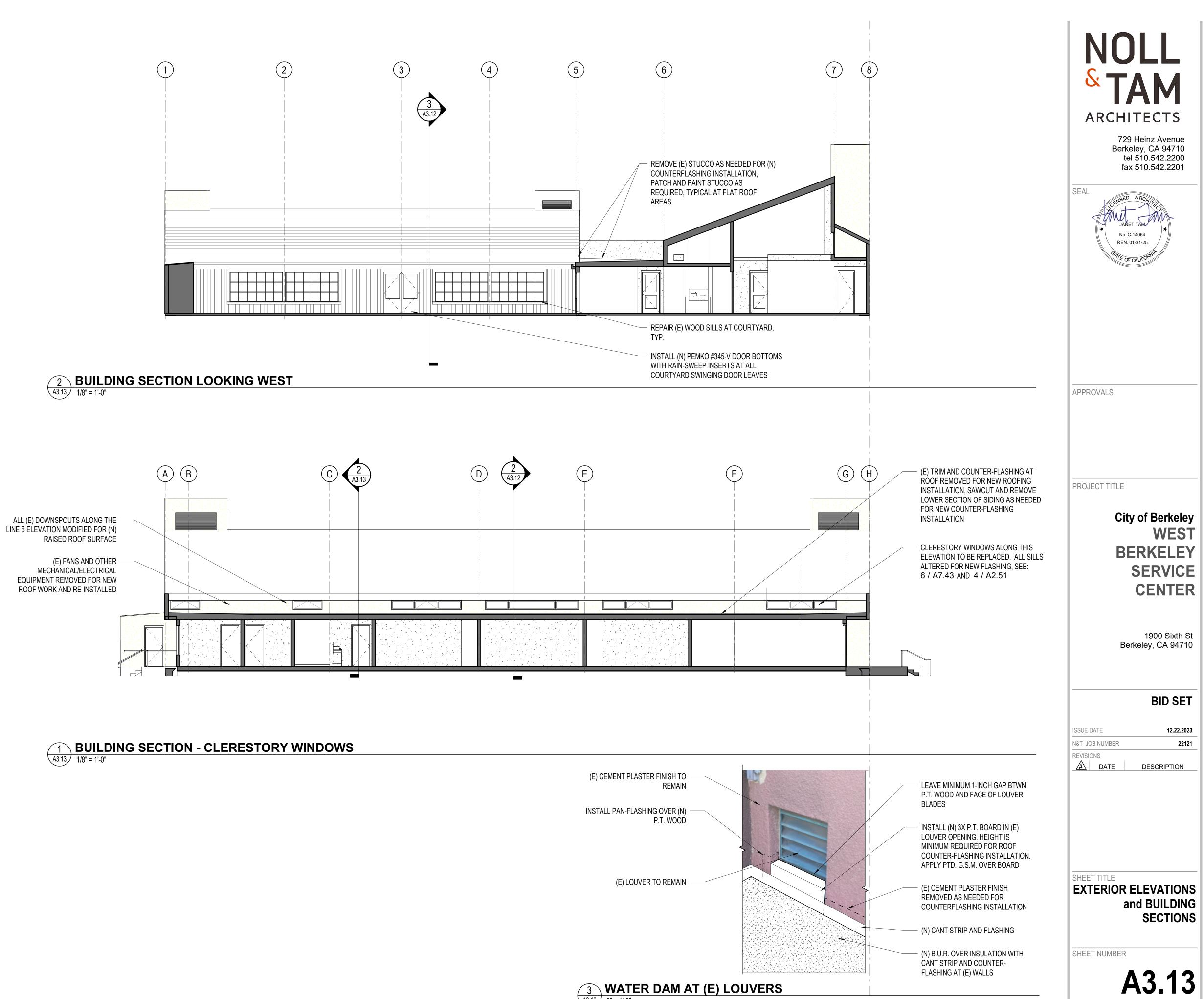
1 $\overline{7}$ 8 NEW ROOF OVER NEW MECHANICAL ROOM Remove (E) PTD. MTL. Coping -IN AREA OF NEW WORK, REPLACE AS REQUIRED (E) CEMENT PLASTER WALL — RWL TERMINATES THROUGH-WALL INTO LAMBS TONGUE ABOVE CONCRETE CURB, REPAIR STUCCO AROUND WALL PENETRATION, PAINT IMPACTED WALL T.M.E. BUILDING COLOR WEST ELEVATION A3.12 1/8" = 1'-0" 8 $\overline{7}$ BUILDING SECTION LOOKING EAST 2 **BUILD** A3.12 1/8" = 1'-0" (A) (B)BUILDING SECTION LOOKING NORTH A3.12 1/8" = 1'-0"

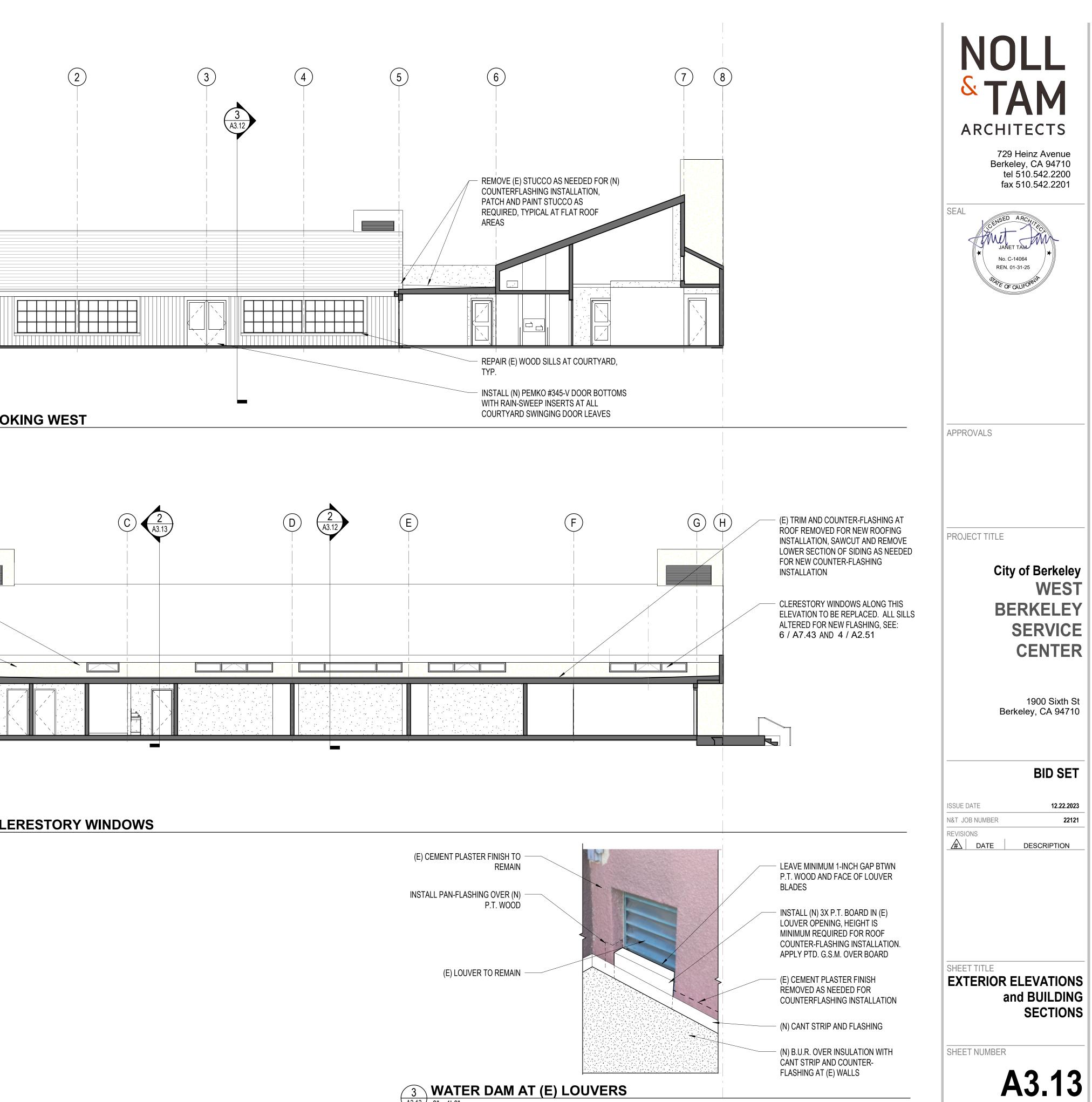


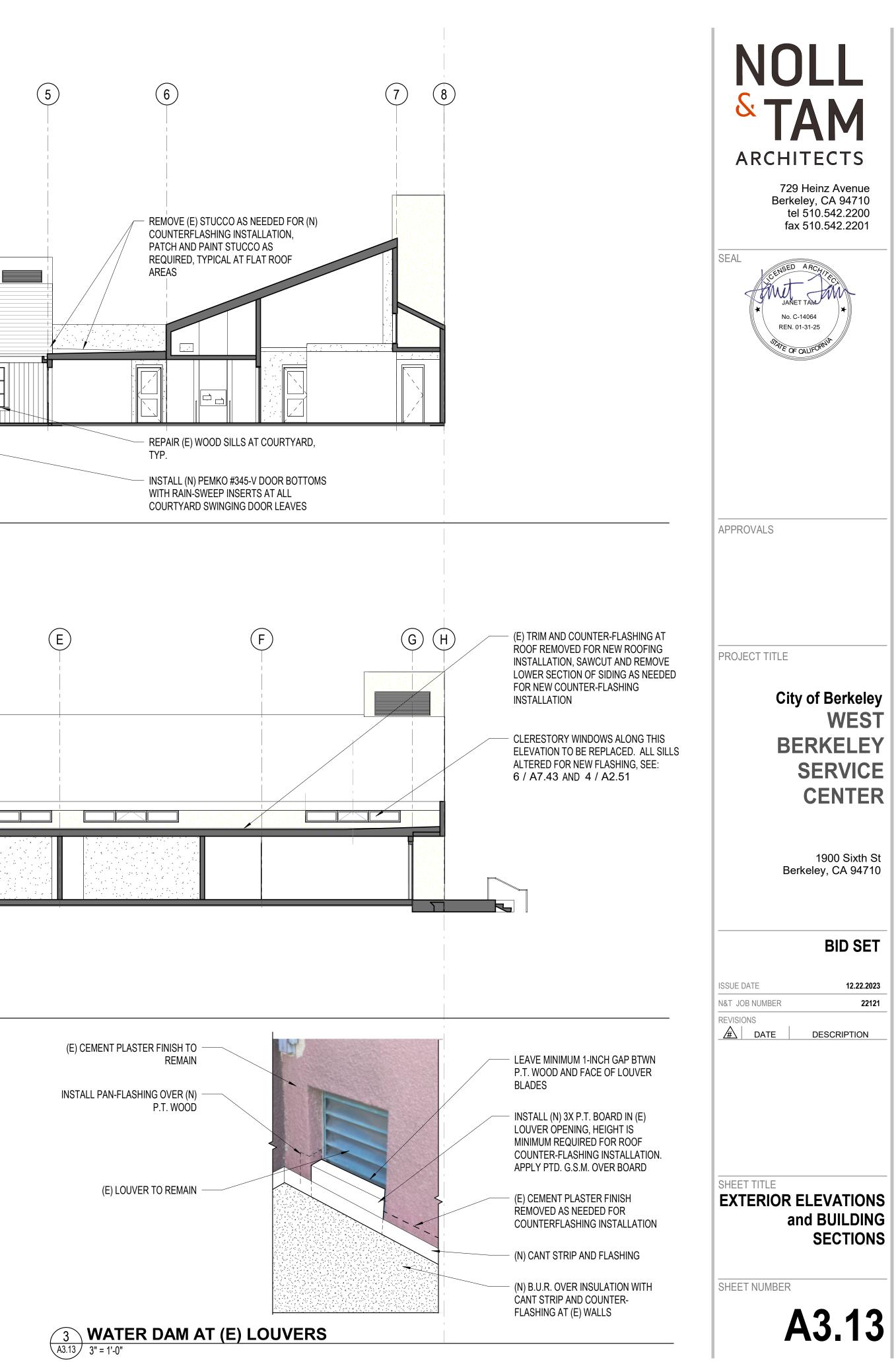


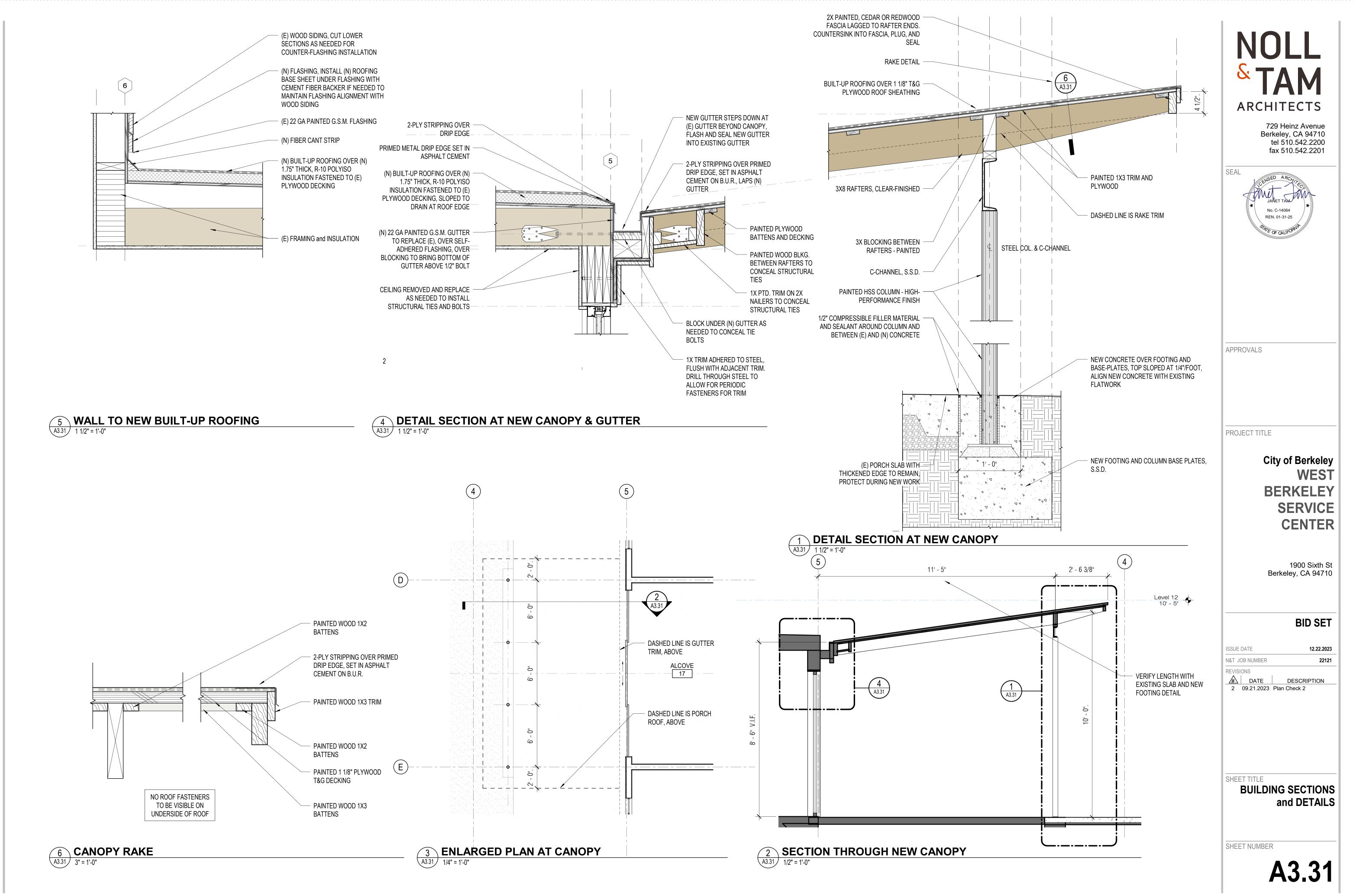


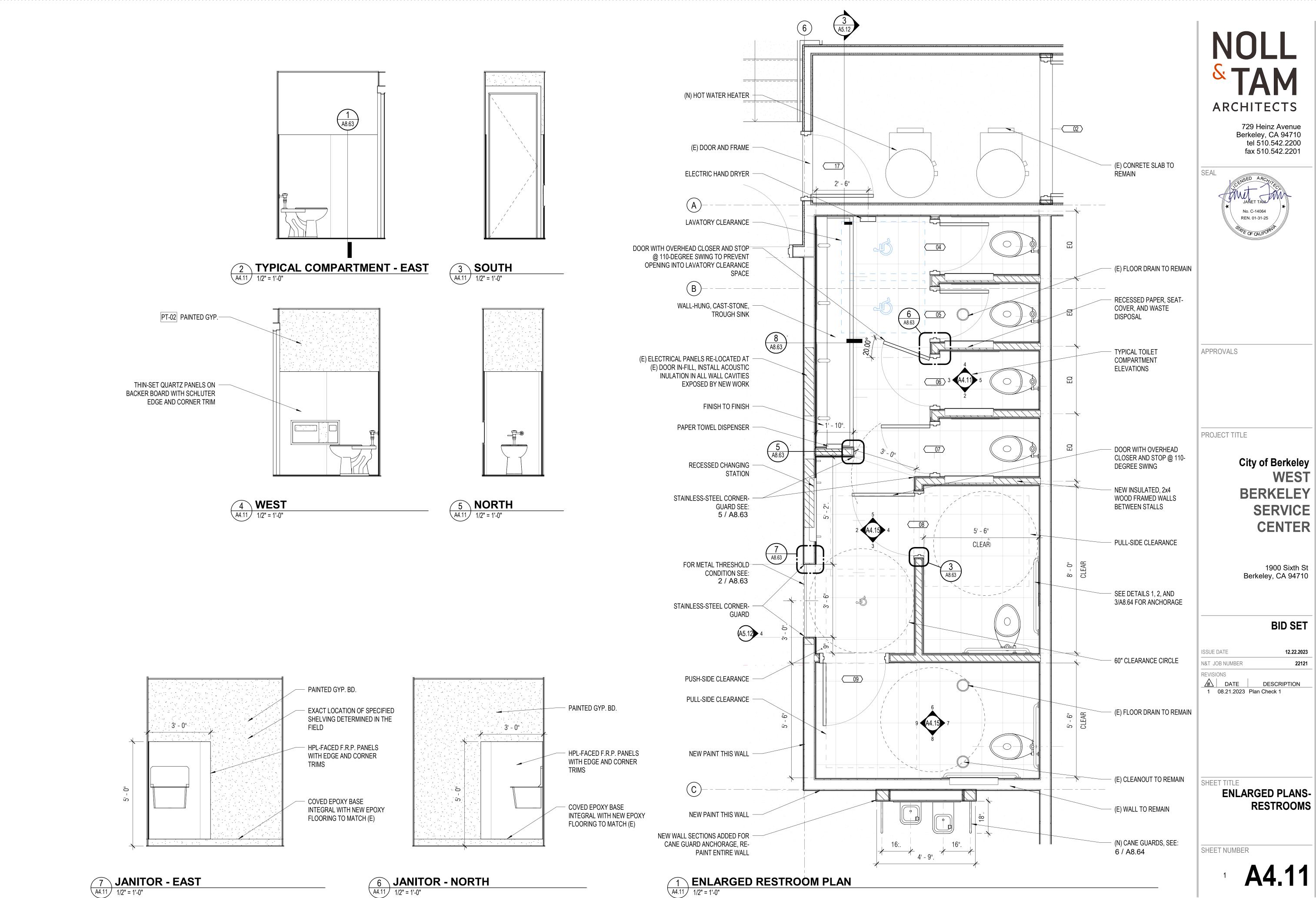




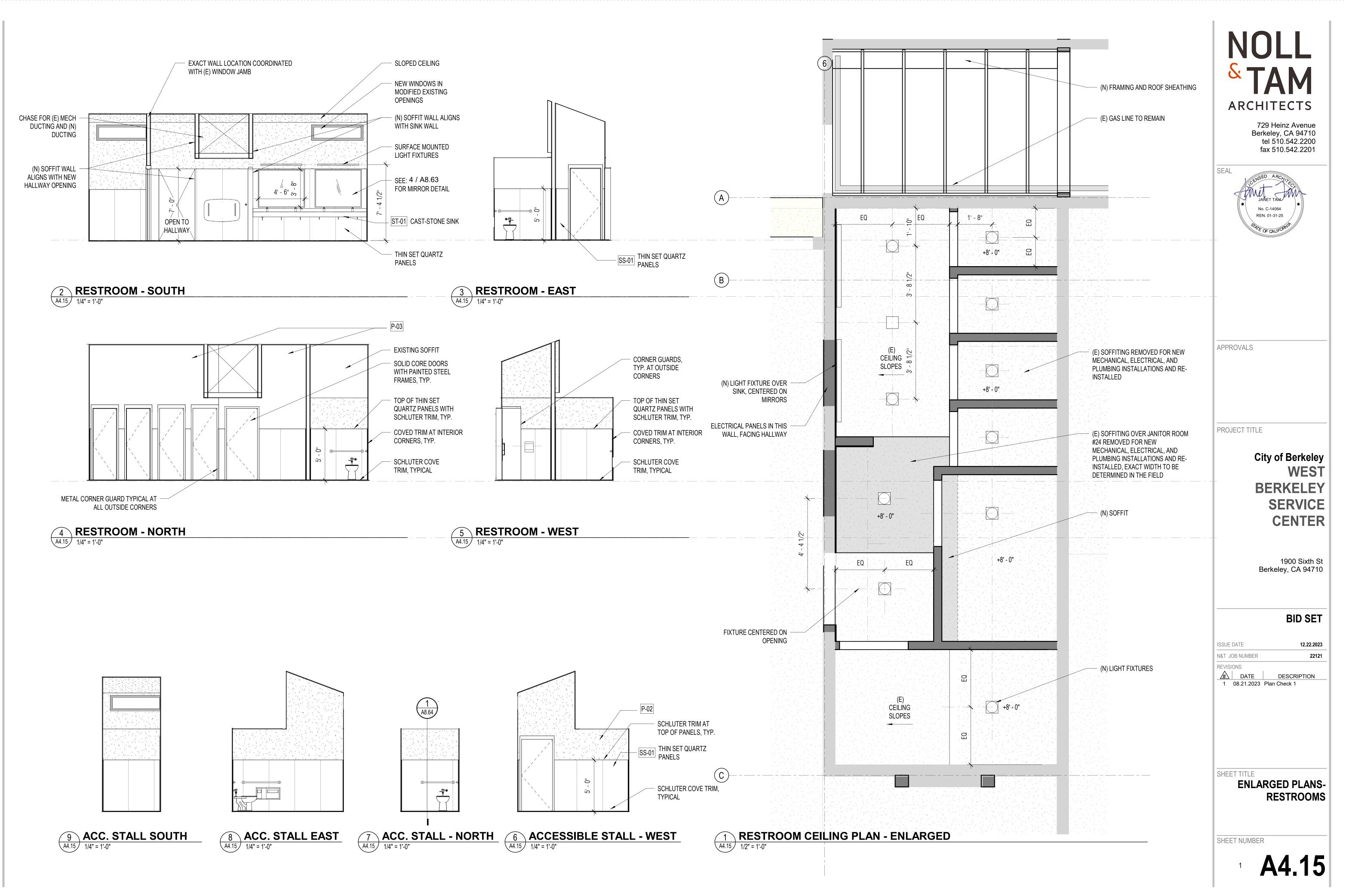


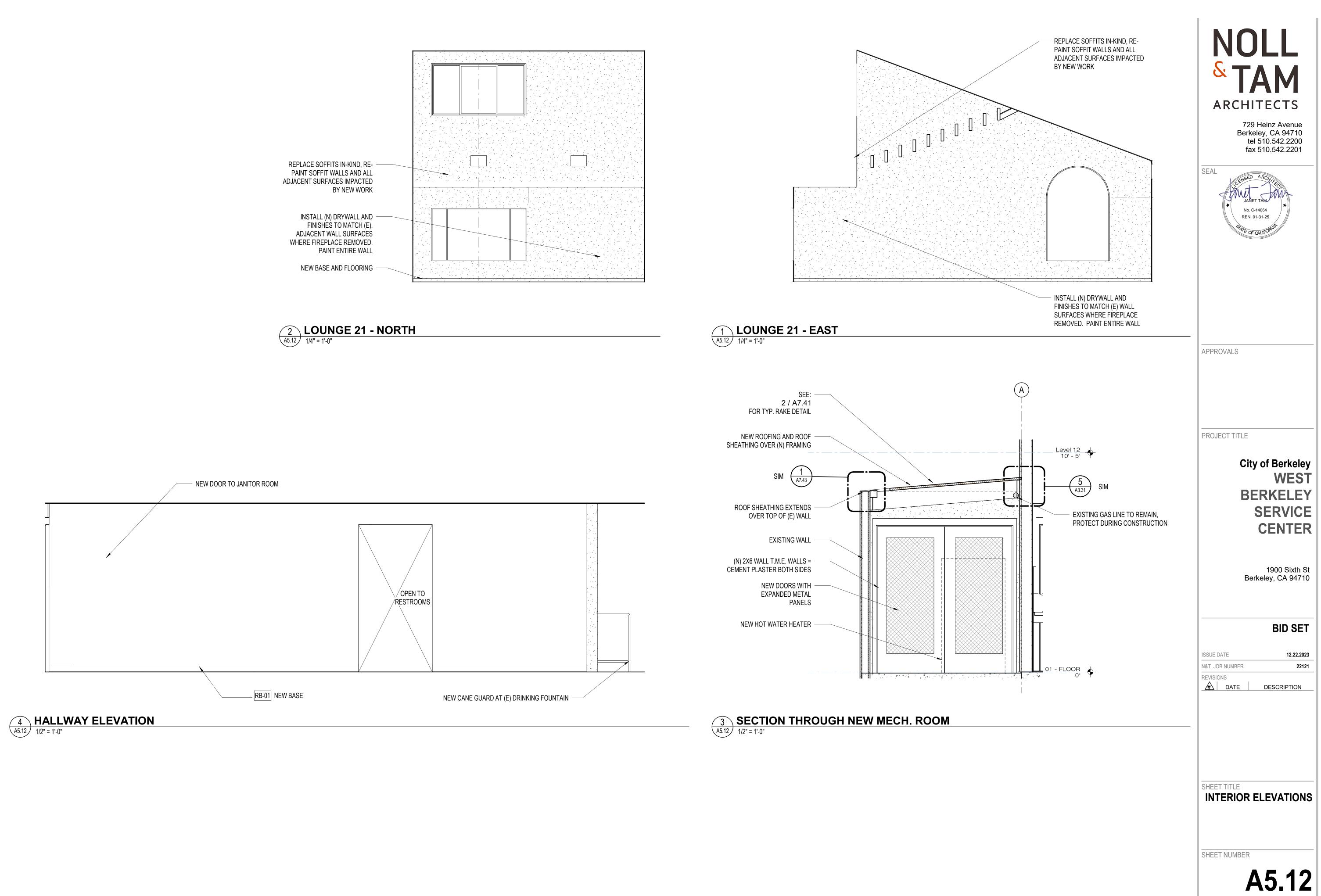


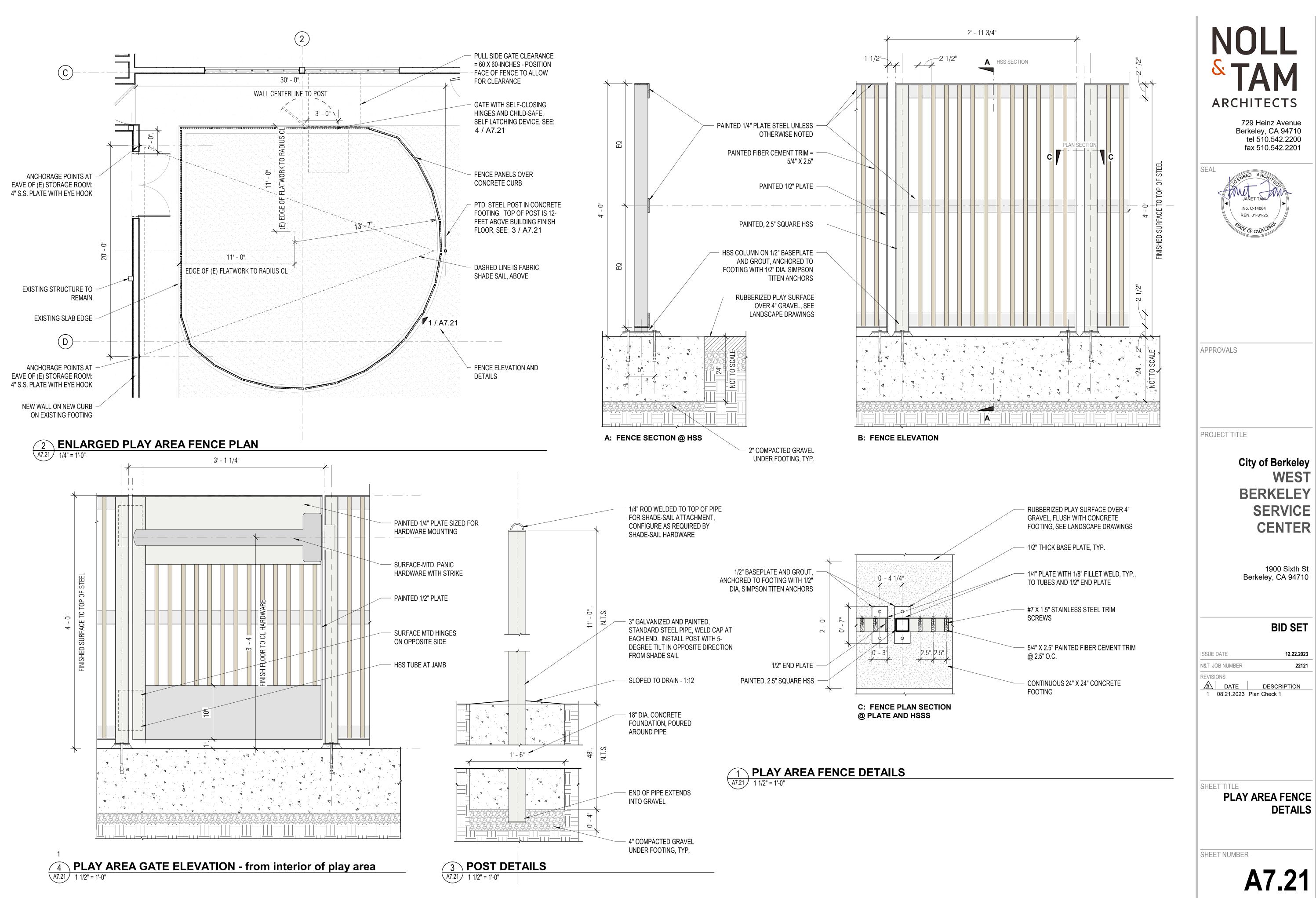


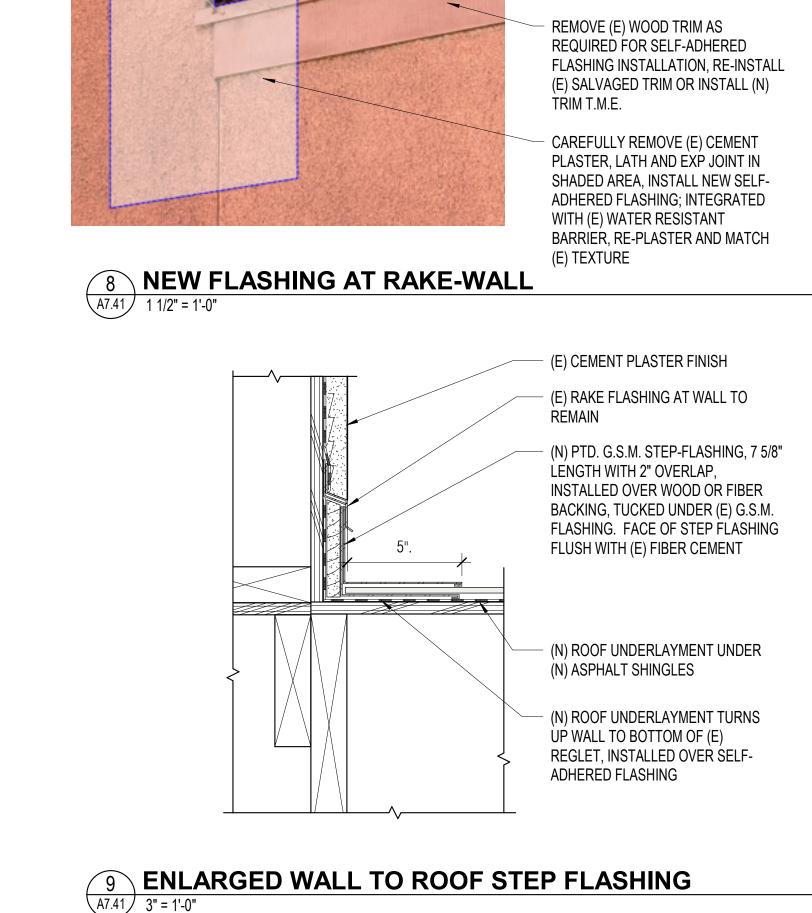


A4.11 1/2" = 1'-0"











SLOPED ROOF PEAK

(E) CEMENT PLASTER FINISH,

NEW SELF-ADHERED SADDLE-

ADD (N) RAKE FLASHING T.M.E TO

SELF-ADHERED SADDLE FLASHING INSTALLED OVER (E) WALL W.R.B.

(E) WOOD TRIM, REMOVE, SALVAGE,

AND RE-INSTALL AS NEEDED FOR

INSTALLATION. INSTALL NEW TRIM

T.M.E. IF EXISTING TRIM IS NOT

SELF-ADHERED FLASHING

A7.41 3" = 1'-0"

SALVAGEABLE.

AND (N) ROOF UNDERLAYMENT

ADDRESS ASPHALT SHINGLE

FLASHING, SEE DETAIL:

4 / A7.41

INSTALLATION

REMOVE AS REQUIRED TO INSTALL

(E) METAL FLASHING TO REMAIN

ASPHALT SHINGLES AND STARTER STRIP OVER UNDERLAYMENT OVER SELF-ADHERED EAVE-PROTECTION FLASHING AND PTD. G.S.M. DRIP EDGE

(E) METAL DRIP EDGE REMOVED,

INSTALL NEW DRIP EDGE

(E) ROOF TILES TO BE REMOVED

BACKING, TUCKED UNDER (E) G.S.M. RAKE FLASHING. FACE OF STEP FLASHING FLUSH WITH (E) FIBER

REMAIN

CEMENT

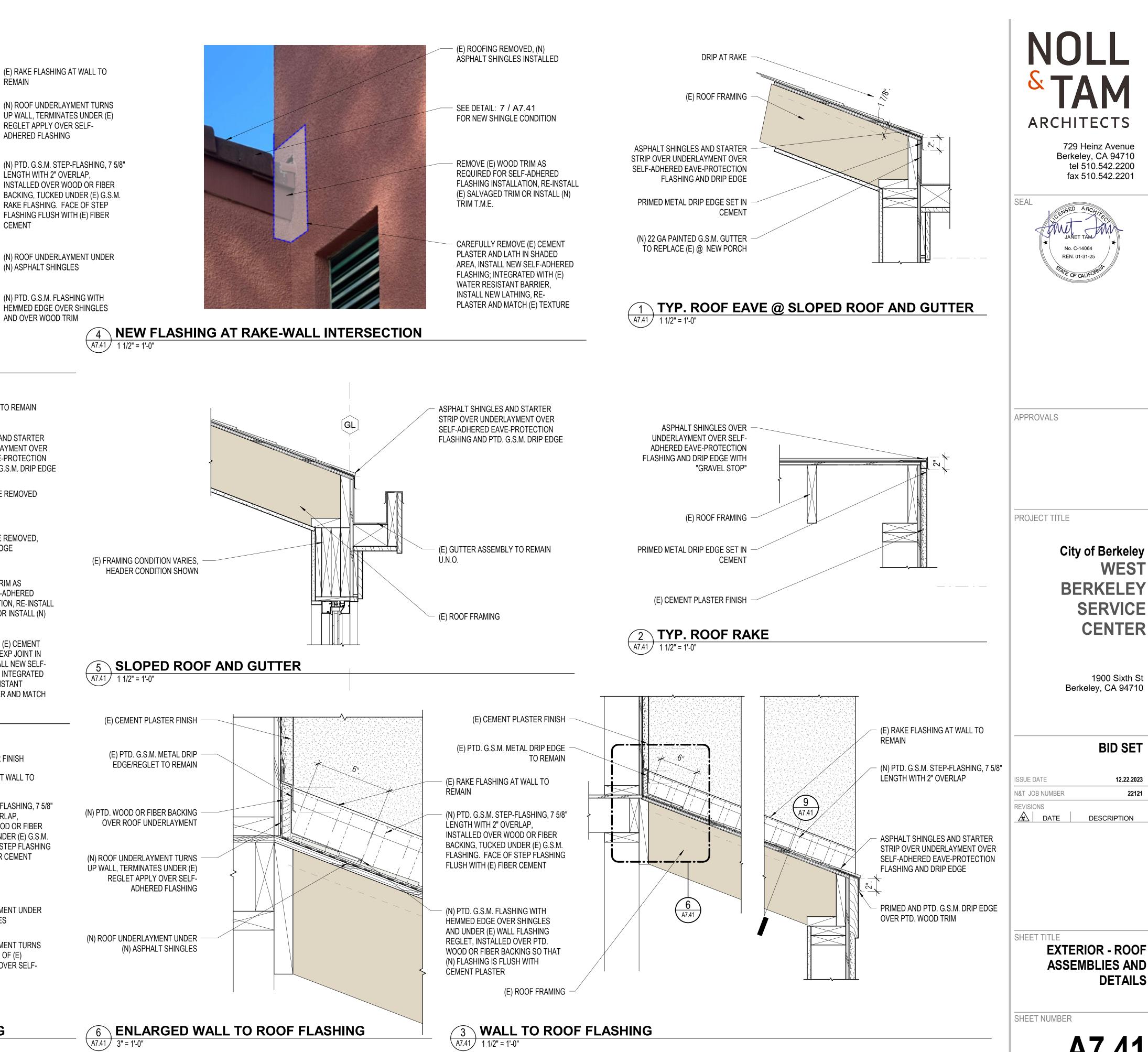
LENGTH WITH 2" OVERLAP,

ADHERED FLASHING

(N) ROOF UNDERLAYMENT UNDER (N) ASPHALT SHINGLES

(N) PTD. G.S.M. FLASHING WITH

HEMMED EDGE OVER SHINGLES AND OVER WOOD TRIM



BID SET 12.22.2023 22121 **EXTERIOR - ROOF** ASSEMBLIES AND DETAILS SHEET NUMBER

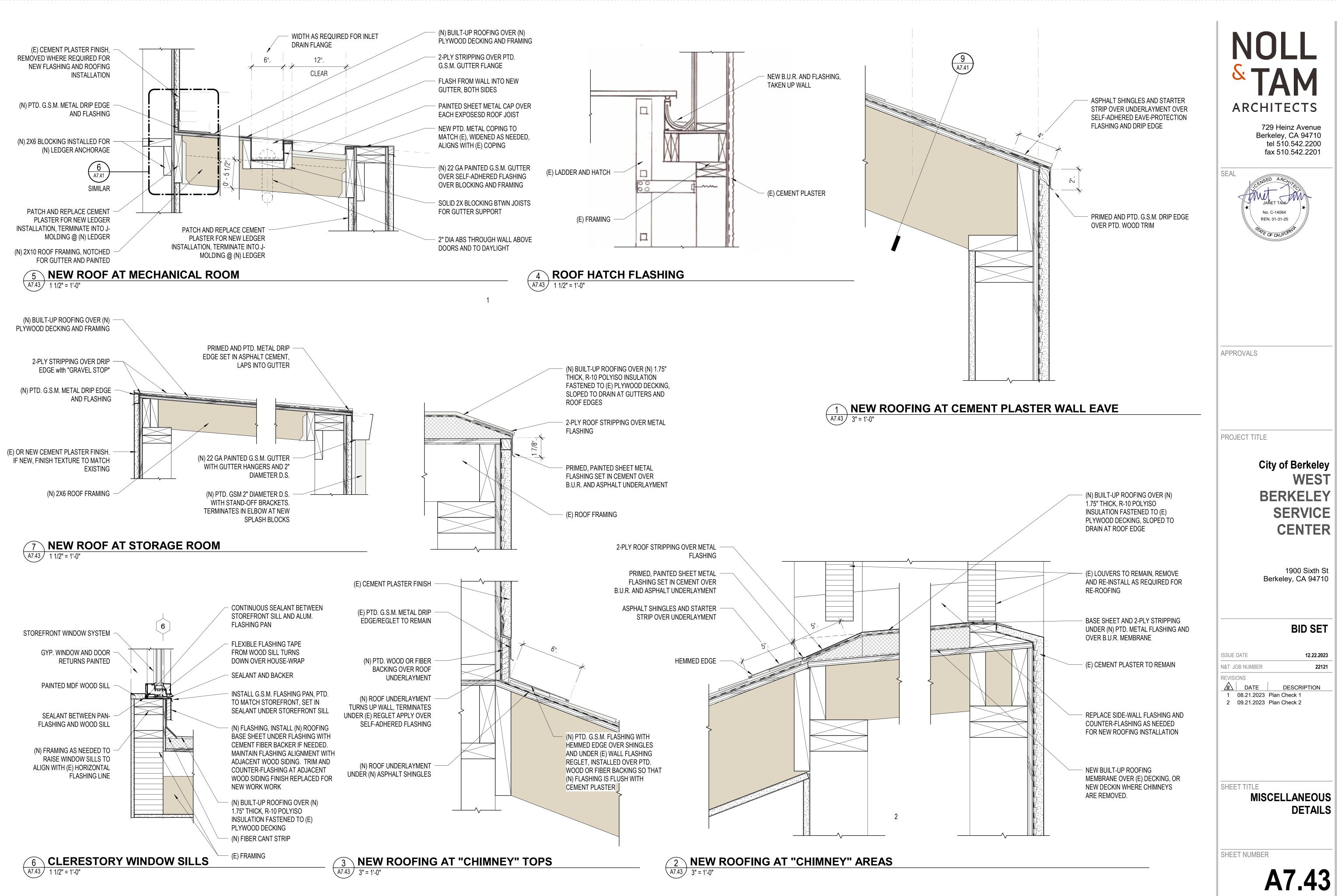
A7.41

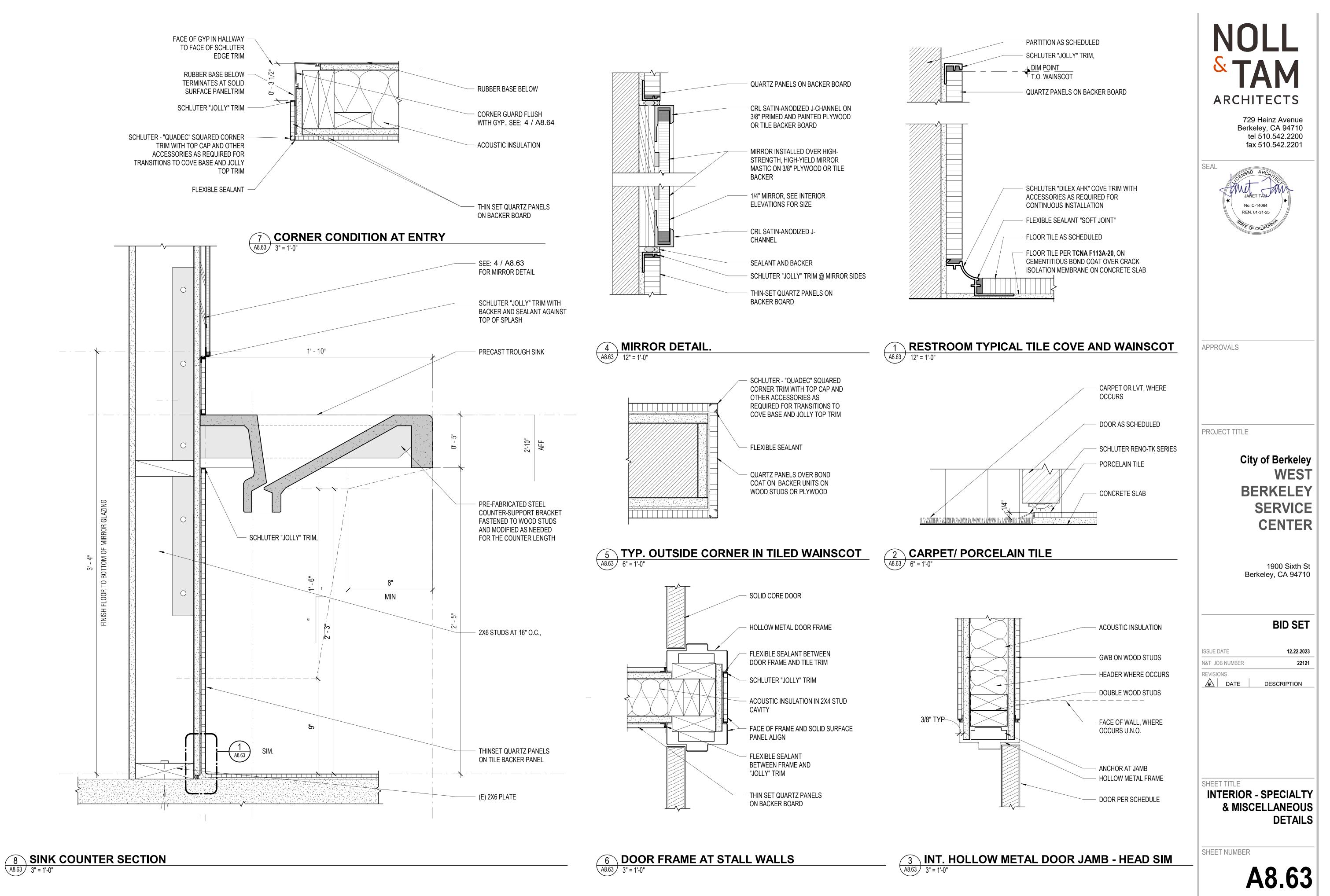
WEST

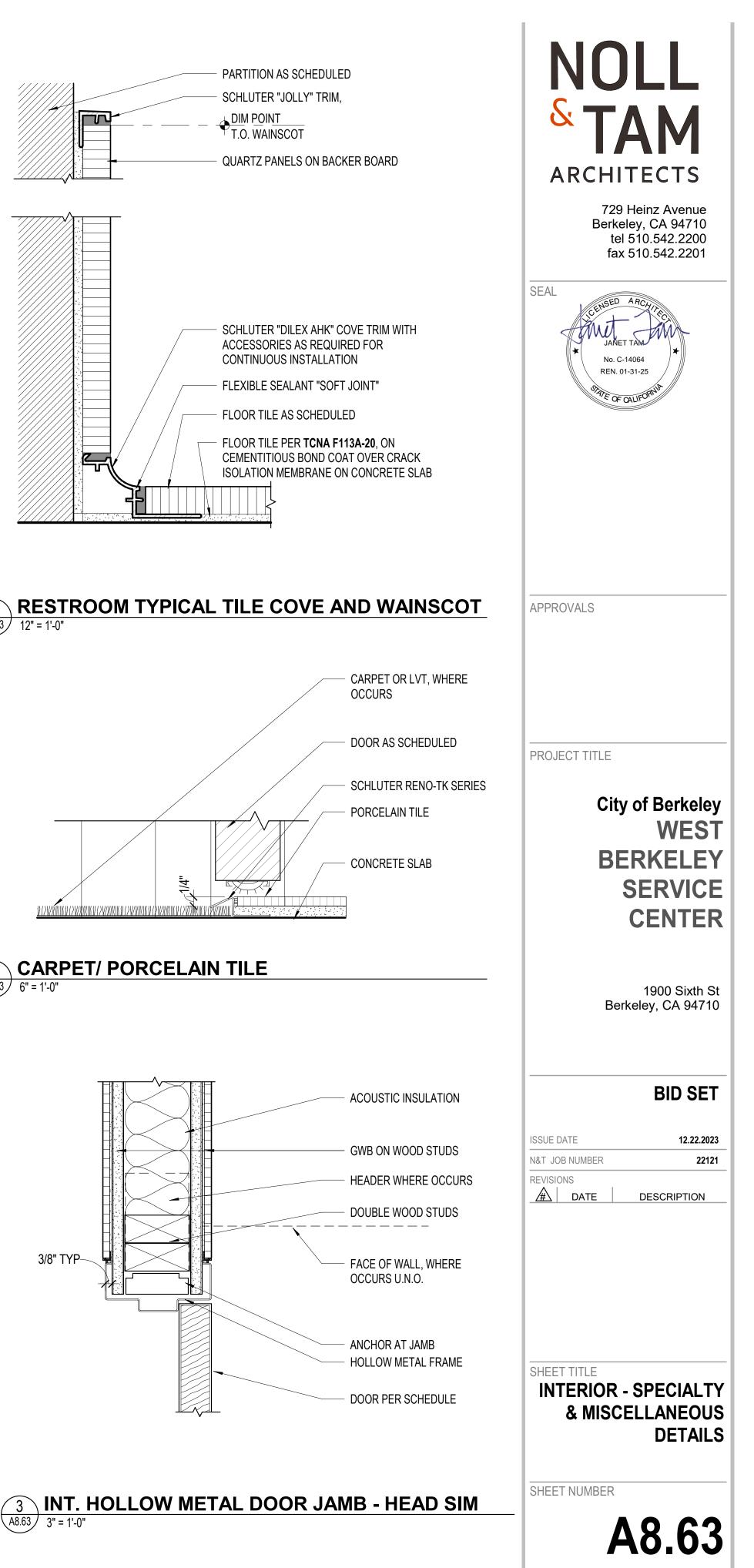
SERVICE

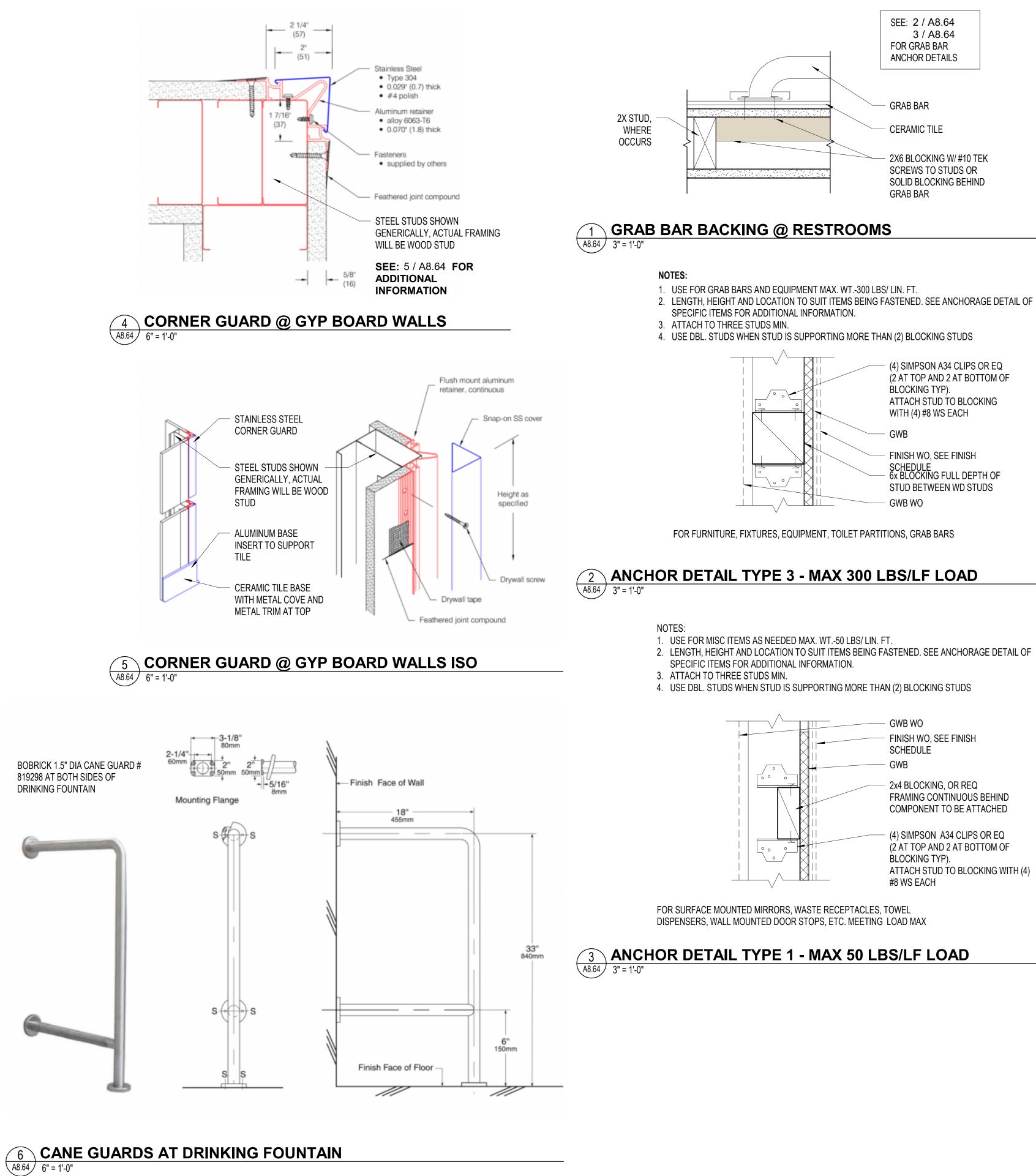
CENTER

1900 Sixth St









ATTACH STUD TO BLOCKING WITH (4)

NOLI
ADCIUTECTO
ARCHITECTS 729 Heinz Avenue
Berkeley, CA 94710 tel 510.542.2200 fax 510.542.2201
SEAL
× No. C-14064
REN. 01-31-25
APPROVALS
PROJECT TITLE
City of Berkeley WEST
BERKELEY
SERVICE
CENTER
1900 Sixth St Berkeley, CA 94710
BID SET
ISSUE DATE 12.22.2023
N&T JOB NUMBER 22121 REVISIONS
#DATEDESCRIPTION108.21.2023Plan Check 1
SHEET TITLE
INTERIOR - SPECIALTY & MISCELLANEOUS
DETAILS

11

SHEET NUMBER



			ROOM FINIS	SH SCHEDU	LE	
#	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Com
1	ACTIVITY ROOM	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
2	ACTIVITY ROOM	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
4	HALL	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
5	HALL	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
6	RESTING	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
6A	NURSE	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
8	STORAGE	CONCRETE	RB-01	PTD. GYP AND FRP WAINSCOT	EXISTING TO REMAIN	REPAIRED, REPLACED
8	MECH	EXISTING SLAB				
9	RESTROOM	CT-01	SS-01	PTD. GYP AND CERAMIC TILE	SEE DRAWINGS	
10	KITCHEN	EXISTING FLOORING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	FLOORING REPLACED
11	WOMEN'S					
12	STORAGE	EXISTING FLOORING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	
13	OFFICE (JAN)	EF-01	EPOXY	EXISTING TO REMAIN	EXISTING TO REMAIN	PLASTIC LAMINATE PA
14	DINING	EXISTING FLOORING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	
16	ALCOVE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
17	ALCOVE	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	CEILING REPLACED IN- NEW WORK, PTD ENTIF
18	ALCOVE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
19	STORAGE	EXISTING FLOORING TO REMAIN	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
20	MECH	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
21	LOUNGE	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
22	ENTRY	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
23	HALL	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
25	MECH	EXISTING SLAB	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
26	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
27	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
28	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
29	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
30	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
31	EXT. STORAGE	CONCRETE SLAB				
32	HALL	LVT-01	RB-01			
L	1					

INTERIOR FINISHES SCHEDULE* *FOR REFERENCE ONLY, SEE SPECIFICATIONS FOR MORE INFORMATION

SECTION 04 72 00 - ARCHITECTURAL CAST STONE

CAST STONE SINK:

MANUFACTURER: SONOMA STONE PRODUCT: NUCRETE CONCRETE COLOR: ASH LOCATION: RESTROOMS CONTACT: SUZANNE SMITH, estimating@sonomastone.com

LAMINART

AMBER ELM

RESTROOM DOORS

SECTION 06 41 00 - ARCHITECTURAL WOOD CASEWORK

PLASTIC	CAMINATE:
PL-01:	MANUFACTURER:
	COLOR:
	FINISH:
	LOCATION:

<u>SECTION 09 30 00 - TILING</u>

PORCELAIN FLOOR TILE: CT-01: MANUFACTURER:

PRODUCT: COLOR: SIZE (NOMINAL): **INSTALLATION PATTERN:** GROUT COLOR: GROUT JOINT SIZE: TRIM: LOCATION:

CERAMICS TECHNICS FIRENZE DESIGN STONES TAUPE/DARK IN NATURAL FINISH 12" X 24", 10MM THICKNESS ASHLAR TBD BY ARCHITECT FROM MANUF. STANDARD LINE MINIMUM SIZE AS RECOMMENDED BY MANUFACTURER SCHLUTER DILEX AND JOLLY TRIMS WHERE INDICATED; REFER TO FINISH TRANSITION DETAILS, SHEET A8.63 RESTROOM FLOOR FUSUN YALCINKAYA, fusun@ceramictechnics.com

SECTION 09 65 10 - RESILIENT FLOORING

LUXURY VINYL TILE

LVT-01: MANUFACTURER: PATTERN: COLOR: SIZE: INSTALL METHOD: LOCATION: CONTACT:

CONTACT:

SHAW CONTRACT TERRAIN II 20 MIL 5MM ECHO 00775 6" X 48", 5MM THICKNESS ASHLAR CIRCULATION, LOUNGE, ACTIVITY ROOM MEG LIEVERS, meg.lievers@shawcontract.com

SECTION 09 65 00 - RESILIENT FLOORING

RUBBER WALL BASE: **RB-01:** MANUFACTURER: PRODUCT/COLOR: HEIGHT/PROFILE:

CONTACT:

ROPPE OR EQUIV. T.B.D. FROM MANUFACTURER'S STANDARD 4", STRAIGHT AT CARPET LOCATIONS, COVED (TOE) AT HARD SURFACE LOCATIONS

SECTION 09 67 23 - RESINOUS FLOORING

MANUFACTURI PRODUCT: COLOR:	R: STONHARD STONCLAD G2 WITH S COOL SHALE
THICKNESS:	1/4"
COMMENTS:	PROVIDE INTEGRAL C
LOCATION:	OFFICE 13/JANITOR
CONTACT:	JOHN WAGNER, jwagn
	<i>,</i> , , ,

SECTION 09 68 00 - CARPETING

EF-01:

CARPET	TILE:	
CPT-01:	MANUFACTURER:	SHAW CONTRACT
	PATTERN:	DIFFUSE ECOWORX
	COLOR:	ROAD TRIP 75105
	SIZE:	24" X 24"
	DYE METHOD:	100% SOLUTION DYED
	INSTALL METHOD:	ASHLAR
	LOCATION:	OFFICES, ACTIVITY RC
	CONTACT:	MEG LIEVERS, meg.liev

SECTION 09 90 00 - PAINTING

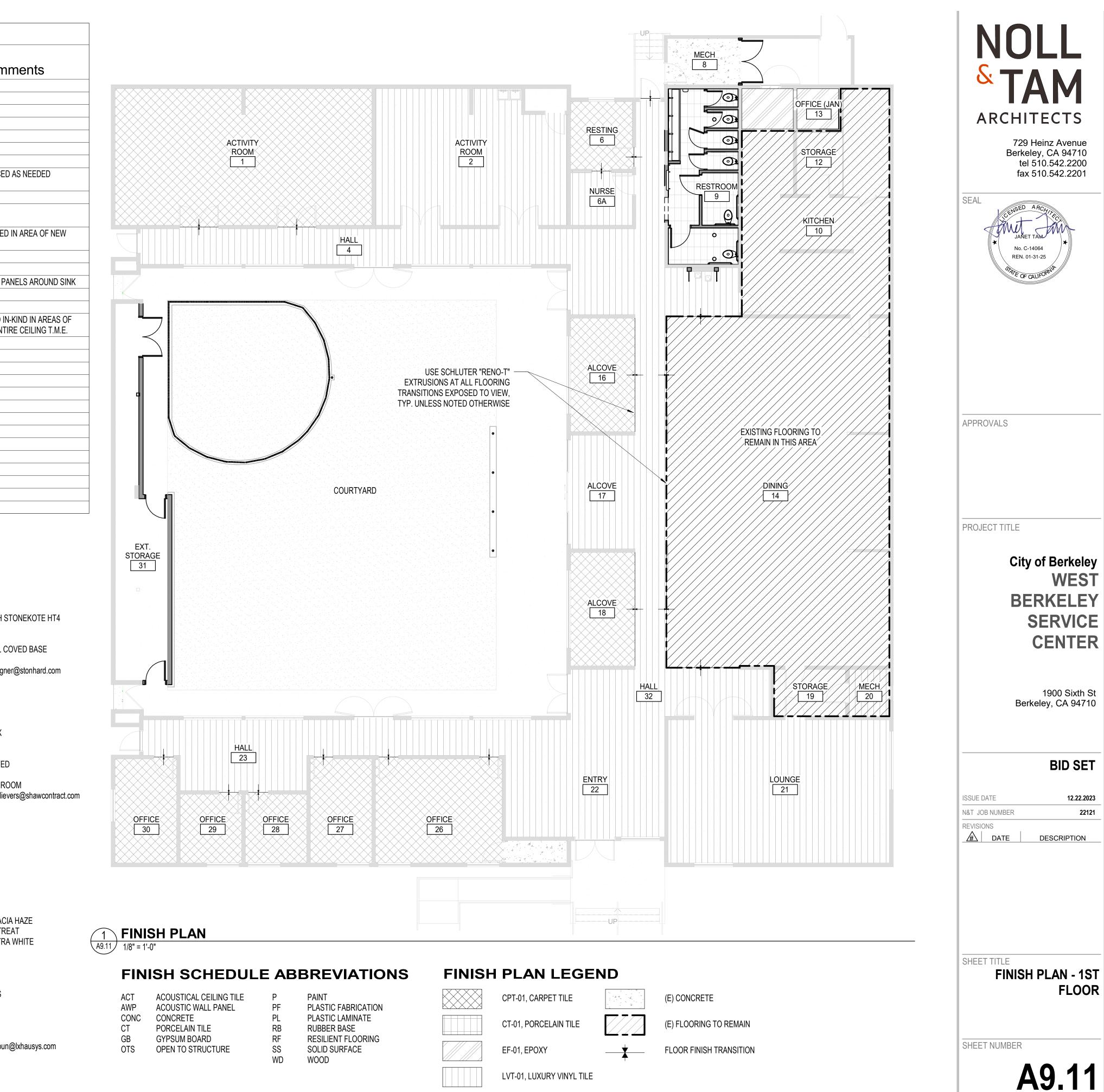
TYPICAL INTERIOR PAINT FINISHES: CEILINGS & SOFFITS: FLAT WALLS: EGGSHELL TOILET ROOM, CUSTODIAL ROOM WALLS: SEMI-GLOSS PAINTED DOORS & FRAMES: SEMI-GLOSS

INTERIOR PAINT COLORS:

P-01 (GENERAL):	SHERWIN WILLIAMS, TBD
P-02 (ACCENT):	SHERWIN WILLIAMS, SW 9132 ACACI
P-03 (ACCENT):	SHERWIN WILLIAMS, SW 6207 RETRE
P-05 (CEILINGS):	SHERWIN WILLIAMS, SW 7006 EXTRA

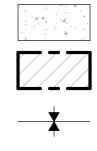
SECTION 12 36 69 - COUNTERTOPS and WALL PANELS

RESIN S	OLID SURFACE WALL P	ANEL:
SS-01:	MANUFACTURER:	LX HAUSYS HIMACS
	COLOR:	LUNAR SAND
	THICKNESS:	12MM
	SIZE:	30" X 145"
	LOCATION:	RESTROOM WALLS
	CONTACT:	THERESA YOUN, tyoun



ACT	ACOUSTICAL CEILIN
AWP	ACOUSTIC WALL PA
CONC	CONCRETE
СТ	PORCELAIN TILE
GB	GYPSUM BOARD
OTS	OPEN TO STRUCTUR





LVT-01, LUXURY VINYL TILE

GENERAL NOTES ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING

CODE

- THESE NOTES SHALL APPLY TO ALL STRUCTURAL DRAWINGS UNLESS
- OTHERWISE NOTED OR SHOWN. ALL WORK IS TO BE ASSUMED AS NEW UNLESS SPECIFICALLY STATED
- OTHERWISE
- FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS. ALL DETAILS REFERENCED, AND DETAILS NOT REFERENCED ON PLANS, SHALL BE CONSIDERED TYPICAL AND APPLY TO ALL SIMILAR CONDITIONS OF THE CONSTRUCTION
- UNLESS SHOWN OTHERWISE, DETAILS SHOWN ON "TYPICAL DETAIL" SHEETS SHALL BE USED WHEREVER APPLICABLE. SPECIFIC DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER "TYPICAL DETAILS". SPECIFIC NOTES ON STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER NOTES SHOWN IN "GENERAL NOTES"
- THE STRUCTURAL DRAWINGS SHOW STRUCTURAL FEATURES. EXACT CONFIGURATION OF INTERIOR PARTITION WALLS IS SHOWN ON ARCHITECTURAL DRAWINGS AND IS NOT NECESSARILY ALL SHOWN ON THE STRUCTURAL DRAWINGS. PROVIDE ANCHORAGE, INSERTS, ANCHOR BOLTS, ETC. FOR STRUCTURAL CONNECTIONS OF TOP. SIDES AND BOTTOM OF ALL PARTITION WALLS AS LOCATED ON THE ARCHITECTURAL DRAWINGS.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING: FLOOR FINISHES; DEPRESSIONS AND CURBS ON FLOORS; OPENINGS REQUIRED FOR WINDOWS, DOORS, DUCTS, VENTS, PLUMBING, ETC.; FLASHING, INSERTS, ANCHORAGES, HANGERS ETC., EMBEDDED IN OR ATTACHED TO THE STRUCTURE; ROADWAY, WALKS, PAVING, STAIRS, RAMPS, TERRACES, EXTERIOR GRADES, ELEVATIONS OF ROOF SURFACE AND LOCATIONS OF DRAINS AND PARTITION
- THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, PLUMBING, MECHANICAL, CIVIL, AND ELECTRICAL DRAWINGS AS TO ALL LAYOUTS, DIMENSIONS AND ELEVATIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT FOR PROPER ADJUSTMENT BEFORE PROCEEDING WITH THE WORK
- IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE GENERAL NOTES, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN FOR SIMILAR CONDITIONS.
- BEAMS, JOISTS AND ANY OTHER STRUCTURAL ELEMENTS SHALL NOT BE CUT OR 10. PENETRATED, EXCEPT AS SHOWN IN STRUCTURAL DETAILS OR AS APPROVED BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD PRIOR TO POURING CONCRETE; ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- FEATURES OF EXISTING CONSTRUCTION SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD AND DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES AND SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PROGRAMS AND PROCEDURES DURING CONSTRUCTION.
- 14. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY SHORE AND BRACE EXISTING BUILDING AS REQUIRED DURING CONSTRUCTION. ALL SHORING SHALL CONFORM TO FEDERAL AND LOCAL JURISDICTION OSHA REQUIREMENTS. SHORING DESIGN SHALL BE DESIGNED AND STAMPED BY AN ENGINEER RETAINED BY CONTRACTOR AND REGISTERED IN THE LOCAL JURISDICTION.
- 15. THE CONTRACTOR SHALL FOLLOW ALL INSTRUCTIONS, RECOMMENDATIONS AND SAFETY PRECAUTIONS PROVIDED BY THE MANUFACTURER OR SUPPLIER OF ANY MATERIAL OR PRODUCT NOTED IN GENERAL NOTES OR DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR DETAILS ON REQUIRED VENTILATION OF ROOF JOISTS, FLOOR JOISTS, AND ATTIC SPACES. CONTRACTOR SHALL FIELD VERIFY EXISTING FRAMING CONDITIONS AND SHALL 17. NOTIFY ARCHITECT OF ANY VARIATION FROM CONDITIONS ASSUMED ON
- DRAWINGS. CONTRACTOR SHALL VERIFY THAT EXISTING FRAMING IS RE-SUPPORTED AND ALL LOADS ARE TRANSFERRED TO NEW OR EXISTING FOOTINGS. CONTRACTOR SHALL CONSULT WITH THE STRUCTURAL ENGINEER AS REQUIRED
- GRADES SHOWN ON STRUCTURAL DRAWINGS ARE APPROXIMATE AND FOR 18. GENERAL REFERENCE ONLY.
- MECHANICAL UNIT LOCATIONS SHOWN ON STRUCTURAL DRAWINGS ARE 19. SCHEMATIC ONLY. GENERAL CONTRACTOR TO COORDINATE STRUCTURA TRADES WITH MECHANICAL CONTRACTOR TO DETERMINE EXACT LOCATION OF UNITS AND SUPPORTING STRUCTURE. 20. DO NOT SCALE DRAWINGS.

DESIGN CRITERIA

1.	VERTI	CAL LOADS:		
	Α.	DEAD LOADS:		
		ROOF DEAD LOAD:	20 PSF	:
	В.	LIVE LOADS:		
		ROOF LIVE LOAD:	20 PSF	:
2.	LATER	AL LOADS:		
	Α.	WIND DESIGN LOADS – PER CBC SECTION 1609:		
		BASIC WIND SPEED	95 MPI	4
		EXPOSURE CATEGORY	В	
	В.			
		RISK CATEGORY	II	
		SEISMIC DESIGN CATEGORY	E	
		SITE CLASS	D	
		FUNDAMENTAL PERIOD	T = 0.1	SECONDS
		BASIC LATERAL FORCE RESISTING SYSTEM –		
		LIGHT-FRAMED WALLS W/ WOOD STRUCTUR		
		MAPPED SHORT PERIOD ACCELERATION	Ss	= 1.928 g
		SITE COEFFICIENT	Fa	= 1.2
		DESIGN SHORT PERIOD ACCELERATION	SDS	
		MAPPED ONE SECOND PERIOD ACCELERATION	S ₁	
		SITE COEFFICIENT	Fv	= 0.6
		DESIGN ONE SECOND ACCELERATION	S _{D1}	
		RESPONSE MODIFICATION FACTOR	R	= 6.5
		IMPORTANCE FACTOR		= 1
		SEISMIC RESPONSE COEFFICIENT, (SDS*I/R)	Cs	= 0.237
		BASE SHEAR, V= Cs * W AT STRENGTH LEVEL		
3.	ALLOW	ABLE SOIL PRESSURES:		
		DEAD LOAD	2500	PSF
		DEAD + LIVE LOADS	2500	PSF
		DEAD + LIVE + LATERAL LOADS	2500	PSF
		LATERAL PRESSURE	150	PSF/FT

- ABOVE.
- UNLESS OTHERWISE NOTED.
- SLOPES AND DRAINS, INSERTS, ETC.

CONCRETE NOTES

- STRENGTH DESIGNATION.
- 28 DAY CONCRETE USE CLASS (PSI)

А	FOUNDATIONS	2500
D	SLABS-ON-GRADE	2500

FOUNDATION NOTES CARPENTRY NOTES NAILING NOTES FOR BIDDING PURPOSES, THE ELEVATION OF THE BOTTOM OF SILLS ON CONCRETE SHALL BE PRESSURE TREATED DOUGLAS FIR LARCH 3x FOOTINGS SHALL BE AS INDICATED ON THE FOUNDATION PLANS AND THICK AT ALL EXTERIOR WALLS AND INTERIOR SHEAR WALLS NOTED ON PLAN. ON DETAILS. THESE FOOTING DEPTHS ARE MINIMUM AND SHALL IN ALL OTHER SILLS ON CONCRETE MAY BE PRESSURE TREATED DOUGLAS FIR NO CASE BE LESS THAN 12 INCHES. SLOPE BOTTOM OF FOOTINGS AT LARCH 2x THICK. THEY SHALL BE ANCHORED WITH 5/8" DIAMETER MACHINE 1:10 MAXIMUM SLOPE AS REQUIRED TO SUIT GRADING AND BOLTS WITH 7" EMBEDMENT. AT SHEAR WALLS, BOLTS SHALL HAVE NUT, CUT ADJACENT FOOTING CONDITIONS. STEP BOTTOM OF FOOTINGS PER WASHER AND PLATE WASHER AS FOLLOWS TYPICAL DETAIL FOR GREATER INCLINATIONS 4" STUDS: 1/4"x3"x3" PLATE WASHER SOIL BEARING PRESSURES UNDER FOOTINGS AS DESIGNED DO NOT 6" STUDS: 1/4"x3"x5" PLATE WASHER. EXCEED ALLOWABLE SOIL PRESSURES DEFINED IN DESIGN CRITERIA 8" STUDS: 1/4"x3x7" PLATE WASHER. AT NON-SHEAR WALLS, PLATE WASHER IS NOT REQUIRED. LOCATE BOLTS 6" WHERE FOUNDATION WALL BACKFILL IS NECESSARY, THE BACKFILL MINIMUM AND 12" MAXIMUM FROM EACH END OF EACH STICK AND NOT OVER 48" ON CENTER BETWEEN. SEE SHEAR WALL SCHEDULE OR PLANS FOR SHALL BE PLACED SIMULTANEOUSLY ON EACH SIDE OF WALL, AND SPECIFIC SPACING OF ANCHOR BOLTS WHICH MAY BE NOTED AS LESS THAN THE LEVEL ON ONE SIDE SHALL NOT EXCEED THE OTHER SIDE BY 48" ON CENTER. THERE SHALL BE AT LEAST 2 BOLTS IN EACH STICK. WHERE MORE THAN 6 INCHES DURING THIS OPERATION. FOOTINGS SHALL BE CENTERED UNDER BEARING WALLS ABOVE NOTCHES FOR PIPES, ETC., EXCEED 1/3 THE WIDTH OF THE SILL, PLACE A BOLT WITHIN 6" OF EACH SIDE OF NOTCH. TIEDOWN BOLTS SHALL NOT BE SEE ARCHITECTURAL, PLUMBING, MECHANICAL, ELECTRICAL AND CONSIDERED AS SILL BOLTS. ANY OTHER INCLUDED DRAWINGS, AND CONSULT WITH THE FRAMING LUMBER: DOUGLAS FIR-LARCH, MANUFACTURED AND GRADED IN ACCORDANCE WITH THE WEST COAST LUMBER INSPECTION BUREAU RESPECTIVE TRADES FOR VERIFICATION OF ALL ITEMS SHOWN OR NOT SHOWN ON STRUCTURAL PLANS PRIOR TO POURING CONCRETE "STANDARD GRADING RULES NO. 17", LATEST EDITION INCLUDING ALL FOOTINGS AND FLOOR SLABS. PIPES OR ELECTRICAL CONDUITS SUPPLEMENTS. STRUCTURAL LIGHT FRAMING: NO. 1, 2" TO 4" THICK SHALL NOT ROUTE UNDER FOOTINGS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. IN ALL CASES, PIPES AND CONDUITS NO. 1, FREE OF HEART CENTER, 5" AND THICKER BEAMS POSTS: SHALL BE EMBEDDED IN TRENCHES FILLED WITH LEAN CONCRETE NO 1 AND SPACED A MINIMUM 3 DIAMETERS BETWEEN EACH PIPE OR STUDS: 2x4 OR 3x4 - CONSTRUCTION CONDUIT BASED ON THE LARGEST DIAMETER. 2x6 AND LARGER - NO. 2 ALL FRAMING LUMBER SHALL BE HAVE A MAXIMUM MOISTURE CONTENT OF 19 VERIFY LOCATIONS FOR OPENINGS OR PENETRATIONS THROUGH PERCENT AT TIME OF INSTALLATION. LUMBER USED IN WALLS AND FLOORS CONCRETE, CONCRETE CURBS, FLOOR DEPRESSIONS, FLOOR SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% AT THE TIME OF CLOSURE. STUD AND POST SIZES (UNLESS OTHERWISE NOTED) STUDS AT NEW EXTERIOR WALLS: 2x6 @ 16" ON CENTER ALL CONCRETE SHALL BE REINFORCED UNLESS NOTED "NOT REINFORCED". STUDS AT NEW INTERIOR WALLS: 2x4 @ 16" ON CENTER SEE THE CALIFORNIA BUILDING CODE FOR THE REQUIREMENTS IN THE POSTS: PRODUCTION. TESTING AND INSTALLATION OF CONCRETE. 5. BLOCKING AND BRIDGING - PROVIDE AS FOLLOWS: SEE ARCHITECTURAL DRAWINGS FOR THE LOCATION AND EXTENT OF EXTERIOR 2x SOLID BLOCKING BETWEEN JOISTS AND RAFTERS OVER SUPPORT. WALKS AND PAVEMENTS AND FOR REINFORCEMENT REQUIREMENTS. 2x SOLID BLOCKING BETWEEN JOISTS AND RAFTERS NOT OVER 8'-0" ON REINFORCEMENT SHALL BE PER ASTM A615, GRADE 60 WITH BAR MARKS LEGIBLY CENTER NOR MORE THAN 8'-0" FROM SUPPORT. ROLLED INTO THE SURFACE INDICATING SIZE, TYPE OF STEEL, AND YIELD OMIT BLOCKING BETWEEN CEILING JOISTS AND RAFTERS 2x8 AND SMALLER. REINFORCEMENT FOR WELDING, FOR SHEAR WALLS, OR FOR MOMENT FRAMES CONTINUOUS 2" HERRINGBONE BRIDGING, SLOPE 3 IN 12, AT MID-D. SHALL BE PER ASTM A706, GRADE 60 WITH BAR MARKS LEGIBLY ROLLED INTO THE HEIGHT OF STUDS OR SO SPACED THAT UNBRACED LENGTH OF STUDS SURFACE INDICATING SIZE, TYPE OF STEEL, AND YIELD STRENGTH DESIGNATION. SHALL NOT EXCEED 8'-0", EXCEPT WHERE WALL FINISH OF PLYWOOD CONCRETE SHALL CONFORM TO THE FOLLOWING CLASSES: SHEATHING AT SHEAR WALLS CALLS FOR SOLID HORIZONTAL BLOCKING. MAX CONCRETE MAX MIN/MAX 6. PIPES EXCEEDING ONE-THIRD OF THE PLATE WIDTH SHALL NOT BE PLACED IN AGGREGATE WEIGHT FLYASH OR STRENGTH W/C+F+S) PARTITIONS USED AS BEARING OR SHEAR WALLS, UNLESS OTHERWISE SIZE (IN) (PCF) RATIO % SLAG % DETAILED OR COMPLETELY FURRED CLEAR OF THE STUDS. PIPES SHALL PASS THROUGH THE CENTER OF THE PLATES USING A NEATLY BORED HOLE. NO 145 0.50 25/50 NOTCHING WILL BE ALLOWED. LAG SCREWS SHALL BE SCREWED (NOT DRIVEN) INTO PLACE. DRILL HOLES 25/50 145 0.50 SAME DIAMETER AND DEPTH AS SHANK. THEN DRILL HOLE 60-70% OF DIAMETER AT BASE OF THREAD FOR THE THREADED PORTION. USE STEEL *(C+F+S) DENOTES TOTAL WEIGHT OF CEMENT, FLYASH AND SLAG PLATE WASHERS AS REQUIRED FOR THE SAME BOLT SIZE. PORTLAND CEMENT SHALL BE PROPORTIONED IN ACCORDANCE WITH ASTM C94, BOLTS IN WOOD SHALL BE MACHINE BOLTS UNLESS OTHERWISE NOTED. ALL TYPE I OR II. MACHINE BOLTS SHALL HAVE CUT THREADS. REPLACE CEMENT CONTENT WITH FLYASH CONFORMING TO ASTM C618 CLASS C OR F 9. BOLT HOLES IN WOOD AND STEEL SHALL BE THE DIAMETER OF THE BOLT PLUS OR GROUND GRANULATED BLAST FURNACE SLAG CONFORMING TO ASTM 989, CLASS 100 OR 120, PER TABLE ABOVE. PROVIDE PLATE WASHER UNDER HEAD AND NUT OF BOLT WHERE BEARING IS 10. REINFORCEMENT, ANCHOR BOLTS, PIPE SLEEVES, AND OTHER INSERTS SHALL BE AGAINST WOOD. LENGTH OF THREAD SHALL BE SUCH THAT THREADS DO NOT POSITIVELY SECURED IN PLACE BEFORE CONCRETE IS POURED. "WET-SETTING" WILL BEAR AGAINST WOOD. ALL NUTS SHALL BE TIGHTENED WHEN PLACED AND RE-NOT BE ALLOWED TIGHTENED AT COMPLETION OF THE JOB IMMEDIATELY BEFORE CLOSING WITH REINFORCING BARS WELDED TO STRUCTURAL STEEL SHALL BE SUPPLIED BY FINISH CONSTRUCTION REINFORCING BAR SUB-CONTRACTOR AND ALL WELDING SHALL BE DONE BY CONNECTORS FOR WOOD CONSTRUCTION NOTED ON PLANS AND DETAILS 11. STRUCTURAL STEEL SUB-CONTRACTOR SHALL BE SIMPSON COMPANY STRONG-TIE CONNECTORS OR APPROVED BAR COVERAGE TO FACE OF BAR, EXCEPT AS OTHERWISE SHOWN, SHALL BE: EQUA WHERE CONCRETE IS POURED AGAINST EARTH OR AGAINST STUDS SHALL BE ONE PIECE BETWEEN FLOORS AND FROM FLOOR TO ROOF. 3" 12. GROUNDCONTACT. ALIGN CENTERLINE OF STUDS WITH CENTERLINE OF FLOOR JOISTS. ALIGN FOR BARS LARGER THAN #5, WHERE CONCRETE SURFACES ARE CENTERLINE OF STUDS FOR FULL HEIGHT OF STRUCTURE TYPICAL ALL POSTS SHALL BE FULL HEIGHT FROM FOUNDATION TO ROOF. WHERE EXPOSED TO EARTH OR TO WEATHER AFTER REMOVAL OF FORMS. 13. 1-1/2" FOR #5 BARS OR SMALLER, WHERE CONCRETE SURFACES ARE EXPOSED POSTS ARE DISCONTINUOUS AT JOIST SPACE AND/OR FROM TOP OF TO EARTH OR TO WEATHER AFTER REMOVAL OF FORMS. BEAMS/HEADERS TO LOWER TOP PLATE, BLOCK THIS SPACE WITH STUD POST 1-1/2" FOR COLUMN SPIRAL TIES* ALL NON-BEARING PARTITIONS SHALL HAVE DOUBLE JOISTS BELOW WHERE 14. FOR WALL BARS (DOUBLE MAT)* PARTITIONS ARE PARALLEL TO JOISTS, AND FULL DEPTH [2x] [LSL] BLOCKING FOR STRUCTURAL SLAB BARS, TOP AND BOTTOM* BELOW WHERE PARTITIONS ARE PERPENDICULAR TO JOISTS. *UNLESS GOVERNED ABOVE BY EXPOSURE OR NOTED ON DETAILS JOISTS SUPPORTING MECHANICAL EQUIPMENT SHALL BE DOUBLE JOISTS (DJ) INTERIOR SLAB ON GROUND SHALL BE REINFORCED AS SHOWN ON STRUCTURAL PLANS. UNLESS NOTED OTHERWISE. LOCATIONS OF CONSTRUCTION JOINTS OTHER THAN SHOWN ON DRAWINGS MUST BE APPROVED BY THE ARCHITECT. SHEATHING NOTES ALL CONCRETE CURBS ARE 6 INCHES HIGH UNLESS OTHERWISE NOTED. ROOF, FLOORS, ALL EXTERIOR WALLS AND INTERIOR SHEAR WALLS WHERE NEW CONSTRUCTION IS INTEGRATED WITH EXISTING CONCRETE 14. (WHERE NOTED ON STRUCTURAL PLANS) SHALL BE SHEATHED WITH CONSTRUCTION, CARE SHALL BE TAKEN SO AS NOT TO DAMAGE EXISTING REMAINING DOUGLAS FIR SHEATHING WITH EXTERIOR GLUE AS FOLLOWS: CONCRETE AND REINFORCING. WHERE NEW CONCRETE ABUTS EXISTING CONCRETE, ROOF: 5/8" APA STRUCTURAL I RATED CLEAN EXISTING CONCRETE SURFACE WITH HIGH PRESSURE WATER SPRAY. APPLY PLYWOOD, 40/20, EXPOSURE 1 APPROVED BONDING AGENT TO SURFACE OF EXISTING CONCRETE. 1/2", APA STRUCTURAL I RATED SHEATHING, WALLS: 15 HOLES FOR GROUTED ANCHORS SHALL BE DRILLED WITH ROTARY HAMMER OR OTHER 32/16. EXPOSURE 1 SUITABLE METHODS TO ENSURE EXISTING REINFORCEMENT IS NOT DAMAGED. HOLE SHEATHING MAY BE ORIENTED STRAND BOARD OR PLYWOOD UNLESS 2. DIAMETER SHALL BE 1/8" GREATER THAN ANCHOR ROD DIAMETER, UNLESS OTHERWISE SPECIFICALLY NOTED AS PLYWOOD. NOTED. GROUT SHALL BE NON-SHRINK EPOXY. LOCATE EXISTING REINFORCING BARS ALL EXTERIOR WALLS SHALL BE SHEATHED. PRIOR TO DRILLING HOLES. DO NOT DAMAGE EXISTING REINFORCING. METHOD OF ALL SHEATHING USED STRUCTURALLY SHALL EXTEND CONTINUOUSLY LOCATING EXISTING REINFORCING BARS SHALL BE APPROVED BY THE STRUCTURAL BEHIND ALL FINISH. WHERE IT IS TO BE PLASTERED, IT SHALL BE ENGINEER. ALL MIS-DRILLED OR UNACCEPTABLE HOLES SHALL BE GROUTED SOLID. PROTECTED BY AN UNBROKEN LAYER OF MOISTURE-TIGHT PAPER TERMINATION OF REINFORCEMENT: UNDER LATHING. TERMINATE ALL BARS IN LAPS, 90 DEGREE BENDS, OR DOWELS INTO FOOTINGS IN GENERAL, SHEETS SHALL BE 4'-0" x 8'-0". MINIMUM SHEET DIMENSION 5 OR PERPENDICULAR WALLS OR COLUMNS. IS 24 INCHES, UNLESS ALL EDGES ARE FULLY SUPPORTED BY FRAMING BEND TOP FOOTING BARS DOWN TO BOTTOM REINFORCING. MEMBERS OR BLOCKING. THE LONG DIMENSION MAY BE LAID EITHER BEND BOTTOM FOOTING BARS UP WITH STANDARD 90 DEGREE BENDS. HORIZONTALLY OR VERTICALLY AT WALLS. ROOF AND FLOOR SHEETS 10. END WALLS WITH HORIZONTAL BARS BENT DOWN OR HORIZONTAL OR BENT INTO SHALL BE LAID WITH FACE PLIES ACROSS JOISTS OR FRAMING PERPENDICULAR WALLS, COLUMNS OR CORNERS MEMBERS AND WITH END JOINTS STAGGERED 4'-0". USE PLYCLIPS 11. PROVIDE DOWELS INTO FOOTINGS FOR WALLS AND COLUMNS OF THE SAME BAR HALFWAY BETWEEN EACH SUPPORT AT UNBLOCKED ROOFS. ALL SIZE AND SPACING AS IN WALLS AND COLUMNS. SHEATHING JOINTS SHALL BE ACCURATELY CENTERED ON SUPPORTING 12. LAP DOWELS PER THE LAP SCHEDULE AT THE BASE OF THE WALL OR COLUMN. ELEMENTS, INCLUDING BLOCKING. BLOCKING BETWEEN JOISTS FOR 13 ALL REINFORCEMENT SHALL LAP PER THE LAP SPLICE SCHEDULE. EDGE NAILING SHALL BE 3x4 MINIMUM FLAT BLOCKING, EXCEPT WHERE LAP NO MORE THAN EVERY OTHER BAR AT A SINGLE LOCATION (50% BARS), DETAILED OTHERWISE. ROOF AND FLOOR SHEATHING MAY BE STAGGER LAPS 5'-0". UNBLOCKED. GLUE FLOOR SHEATHING TO ALL SUPPORTS INCLUDING REINFORCEMENT LAPS MAY BE MADE WITH MECHANICAL COUPLERS, TYPE 1, G BLOCKING WITH AN ADHESIVE RECOMMENDED BY THE AMERICAN WHICH CAN ACHIEVE 125% OF BAR STRENGTH OR GREATER. PLYWOOD ASSOCIATION FOR THIS PURPOSE. SUBMIT ICC EVALUATION REPORT TO STRUCTURAL ENGINEER FOR REVIEW. ROUGHEN SURFACES AND KEY JOINTS AT HARDENED CONCRETE. ROUGHEN ALL EXPANSION ANCHORS IN HARDENED CONCRETE NOTES SURFACES AT COLD JOINTS TO ¼ INCH AMPLITUDE UNLESS NOTED OTHERWISE IN INSTALLATION: THE ANCHORS MUST BE INSTALLED IN ACCORDANCE WITH DETAILS. ROUGHEN ALL JOINTS: THE REQUIREMENTS GIVEN IN ICBO RESEARCH COMMITTEE PROVIDE 1.5" X 3.5" KEY JOINTS AT BOTTOM OF WALLS AND AT ENDS OF WALLS RECOMMENDATIONS FOR THE SPECIFIC ANCHOR AT COLUMNS, CROSS WALLS OR CORNERS. HOLES FOR EXPANSION ANCHORS SHALL BE DRILLED WITH ROTARY PROVIDE 1.5" X 3.5" X 10" KEY JOINTS AT GRADE BEAMS. HAMMER OR OTHER SUITABLE METHODS TO ENSURE EXISTING ROUGHEN SURFACES AT TOPS OF FOOTINGS BELOW WALLS AND COLUMNS. REINFORCEMENT IS NOT DAMAGED. HOLE DIAMETER SHALL BE AS A ROUGHEN SURFACES AT TOPS OF ALL WALLS, REQUIRED BY MANUFACTURER. LOCATE EXISTING REINFORCING BARS 18. COLUMNS AND JOINTS WITHIN ELEMENTS PRIOR TO DRILLING HOLES. DO NOT DAMAGE EXISTING REINFORCING. METHOD OF LOCATING EXISTING REINFORCING BARS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. ALL MIS-DRILLED OR UNACCEPTABLE HOLES SHALL BE GROUTED SOLID. 3. JOB TESTING AND INSPECTION: CONTINUOUS VISUAL INSPECTION OF SUPPORTING MEMBER FOR PERMANENT APPURTENANCES ANCHOR INSTALLATION IS REQUIRED. TEST FIRST TEN INSTALLED ANCHORS NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD SHALL BE ULTILIZED FOR OF EACH SIZE TO TENSION PROOF LOAD. IF ALL PASS, TEST 10% OF THOSE PORTIONS OF WOOD MEMBERS THAT FORM THE STRUCTURAL SUPPORTS OF REMAINING ANCHORS. IF ANY ANCHOR FAILS, TEST ALL ANCHORS UNTIL 10 BUILDINGS, BALCONIES, PORCHES OR SIMILAR PERMANENT BUILDING APPURTENANCES SUCCESSFUL CONSECUTIVE TESTS ARE MADE, THEN RESUME 10% TESTING WHERE SUCH MEMBESR ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE FREQUENCY. THE LOAD TEST SHALL BE PERFORMED IN THE PRESENCE OF PROTECTION FROM A ROOF. EAVE. OVERHANG OR OTHER COVERING TO PREVENT THE PROJECT INSPECTOR. THE LOAD MAY BE APPLIED BY ANY METHOD

- 11

- 17

MOISTURE OR WATER ACCUMULATION ON THE SURFACE OF AT JOINTS BETWEEN MEMBERS.

THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE ANCHOR, SUCH AS DIRECT PULL WITH A HYDRAULIC JACK, A TORQUE WRENCH CALIBRATED USING THE SPECIFIC ANCHOR, CALIBRATED SPRING-LOADED DEVICES, ETC. ANCHORS IN WHICH THE TORQUE IS USED TO EXPAND THE ANCHOR WITHOUT APPLYING TENSION TO THE BOLT MAY NOT BE VERIFIED WITH A TORQUE WRENCH ALL EXPANSION ANCHORS IN CONCRETE SHALL BE HILTI KB-TZ2 (PER

ESR-4266), SIMPSON STRONG-BOLT 2 (PER ESR 3037) OR APPROVED EQUAL

TEST INSPECTOR SHALL VERIFY ALL EXPANSION ANCHORS NOT TENSION LOAD TESTED FOR MINIMUM INSTALLATION TORQUE NOTED IN SCHEDULE

BELOW TENSION PROOF LOAD SHALL BE BY AN INDEPENDENT TESTING

LABORATORY.

ALL NAILS SHALL BE COMMON WIRE NAILS. WHERE NAILS TEND TO SPLIT THE WOOD, NAIL HOLES SHALL BE PRE-DRILLED. PROVIDE MINIMUM NAILING REQUIREMENTS AS SET FORTH IN CALIFORNIA BUILDING CODE TABLE 2304.10.1 EXCEPT THAT BOX NAILS SHALL NOT BE USED.

PLYWOOD NAILING:

AT ROOF:

5/8" PLYWOOD WITH 10d @ 4" ON

CENTER ALONG SUPPORTED PANEL EDGES AND WHERE NOTED ON PLANS AND DETAILS AS EDGE NAILING (EN) AND 10d @ 12" ON CENTER ALONG INTERMEDIATE

FRAMING MEMBERS AT WALLS: SEE SHEAR WALL SCHEDULE

MAINTAIN ACCURATE NAIL SPACING AS INDICATED. NAIL SPACING CLOSER THAN SPECIFIED WILL BE CAUSE FOR REJECTION OF THE WORK. NAILS PENETRATING PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153, CLASS D. NAILS FOR STAINLESS STEEL CONNECTORS SHALL BE STAINLESS STEEL.

STRUCTURAL STEEL NOTES

STRUCTURAL STEEL SPECIFICATIONS SHALL BE IN ACCORDANCE WITH:

STRUCTURAL STEEL PROPERTIES TABLE

STRUCTURAL STEEL ELEMENTS	SPECIFICATION
C CHANNELS AND L ANGLES	ASTM A36, GRADE 36 OR DUEL GRADE
HSS RECTANGULAR OR SQUARE	ASTM A500, GRADE C, Fy = 50 KSI
HSS ROUND (PIPES)	ASTM A500, GRADE C, Fy = 46 KSI
STRUCTURAL STEEL PLATES	ASTM A36, GRADE 36 OR DUEL GRADE
WELDING ELECTRODES	E70XX PER AWS D1.1 AND D1.8
HIGH STRENGTH BOLTS (HSB)	ASTM F3125 GRADE A325X
MACHINE BOLTS (MB)	ASTM A307, Fy = 36 KSI
ANCHOR BOLTS (AB) OR ANCHOR RODS	ASTM F1554, Fy = 36 KSI
ALL THREADED RODS (ATR)	ASTM A36, Fy = 36 KSI

ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, LATEST EDITION. ALL BOLTED CONNECTIONS STEEL TO STEEL SHALL BE MADE WITH 1" DIAMETER HIGH-STRENGTH (A325-X) BOLTS UNLESS OTHERWISE NOTED. ANCHOR BOLTS SHALL BE ASTM F1554, Fy = 36 KSI. THREADED RODS SHALL

BE PER ASTM A193 GRADE B7. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS

ALL TESTING AND INSPECTION OF SHOP AND FIELD WELDING OPERATIONS SHALL BE MADE BY A CERTIFIED WELDING INSPECTOR.

ALL WELDS SHALL BE TESTED AND INSPECTED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE

AWS D1.1, AS WELL AS D1.8 FOR SEISMIC ELEMENTS.

ALL WELDING ELECTRODES SHALL BE E70 SERIES. THE WELDING INSPECTOR SHALL CHECK THE WELDER'S CERTIFICATION, MATERIAL EQUIPMENT, FIT UP AND PROCEDURES AS WELL AS THE WELDS. THE INSPECTOR SHALL USE ALL MEANS NECESSARY TO DETERMINE THE QUALITY OF THE WELDS, INCLUDING THE USE OF GAMMA RAY, MAGNAFLUX, TREPANNING, SONICS OR ANY OTHER AID TO VISUALLY INSPECT AND TO ASCERTAIN THE ADEQUACY OF THE WELDING. THE INSPECTOR SHALL FURNISH THE ARCHITECT AND THE STRUCTURAL ENGINEER WITH A REPORT VERIFYING THAT ALL WELDS HAVE BEEN DONE IN CONFORMITY WITH THE PLANS, SPECIFICATIONS, AWS D1.1 AND ANY APPLICABLE CODES. UNLESS NOTED OTHERWISE ON THE DRAWINGS, THE FABRICATION AND ERECTION REQUIREMENTS MAY DICTATE FIELD WELDING AND/OR SHOP WELDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE METHOD OF WELDING TO FULFILL THESE REQUIREMENTS. ALL ASSOCIATED COSTS SHALL BE INCLUDED IN THE CONTRACT PRICE. ALL WELDS USED IN MEMBERS AND CONNECTIONS IN THE SEISMIC LOAD RESISTING SYSTEM AS DEFINED ON THE PLANS SHALL BE MADE WITH A FILLER METAL THAT CAN PRODUCE WELDS THAT HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LB AT 0 DEGREES FAHRENHEIT AS DETERMINED BY THE APPROPRIATE AWS A5 CLASSIFICATION TEST

METHOD OR MANUFACTURER CERTIFICATION. ALL WELDS DESIGNATED AS DEMAND CRITICAL SHALL BE MADE WITH A FILLER METAL THAT CAN PRODUCE WELDS THAT HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LB AT -20 DEGREES FAHRENHEIT AS DETERMINED BY THE APPROPRIATE AWS A5 CLASSIFICATION TEST METHOD OR MANUFACTURER CERTIFICATION, AND 40 FT-LB AT 70 DEGREES FAHRENHEIT

AS DETERMINED BY APPENDIX X OF AISC 341-10 OR OTHER APPROVED METHOD, WHEN THE STEEL FRAME IS NORMALLY ENCLOSED AND MAINTAINED AT A TEMPERATURE OF 50 DEGREES FAHRENHEIT OR HIGHER. SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW PRIOR TO

FABRICATION. SHOP DRAWINGS SHALL INCLUDE ITEMS REQUIRED BY THE SPECIFICATIONS AND THE FOLLOWING: DESIGNATION OF THE MEMBERS AND CONNECTIONS THAT ARE PART

OF THE SEISMIC LOAD RESISTING SYSTEM CONNECTION MATERIAL SPECIFICATIONS AND SIZES

LOCATIONS OF DEMAND CRITICAL WELDS

WELDING REQUIREMENTS AS SPECIFIED IN APPENDIX W OF

AISC 341-10. WHERE CLOSER THAN AISC TOLERANCES ARE NECESSARY, SUCH AS FOR ALIGNMENT OF STEEL STUDS, MULLIONS, GFRC PANELS, ETC., FIELD WELDING WILL BE REQUIRED TO MEET THE NECESSARY TOLERANCES WITH NO ADDITIONAL COSTS TO THE OWNER.

USE ONE TYPE OF WELDING ELECTRODE THROUGHOUT ANY ONE CONNECTION

WELDING OF REINFORCING STEEL TO STRUCTURAL STEEL SHALL BE DONE BY STRUCTURAL STEEL SUB-CONTRACTOR. BOLT HOLES IN STEEL SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL CONTRACTOR SHALL EXCHANGE SHOP DRAWINGS WITH STEEL DECK SUB-CONTRACTOR FOR COORDINATION

EXISTING BUILDING NOTES:

CONDITION OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE BASED ON EXISTING RECORD DRAWINGS PROVIDED. THE CONSTRACTOR SHALL VERIFY FRAMING CONDITIONS PRIOR TO START OF WORK. IF CONDITIONS DIFFER IN ANY SIGNIFICANT WAY FROM THAT SHOWN, NOTIFY ARCHITECT/STRUCTURAL ENGINEER.

THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING AND/OR SCAFFOLDING.

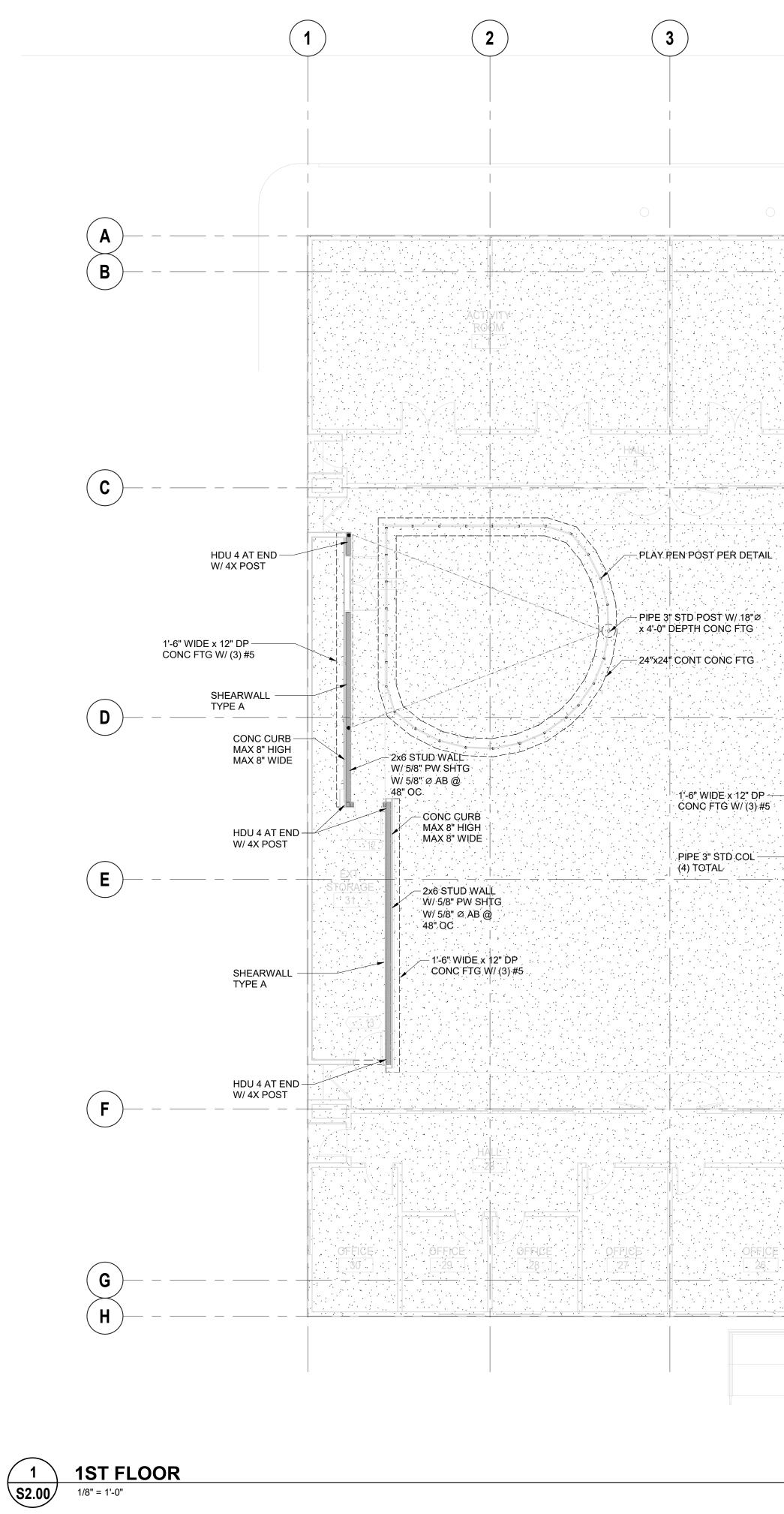
THE CONTRACTOR SHALL CAREFULLY CHECK THE STABILITY OF ALL ELEMENTS OF THE EXISTING BUILDING BEFORE COMMENCING WITH ANY WORK. SEWER AND UTILITY LINES ARE NOT INDICATED ON STRUCTURAL DRAWINGS, REFER TO CIVIL, PLUMBING AND ELECTRICAL DRAWINGS FOR THEIR LOCATION, PROFILE AND DETAILS. ANY INTERFERENCE BETWEEN SEWER AND UTILITY LINES SHALL BE NOTIFIED TO THE ARCHITECT/STRUCTURAL ENGINEER BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.

NO NEW OPENINGS IS ALLOWED WITH AN EXCEPTION OF THE FOLLOWING CONDITION. A SINGLE 5" MAX, DIAMETER OR SQUARE PIPE OPENING AT SLAB ABOVE DATA ROOM, AT ROOF SLAB, AND SLABS IN-BETWEEN THESE LEVELS. THE OPENING SHALL BE LOCATED IN-BETWEEN EXISTING REBAR. AVOID ANY PART OF THE EXISTING COLUMN CAPITAL OR EXISTING WALL.

CONTRACTOR SHALL VERIFY CONSTRUCTION OF ALL STRUCTURAL FLOOR SLABS, AND SHALL NOTIFY ENGINEER IF POST-TENSIONED CONCRETE SLABS ARE PRESENT PRIOR TO ANY WORK COMMENCING AT THOSE LOCATIONS. PRIOR TO DRILL HOLES FOR POST-INSTALLED ANCHORS/DOWELS, CONTRACTOR

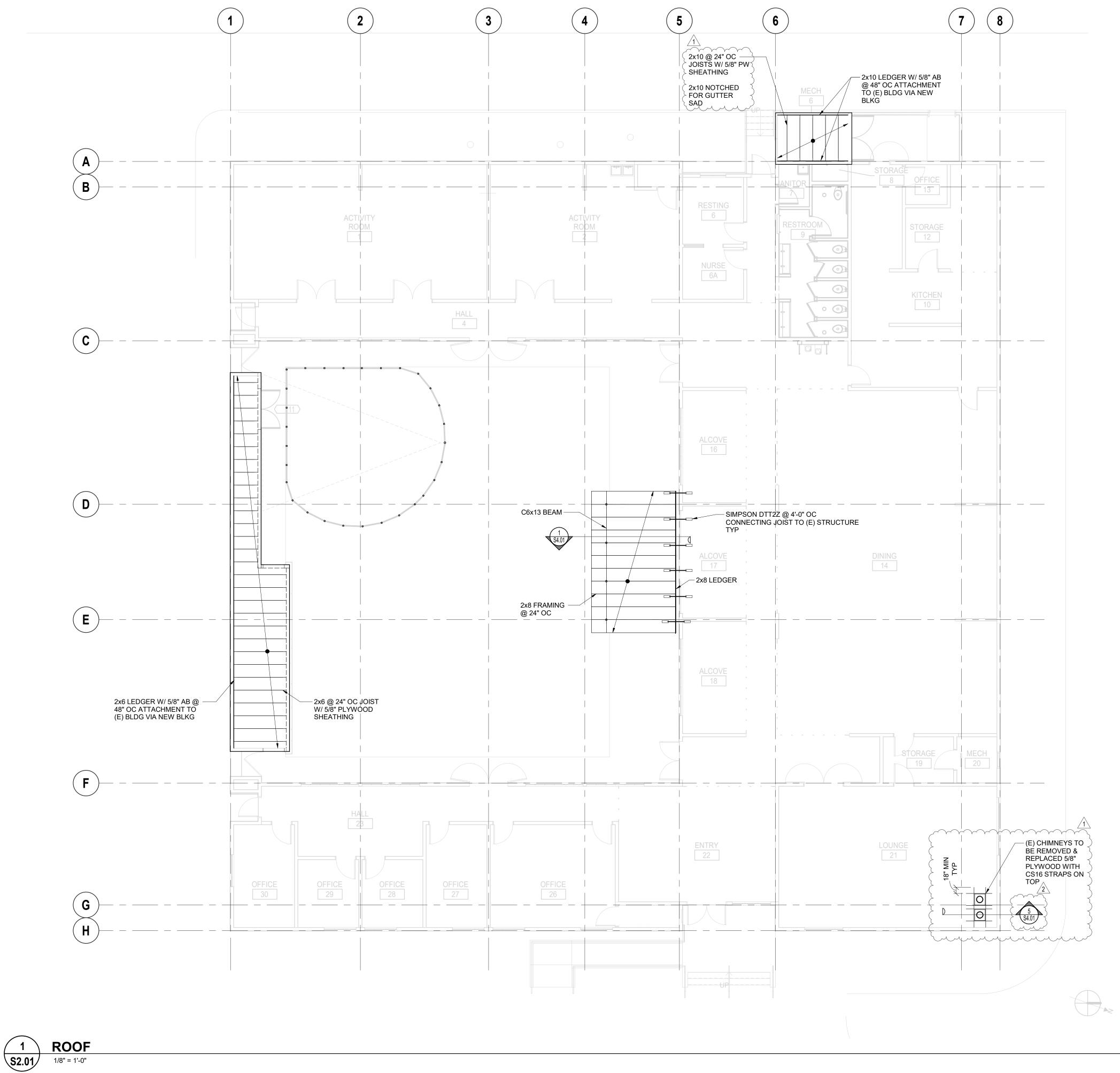
SHALL USE NON-DESTRUCTIVE METHOD TO DETECT LOCATIONS OF REBAR IN EXISTING ELEMENTS TO AVOID DAMAGING AND/OR CUTTING. NOTIFY, ARCHITECT AND STRUCTURAL ENGINEER WHERE CONFLICT ARE FOUND IN FIELD. OTHER THAN THE DRILLED HOLES FOR POST-INSTALLED ANCHORS, DO NOT DAMAGE SURROUNDING EXISTING CONCRETE DURING INSTALLATION AND FOR TESTING OF POST-INSTALLED ANCHORS.

NOLL
× TAM
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729 Heinz Avenue Berkeley, CA 94710 tel 510.542.2200
fax 510.542.2200
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STRUCTURAL ENGINEERS 1629 Telegraph Ave
Suite 300 Oakland, CA 94612 tel: 510.834.1629 ida-se.com
PROFESSION
SS No SOZEOZ
No. S03527
OF CALLEON
APPROVALS
PROJECT TITLE
City of Berkeley
WEST BERKELEY
SERVICE
CENTER
1900 Sixth St Berkeley, CA 94710
BID SET
SSUE DATE 12.22.2023 DA JOB NUMBER 23022
DRAWN BY Author CHECKED BY Checker SHEET TITLE
SHEET TITLE

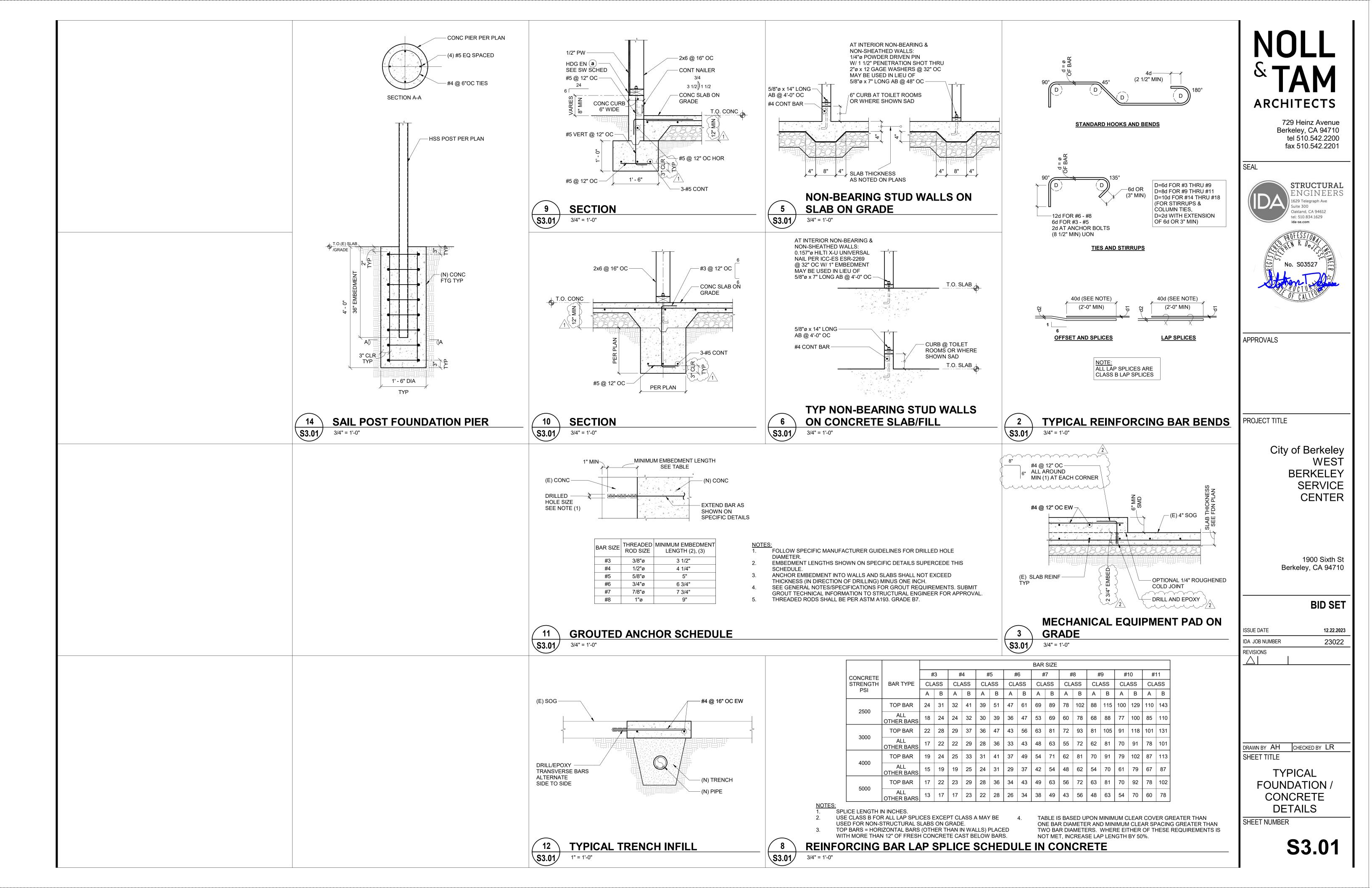


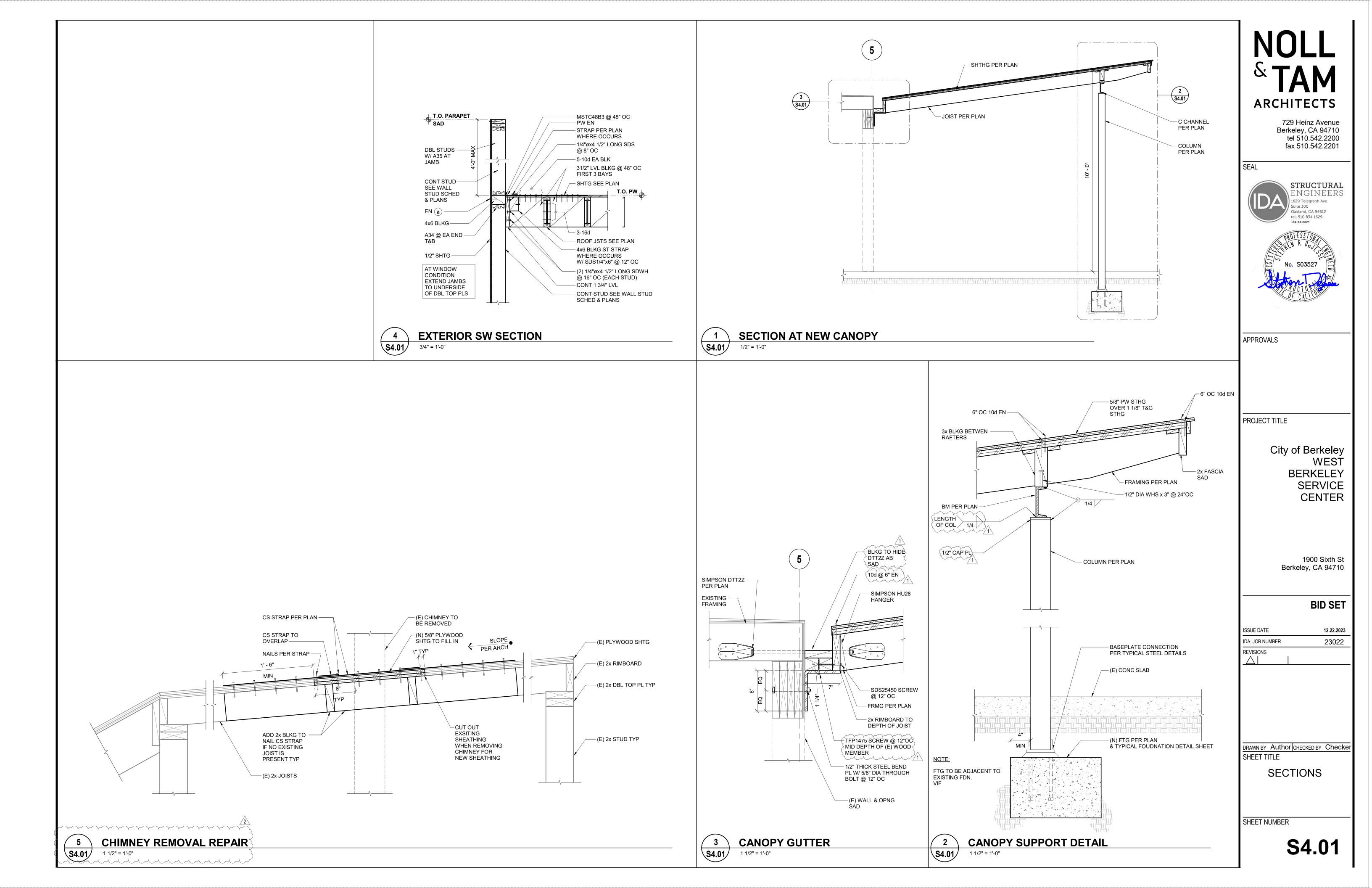
4	5	6	1 (7)	8
			VATER HEATERS ON 6" CONC PAD W/ (4) 1/2" DIA TIEN ABS X 3.75" "MIN EDGE DISTANCE NON-BEARING 2x PARTITION WALL WIDTH TO MATCH ARCHITECT	
		6	SAD	
ACTIVITY	RESTING 6 6 6 6 7			
	ALCOVE 177		NING 14	
			STORAGE MECH	
	ENTRY 22		LOUNGE	

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No. SO3527
APPROVALS
PROJECT TITLE
City of Berkeley WEST BERKELEY SERVICE CENTER
1900 Sixth St Berkeley, CA 94710
BID SET
ISSUE DATE 12.22.2023 IDA JOB NUMBER 23022 REVISIONS
DRAWN BY AH CHECKED BY LR SHEET TITLE
FOUNDATION AND FIRST FLOOR PLAN
SHEET NUMBER



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No. SO3527
APPROVALS
PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE CENTER
1900 Sixth St Berkeley, CA 94710
BID SET
ISSUE DATE 12.22.2023 IDA JOB NUMBER 23022 REVISIONS
DRAWN BY Author CHECKED BY Checker SHEET TITLE ROOF FRAMING PLAN
SHEET NUMBER

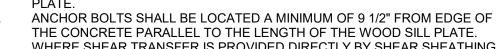




				CONNECTION	IS NOTED ON D	ETAILS			
MARK	15/32"	(8	1)	b	С	d	e	MAX ALLOWABLE	REMARKS
	WOOD STRUCT 1 PANEL SHEATHING	NAIL EDGES	ING FIELD	2x SOLE PLATE CONNECTION	TOP PLATE CONNECTION	JOIST OR BLKG	3x PTDF SILL PL W/ AB (SEE NOTE 14) MAXIMUM SPACING	SHEAR CAPACITY (plf)	REMARKS
	1 SIDE	10d @ 6" OC	10d @ 12" OC	16d @ 6" OC STAGGERED	A35 @ 16" OC OR LTP5 @ 16" OC	3x SS OR 1 3/4" LSL	5/8"ø @ 48" OC	340	
В	1 SIDE	10d @ 4" OC	10d @ 12" OC	16d @ 4" OC STAGGERED	A35 @ 8" OC OR LTP5 @ 8" OC	3x SS OR 1 3/4" LSL	5/8"ø @ 32" OC	510	USE 3x STUDS @ SHEATHING PANEL JTS
Ъ́/	2 SIDES	10d @ 4" OC	10d @ 12" OC	1/4"ø x 6" SDS SCREWS @ 4" OC	A35 @ 6" OC OR LTP5 @ 4" OC	3x SS OR 1 3/4" LSL	5/8"ø @ 16" OC	1020	USE 3x STUDS @ SHEATHING PANEL JTS
¢	1 SIDE	10d @ 3" OC	10d @ 12" OC	16d @ 3" OC STAGGERED	A35 @ 8" OC OR LTP5 @ 8" OC	3x SS OR 1 3/4" LSL	5/8"ø @ 16" OC	665	USE 3x STUDS @ SHEATHING PANEL JTS
	2 SIDES	10d @ 3" OC	10d @ 12" OC	1/4"ø x 6" SDS SCREWS @ 4" OC	A35 @ 4" OC OR LTP5 @ 4" OC	3x SS OR 1 3/4" LSL	5/8"ø @ 8" OC	1330	USE 3x STUDS @ SHEATHING PANEL JTS
	1 SIDE	10d @ 2" OC	10d @ 12" OC	20d @ 3" OC STAGGERED	A35 @ 6" OC OR LTP5 @ 6" OC	3x SS OR 1 3/4" LSL	5/8"ø @ 16" OC	870	USE 3x STUDS @ SHEATHING PANEL JTS
	2 SIDES	10d @ 2" OC	10d @ 12" OC	1/4"ø x 6" SDS SCREWS @ 3" OC	A23 @ 6" OC EF OR LTP5 @ 6" OC EF	3x SS OR 1 3/4" LSL	5/8"ø @ 8" OC	1740	USE 3x STUDS @ SHEATHING PANEL JTS

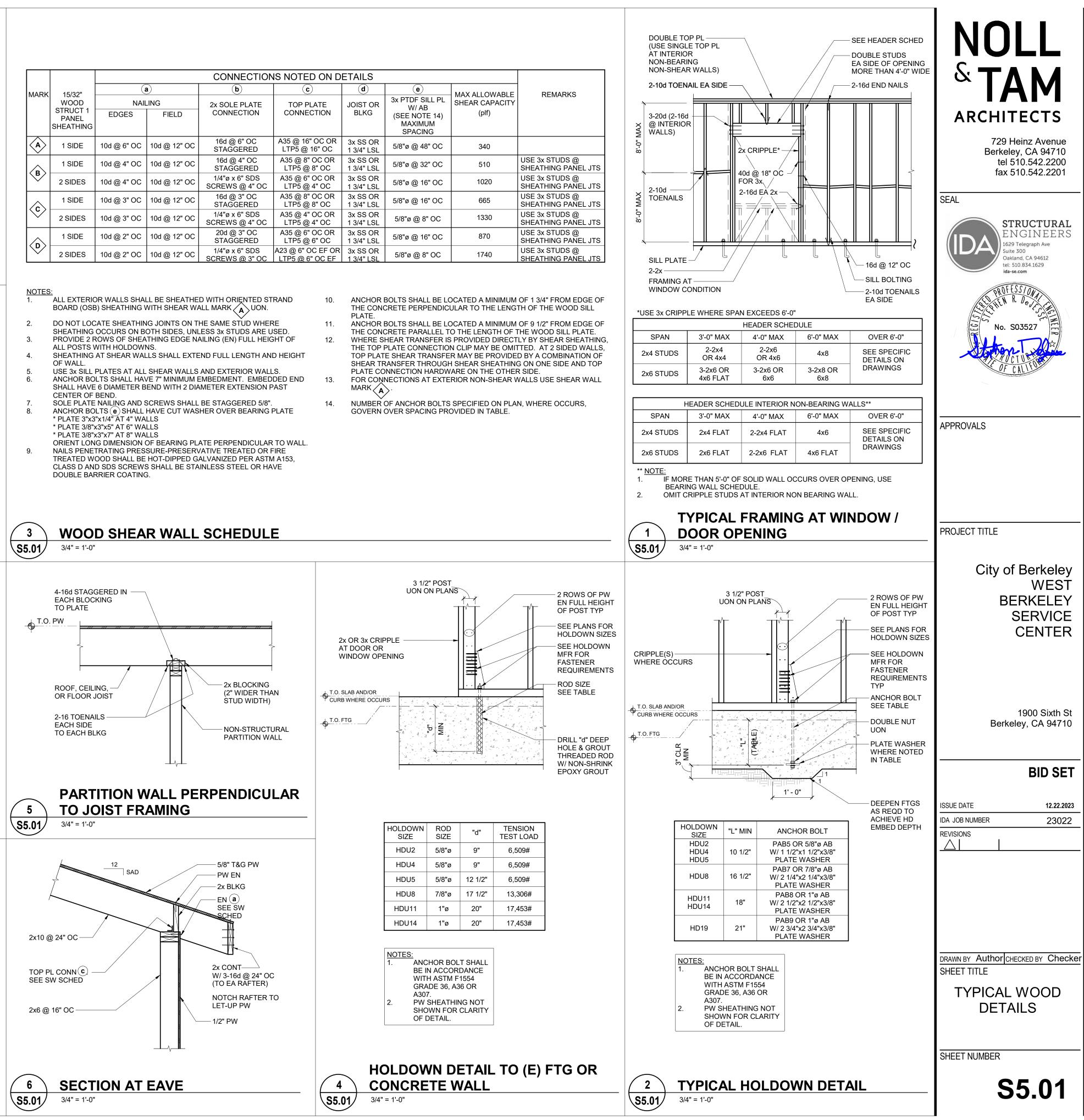
- BOARD (OSB) SHEATHING WITH SHEAR WALL MARK

- USE 3x SILL PLATES AT ALL SHEAR WALLS AND EXTERIOR WALLS. SHALL HAVE 6 DIAMETER BEND WITH 2 DIAMETER EXTENSION PAST CENTER OF BEND.
- * PLATE 3"x3"x1/4" AT 4" WALLS
- * PLATE 3/8"x3"x7" AT 8" WALLS
- NAILS PENETRATING PRESSURE-PRESERVATIVE TREATED OR FIRE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153, CLASS D AND SDS SCREWS SHALL BE STAINLESS STEEL OR HAVE DOUBLE BARRIER COATING.



- PLATE CONNECTION HARDWARE ON THE OTHER SIDE.
- MARK
- GOVERN OVER SPACING PROVIDED IN TABLE.





COLUMN BASE PLATE & ANCHOR BOLT SCHEDULE TYPE TYPE THICKNESS WIDTH (M)	NOLL
THICKNESS WIDTH (W) LENGTH (L) HEM/4 (K) PIPE 3" STD 1/2" 10" 10" 1/2"ø x 9" LONG	δ. TAM
	ARCHITECTS
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	tel 510.542.2200 fax 510.542.2201
	SEAL
	STRUCTURAL ENGINEERS 1629 Telegraph Ave Suite 300 Oakland, CA 94612 tel: 510.834.1629 ida-se.com
	PROFESSION R. De
PIPE COL BASE PL - 2" NON-SHRINK	
GROUT T.O. FTG	UT CALL
	APPROVALS
1/2"x4x0'-4"	
PIPE COL BASE PLATE & ANCHOR	
1 BOLT DETAIL \$6.01 3/4" = 1'-0"	PROJECT TITLE
	City of Berkeley
	WEST BERKELEY
	WEST
	WEST BERKELEY SERVICE
	WEST BERKELEY SERVICE
	WEST BERKELEY SERVICE
	WEST BERKELEY SERVICE CENTER 1900 Sixth St
	WEST BERKELEY SERVICE CENTER 1900 Sixth St
	WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710 BID SET ISSUE DATE
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	WEST BERKELEY SERVICE CENTER 1900 Sixth St BID SET ISSUE DATE 1222.002 REVISIONS IDRAWIN BY Author CHECKED BY Checker SHEET TITLE TYPICAL STEEL
	WEST BERKELEY SERVICE CENTER 1900 Sixth St BID SET ISSUE DATE 12.22.2023 IDA JOB NUMBER 23022 REVISIONS
	WEST BERKELEY SERVICE CENTER 1900 Sixth St BID SET ISSUE DATE 1222.002 REVISIONS IDRAWIN BY Author CHECKED BY Checker SHEET TITLE TYPICAL STEEL
	WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710 BID SET ISSUE DATE 12.22.003 IDA JOB NUMBER 23022 REVISIONS △

F	LOME	BING LEGEND
SYMBOLS	ABB'R	SERVICE
К		EQUIPMENT IDENTIFICATION
		DETAIL OR SECTION
P1.0		SHEET NUMBER
		NORTH ARROW (REFERENCE)
		POINT OF CONNECTION (POC) OR EXTENT OF WORK
	FP	
, , , , , , , , , , , , , , , , , , , ,		(E) PIPE TO BE REMAIN (E) PIPE TO BE REMOVED
	(N)	NEW
	(E)	EXISTING
	AP/AD	ACCESS PANEL/ACCESS DOOR
0	UP	ALL SERVICES
	DN	ALL SERVICES
0	VR-VTR	VENT RISE - VENT THRU ROOF
		DIRECTION OF FLOW
— s/w —	S/W	SANITARY OR WASTE
— SD —	SD	STORM DRAIN
— FS —	FS	FIRE SPRINKLER
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
	V	VENT
— G —	G	GAS
—CD—	CD	CONDENSATE DRAIN
	FCO	FLOOR CLEANOUT
		3-WAY CONTROL VALVE
R		2-WAY CONTROL VALVE
	BC	BALANCING COCK
		BALANCING VALVE
		BALL VALVE
	BV	BUTTERFLY VALVE
	PRV	
	TCV GV	TEMPERATURE CONTROL VALVE
	GLV	GLOBE VALVE
	CKV	CHECK VALVE
	0.00	STRAINER
_F\	AVA	AIR VENT VALVE-AUTOMATIC
	AVM	AIR VENT VALVE-MANUAL
	PGA	PRESSURE GAUGE
Υ		
	U	UNION CONNECTION
	U	PETE'S PLUG
	U	
T		PETE'S PLUG
	TP	PETE'S PLUG FLOOR DRAIN TRAP PRIMER
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT TEMPERATURE GAUGE
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT TEMPERATURE GAUGE TEMPERATURE SENSOR
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT TEMPERATURE GAUGE TEMPERATURE SENSOR FLOW SWITCH/SENSOR
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT TEMPERATURE GAUGE TEMPERATURE SENSOR FLOW SWITCH/SENSOR PRESSURE SENSOR/TRANSMITTER
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT TEMPERATURE GAUGE TEMPERATURE SENSOR FLOW SWITCH/SENSOR PRESSURE SENSOR/TRANSMITTER MAGNETIC STARTER
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT TEMPERATURE GAUGE TEMPERATURE SENSOR FLOW SWITCH/SENSOR PRESSURE SENSOR/TRANSMITTER MAGNETIC STARTER DIGITAL INPUT
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT TEMPERATURE GAUGE TEMPERATURE SENSOR FLOW SWITCH/SENSOR PRESSURE SENSOR/TRANSMITTER MAGNETIC STARTER DIGITAL INPUT DIGITAL OUTPUT
	TP TH	PETE'S PLUG FLOOR DRAIN TRAP PRIMER THERMOMETER THERMOSTAT TEMPERATURE GAUGE TEMPERATURE SENSOR FLOW SWITCH/SENSOR PRESSURE SENSOR/TRANSMITTER MAGNETIC STARTER DIGITAL INPUT DIGITAL OUTPUT ANALOG OUTPUT ELECTRICAL CONTROL WIRING
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ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
BHP	BRAKE HORSEPOWER/BOILER HORSEPOWER
BOP	BOTTOM OF PIPE
CFF	CAP FOR FUTURE
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CTE	CONNECT TO EXISTING
DN	DOWN
(D)	DISPOSE
(E)	EXISTING
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
F	FIRE SPRINKLER
FC	FLEXIBLE CONNECTION
FPM	FEET PER MINUTE
FSD	FIRE SMOKE DETECTOR
HTR	HEATER
HW	HOT WATER
180KHW	180 KITCHEN HOT WATER
HWR	RECIRCULATING HOT WATER
MFR	MANUFACTURER
(N)	NEW
NC	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN
PG	PRESSURE GAUGE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PSI	POUND PER SQUARE INCH
PSIG	POUND PER SQUARE INCH GAUGE
(R)	RELOCATED
RF	RETURN FAN
(R) RIO	RELOCATE ROUGH IN ONLY
RPM	REVOLUTION PER MINUTE
(S)	SALVAGE TO BE RE-INSTALLED
(S) SF	SUPPLY FAN
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
ТН	THERMOMETER
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VTR	VENT THRU ROOF
WPD	WATER PRESSURE DROP
WP	WEATHER OR WATER PROOF
WT	WEIGHT

 CALFORMA RESINCE ODE: 2022 CALFORMA RESINCE ODE: 2022 CALFORMA ELECTRICA CODE 2024 CALFORMA ELECTRICA CO	SCOPE OF WO
 COST TO THE OWNER. RESTORATION OF WALL OR FLOOR FINISH SHALL MATCH EXISTING. 18. ALL PLUMBING PIPING MATERIAL, PLUMBING FIXTURE, VALVE, FITTINGS AND ACCESSORIES SHALL BE 'LEAD-FREE' IN ACCORDANCE WITH CALIFORNIA REGULATION AB1953. PROVIDE SUBMITTAL FROM MANUFACTURER'S FOR COMPLIANCE. 19. THE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE MAINTAINED IN OPERATION DURING THE DEMOLITION AND INSTALLATION OF NEW WORK. WHEN A SYSTEM SHUTDOWN IS NECESSARY, OBTAIN A WRITTEN APPROVAL FROM THE OWNER PRIOR TO SHUTTING DOWN OF ANY MECHANICAL AND ELECTRICAL SYSTEMS. 	ENERAL: THIS SCOPE OF WORK DT INTENDED TO DESCRIBE TH RE INDICATED ON EACH DRAWN REMOVE AND DISPOSE EXIS PROVIDE NEW PLUMBING FI PLUMBING UTILITIES AS REQU REVIDE NEW JANITOR SINU UTILITIES AS REQUIRED. REMOVE AND DISPOSE EXIS RESTING AREA INCLUDING A PAD SUPPORT AND ANCHOF SYSTEM AND MATERIAL. PROVIDE NEW HYBRID HEAT REQUIRED. TEST AND COMM WRITTEN REPORT. PROVIDE HEATER, AMBIENT TEMPERA THROUGH THE WATER HEAT ELECTRIC HEATER MODE AN AT THE COMBINED MODE OF WATER HEATER. PROVIDE NEW EMERGENCY EXISTING GAS METER. MOD AND ACCEPTANCE FROM TH PROVIDE NEW RAIN WATER TERMINATE THE DRAIN PIPI PROVIDE PIPE SUPPORTS. . PRESSURE TEST ALL PLUM 9. FLUSH AND DISINFECT ALL
19. THE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE MAINTAINED IN OPERATION DURING THE DEMOLITION AND INSTALLATION OF NEW WORK. WHEN A SYSTEM SHUTDOWN IS NECESSARY, OBTAIN A WRITTEN APPROVAL FROM THE OWNER PRIOR TO SHUTTING DOWN OF ANY MECHANICAL AND ELECTRICAL SYSTEMS.P1.00PLU P2.0019. THE EXISTING MECHANICAL AND ELECTRICAL SYSTEMSP2.00PLU P2.10PLU P2.10	RAWING INDE
THE RIM OF BOWL.	 .00 PLUMBING LEGEND, SYME 2.00 PLUMBING DEMOLITION PLUMBING CONSTRUCTIO 3.01 PLUMBING DETAILS 3.02 PLUMBING FIXTURE SCHE

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ORK IS AN OUTLINE OF WORK INVOLVE FOR THIS PROJECT AND IS THE COMPLETE SCOPE OF WORK. THE DETAILED REQUIREMENTS AWING AND SPECIFICATION SECTION.

XISTING PLUMBING FIXTURES AS INDICATED.

G FIXTURES AS INDICATED. MODIFY AND EXTEND EXISTING REQUIRED.

INK AS INDICATED. MODIFY AND EXTEND EXISTING PLUMBING

EXISTING GAS WATER HEATER LOCATED ON THE ROOF OVER THE IG ALL ASSOCIATED STORAGE TANK, ALL PLUMBING, EQUIPMENT HORS. REPAIR AND PATCH ROOF TO MATCH EXISTING ROOFING

EAT PUMP WATER HEATER. MODIFY PLUMBING UTILITIES AS OMMISSION THE OPERATION OF THE WATER HEATER. SUBMIT A VIDE DATA FOR HOT WATER TEMPERATURE FROM THE WATER ERATURE, WATER INLET AND OUTLET PRESSURE, WATER FLOW EATER IN GPM, OUTLET WATER TEMPERATURE ON HEAT MODE, E AND COMBINED MODES, AMPERE DRAW FROM THE WATER HEATER E OF OPERATION. PROVIDE TRAINING FOR THE OPERATION OF THE

ICY EARTHQUAKE SHUT OFF VALVE ON GAS MAIN ADJACENT TO THE ODIFY EXISTING GAS PIPING AS NECESSARY. OBTAIN INSPECTION 1 THE CITY OF BERKELEY.

ER DRAIN FOR THE NEW ROOF OVER THE NEW WATER HEATERS. PIPING THROUGH EXISTING WALL WITH DOWNSPOUT NOZZLE. S.

JMBING PER CPC 2022.

LL WATER PIPING AND EQUIPMENT PER CPC 2022 AND AS SPECIFIED.

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DRAWN BY EPCE CHECKED BY EP SHEET TITLE PLUMBING LEGEND SYMBOLS, ABBV. GENERAL NOTES & SCOPE OF WORK

P1.00

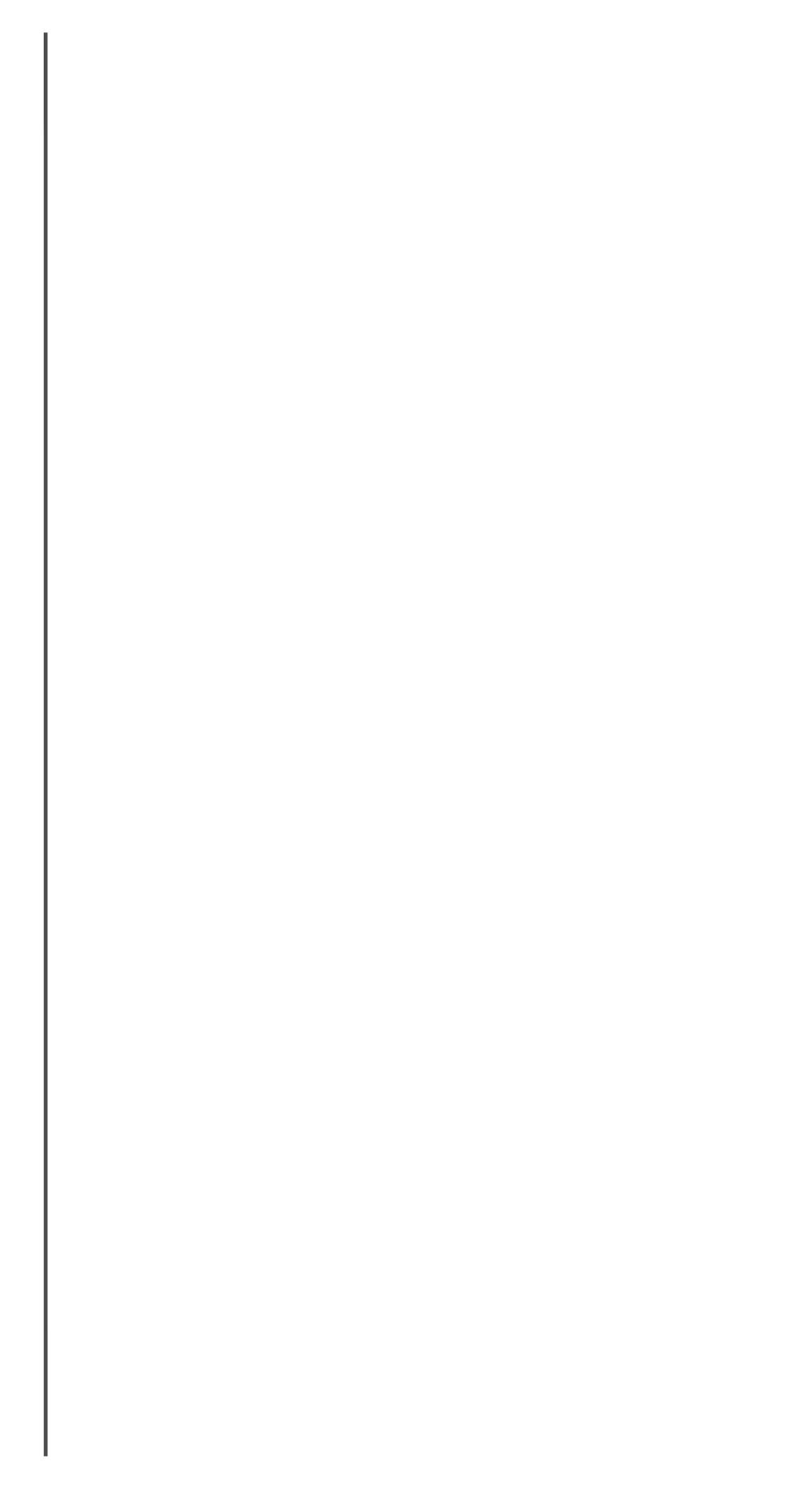
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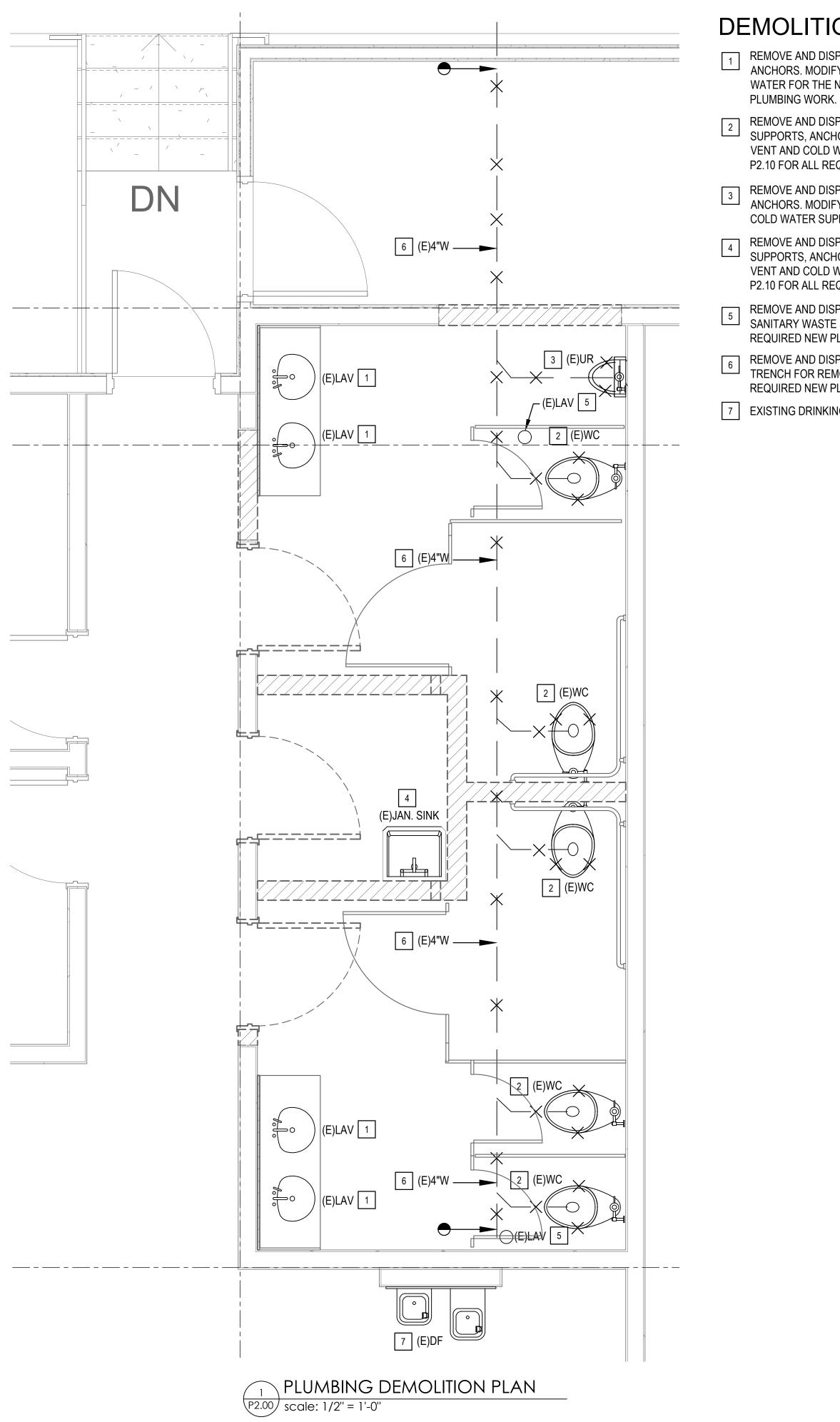
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YMBOLS, ABBREVIATIONS, GENERAL NOTES & SCOPE OF WORK

TION PLANS

CHEDULE AND SPECIFICATIONS





DEMOLITION KEYED NOTES

REMOVE AND DISPOSE EXISTING (E) LAVATORY AND ASSOCIATED SUPPORTS, ANCHORS. MODIFY PLUMBING FOR SANITARY WASTE & VENT, HOT AND COLD WATER FOR THE NEW LAVATORY. REFER TO P2.10 FOR ALL REQUIRED NEW

REMOVE AND DISPOSE EXISTING (E) WATER CLOSET AND ASSOCIATED SUPPORTS, ANCHORS. MODIFY EXISTING PLUMBING FOR SANITARY WASTE & VENT AND COLD WATER SUPPLY FOR THE NEW WATER CLOSET. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.

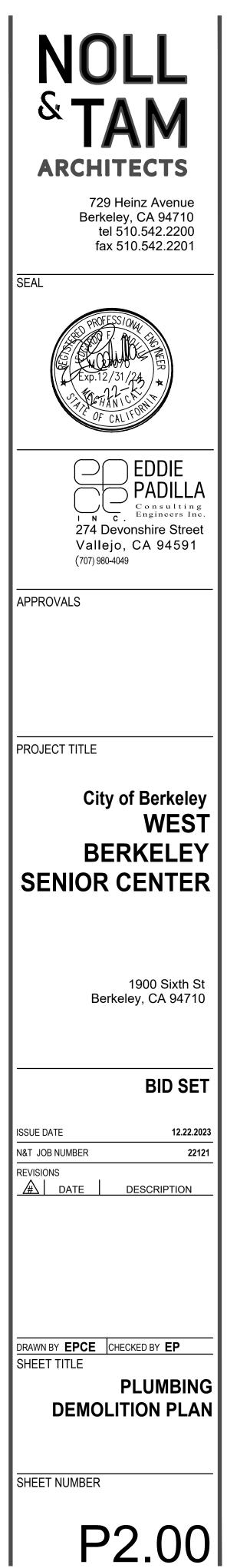
REMOVE AND DISPOSE EXISTING (E) URINAL AND ASSOCIATED SUPPORTS, ANCHORS. MODIFY EXISTING PLUMBING FOR SANITARY WASTE & VENT AND COLD WATER SUPPLY FOR THE NEW WATER CLOSET.

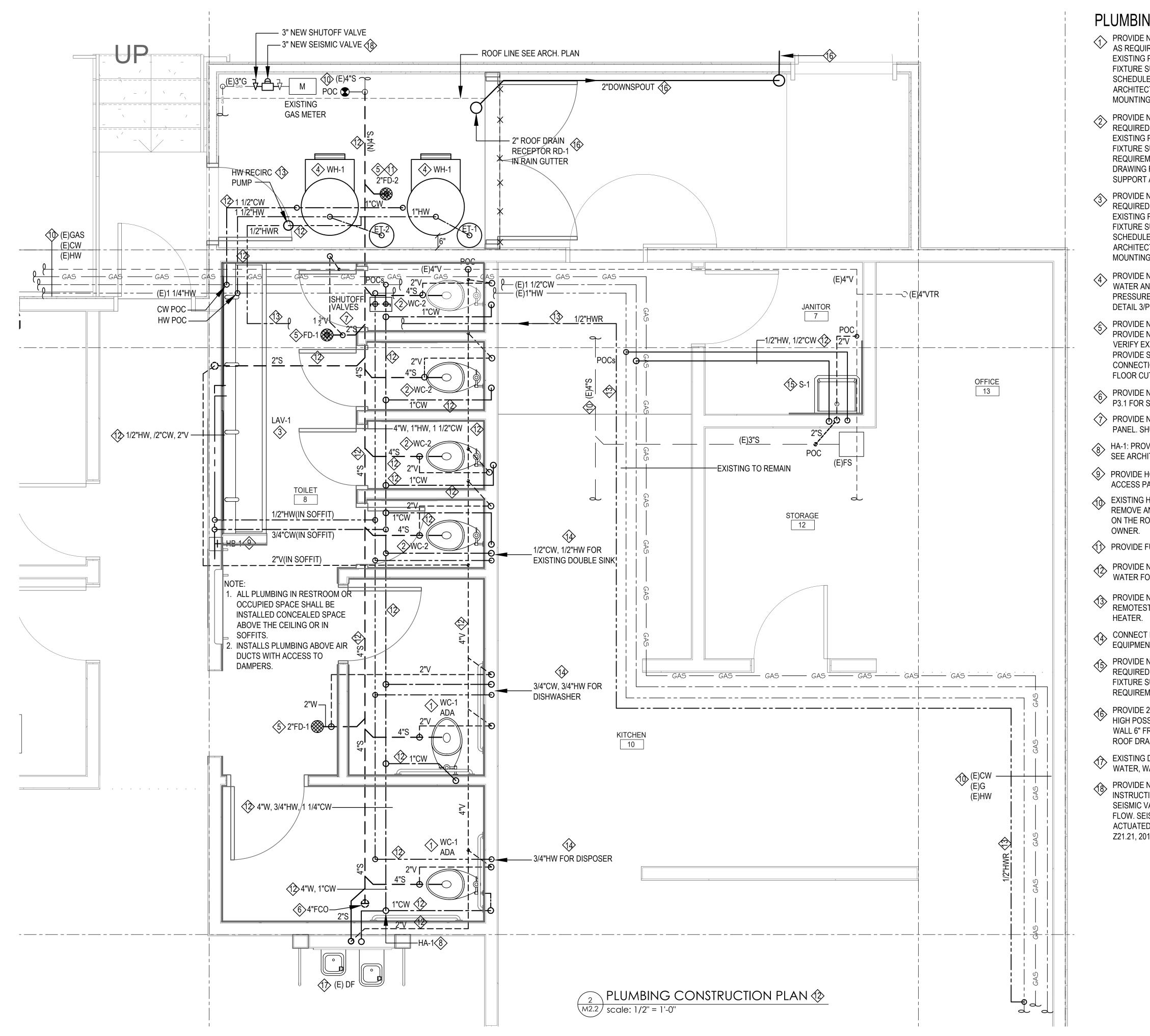
4 REMOVE AND DISPOSE EXISTING (E) JANITOR SINK AND ASSOCIATED SUPPORTS, ANCHORS. MODIFY EXISTING PLUMBING FOR SANITARY WASTE & VENT AND COLD WATER SUPPLY FOR THE NEW WATER CLOSET. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.

REMOVE AND DISPOSE EXISTING (E) FLOOR DRAIN. MODIFY PLUMBING FOR SANITARY WASTE & VENT FOR THE NEW FLOOR DRAIN. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.

REMOVE AND DISPOSE EXISTING SEWER PIPING. CUT CONCRETE FLOOR AND TRENCH FOR REMOVAL OF EXISTING SEWER PIPING. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.

7 EXISTING DRINKING FOUNTAIN TO REMAIN.





PLUMBING NEW CONSTRUCTION KEYED NOTES:

PROVIDE NEW FLOOR MOUNTED WATER CLOSET (ADA). PROVIDE NEW PLUMBING AS REQUIRED FOR COLD WATER, SANITARY WASTE DRAIN AND VENTS. VERIFY EXISTING PIPING CONNECTION CONDITION, LOCATION AND SIZES. PROVIDE NEW FIXTURE SUPPORT CARRIER AND ANCHORS. SEE DRAWING P3.02 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS. REFER TO ARCHITECTURAL DRAWING FOR ADA ACCESSIBILITY EXACT LOCATION AND MOUNTING HEIGHT. ADJUST PIPING AND SUPPORT ACCORDINGLY.

PROVIDE NEW FLOOR MOUNTED WATER CLOSET. PROVIDE NEW PLUMBING AS REQUIRED FOR COLD WATER, SANITARY WASTE DRAIN AND VENTS. VERIFY EXISTING PIPING CONNECTION CONDITION, LOCATION AND SIZES. PROVIDE NEW FIXTURE SUPPORT CARRIER AND ANCHORS. SEE DRAWING P3.1 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATION AND MOUNTING HEIGHT. ADJUST PIPING AND SUPPORT ACCORDINGLY.

PROVIDE NEW WALL MOUNTED LAVATORY (ADA). PROVIDE NEW PLUMBING AS REQUIRED FOR COLD WATER, SANITARY WASTE DRAIN AND VENTS. VERIFY EXISTING PIPING CONNECTION CONDITION, LOCATION AND SIZES. PROVIDE NEW FIXTURE SUPPORT CARRIER AND ANCHORS. SEE DRAWING P3.02 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS. REFER TO ARCHITECTURAL DRAWING FOR ADA ACCESSIBILITY EXACT LOCATION AND MOUNTING HEIGHT. ADJUST PIPING AND SUPPORT ACCORDINGLY.

PROVIDE NEW HYBRID WATER HEATER AND ASSOCIATED PLUMBING FOR HOT WATER AND COLD WATER, DRAIN, ISOLATION VALVES, EXPANSION TANK, PRESSURE RELIEF DRAIN, SEISMIC BRACE, SUPPORTS AND ANCHORS. REFER TO DETAIL 3/P3.01 FOR DETAILED REQUIREMENTS.

PROVIDE NEW FLOOR DRAIN WITH SANITARY VENT AND TRAP PRIMER (TP-1). PROVIDE NEW PLUMBING AS REQUIRED SANITARY WASTE DRAIN AND VENTS. VERIFY EXISTING PIPING CONNECTION CONDITION, LOCATION AND SIZES. PROVIDE SEE DRAWING P3.02 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATION AND FLOOR CUTTING AND PATCHING. ADJUST PIPING AND SUPPORT ACCORDINGLY.

PROVIDE NEW WALL & FLOOR CLEANOUTS WITH ACCESS PANEL. SEE DRAWING P3.1 FOR SCHEDULED REQUIREMENTS.

PROVIDE NEW SHUTOFF VALVES FOR CW AND HW. PROVIDE NEW 18"X18" ACCESS PANEL. SHUTOFF VALVES.

ARRESTORS. PROVIDE 18"X18" ACCESS PANEL. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.

PROVIDE HOSE BIBB. PROVIDE 12"X12" STAINLESS STEEL HOUSING WITH FRONT ACCESS PANEL WITH VANDAL PROOF KEYED LOCK.

EXISTING HOT WATER, COLD WATER, SANITARY AND VENT PIPING TO REMAIN. REMOVE AND DISPOSE EXISTING GAS LINE FOR EXISTING GAS WATER HEATER ON THE ROOF. CAP AS INDICATED. OBTAIN WRITTEN APPROVAL FROM THE

PROVIDE FUNNEL DRAIN FOR HYBRID WATER HEATER DRAIN.

PROVIDE NEW PLUMBING FOR SEWER, SANITARY VENTS, COLD WATER AND HOT
WATER FOR THE TOILET FACILITY.

PROVIDE NEW PLUMBING FOR RECIRCULATING HOT WATER FROM THE REMOTEST PLUMBING FIXTURE IN THE KITCHEN AND BACK TO THE WATER

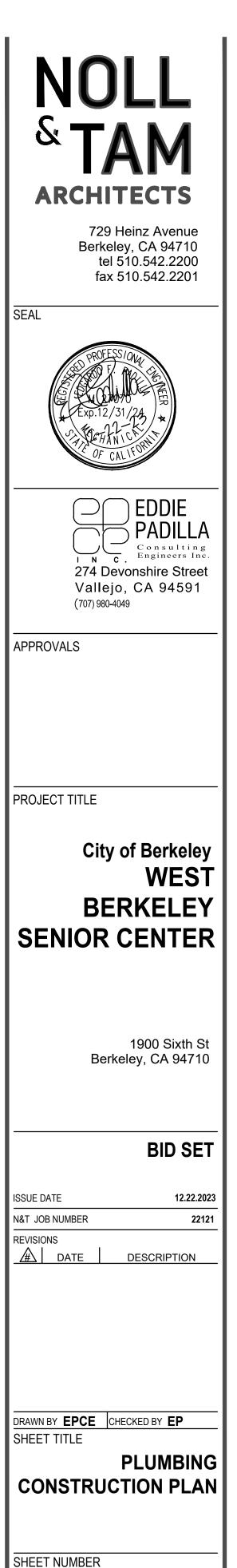
CONNECT NEW PLUMBING FOR HOT AND COLD WATER FOR ALL EXISTING KITCHEN EQUIPMENT SERVED FROM THE RESTROOM. FIELD VERIFY.

PROVIDE NEW WALL MOUNTED JANITOR'S SINK. PROVIDE NEW PLUMBING AS REQUIRED FOR COLD WATER, SANITARY WASTE DRAIN AND VENTS. PROVIDE NEW FIXTURE SUPPORT AND ANCHORS. SEE DRAWING P3.02 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS.

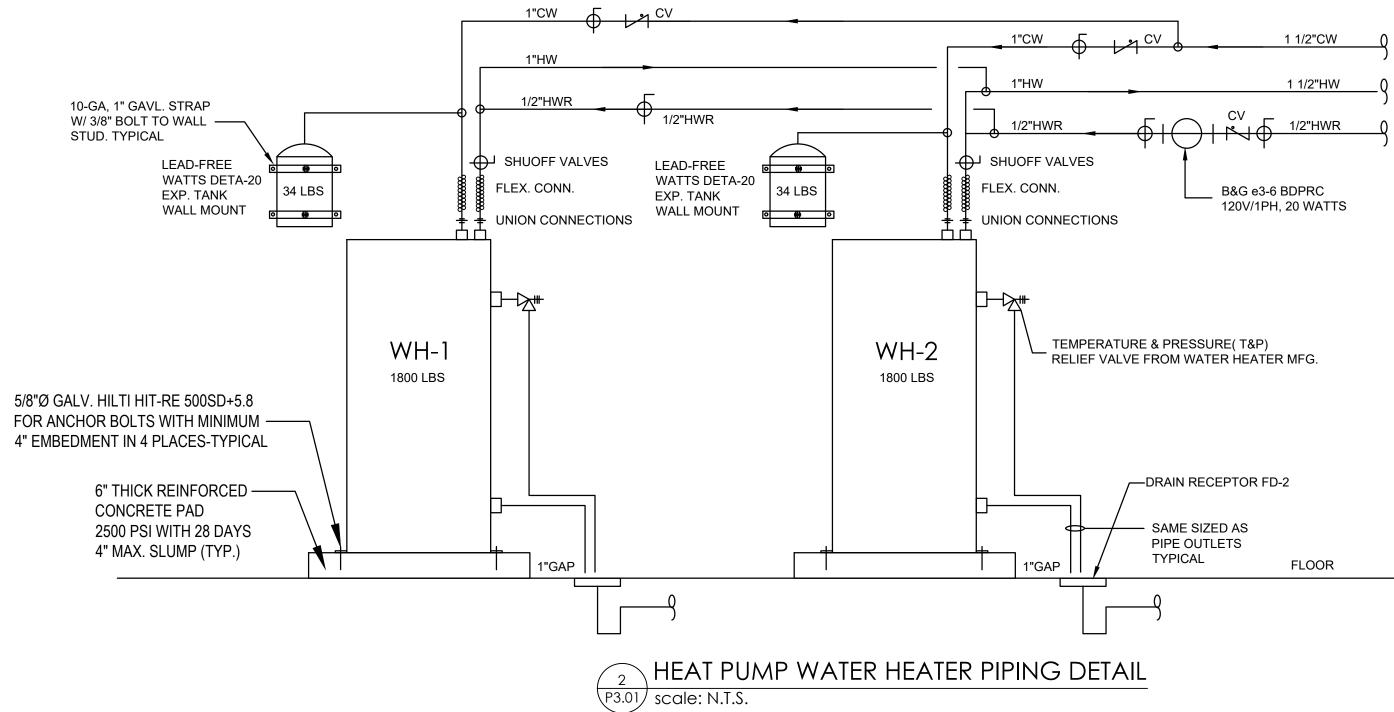
PROVIDE 2" ROOF DRAIN RECEPTOR IN ROOF GUTTER. ROUTE DRAIN PIPE AS HIGH POSSIBLE AND TERMINATE ON THE PAVEMENT THOUGH EXISTING EXTERIOR WALL 6" FROM THE PAVEMENT. PROVIDE STEEL PIPE SLEEVE THROUGH WALL. ROOF DRAIN SHALL BE ZURN

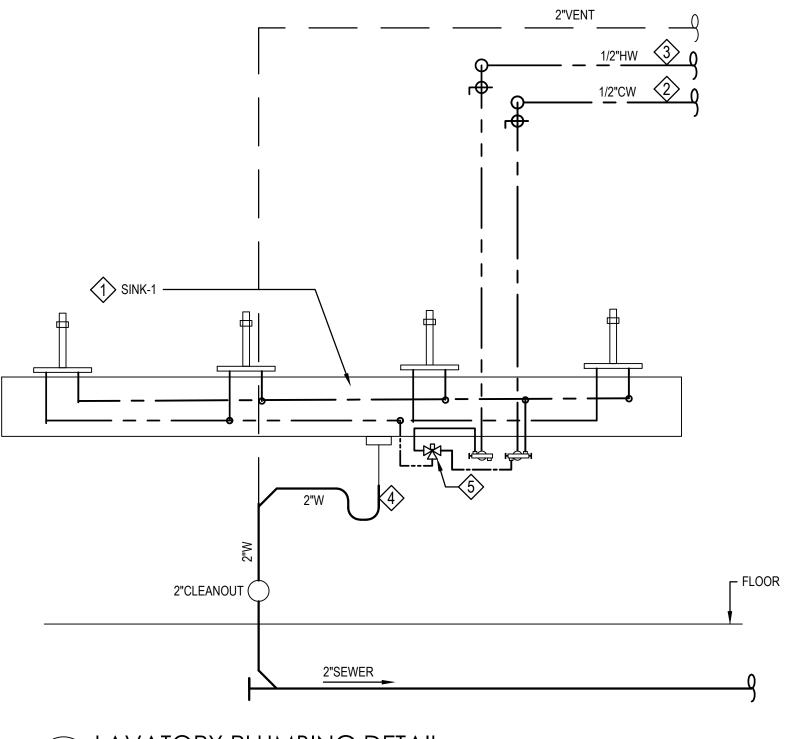
EXISTING DRINKING FOUNTAIN TO REMAIN. CONNECT NEW PLUMBING FOR COLD WATER, WASTE AND VENT FOR THE DRINKING FOUNTAIN. FIELD VERIFY.

PROVIDE NEW 3" SEISMIC VALVE. INSTALL AND TEST PER MANUFACTURER'S INSTRUCTION. OBTAIN APPROVAL FROM CITY INSPECTION. SEISMIC VALVE SHALL BE SEISMIC PACIFIC PRODUCT MODEL 315(60), HORIZONTAL FLOW. SEISMIC VALVE SHALL MEET CALIFORNIA STANDARDS FOR EARTHQUAKE ACTUATED AUTOMATIC GAS SHUT OFF SYSTEM STANDARD NO. 12-12-1, ANSI Z21.21, 2012 AND ASCE 25-06 STANDARDS.



P2.10





LAVATORY PLUMBING DETAIL 1 M3.01 scale: NTS

NOTES:

- SINK.

- PRESSURE OF 150 PSI AND MAXIMUM TEMPERATURE OF 200°F. CSA B125 CERTIFIED, LISTING: ASSE 1017 AND IAPMO UPC.

PROVIDE ADA LAVATORY. PROVIDE HOT AND COLD WATER, SANITARY WASTE DRAIN AND VENTS PLUMBING AS REQUIRED. REFER TO ARCHITECTURAL DRAWING FOR SPECIFICATIONS AND EXACT LOCATION. PLUMBING INSTALLATION SHALL MEET ADA CLEARANCE REQUIREMENTS UNDER THE

2 1/2" COLD WATER SUPPLY. PROVIDE WATER SUPPLY TO THE NEW SINK. ARRANGE PIPING, INSULATION AND SUPPORTS TO MEET ADA CLEARANCE UNDER THE SINK.

3 1/2" HOT WATER SUPPLY. PROVIDE WATER SUPPLY TO THE NEW SINK. ARRANGE PIPING, INSULATION AND SUPPORTS TO MEET ADA CLEARANCE UNDER THE SINK.

 PROVIDE INSULATION WITH PVC JACKET FOR SINK P-TRAP AND TAIL PIEACE FOR ADA COMPLIANCE.

PROVIDE 1/2" HOT WATER THERMOSTATIC CONTROL VALVE WATTS MODEL LFL 1170-M2 SET AT 115°F ADJUSTABLE TO 120°F., LEAD-FREE, BRASS BODY, STAINLESS STEEL SPRINGS, COPPER

THERMOSTAT ASSEMBLY EPDM O RING WITH INTEGRAL CHECK VALVE, RATED FOR MAXIMUM

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SPECIFICATIONS

- ALL WORK SHALL BE IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE 2022.
- HOT. COLD AND TEMPERED WATER: COPPER TUBE TYPE L. HARD DRAWN ASTM M-88 WITH WROUGHT COPPER FITTINGS WITH 95% TIN. 5% ANTIMONY SOLDER JOINTS. PIPING BELOW GRADE SHALL FACTORY POLYETHYLENE COATED COPPER TYPE K WITH BRAZED JOINTS AS MANUFACTURED BY 'AQUA-SHIELD' OR WITH 'PLUMBEST' 10 MIL PVC PIPE WRAP.. TYPE OF COATING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR EQUAL.
- SHUTOFF VALVES: BALL VALVE 600 WOG, TWO-PIECE BRONZE BODY ASTM B-584 WITH TFE SEATS AND SEAL WITH BRONZE TRIM. BALL VALVE SHALL BE NIBCO OR EQUAL. PROVIDE ACCESS PANEL
- 4. DIELECTRIC COUPLER: PROVIDE DIELECTRIC COUPLER BETWEEN DISSIMILAR PIPING MATERIAL. COUPLERS SHALL BE RED BRASS NIPPLE, WITH MINIMUM LENGTH OF 6 TIMES PIPE DIAMETER. COUPLER SHALL BE DIELECTRIC WATERWAY STYLE 4 OR EQUAL.
- 5. PIPE INSULATION: INSULATE BOTH HOT AND COLD WATER WITH 1" THICK FIBERGLASS FOR INDOOR INSTALLATION. PROVIDE 1" THICK FIBERGLASS INSULATION WITH ALUMINUM JACKET FOR OUTDOOR INSTALLATION. INSULATION SHALL BE OWENS CORNING SSLII WITH ASJ OR APPROVED EQUAL. PROVIDED CALCIUM SILICATE INSERTS AT SUPPORT POINTS. INSERTS SHALL BE CLEMENT INSULATED PIPE SUPPORT MODEL HW OR EQUAL.
- SANITARY WASTE AND VENT PIPING:
 - A. EQUIPMENT WASTE ABOVE GROUND COPPER DWV. ASTM B-306 WITH DRAINAGE WYE FITTINGS WITH 95% TIN. 5% ANTIMONY SOLDER JOINTS.
 - BELOW GRADE CAST IRON, HEAVY WEIGHT, BELL AND SPIGOT ENDS WITH SEALITE NO.110 CAULKING, B. NEOPRENE GASKET OR MECHANICAL JOINTS. SUPPORT FROM FLOOR SLAB AT 5 FEET INTERVAL MAXIMUM.
 - RAIN WATER GALVANIZED STEEL PIPE SCHEDULE 40, THREADED JOINTS C.
- 7. PIPE SUPPORT: UNISTRUT, CLAMP AND ANCHORS. SUPPORT WATER PIPING AT 6 FEET ON CENTER: SUPPORT SANITARY SEWER AND VENTS AT 5 FEET ON CENTER.
- 8. PIPING IDENTIFICATION: LABEL PIPING TO ASME ANSI STANDARDS, LABELS SHALL BE DURAMARK OR EQUAL.
- 9. WALL CLEANOUT ACCESS PANEL: ZURN Z1441 WALL CLEANOUT, DURA-COATEDCAST IRON BODY, GAS AND WATERTIGHT TAPERED THREAD PLUG, AND ROUND, SMOOTH STAINLESS STEEL ACCESS COVER WITH SECURING SCREW OR EQUAL.
- 10. ACCESS DOORS
 - ACCESS DOORS SHALL BE INSTALLED WHERE VALVES, SWITCHES, DAMPERS, CONTROLLERS OR OTHER SIMILAR EQUIPMENT ARE INSTALLED ABOVE GWB CEILINGS OR BEHIND WALLS OR ANYWHERE THEY BECOME INACCESSIBLE FOR INSPECTION, MAINTENANCE OR SERVICING. ACCESS DOORS SHALL BE 24" BY 24" IN GENERAL AND A MINIMUM OF 10" BY 18", EXCEPT PLUMBING VALVE ACCESS DOORS IN TILE AREAS, SHALL BE 8" X 8" OR 12" X 12" TO MATCH TILE DIMENSIONS UNLESS OTHERWISE INDICATED. ACCESS DOORS SHALL BE SIZED TO SUIT THE ACCESS REQUIREMENT TO SERVICE THE EQUIPMENT AND SHALL BE LOCATED INDIVIDUALLY AND IN A MANNER APPROVED BY THE OWNER'S REPRESENTATIVE AND TO MEET REQUIREMENTS SPECIFIED HERE AND ELSEWHERE, FOR SPECIFIC APPLICATIONS
 - ACCESS DOORS SHALL BE SET SQUARE AND FLUSH. ACCESS PANELS SHALL BE LOCATED IN CLOSETS. Β. STORAGE ROOMS AND/OR OTHER NON-PUBLIC AREAS AND SHALL BE CONSTRUCTED IN A WORKMANLIKE MANNER. DOORS SHALL BE POSITIONED SO THAT THE JUNCTION CAN BE EASILY REACHED. WHERE ACCESS PANELS ARE REQUIRED IN CORRIDORS, LOBBIES OR OTHER HABITABLE AREAS, THEY WILL BE LOCATED AS APPROVED BY THE OWNER'S REPRESENTATIVE WITH KEYED LOCKS.
 - C. ACCESS DOORS SHALL BE CONSTRUCTED OF STEEL WITH PRIMER COAT OF RUST INHIBITIVE PAINT AND SHALL HAVE CONTINUOUS PIANO HINGE. AS MANUFACTURED BY INLAND STEEL PRODUCTS MILCOR. MIAMI, WALSH-HANNON OR EQUAL. DOOR LOCKS SHALL BE SCREWDRIVER OPERATED WITH STAINLESS STEEL CAM AND STUDS.
- 11. DISINFECTION PROCEDURE:
 - A. DISINFECT ALL NEW DOMESTIC WATER PIPING WORK TO THE POINT OF CONNECTIONS TO EXISTING WATER DISTRIBUTION. PROVIDE ISOLATION VALVE AT THE POINT OF CONNECTION.
 - POST SUITABLE WARNING SIGNS AT EACH OUTLET: 'WARNING DO NOT USE WATER SYSTEM BEING B. CHLORINATED'.
 - C. INJECT DISINFECTANT SOLUTION INTO THE SYSTEM THROUGH THE SERVICE COCK BY MEANS OF A PUMP, OR OTHER PRESSURE DEVICE, AT A SLOW CONTINUOUS RATE, SIMULTANEOUS WITH A REDUCED FLOW FROM THE WATER MAIN. UNTIL THE ORTHOTOLIDIN TEST FOR RESIDUAL CHLORINE AT EACH OUTLET SHOWS A CONCENTRATION OF AT LEAST 50PPM. BUT NOT MORE THAN 100 PPM.
 - D. CLOSE ALL OUTLETS AND VALVES, INCLUDING THE SERVICE VALVE AT THE MAIN AND THE INJECTION COCK. RETAIN THE CHLORINATED WATER IN THE SYSTEM FOR 24 HOURS.
 - AFTER 24 HOUR HOLDING PERIOD, THE RESIDUAL CHLORINE CONCENTRATION SHALL BE NOT LESS THE 50 PPM AS SHOWN BY THE ORTHOTOLIDIN TEST.
 - DRAIN AND FLUSH ENTIRE DOMESTIC WATER SYSTEM UNTIL ORTHOLIDIN TEST SHOW BACKGROUND F. RESIDUAL CHLORINE CONCENTRATION AT ANY OUTLET.
 - G. ENVIRONMENTAL, HEALTH AND SAFETY (EH&S) WILL DETERMINE WHETHER SAMPLES OF WATER MUST BE COLLECTED AND ANALYZED FOR THE DETERMINATION OF BACTERIOLOGICAL QUALITY.
 - H. STANDARDS NECESSARY FOR APPROVAL:
 - a. THE WATER SYSTEM SHALL BE UNIFORMLY CHLORINATED UNDER THE SUPERVISION OF ENVIRONMENTAL, HEALTH AND SAFETY (EH&S) AS OUTLINED IN THE 'DISINFECTION PROCEDURE'.
 - b. THE RESULT OF WATER SAMPLE ANALYSIS SHALL BE NEGATIVE FOR THE COLIFORM ORGANISM.
 - c. IF THE TEST FOR THE BACTERIOLOGICAL QUALITY OF THE WATER IN THE SYSTEM DOES NOT MEET THE STANDARDS, REPEAT THE DISINFECTION PROCEDURE UNTIL THE SPECIFIED STANDARDS ARE MET.
 - FINAL APPROVAL: ENVIRONMENTAL, HEALTH AND SAFETY (EH&S) WILL GIVE WRITTEN APPROVAL TO THE OWNER FOR ACCEPTANCE AND USE OF THE WATER SYSTEM AFTER THE ABOVE PROCEDURES HAVE BEEN SUCCESSFULLY COMPLETED AND THE STANDARDS MET.

FIXTURE TAG
WC-1 (ADA)
WC-2
LAV-1
S-1
FD-1
RD-1
1. ALL WATE

PLUMBING FIXTURE SCHEDULE

		R	DUGH -	IN				
DESCRIPTION	SS V CW HW			HW	TW	REMARKS		
WATER CLOSET	4"	2"	1"	-	-	FLOOR MOUNTED, ADA ACCESSIBLE WHERE INDICATED.		
WATER CLOSET	4"	2"	1"	-	-	FLOOR MOUNTED		
LAVATORY	2"	1 1/2"	1/2"	1/2"	-	WALL HUNG, ADA ACCESSIBLE WHERE INDICATED.		
JANITOR'S SINK	3	-	1/2"	1/2"	-	WALL MOUNTED		
FLOOR DRAIN	2"	1 1/2"	1/2"	-	-	PROVIDE TRAP PRIMER.		
ROOF DRAIN	2"	-	-	-	-	PROVIDE GALVANIZED STEEL PIPE, SCHEDULE 40.		

ALL WATER CLOSETS SHALL USE A MAXIMUM OF 1.28 GALLONS PER FLUSH.

2. ALL LAVATORY FAUCETS SHALL BE FITTED WITH AN APPROVED FLOW CONTROL DEVICE ALLOWING A MAXIMUM OF 0.5 GPM. PUBLIC LAVATORIES SHALL HAVE CONTROLS TO LIMIT THE WATER TEMPERATURE TO 110°F ADJUSTABLE TO 120°F MAXIMUM. PROVIDE

3. REFER TO ARCHITECTURAL DRAWING FOR PLUMBING FIXTURE LOCATION AND MOUNTING HEIGHT.

PLUMBING FIXTURES SPECIFICATIONS

- WATER CLOSET: WC-1 ADA ACCESSIBLE TRANSFORMER.
- 2. WATER CLOSET: WC-2 TRANSFORMER.
- LAVATORY: LAV-1 (SEE ARCHITECTURAL PLAN FOR DETAILED SPECIFICATIONS) FRAME AND ANGLEG STAINLESS STEEL ENCLOSURE.
- WATER CLOSET FLUSHOMETER.
- VACUUM BREAKER FROM CLOSIEST WATER CLOSET FLUSHOMETER.
- PANEL.
- 6.
- ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE LOCATION AND MOUNTING HEIGHT
- SHALL BE SOLID NUT CONSTRUCTION
- JANITOR'S SINK S-1:
- 10. HYBRID ELECTRIC HEAP PUMP WATER HEATER WH-1 AND WH-2: AND DETAILED REQUIREMENTS AS LISTED BELOW:
 - 119 GALLON WATER STORAGE CAPACITY.
 - RATED 3.05 HP AT 208/1PH/60Hz HEAT PUMP POWER, 22 KW INPUT
 - 150°F MAXIMUM WATER TEMPERATURE ON HYBRID MODE, 180°F ON ELECTRIC MODE.
 - MAXIMUM 59 dB OPERATING NOISE.
 - DUAL EVAPORATOR FANS.
 - 182 GALLON PER HOUR (GPH) HEATER RECOVERY
 - 349 GPH FIRST HOUR DELIVERY, 238 GPH 3 HOUR DELIVERY AVERAGE.
 - 150°F MAXIMUM TEMPERATURE HYBRID MODE. 180°F ELECTRIC MODE
- 3.3 LBS. R 134a REFRIGERANT WITH 4.2 COP.
- MEETS DOE STAND BY ENERGY LOSS
- 500 POUNDS WEIGHT
- 11. WATER HEATER EXPANSION TANK ET-1 & ET-2: PRE-PAINTED AT THE FACTORY.
- 12 ROOF DRAIN RECETOR RD-1: SHALLOW SUMP WITH FLASHING FLANGE AND SIDE THREADED OUTLET CONNECTION
- STANDARD NO. 12-12-1, ANSI Z21.21, 2012 AND ASCE 25-06 STANDARDS.

FURNISH AMERICAN STANDARD "MADERA FLOWISE" NO. 2234.128 FLOOR-MOUNT, 16-1/2" HEIGHT, ELONGATED, WHITE, VITREOUS CHINA, TOP SPUD, 1.28 GPF, EVERCLEAN SURFACE. FLUSH VALVE SHALL BE 1" HARDWIRED TOP SPUD. 'SELECTRONIC' SENSOR ACTIVATED FLUSHOMETER WITH OVERRIDE BUTTON AND VICINITY SENSOR HAND FREE OPERATION, NON-HOLD OPEN INTEGRAL SOLENOID OPERATOR WITH NO VISIBLE FASTENERS, BACK-PRESSURE ANGLE VALVE, VANDAL RESISTANT STOP CAP, VACUUM BREAKER. FULLY MANUAL OVERRIDE BUTTON TO FLUSH THE VALVE ON POWER LOSS. FURNISH TOILET SEAT, WHITE COLOR. PROVIDE ACCESS TO FLUSH VALVE CONTROL ON THE WIDE SIDE FOR ACCESSIBLE (ADA) ACCESS. PROVIDE POWER KIT WITH

FURNISH AMERICAN STANDARD "MADERA FLOWISE" NO. 2234.128 FLOOR-MOUNT, 15" HEIGHT, ELONGATED, WHITE, VITREOUS CHINA, TOP SPUD, 1.28 GPF, EVERCLEAN SURFACE. FLUSH VALVE SHALL BE 1" HARDWIRED TOP SPUD, 'SELECTRONIC' SENSOR ACTIVATED FLUSHOMETER WITH OVERRIDE BUTTON AND VICINITY SENSOR HAND FREE OPERATION, NON-HOLD OPEN INTEGRAL SOLENOID OPERATOR WITH NO VISIBLE FASTENERS, BACK-PRESSURE ANGLE VALVE, VANDAL RESISTANT STOP CAP, VACUUM BREAKER. FULLY MANUAL OVERRIDE BUTTON TO FLUSH THE VALVE ON POWER LOSS. FURNISH TOILET SEAT, WHITE COLOR. PROVIDE ACCESS TO FLUSH VALVE CONTROL ON THE WIDE SIDE FOR ACCESSIBLE (ADA) ACCESS. PROVIDE POWER KIT WITH

PROVIDE SONOMA CAST STONE WALL-HUNG LAVATORY (SINK), FABRICATED FROM COLORED CONCRETE MATERIAL: DOVE. FAUCETS SHALL BE HARD-WIRED AND SHALL BE SENSOR-ACTIVATED SLOAN FAUCET MODEL EFX-277, SENSOR ACTIVATED CONTROLS WITH SOLAR MODULE. FAUCETS SHALL BE RATED FOR 0.5 GPM AT 60 PSI. COPPER SUPPLY TUBE INLETS, COVER PLATE, CHROME FINISH, TAILPIECE, BRASS CRAFT P-TRAP, BRASS, CHROME FLEXIBLE SUPPLIES. PROVIDE LAVATORY COMPLETE WITH MANUFACTURER WALL SUPPORT

FLOOR DRAIN FD-1 : JOSAM 30000-E, CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH 1/2" PRIMER TAP, POLISHED NICKEL BRONZE, HEAVY DUTY. INVERTER STRAINER. PROVIDE TRAP PRIMER WITH SLOAN VBF-72-A WITH VACUUM BREAKER FROM CLOSIEST

4. FLOOR DRAIN FD-2 : JOSAM 30000-E3, CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH 1/2" PRIMER TAP, POLISHED NICKEL BRONZE, HEAVY DUTY, INVERTER STRAINER WITH INTEGRAL OVAL FUNNEL. PROVIDE TRAP PRIMER WITH SLOAN VBF-72-A WITH

5. WATER HAMMER ARRESTOR (HA-1): JAY R. SMITH, 5220 SERIES, 1" CONNECTION, PISTON TYPE. WITH EPDM O-RING, LEAD-FREE JOINT, 60 PSIG AIR CHARGE, THREADED TYPE K COPPER, 95-5 SOLDER, RATED AT 212°F, 200 PSIG. UNIT TO COMPLY WITH ANSI 1010 WATER HAMMER ARRESTOR. PROVIDE 12X12 STAINLESS STEEL ACCESS

REFER TO ARCHITECTURAL DRAWINGS FOR ALL PLUMBING FIXTURE LOCATION AND MOUNTING HEIGHT. PLUMBING FIXTURE CARRIERS OR WALL SUPPORTS SHALL BE ADJUSTABLE J. R. SMITH OR EQUAL. REFER TO

8. PROVIDE CLEANOUTS WITH BRASS CAPS AND SCREWS SAME SIZE AS PIPE AT THE ENDS OF BRANCHES ON SOIL AND WASTE PIPING, AND IN SUCH OTHER PORTIONS OF THE PIPING WHERE RUN IS OVER 50'-0". BRASS CLEANOUTS

WALL MOUNTED JANITOR'S SINK 'AKRON' SERVICE SINK MODEL 7695.008 ENAMELED CAST IRON, 3" OUTLET, WITH WALL SUPPORT HANGER AND RIM GUARD, 24"X20 1/2"X10 1/2" DEEP BOWL, MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS ASME A1112.19.1 FOR CAST IRON PLUMBING FIXTURES. PROVIDE AMERICAN STANDARD MODEL EXPOSED YOKE WALL-MOUNT UTILITY FAUCET 8440.243 WITH VACUUM BREAKER, CERAMIC DISC VALVE, INTEGRAL SUPPLY STOPS, OFFSET SHANKS WITH INTEGRAL CHECK VALVES, VANDAL-RESISTANT, 3/4" THREADED HOSE END, 1/2" NPT FEMALE INLETS, 8" CENTERS FAUCET. 3" STANDARD IRON P-TRAP 7798.030.

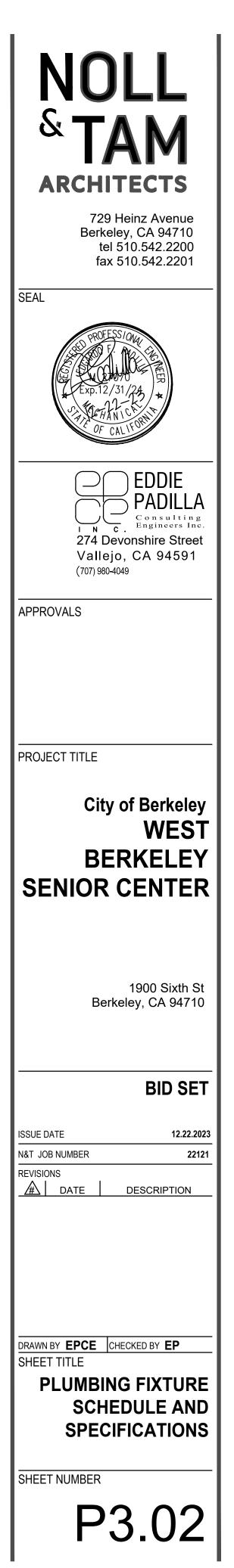
PROVIDE TWO (2) A.O. SMITH MODEL CAHP-120, FULLY INTEGRATED COMMERCIAL ELECTRIC HEAT PUMP WATER HEATER, RATED FOR 208 VOLT/1PH/ 60 Hz, UL LISTED, SHALL MEET NSF 5 REQUIREMENTS, TOUCH SCREEN LCD ELECTRONIC DISPLAY AND CONTROLS WITH DIAGNOSTIC AND TROUBLESHOOTING INFORMATION, 160 PSI WORKING PRESSURE, EQUIPPED WITH COMMERCIAL GRADE ANODE. ALL INTEGRAL PART OFF THE HEATER EXPOSED TO WATER SHALL BE GLASS-LINED WITH ALKALINE BOROSILICATE COMPOSITION FUSED TO STEEL. THE WATER HEATER SHALL PROVIDE WITH FACTORY TEMPERATURE AND PRESSURE RELIEF VALVE. CAPACITY

HEATER ELEMENTS:9 KW TOTAL AT 208 VOLT/1PH/60Hz. UL LISTED, MEETS NSF5 REQUIREMENTS

WATTS MODEL DETA-20, 8-GALLON, PRE-CHARGED STEEL THERMAL EXPANSION TANK WITH FIXED BUTYL BLADDER. THE TANK SHALL HAVE A BLADDER INTEGRITY MONITOR AND A CHARGING VALVE CONNECTION (STANDARD TIRE VALVE) FOR ON-SITE CHARGING OF THE TANK. THE TANK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION VIII OF THE ASME BOILER PRESSURE VESSEL CODE. THE TANK SHALL BE

JOSAM SERIES 24500-90 COATED CAST IRON SILL DRAIN SECURED LOW BRONZE COME CLAMP RING AND

13 NATURAL GAS SEISMIC VALVE SHALL BE SEISMIC PACIFIC PRODUCT MODEL 315(60), HORIZONTAL FLOW. SEISMIC VALVE SHALL MEET CALIFORNIA STANDARDS FOR EARTHQUAKE ACTUATED AUTOMATIC GAS SHUT OFF SYSTEM

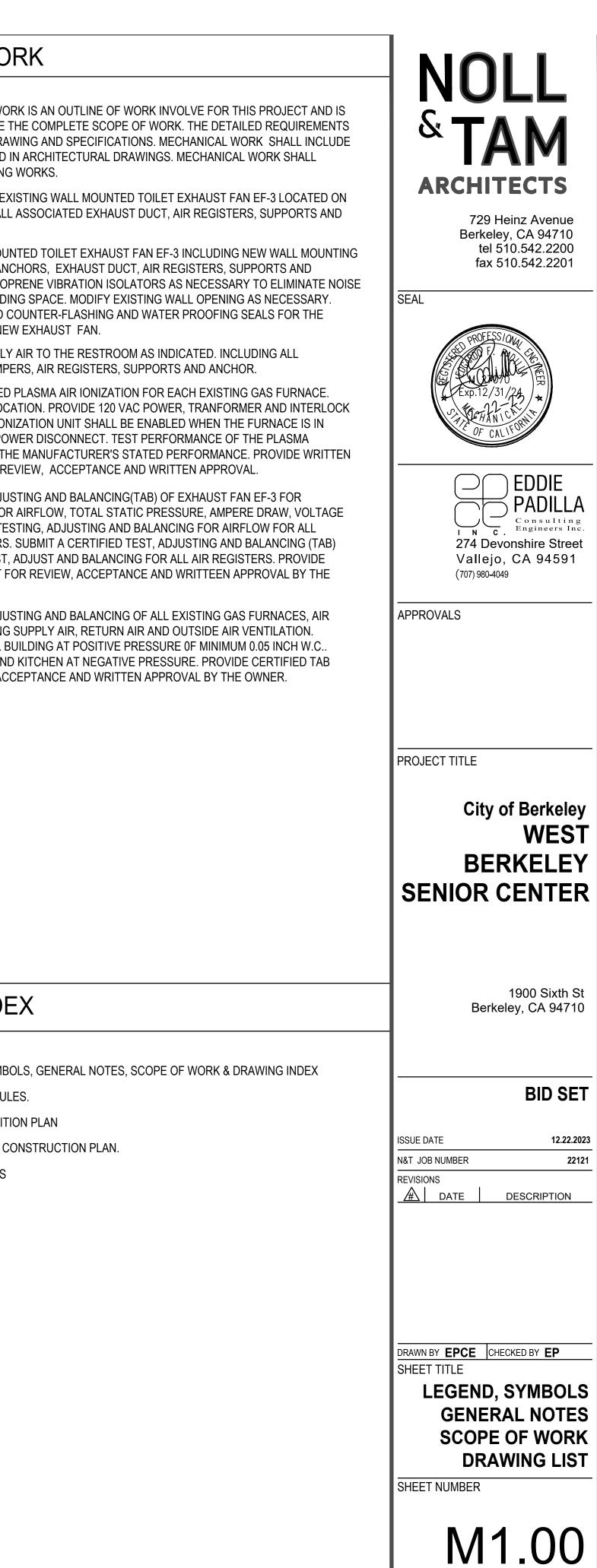


		LEGEND	ABBRE
SYMBOLS	ABB'R	SERVICE	ACU
ACU 1		EQUIPMENT IDENTIFICATION	AFF
		DETAIL OR SECTION	AHU
M-1		SHEET NUMBER	AP
		NORTH ARROW (REFERENCE)	BHP
			BOP
		POINT OF DEMOLITION KEYED NOTE	CFF
		FIRE SPRINKLER HEAD	CFH
	FP	FLEXIBLE CONNECTION	CFM
,		(E) PIPE TO BE REMAIN	CLG
5 × × × × × 		(E) PIPE TO BE REMOVED	CTE
	(N)	NEW	DN
	(E)	EXISTING	(D)
	AP/AD	ACCESS PANEL/ACCESS DOOR	(E)
0 	UP DN	ALL SERVICES ALL SERVICES	EF
0	VR-VTR	VENT RISE - VENT THRU ROOF	ESP
_ > _		DIRECTION OF FLOW	
— w —	W	SANITARY OR WASTE	F
— SD —	SD	STORM DRAIN	FC
— FS —	FS	FIRE SPRINKLER	FPM
	CW	COLD WATER	FSD
	HW	HOT WATER	0014
	HWR	HOT WATER RETURN	GSM
	V	VENT	HTR
— G — — CD —	G CD	GAS CONDENSATE DRAIN	HW
	U	3-WAY CONTROL VALVE	MFR
 ₽		2-WAY CONTROL VALVE	(N)
	BC	BALANCING COCK	NC
		BALANCING VALVE	NFPA
<u> </u>		BALL VALVE	NO
<u> </u>	BV	BUTTERFLY VALVE	PG
	PRV	PRESSURE REDUCING VALVE	PLBG
	TCV		POC
	GV GLV	GATE VALVE GLOBE VALVE	
	CKV	CHECK VALVE	PSI
		STRAINER	PSIG (R)
<u>-t</u>	AVA	AIR VENT VALVE-AUTOMATIC	
<u> </u>	AVM	AIR VENT VALVE-MANUAL	RF (R)
	PGA	PRESSURE GAUGE	RIO
	U	UNION CONNECTION	RPM
		PETE'S PLUG	
	TH	THERMOMETER	(S) SF
	Т	THERMOSTAT TEMPERATURE GAUGE	
		TEMPERATURE SENSOR	SH0-1
FS		FLOW SWITCH/SENSOR	SS
P		PRESSURE SENSOR/TRANSMITTER	STD
MS		MAGNETIC STARTER	STL
DI		DIGITAL INPUT	TH
D0		DIGITAL OUTPUT	TSP
AI		ANALOG INPUT	TYP
D0			UNO
		ELECTRICAL CONTROL WIRING PNEUMATIC CONTROL	VTR
			WPD
			WP
			WT
		1	I

VIATIONS

AIR CONDITIONING UNIT
ABOVE FINISH FLOOR
AIR HANDLING UNIT ACCESS PANEL
BRAKE HORSEPOWER/BOILER HORSEPOW
BOTTOM OF PIPE
CAP FOR FUTURE
CUBIC FEET PER HOUR
CUBIC FEET PER MINUTE
CEILING
CONNECT TO EXISTING
DOWN
DISPOSE
EXISTING
EXHAUST FAN
EXTERNAL STATIC PRESSURE
FIRE SPRINKLER
FLEXIBLE CONNECTION
FEET PER MINUTE
FIRE SMOKE DETECTOR
GALVANIZED SHEET METAL
HEATER
HOT WATER
MANUFACTURER
NEW
NORMALLY CLOSED
NATIONAL FIRE PROTECTION ASSOCIATION
NORMALLY OPEN
PRESSURE GAUGE
PLUMBING
POINT OF CONNECTION
POUND PER SQUARE INCH
POUND PER SQUARE INCH GAUGE
RETURN FAN
RELOCATE
ROUGH IN ONLY
REVOLUTION PER MINUTE
SALVAGE TO BE RE-INSTALLED
SUPPLY FAN
SHOWER UNIT
STAINLESS STEEL
STANDARD
STEEL
THERMOMETER
TOTAL STATIC PRESSURE
TYPICAL UNLESS NOTED OTHERWISE
VENT THRU ROOF
WATER PRESSURE DROP
WEATHER OR WATER PROOF
WEIGHT

	GENERAL NOTES	SCOPE OF WOF
	 ALL WORK SHALL BE IN COMPLIANCE WITH THE LATEST APPLICABLE LOCAL AND STATE CODES AND REGULATIONS: CALIFORNIA BUILDING CODE 2022 CALIFORNIA MECHANICAL CODE 2022 CALIFORNIA PLUMBING CODE 2022 CALIFORNIA FIRE CODE 2022 CALIFORNIA FIRE CODE 2022 CALIFORNIA FIRE CODE 2022 CALIFORNIA FIRE CODE 2022 	GENERAL: THIS SCOPE OF WOR NOT INTENDED TO DESCRIBE TH ARE INDICATED ON EACH DRAW SCOPE OF WORK DESCRIBED IN INCLUDE HVAC AND PLUMBING V
RSEPOWER	 CALIFORNIA ELECTRICAL CODE 2022 ALL PIPING SHOWN ON PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. CERTAIN VERTICAL AND HORIZONTAL DIMENSIONS ARE SHOWN IN DUCTS AND PIPES TO INDICATE THEIR GENERAL POSITION IN RELATIONSHIP TO THE SYSTEMS WITHIN THE SPACE AVAILABLE FOR SYSTEM INSTALLATION. PROVIDE ADDITIONAL PIPING OFFSETS AS REQUIRED, AND TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS AT NO ADDITIONAL COST TO THE OWNER. ALL DIMENSIONS ARE IN INCHES OR OTHERWISE NOTED. 	 1. REMOVE AND DISPOSE EXAMINED TO THE ROOF INCLUDING ALL A ANCHOR. 2. PROVIDE NEW WALL MOUNT SUPPORT FRAME AND ANCHORS. PROVIDE NEOPE TO THE OCCUPIED BUILDINE PROVIDE FLASHING AND CONSTALLATION OF THE NEW
	3. WHERE EXISTING CONSTRUCTION IS CUT, DAMAGED, OR REMODELED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY, AND PERFORMANCE.	3. MODIFY EXISTING SUPPLY A ASSOCIATED DUCT DAMPEI
	4. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR SAFETY OF ALL PERSONS ON OR ABOUT THE CONSTRUCTION SITE, IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. GUARD ALL HAZARDS IN ACCORDANCE WITH THE SAFETY PROVISIONS OF THE LATEST MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA AND OSHA.	4. PROVIDE DUCT MOUNTED F REFER TO M2.10 FOR LOCA FOR IONIZATION UNIT. IONIZ OPERATION. PROVIDE POW IONIZATION UNIT WITH THE
	5. REFER TO SMACNA SEISMIC GUIDELINES AND STANDARDS FOR DUCT PIPE SUPPORT AND EQUIPMENT SEISMIC BRACING.	5. PERFORM TESTING, ADJUS
	 COORDINATE WORK WITH THE OWNER AND ALL OTHER TRADES. SEAL AIR AND WATER TIGHT ALL PIPE PENETRATIONS THROUGH WALL. SEALANT SHALL BE 3M BRAND PRODUCTS. BRACE ALL PIPES AND EQUIPMENT TO WITHSTAND FORCES AS REQUIRED BY THE STATE AND LOCAL CODES. 	PERFORMANCE DATA FOR A AND NOISE. PERFORM TEST EXHAUST AIR REGISTERS. S REPORT. PERFORM TEST, A CERTIFIED TAB REPORT FO OWNER.
	8. PROTECT THE PUBLIC FROM INJURY DURING PROGRESS OF WORK BY POSTING WARNING SIGNS, GUARD LIGHTS AND BARRICADES.	6. PERFORM TESTING, ADJUS
	9. THE CONTRACTOR SHALL PROVIDE DUST BARRIER PLASTIC COVERS, SCREEN AND TENTING AT ALL TIMES TO CONTAIN DUST AND DEBRIS WITHIN THE DESIGNATED WORK AREA. LOCATING AND INSTALLATION OF DUST PROTECTION COVERS AND TENTING TO BE APPROVED BY THE OWNER PRIOR TO INSTALLING. CONTRACTOR SHALL CLEAN WORK AREA AND REMOVE DEBRIS AT THE END OF EACH WORKING DAY. DISPOSAL OF DEBRIS AND EXCESS MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.	DISTRIBUTION INCLUDING S MAINTAIN THE OVERALL BU MAINTAIN THE TOILET AND REPORT FOR REVIEW, ACCI
OCIATION	10. THE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE MAINTAINED IN OPERATION DURING THE DEMOLITION AND INSTALLATION OF NEW WORK. WHEN A SYSTEM SHUTDOWN IS NECESSARY, OBTAIN A WRITTEN APPROVAL FROM THE OWNER PRIOR TO SHUTTING DOWN OF ANY MECHANICAL ELECTRICAL SYSTEMS.	
	11. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS.	
Ξ	12. VERIFY DIMENSIONS OF OWNER FURNISHED EQUIPMENT TO ENSURE PROPER COORDINATION WITH CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOUND. NO ALLOWANCE SHALL BE MADE FOR ANY EXPENSE TO WHICH THE CONTRACTOR MAY INCUR DUE TO FAILURE OR NEGLECT ON HIS PART TO MAKE SUCH VERIFICATION.	
	13. ANY ERRORS, OMISSIONS OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER AND OWNER BEFORE PROCEEDING WITH THE WORK.	
	14. PENETRATIONS THROUGH EXISTING CONCRETE WALL, FLOOR OR ROOF SHALL BE VERIFIED FOR STRUCTURAL REINFORCEMENTS. X-RAY ARE REQUIRED TO LOCATE REINFORCEMENT PRIOR TO CONCRETE CORE DRILLING OR CUTTING. OBTAIN OWNER'S WRITTEN APPROVAL PRIOR TO CORE DRILLING AND CUTTING.	DRAWING INDE
	15. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF WORK AT HIS OWN EXPENSE FOR WORK INSTALLED IN CONFLICT WITH CONSTRUCTION DOCUMENTS.	M1.00 LEGEND, SYMBO M1.10 HVAC SCHEDULE
	16. CONTRACTOR SHALL LEAVE PREMISES AND ALL AFFECTED AREAS CLEAN AND IN ORDERLY MANNER READY FOR MOVE-IN OR FACILITY OPERATION.	M2.00 HVAC DEMOLITIC
	17. PROVIDE ADEQUATE CLEARANCE AND ACCESS TO EQUIPMENT FOR SERVICE AND MAINTENANCE. EQUIPMENT CLEARANCES SHALL MEET THE REQUIREMENT OF THE MANUFACTURER.	M2.10 MECHANICAL CO M3.00 HVAC DETAILS
	18. INSULATE ALL HOT AND COLD PIPING. PROVIDE SILICATE INSERTS AT SUPPORT POINTS. PROVIDE ALUMINUM JACKETING FOR OUTDOOR INSTALLATION.	
	19. EXPLORATORY WORK TO SEARCH FOR PIPING, PLUMBING OR DUCT FOR CONNECTIONS TO EXISTING BUILDING SYSTEM INCLUDING POINT OF CONNECTIONS UNDER FLOOR SLAB, IN WALLS AND CEILING SHALL BE INCLUDED AT NO COST TO THE OWNER. CUTTING, PATCHING AND RESTORATION OF FLOORS, WALLS, CEILING AND FINISH SHALL BE INCLUDED IN THIS WORK AT NO COST TO THE OWNER. RESTORATION OF WALL OR FLOOR FINISH SHALL MATCH EXISTING.	
	20. ALL PLUMBING PIPING MATERIAL, PLUMBING FIXTURE, VALVE, FIITINGS AND ACCESSORIES SHALL BE 'LEAD-FREE' IN ACCORDANCE WITH CALIFORNIA REGULATION AB1953. PROVIDE SUBMITTAL FROM MANUFACTURER'S FOR COMPLIANCE.	

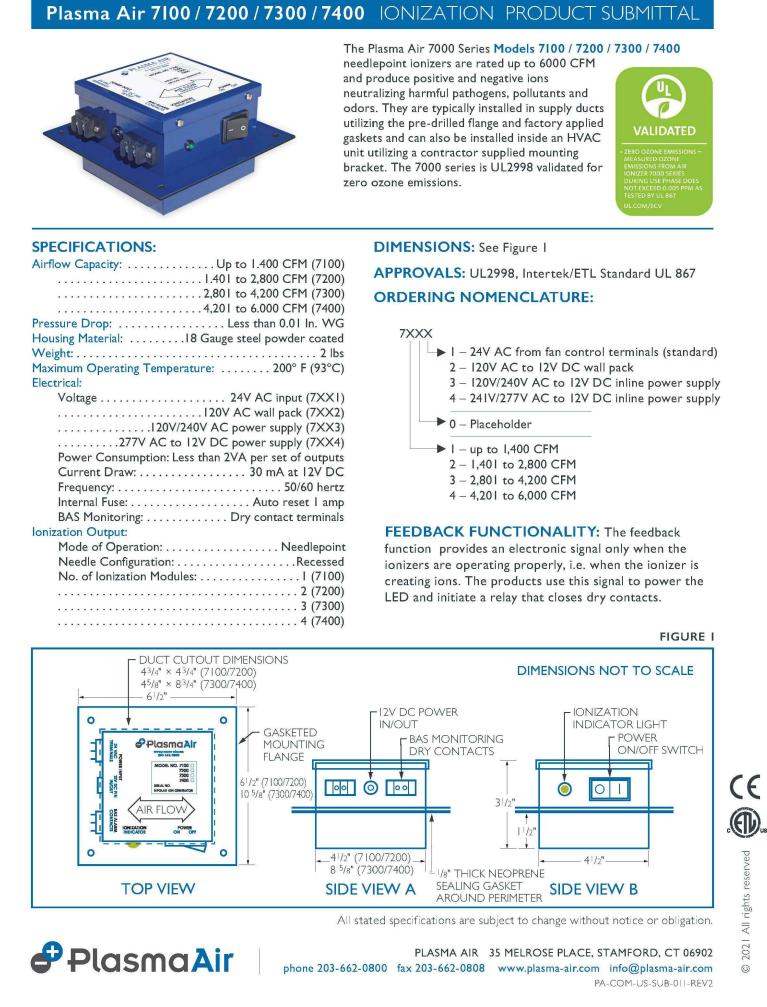


$\langle \stackrel{_{HV}}{\times} \rangle$ EXISTING GAS FURNACE WITH PLASMA AIR UNIT

UNIT NUMBER	MODEL NO.	LOCATION	SERVICE	FAN CFM	FILTER	ASHRAE 62.1 REQUIRD MIN. VENTILATION CFM	AIR IONIZER PLASMA AIR MODEL NO. CFM CAPACITY	COMMENTS
HV-1	PAYNE PG8JAA048	EAST MECH. RM.	EAST OFFICES	1100	MERV 13	200	7103	
HV-2	AIRCOAIRE NNE125J20GI	WEST MECH. RM.	ACTIVITY ROOMS	1815	MERV 13	600	7203	
HV-3	PAYNE PG8JAA048	NORTH MECH. RM.	LOUNGE 21	1540	MERV 13	400	7203	
HV-4	PAYNE PG8JAA048	NORTH MECH. RM.	DINING, KITCHEN	2400	MERV 13	2000	7303	

PROVIDE THE FOLLOWING REQUIREMENTS FOR EACH EXISTING GAS FURNACES:

- . TEST, ADJUST AND BALANCE TO INDICATED OUTDOOR AIR VENTILATION. FIX OR REPLACE EXISTING VOLUME DAMPERS. 2. REPLACE EXISTING FILTERS TO MERV 13.
- PROVIDE PLASMA AIR BI-POLAR AIR IONIZATION ON THE SUPPLY AIR DUCT FOR EACH EXISTING GAS FURNACE AS INDICATED ON M2.10. PROVIDE POWER INTERLOCK FOR THE IONIZATION UNIT TO ENABLE WHEN THE FAN IS ENERGIZED. TEST ACTUAL ION/CC/SEC RATE AT EACH FURNACES. SEE BELOW FOR PLASMA AIR SPECIFICATION. INSTALL PLASMA AIR UNIT AS RECOMMENDED BY THE MANUFACTURER.
- PROVIDE PLASMA AIR BI-POLAR AIR IONIZATION 100 VAC/12VDC POWER SUPPLY UNIT. INSTALL IN A JUNCTION BOX AS RECOMMENDED BY THE MANUFACTURER. PROVIDE LOCAL POWER DISCONNECT.
- 5. PROVIDE ONE (1) PLASMA AIR POLAR AIR IONIZATION ION METER WITH 0 TO 20,000 NEGATIVE ION/CC.



ITTAL
7400
LIDATED
CONE EMISSIONS -

	EF X	FAN SCHE	DU	LE																		
			RATED	RATED	FAN	SET	FAN		MOT	FOR DATA	@ 60 HZ				MAX.				SEE NOT		FOR ADDITIONA	
UNIT NUMBER	FAN LOCATION	SERVICE	CFM	S.P. (IN. H ₂ O)	RPM FAN TYPE				RPM					G MANUFACTURER MODEL NO.				WEIGHT POUNDS				
EF-3	ROOF	RESTROOM EXHAUST	700	0.75	1530	580	В	0.17	1/4	1750	115	1	YES	DIRECT	54	GREEI	NHECK CUE	E-099-VG				200
Í																						
FAN SHA	LL MEET WI	TH THE FOLLOWING REQUIREMEN	NTS:						REQUIR	Ed Maxin	IUM FAN l	JNIT SOU	ND POWE	R LEVEL o	dB re 10 -1	2 WATTS						_
1. ALL	1. ALL UNITS SHALL HAVE SINGLE POINT ELECTRICAL CONNECTION. HZ 62.5 125 250 500 1000 2000 4000 8000 LwA dBA SONE							SONE														
2. EXHAUST FAN SHALL BE CENTRIFUGAL TYPE ROOF EXHAUST VENTILATOR, ALUMINUM CONSTRUCTION, WELDED HOUSING WITH VENTED MOTOR ENCLOSURE. EF-3 INLET: 73 71 71 66 62 61 57 48 69 58 8.8																						
1		L BE PROVIDED WITH HEAVY DUT GS, POLISHED SOLID STEEL SHAF																				

AND ADJUSTABLE PITCH DRIVE.

NOISE GENERATED SHALL NOT EXCEED THE INDICATED REQUIREMENTS.

. UNIT SHALL BE PROVIDED WITH VIBRATION ISOLATORS,

DAMPER.

5. ALL FANS SHALL BE PROVIDED WITH HIGH EFFICIENCY CLASS B MOTOR MEETS EPACT AND NEMA 1210.

EXHAUST FAN SHALL BE PROVIDE WITH METAL ROOF CURB WITH STAINLESS STEEL HINGES

FOR EASY LIFT ACCESS FOR CLEANING, BACKDRAFT DAMPER WITH ADJUSTABLE BACKDRAFT

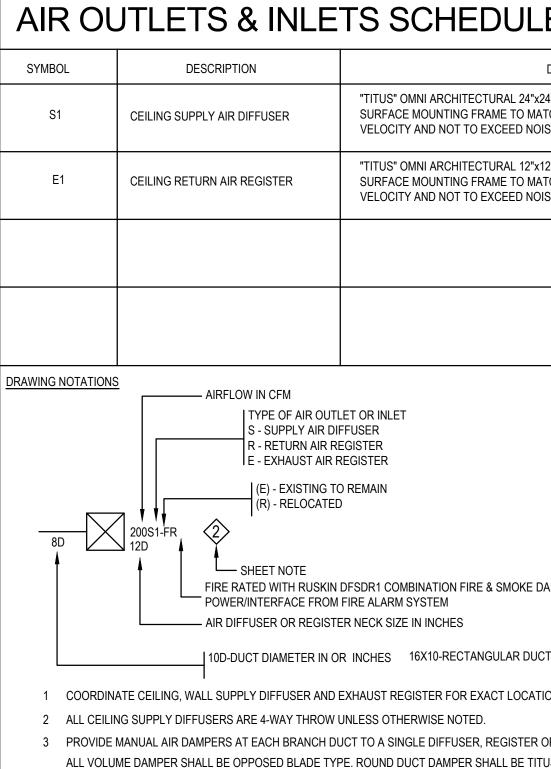
PROVIDE ON BOARD VARI-GREEN SPEED CONTROLLER AND PREWIRED POWER DISCONNECT.

FAN TYPE DESIGNATION

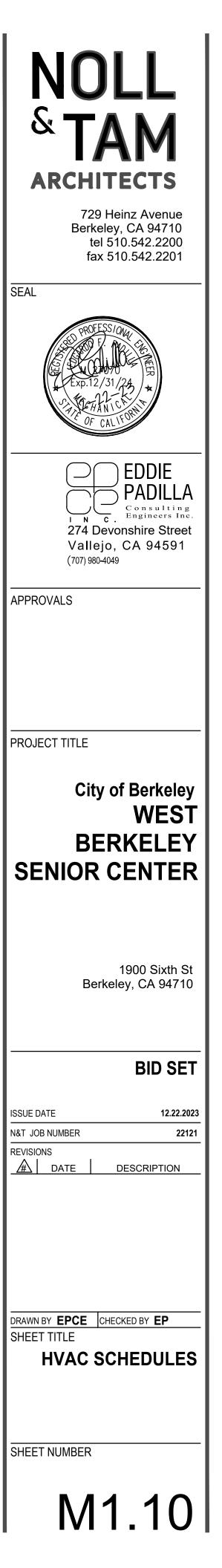
A- CENTRIFUGAL UTILITY FAN

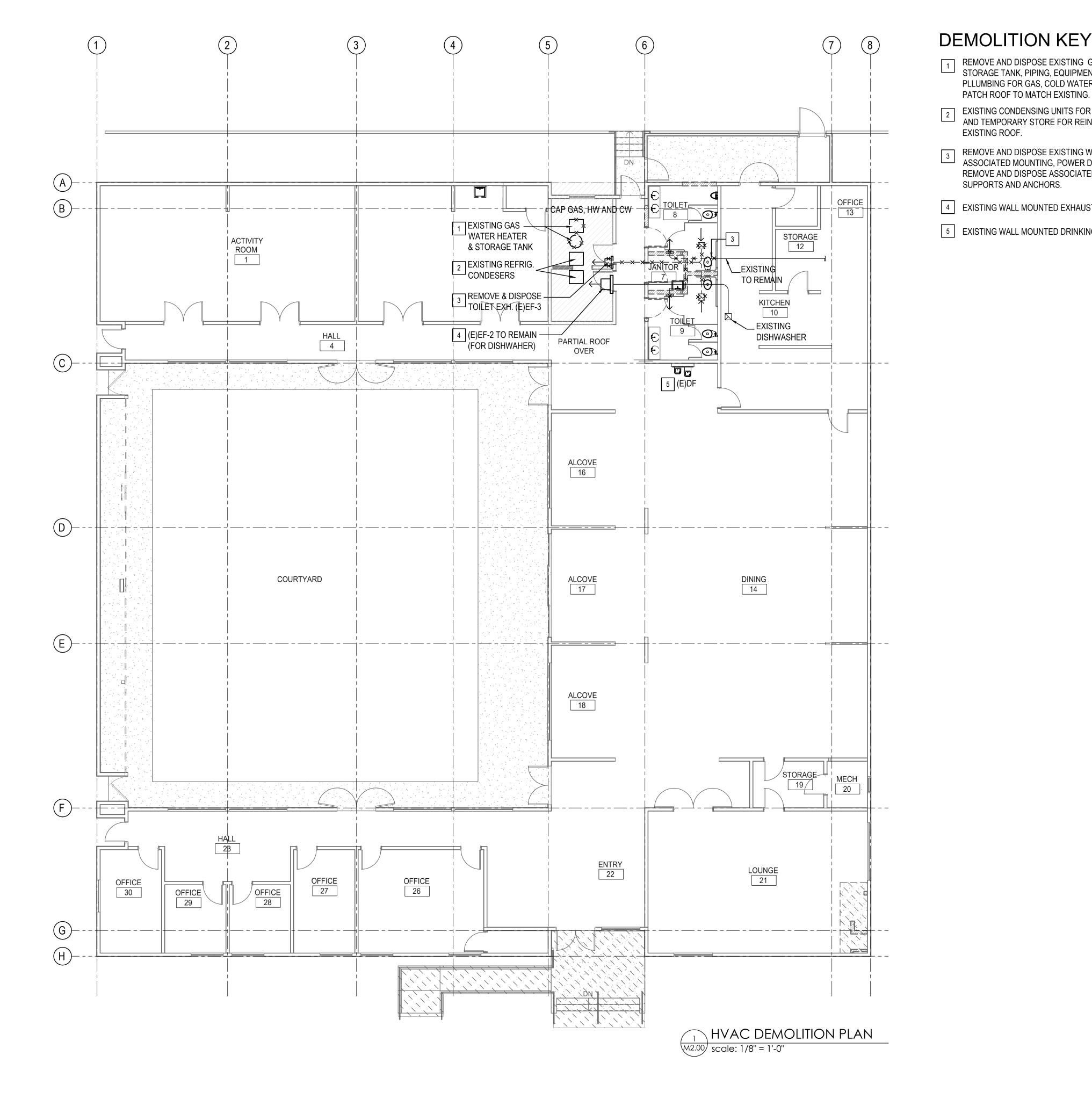
B- WALL MOUNTED CENTRIFUGAL FAN C- CENTRIFUGAL FAN, CEILING MOUNTED

D- ROOF EXHAUST VENTILATOR



E
DESCRIPTION
4" MODULE SQUARE PANEL, 22-GA FACE PANEL, STEEL CONSTRUCTION, TCH CEILING SYSTEM. SIZE DIFFUSER NOT TO EXCEED 500 FPM NECK SE LEVEL OF 30 NC. PROVIDE DIFFUSER WITH WHITE FINISH.
2" MODULE SQUARE PANEL, 22-GA FACE PANEL, STEEL CONSTRUCTION, TCH CEILING SYSTEM. SIZE DIFFUSER NOT TO EXCEED 500 FPM NECK SE LEVEL OF 30 NC. PROVIDE DIFFUSER WITH WHITE FINISH.
AMPER OR SIMILAR FOR RECTANGULAR NECK. PROVIDE
T SIZE IN INCHES
ON WITH ARCHITECTURAL REFLECTED CELING PLAN.
DR GRILLE. US AG-75.





DEMOLITION KEYED NOTES

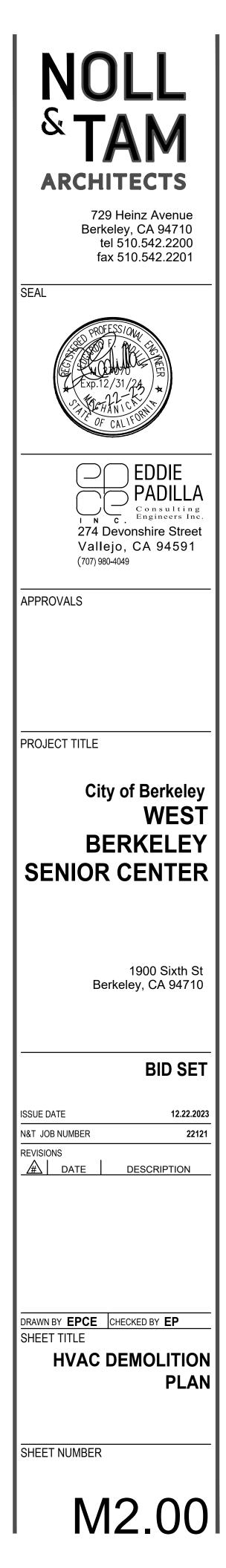
REMOVE AND DISPOSE EXISTING GAS WATER HEATER AND ASSOCIATED 1 REMOVE AND DISPUSE EXISTING GAS WATER TENTENTED TO BELOW THE ROOF LEV PLLUMBING FOR GAS, COLD WATER, HOT WATER TO BELOW THE ROOF LEVEL.

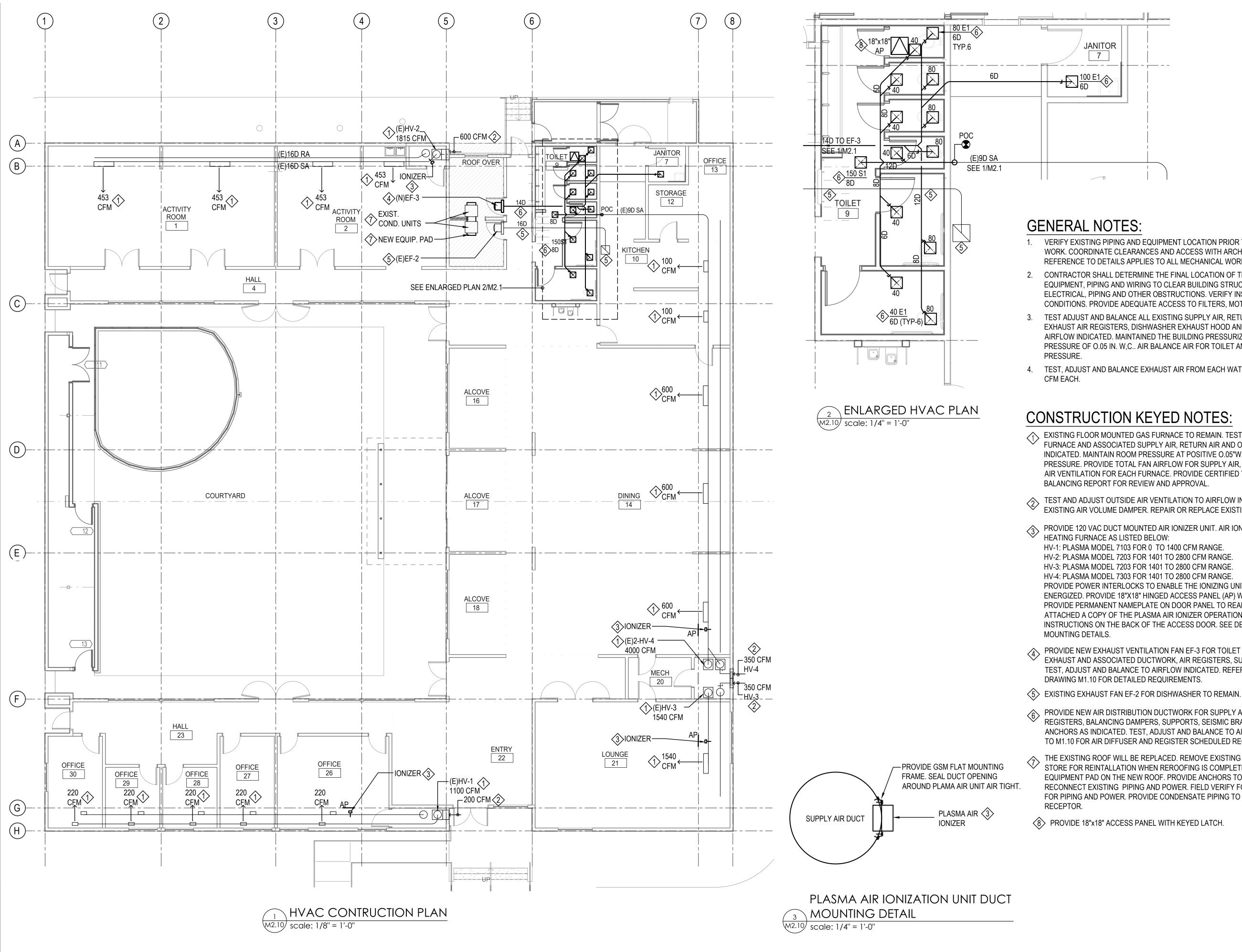
2 EXISTING CONDENSING UNITS FOR THE REFRIGERATORS TO REMAIN. REMOVE AND TEMPORARY STORE FOR REINSTALLATION AFTER THE REPLACEMENT OF

REMOVE AND DISPOSE EXISTING WALL MOUNTED TOILET EXHAUST FAN AND ASSOCIATED MOUNTING, POWER DISCONNECT, FRAME AND ANCHORS. REMOVE AND DISPOSE ASSOCIATED EXHAUST DUCT, AIR REGISTERS,

4 EXISTING WALL MOUNTED EXHAUST FAN FOR DISHWASHER TO REMAIN.

5 EXISTING WALL MOUNTED DRINKING FOUNTAIN TO REMAIN.





VERIFY EXISTING PIPING AND EQUIPMENT LOCATION PRIOR TO INSTALLATION OF NEW WORK. COORDINATE CLEARANCES AND ACCESS WITH ARCHITECTURAL DRAWINGS. REFERENCE TO DETAILS APPLIES TO ALL MECHANICAL WORK

CONTRACTOR SHALL DETERMINE THE FINAL LOCATION OF THE EQUIPMENT. LOCATE EQUIPMENT, PIPING AND WIRING TO CLEAR BUILDING STRUCTURE, EXISTING ELECTRICAL, PIPING AND OTHER OBSTRUCTIONS. VERIFY INSTALLATION WITH EXISTING CONDITIONS. PROVIDE ADEQUATE ACCESS TO FILTERS, MOTORS AND VALVES.

TEST ADJUST AND BALANCE ALL EXISTING SUPPLY AIR, RETURN RETURN AIR AND EXHAUST AIR REGISTERS, DISHWASHER EXHAUST HOOD AND GREASE HOOD TO AIRFLOW INDICATED. MAINTAINED THE BUILDING PRESSURIZATION AT POSITIVE PRESSURE OF 0.05 IN. W.C., AIR BALANCE AIR FOR TOILET AND KITCHEN AT NEGATIVE

TEST, ADJUST AND BALANCE EXHAUST AIR FROM EACH WATER CLOSET AND MINIMUM 80

EXISTING FLOOR MOUNTED GAS FURNACE TO REMAIN. TEST AND BALANCE EXISTING FURNACE AND ASSOCIATED SUPPLY AIR, RETURN AIR AND OUTSIDE AIR TO AIRFLOW INDICATED. MAINTAIN ROOM PRESSURE AT POSITIVE 0.05"W.C. TO OUTDOOR PRESSURE. PROVIDE TOTAL FAN AIRFLOW FOR SUPPLY AIR, RETURN AIR AND OUTSIDE AIR VENTILATION FOR EACH FURNACE. PROVIDE CERTIFIED TESTING, ADJUSTING AND

TEST AND ADJUST OUTSIDE AIR VENTILATION TO AIRFLOW INDICATED. REPLACE EXISTING AIR VOLUME DAMPER. REPAIR OR REPLACE EXISTING RETURN AIR DAMPER,

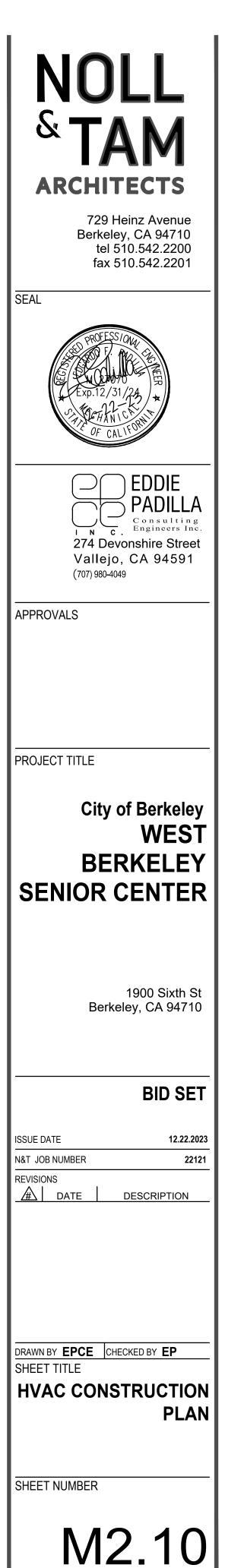
PROVIDE 120 VAC DUCT MOUNTED AIR IONIZER UNIT. AIR IONIZING UNIT FOR EACH GAS

PROVIDE POWER INTERLOCKS TO ENABLE THE IONIZING UNIT WHEN THE FURNACE IS ENERGIZED. PROVIDE 18"X18" HINGED ACCESS PANEL (AP) WITH KEYED DOOR LATCH. PROVIDE PERMANENT NAMEPLATE ON DOOR PANEL TO READ 'AIR IONIZING UNIT'. ATTACHED A COPY OF THE PLASMA AIR IONIZER OPERATION AND MAINTENANCE INSTRUCTIONS ON THE BACK OF THE ACCESS DOOR. SEE DETAIL 3/M2.10 FOR DUCT

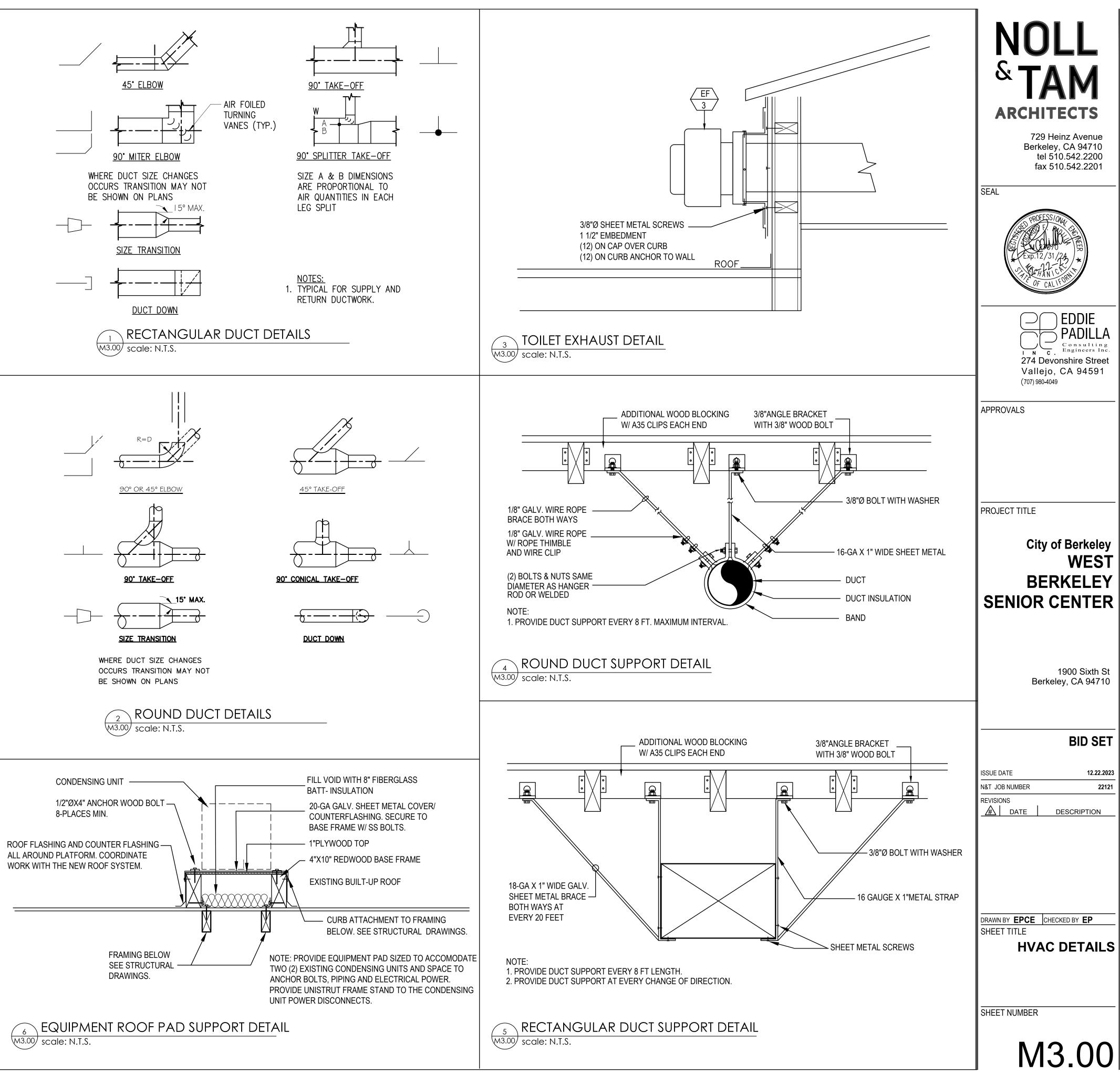
PROVIDE NEW EXHAUST VENTILATION FAN EF-3 FOR TOILET AND JANITOR'S ROOM EXHAUST AND ASSOCIATED DUCTWORK, AIR REGISTERS, SUPPORTS AND ANCHORS. TEST, ADJUST AND BALANCE TO AIRFLOW INDICATED. REFER TO FAN SCHEDULE ON

PROVIDE NEW AIR DISTRIBUTION DUCTWORK FOR SUPPLY AIR AND EXHAUST AIR, AIR REGISTERS, BALANCING DAMPERS, SUPPORTS, SEISMIC BRACES ASSOCIATED ANCHORS AS INDICATED. TEST, ADJUST AND BALANCE TO AIRFLOW INDICATED. REFER TO M1.10 FOR AIR DIFFUSER AND REGISTER SCHEDULED REQUIREMENTS.

THE EXISTING ROOF WILL BE REPLACED. REMOVE EXISTING CONDENSING UNITS AND STORE FOR REINTALLATION WHEN REROOFING IS COMPLETE. PROVIDE NEW EQUIPMENT PAD ON THE NEW ROOF. PROVIDE ANCHORS TO THE EQUIPMENT PAD. RECONNECT EXISTING PIPING AND POWER. FIELD VERIFY FOR PROPER CONNECTIONS FOR PIPING AND POWER. PROVIDE CONDENSATE PIPING TO EXISTING ROOF DRAIN



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<u>SYMBOL LIST</u> (not all symbols used)

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\bigcirc		FUSED DISCONNECT SWITCH, 3 POLE UNLESS NOTED OTHERWISE.	U
Image: Solution of the solutio		CIRCUIT BREAKER ACCESORY, 'S' INDICATES SHUNT TRIP, 'G' INDICATES GROUND FAULT RELAY	S
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Em P = ASSNE INTERPECT C = ULL REPECT C = ULL REPECT S = SUPCE SUPCE S = SUPCE SUPCET SUPCET SUPCET	LIGHTING CONTROLS		
Image: Control State Processing Image: Control Processing Image: Control Processing Image: Control Processing <tr< td=""><td>os</td><td>P = PASSIVE INFRARED</td><td>U 4 U A 9 A</td></tr<>	os	P = PASSIVE INFRARED	U 4 U A 9 A
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	\$	2 = DOUBLE POLE SWITCH	$\square \Leftrightarrow \square$
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Image: State in the interval model in the interval control interval interval control interval inte		M = MANUAL MOTOR STARTER WITH THERMAL OVERLOAD	
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P = NUMERADICS RECESSED SURFACE EM OCCUPANCY SANSAR/SMICH S = ASSINE INFORCED WITH INTEGRAL "OFF" SMICH Image: Second State	os-		EQUIPMENT
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□ RECESSED DOWNLIGHT LUMINAIRE. (5) □ SURFACE MOUNTED 2'X4' LUMINAIRE □ □ SURFACE OR PENDANT MOUNTED 1'X4' LUMINAIRE □ □ SURFACE OR PENDANT MOUNTED 1'X4' LUMINAIRE □ □ SURFACE OR PENDANT 1'X8' LUMINAIRE □ □ SURFACE OR PENDANT 6'X8' LUMINAIRE □ □ SURFACE OR PENDANT 6'X8' LUMINAIRE □ □ SURFACE OR PENDANT 6'X8' LUMINAIRE □ □ SURFACE OR PENDANT STRIP LUMINAIRE □ □ SURFACE OR PENDANT STRIP LUMINAIRE □ ○ SURFACE OR PENDANT STRIP LUMINAIRE □ ○ WALL SCONCE □ □ □ ■ AREA LUMINAIRE MOUNTED UMINAIRE, SEE LUMINAIRE SCHEDULE □ □ ● BOLLARD OR POST TOP LUMINAIRE, SEE LUMINAIRE SCHEDULE □ □ □ ○ SURFACE OR PENDANT DOWNLIGHT □ □ □ □ ■ EMERGENCY LIGHTING, SEE DESCRIPTIONS ABOVE □ □ □ ■ ■ □ □ □<	LUMINAIRES	D = PASSIVE INFRARED WITH INTEGRAL DIMMER TO OFF.	\square
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SURFACE OR PENDANT STRIP LUMINAIRE Image: Comparison of the second o	\Box	SURFACE OR PENDANT 1'X8' LUMINAIRE	
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		AREA LUMINAIRE MOUNTED WITH POLE AND CONCRETE BASE	
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SURFACE OR PENDANT DOWNLIGHT A-1,3,5. Image: Superson of the sector of the s		BOLLARD OR POST TOP LUMINAIRE, SEE LUMINAIRE SCHEDULE	(FFF)
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'A' LUMINAIRE NOMENCLATURE 'A' LUMINAIRE NOMENCLATURE 'A' = LUMINAIRE TYPE, SEE LUMINAIRE SCHEDULE 1 = CIRCUIT NUMBER a = LOWERCASE LETTER INDICATES MANUAL OR OCCUPANCY SWITCH LEG ZA. = INDICATES AUTOMATED DAYLIGHT CONTROL ZONE SECURITY/ACCESS CONTI Image: Circuit Number a = INDICATES AUTOMATED DAYLIGHT CONTROL ZONE Image: Circuit Number Image: Circuit Number		FLOOD LIGHT FLUSH IN GRADE EXTERIOR LUMINAIRE SURFACE OR PENDANT DOWNLIGHT	AC A-1,3,5. 1 F40-3
A A		FLOOD LIGHT FLUSH IN GRADE EXTERIOR LUMINAIRE SURFACE OR PENDANT DOWNLIGHT	AC A-1,3,5. 1 F40-3
A' = LUMINAIRE TYPE, SEE LUMINAIRE SCHEDULE 1,a,zA. 1,a,zA. a = LOWERCASE LETTER INDICATES MANUAL OR OCCUPANCY SWITCH LEG zA. = INDICATES AUTOMATED DAYLIGHT CONTROL ZONE SECURITY/ACCESS CONTI (100W) TRACK LIGHTING CURRENT LIMITER. WATTAGE IN PARENTHESIS INDICATES		FLOOD LIGHT FLUSH IN GRADE EXTERIOR LUMINAIRE SURFACE OR PENDANT DOWNLIGHT EMERGENCY LIGHTING, SEE DESCRIPTIONS ABOVE	AC A-1,3,5. 1 F40-3
zA. = INDICATES AUTOMATED DAYLIGHT CONTROL ZONE SECURITY/ACCESS CONT CL(100W) TRACK LIGHTING CURRENT LIMITER. WATTAGE IN PARENTHESIS INDICATES		FLOOD LIGHT FLUSH IN GRADE EXTERIOR LUMINAIRE SURFACE OR PENDANT DOWNLIGHT ————————————————————————————————————	$\begin{array}{c} & \\ & \\ \hline \\ \\ & \\ \hline \\ \\ & \\ \hline \\ \\ \\ \hline \\ \\ \hline \\ \\ \hline \\ \\ \hline \\ \hline \\ \hline \\ \hline \\ \\ \hline \\$
CL(100W) TRACK LIGHTING CURRENT LIMITER. WATTAGE IN PARENTHESIS INDICATES		FLOOD LIGHT FLUSH IN GRADE EXTERIOR LUMINAIRE SURFACE OR PENDANT DOWNLIGHT ————————————————————————————————————	$\begin{array}{c} \hline \\ \hline $
		FLOOD LIGHT FLUSH IN GRADE EXTERIOR LUMINAIRE SURFACE OR PENDANT DOWNLIGHT 	$\begin{array}{c} & \\ & \\ \hline \\ \\ & \\ \hline \\ \\ & \\ \hline \\ \\ \hline \\ \\ \\ \hline \\ \hline \\ \hline \\ \\ \hline \\ \\ \hline \hline \\ \hline \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \\ \\$
\mathbb{Y}	→ X O 0 0 1,a,zA.	FLOOD LIGHT FLUSH IN GRADE EXTERIOR LUMINAIRE SURFACE OR PENDANT DOWNLIGHT ————————————————————————————————————	$\begin{array}{c} \hline \\ \hline $
	→ X O 0 0 1,a,zA.	FLOOD LIGHT FLUSH IN GRADE EXTERIOR LUMINAIRE SURFACE OR PENDANT DOWNLIGHT ————————————————————————————————————	$\begin{array}{c} \hline \\ \hline $

SIMPLEX OR SPECIAL RECEPTACLE TYPE, SEE PLANS FOR NEMA TYPE DUPLEX RECEPTACLE, 5–20R U.O.N. DOUBLE DUPLEX (QUAD) RECEPTACLE, 5–20R U.O.N.

CONTROLLED DUPLEX RECEPTACLE, 5-20R U.O.N.

CONTROLLED DOUBLE DUPLEX (QUAD) RECEPTACLE, 5–20R U.O.N. *PROVIDE COMBINED POWER/DATA FLOOR BOXES IF SHOWN ON PLANS PT = POKE THRU, FB = FLOOR BOX, PD = PEDESTAL

ABOVE COUNTER OR AT DEFINED HEIGHT. REFER TO ARCHITECT GROUND FAULT CIRCUIT INTERRUPTER WEATHERPROOF IN-USE COVER WITH GFI RECEPTACLE RECEPTACLE DEVICE WITH (2) USB PORTS SPLIT WIRED RECEPTACLE DEDICATED CIRCUIT DEVICE CIRCUITING NOMENCLATURE A = PANEL NAME, IF SHOWN

1. = CIRCUIT NUMBER

4-IN SQUARE JUNCTION BOX

PULL BOX, SIZED PER CODE

POWER AND DATA JUNCTION BOXES WITH WHIPS FOR FURNITURE CONNECTION. *PROVIDE POWER POLE WITH CEILING JUNCTION BOX

TELECOM OUTLET. PROVIDE 1-1/4"C STUBBED TO ACCESSIBLE CEILING SPACE.

HDMI/AV OUTLET. PROVIDE 1–1/4"C, REFER TO LOW VOLTAGE DIAGRAMS *PROVIDE COMBINED POWER/DATA FLOOR BOXES IF SHOWN ON PLANS PT = POKE THRU, FB = FLOOR BOX, PD = PEDESTAL ** A = ABOVE COUNTER OR AT DEFINED HEIGHT, REFER TO ARCHITECT WIRELESS ACCESS POINT DATA OUTLET WITH CAT6 CABLING,

UL 924 EMERGENCY LIGHTING RELAY

DISCONNECT SWITCH, 30 AMP MINIMUM UNLESS NOTED OTHERWISE. FUSED DISCONNECT SWITCH, 30 AMP MINIMUM UNLESS NOTED OTHERWISE. COMBINATION DISCONNECT SWITCH MOTOR STARTER

MOTOR, 5 HP INDICATED.

TRANSFORMER, ###W INDICATES WATTAGE

RELAY OR EQUIPMENT CABINET AS INDICATED ON PLANS.

LIGHTING OR POWER PANEL BOARD.

FREE STANDING SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD.

FIRE TREATED PLYWOOD BACKBOARD 3/4"X96" HIGH X LENGTH AS INDICATED.

BATTERY PACK OR MINI INVERTER, ###W INDICATES WATTAGE

ELECTRICAL EQUIPMENT DESIGNATION DESIGNED "EQ01" SHEET NOTE ON SAME SHEET.

MECHANICAL EQUIPMENT DESIGNATION "AC-1" INDICATED. A-1,3,5. INDICATES CIRCUIT NUMBER, F40-3 INDICATES FEEDER CODE IF NONE SHOWN REFER TO SINGLE LINE DIAGRAM FOR ELECTRICAL REQUIREMENTS

EQUIPMENT NAME OR NUMBER

DETAIL REFERENCE

LIGHTING CONTROL SEQUENCE OF OPERATION TAG

DOOR ALARM CONTACT

CARD READER

POE CAMERA

 $\langle RX \rangle$

REQUEST TO EXIT

ABBREVIATIONS

(E)	EXISTING
(D)	DEMOLISH
(R)	RELOCATE
(RL)	
(RL) A	
A AHJ	AMPERES, AMBER AUTHORITY HAVING JURISDICTION
AIC	AVAILABLE INTERRUPTING CAPACITY
AIC C	CONDUIT, CLOSE, CONTROL
CA	CABLE
CAT	CABLE
CU	COPPER
DIA	DIAMETER
	DIMENSION
DIM	
DN	
	DRAWING
EA	
FF	
FT	
GND	
GFCI	
GFI	
IG	ISOLATED GROUND
κv	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LV	LOW VOLTAGE
MCA	MINIMUM CIRCUIT AMPS
MISC	MISCELLANEOUS
MOCP	MAXIMUM OVERCURRENT PROTECTION
NEC	NATIONAL ELECTRIC CODE
NTS	NOT TO SCALE
PH	
QTY	QUANTITY
RM	
STD	
TBD	to be determined
TOD	

- TGB TELECOMMUNICATIONS GROUNDING BUS BAR
- TYP TYPICAL UL UNDERWRITERS LABORATORIES
- V VOLTS, VOLTAGE
- WP WEATHERPROOF

CODES & STANDARDS

- 1. 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA ELECTRICAL CODE
 2022 CALIFORNIA MECHANICAL CODE
- 4. 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ENERGY CODE (TITLE 24)
 2022 CALIFORNIA FIRE CODE
- 7. 2022 CALIFORNIA FIRE CODE
- 8. CITY OF BERKELEY DESIGN & CONSTRUCTION STANDARDS

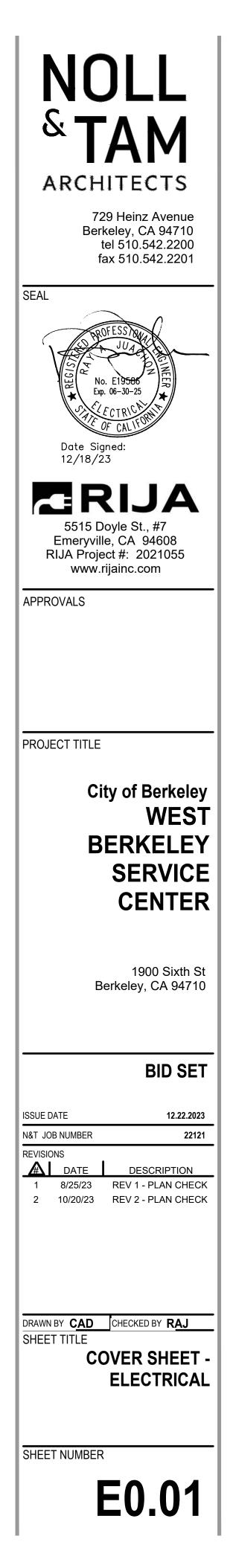
DRAWING INDEX

E0.01	COVER SHEET - ELECTRICAL

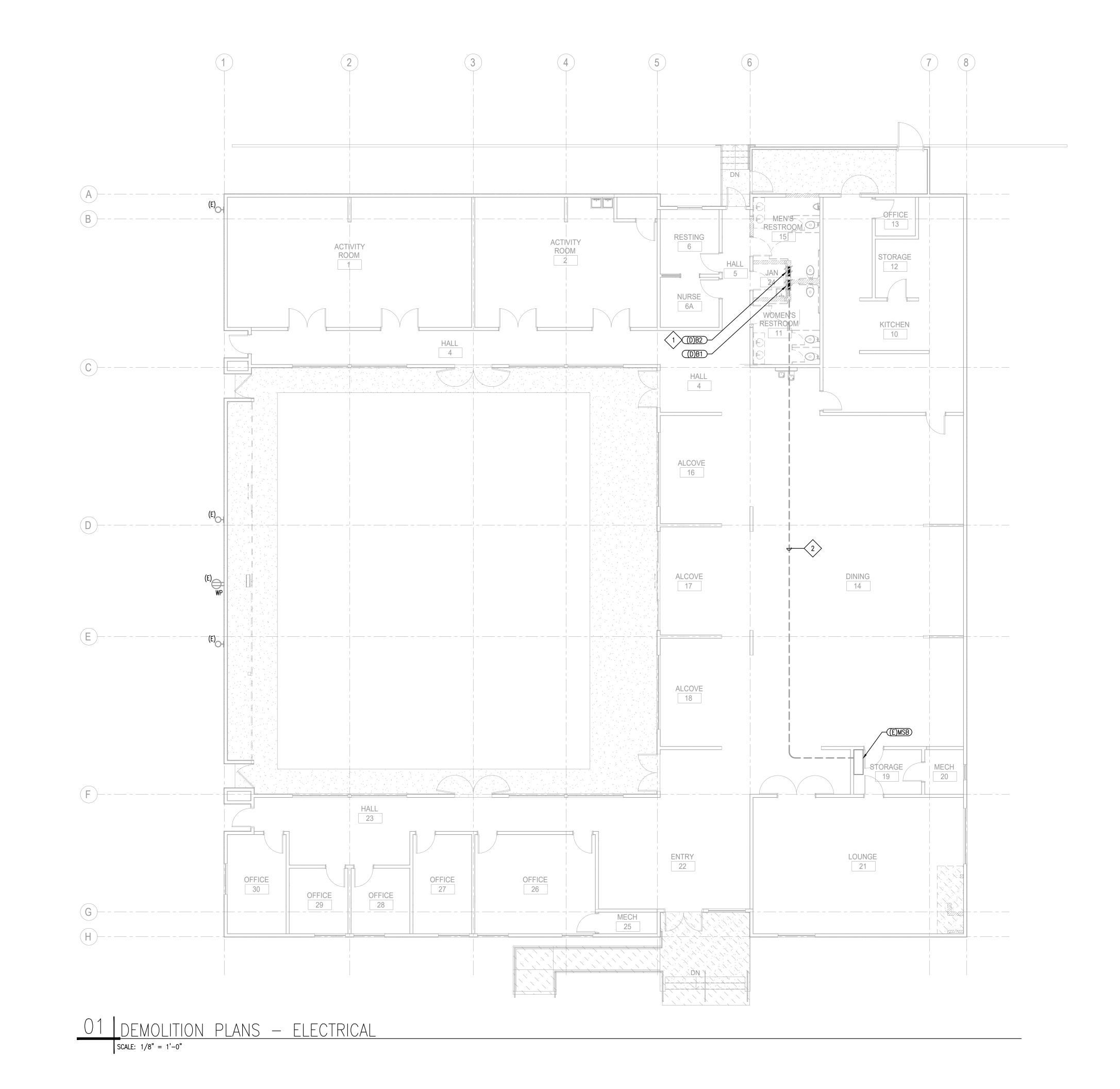
- ED1.01 DEMOLITION PLAN ELECTRICAL
- E1.01 FLOOR PLAN ELECTRICAL
- E2.01 SINGLE LINE DIAGRAM AND SCHEDULES
- E3.01 DETAILS
- E4.01 SPECIFICATIONS
- E5.01 ENERGY COMPLIANCE FORMS

GENERAL ELECTRICAL NOTES

- A. SCHEDULE WORK IN EXISTING BUILDINGS WITH THE OWNER. MINIMIZE DISRUPTION OF NORMAL OPERATIONS.
- B. VISIT THE SITE BEFORE SUBMITTING A BID TO OBSERVE EXISTING CONDITIONS.
- C. DO NOT INSTALL ELECTRICAL BOXES IN RATED WALLS CLOSER THAN 2'-0" TO EACH OTHER. PROVIDE "PADDY" PADS OR EQUIVALENT ON EACH BOX INSTALLED.
- D. PLANS DO NOT GENERALLY INDICATE WIRE COUNTS. FOR EACH 20 AMP, 120 VOLT OR 277 VOLT CIRCUIT, PROVIDE (1) #12 PHASE CONDUCTOR, (1) #12 NEUTRAL CONDUCTOR AND (1) #12 GROUNDING CONDUCTOR. WHERE MULTIPLE CIRCUITS ARE SHOWN, UP TO THREE SEPARATE AND DIFFERENTLY PHASED CIRCUITS (A, B AND C) PROVIDE DEDICATED NEUTRALS UNLESS OTHERWISE NOTED AND A SINGLE GROUNDING CONDUCTOR. WHERE DRAWINGS INDICATE WIRE SIZES/COUNTS, PROVIDE SUCH CIRCUIT, NEUTRAL AND GROUNDING CONDUCTORS FOR THE PORTION OF THE CIRCUIT WHERE SUCH CONDUCTORS SHARE A COMMON CONDUIT. GROUND WIRE INSULATION: GREEN. ALL WORK COMPLY WITH CEC 300.17.
- E. IN ALL CASES AND FOR ALL SYSTEMS AND COMPONENTS, USE ONLY EQUIPMENT IN ACCORDANCE WITH ITS LISTING OR LABELING. [CEC 110.3(B)]
- F. USE ONLY EQUIPMENT MARKED (LISTED/LABELED) AS SUITABLE FOR INSTALLATION AND WITH HIGHER TEMPERATURE RATED CONDUCTORS AT THE AMPACITY OF THE HIGHER RATED CONDUCTORS. REFER TO THE UL ELECTRICAL CONSTRUCTION MATERIAL DIRECTORY FOR CIRCUIT BREAKERS, SWITCHES, PANELBOARDS, SWITCHBOARDS, ETC. [CEC 110.14(C)]
- G. PROVIDE SUFFICIENT ACCESS AND WORKING CLEARANCE ABOUT THE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(A).
- H. PROVIDE ACCESS AND ENTRANCES TO AND EGRESS FROM WORKING SPACE ABOUT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(C).
- I. INSTALL ONLY RECEPTACLE OUTLETS WITH GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION IN LOCATIONS SPECIFIED AS BATHROOMS, COMMERCIAL AND INSTITUTIONAL KITCHENS, ROOFTOPS AND OUTDOOR PUBLIC SPACES. SEE EXCEPTIONS. [CEC 210.8(B)]
- J. PROVIDE OUTLET DEVICE(S) INSTALLED ON A BRANCH CIRCUIT WITH A RATING IN ACCORDANCE WITH CEC 210.21(B) (SEE EXCEPTIONS, AND REFER TO 210.21(B) TABLE(S)).
- K. DO NOT INSTALL CONDUCTORS OTHER THAN SERVICE CONDUCTORS IN THE SAME SERVICE RACEWAY OR SERVICE CABLE WITH OTHER CONDUCTORS. SEE EXCEPTIONS. [CEC 230.7]
- L. PROVIDE GROUND FAULT PROTECTION OF EQUIPMENT IN ACCORDANCE WITH CEC 230.95 AND 240.13 (SEE EXCEPTIONS).
- M. FOR PVC CONDUIT, PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR RUN WITH THE FEEDER CONDUCTORS AND SIZE PER CEC TABLE 250.122.
- N. FOR PERMANENTLY CONNECTED APPLIANCES RATED NOT OVER 300 VOLTAMPERES OR 1/8 HORSEPOWER, THE BRANCH-CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS. [CEC 422.31]
- O. KEEP LIFE SAFETY BRANCH WIRING ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND SHALL NOT ENTER THE SAME RACEWAYS, BOXES, OR CABINETS WITH EACH OTHER OR OTHER WIRING. [CEC 517.41(D) (SEE EXCEPTIONS)]
- P. PROVIDE DEFERRED APPROVAL AND DESIGN BUILD FOR ANY REQUIRED MODIFICATION TO THE EXISTING FIRE ALARM SYSTEM. SUBMIT COMPLETE DRAWINGS TO THE FIRE MARSHALL FOR APPROVAL AND ASSUME FULL RESPONSIBILITY OF THE SYSTEM, DEVICE QUANTITY AND LOCATION, WIRING, PROGRAMMING AND CONTROL PANELS. COORDINATE FINAL DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.



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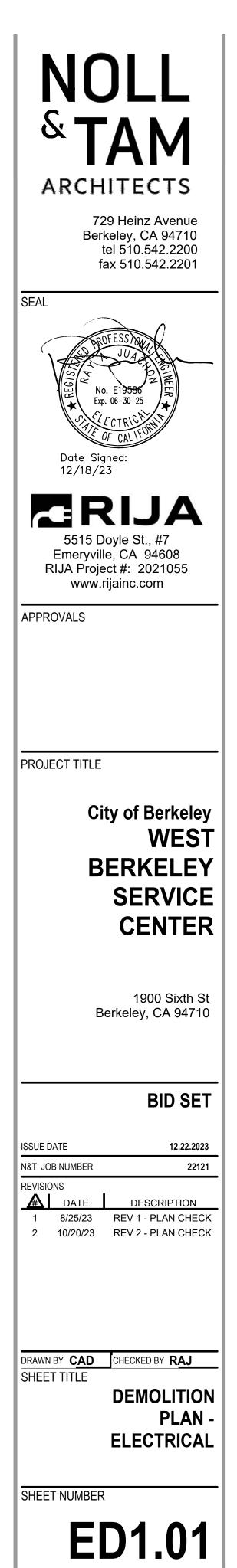


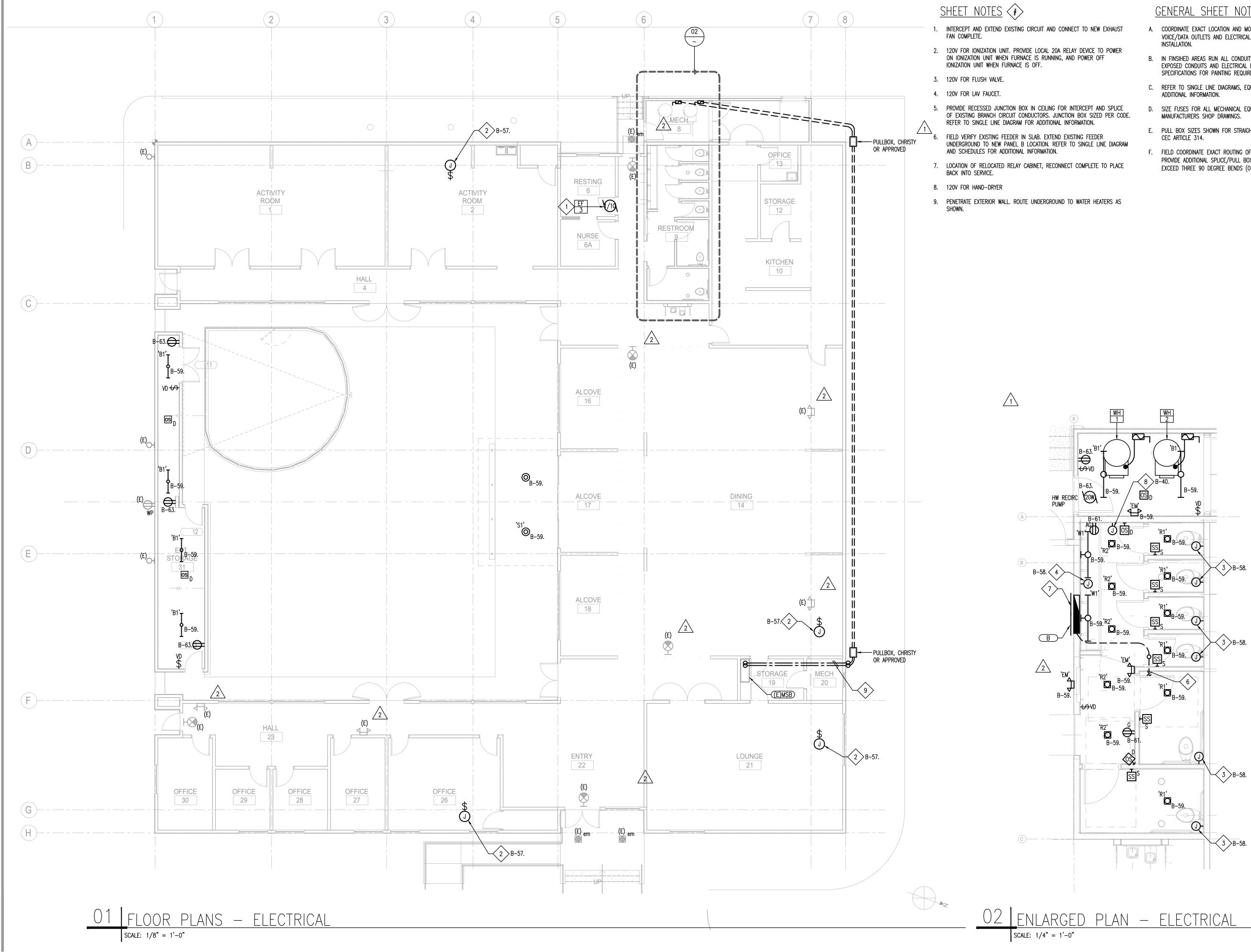
<u>GENERAL SHEET NOTES</u>

- A. COORDINATE DEMOLITION WORK WITH ARCHITECT AND BUILDING OWNER PRIOR TO COMMENCEMENT OF WORK.
- B. DEMOLISH EXISTING RECEPTACLES, VOICE/DATA OUTLETS, FEEDERS, ETC., AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION AND INDICATED WITH CROSSMARKS ON DRAWINGS. REUSE SPARE CIRCUITS AS MUCH AS POSSIBLE FOR NEW WORK. COORDINATE AND SEQUENCE DEMOLITION WORK WITH PROVISIONS OF CONSTRUCTION DOCUMENT DIVISIONS.
- C. REMOVE EXISTING MATERIALS CONFLICTING WITH REMODEL WORK INDICATED IN THE CONSTRUCTION DOCUMENTS AND SUBJECT TO CONDITIONS INDICATED IN SUCH.
- D. REMOVE ELECTRICAL MATERIALS MOUNTED IN OR ON WALLS AND CEILING TO BE REMOVED AS INDICATED IN ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- E. MAINTAIN IN OPERATION EXISTING SYSTEMS NOT INDICATED FOR REMOVAL IN CONSTRUCTION DOCUMENTS.
- F. PROVIDE UPDATED PANEL SCHEDULES THAT IDENTIFY EXISTING CIRCUITS AND NUMBER OF SPARE CIRCUITS AVAILABLE UPON COMPLETION OF DEMOLITION WORK.
- G. VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK. PROVIDE ADDITIONAL SPLICE BOXES, ETC., AS REQUIRED FOR COMPLETE AND PROPERLY OPERATING SYSTEM. REUSE IN PLACE EXISTING CONDUIT NOT REMOVED DURING DEMOLITION IF SIZED IN ACCORDANCE WITH LATEST EDITION OF THE C.E.C. (CALIFORNIA ELECTRICAL CODE) AND THOROUGHLY CLEANED AND SWABBED PRIOR TO PULLING NEW WIRES.
- G. OBTAIN COPY OF EXISTING AS-BUILT DRAWINGS PRIOR TO BID.
- H. WHERE REMOVAL OF OUTLET(S) INTERRUPT EXISTING CONDUIT AND/OR CIRCUIT, WALL OR PORTION OF THE CIRCUIT AND RESULTS IN LOSS OF CIRCUIT CONTINUITY, REROUTE, EXTEND AND RECONNECT REMAINING CONDUIT AND/OR CIRCUIT AS REQUIRED TO PROVIDE CONTINUITY OF THE CIRCUIT THAT REMAINS IN SERVICE TO OUTLETS AND EQUIPMENT.
- I. WHERE DRAWINGS INDICATE EXISTING ELECTRICAL EQUIPMENT OR DEVICES TO BE RELOCATED AND/OR REUSED, REFURBISH THEM. THOROUGHLY CLEAN SUCH ITEMS. NOTIFY ARCHITECT OF ANY DEFECTS IN SUCH INSTALLATIONS. REPAIR ANY DAMAGE CAUSED BY DEMOLITION OR CONSTRUCTION PERFORMED UNDER THIS CONTRACT.

<u>Sheet Notes</u> (#>

- 1. EXISTING RELAY CABINET ABOVE PANEL B2 TO BE RELOCATED. REFER TO NEW WORK FOR LOCATION.
- 2. EXISTING FEEDER ASSUMED TO BE ROUTED IN SLAB, TO PANEL B1. FIELD VERIFY.

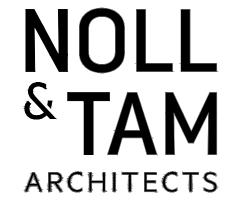




GENERAL SHEET NOTES

- COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF RECEPTACLES, VOICE/DATA OUTLETS AND ELECTRICAL DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.
- B. IN FINSIHED AREAS RUN ALL CONDUITS CONCEALED U.O.N. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT, REER TO ARCHITECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.
- C. REFER TO SINGLE LINE DIAGRAMS, EQUIPMENT SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION.
- D. SIZE FUSES FOR ALL MECHANICAL EQUIPMENT PER APPROVED
- E. PULL BOX SIZES SHOWN FOR STRAIGHT PULL APPLICATION ONLY. SIZE PER
- F. FIELD COORDINATE EXACT ROUTING OF UNDERGROUND INFRASTRUCTURE. PROVIDE ADDITIONAL SPLICE/PULL BOXES AS REQUIRED IF CONDUIT BENDS EXCEED THREE 90 DEGREE BENDS (OR 270 DEGREES TOTAL).
- SEAL No. E19586 Exp. 06-30-25 Date Signed: 12/18/23 **RIJA** 5515 Doyle St., #7 Emeryville, CA 94608 RIJA Project #: 2021055 www.rijainc.com APPROVALS PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710 **BID SET** 12.22.2023 ISSUE DATE N&T JOB NUMBER 22121 REVISIONS DATE DESCRIPTION 1 8/25/23 REV 1 - PLAN CHECK 2 10/20/23 REV 2 - PLAN CHECK DRAWN BY **CAD** CHECKED BY **RAJ** SHEET TITLE FLOOR PLAN -ELECTRICAL
 - SHEET NUMBER

E1.01



729 Heinz Avenue Berkeley, CA 94710 tel 510.542.2200 fax 510.542.2201

	LUMINAIRE SCHEDULE
	PROTOCOL (0-10VDC, LINE VOLTAGE, DALI, ETC.) COMPATIBLE
	ROL SYSTEM AS SPECIFIED AND SHOWN ON DRAWINGS.
	CEILING TYPES WITH LUMINAIRE LOCATIONS PRIOR TO ES. COORDINATE INSTALLATION WITH REFLECTED CEILING PLAN.
	ACTURERS ARE APPROVED TO SUBMIT BID. INCLUSION DOES ACTURER FROM SUPPLYING PRODUCT AS DESCRIBED.
INFORMATION OF EAC OR HIGHLIGHTED. SUB	ALS THAT INCLUDE THE LUMINAIRE, LAMP AND BALLAST CH LUMINAIRE, WITH APPLICABLE OPTIONS CLEARLY CHECKED BMITTALS NOT INCLUDING THIS INFORMATION WILL BE TED BY THE ENGINEER OF RECORD.
TYPE:	B1
DESCRIPTION:	BACK OF HOUSE LINEAR LED
MOUNTING:	PENDANT OR SURFACE
FINISH:	MATTE BLACK
DRIVER/BALLAST:	
LED/LAMPS:	4000L, 3500K, 80 CRI
UED/LAMPS: WATTS:	31W
MANUFACTURER:	DAY BRITE #FSS-4-40L-835-UNV-DIM-BK OR APPROVED
NOTES:	
TYPE:	R1
DESCRIPTION:	4" RECESSED LED DOWNLIGHT
MOUNTING:	RECESSED
FINISH:	STANDARD WHITE
DRIVER/BALLAST:	INTEGRAL TRIAC
LED/LAMPS:	908L, 3500K, 80CRI
WATTS:	10W
MANUFACTURER:	LUCIFER FRAXION #F4R-FFS-1-WH-WH-80C12A-35-10-X-TR2 OR APPROVED
NOTES:	
TYPE:	R2
DESCRIPTION:	4" RECESSED LED DOWLIGHT SLOPED CEILING
MOUNTING:	4 RECESSED LED DOWLIGHT SLOPED CEILING RECESSED
FINISH:	STANDARD WHITE
DRIVER/BALLAST:	INTEGRAL ELV/TRIAC
LED/LAMPS:	1196L, 3500K, 80CRI
WATTS:	14W
	LUCIFER FRAXION SLOPED
MANUFACTURER:	#FS1-R-M-1-WH-WH-80C16A-35-22-X-X-PH OR APPROVED
NOTES:	
TYPE:	S1
DESCRIPTION:	EXTERIOR SURFACE MOUNT CYLINDER DOWNLIGHT
MOUNTING:	SURFACE MOUNT TO SURFACE BOX
FINISH:	STANDARD BY ARCHITECT
	REMOTE DRIVER, COORDINATE EXACT LOCATION WITH
DRIVER/BALLAST:	ARCHITECT.
LED/LAMPS:	
LED/LAWIF 3:	3000K, 80CRI, 692L
UED/LAMPS: WATTS:	3000K, 80CRI, 692L 12W
	12W
WATTS:	12W
WATTS: MANUFACTURER:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FWEERFOOT
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS: WATTS:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FWEERFOOT #HP-2-WM-ID-X-S-S-835-TG-F-96LG-120-SC-FC-10%-MB-FE-SW
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS: WATTS: MANUFACTURER:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FWEERFOOT
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WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS: WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FWEEREFOOT #HP-2-WM-ID-X-S-S-835-TG-F-96LG-120-SC-FC-10%-MB-FE-SW OR APPROVED EM EMERGENCY BUG-EYE SURFACE
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS: WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FMEEREFOOT #HP-2-WM-ID-X-S-S-835-TG-F-96LG-120-SC-FC-10%-MB-FE-SW OR APPROVED EM EMERGENCY BUG-EYE
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS: WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FWEERFFOOT #HP-2-WM-ID-X-S-S-835-TG-F-96LG-120-SC-FC-10%-MB-FE-SW OR APPROVED EM EMERGENCY BUG-EYE SURFACE STANDARD BY ARCHITECT
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS: WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FWEERFFOOT #HP-2-WM-ID-X-S-S-835-TG-F-96LG-120-SC-FC-10%-MB-FE-SW OR APPROVED EM EMERGENCY BUG-EYE SURFACE STANDARD BY ARCHITECT INTEGRAL POWER SUPPLY FOR 90MINS. NICKEL CADMIUM
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS: WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FM EEREFOOT #HP-2-WM-ID-X-S-S-835-TG-F-96LG-120-SC-FC-10%-MB-FE-SW OR APPROVED EM EMERGENCY BUG-EYE SURFACE STANDARD BY ARCHITECT INTEGRAL POWER SUPPLY FOR 90MINS. NICKEL CADMIUM 1000L
WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST: LED/LAMPS: WATTS: MANUFACTURER: NOTES: TYPE: DESCRIPTION: MOUNTING: FINISH: DRIVER/BALLAST:	12W BK #CK-LED-X59-FL-XX-10 OR APPROVED PROVIDE #PM2RM REMOTE POWER SUPPLY W1 DIRECT/INDIRECT LINEAR WALL MOUNT WALL STANDARD BY ARCHITECT 0-10V 10% DIM 823L/FT, 3500K, 80CRI FWEERFFOOT #HP-2-WM-ID-X-S-S-835-TG-F-96LG-120-SC-FC-10%-MB-FE-SW OR APPROVED EM EMERGENCY BUG-EYE SURFACE STANDARD BY ARCHITECT INTEGRAL POWER SUPPLY FOR 90MINS. NICKEL CADMIUM
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	FEEDER SCHEDULE ((<u>)</u>
FEEDER TAG	2 WIRE + GND WIRE AND CONDUIT	MAXIMUM Circuit Breaker	ACTUAL FEEDER CAPACITY
F20-2	2 #12, 1#12 GND IN 3/4"C	20	20
F30-2	2 #10, 1#10 GND IN 3/4"C	30	30
F40-2	2 #8, 1#10 GND IN 3/4"C	40	40
F50-2	2 #6, 1#8 GND IN 3/4"C	60	55
F70-2	2 #4, 1#8 GND IN 1"C	70	70
F90-2	2 #2, 1#8 GND IN 1"C	90	95
F125-2	2 #1, 1#6 GND IN 1-1/4"C	125	130
	3 WIRE + GND		
FEEDER TAG	WIRE AND CONDUIT		
F20-3	3 #12, 1#12 GND IN 3/4"C	20	20
F30-3	3 #10, 1#10 GND IN 3/4"C	30	30
F40-3	3 #8, 1#10 GND IN 1"C	40	40
F50-3	3 #6, 1#8 GND IN 1"C	60	55
F70-3	3 #4, 1#8 GND IN 1-1/4"C	70	70
F90-3	3 #2, 1#8 GND IN 1-1/4"C	90	95
F125-3	3 #1, 1#6 GND IN 1-1/2"C	125	130
F150-3	3 #1/0, 1#6 GND IN 1-1/2"C	150	150
F175-3	3 #2/0, 1#6 GND IN 2"C	175	175
F200-3	3 #3/0, 1#6 GND IN 2"C	200	200
F225-3	3 #4/0, 1#4 GND IN 2"C	225/250	230
F250-3	3 #250, 1#4 GND IN 2-1/2"C	250/300	255
F300-3	3 #350, 1#4 GND IN 3"C 3 #500, 1#2 GND IN 4"C	300/350	310
F350-3	2 SETS (3 #3/0, 1#2 GND IN 2"C)	350/400	380
F400-3 F450-3	2 SETS (3 #4/0, 1#1 GND IN 2-1/2"C)	400	400
F450-3 F500-3	2 SETS (3 #250, 1#1 GND IN 2-1/2 C)	450/500	460 510
F600-3	2 SETS (3 #350, 1#1 GND IN 3"C)	500/600 600/700	620
F700-3	2 SETS (3 #500, 1#1/0 GND IN 3"C)	700/800	760
F800-3	3 SETS (3 #350, 1#1/0 GND IN 3"C)	800	930
1000-5	4 WIRE + GND	000	330
FEEDER TAG	WIRE AND CONDUIT		
F20-4	4 #12, 1#12 GND IN 3/4"C	20	20
F30-4	4 #10, 1#10 GND IN 3/4"C	30	30
F40-4	4 #8, 1#10 GND IN 1"C	40	40
F50-4	4 #6, 1#8 GND IN 1-1/4"C	60	55
F70-4	4 #4, 1#8 GND IN 1-1/4"C	70	70
F90-4	4 #2, 1#8 GND IN 1-1/2"C	90	95
F125-4	4 #1, 1#6 GND IN 2"C	125	130
F150-4	4 #1/0, 1#6 GND IN /2"C	150	150
F175-4	4 #2/0, 1#6 GND IN 2"C	175	175
F200-4	4 #3/0, 1#6 GND IN 2-1/2"C	200	200
F225-4	4 #4/0, 1#4 GND IN 2-1/2"C	225/250	230
F250-4	4 #250, 1#4 GND IN 3"C	250/300	255
F300-4	4 #350, 1#4 GND IN 3"C	300/350	310
F350-4	4 #500, 1#2 GND IN 4"C	350/400	380
F400-4	2 SETS (4 #3/0, 1#2 GND IN 2-1/2"C) 2 SETS (4 #4/0, 1#1 GND IN 2-1/2"C)	400	400
F450-4	2 SETS (4 #4/0, 1#1 GND IN 2-1/2 C) 2 SETS (4 #250, 1#1 GND IN 3"C)	450/500	460
F500-4	2 SETS (4 #250, 1#1 GND IN 3 C) 2 SETS (4 #350, 1#1 GND IN 3"C)	500/600	510
F600-4	2 SETS (4 #500, 1#1/0 GND IN 3 C) 2 SETS (4 #500, 1#1/0 GND IN 4"C)	600/700	620
F700-4	3 SETS (4 #350, 1#1/0 GND IN 3"C)	700/800	760
F800-4		800	930
-			
A. R	CONDUIT SIZES ARE MINIMUM.		

B. USE MINIMUM 1"C FOR UNDERGROUND WORK C. ABOVE 86 DEG. F AMBIENT, INCREASE WIRE SIZE PER

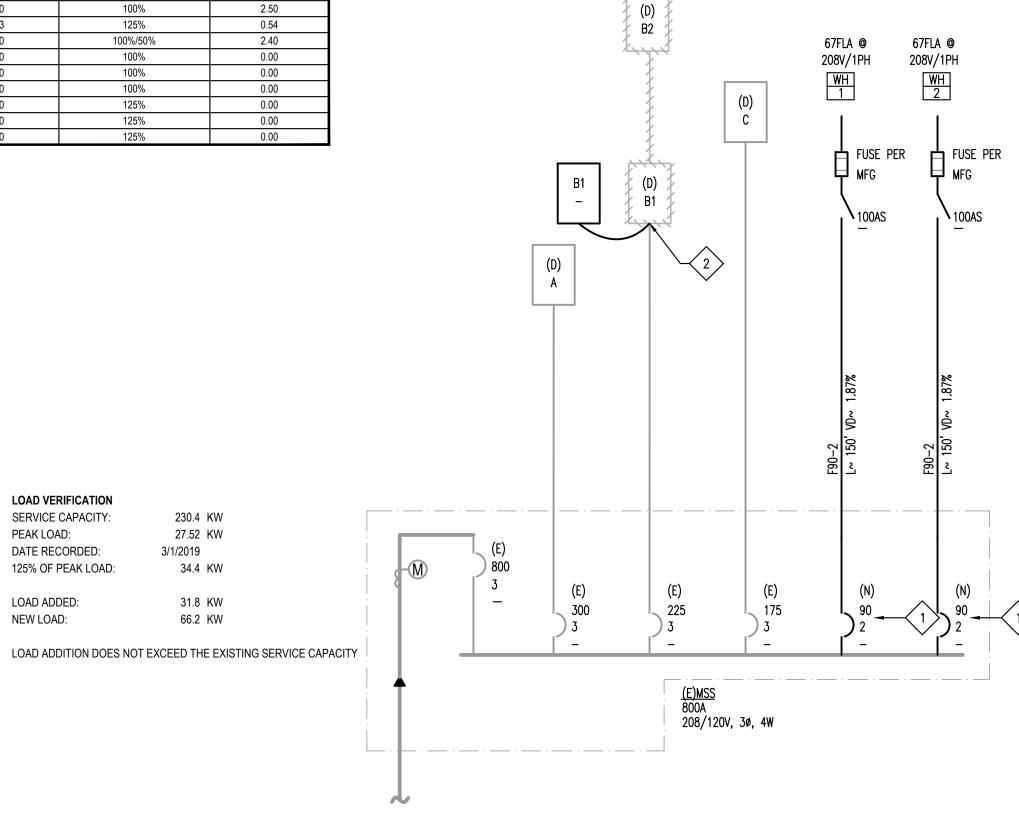
NATIONAL ELECTRICAL CODE

D. DERATE WIRE SIZE PER NEC FOR MORE THAN THREE CURRENT CARRYING WIRES IN CONDUIT

ç	SUMMARY OF VO	olt drop limits	6
CIRCUIT VOLTS (V)	2% VOLTAGE DROP (V)	3% VOLTAGE DROP (V)	TOTAL LOSS (V)
120	2.4	3.6	6.0
208	4.2	6.2	10.4

SUI	MMARY O		JM FEEDE T LENGTH		RANCH
WIRE (AWG)	CIRCUIT AMPS (A)		1 FEEDER TH (ft)		M BRANCH LENGTH (ft)
		120V	208V	120V	208V
14	12	39	67	58	101
12	16	46	80	69	120
10	24	48	83	72	125
8	32	57	99	86	149
6	40	73	127	110	190
4	52	89	154	134	232
2	72	103	178	154	267
1/0	96	123	212	184	319
2/0	108	137	238	206	357
4/0	144	163	283	245	425
250	164	170	294	255	441
300	184	181	314	272	471
350	200	195	338	292	506
500	248	224	388	336	582

	PANEL B			PH/ M/ E	VOLTAGE: ASE/WIRE: AIN AMPS: BUS AMPS:	3 PH 4V MLO 225 A	V				PH	IASE A: IASE B: IASE C:	1500 3400 430	VA VA	12.5 A 28.3 A 3.6 A
					ic rating Iounting:							ECTED: Emand:	5330 5438		14.8 A 15.1 A
NOTES	LOAD DESCRIPTION	φ	VA		BKR	СКТ		СКТ	BKR		VA	φ	LOAD DE	SCRIPTION	NOTES
1	(EXISTING PANEL B1 LOAD)	Α			15/1	1		2	15/1			Α	(EXISTING P	ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	В			15/1	3		4	15/1			В	(EXISTING P	ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	С			15/1	5		6	15/1			С	(EXISTING P	ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A			15/1	7		8	15/1			A	(EXISTING P	ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	В			15/1	9		10	15/1			В	(EXISTING P	ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C			15/1	11		12	15/1			C	(EXISTING P	ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A			15/1	13		14	15/1			A	(EXISTING P	ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	В			15/1	15		16	15/1			В	(EXISTING P	ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C			15/1	17		18	15/1			c		ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A			15/1	19		20	15/1			A		ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	В			15/1	21		20	15/1			В	(ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C			15/1	23		24	15/1			C		ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A			15/1	25		26	15/1			A		ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	В			15/1	27		28	15/1			В		ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C			15/1	29		30	15/1			c		ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A			20/2	31		32	15/1			A		ANEL B1 LOAD)	1
		В			-	33		34	15/1			В		ANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C			20/2	35		36	15/1			c		ANEL B1 LOAD)	1
-		A			-	37		38	20/1			A		PACE	<u> </u>
1	(EXISTING PANEL B1 LOAD)	В			20/2	39		40	20/1	G	1500	В		DRYER	-
-		C			-	41		40	20/1		1000	c		PACE	-
2	(EXISTING PANEL B2 LOAD)	A			15/1	43		44	15/1			A		ANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	В			15/1	45		44	15/1			В	(ANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	C			15/1	47		48	15/1			C		ANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	A			15/1	49		50	15/1			A	`	ANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	В			15/1	51		52	15/1			В		ANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	C			15/1	53		54	15/1			c		ANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	A			15/1	55		56	15/1			A	`	ANEL B2 LOAD)	2
-		В	500	G	20/1	57		58	20/1	G	500	В	I AV/ELUSH	VALVE PWR	
	NEW LIGHTING	C	430	L	20/1	59		60	2071			C		PACE	-
	R - RESTROOM	A	1500	R	20/1	61		62				A		PACE	-
	R - STORAGE	В	900	R	20/1	63		64				В		ACE	1
	HW CIRC PUMP	C				65		66				C		PACE	+
	SPACE	A				67		68				A		PACE	1
	SPACE	В				69		70				В		PACE	1
	SPACE	С				71		72				С	SF	PACE	
GENERAL	NOTES		·	•	·	· · · ·	S	CHEDUL	E NOTES	·	·	· !			
a.							1.	REFER	TO EXISTIN	IG PAN	EL DIRECTO	RY B1. P	ROVIDE NEW		
b.									TO EXISTIN	NG PANI	EL DIRECTO	RY B2. P	ROVIDE NEW		
C.					1		3.								
LOAD TYPE	LOAD DESCRIPTION	co	NNECTED (k	VA)	SUBFE	D (kVA)		TOTAL	BY TYPE (kVA)	DEMA	ND FACT	OR (kVA)	DEMAND BY	TYPE (kVA)
G	GENERAL		2.50		0.	00		2.50		100%			2.5	0	
L	LIGHTING		0.43			00			0.43			125%		0.5	
R	RECEPTACLES		2.40			00	+		2.40			100%/50	1%	2.4	
К Н	KITCHEN HEATING		0.00			00	+		0.00			100% 100%		0.0	
н М	MOTORS		0.00			00	+		0.00			100%		0.0	
LM	LARGEST MOTOR		0.00			00	+		0.00			125%		0.0	
WH	WATER HEATER		0.00			00	+		0.00			125%		0.0	
С	CONTINUOUS		0.00		0.	00			0.00			125%		0.0	0



01 SINGLE LINE DIAGRAM scale: nts

230.4 KW

27.52 KW

34.4 KW

31.8 KW

66.2 KW

3/1/2019

LOAD VERIFICATION SERVICE CAPACITY:

DATE RECORDED:

125% OF PEAK LOAD:

PEAK LOAD:

LOAD ADDED:

NEW LOAD:

<u>GENERAL SHEET NOTES</u>

- A. DERATE WIRE SIZE PER NEC FOR NUMBER OF CURRENT CARRYING WIRES AND FOR AMBIENT TEMPERATURE OF 86F
- B. FEEDERS SHOWN ARE COPPER CONDUCTORS WITH THHN/THWN INSULATION TYPE UNLESS NOTED OTHERWISE.
- C. FEEDER LENGTH AND VOLTAGE DROP CALCULATIONS ARE FOR ESTIMATING VOLTAGE DROP AND SHORT CIRCUIT COORDINATION PURPOSES ONLY. CONTRACTOR SHALL USE ACTUAL FEEDER LENGTHS TO CALCULATE ACTUAL VOLTAGE DROP AND SHORT CIRCUIT VALUES.
- D. THE CONTRACTOR SHALL PROVIDE AND INSTALL PERMANENT ARC FLASH WARNING LABELS FOR ALL NEW POWER DISTRIBUTION EQUIPMENT (CEC 110.16). LABEL SHALL BE FACTORY APPLIED AND MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS.

<u>Sheet Notes</u>

- 1. NEW CIRCUIT BREAKER TO MATCH EXISTING SWITCHBOARD MANUFACTURER AND AIC RATING.
- 2. DISCONNECT AND REMOVE EXISTING PANELBOARD. INTERCEPT EXISTING FEEDER AND EXTEND TO NEW PANEL B LOCATION. EXTEND EXISTING BRANCH CIRCUITS TO NEW PANEL B LOCATION.

NOLL SOLL<
SEAL
No. E19586 Exp. 06-30-25 Date Signed: 12/18/23
5515 Doyle St., #7 Emeryville, CA 94608 RIJA Project #: 2021055 www.rijainc.com
APPROVALS
PROJECT TITLE
City of Berkeley
City of Berkeley WEST BERKELEY SERVICE CENTER
WEST BERKELEY
WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710
WEST BERKELEY SERVICE CENTER1900 Sixth St Berkeley, CA 94710BID SET
WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710
WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710 BID SET ISSUE DATE 1222023
WEST BERKELES SERVICE SERVICE SERVICE SERVICE SERVICE Service Service BID SET ISSUE DATE ISSUE DATE Service REVISIONS DATE DATE DATE DESCRIPTION 1 8/25/23 REVISIONS
WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710 BID SET ISSUE DATE 1222.003 N&T JOB NUMBER 2121 REVISIONS DATE 1 8/25/23 REV 1 - PLAN CHECK 2 10/20/23 REV 2 - PLAN CHECK DRAWN BY CHECKED BY
WEST BERKELES SERVICE CENTER 1900 Sixth St BID SET ISUE DATE 102 NUMBER 2121 REVISIONS 1
WEST BERKELEY SERVICE SERVICE CENTER 1900 Sixth St Berkeley, CA 94710 BID SET ISSUE DATE 1222.023 N&T JOB NUMBER 2121 ISSUE DATE 12.22.023 N&T JOB NUMBER 2121 REVISIONS DATE DESCRIPTION 1 8/25/23 REV 1 - PLAN CHECK 2 10/20/23 REV 2 - PLAN CHECK DRAWN BY CAD CHECKED BY RAJ SHEET TITLE SINGLE LINE DIAGRAM AND

- CONTROL.

- FINISHES WITH ARCHITECT.

2

TYPICAL SWITCH ELEVATION SCALE: NTS

F. COORDINATE PRESETS WITH CLIENT AND PROVIDE ENGRAVING AS REQUIRED.

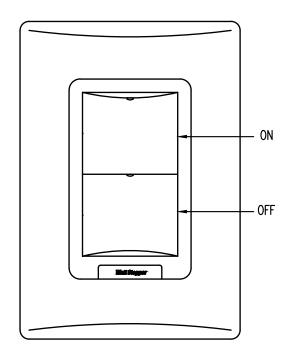
E. COORDINATE WITH OWNER AND ARCHITECT FOR ENGRAVING OF BUTTONS AND FACEPLATES. COORDINATE FINAL

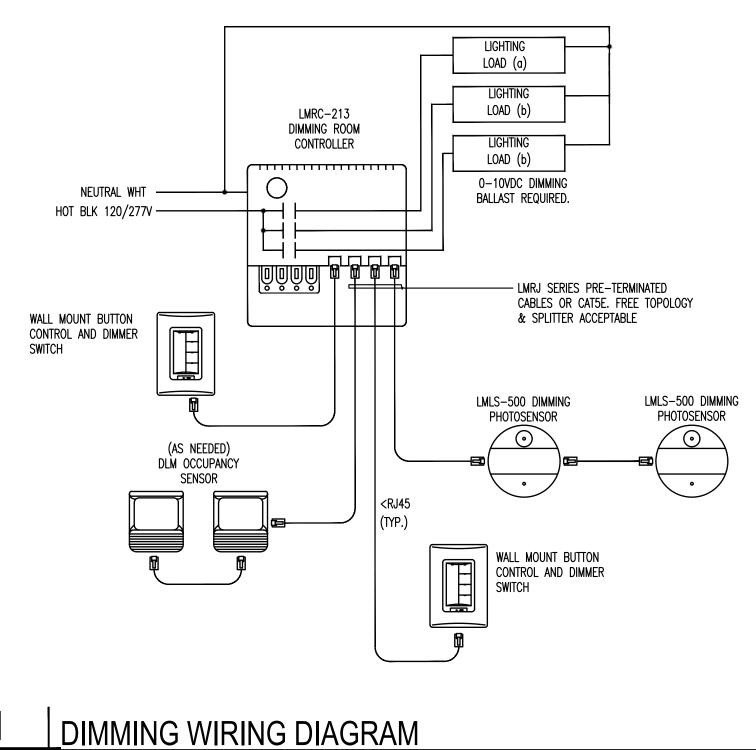
D. PROVIDE # OF BUTTONS AS REQUIRED. UNUSED BUTTONS SHALL BE SPARES.

C. PROVIDE ENGRAVED LABELING PER CLIENT

B. HOLD BUTTON FOR DIM UP/DOWN.

DETAIL NOTES A. TYPICAL SWITCHBANK CONFIGURATIONS SHOWN. EACH ZONE SHOWN ON PLAN SHALL HAVE A DEDICATED BUTTON





- AND TECHNICAL SUPPORT.

SCALE: NTS

- AND ASSOCIATED LABOR FOR A COMPLETE INSTALLATION.

- DOCUMENTS.
- BLANK FACEPLATES AT CEILING.
- COORDINATE FINAL LOCATION OF DEVICES WITH ARCHITECT.
- ZONES) AND CONTINUOUS DIMMING CAPABILITIES.

- REQUIREMENTS ON THE PROJECT.
- DEVICE.

WATTSTOPPER DLM – GENERAL NOTES

A. BASIS OF DESIGN IS WATTSTOPPER DLM. CONTRACTOR TO PROVIDE ALL PARTS, DEVICES, WIRING, APPURTENANCES,

B. ALL SENSOR LOCATIONS ARE APPROXIMATE AND SHOWN FOR DESIGN INTENT ONLY. LOCATE SENSORS PER MANUFACTURER GUIDELINES AND INSTALLATION MANUAL. PROVIDE QUANTITIES AND LOCATIONS AS REQUIRED FOR PROPER SENSING. FINAL DEVICE LAYOUT SHALL BE SUBMITTED AS A SHOP DRAWING AS PART OF SUBMITTAL REVIEW. SHOP DRAWING APPROVAL IS REQUIRED PRIOR TO PROCUREMENT AND ROUGH-IN.

C. LOCATE SENSOR MINIMUM 5 FEET FROM ANY AIR SUPPLY AND/OR RETURN REGISTERS.

D. THE CONTRACTOR SHALL COMMISSION SENSITIVITY AND TIME DELAY SETTINGS AND PROVIDE TITLE 24 COMMISIONING

E. THE CONSTRACTOR SHALL PROVIDE ALL REQUIRED OCCUPANCY SENSOR POWER PACKS. PROVIDE J-BOXES WITH

F. ROOM CONTROLLERS SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION, INSIDE A MULTI-GANG J-BOX WITH BLANK FACEPLATE. CONCEALED IN CABINETRY. ABOVE DROP CEILING/CLOUD, OR AT A NEARBY REMOTE LOCATION.

G. ROOM CONTROLLER QUANTITIES SHOWN ON PLANS FOR DESIGN INTENT. PROVIDE QUANTITIES AS REQUIRED FOR A COMPLETE SYSTEM. ONE ROOM CONTROLLER IS REQUIRED FOR EACH LIGHTING CIRCUIT. PROVIDE ROOM CONTROLLER SERIES WITH THE FOLLOWING THREE SWITCHING ZONES (INCLUDING MULTIPLE DAYLIGHT SWITCHING

H. LMRJ SERIES PRE-TERMINATED CABLES OR CAT5E IS ACCEPTABLE. MANUFACTURER RECOMMENDS PROVIDING LMRJ SERIES PRE-TERMINATED CABLES FOR EASE OF INSTALLATION.

I. COORDINATE WITH MANUFACTURER SO THAT DEVICES ALLOW FOR OPEN TOPOLOGY, AND DO NOT REQUIRE ADDITIONAL CLASS 2 0-10V CONTROL WIRING. DEVICES SHALL HAVE NETWORK CAPABILITY FOR FUTURE USE.

J. COMPATIBILITY WITH THIRD PARTY EQUIPMENT REQUIRES SELECT DEVICES. THIRD PARTY PROJECTION SCREENS REQUIRE #LMDI-101 AND #LMSW-102 TO UTILIZE DLM CONTROL SWITCH. THIRD PARTY SHADES REQUIRE #LMDI-010 AND #LMSW-102 TO UTILIZE DLM CONTROL SWITCH. COORDINATE WITH ARCHITECT AND OWNER FOR SUCH

K. ALL PART NUMBERS SHOWN ARE BY WATTSTOPPER. SEE MANUFACTURER'S WEBSITE FOR SUPPORT DOCUMENTATION

L. SYSTEM SHALL HAVE NETWORK CAPABILITY FOR AUTOMATIC DEMAND RESPONSE VIA BMS OR THIRD PARTY SIGNALLY

M. PROVIDE LMCZ-301 CONTROLLER FOR TIMECLOCK CONTROL OF KITCHEN AND DINING AREAS.

NOLL Section 2015 Section 2015
SEAL
S515 Doyle St., #7 Emeryville, CA 94608 RIJA Project #: 2021055 www.rijainc.com
PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE CENTER
1900 Sixth St Berkeley, CA 94710
BID SET ISSUE DATE 12.22.2023 N&T JOB NUMBER 22121 REVISIONS DATE DESCRIPTION 1 8/25/23 REV 1 - PLAN CHECK 2 10/20/23 REV 2 - PLAN CHECK
DRAWN BY CAD CHECKED BY RAJ SHEET TITLE DETAILS
SHEET NUMBER

SECTION 260000 - ELECTRICAL D. FLEXIBLE CONDUIT, PVC COATED (LFMC): INNER CORE MADE FROM SPIRAL WOUND STRIP OF HEAVY GAUGE, HOT DIPPED GALVANIZED LOW CARBON STEEL. PART 1 – GENERAL 1/2-INCH THROUGH 1-1/4 INCH TRADES SIZES HAVE A SQUARE LOCK CORE AND CONTAIN AN INTEGRAL BONDING STRIP OF COPPER. 1-1/2 INCH AND LARGER HAVE FULLY INTERLOCKED CORE. JACKET MATERIAL IS MOISTURE, OIL, AND SUNLIGHT RESISTANT FLEXIBLE PVC. MANUFACTURED IN CONFORMANCE 1.1 SUMMAR WITH UL 360. MANUFACTURERS: AFC CABLE SYSTEMS INC., ELECTRI-FLEX COMPANY, INTERNATIONAL METAL HOSE, OR APPROVED EQUIVALENT. A. ELECTRICAL SYSTEMS REQUIRED FOR THIS WORK INCLUDES LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE INSTALLATION OF E. ELECTRICAL POLYVINYL CHLORIDE (PVC): SCHEDULE 40 RIGID PVC. [SCHEDULE 80 RIGID PVC.] MANUFACTURED IN CONFORMANCE WITH UL 651. ELECTRICAL WORK SHOWN ON DRAWINGS, SPECIFIED HEREIN OR REQUIRED FOR A COMPLETE OPERABLE FACILITY AND NOT SPECIFICALLY DESCRIBED IN MANUFACTURERS: AFC CABLE SYSTEMS INC., PW PIPE, INTERNATIONAL METAL HOSE, OR APPROVED EQUIVALENT. OTHER SECTIONS OF THESE SPECIFICATIONS. AMONG THE ITEMS REQUIRED ARE: 1. DISTRIBUTION EQUIPMENT SHOWN ON DRAWINGS. F. CONDUIT FITTINGS 2. FEEDERS TO DISTRIBUTION PANELS, AND OTHER EQUIPMENT AS DETAILED. 1. BUSHINGS: INSULATED TYPE FOR THREADED RIGID, CONDUIT OR RACEWAY CONNECTORS WITHOUT FACTORY INSTALLED PLASTIC THROAT CONDUCTOR PROTECTION. MANUFACTURERS: THOMAS & BETTS 1222 SERIES, O-Z GEDNEY B SERIES, OR APPROVED EQUIVALENT. 3. BRANCH CIRCUIT WIRING FROM THE DISTRIBUTION PANELS FOR LIGHTING, RECEPTACLES, MOTORS, SIGNAL SYSTEMS AND OTHER DETAILED CIRCUIT WIRING. 2. GROUND BUSHINGS: INSULATED GROUNDING TYPE FOR THREADED RIGID, CONDUIT OR RACEWAY CONNECTORS. MANUFACTURERS: 0-Z GEDNEY BLG SERIES OR APPROVED EQUIVALENT. B. FEES: 3. RACEWAY CONNECTORS AND EMT COUPLINGS: 1. OBTAIN AND PAY FOR ELECTRICAL PERMITS, PLAN REVIEW, AND INSPECTIONS FROM LOCAL AUTHORITY HAVING JURISDICTION (AHJ). a. STEEL CONNECTORS, COUPLINGS, AND CONDUIT BODIES WITH ZINC ELECTROPLATE. 1.2 DEFINITIONS b. CONNECTOR LOCKNUTS ARE ZINC ELECTROPLATED STEEL, WITH THREADS MEETING ASTM TOLERANCES. c. CONNECTOR THROATS HAVE FACTORY INSTALLED PLASTIC INSERTS PERMANENTLY INSTALLED. FOR NORMAL CABLE OR CONDUCTOR EXITING ANGLES A. FOLLOWING IS A LIST OF ABBREVIATIONS GENERALLY USED IN THIS DIVISION: FROM RACEWAY, THE CABLE JACKET OR CONDUCTOR INSULATION BEARS ONLY ON PLASTIC THROAT INSERT. 1. ADA AMERICANS WITH DISABILITIES ACT. 4. EXPANSION/DEFLECTION FITTINGS: 2. CBC CALIFORNIA BUILDING CODE. a. EMT: USE O_Z GEDNEY TYPE TX, OR APPROVED EQUIVALENT. 3. CEC CALIFORNIA ELECTRICAL CODE. b. RMC: USE O_Z GEDNEY TYPE AX, DX AND AXDX, OR APPROVED EQUIVALENT. 4. CFC CALIFORNIA FIRE CODE. 5. CEC T24 CALIFORNIA ENERGY CODE TITLE 24. 2.3 WIRES AND CABLES 6. HVAC HEATING, VENTILATING AND AIR CONDITIONING. A. COPPER, 600 VOLT RATED THROUGHOUT. CONDUCTORS 14AWG TO 10AWG, SOLID. CONDUCTORS 8AWG AND LARGER, STRANDED. PHASE COLOR TO BE 7. IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS. CONSISTENT AT FEEDER TERMINATIONS; A-B-C, TOP TO BOTTOM, LEFT TO RIGHT, FRONT TO BACK. CONDUCTORS JAWG AND LARGER, MINIMUM INSULATION ILLUMINATING ENGINEERING SOCIETY 8. IES RATING OF 75C. INSULATION TYPES THWN, THHN OR XHHW. MINIMUM INSULATION RATING OF 90C FOR BRANCH CIRCUITS. MANUFACTURERS: CAROL, NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION. GENERAL CABLE, OKONITE, SOUTHWIRE, OR APPROVED EQUIVALENT. 10. NFPA NATIONAL FIRE PROTECTION ASSOCIATION. 2.4 CONNECTORS 11. OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. A. COPPER PADS: DRILLED AND TAPPED FOR MULTIPLE CONDUCTOR TERMINALS. UNDERWRITERS LABORATORIES INC. 12. UL B. PROVIDE: TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE. B. LUGS: COMPRESSION TYPE FOR USE WITH STRANDED BRANCH CIRCUIT OR CONTROL CONDUCTORS; MECHANICAL LUGS NOT ACCEPTABLE. MANUFACTURERS: ANDERSON, ILSCO, PANDUIT, THOMAS & BETTS, 3M, OR APPROVED EQUIVALENT. C. FURNISH: SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNPACKING, ASSEMBLY AND INSTALLATION. C. CONDUCTOR BRANCH CIRCUITS: WIRE NUTS WITH INTEGRAL SPRING CONNECTORS FOR CONDUCTORS 18 THROUGH 8AWG. PUSH-IN TYPE CONNECTORS D. INSTALL: INCLUDES UNLOADING. UNPACKING. ASSEMBLING, ERECTING, INSTALLATION, APPLYING, FINISHING, PROTECTING, CLEANING AND SIMILAR OPERATIONS WHERE CONDUCTORS ARE NOT REQUIRED TO BE TWISTED TOGETHER ARE NOT ACCEPTABLE. MANUFACTURERS: 3M, IDEAL, OR APPROVED EQUIVALENT. AT THE PROJECT SITE AS REQUIRED TO COMPLETE ITEMS OF WORK FURNISHED BY OTHERS. 2.5 BOXES 1.3 SUBMITTALS A. LUMINAIRE OUTLET: 4-INCH OCTAGONAL BOX, 1-1/2 INCHES DEEP WITH 3/8-INCH LUMINAIRE STUD IF REQUIRED. PROVIDE RAISED COVERS ON A. OPERATION AND MAINTENANCE DOCUMENTATION: PROVIDE COPIES OF CERTIFICATES OF CODE AUTHORITY ACCEPTANCE, TEST DATA, PRODUCT DATA, BRACKET OUTLETS AND ON CEILING OUTLETS. MANUFACTURER: HUBBELL, THOMAS & BETTS, OR APPROVED EQUIVALENT. GUARANTEES, WARRANTIES, AND THE LIKE. B. DEVICE OUTLET: INSTALLATION OF ONE OR TWO DEVICES AT COMMON LOCATION, MINIMUM 4-INCH SQUARE, MINIMUM 1-1/2 INCHES DEEP. SINGLE- OR B. SHOP DRAWINGS: PROVIDE SHOP DRAWINGS WHICH INCLUDE PHYSICAL CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, DEVICE LAYOUT PLANS, WIRING TWO-GANG FLUSH DEVICE RAISED COVERS. MANUFACTURER: HUBBELL, THOMAS & BETTS, OR APPROVED EQUIVALENT. DIAGRAMS, AND THE LIKE. PROVIDE PRODUCT SUBMITTALS AND SHOP DRAWINGS IN EITHER PAPER FORMAT OR ELECTRONIC FORMAT. ELECTRONIC FORMAT MUST BE SUBMITTED VIA EMAIL OR FTP SITE. FOR PAPER HARDCOPY, PROVIDE ONE COMPLETE BINDER WITH TABBED DIVIDERS CONTAINING A SEPARATE C. MULTIPLE DEVICES: THREE OR MORE DEVICES AT COMMON LOCATION. INSTALL ONE-PIECE GANG BOXES WITH ONE-PIECE DEVICE COVER, ONE DEVICE SUBMITTAL FOR EACH SPECIFICATIONS SECTION. FOR ELECTRONIC FORMAT, PROVIDE ONE ZIP FILE PER SPECIFICATION DIVISION CONTAINING A SEPARATE PER GANG. FILE FOR EACH SPECIFICATIONS SECTION. INDIVIDUAL SUBMITTALS SENT PIECEMEAL IN A PER SPECIFICATION SECTION METHOD WILL BE RETURNED WITHOUT D. MASONRY BOXES: OUTLETS IN CONCRETE. MANUFACTURER: HUBBELL, THOMAS & BETTS, OR APPROVED EQUIVALENT REVIEW OR COMMENT. COPY ARCHITECT ON ALL SUBMISSIONS. 1. IDENTIFY EACH SUBMITTAL IN DETAIL. NOTE WHAT DIFFERENCES, IF ANY, EXIST BETWEEN THE SUBMITTED ITEM AND THE SPECIFIED ITEM. FAILURE TO E. CONSTRUCTION: FOR INTERIOR LOCATIONS, PROVIDE GALVANIZED STEEL OUTLET WIRING BOXES, OF THE TYPE, SHAPE AND SIZE, INCLUDING DEPTH OF IDENTIFY THE DIFFERENCES WILL BE CONSIDERED CAUSE FOR DISAPPROVAL. IF DIFFERENCES ARE NOT IDENTIFIED AND/OR NOT DISCOVERED DURING BOX, TO SUIT EACH RESPECTIVE LOCATION AND INSTALLATION; CONSTRUCTED WITH STAMPED KNOCKOUTS IN BACK AND SIDES, AND WITH THREADED HOLES THE SUBMITTAL REVIEW PROCESS, CONTRACTOR REMAINS RESPONSIBLE FOR PROVIDING EQUIPMENT AND MATERIALS THAT MEET THE SPECIFICATIONS WITH SCREWS FOR SECURING BOX COVERS OR WIRING DEVICES. PROVIDE OUTLET BOX ACCESSORIES FOR EACH INSTALLATION, INCLUDING MOUNTING BRACKETS, WALLBOARD HANGERS, EXTENSION RINGS, LUMINAIRE STUDS, CABLE CLAMPS AND METAL STRAPS FOR SUPPORTING OUTLET BOXES, COMPATIBLE AND DRAWINGS 2. PROVIDE THE FOLLOWING INFORMATION FOR LIGHTING SUBMITTALS: INCLUDE ELECTRICAL RATINGS, DIMENSIONS, MOUNTING, MATERIAL, REQUIRED WITH OUTLET BOXES BEING USED AND MEETING REQUIREMENTS OF INDIVIDUAL WIRING SITUATIONS. CLEARANCES, TERMINATIONS, WIRING AND CONNECTION DIAGRAMS, PHOTOMETRIC DATA, DIFFUSERS, LOUVERS, BALLAST TYPE AND QUANTITIES, LAMP F. JUNCTION AND PULL BOXES: ANSI 49 GRAY ENAMEL PAINTED SHEET STEEL JUNCTION AND PULL BOXES, WITH SCREW-ON COVERS; OF THE TYPE SHAPE TYPE AND QUANTITIES AND SIZE, TO SUIT EACH RESPECTIVE LOCATION AND INSTALLATION; WITH WELDED SEAMS AND EQUIPPED WITH STEEL NUTS, BOLTS, SCREWS AND WASHERS. 3. MAXIMUM OF TWO REVIEWS OF COMPLETE SUBMITTAL PACKAGE. ARRANGE FOR ADDITIONAL REVIEWS AND/OR EARLY REVIEW OF LONG-LEAD ITEMS; INSTALL JUNCTION BOXES ABOVE ACCESSIBLE CEILINGS FOR DROPS INTO WALLS FOR RECEPTACLE OUTLETS FROM OVERHEAD. INSTALL JUNCTION BOXES BEAR COSTS OF THESE ADDITIONAL REVIEWS AT ENGINEER'S HOURLY RATES. INCOMPLETE SUBMITTAL PACKAGES/SUBMITTALS WILL BE RETURNED TO AND PULL BOXES TO FACILITATE THE INSTALLATION OF CONDUCTORS AND LIMITING THE ACCUMULATED ANGULAR SUM OF BENDS BETWEEN BOXES, CABINETS CONTRACTOR WITHOUT REVIEW. AND APPLIANCES TO 270 DEGREES. MANUFACTURER: B-LINE, HOFFMAN, OR APPROVED EQUIVALENT. C. RECORD DRAWINGS: SHOW CHANGES AND DEVIATIONS FROM THE DRAWINGS. INCLUDE WRITTEN ADDENDUM AND CHANGE ORDER ITEMS. MAKE CHANGES G. BOX EXTENSION ADAPTER: INSTALL OVER FLUSH WALL OUTLET BOXES TO PERMIT FLEXIBLE RACEWAY EXTENSION FROM FLUSH OUTLET TO FIXED OR TO DRAWINGS IN ELECTRONIC FORMAT. OBTAIN ELECTRONIC COPY FROM ARCHITECT, USE THE SAME VERSION OF AUTOCAD TO PREPARE RECORD DRAWINGS MOVABLE EQUIPMENT. MANUFACTURER: BELL 940 SERIES, RED DOT IHE4 SERIES, OR APPROVED EQUIVALENT. AS WAS USED BY THE ARCHITECT. PROVIDE ELECTRONIC COPY AND HARD COPY TO ARCHITECT FOR REVIEW. 2.6 WIRING DEVICES 1.4 QUALITY ASSURANCE A. FINISH: WHITE A. CONFORM TO THE LATEST ADOPTED VERSION OF THE CALIFORNIA ELECTRIC CODE (CEC), WITH LOCAL AMENDMENTS. B. WALL SWITCHES: DECORATIVE AC ROCKER SWITCHES CHARACTERISTICS: QUIET ACTING, 20 AMP, 120/277 VOLT, UL LISTED FOR MOTOR LOADS UP TO 80 B. FURNISH PRODUCTS LISTED BY UNDERWRITERS LABORATORIES INC. (UL) OR OTHER TESTING FIRM ACCEPTABLE TO AHJ. PERCENT OF RATED AMPERAGE. WHERE SWITCHES ARE GANGED TOGETHER, PROVIDE A SINGLE MULTI-GANG COVERPLATE. COOPER, HUBBELL, LEVITON, PASS & SEYMOUR, OR APPROVED EQUIVALENT. C. USE MANUFACTURER'S PUBLISHED TESTING AND ADJUSTING PROCEDURES TO ADJUST SENSORS' TIME DELAY, DAYLIGHT SENSITIVITY, AND PASSIVE INFRARED C. RECEPTACLES: STRAIGHT PARALLEL BLADE, 125 VOLT, 2 POLE, 3 WIRE GROUNDING. SENSITIVITY TO SATISFACTION OF THE OWNER. COMMERCIAL GRADE: RIVETED. BACK AND SIDE WIRED. BRASS GROUND CONTACT ON STEEL MOUNTING STRAP. NYLON FACE AND NYLON BASE. 20 D. REGULATORY REQUIREMENTS: AMP. COOPER 5362, HUBBELL 5362, BRYANT 5362, LEVITON 5362S, PASS & SEYMOUR 5362 1. PROVIDE LUMINAIRES ACCEPTABLE TO CODE AUTHORITY FOR APPLICATION AND LOCATION AS INDICATED. 2. COMPLY WITH APPLICABLE ANSI STANDARDS. D. GROUND FAULT INTERRUPTER (GFCI) RECEPTACLE: MEETS OR EXCEEDS UL943 (CLASS A GFCI), UL498. FEED THROUGH TYPE, BACK-AND-SIDE WIRED, TAMPER-RESISTANT, WEATHER RESISTANT SELF-TESTING, 20 AMP, 125VAC. HUBBELL GFR5362SB, COOPER WRVGF20, PASS & SEYMOUR 2095TRWR, OR COMPLY WITH APPLICABLE NEMA STANDARDS. APPROVED EQUIVALENT. 4. PROVIDE LUMINAIRES AND LAMPHOLDERS THAT COMPLY WITH UL STANDARDS AND HAVE BEEN LISTED AND LABELED FOR LOCATION AND USE INDICATED BY A TESTING AGENCY ACCEPTABLE BY THE AHJ (E.G. UL, ETL, AND THE LIKE). E. FINISH PLATES: MATCH BUILDING STANDARD. COMMERCIAL GRADE THERMOPLASTIC, FINISH TO MATCH DEVICE FINISH. 5. COMPLY WITH CEC AS APPLICABLE TO INSTALLATION AND CONSTRUCTION OF LUMINAIRES. 2.7 OCCUPANCY SENSORS 6. COMPLY WITH FALLOUT AND RETENTION REQUIREMENTS OF CBC FOR DIFFUSERS. BAFFLES. AND LOUVERS. A. COMBINED OCCUPANCY SENSOR/WALL SWITCHES ("SENSOR/SWITCHES") 7. PROVIDE SIMILAR LAMPS AND BALLASTS FROM COMMON MANUFACTURER (E.G. ALL FLUORESCENT LAMPS FROM OSRAM/SYLVANIA, AND ALL MR LAMPS 1. COMPLETELY SELF-CONTAINED SENSOR SYSTEM THAT FITS INTO A STANDARD SINGLE GANG BOX. INTERNAL TRANSFORMER POWER SUPPLY, LATCHING FROM USHIO) UNLESS INDICATED OTHERWISE IN THE LUMINAIRE SCHEDULE. DRY CONTACT RELAY SWITCHING MECHANISM COMPATIBLE WITH ELECTRONIC BALLASTS, COMPACT FLUORESCENT, AND INDUCTIVE LOADS. TRIAC AND 1.5 SEQUENCING AND SCHEDULING OTHER HARMONIC GENERATING DEVICES ARE NOT ALLOWED. 2. PASSIVE INFRARED SENSOR TECHNOLOGY INCLUDES ADVANCED SIGNAL PROCESSING TO REDUCE FALSE TRIGGERS WITHOUT INCREASING SENSITIVITY. A. FOR THE PROPER EXECUTION OF THE WORK, COOPERATE WITH OTHER CRAFTS AND CONTRACTS AS NEEDED. LED INDICATOR BLINKS WHEN OCCUPANT SENSED. B. TO AVOID INSTALLATION CONFLICTS, THOROUGHLY EXAMINE THE COMPLETE SET OF CONTRACT DOCUMENTS. RESOLVE CONFLICTS PRIOR TO INSTALLATION. 3. RATED TO SWITCH LOADS: 800 WATTS INCANDESCENT OR 120-VOLT BALLAST; 1000 WATTS 277 VOLT BALLAST. ZERO-CROSSING TECHNOLOGY SWITCHES LIGHTING OFF WHEN AC VOLTAGE IS AT ZERO. MINIMIZES CONTACT WEAR. C. PRIOR TO INSTALLATION OF FEEDERS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS, EXAMINE THE MANUFACTURER'S SHOP DRAWINGS, WIRING 4. PROVIDE ADJUSTABLE DAYLIGHT FEATURE THAT HOLDS LIGHTING "OFF" WHEN A DESIRED FOOTCANDLE LEVEL IS PRESENT. DIAGRAMS, PRODUCT DATA, AND INSTALLATION INSTRUCTIONS. VERIFY THAT THE ELECTRICAL CHARACTERISTICS DETAILED IN THE CONTRACT DOCUMENTS ARE CONSISTENT WITH THE ELECTRICAL CHARACTERISTICS OF THE ACTUAL EQUIPMENT BEING INSTALLED. 5. PROVIDE INTEGRAL OFF OVERRIDE SWITCH WITH NO LEAKAGE CURRENT TO THE LOAD OR GROUND. 6. VANDAL-RESISTANT LENS. 1.6 WARRANTY 7. FINISH: WHITE FINISH UNLESS SELECTED OTHERWISE BY ARCHITECT. A. GUARANTEE ELECTRICAL WORK AGAINST FAULTY MATERIAL OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION BY THE 8. ALERTS FOR IMPENDING SHUT-OFF: LIGHT FLASH, AUDIBLE, BOTH OR NONE. OWNER. 9. STANDARD SENSOR/SWITCH: B. LED WARRANTY: LED SYSTEMS AND COMPLETE LUMINAIRES MUST HAVE MANUFACTURER'S WARRANTY OF 3 YEARS FROM DATE OF SUBSTANTIAL COMPLETION, a. 180 DEGREE SENSOR RANGE; COVERAGE: 150 SQUARE FEET FOR DESKTOP ACTIVITY. INCLUDING DRIVERS. b. MANUFACTURERS: WATTSTOPPER PW-100 SERIES OR APPROVED EQUIVALENT. PART 2 – PRODUCTS 2.8 SAFETY DISCONNECTS 2.1 MATERIALS A. TOGGLE TYPE DISCONNECT SWITCHES: 120 VOLT, 1-POLE, 20 AMP, 1 HP MAXIMUM. NEMA 1 ENCLOSURE FOR INDOORS, NEMA 3R ENCLOSURE FOR OUTDOORS. A. BASE CONTRACT UPON FURNISHING MATERIALS AS SPECIFIED. MATERIALS, EQUIPMENT, AND FIXTURES USED FOR CONSTRUCTION ARE TO BE NEW, LATEST PRODUCTS AS LISTED IN MANUFACTURER'S PRINTED CATALOG DATA AND ARE TO BE UL APPROVED OR HAVE ADEQUATE APPROVAL OR BE ACCEPTABLE BY B. SAFETY SWITCHES: HEAVY DUTY, FUSIBLE AND NON-FUSIBLE TYPE (AS INDICATED ON DRAWINGS), DUAL RATED, QUICK-MAKE, QUICK-BREAK WITH FUSE STATE, COUNTY, AND CITY AUTHORITIES. EQUIPMENT/FIXTURE SUPPLIER IS RESPONSIBLE FOR OBTAINING STATE, COUNTY, AND CITY ACCEPTANCE ON REJECTION FEATURE FOR USE WITH CLASS R FUSES ONLY. DEVICE LABELED WITH MAXIMUM VOLTAGE, CURRENT, AND HORSEPOWER. OPERABLE HANDLE EQUIPMENT/FIXTURE NOT UL APPROVED OR NOT LISTED FOR INSTALLATION. INTERLOCKED TO PREVENT OPENING FRONT COVER WITH SWITCH IN "ON" POSITION AND LOCKABLE IN "OFF" POSITION. SWITCHES RATED FOR MAXIMUM AVAILABLE FAULT CURRENT. PROVIDE NEMA 1 ENCLOSURE FOR INDOORS, NEMA 3R ENCLOSURE FOR OUTDOORS. MANUFACTURERS: EATON, GENERAL B. INCLUDE SPECIAL FEATURES, FINISHES, ACCESSORIES, AND OTHER REQUIREMENTS AS DESCRIBED IN THE CONTRACT DOCUMENTS REGARDLESS OF THE ELECTRIC, SQUARE D, SIEMENS, OR APPROVED EQUIVALENT. ITEM'S LISTED CATALOG NUMBER. 2.9 SUPPORTING DEVICES C. PROVIDE INCIDENTALS NOT SPECIFICALLY MENTIONED HEREIN OR NOTED ON DRAWINGS, BUT NEEDED TO COMPLETE THE SYSTEM OR SYSTEMS, IN A SAFE A. HANGERS, SUPPORTS, THREADED ROD AND FASTENERS: CORROSION-RESISTANT MATERIALS OF SIZE AND TYPE ADEQUATE TO CARRY THE LOADS OF AND SATISFACTORY WORKING CONDITION. EQUIPMENT AND CONDUIT, INCLUDING WEIGHT OF WIRE IN CONDUIT. MANUFACTURERS: B-LINE, KINDORF, SUPERSTRUT, UNISTRUT, OR APPROVED D. FIRESTOPPING FOAM SEALANT: FOAM SEALANT FOR USE AROUND CONDUIT PENETRATIONS TO PREVENT PASSAGE OF SMOKE, FIRE, TOXIC GAS OR WATER. FOUIVALENT. MAINTAIN SEAL BEFORE, DURING AND AFTER FIRE. IN AND AROUND CONDUIT FOR THERMAL BREAK AT PENETRATION OF BARRIER BETWEEN HEATED AND B. ANCHORS: CORROSION-RESISTANT MATERIALS OF SIZE AND TYPE ADEQUATE TO CARRY THE LOADS OF EQUIPMENT AND CONDUIT, INCLUDING WEIGHT OF UNHEATED SPACES. HILTI, 3M, CHASE TECHNOLOGY CORPORATION CTC PR-855, FIRE FOAM, THOMAS & BETTS, OR APPROVED EQUIVALENT. WIRE IN CONDUIT. MANUFACTURERS: ANCHOR IT, EPCON SYSTEM, HILTI-HIT SYSTEM, POWER FAST SYSTEM, OR APPROVED EQUIVALENT. 2.2 RACEWAYS C. CONCRETE INSERTS: CAST IN CONCRETE FOR SUPPORT FASTENERS FOR LOADS UP TO 800 LBS. MANUFACTURERS: B-LINE, KINDORF, SUPERSTRUT, A. RIGID METAL CONDUIT (RMC): HOT-DIP GALVANIZED AFTER THREAD CUTTING. MANUFACTURED IN CONFORMANCE WITH UL 6, ANSI C80.1. UNIFORM FINISH UNISTRUT. OR APPROVED EQUIVALENT. COAT WITH CHROMATE FOR ADDED PROTECTION. MANUFACTURERS: ALLIED TUBE & CONDUIT, BECK MANUFACTURING WL, PICOMA, OR APPROVED EQUIVALENT. D. PIPE STRAPS: TWO-HOLE GALVANIZED OR MALLEABLE IRON. B. ELECTRICAL METALLIC TUBING (EMT): STEEL GALVANIZED TUBING. MANUFACTURED IN CONFORMANCE WITH UL 797, ANSI C80.3. MANUFACTURERS: ALLIED E. LUMINAIRE CHAIN: CAMPBELL CHAIN 75031 OR APPROVED EQUIVALENT, 90 LB. TEST WITH STEEL HOOKS.

- TUBE & CONDUIT, BECK MANUFACTURING WL, PICOMA, OR APPROVED EQUIVALENT.
- C. FLEXIBLE METAL CONDUIT (FMC): INTERLOCKED STEEL CONSTRUCTION. MANUFACTURED IN CONFORMANCE WITH UL 1. MANUFACTURERS: AFC CABLE SYSTEMS INC., ELECTRI-FLEX COMPANY, INTERNATIONAL METAL HOSE, OR APPROVED EQUIVALENT.

2.10ELECTRICAL IDENTIFICATION

A. NAMEPLATES: ENGRAVING STOCK MELAMINE OR LAMICOID PLASTIC LAMINATE, FEDERAL SPECIFICATION L-P-387, IN THE SIZE AND THICKNESSES INDICATED, ENGRAVED WITH ENGRAVER'S STANDARD LETTER STYLE, MINIMUM 1/2-INCH HIGH LETTERS, BLACK WITH WHITE CORE (LETTER COLOR), PUNCHED FOR

MECHANICAL FASTENING EXCEPT WHERE ADHESIVE MOUNTING IS NECESSARY BECAUSE OF SUBSTRATE. PROVIDE 1/8–INCH THICK MATERIAL. USE SELF TAPPING STAINLESS STEEL SCREWS. MANUFACTURER: B&I NAMEPLATES, INTELLICUM, JBR ASSOCIATES, OR APPROVED EQUIVALENT.

B. LABELS: ADHESIVE TAPE WITH 18 POINT BLACK LETTERS ON CLEAR BACKGROUND. USE ONLY FOR IDENTIFICATION OF INDIVIDUAL WALL SWITCHES AND RECEPTACLES, CONTROL STATIONS, AND TELECOMMUNICATION OUTLETS. INDICATE DEVICE NAME, SOURCE PANEL, AND SOURCE CIRCUITS. DO NOT PROVIDE DYMO TAPE STYLE LABELS. MANUFACTURER: KROY, BRADY, OR APPROVED EQUIVALENT.

C. CONDUCTOR NUMBERS: VINYL-CLOTH SELF-ADHESIVE TYPE WIRE MARKERS. EACH CONDUCTOR AT PULLBOXES, PANELBOARDS, OUTLET BOXES, JUNCTION BOXES, AND EACH LOAD CONNECTION. BRANCH CIRCUIT OR FEEDER NUMBERS AS INDICATED ON DRAWINGS AND SOURCE PANEL. MANUFACTURER: BRADY,

D. BRANCH CIRCUIT SCHEDULES: PROVIDE BRANCH CIRCUIT IDENTIFICATION SCHEDULES, TYPEWRITTEN, CLEARLY FILLED OUT, TO IDENTIFY LOAD CONNECTED TO EACH CIRCUIT AND LOCATION OF LOAD. NUMBERS TO CORRESPOND TO NUMBERS ASSIGNED TO EACH CIRCUIT BREAKER POLE POSITION. E. RELAY PANEL SCHEDULE: PROVIDE TYPEWRITTEN SCHEDULE TO IDENTIFY THE INCOMING CIRCUIT, THE CONTROLLED LOAD, AND THE CONTROLLING DEVICES

F. CIRCUIT BREAKER IDENTIFICATION: PROVIDE PERMANENT IDENTIFICATION NUMBER IN OR ON PANELBOARD DEAD-FRONT ADJACENT TO EACH CIRCUIT BREAKER POLE POSITION. HORIZONTAL CENTERLINE OF ENGRAVED NUMBERS TO CORRESPOND WITH CENTERLINE OF CIRCUIT BREAKER POLE POSITION.

A. GROUNDING CONNECTORS: HYDRAULIC COMPRESSION TOOL APPLIED CONNECTORS OR EXOTHERMIC WELDING PROCESS CONNECTORS OR POWDER ACTUATED COMPRESSION TOOL APPLIED CONNECTORS. MECHANICAL TYPE OF CONNECTORS ARE NOT ACCEPTABLE. MANUFACTURERS: BURNDY HYGROUND COMPRESSION SYSTEM, ERICO/CADWELD, AMP AMPACT GROUNDING SYSTEM OR APPROVED EQUIVALENT.

B. PIPE GROUNDING CLAMP: MECHANICAL GROUND CONNECTOR WITH CABLE PARALLEL OR PERPENDICULAR TO PIPE. BURNDY GAR SERIES, O_Z GEDNEY,

C. GROUNDING ELECTRODE CONDUCTOR: SOFT-DRAW BARE STRANDED CONDUCTOR FOR WIRE SIZES LARGER THAN #10 AWG BARE. SOLID COPPER FOR WIRE

D. EQUIPMENT GROUNDING CONDUCTOR: GREEN INSULATED, INSULATION TYPE TO MATCH THAT OF ASSOCIATED FEEDER OR BRANCH CIRCUIT WIRING, SIZE AS

A. MANUFACTURERS: SIEMENS, SQUARE D, EATON ELECTRICAL, GENERAL ELECTRIC, OR APPROVED EQUIVALENT. B. STANDARDS: COMPLY WITH REQUIREMENTS OF UL 891, NEMA PB2 AND CEC IN CONSTRUCTION OF SWITCHBOARDS. PROVIDE SHORT CIRCUIT CURRENT

1. ENCLOSURE: NEMA PB1, TYPE 1 OR 3R AS INDICATED ON THE DRAWINGS. CIRCUIT BREAKER TYPE. MAXIMUM ENCLOSURE DEPTH FOR BRANCH CIRCUIT PANELBOARD: 6-INCHES SURFACE MOUNTED, 5-3/4 INCHES FOR FLUSH MOUNTED. MAXIMUM BRANCH CIRCUIT PANELBOARD ENCLOSURE

WIDTH: 20 INCHES. PROVIDE GALVANIZED METAL FINISH. 2. INTERIOR: COPPER BAR WITH SUITABLE ELECTROPLATING (TIN) FOR CORROSION CONTROL AT CONNECTION. PROVIDE COPPER GROUND BUS TO ACCOMMODATE SPECIFIED TERMINAL LUGS. PREDRILL BUS FOR BOLT-ON TYPE CIRCUIT BREAKERS. PROVIDE DOUBLE LUGS AND/OR FEED-THROUGH

3. PROVIDE FULLY RATED INTEGRATED EQUIPMENT RATING GREATER THAN THE AVAILABLE FAULT CURRENT. SERIES RATED PANELBOARDS ARE NOT ACCEPTABLE. SEE DRAWINGS FOR AVAILABLE FAULT CURRENT. MINIMUM RATING OF 10,000 AMPS FOR 208V PANELBOARDS AND 14,000 AMPS FOR

a. THERMAL MAGNETIC TRIP CIRCUIT BREAKERS. BOLT-ON TYPE WITH COMMON TRIP HANDLE FOR POLES, UL LISTED. DO NOT USE TANDEM CIRCUIT b. UL LISTED TO ACCEPT SOLID OR STRANDED, ALUMINUM OR COPPER CONDUCTORS. LUGS SUITABLE FOR 90C RATED WIRE SIZED ACCORDING TO

1) TYPE SWD (SWITCH DUTY) FOR LIGHTING CIRCUITS.

PANDUIT, SUMITOMO, OR APPROVED EQUIVALENT

THOMAS & BETTS OR APPROVED EQUIVALENT.

LUGS FOR FEED THROUGH FEEDERS.

THE 75C TEMPERATURE RATING PER CEC.

c. UL LISTED WITH THE FOLLOWING RATINGS:

(GFCI), AUXILIARY SWITCH AND ALARM SWITCH.

MANUFACTURER IS INDICATED IN THE LUMINAIRE SCHEDULE

480V PANELBOARDS.

BRFAKFRS.

INSTALLATION.

2.130VERCURRENT PROTECTIVE DEVICES

APPROVED EQUIVALENT.

TRIPPING

2.14CONTROL DEVICES

INSTALLATION.

I OCATIONS.

C. LED (LIGHT EMITTING DIODE):

LUMENS.

RATING.

PART 3 – EXECUTION

2.15 LUMINAIRES

2.16LAMPS

B. MOLDED CASE CIRCUIT BREAKERS:

4. BRANCH CIRCUIT BREAKERS:

RATING (INTEGRATED EQUIPMENT RATING, IER) FOR PANELBOARDS.

SIZES #10 AWG AND SMALLER.

INDICATED ON DRAWINGS.

2.12DISTRIBUTION PANELBOARD

C. LUGS: MECHANICAL TYPE.

D. PANELBOARDS:

FOR EACH RELAY.

2.11 GROUNDING MATERIALS

2) TYPE HACR (HEATING, AIR CONDITIONING, AND REFRIGERATION) FOR HVAC EQUIPMENT CIRCUITS. 5. COVER: CONCEALED HINGED DOOR, METAL DIRECTORY FRAME WITH HEAVY CLEAR PLASTIC PROTECTOR, FLUSH LIFT LATCH AND LOCK, TWO KEYS PER PANEL. KEY BRANCH CIRCUIT PANELBOARDS ALIKE. MEDIUM LIGHT GREY FINISH SUITABLE FOR FIELD PAINTING TO MATCH WALL FINISH. 6. PROVIDE BOXES WITH REMOVABLE BLANK END WALLS AND INTERIOR MOUNTING STUDS. PROVIDE INTERIOR SUPPORT BRACKET FOR EASE OF INTERIOR

7. ACCESSORIES: PROVIDE WHERE INDICATED: SHUNT TRIP, ARC-FAULT CIRCUIT INTERRUPTION (AFCI), CLASS A GROUND FAULT CIRCUIT INTERRUPTION

A. FUSES: DUAL ELEMENT, TIME DELAY, CURRENT LIMITING, NONRENEWABLE TYPE, REJECTION FEATURE. UL CLASS RK1 1/10 TO 600 AMP, UL CLASS L, ABOVE 600 AMPS. PROVIDE FUSE PULLERS FOR COMPLETE RANGE OF FUSES. MANUFACTURERS: BUSSMANN, GOULD-SHAWMUT, LITTELFUSE, OR

1. ONE, TWO OR THREE-POLE BOLT ON, SINGLE HANDLE COMMON TRIP, AS INDICATED ON DRAWINGS. 2. OVERCENTER TOGGLE-TYPE MECHANISM. QUICK-MAKE, QUICK-BREAK ACTION. TRIP INDICATION IS BY HANDLE POSITION. 3. CALIBRATE FOR OPERATION IN 40C AMBIENT TEMPERATURE.

4. 15 TO 150 AMP BREAKERS: PERMANENT TRIP UNIT CONTAINING INDIVIDUAL THERMAL AND MAGNETIC TRIP ELEMENTS IN EACH POLE. 5. 151 TO 400 AMP BREAKERS: VARIABLE MAGNETIC TRIP ELEMENTS. PROVIDE PUSH-TO-TRIP BUTTON ON COVER ON BREAKER FOR MECHANICAL 6. PROVIDE HANDLE MECHANISMS THAT ARE LOCKABLE IN THE OPEN (OFF) POSITION.

7. MANUFACTURERS: EATON ELECTRICAL, GENERAL ELECTRIC, SIEMENS, SQUARE D, OR APPROVED EQUIVALENT.

A. LUMINAIRES: REFER TO DESCRIPTION AND MANUFACTURERS IN LUMINAIRE SCHEDULE. B. WHERE RECESSED LUMINAIRES ARE INSTALLED IN CAVITIES INTENDED TO BE INSULATED. PROVIDE IC RATED LUMINAIRES OR OTHER CODE APPROVED

C. UL LABEL LUMINAIRES INSTALLED UNDER CANOPIES, ROOF OR OPEN PORCHES, AND SIMILAR DAMP OR WET LOCATIONS, AS SUITABLE FOR DAMP OR WET

D. SUSPENDED LUMINAIRES: PROVIDE MINIMUM 24-INCH ADJUSTABILITY IN AIRCRAFT CABLE LENGTH WHERE USED.

E. RECESSED LUMINAIRES: FRAME COMPATIBLE WITH CEILING MATERIAL INSTALLED AT PARTICULAR LUMINAIRE LOCATION. PROVIDE PROPER FACTORY TRIM AND FRAME FOR LUMINAIRE TO FIT LOCATION AND CEILING MATERIAL. VERIFY WITH ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO SUBMITTALS. F. FINISHES: MANUFACTURER'S STANDARD FINISH (UNLESS OTHERWISE INDICATED) OVER CORROSION RESISTANT PRIMER. WHITE OR SPECULAR FINISH WITH NOT

LESS THAN 85 PERCENT REFLECTANCE FOR INTERIOR LUMINAIRES. G. LIGHT TRANSMITTING COMPONENTS: PLASTIC DIFFUSERS, MOLDED OR EXTRUDED OF 100 PERCENT VIRGIN ACRYLIC. PRISMATIC ACRYLIC, EXTRUDED, FLAT DIFFUSERS, 0.125-INCH OVERALL THICKNESS, UNLESS OTHERWISE NOTED.

A. PROVIDE LAMPS FOR LUMINAIRES. PROVIDE LAMP CATALOGED FOR SPECIFIED LUMINAIRE TYPE. B. MANUFACTURERS: OSRAM/SYLVANIA, GENERAL ELECTRIC, PHILIPS, VENTURE, USHIO (MR ONLY), OR APPROVED EQUIVALENT UNLESS SPECIFIC

1. LED MANUFACTURER WILL INCLUDE. BUT NOT BE LIMITED TO, LIGHT SOURCE, LUMINAIRE, POWER SUPPLY AND CONTROL INTERFACE WITH ADDED COMPONENTS AS NEEDED FOR COMPLETE AND FUNCTIONING SYSTEM. 2. COMPLY WITH ANSI CHROMATICITY STANDARD FOR CLASSIFICATIONS OF COLOR TEMPERATURE. SEE LUMINAIRE SCHEDULE FOR SPECIFIED LED LAMP COLOR AND COLOR TEMPERATURE. UL OR ETL LISTED AND LABELED.

3. LUMINAIRE TESTING PER IESNA LM-79 AND LM-80 PROCEDURES. 4. LAMP LIFE FOR WHITE LEDS: 50,000 PLUS HOURS WITH LAMP FAILURE OCCURRING WHEN LED PRODUCES 70 PERCENT OF INITIAL RATED LUMENS. 5. LAMP LIFE FOR COLOR LEDS: 30,000 PLUS HOURS WITH LAMP FAILURE OCCURRING WHEN LED PRODUCES 50 PERCENT OF ITS INITIAL RATED

6. PROVIDE SHOP DRAWINGS, WITH LED SYSTEMS BASED ON LUMEN OUTPUT AT 70 PERCENT LUMEN DEPRECIATION FOR WHITE LEDS AND 50 PERCENT LUMEN DEPRECIATION FOR COLOR LEDS. INITIAL LUMENS FOR ALL COLORS OF LEDS MUST BE LISTED INDIVIDUALLY. 7. LED DRIVERS: REVERSE POLARITY PROTECTION, OPEN CIRCUIT PROTECTION, REQUIRE NO MINIMUM LOAD. MINIMUM 80% EFFICIENCY. CLASS A NOISE

8. DIMMING: LED SYSTEM CAPABLE OF FULL AND CONTINUOUS DIMMING. 9. LED LIGHT SOURCE MANUFACTURERS: NICHIA, CREE, OSRAM/SYLVANIA, GE LUMINATION OR APPROVED EQUIVALENT.

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- 3.1 EXAMINATION
- A. DRAWINGS ARE DIAGRAMMATIC WITH SYMBOLS REPRESENTING ELECTRICAL EQUIPMENT, OUTLETS, LUMINAIRES, AND WIRING. EXAMINE THE ENTIRE SET OF DRAWINGS TO AVOID CONFLICTS WITH OTHER SYSTEMS. DETERMINE EXACT ROUTE AND INSTALLATION OF ELECTRICAL WIRING AND EQUIPMENT WITH CONDITIONS OF CONSTRUCTION.
- B. CLARIFICATION:
- 1. THE DRAWINGS GOVERN IN MATTERS OF QUANTITY, THE SPECIFICATION IN MATTERS OF QUALITY. IN EVENT OF CONFLICT ON DRAWINGS OR IN THE SPECIFICATIONS, THE GREATER QUANTITY AND THE HIGHER QUALITY APPLY.
- 2. SHOULD THE ELECTRICAL DOCUMENTS INDICATE A CONDITION CONFLICTING WITH THE GOVERNING CODES AND REGULATIONS, REFRAIN FROM INSTALLING THAT PORTION OF THE WORK UNTIL CLARIFIED BY ARCHITECT.

3.2 MOTORS/APPLIANCE/UTILIZATION BRANCH CIRCUIT WIRING

- A. CONNECT EQUIPMENT. WHETHER FURNISHED BY OWNER OR OTHER DIVISIONS OF THE CONTRACT, ELECTRICALLY COMPLETE. DO NOT INSTALL ELECTRICAL EQUIPMENT OR WIRING ON MECHANICAL EQUIPMENT WITHOUT APPROVAL OF ARCHITECT.
- B. PROVIDE MOISTURE TIGHT EQUIPMENT WIRING AND SWITCHES IN DUCTS OR PLENUMS USED FOR ENVIRONMENTAL AIR.
- C. CONNECT MOTOR BRANCH CIRCUITS COMPLETE FROM PANEL TO MOTOR/EQUIPMENT AS REQUIRED BY CODE.
- D. MOTOR STARTERS FOR EQUIPMENT, MOTOR START CONTROL DEVICES, AND WIRING FURNISHED BY OTHER DIVISIONS PROVIDED BY EQUIPMENT INSTALLER FOR INSTALLATION BY THIS DIVISION, UNLESS NOTED ON DRAWINGS.
- E. INSTALL FEEDER CIRCUIT TO PACKAGED HVAC EQUIPMENT. TERMINATE FEEDER CONDUCTORS AT LINE TERMINALS AS DIRECTED BY EQUIPMENT MANUFACTURER.
- F. APPLIANCE/UTILIZATION EQUIPMENT: PROVIDE APPROPRIATE CABLE AND CORD CAP FOR FINAL CONNECTION UNLESS EQUIPMENT IS PROVIDED WITH SAME. VERIFY SPECIAL PURPOSE OUTLET NEMA CONFIGURATION AND AMPERE RATING WITH EQUIPMENT SUPPLIER PRIOR TO ORDERING DEVICES AND COVERPLATES.

3.3 DEMOLITION

- A. COORDINATE WITH OWNER SO THAT WORK CAN BE SCHEDULED NOT TO INTERRUPT OPERATIONS, NORMAL ACTIVITIES, BUILDING ACCESS, ACCESS TO DIFFERENT AREAS. THE OWNER WILL COOPERATE TO THE BEST OF THEIR ABILITY TO ASSIST IN A COORDINATED SCHEDULE, BUT WILL REMAIN THE FINAL AUTHORITY AS TO TIME OF WORK PERMITTED.
- B. COORDINATE THE EXACT LOCATION OF EXISTING UTILITIES AND EQUIPMENT PRIOR TO COMMENCEMENT OF WORK. COMPENSATE THE OWNER FOR DAMAGES CAUSED BY THE FAILURE TO LOCATE AND PRESERVE UTILITIES. REPLACE DAMAGED ITEMS WITH NEW MATERIAL TO MATCH EXISTING. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.
- C. EXECUTION:
- REMOVE EXISTING LUMINAIRES, SWITCHES, RECEPTACLES, AND OTHER ELECTRICAL EQUIPMENT AND DEVICES AND ASSOCIATED WIRING FROM WALLS, CEILINGS, FLOORS, AND OTHER SURFACES SCHEDULED FOR REMODELING, RELOCATION, OR DEMOLITION UNLESS SHOWN AS RETAINED OR RELOCATED ON DRAWINGS.
- 2. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN ELECTRICAL CONTINUITY OF EXISTING SYSTEMS DURING CONSTRUCTION. REMOVE OR RELOCATE ELECTRICAL BOXES, CONDUIT, WIRING, EQUIPMENT, LUMINAIRES, AS ENCOUNTERED IN REMOVED OR REMODELED AREAS IN THE EXISTING CONSTRUCTION AFFECTED BY THIS WORK.
- 3. REMOVE AND RESTORE WIRING WHICH SERVES USABLE EXISTING OUTLETS CLEAR OF THE CONSTRUCTION OR DEMOLITION
- 4. IF EXISTING JUNCTION BOXES WILL BE MADE INACCESSIBLE, OR IF ABANDONED OUTLETS SERVE AS FEED THROUGH BOXES FOR OTHER EXISTING
- ELECTRICAL EQUIPMENT WHICH IS BEING RETAINED, PROVIDE NEW CONDUIT AND WIRE TO BYPASS THE ABANDONED OUTLETS. 5. IF EXISTING CONDUITS PASS THROUGH PARTITIONS OR CEILING WHICH ARE BEING REMOVED OR REMODELED, PROVIDE NEW CONDUIT AND WIRE TO REROUTE CLEAR OF THE CONSTRUCTION OR DEMOLITION AND MAINTAIN SERVICE TO THE EXISTING LOAD.
- 6. CONCEALED CONDUIT LOCATED IN CONCRETE WALLS OR HARDBOARD CEILING SPACES MAY BE ABANDONED IN PLACE. REMOVE CONDUCTORS AND TAG ABANDONED CONDUITS WITH CORRESPONDING SYSTEM AND TERMINATION POINT. CUT AND CAP ABANDONED CONDUIT. DO NOT EXTEND STUBS ABOVE FINISHED FLOOR.
- 7. EXTEND CIRCUITING AND DEVICES IN EXISTING WALLS TO BE FURRED OUT.
- 8. PROVIDE TEMPORARY SUPPORT FOR ELECTRICAL SYSTEMS THAT REMAIN IN PLACE. 9. EXISTING ELECTRICAL OUTLETS AND LUMINAIRES ARE INDICATED ON ELECTRICAL DEMOLITION PLANS. VERIFY EXACT LOCATION AND NUMBER OF EXISTING ELECTRICAL OUTLETS AND LUMINAIRES IN THE FIELD. ONLY PARTIAL EXISTING ELECTRICAL SHOWN. LOCATIONS OF ITEMS SHOWN ON DRAWINGS AS EXISTING ARE PARTIALLY BASED ON RECORD AND OTHER DRAWINGS WHICH MAY CONTAIN ERRORS. VERIFY THE ACCURACY OF THE INFORMATION SHOWN PRIOR TO BIDDING AND PROVIDE SUCH LABOR AND MATERIAL AS IS NECESSARY TO ACCOMPLISH THE INTENT OF THE CONTRACT DOCUMENTS
- 10. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
- 11. PROVIDE BLANK COVER PLATE FOR ABANDONED FLUSH OUTLETS.
- 12. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE. 13. PROVIDE UPDATED PANEL SCHEDULES AND DIRECTORIES THAT IDENTIFY EXISTING CIRCUITS AND NUMBER OF SPARE CIRCUITS AVAILABLE UPON COMPLETION OF DEMOLITION WORK.

3.4 CONTINUITY OF SERVICE

A. NO INTERRUPTION OF SERVICES TO ANY PART OF EXISTING FACILITIES WILL BE PERMITTED WITHOUT EXPRESS PERMISSION IN EACH INSTANCE FROM THE OWNER. REQUESTS FOR OUTAGES SHALL STATE THE SPECIFIC DATES AND HOURS AND THE MAXIMUM DURATIONS, WITH THE OUTAGES KEPT TO THESE SPECIFIC DATES AND HOURS AND THE MAXIMUM DURATIONS. OBTAIN WRITTEN PERMISSION FROM THE OWNER FOR ANY INTERRUPTION OF POWER, LIGHTING OR SIGNAL CIRCUITS AND SYSTEMS.

3.5 INSTALLATION

- A. INSTALL ELECTRICAL EQUIPMENT COMPLETE AS DIRECTED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS. OBTAIN INSTALLATION INSTRUCTIONS FROM MANUFACTURER PRIOR TO ROUGH-IN OF THE ELECTRICAL EQUIPMENT, EXAMINE THE INSTRUCTIONS THOROUGHLY. WHEN REQUIREMENTS OF INSTALLATION INSTRUCTIONS CONFLICT WITH CONTRACT DOCUMENTS, REQUEST CLARIFICATION FROM ARCHITECT PRIOR TO PROCEEDING WITH INSTALLATION. THIS INCLUDES PROPER INSTALLATION METHODS, SEQUENCING, AND COORDINATION WITH OTHER TRADES AND DISCIPLINES.
- B. DELIVERY, STORAGE AND HANDLING: INSPECT AND REPORT CONCEALED DAMAGE TO CARRIER WITHIN THEIR REQUIRED TIME PERIOD. STORE IN A CLEAN, DRY ENVIRONMENT. MAINTAIN FACTORY PACKAGING, AND IF REQUIRED, PROVIDE AN ADDITIONAL HEAVY CANVAS OR HEAVY PLASTIC COVER TO PROTECT ENCLOSURE(S) FROM DIRT, WATER, CONSTRUCTION DEBRIS, AND TRAFFIC.
- C. INSTALL EQUIPMENT REQUIRING ACCESS (I.E. JUNCTION BOXES, LUMINAIRES, POWER SUPPLIES, MOTORS, ETC.) SO THAT THEY MAY BE SERVICED, RESET, REPLACED OR RECALIBRATED BY SERVICE PEOPLE WITH NORMAL SERVICE TOOLS AND EQUIPMENT. DO NOT INSTALL ELECTRICAL EQUIPMENT IN OBVIOUS PASSAGES, DOORWAYS, SCUTTLES OR CRAWL SPACES WHICH WOULD IMPEDE OR BLOCK THE INTENDED USAGE.
- D. NOISE CONTROL:
- 1. DO NOT INSTALL OUTLET BOXES BACK TO BACK. DO NOT USE STRAIGHT THROUGH BOXES.
- 2. DO NOT PLACE CONTACTORS, TRANSFORMERS, STARTERS AND SIMILAR NOISE PRODUCING DEVICES ON WALLS WHICH ARE COMMON TO OCCUPIED SPACES UNLESS SPECIFICALLY CALLED FOR ON DRAWINGS. WHERE SUCH DEVICES MUST BE MOUNTED ON WALLS COMMON TO OCCUPIED SPACES, MOUNT OR ISOLATE IN SUCH A MANNER AS TO EFFECTIVELY PREVENT THE TRANSMISSION OF THEIR INHERENT NOISE TO THE OCCUPIED SPACE.
- E. FIRESTOPPING: COORDINATE LOCATION AND PROTECTION LEVEL OF FIRE AND/OR SMOKE RATED WALLS, CEILINGS, AND FLOORS, WHEN THESE ASSEMBLIES ARE PENETRATED, SEAL AROUND CONDUIT AND EQUIPMENT WITH APPROVED FIRESTOPPING MATERIAL. INSTALL FIRESTOPPING MATERIAL COMPLETE AS DIRECTED THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. MEET REQUIREMENTS OF ASTM E814, STANDARD TEST METHOD FOR FIRE TESTS OF THROUGH-PENETRATION FIRE STOPS.

F. CONDUIT:

- 1. CONDUIT JOINTS: ASSEMBLE CONDUITS CONTINUOUS AND SECURE TO BOXES, PANELS, LUMINAIRES AND EQUIPMENT WITH FITTINGS TO MAINTAIN CONTINUITY. PROVIDE WATERTIGHT JOINTS WHERE EMBEDDED IN CONCRETE, BELOW GRADE OR IN DAMP LOCATIONS. SEAL PVC CONDUIT JOINTS WITH SOLVENT CEMENT AND METAL CONDUIT WITH METAL THREAD PRIMER. RIGID CONDUIT CONNECTIONS TO BE THREADED, CLEAN AND TIGHT (METAL TO METAL). THREADLESS CONNECTIONS ARE NOT PERMITTED FOR RMC AND IMC.
- 2. CONCEAL CONDUITS. EXPOSED CONDUITS ARE PERMITTED ONLY IN THE FOLLOWING AREAS: a. MECHANICAL ROOMS, ELECTRICAL ROOMS OR SPACES WHERE WALLS, CEILINGS AND FLOORS WILL NOT BE COVERED WITH FINISHED MATERIALS. b. EXISTING WALLS THAT ARE CONCRETE OR BLOCK CONSTRUCTION AND WHERE SPECIFICALLY NOTED ON THE DRAWINGS.
- 3. DO NOT INSTALL CONDUITS ON SURFACE OF BUILDING EXTERIOR, ACROSS ROOF, ON TOP OF PARAPET WALLS, OR ACROSS FLOORS. WHERE EXPOSED CONDUITS ARE PERMITTED, INSTALL PARALLEL AND PERPENDICULAR TO WALLS, TIGHT TO FINISHED SURFACES AND NEATLY OFFSET INTO BOXES. 4. KEEP CONDUITS A MINIMUM OF 12-INCHES AWAY FROM STEAM OR HOT WATER RADIANT HEATING LINES (AT OR ABOVE 104 DEGREES F) OR 3-INCHES
- AWAY FROM WASTE OR WATER LINES. 5. POWER WIRING INDEPENDENT OF COMMUNICATION SYSTEM WIRING. KEEP EMERGENCY SYSTEM WIRING INDEPENDENT OF OTHER WIRING SYSTEMS. 6. MAXIMUM BENDS: INSTALL NO MORE THAN EQUIVALENT OF THREE 90 DEGREE BENDS BETWEEN ELECTRICAL BOXES. INSTALL NO MORE THAN
- EQUIVALENT OF TWO 90 DEGREE BENDS BETWEEN TELECOMMUNICATION BOXES. USE CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION, AS AROUND BEAMS. 7. FLEXIBLE CONDUIT: INSTALL 12 INCH MINIMUM SLACK LOOP ON FLEXIBLE METALLIC CONDUIT AND LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.
- 8. CONDUIT SIZE: MINIMUM TRADE SIZE 3/4 INCH.
- 9. CONDUIT USE LOCATIONS:
- a. UNDERGROUND, IN SLAB ON GRADE, OR IN SLAB ABOVE GRADE: PVC.
- b. OUTDOOR LOCATIONS ABOVE GRADE: RMC OR IMC.
- c. WET LOCATIONS: RMC OR IMC.
- d. DAMP LOCATIONS: RMC, IMC, OR EMT UP TO 2 INCHES IN DIAMETER.
- e. DRY, PROTECTED: RMC, IMC, EMT.
- f. IN AREAS EXPOSED TO SEVERE MECHANICAL DAMAGE; RMC.
- g. CAST-IN-PLACE CONCRETE AND MASONRY: RMC, IMC, AND PVC. HORIZONTAL RUNS OF CONDUIT IN POURED-IN-PLACE CONCRETE SLABS, MAXIMUM DIAMETER OF CONDUIT IS 1 INCH.

h. SHARP BENDS AND ELBOWS: RMC, EMT USE FACTORY ELBOWS.

i. INSTALL TWO PULL STRINGS/TAPES IN EMPTY RACEWAYS. SECURE PULL STRINGS/TAPES AT EACH END. j. ELBOW FOR LOW ENERGY SIGNAL SYSTEMS: USE LONG RADIUS FACTORY ELLS WHERE LINKING SECTIONS OF RACEWAY FOR INSTALLATION OF

SIGNAL CABLE. k. FOR MOTORS, RECESSED LUMINAIRES AND EQUIPMENT CONNECTIONS SUBJECT TO MOVEMENT OR VIBRATION, USE FLEXIBLE METALLIC CONDUIT. I. FOR MOTORS AND EQUIPMENT CONNECTIONS SUBJECT TO MOVEMENT OR VIBRATION AND SUBJECTED TO THE FOLLOWING CONDITIONS; EXTERIOR LOCATION, MOIST OR HUMID ATMOSPHERE, WATER SPRAY, OIL OR GREASE: USE PVC COATED LIQUID TIGHT FLEXIBLE METALLIC CONDUIT.

10. BRANCH CIRCUITS: DO NOT CHANGE THE INTENT OF THE BRANCH CIRCUITS OR CONTROLS WITHOUT APPROVAL. HOMERUNS FOR 20 AMP BRANCH CIRCUITS MAY BE COMBINED TO A MAXIMUM OF SIX CONDUCTORS IN A HOMERUN. APPLY DERATING FACTORS. INCREASE CONDUCTOR SIZE AS NFFDFD. G. CONDUIT FITTINGS:

1. USE SET SCREW TYPE FITTINGS ONLY IN DRY LOCATIONS. WHEN SET SCREW FITTINGS ARE UTILIZED, PROVIDE INSULATED CONTINUOUS EQUIPMENT GROUND CONDUCTOR IN CONDUIT, FROM OVER CURRENT PROTECTION DEVICE TO OUTLET. 2. USE COMPRESSION FITTINGS IN DRY LOCATIONS, DAMP AND RAIN-EXPOSED LOCATIONS. MAXIMUM SIZE PERMITTED IN DAMP LOCATIONS AND

LOCATIONS EXPOSED TO RAIN IS 2 INCHES IN DIAMETER. 3. USE THREADED TYPE FITTINGS IN WET LOCATIONS, AND DAMP OR RAIN-EXPOSED LOCATIONS WHERE CONDUIT SIZE IS GREATER THAN 2 INCHES. 4. PROVIDE CORROSION-RESISTANT PUNCHED-STEEL BOX KNOCKOUT CLOSURES, CONDUIT LOCKNUTS AND PLASTIC CONDUIT BUSHINGS OF THE TYPE AND

SIZE TO SUIT EACH RESPECTIVE USE AND INSTALLATION. 5. USE INSULATED TYPE BUSHINGS WITH GROUND PROVISION AT SWITCHBOARDS, PANELBOARDS, SAFETY DISCONNECT SWITCHES, JUNCTION BOXES AND THE LIKE THAT HAVE FEEDERS 60 AMPERES AND GREATER.

6. PROVIDE CONDUIT EXPANSION FITTINGS AT BUILDING EXPANSION JOINTS AND AT LOCATIONS WHERE CONDUIT IS EXPOSED TO THERMAL EXPANSION AND CONTRACTION.

H. WIRES AND CABLES:

1. CONDUCTOR INSTALLATION: INSTALL CONDUCTORS WITH CARE TO AVOID DAMAGE TO INSULATION. DO NOT APPLY GREATER TENSION ON CONDUCTORS THAN RECOMMENDED BY MANUFACTURER DURING INSTALLATION. 2. CONDUCTOR SIZE AND QUANTITY: INSTALL NO CONDUCTORS SMALLER THAN 12AWG UNLESS OTHERWISE SHOWN. PROVIDE REQUIRED CONDUCTORS FOR A FULLY OPERABLE SYSTEM.

I. BOXES:

1. ANCHORING: SECURE BOXES RIGIDLY TO THE SUBSTRATE UPON WHICH THEY ARE BEING MOUNTED, OR SOLIDLY EMBED BOXES IN CONCRETE OR

2. NOISE CONTROL: PROVIDE ACOUSTIC PUTTY PAD TO BACK SIDE OF EACH OUTLET BOX INSTALLED IN ACOUSTIC RATED WALLS. 3. COORDINATE ELECTRICAL DEVICE LOCATIONS AND ELEVATIONS (SWITCHES AND RECEPTACLES) WITH ARCHITECTURAL DRAWINGS TO PREVENT MOUNTING DEVICES IN MIRRORS, BACK SPLASHES, AND BEHIND CABINETS.

4. PROVIDE WEATHERPROOF OUTLETS FOR LOCATIONS EXPOSED TO WEATHER OR MOISTURE.

5. KNOCKOUT CLOSURES: PROVIDE KNOCKOUT CLOSURES TO CAP UNUSED KNOCKOUT HOLES WHERE BLANKS HAVE BEEN REMOVED. 6. CODE COMPLIANCE: COMPLY WITH CEC AS APPLICABLE TO CONSTRUCTION AND INSTALLATION OF ELECTRICAL BOXES AND FITTINGS AND SIZE BOXES ACCORDING TO CEC, EXCEPT AS NOTED OTHERWISE.

7. MOUNT CENTER OF OUTLET BOXES AS REQUIRED BY AMERICANS WITH DISABILITIES ACT (ADA), OR NOTED ON DRAWINGS, THE FOLLOWING DISTANCE ABOVE THE FLOOR:

a. CONTROL SWITCHES: 46 INCHES.

b. RECEPTACLES: 18 INCHES.

c. WALL PHONES: 46 INCHES. d. TELECOM OUTLETS: 18 INCHES.

e. OTHER OUTLETS: AS INDICATED IN OTHER SECTIONS OF SPECIFICATIONS OR AS DETAILED ON DRAWINGS.

J. PROVIDE CEC-REQUIRED DISCONNECT SWITCHES WHETHER SPECIFICALLY SHOWN ON DRAWINGS OR NOT. PROVIDE DISCONNECT SWITCH AT EACH MOTOR LOCATION WITHIN 5 FEET UNLESS OTHERWISE NOTED. LOCATE DISCONNECT MEANS IN VIEW OF AND NOT INSIDE OF EQUIPMENT, SUCH THAT TOOLS ARE NOT NEEDED TO REMOVE COVERS OF ENERGIZED EQUIPMENT TO ACCESS THE DISCONNECTING MEANS. COORDINATE FUSE AMPERE RATING WITH INSTALLED EQUIPMENT. FUSE AMPERE RATING VARIANCE BETWEEN ORIGINAL DESIGN INFORMATION AND INSTALLED EQUIPMENT, SIZE IN ACCORDANCE WITH BUSSMANN FUSETRON 40C RECOMMENDATIONS. DO NOT PROVIDE FUSES OF LOWER AMPERE RATING THAN MOTOR STARTER THERMAL UNITS. PROVIDE ARC FLASH LABELS.

K. SUPPORTING DEVICES:

1. SAFETY FACTOR OF 4 REQUIRED FOR EVERY FASTENING DEVICE OR SUPPORT FOR ELECTRICAL EQUIPMENT INSTALLED. SUPPORT TO WITHSTAND FOUR TIMES WEIGHT OF EQUIPMENT IT SUPPORTS. PROVIDE SEISMIC BRACING PER CBC REQUIREMENTS FOR THIS BUILDING LOCATION. 2. PROVIDE VERTICAL SUPPORT MEMBERS FOR EQUIPMENT AND LUMINAIRES, STRAIGHT AND PARALLEL TO BUILDING WALLS. PROVIDE HORIZONTAL SUPPORT MEMBERS STRAIGHT AND PARALLEL TO CEILINGS OR FINISHED FLOOR, UNLESS OTHERWISE NOTED.

3. PROVIDE INDEPENDENT SUPPORTS TO STRUCTURAL MEMBER FOR LUMINAIRES, ELECTRICAL MATERIALS, OR EQUIPMENT INSTALLED IN OR ON CEILING, WALLS OR IN VOID SPACES OR OVER FURRED OR SUSPENDED CEILINGS.

4. DO NOT USE OTHER TRADE'S FASTENING DEVICES AS SUPPORTING MEANS FOR LUMINAIRES, ELECTRICAL MATERIALS, OR EQUIPMENT. 5. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT OR CONDUIT.

6. DO NOT USE SUPPORTS OR FASTENING DEVICES TO SUPPORT OTHER THAN ONE PARTICULAR ITEM.

7. SUPPORT CONDUITS WITHIN 18 INCHES OF OUTLETS, BOXES, PANELS, CABINETS AND DEFLECTIONS. MAXIMUM DISTANCE BETWEEN SUPPORTS NOT TO EXCEED 8 FOOT SPACING.

8. SECURELY SUSPEND JUNCTION BOXES, PULL BOXES OR OTHER CONDUIT TERMINATING HOUSINGS LOCATED ABOVE SUSPENDED CEILING FROM THE FLOOR ABOVE OR ROOF STRUCTURE TO PREVENT SAGGING AND SWAYING.

9. PROVIDE SEISMIC BRACING PER CBC REQUIREMENTS. L. ELECTRICAL IDENTIFICATION:

1. CONDUCTOR IDENTIFICATION: APPLY MARKERS ON EACH CONDUCTOR FOR POWER, CONTROL, SIGNALING AND COMMUNICATIONS CIRCUITS. 2. PROVIDE AN ENGRAVED LABEL ON EACH MAJOR UNIT OF ELECTRICAL EQUIPMENT INDICATING BOTH EQUIPMENT NAME AND CIRCUIT SERVING EQUIPMENT. INCLUDING BUT NOT LIMITED TO THE FOLLOWING ITEMS: DISCONNECT SWITCHES, RELAYS, CONTACTORS, TIME SWITCHES, OVERRIDE SWITCHES, SERVICE DISCONNECTS, DISTRIBUTION SWITCHES, SWITCHBOARDS, BRANCH CIRCUIT PANELBOARDS, AND TRANSFORMERS.

3. INSTALL ENGRAVED LABEL ON THE INSIDE OF FLUSH PANELS, VISIBLE WHEN DOOR IS OPENED. INSTALL LABEL ON OUTSIDE OF SURFACE PANEL. SECURE NAMEPLATES TO INSIDE SURFACE OF DOOR ON PANELBOARD THAT IS RECESSED IN FINISHED LOCATIONS.

4. ON THE FRONT OF RECEPTACLE AND SWITCH FINISH PLATES, PROVIDE LABEL WITH THE CIRCUIT THAT EACH DEVICE IS CONNECTED TO. M. GROUNDING:

1. PERFORMANCE REQUIREMENTS: SUPPLEMENT THE GROUNDED NEUTRAL OF THE SECONDARY DISTRIBUTION SYSTEM WITH AN EQUIPMENT GROUNDING SYSTEM TO PROPERLY SAFEGUARD THE EQUIPMENT AND PERSONNEL. INSTALL EQUIPMENT GROUNDING SUCH THAT METALLIC STRUCTURES. ENCLOSURES, RACEWAYS, JUNCTION BOXES, OUTLET BOXES, CABINETS, MACHINE FRAMES, PORTABLE EQUIPMENT AND OTHER CONDUCTIVE ITEMS IN CLOSE PROXIMITY WITH ELECTRICAL CIRCUITS OPERATE CONTINUOUSLY AT GROUND POTENTIAL AND PROVIDE A LOW IMPEDANCE PATH FOR POSSIBLE GROUND FAULT CURRENTS. 2. RACEWAY GROUNDING:

a. GROUND METALLIC RACEWAY SYSTEMS. BOND TO GROUND TERMINAL WITH CODE SIZE JUMPER EXCEPT WHERE CODE SIZE OR LARGER GROUNDING CONDUCTOR IS INCLUDED WITH CIRCUIT, USE GROUNDING BUSHING WITH LAY-IN LUG. b. CONNECT METAL RACEWAYS, WHICH TERMINATE WITHIN AN ENCLOSURE BUT WITHOUT MECHANICAL CONNECTION TO THE ENCLOSURE, BY GROUNDING

BUSHINGS AND GROUND WIRE TO THE GROUNDING BUS. c. WHERE EQUIPMENT SUPPLY CONDUCTORS ARE IN FLEXIBLE METALLIC CONDUIT, INSTALL STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR

FROM OUTLET BOX TO EQUIPMENT FRAME. d. INSTALL EQUIPMENT GROUNDING CONDUCTOR, CODE SIZE MINIMUM IN NONMETALLIC AND METALLIC RACEWAY SYSTEMS.

3. BOXES, CABINETS, ENCLOSURES AND PANELBOARDS:

a. BOND GROUNDING CONDUCTORS TO ENCLOSURE WITH SPECIFIED CONDUCTORS AND LUGS. INSTALL LUGS ONLY ON THOROUGHLY CLEANED CONTACT SURFACES.

b. BOND SECTIONS OF SERVICE EQUIPMENT ENCLOSURE TO SERVICE GROUND BUS. 4. MOTORS, EQUIPMENT AND APPLIANCES: INSTALL CODE SIZE EQUIPMENT GROUNDING CONDUCTOR FROM OUTLET BOX TO (MOTOR) EQUIPMENT FRAME

OR MANUFACTURER'S DESIGNATED GROUND TERMINAL. 5. RECEPTACLES: CONNECT GROUND TERMINAL OF RECEPTACLE TO EQUIPMENT GROUND SYSTEM BY NO. 14 CONDUCTOR BOLTED TO OUTLET BOX.

SELF GROUNDING NATURE OF RECEPTACLE DEVICES DOES NOT ELIMINATE CONDUCTOR BOLTED TO OUTLET BOX.

N. DISTRIBUTION PANELBOARDS:

1. INSTALL EQUIPMENT COMPLETE AS DIRECTED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS. 2. INSTALL EQUIPMENT IN CONFORMANCE WITH WORK SPACE REQUIREMENTS OF CEC. LOCATE EQUIPMENT IN ROOMS OR SPACES DEDICATED TO SUCH EQUIPMENT. 6-FEET 6-INCHES TO TOP OF PANELBOARD. COORDINATE WITH OTHER DIVISIONS OF WORK.

3. FEEDER CONDUCTORS TO ENTER DIRECTLY IN LINE WITH LUG TERMINALS WHEREVER PRACTICAL. FEEDER CONDUCTORS, EXCEPT GROUND AND NEUTRAL, NOT TO EXCEED 45 DEGREE DEFLECTION FROM RACEWAY ENTRY TO FEEDER PHASE LUGS. 4. PROVIDE FILLER PLATES FOR UNUSED SPACES IN PANELBOARDS.

5. PROVIDE TYPED CIRCUIT DIRECTORY FOR EACH PANELBOARD, INCLUDE ALL "SPACES" AND "SPARES", REVISE DIRECTORY TO REFLECT CIRCUITING CHANGES AND AS-INSTALLED CONDITIONS. USE FINAL OWNER DESIGNATED ROOM NAMES AND NUMBERS, AND NOT DESIGNATIONS SHOWN ON DRAWINGS. 6. PROVIDE ARC FLASH LABELS AND ENGRAVED PLASTIC NAMEPLATES ON PANELBOARD ENCLOSURE COVERS.

7. GROUND AND BOND PANELBOARD ENCLOSURE PER CEC. 8. MEASURE STEADY STATE LOAD CURRENTS AT EACH PANELBOARD FEEDER; REARRANGE CIRCUITS IN THE PANELBOARD TO BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER. MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS.

9. FOR BREAKERS ADDED TO EXISTING PANELBOARDS, COORDINATE BREAKER TYPE AND SHORT CIRCUIT RATING WITH EXISTING PANELBOARD. BREAKERS TO MATCH EXISTING IN MANUFACTURER'S TYPE AND AIC RATING. PROVIDE NEW TYPED PANELBOARD DIRECTORY.

10. FLUSH PANELS; VERIFY AVAILABLE RECESSING DEPTH AND COORDINATE WALL FRAMING WITH OTHER DIVISIONS.

11. PROVIDE TWO 1" SPARE CONDUITS FROM PANEL TO ACCESSIBLE SPACE ABOVE.. MAINTAIN FIRE RATING OF WALL.]

0. FUSES: FOR EACH CLASS AND AMPERE RATING OF FUSE INSTALLED, PROVIDE THREE SPARE FUSES.

P. CIRCUIT BREAKERS 1. PROVIDE GROUND FAULT INTERRUPTER CIRCUIT BREAKERS FOR EQUIPMENT IN DAMP OR WET LOCATIONS. 2. PROVIDE HANDLE GUARDS ON CIRCUITS SUPPLYING CONSTANT LOADS SUCH AS FIRE ALARM, SECURITY, LIGHTING CONTROLS, REFRIGERATORS AND FREEZERS, FIRE PROTECTION, ETC.

Q. OCCUPANCY SENSORS:

- SENSORS, POWER SUPPLY PACK AND LOW VOLTAGE WIRING.
- ADDING ADDITIONAL SENSORS AS NEEDED.
- 3. FIELD ADJUST EACH SENSOR TO MAXIMIZE ITS COVERAGE OF ROOM SPACE.
- 4. FIELD SET TIME DELAY FOR EACH DEVICE AS NOTED BELOW: a. RESTROOMS: 15 MINUTES
- b. STORAGE ROOMS, JANITOR'S CLOSETS, UNISEX RESTROOMS: 5 MINUTES

c. OTHER SPACES: 15 MINUTES.

R. LIGHTING: 1. INSTALL LUMINAIRES SECURELY, IN NEAT AND WORKMANLIKE MANNER.

2. INSTALL LUMINAIRE OF TYPES INDICATED WHERE SHOWN AND AT INDICATED HEIGHTS; IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT LUMINAIRES COMPLY WITH REQUIREMENTS AND SERVE INTENDED PURPOSES. 3. ALIGN, MOUNT AND LEVEL LUMINAIRES UNIFORMLY. USE BALL HANGERS FOR SUSPENDED STEM MOUNTED LUMINAIRES 4. AVOID INTERFERENCE WITH AND PROVIDE CLEARANCE FOR EQUIPMENT. WHERE THE INDICATED LOCATIONS FOR THE LUMINAIRES CONFLICT WITH LOCATIONS FOR EQUIPMENT, CHANGE LOCATIONS FOR THE LUMINAIRE AS DIRECTED BY ARCHITECT.

- 8. WIRING:
- OF LUMINAIRE

- 9. RELAMP LUMINAIRES WHICH HAVE FAILED LAMPS AT SUBSTANTIAL COMPLETION.
- 10. REPLACE BALLASTS DEEMED AS EXCESSIVELY NOISY BY ARCHITECT, ENGINEER, OR OWNER.
- SUSPEND LUMINAIRE AT INDICATED HEIGHT.
- PREVENT MOVEMENT
- BALLAST/DRIVER TO ACCOMMODATE VOLTAGE DROP.

3.6 FIELD QUALITY CONTROL

- THE INSTALLATION CAN BE PERFORMED.
- NOTIFY ARCHITECT IF INSULATION RESISTANCE IS LESS THAN 1 MEGOHM
- C. VERIFY ELECTRICAL CHARACTERISTICS OF EQUIPMENT PRIOR TO INSTALLATION OF CONDUITS AND WIRING FOR EQUIPMENT.
- D. COORDINATE HVAC VOLTAGE REQUIREMENTS WITH DRAWINGS AND EQUIPMENT SUBMITTALS PRIOR TO ROUGH IN.
- CORRECT DEFECTIVE WIRING.
- SENSITIVITY TO SATISFACTION OF THE OWNER.

FOR SHIPMENT. 3.7 CLEANING

- DUST-FREE AND PROPER WORKING ORDER.
- REMOVE CONSTRUCTION DEBRIS AND SURPLUS MATERIALS ACCUMULATED DURING WORK.
- SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. D. CLEAN PAINT SPLATTERS, DIRT, DUST, FINGERPRINTS, AND DEBRIS FROM LUMINAIRES.

END OF ELECTRICAL SPECIFICATIONS

1. INSTALL OCCUPANCY SENSORS AS DIRECTED BY MANUFACTURER'S INSTRUCTIONS. PROVIDE CONNECTIONS TO CONTROL CIRCUITS, OCCUPANCY 2. DRAWINGS WERE LAID OUT USING WATT STOPPER SENSORS AS THE BASIS OF DESIGN. IF ANOTHER MANUFACTURER IS APPROVED FOR INSTALLATION UNDER THIS CONTRACT, VERIFY WITH MANUFACTURER REPRESENTATIVE THAT SENSORS ARE LAID OUT TO PROVIDE COVERAGE ACROSS ROOM SPACE,

5. SUSPENDED LUMINAIRES: MOUNTING HEIGHTS INDICATE CLEARANCES BETWEEN BOTTOM OF LUMINAIRE AND FINISHED FLOORS.

6. SUPPORT LUMINAIRES: ANCHOR SUPPORTS TO STRUCTURAL SLAB OR TO STRUCTURAL MEMBERS WITHIN A PARTITION, OR ABOVE A SUSPENDED CEILING. MAINTAIN LUMINAIRE POSITIONS AFTER CLEANING AND RELAMPING. SUPPORT LUMINAIRES WITHOUT CAUSING CEILING OR PARTITION TO DEFLECT. 7. PROVIDE RECESSED FLUORESCENT LUMINAIRES WITH TWO SUPPORT WIRES AS REQUIRED BY CBC.

a. RECESSED LUMINAIRES TO BE INSTALLED USING FLEXIBLE METALLIC CONDUIT WITH LUMINAIRE CONDUCTORS SPLICED TO BRANCH CIRCUIT CONDUCTORS IN NEARBY ACCESSIBLE JUNCTION BOX OVER CEILING. JUNCTION BOX FASTENED TO BUILDING STRUCTURAL MEMBER WITHIN 6 FEET

b. INSTALL LUMINAIRES FOR LIFT OUT AND REMOVAL FROM CEILING PATTERN WITHOUT DISCONNECTING CONDUCTORS OR DEFACING CEILING MATERIALS. c. FLEXIBLE CONNECTIONS WHERE PERMITTED TO EXPOSED LUMINAIRES; NEAT AND STRAIGHT, WITHOUT EXCESS SLACK, ATTACHED TO SUPPORT

d. INSTALL JUNCTION BOX, FLEXIBLE CONDUIT AND HIGH TEMPERATURE INSULATED CONDUCTORS FOR THROUGH WIRING OF RECESSED LUMINAIRES.

11. INSTALL SUSPENDED LUMINAIRES AND EXIT SIGNS USING PENDANTS SUPPORTED FROM SWIVEL HANGERS. PROVIDE PENDANT LENGTH REQUIRED TO

12. INSTALL SURFACE MOUNTED LUMINAIRES AND EXIT SIGNS PLUMB AND ADJUST TO ALIGN WITH BUILDING LINES AND WITH EACH OTHER. SECURE TO

13. MAKE WIRING CONNECTIONS TO BRANCH CIRCUIT USING BUILDING WIRE WITH INSULATION SUITABLE FOR TEMPERATURE CONDITIONS WITHIN LUMINAIRE. 14. WHERE REMOTE BALLASTS OR DRIVERS ARE REQUIRED, INSURE ADEQUATE ACCESSIBILITY. UPSIZE CONDUCTORS BETWEEN LUMINAIRE AND

A. TESTS: CONDUCT TESTS OF EQUIPMENT AND SYSTEMS TO DEMONSTRATE COMPLIANCE WITH REQUIREMENTS SPECIFIED IN THIS DIVISION. REFER TO INDIVIDUAL SPECIFICATION SECTIONS FOR REQUIRED TESTS. DOCUMENT TESTS AND INCLUDE IN CLOSEOUT DOCUMENTS. DURING SITE EVALUATIONS BY ARCHITECT, PROVIDE AN ELECTRICIAN WITH TOOLS TO REMOVE AND REPLACE TRIMS, COVERS, DEVICES, AND THE LIKE, SO THAT A PROPER EVALUATION OF

B. TEST CONDUCTOR INSULATION ON FEEDERS OF 100 AMP AND GREATER FOR CONFORMITY WITH 1000 VOLT MEGOHMMETER. USE INSULATED CABLE ENGINEERS ASSOCIATION TESTING PROCEDURES. MINIMUM INSULATION RESISTANCE ACCEPTABLE IS 1 MEGOHM FOR SYSTEMS 600 VOLTS AND BELOW.

E. WIRING DEVICE TESTS: TEST WIRING DEVICES TO ENSURE ELECTRICAL CONTINUITY OF GROUNDING CONNECTIONS, AND AFTER ENERGIZING CIRCUITRY, TO DEMONSTRATE COMPLIANCE WITH REQUIREMENTS. TEST RECEPTACLES FOR LINE TO NEUTRAL, LINE TO GROUND AND NEUTRAL TO GROUND FAULTS.

F. USE MANUFACTURER'S PUBLISHED TESTING AND ADJUSTING PROCEDURES TO ADJUST SENSORS TIME DELAY, DAYLIGHT SENSITIVITY, AND PASSIVE INFRARED

G. VERIFICATION OF CONDITIONS: VERIFY CEILING CONSTRUCTION, RECESSING DEPTH AND OTHER CONSTRUCTION DETAILS PRIOR TO RELEASE OF LUMINAIRE

A. REMOVE DIRT AND DEBRIS CAUSED BY THE EXECUTION OF THE ELECTRICAL WORK. LEAVE THE ENTIRE ELECTRICAL SYSTEM INSTALLED IN CLEAN,

B. THOROUGHLY CLEAN EXPOSED PORTIONS OF EQUIPMENT, REMOVING TEMPORARY LABELS AND TRACES OF FOREIGN SUBSTANCES. THROUGHOUT WORK,

C. WHERE FINISH OF LUMINAIRES OR ENCLOSURES IS DAMAGED, TOUCH UP FINISH WITH MATCHING PAINT IN ACCORDANCE TO MANUFACTURER'S

NOLL
ARCHITECTS
729 Heinz Avenue Berkeley, CA 94710
tel 510.542.2200 fax 510.542.2201
SEAL
Exp. $06-30-25$ Fxp. 06-30-25 FC CTRICAL Date Signed: 12/18/23
5515 Doyle St., #7 Emeryville, CA 94608 RIJA Project #: 2021055 www.rijainc.com
APPROVALS
City of Berkeley WEST
BERKELEY SERVICE
CENTER
1900 Sixth St Berkeley, CA 94710
BID SET
ISSUE DATE 12.22.2023 N&T JOB NUMBER 22121
REVISIONS
ADATEDESCRIPTION18/25/23REV 1 - PLAN CHECK210/20/23REV 2 - PLAN CHECK
DATEDESCRIPTION18/25/23REV 1 - PLAN CHECK
DATE DESCRIPTION 1 8/25/23 REV 1 - PLAN CHECK 2 10/20/23 REV 2 - PLAN CHECK



CERTIFICATE OF C	COMPLIANCE
160.6 and 160.5	is used to demonstrate compliance with mandatory requirements 9 for electrical systems in newly constructed multifamily occupance 11 also use this document to demonstrate compliance per 141.0(a) 180.2 (b)4Bvii
Project Name:	West Berkeley Service Center
Project Address:	

01	Project Location (city)	Berkeley	

B. PROJECT SCOPE This table includes electrical systems that are within the scope of the permit applied

01	02	03	04	05		
Electrical Service Designation/ Description	Scope of Work ¹	Rating ² (kVA)	Utility Provided Metering System Exception to 130.5(a)/ 160.6(a) ³	Syster subject t Elec Cc Article Exceptic 130.5(a) (b)		
Existing meter and service	Add/Alt to feeders and branch circuits only					

² If common use areas in a multifamily are submetered, rating is for submeter size serving of Applicable if the utility company is providing a metering system that indicates instantane

Registration Number:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

STATE OF CALIFORNIA

Electrical Power Distribution CERTIFICATE OF COMPLIANCE

Project Name: West Berkeley Service Center

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection 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

NRCI-ELC-E - Must be submitted for all buildings

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE There are no forms required for this project.

Registration Number:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

CALIFORNIA ENERGY COMMISSION

			NRCC-ELC-E
ies. Add	ditions and a	ical systems in newly constructed nonresidenti alterations to electrical service systems in non alterations. For multifamily addition or alterati	residential and hotel/motel
	Report	Page:	(Page 1 of 4
	Date Pr	epared:	2023-04-28T12:12:21-04:00
	02	Climate Zone	3
	03	Occupancy Types Within Project:	School or ClassroomSports Arena
lication.			
5		06	07
em to CA Code 517 ion to a)and		Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
]	which are least on demand Section mecha	equired, demand response controls must be sp capable of receiving and automatically response e standards based messaging protocol which ed response after receiving a demand response is 120.2/ 160.3, 130.1/ 160.5, and 130.3/ 160. nical, indoor lighting, and sign lighting Certific ince documents will indicate when demand re controls are required.	ding to at enables signal. 5, and cate of

Generated Date/Time:

Documentation Software: Energy Code Ace

Report Generated: 2023-04-28 09:12:23

Compliance ID: 104453-0423-0002

Report Version: 2022.0.000 Schema Version: rev 20220101

CALIFORNIA ENERGY COMMISSION

NRCC-ELC-E Report Page: (Page 3 of 4) Date Prepared: 2023-04-28T12:12:21-04:00

Form/Title

STATE OF CALIFORNIA **Electrical Power Distribution**

	Project Name:	West Berkeley Service Center	Report Page:
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C. COMPLIANCE RESULTS

01		02		03		04
Service Electrical Metering 130.5(a)/ 160.6(a) (See Table F)	AND	Separation for Monitoring 130.5(b)/ 160.6(b) (See Table G)	AND	Voltage Drop 130.5(c)/ 160.6(c) (See Table H)	AND	Controlled Receptacles 130.5(d)/ 160.6(d (See Table I)
	AND		AND	Yes	AND	

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.

H. VOLTAGE DROP

This table includes entirely new o demonstrate compliance with 13		2. C		80 B			
01		03	2				
Electrical Service Designation/Description	Co		ge Drop on Installed Feeder/Branch iductors Compliance Method				
Existing meter and service	⊠	Voltage drop less than 5%		Permitted by CA Elec Code (Exception to 130.5(c))*	In construc		

* NOTES: If "Permitted by CA Elec Code *" is selected under Compliance Method above, please indicate where the exception applies in the space provi ¹ FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority H if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".

Generated Date/Time:

Registration Number:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

STATE OF CALIFORNIA 1112210

Electrical I		
CERTIFICATE O	FCOMPLIANCE	n.,
Project Name:	West Berkeley Service Center	Report Page:
Project Address	:	Date Prepared:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	

I certify that this Certificate of Compliance documen	tation is accurate and complete.
Documentation Author Name: Ray Juachon	Documentation Aut
Company: RIJA	Signature Date:
Address:	CEA/ HERS Certifica
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

The information provided on this Certificate of Compliance is true and correct. 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 The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate o

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

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 t

inspections. I understand that a completed signed copy of th	his certificate of compliance is required to be included with the
Responsible Designer Name: Ray Juachon	Responsible Design
Company: RIJA	Date Signed:
Address:	License:
City/State/Zip:	Phone:

Generated Date/Time:

Report Version: 2022.0.000

Schema Version: rev 20220101

Documentation Software: Energy Code Ace

Compliance ID: 104453-0423-0002 Report Generated: 2023-04-28 09:12:23 Registration Number:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Generated Date/Time:

Report Version: 2022.0.000 Schema Version: rev 20220101

CALIFORNIA ENERGY COMMISSION NRCC-ELC-E (Page 2 of 4) 2023-04-28T12:12:21-04:00	NOLL
OMPLIES with Exceptional Conditions" refer 06	& TAM ARCHITECTS 729 Heinz Avenue
Compliance Results	Berkeley, CA 94710 tel 510.542.2200 fax 510.542.2201
COMPLIES	SEAL
04 05 Deer for Voltage Drop Field Inspector Ins in Construction Pass Fail	Date Signed: 12/18/23
E2.01	5515 Doyle St., #7 Emeryville, CA 94608 RIJA Project #: 2021055 www.rijainc.com
Documentation Software: Energy Code Ace Compliance ID: 104453-0423-0002 Report Generated: 2023-04-28 09:12:23	APPROVALS
CALIFORNIA ENERGY COMMISSION NRCC-ELC-E (Page 4 of 4) 2023-04-28T12:12:21-04:00	
	PROJECT TITLE
Compliance (responsible designer) Certificate of Compliance conform to the requirements	City of Berkeley WEST BERKELEY SERVICE CENTER
compliance documents, worksheets, calculations, ailable to the enforcement agency for all applicable the building owner at occupancy.	1900 Sixth St Berkeley, CA 94710
	BID SET
Documentation Software: Energy Code Ace Compliance ID: 104453-0423-0002 Report Generated: 2023-04-28 09:12:23	ISSUE DATE 12.22.2023 N&T JOB NUMBER 22121 REVISIONS DATE DESCRIPTION 1 8/25/23 REV 1 - PLAN CHECK 2 10/20/23 REV 2 - PLAN CHECK
	DRAWN BY CAD CHECKED BY RAJ SHEET TITLE ENERGY COMPLIANCE FORMS
	SHEET NUMBER E5.01

ote: If any cell on this table says "COMPLIES 05

Electric Ready 160.9 (See Table J)

ons that add, modify or replace both feeder e compliance per 141.0(b)2Piii/ 180.2(b)4 03 04 Sheet Number for V of Voltage Drop Calculations in Co culations¹ Documen E2.01 iction documents

Report Version: 2022.0.000 Schema Version: rev 20220101

ation Identification (if 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 er Signature

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	PI	many Function A	hied	<u>§130.1(a</u>	4	1	§130.1(b)		§130.1(c)		§130.1(d)		40.6(d)	§140.6(a)1 Pass	i Fail
STORAGE ARE	A All	Other Space Typ	es	Manual ON	/	r	Dimmer	(Occ. Sensor		NA		NA		1	
				OFF	_					_	- unressed filled - 1	_				
#9 - RESTROO	M	Restroom		Manual ON OFF		E	xempt*	(Occ. Sensor		NA		NA			
2 				UFF											_	
#7-JANITOR	All	Other Space Typ	es	Auth. Persor	nel	E	xempt*	(Occ. Sensor		NA		NA			
	Electrica	l, Mechanical, Te	lephone				1						N/P	_		
#6-MECH	1.	Rooms		Auth. Person	nel	E	xempt*	(Occ. Sensor		NA		NA			
#8-STORAGE	E All	Other Space Typ	es	Auth. Persor	nel	E	xempt*	(Occ. Sensor		NA		NA			

Indoor Light	ing	
NRCC-LTI-E (Created)	04/21)	
CERTIFICATE OF	COMPLIANCE	
Project Name:	WEST BERKELEY SERVICE CENTER	
Project Address:	1900 Sixth St Berkeley, CA 94710	

H. INDOOR LIGHTING CONTROLS (Not Inclu	ding PAFs)
Table Instructions: Please include lighting control	

Building Level Contro	ls	
	01	
	Mandatory Demand Response <u>§110.12(c)</u>	
	Not Required ≤ 10,000 SF	
Area Level Controls		
04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)
STORAGE AREA	All Other Space Types	Manual ON/ OFF
#9 - RESTROOM	Restroom	Manual ON/ OFF
#7-JANITOR	All Other Space Types	Auth. Personel
#6-MECH	Electrical, Mechanical, Telephone Rooms	Auth. Personel
#8-STORAGE	All Other Space Types	Auth. Personel
	h a * require a note in the space below nary/Skylight Daylighting: Exempt beco <u>1(d)2</u>	
#9 - RESTROOM	RESTROOMS	
#7-JANITOR	<100SF	

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

#6-MECH <100SF #8-STORAGE <100SF compliance is achieved. 0 watts of general lighting;

April 2021

13

Plan Sheet Showing Daylit Zones:

N/A

STATE OF CALIFORNIA Indoor Lighting

NRCC-LTI-E (Created	104/21)	
CERTIFICATE OF	COMPLIANCE	
Project Name:	WEST BERKELEY SERVICE CENTER	Report
Project Address	: 1900 Sixth St Berkeley, CA 94710	Date P
		Controls Compli
	F	lated Power Reduction Compli
D. EXCEPTION	AL CONDITIONS	
This table is aut	o-filled with uneditable comments because of selections m	ade or data entered in tables t
Table H Indoor I	Lighting Controls Permit Applicant Notes:	
#9 - RE	STROOM: RESTROOMS	
#7-JAN	ITOR: <100SF	
#6-ME	CH: <100SF	
#8-STO	RAGE: <100SF	

E. ADDITIONAL REMARKS

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

Table Inst	ructions: Include all permanent design	ed lighting and	all portable light	ing in offices.				
Designed	Wattage: Conditioned Spaces							
01	02	03	04	05	06	07	08	09
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change ¹	Watts per luminaire ²	How Wattage is determined	Total number luminaires	Exempt per §140.6(a)3	Design Watt
B1	BACK OF HOUSE LINEAR LED			31	Mfr. Spec ²	8		248
R1	4" RECESSED LED DOWNLIGHT			10	Mfr. Spec ²	6		60
R2	4" RECESSED LED DOWLIGHT SLOPE			14	Mfr. Spec ²	3		42
W1	DIRECT/INDIRECT LINEAR WALL MOL			28	Mfr. Spec ²	2		56
		11			Total Designed	Watts CONDIT	IONED SPACES:	406

¹ FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per <u>§140.6(a)4B</u> is adjusted to be 75% 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) Wattage used must be the maximum rated for the luminaire, not the lamp.

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

STATE OF CALIFORNUS	
STATE OF CALIFORNIA	
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Indoor Lighting NRCC-LTI-E (Created 04/21

NRCC-LIT-E (Created	04/21)	
CERTIFICATE OF	COMPLIANCE	
Project Name:	WEST BERKELEY SERVICE CENTER	Report
Project Address:	1900 Sixth St Berkeley, CA 94710	Date P

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS Table Instructions: Complete the table for each area complying using the Complete Building or Area Catego allowances per <u>§140.6(c)</u> or adjustments per <u>§140.6(a)</u> are being used.

Conditioned Spaces

01	02	
Area Description	Complete Building or Area Category Primary Function Area	3
STORAGE AREA	All Other Space Types	
#9 - RESTROOM	Restroom	
#7-JANITOR	All Other Space Types	
#6-MECH	Electrical, Mechanical, Telephone Rooms	
#8-STORAGE	All Other Space Types	

J. ADDITIONAL LIGHTING ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYS This Section Does Not Apply

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE	
This Section Does Not Apply	
L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY	
This Section Does Not Apply	

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING This Section Does Not Apply

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS This Section Does Not Apply

NOLL S S A D A D A R C H E H
SEAL ROFESSION JUA No. E19586 Exp. 06-30-25 FCTRICH Date Signed: 12/18/23
5515 Doyle St., #7 Emeryville, CA 94608 RIJA Project #: 2021055 www.rijainc.com APPROVALS
City of Berkeley WEST BERKELEY SERVICE CENTER
1900 Sixth St
1900 Sixth St Berkeley, CA 94710 BID SET
Berkeley, CA 94710
Berkeley, CA 94710 BID SET ISSUE DATE 12.22.2023 N&T JOB NUMBER 22121 REVISIONS DATE DESCRIPTION 1 8/25/23 REV 1 - PLAN CHECK

			CA	LIFORNIA ENERGY C	OMMISSIO	N (1997)
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iance (S	ee Table Q for D	etails)		Not Applic	able	
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tage is	Total number	Exempt	Exempt per Field		Field In	spector
ined	luminaires	§140.6(a	3)3	Design Watts		e 11
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pec ²	8			248		
pec ²	6		_	60		
	224.00					
pec ²	3			42		
pec ²	2			56		

April 2021

				NIDCCIT	
Page:				NRCC-LT Page 4 o	
rage. repared:				04.28.20	
epareu.				04.20.20	
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ory Methods pe	r <u>§140.6(</u>	b). Indicate if	additional lighting p	ower	
			Alexandra Alexandra e Alexandra de Alexandra Alexandra da Alexandra da Alexandra da Alexandra da Alexandra da A		
51		152	52		
03	04	05	06		
Allowed	Area	Allowed	Additional Allo	wances /	
Density	Area (ft ²)	Wattage	Adjustment		
(W/ft ²)	(11-)	(Watts)	Area Category	PAF	
0.4	425	170			
0.65	275	178.75			
0.4	35	14			
0.4	100	40			
0.4	20	8			
TOTAL:	855	410.75	See Tables J or I	P for detai	
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April 2021

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

STATE OF CALIFORNIA

Indoor Lighting		CALIFORNIA ENERGY COMMISSION
NRCC-LTI-E (Created 04/21)		CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE		NRCC-LTI
Project Name: WEST BERKELEY SERVICE CENTER	Report Page:	Page 5 of
Project Address: 1900 Sixth St Berkeley, CA 94710	Date Prepared:	04.28.202
O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABL	E MERCHANDISE	2
This Section Does Not Apply		
P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJ	USTMENT FACTOR (PAF))	2
This Section Does Not Apply		
Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS		· · · · · · · · · · · · · · · · · · ·
This Section Does Not Apply		
R. 80% LIGHTING POWER FOR ALTERATIONS - CONTROLS EXCEPTIO	ONS	
This Section Does Not Apply		
S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)		2
This Section Does Not Apply		
T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION		2
Table Instructions: Selections have been made based on information provid	led in previous tables of this document. If any selection i	
Table E. Additional Remarks. These documents must be provided to the bui		

Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at <u>https://ww2.energy.ca.gov/</u> title24/2019standards/2019 compliance documents/Nonresidential Documents/NRCI/

YES	NO	Form/Title		Field Inspector	
125		i onny nue	Pass	Fail	
۲	0	NRCI-LTI-01-E - Must be submitted for all buildings			
0	۲	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.			
0	۲	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.			
0	۲	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.			
0	۲	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.			

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

Indoor Lighting			
NRCC-LTI-E (Created 04/21) CERTIFICATE OF COMPLIANCE			CALIFORNIA ENERGY COMMISSION
Project Name: WEST BERKEL	EX SERVICE CENTER	Report Page:	Page 7 of 7
Project Address: 1900 Sixth St		Date Prepared:	04.28.202
DOCUMENTATION AUTHOR	'S DECLARATION STATEMENT		2
I certify that this Certificate of O	Compliance documentation is accurate and com	plete	\frown
Documentation Author Name:	Ray A. Juachon, PE	Documentation Author Signature:	Ball
Company:	RIJA, Inc.	Signature Date:	04.28.2023
Address:	5515 Doyle Street, #7	CEA/ HERS Certification Identification	(if applicable):
City/State/Zip:	Emeryville, CA 94608	Phone:	415.730.7994
2. I am eligible under Division	3 of the Business and Professions Code to acce	pt responsibility for the building design or systemeters	em design identified on this Certificate of
Compliance (responsible des 3. The energy features and per Certificate of Compliance co 4. The building design features compliance documents, wor 5. I will ensure that a complete to the enforcement agency f	signer) formance specifications, materials, componen onform to the requirements of Title 24, Part 1 a s or system design features identified on this C rksheets, calculations, plans and specifications ed signed copy of this Certificate of Compliance for all applicable inspections. I understand tha	ts, and manufactured devices for the building o and Part 6 of the California Code of Regulations ertificate of Compliance are consistent with the submitted to the enforcement agency for appr e shall be made available with the building per	design or system design identified on this e information provided on other applicable
Compliance (responsible des 3. The energy features and per Certificate of Compliance co 4. The building design features compliance documents, wor 5. I will ensure that a complete to the enforcement agency f	signer) rformance specifications, materials, componen onform to the requirements of Title 24, Part 1 a s or system design features identified on this C rksheets, calculations, plans and specifications ed signed copy of this Certificate of Compliance	ts, and manufactured devices for the building o and Part 6 of the California Code of Regulations ertificate of Compliance are consistent with the submitted to the enforcement agency for appr e shall be made available with the building per	design or system design identified on this information provided on other applicable oval with this building permit application. mit(s) issued for the building, and made available
Compliance (responsible des 3. The energy features and per Certificate of Compliance co 4. The building design features compliance documents, wor 5. I will ensure that a complete to the enforcement agency is documentation the builder p	signer) formance specifications, materials, componen onform to the requirements of Title 24, Part 1 a s or system design features identified on this C rksheets, calculations, plans and specifications ed signed copy of this Certificate of Compliance for all applicable inspections. I understand tha provides to the building owner at occupancy.	ts, and manufactured devices for the building ond Part 6 of the California Code of Regulations. ertificate of Compliance are consistent with the submitted to the enforcement agency for appr shall be made available with the building perr t a completed signed copy of this Certificate of	design or system design identified on this information provided on other applicable oval with this building permit application. mit(s) issued for the building, and made available
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CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

April	2021

		NRCC-LTI-E
	Report Page:	Page 7 of 7
	Date Prepared:	04.28.2023
mplete		
	Documentation Author Si	gnature:
	Signature Date:	04.28.2023
	CEA/ HERS Certification Id	dentification (if applicable):
	Phone:	415,730,7994

STATE OF CALIFORNIA Indoor Lighting NRCC-LTI-E (Created 04/21)

CERTIFICATE OF COMPLIANCE					
Project Name:	WEST BERKELEY SERVICE CENTER	Report Pa			
Project Address:	1900 Sixth St Berkeley, CA 94710	Date Prep			

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy
Table E. Additional Remarks. These documents must be provided to the building inspector during construct
Table Instructions: Selections have been made based on information provided in previous tables of this do

YES	NO	Form/Title	Field Inspector		
100		Torny file	Pass	Fail	
۲	0	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.			
0	۲	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.			
0	۲	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.			
0	۲	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF).			
0	۲	NRCA-ENV-03-F - Must be submitted for daylighting design power adjustment factors (PAF).			

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

NRCC-LTO-E (Created CERTIFICATE OF (
A Second as to be an a based of the operation	used to demonstrate co	moliance	with requiremen	nts in \$110.9. \$130.0.	\$130 2 \$140 7		
Project Name:	WEST BERKELEY SERVIC	いん いたき ビアノション しんちし	2011 C.A. (W. 1995207-000 C. 1996), March 197		Repo		
	1900 Sixth St Berkeley,	CA 9471	D		Date		
A. GENERAL IN	FORMATION						
01 Project Loca	ation (city)		Berk	eley	04 Total Illun		
02 Climate Zor			(e-e-2422) (e)	3			
03 Outdoor Lig	shting Zone per Title 24,	Part 1 §1	0-114 or as desig	nated by Authority H	aving Jurisdictio		
LZ-0: Very Lo	w - Undeveloped Parkla	nd 🗍 L	Z-2: Moderate - F	Rural Areas	LZ-4: High -		
LZ-1: Low - D	eveloped Parkland	VL	Z-3: Moderately	High - Urban Areas			
B. PROJECT SC	OPE	11.14					
Table Instruction	s: Include any outdoor li	ghting sy	stems that are w	ithin the scope of the	permit applicati		
	7 or §141.0(b)2L for alte	5 55 ST		1 5	5) A.S.		
My project consi	ists of:						
	01						
✓ New Lightin	g System		Must Comply with Allowances from <u>§140.7</u> .				
Altered Ligh	nting System		Is your alteration increasing the connected lighting				
	03			04			
% of Exist	ing Luminaires Being Alt	ered ¹	ed ¹ Sum Total of Luminaires Being Added or Altered				
¹ FOOTNOTES: %	of Existing Luminaires B	eing Alte	red = (Sum Total	of Luminaires Being A	dded or Altered		
C COMPLIANC							
C. COMPLIANC			OFC NOT COLUMN		F		
	is: If any cell on this tabl				10		
	alculation of Total Allov			1 1 1 1 1 1 1			
01	02	03	04	05	06		
General	Per	ales		Per Specific	Existing		

01		02		0.5		04		0.5		00	
General Hardscape Allowance §140.7(d)1	+	Per Application §140.7(d)2	+	Sales Frontage <u>§140.7(d)2</u>	+	Ornamental §140.7(d)2	+	Per Specific Area <u>§140.7(d)2</u>	OR	Existing Power §141.0(b)2L	=
(See Table I)		(See Table J)		(See Table K)		(See Table L)	1	(See Table M)		(See Table N)	
382.9	+		+		+		+		OR		=
			_		-	Cuto	ff C	ompliance (Se	e Ta	ble G for Deta	ils
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April 2021

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

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SEAL No. E19586 Exp. 06-30-25 CF CALIFORNIA Date Signed: 12/18/23
5515 Doyle St., #7 Emeryville, CA 94608 RIJA Project #: 2021055 www.rijainc.com
PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE CENTER
1900 Sixth St Berkeley, CA 94710
BID SETISSUE DATE12.22.2023N&T JOB NUMBER22121REVISIONS22121MatDATEDESCRIPTION18/25/23REV 1 - PLAN CHECK210/20/23REV 2 - PLAN CHECK
DRAWN BY CAD CHECKED BY RAJ SHEET TITLE ENERGY COMPLIANCE FORMS
SHEET NUMBER E5.03

CALIFORNIA ENERGY COMMISSION	
NRC	C-LTI-E
Page	e 6 of 7

04.28.2023

April 2021

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Prepared:	

s document. If any selection needs to be changed, please explain why in truction and any with "-A" in the form name must be completed through an rgy.ca.gov/title24/attcp/providers.html

ed d / E	ad (Watts)? Existing Luminaires tions" refer to Tabl 07 Total Allowed (Watts) 382.9			ermit Application) x 100
ed d / E = =	ions" refer to Tabl 07 Total Allowed (Watts)	e D. fe	05 Calculation Method In the Scope of the Peter or guidance. Compliance Result 08 Total Actual (Watts) (See Table F) 24	d ermit Application) x 100 S 09 07 Must be≥08
ed d / E	ixisting Luminaires tions" refer to Tabl 07 Total Allowed	e D. fe	05 Calculation Method In the Scope of the Peter or guidance. Compliance Result 08 Total Actual (Watts) (See Table F)	d ermit Application) x 100 s 09
ed d / E	ixisting Luminaires tions" refer to Tabl 07 Total Allowed	e D. fe	05 Calculation Method In the Scope of the Peter or guidance. Compliance Result 08 Total Actual	d ermit Application) x 100 s 09
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ng lo	ad (Watts)?		(Yes	○ No
	02			
tion	and are demonstr	ating	compliance using the	e prescriptive path
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10010001	AHJ):			
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				1
	epared:			04.28.20
	Page:	atuot	n nghung scopes usi	Page 1 of
an	d \$1/11 0/h/21 for a	utdo	ar liahtina scones usi	NRCC-LTO ng the prescriptive path.
			CALIFORNIA	
			CALIFORNIA	ENERGY COMMISSION
			CALIFORNIA	

January 2021

STATE OF CALIFORNIA **Outdoor Lighting**

This table is auto	-filled with uneditable comments because of selections made
D. EXCEPTION	AL CONDITIONS
Project Address:	1900 Sixth St Berkeley, CA 94710
	WEST BERKELEY SERVICE CENTER
CERTIFICATE OF	COMPLIANCE
NRCC-LIO-E (Created	이 것 같은 것 같

Total Hardscape Area in Table A does not match the areas entered in Table I.

E. ADDITIONAL REMARKS

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

F. OUTDOOR LIGHTING FIXTURE SCHEDULE Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

Designed	Wattage:									
01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	ninaire Description Watts per How Watta luminaire ^{1,2} determin		Wattage is termined luminaires ²	Luminaire Status ³	Excluded per §140.7(a)	Design Watts 24	Cutoff Req. ≥ 6,200 initial lumen output §130.2(b) ⁴ NA: <6,200 lumens	Field Inspector Pass Fail	
S1	S1 EXTERIOR SURFACE M		Mfr. Spec ¹	2	New					
					Total Desig	ned Watts:	24			

EX: Luminaire is lighting a statue; EXCEPTION 2 to <u>§130.2(b)</u>.

¹ FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c) ² For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet for the luminaire 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 cutoff requirements is required for luminaires with initial lumen output \geq 6,200 unless exempted by <u>§130.2(b)</u>.

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www

STATE OF CALIFORNIA

EY SERVICE CEI	NTER	
Berkeley, CA 94	4710	
-	20	
	the second s	Berkeley, CA 94710

This Section Does Not Apply

K. LIGHTING ALLOWANCE: SALES FRONTAGE This Section Does Not Apply

L. LIGHTING ALLOWANCE: ORNAMENTAL This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA This Section Does Not Apply

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only) This Section Does Not Apply

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION Table Instructions: Selections have been made based on information provided

		marks. These documents must be provided to the buildin /2019_compliance_documents/Nonresidential_Docume
YES	NO	
۲	0	NRCI-LTO-01-E - Must be submitted for all buildings.
۲	C	NRCI-LTO-02-E - Must be submitted for a lighting con recognized for compliance.

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

		CALIFORNIA ENERGY COMMISSI19
		NRCC-LTO-E
	Report Page:	Page 2 of 6
	Date Prepared:	04.28.2023
		?
or data entered	in tables throughout the form.	
Please review fo	r compliance.	
		?

w.energy.ca.gov/title24/2019standards		January 2021
CALIFORNIA EN	ERGY COMM	ISSI19
		NRCC-LTO-E
Report Page:		Page 4 of 6
Date Prepared:		04.28.2023
		0
Initial Wattage Allowance for Entire Site (W	/atts).	350
Total General Hardscape Allowance (W	U HORDE AVEAH	382.9
		00210
		2
		2
		?
		?
		?
		2
f in previous tables of this document. If any selection needs to be changed, p ing inspector during construction and can be found online at <u>https://www.en</u> ents/NRCI/		
Form/Title	Field Ir	nspector
romynue	Pass	Fail
ntrol system; or for an Energy Management Control System (EMCS), to be		

January 2021

STATE OF CALIFORNIA **Outdoor Lighting**

CERTIFICATE OF	COMPLIANCE	
Project Name:	WEST BERKELEY SERVICE CENTER	Report
Project Address:	1900 Sixth St Berkeley, CA 94710	Date P

G. CUTOFF REQUIREMENTS (BUG) This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS Table Instructions: Complete this table demonstrating 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.

When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in columns 02 through 04, do not leave the field blank, instead select NA or Exempt* from the dropdown list to indicate not applicable or an exemption.

01	02	03
Area Description	Shut-Off <u>§130.2(c)1</u>	Auto-Schedule <u>§130.2(c)2</u>
EXTRIOR AREA	Astronomical Timer	Yes
NOTES: Controls with a * require a no	te in the space below explaining how so	molionce is achieved

Mandatory Controls	71.			20		51 C						
01	1	02			03			04			05	5
Area Description		Shut-Off			Auto-Schedule		Motion Sensor §130.2(c)3			Field Inspector		
	2	§130.2(c)1			§130.2(c)2		3	9130.2(c):	2	1	ass	Fail
EXTRIOR AREA	Astr	onomical Time	er		Yes			Yes				
*NOTES: Controls with a * requ EX: Not permitted by health &		그는 요즘 물리가 있는 것을 걸 때 가지가 갑자기 때문	A DECK DECK DECK	Call of Country of Call States and	is achieved.							
I. LIGHTING POWER ALLOW	/ANCE (per <u>§140.7</u>)											?
Table Instructions: Please com						03	1					
allowance calculations per §14					"Use it or lose it" Allowances (select all that apply)							
is per <u>Table 140.7-A</u> while "Use it or lost it" Allowances are per <u>Table 140.7-B</u> . 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			10.501000000000000000000000000000000000	General Hardscape Allowance	Per Applicatio	n 🔲 Sales Fi	Sales Frontage Ornam		namental	Per Specific Are		ific Area
it or lose it" allowance.			-	ble I (below)	Table J Table K Table L		ole L	Table M				
Calculated General Hardscape	Lighting Power Allowa	ince per Table	140.7	-A (LZ 2 & 3)								
02	03	04		05	06	07		08	09			10
		Are	ea Wat	a Wattage Allowance (AWA)		Linear Wattage Allowance (LWA)				Total	General	
Area Description	Surface Type	Illuminate Area (ft²)		llowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (If)		ed Density W/If)	Linear Allo (Wat	0.00		+ LWA /atts)
EXTERIOR AREA	Concrete	230		0.03	6.9	65		0.4	26		3	2.9
Table Continued				Line and								

Table continued

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

STATE OF CALIFORNIA	
Outdoor Lighting	

NRCC-LTO-E (C	•		
CERTIFICATI	E OF COMP	LIANCE	
Project Nam	ne: WES	T BERKELEY SERVICE CENTER	Repo
Project Add	ress: 1900	Sixth St Berkeley, CA 94710	Date
P. DECLAR	ATION OF	REQUIRED CERTIFICATES OF ACCEPTANCE	
Table E. Add	ditional Rei	ections have been made based on information pro marks. These documents must be provided to the ATTCP). For more information visit: <u>http://www.</u>	building inspector during constru
YES	NO		Form/Title
۲	0	NRCA-LTO-02-A - Must be submitted for all ou luminaires.	tdoor lighting controls except for

STATE OF CALIFORNIA **Outdoor Lighting**

CONTRACTOR OF THE OWNER	0	•
NRCC-LTO-E	Created 01	(21)

NRCC-LTO-E (Created 01/21)		
CERTIFICATE OF COMPLIANCE		
Project Name: WEST BERKELEY	SERVICE CENTER	Repor
Project Address: 1900 Sixth St Be	rkeley, CA 94710	Date F
DOCUMENTATION AUTHOR'S	DECLARATION STATEMENT	
I certify that this Certificate of Con	npliance documentation is accurate and com	plete
Documentation Author Name:	Ray A. Juachon, PE	Documentation
Company:	RIJA, Inc.	Signature Date:
Address:	5515 Doyle Street, #7	CEA/ HERS Certi
City/State/Zip:	Emeryville, CA 94608	Phone:
RESPONSIBLE PERSON'S DECLARA	ATION STATEMENT alty of perjury, under the laws of the State o	f California:
A		

. 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 bu

Compliance (responsible designer) . The energy features and performance specifications, materials, components, and manufactured dev

Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California . The building design features or system design features identified on this Certificate of Compliance a

compliance documents, worksheets, calculations, plans and specifications submitted to the enforcen . I will ensure that a completed signed copy of this Certificate of Compliance shall be made available v

to the enforcement agency for all applicable inspections. I understand that a completed signed copy documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Ray A. Juachon, PE	Responsible Des
Company :	RIJA, Inc.	Date Signed:
Address:	5515 Doyle Street, #7	License:
City/State/Zip:	Emeryville, CA 94608	Phone:

NOLL SOLL SOLL SOLL SOLL SOLL SOLLNOLL SOLL SOLLNOLL SOLL SOLLNOLL SOLL SOLLNOLL SOLL SOLLNOLL SOLL SOLLNOLL SOLL
SEAL
S515 Doyle St., #7 Emeryville, CA 94608 RIJA Project #: 2021055 www.rijainc.com
PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE CENTER
1900 Sixth St Berkeley, CA 94710
BID SET ISSUE DATE 12.22.2023 N&T JOB NUMBER 22121 REVISIONS DATE DESCRIPTION 1 8/25/23 REV 1 - PLAN CHECK 2 10/20/23 REV 2 - PLAN CHECK
DRAWN BY CAD CHECKED BY RAJ SHEET TITLE ENERGY COMPLIANCE FORMS

CALIFORNIA ENERGY COMMISSI19	
NRC	C-LTO-E

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F	21	e	p	ar	e	d	e.

Page 3 of 6 04.28.2023

January	20

CALIFORNIA EN	ERGY COMMIS	NRCC-LTO-E
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document. If any selection needs to be changed, pl ruction and must be completed through an Accepto oviders.html	ance Test Teo	3 5 5 5 4 4 5 8 5 6 9 7 M P
ruction and must be completed through an Accepto	ance Test Teo	chnician

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	CALIFORNIA ENERGY COMMISSION
	NRCC-LTO-E
ort Page:	Page 6 of 6
Prepared:	04.28.2023
~	$\leq $
n Author Signature: \	Late
1	04.28.2023
tification Identification (if	applicable):
	415.730.7994
vices for the building des a Code of Regulations. are consistent with the in ement agency for approv with the building permit y of this Certificate of Co	design identified on this Certificate of ign or system design identified on this formation provided on other applicable al with this building permit application. (s) issued for the building, and made available mpliance is required to be included with the
esigner Signature: '	04.28.2023
	E19586
	415.730.7994

state of california Envelope Component Approach California Energy COMMISSION	state of california Envelope Component Approach California ENERGY COMMISSION California ENERGY COMMISSION	state of california Envelope Component Approach
CERTIFICATE OF COMPLIANCE NRCC-ENV-E This document is used to demonstrate compliance with mandatory requirements in 110.8(g) and 120.7(b)/ 160.1 for newly constructed nonresidential, hotel, multifamily and	CERTIFICATE OF COMPLIANCE NRCC-ENV-E Project Name: West Berkely Service Center Remodel Report Page: (Page 2 of 12) Data Processed Data Processed 0/(4/022)	CERTIFICATE OF COMPLIANCE Project Name: West Berkely Service Center Remodel Report Page:
mixed-use buildings, and 141.0(b)1/180.2 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in 140.3/ 170.2 for newly constructed buildings, and 141.0/180.1/180.2 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.	Date Prepared: 9/14/2023	Date Prepared:
Project Name: West Berkely Service Center Remodel Report Page: (Page 1 of 12) Project Address: 1900 Sixth St Date Prepared: 9/14/2023	B. PROJECT SCOPE	F. ROOF ASSEMBLY SCHEDULE
A. GENERAL INFORMATION	¹ FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on table K with fenestration. ² Roof recovers and replacements must also check "Roof Assembly" box and document compliance with insulation requirements in Table F. Roof recoats may document compliance with	Framed Roof Assemblies
01 Project Location (city) Berkeley 05 # of Stories (Habitable Above Grade) 1	roof material only in Table G.	Tag/Plan Detail ID Name/Description Status Exception to Roof Insulation Requir R-19 Flat 2-Ply Roof Alt Roof 0.3:12 Altered
02 Zipcode 94710 06 Total Conditioned Floor Area (ft ²) 9836 03 Climate Zone 3 07 Total Unconditioned Floor Area (ft ²) 0	C. COMPLIANCE RESULTS	R-19 Roof Attic Alt Roof 6:12 Altered
Occupancy Types Within Project: (select all that apply): If one occupancy constitutes >= 80% of the conditioned floor area, the entire building or Project includes unconditioned enclosed space(s) > 5,000 ft ² under a roof with a ceiling	Results in this table are automatically calculated from data input and calculations in Tables F through L. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see the applicable table referenced below.	R-19 Sloped Vault Alt Roof 4.5:12 No Attic Altered
1^{4} envelope may be designed to comply with the provisions of that occupancy per 100.0(f).	Opaque Envelope Components Daylighting Spaces > Compliance Results	Alt Roof 4 5:12 No Attic
All Other Occupancies	Roof AssemblyRoofing MaterialsWallsFloorsDoorsTenestitation5,000ft²Compliance results0102030405060708	Alt Roof 4 5:12 No Attic
DOTNOTE: Enclosed spaces > 5,000 ft ² directly under roof with ceiling height > 15 ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements ined in 140.3(c)/ 170.2(b) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.	(See Table F) (See Table G) (See Table H) (See Table I) (See Table J) (See Table K) (See Table L) Yes Yes Yes Yes Yes Yes COMPLIES	R-19 Sloped Vault Altered Altered 07 08 09 10 11 12 13
		Tag/Plan Detail How Design H factor was Roof Type & Roof Type & Frame Spacing Frame Spacing Cavity Insulation per Insulation per Insulation per Thermal
PROJECT SCOPE is table specifies project envelope components within the permit application demonstrating compliance using the prescriptive paths outlined in 140.3/170.2 and 141.0(a)1/180.1	D. EXCEPTIONAL CONDITIONS	ID determined Frame Material Depth Design ² Design ² Unit
Id 141.0(b)1 and 2/ 180.2 for additions and alterations. My project consists of (check all that apply) Component Types	This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.	Alt Roof 0.3:12 JA4 Tables Wood 19 10 U-facto
01 02	E. ADDITIONAL REMARKS	
New Construction or Newly Conditioned Space Image: Constructioned Space Image: Conste Space Image: ConstructionedS	This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.	Alt Roof 6:12 JA4 Tables Wood 19 0 U-facto
Addition of conditioned space Image: Walls Image: Exterior Opaque Doors Image: Walls Image: Walls Image: Exterior Opaque Doors	F. ROOF ASSEMBLY SCHEDULE This table demonstrates compliance for prescriptive roof assembly requirements in 140.3(a)1B/ 170.2(a)1B for new construction, 141.0(a)/ 180.1 for additions, or 141.0(b)2Biii/ 180.2	Alt Roof 4.5:12 JA4 Tables Wood 19 0 U-facto
$\square \text{ Addition is } <=700 \text{ ft}^2$	for alterations,	No Attic - W
Addition is >700 ft ² Addition is >700 ft ² Alteration of conditioned space Image: Addition of Conditioned Space	01 Indicate roof types included in the project: 🛛 Framed 🗆 Framed-Multifamily	Alt Roof 4.5:12 No Attic - SJA4 TablesWood190U-factor
One or more enclosed spaces > 5,000 ft ² directly under roof with ceiling height > 15ft and lighting system installed for the first time Roofing Material ² Floors Image: Space Spac	Framed Roof Assemblies 01 Include Framed Roof Assemblies in Area-Weighted Average U-factor Calculation ¹	
Generated Date/Time: Documentation Software: EnergyPro	01 02 03 04 05 06	
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-2729-0923-0120	Generated Date/Time: Documentation Software: EnergyPro	Generated Date/Time: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000
Schema Version: rev 20220101 Report Generated: 2023-09-14 11:31:39	CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-2729-0923-0120 Schema Version: rev 20220101 Report Generated: 2023-09-14 11:31:39	CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 2022010
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Invelope Component Approach CALIFORNIA ENERGY COMMISSION ERTIFICATE OF COMPLIANCE NRCC-ENV-E	Envelope Component Approach CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-ENV-E	
oject Name: West Berkely Service Center Remodel Report Page: (Page 4 of 12) Date Prepared: 9/14/2023	Project Name: West Berkely Service Center Remodel Report Page: (Page 5 of 12) Date Prepared: 9/14/2023	Project Name: West Berkely Service Center Remodel Report Page:
		Date Prepared:
. ROOF ASSEMBLY SCHEDULE	G. RATED ROOFING MATERIAL (COOL ROOF)	K. FENESTRATION AND GLAZED DOOR SCHEDULE
07 08 09 10 11 12 13 14 15 16 How Design Dest Turne & Frame Sensing Cavity Continuous Thermal Required 16	R-19 Flat Alt Roof 0.3:12 Altered Nonresidential Low To Be Determined Aged solar Reflectance 0.63 Reflectance ¹ 0.63	This table demonstrates compliance with prescriptive fenestration requirements in 140.3(a)5/ 170.2(a)3 for new alterations. Exterior doors that are more than 25% glass in area are considered Glazed Doors and should be door
Tag/Plan Detail ID How Design U-factor was determined Roof Type & Frame Material Frame Spacing Depth Continuous Insulation per Design ² Thermal Performance U-factor per Design Net Area ⁴ ft ²	2-Ply Root thermal emittance SRI SRI SRI	01 Indicate fenestration types included in the project: ¹ \boxtimes Vertical (alterations) \square Vertical
Alt Roof 4 5:12	R-19 Roof Att Roof 6:12 Altered Nonresidential Steep To Be Determined To Be Determined reflectance and Emittance 0.2 Reflectance ¹ 0.2 0.75	¹ FOOTNOTES: Fenestration types indicated above as "(new only)" do not have Title 24, Part 6 requirements for a should be clicked above and compliance demonstrated within this table.
No Attic - E JA4 Tables Wood 19 0 U-Tactor 0.082 per Software/ 0.056 1664	Attic slope thermal emittance SRI SRI SRI	Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmi
¹ FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.	R-19 Alt Roof 4.5:12 No Altered Nonresidential Steep slope To Be Determined Aged solar Reflectance 0.2 Reflectance ¹ 0.2 Vulue Attic - W Altered Nonresidential Steep slope To Be Determined reflectance and the meithance 0.75 Emittance 0.75	01 Image: Calculate Area-Weighted Average U-factor for Vertical Fenestration and Gla 02 Image: Calculate Area-Weighted Average (R)SHGC for Vertical Fenestration and Gla
 ² For alterations using U-factor as the Thermal Performance Unit, at least R-10 insulation must be above deck. ³ If "R-value" is shown in cell 13 as the Thermal Performance Unit, the R-value shown here is for continuous insulation per Table 141.0-C. 	Vault Attraction SRI	03 Calculate Area-Weighted Average VT for Vertical Fenestration and Glazed D
⁴ Roof area minus any fenestration/ skylight area	H. WALL ASSEMBLY SCHEDULE This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/170.2(a) for new constructions, 141.0(a)/180.1 for additions and 141.0(b)1B/180.2 for	Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmi04050607080
Area-Weighted Average U-factor Compliance Calculation for Framed/ SIPs/ Span Deck & Concrete/ Metal Panel Roofs	alterations.	Tag/Plan Fenestration Occupancy & Status U-factor/ (R)SHGC VT Compliance Calculation I Detail ID Type Occupancy & Status Compliance Method Method Performance Value
01 02 03 04 05 Boof Type Tatal Area of Boof Type (fr2) Area-weighted U-factor for Roof Type Compliance Results Using Area-Weighted	01 Indicate wall types included in the project:1 Framed Mass (new only) Concrete Sandwich Panel (new only) SIPS ICF (new only) 01 Metal Panels Metal Building Spandrel/ Curtain Wall Straw Bale Log Home (new only)	Detail ID Type Compliance Method Method Performance Val 5110.6 5
Roof Type Total Area of Roof Type (ft ²) Required Designed Compliance results of an price weighted Framed 9836 0.082 0.051	¹ FOOTNOTES: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.	Let core let l Nonresidential/
Framed 9836 0.082 0.051 Total for all Roof Types: 9836 0.082 0.051 COMPLIES		RSHGC
G. RATED ROOFING MATERIAL (COOL ROOF)		Entry Doors Glazed door Nonresidential/ Relocatable 1 CZ: : New Table 140.3-B/C/D Table 140.3-B/C/D Overhang/S
This table demonstrates compliance with prescriptive roof material requirements in 140.3(a)1A/ 170.2(a)1A for new construction, 141.0(a)/ 180.1 for additions, and 141.0(b)2B/ 180.2 for alterations. Roof recovers and replacements must also document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only	I. FLOOR ASSEMBLY SCHEDULE This section does not apply to this project	Entry Doors Glazed door Relocatable 1 CZ: : New lable 140.3-B/C/D 140.3-B/C/D 0verhang/ SRHGC
in Table G. 01 02 03 04 05 06 07 08 09 10	This section does not apply to this project.	5050 x 5 Operable window Nonresidential/ Table 140.3-B/C/D Table 140.3-B/C/D
Tag/Plan Description / Status Occupancy Type Roof Roof Material Compliance Method Required Minimum Designed Material U-factor / Revolution of	J. EXTERIOR DOOR SCHEDULE	RSHGC
Description/ Status Occupancy Type Noor Roof Material Compliance Method Material Performance Description/ Description/	This section does not apply to this project.	5020 x 5 Fixed window Nonresidential/ Relocatable 1 CZ: : New Table 140.3-B/C/D Table 140.3-B/C/D Overhang/S
		S020 x 5 Fixed window Relocatable 1 CZ: : New Table 140.3-B/C/D 140.3-B/C/D 0verhang/ SRHGC
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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-2729-0923-0120 Schema Version: rev 20220101 Report Generated: 2023-09-14 11:31:39	CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-2729-0923-0120 Schema Version: rev 20220101 Report Generated: 2023-09-14 11:31:39	CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220102
		Scheina version: rev 2022010:
tate of california E nvelope Component Approach California energy commission	state of california Envelope Component Approach California energy commission	state of california Envelope Component Approach
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Project Name: West Berkely Service Center Remodel Report Page: (Page 7 of 12) Date Prepared: 9/14/2023	Project Name: West Berkely Service Center Remodel Report Page: (Page 8 of 12) Date Prepared: 9/14/2023	Project Name: West Berkely Service Center Remodel Report Page: Date Prepared: Date Prepared:
K. FENESTRATION AND GLAZED DOOR SCHEDULE	K. FENESTRATION AND GLAZED DOOR SCHEDULE	K. FENESTRATION AND GLAZED DOOR SCHEDULE
Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT) 04 05 06 07 08 09 10 11 12 13	Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)04050607080910111213	Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmi04050607080
Tag/Plan Fenestration Occupancy & Status U-factor/ (R)SHGC VT Compliance Calculation Method for Product Required Product Performance Area ft ²	Tag/Plan Fenestration Occupancy & Status U-factor/ (R)SHGC VT Compliance Calculation Method for Product Required Product Detail ID Type Occupancy & Status U-factor/ (R)SHGC VT Compliance Performance Parformance Performance Product Performance Product Performance Per	Tag/Plan Fenestration Occupancy & Status U-factor/ (R)SHGC VT Compliance Calculation Detail ID Type Occupancy & Status Compliance Method Method Performance Value
Detail D Performance Values per Design Unit Performance per Design	Detail ID Type Compliance Method Method Performance Values per Design Unit Performance per Design	Compliance Method Method Performance Va
8050 x 4 - courtyard Operable window Nonresidential/ Table 140.3-B/C/D Table 140.3-B/C/D Table 140.3-B/C/D Overhang/ Slats used for U-factor (max) 0.79 0.79 140.3-B/C/D Table 140.3-B/C/D Table 140.3-B/C/D Table 140.3-B/C/D Image: Courty of the second	12050 x 2 Operable window Nonresidential/ Table 140.3-B/C/D Table 140.3-B/C/D Table 140.3-B/C/D Overhang/ Slats used for (R)SHGC (max) 0.79 0.79	Back 4050 Operable Nonresidential/ window Relocatable 1 CZ: : New Table 140.3-B/C/D Table 140.3-B/C/D Table 140.3-B/C/D Table
Construct Instruct	RSHGC VT (min) 0.84 0.44	RSHGC
Doors w/ glass 6070 - courthord Onresidential/ Relocatable 1 CZ: : New Table 140.3-B/C/D Table 140.3-B/C/D Table D Table U-factor (max) 0.99 0.99 0.99 42	Doors w/ glass 6070 x Glazed door Nonresidential/ Relocatable 1 CZ:: New Table 140.3-B/C/D Table 140.3-B/C/D Table 0 State U-factor (max) 0.99 0.99 0 0 0 0 0 0 0 0 0	34 Operable vindow (Deployment > 150fta) Table141.0-A Table 140.3-B/C/D Overhang/
courtyard Relocatable 1 C2.: New 140.3-B/C/D RSHGC VT (min) 0.72 0.44	$\frac{1}{2}$ Relocatable 1 CZ: : New 140.3-B/C/D \Box RSHGC $\frac{1}{RSHGC}$ $\frac{1}{VT (min)}$ 0.72 0.44	(Replacement > 150ft2)
34 x 2 Operable window Nonresidential/ Relocatable 1 CZ: : Alt. Table141.0-A Table 140.3-B/C/D Overhang/ Slats used for (R)SHGC (max) 0.58 0.58 15	8050 x 4 - Operable Nonresidential/ Nonresidential/ Table 140.3-B/C/D Table 140.3-B/	2016 x 2 Fixed window Delevation 1 GT New Table 140.3-B/C/D Table 140.3 - B/C/D Table 140.3 - B/C/D 140.3 - B/C/D 140.3 - B/C/D
$\frac{34 \times 2}{(Replacement > 150ft2)}$ $\frac{140.3-B/C/D}{RSHGC} \square \frac{(R)SHGC (max)}{(RSHGC (max)} = 0.41$ $\frac{(R)SHGC (max)}{(R)SHGC (max)} = 0.44$	courtyard window Relocatable 1 CZ: : New I able 140.3-B/C/D 140.3-B/C/D Overhang/ Slats used for RSHGC (R)SHGC (max) 0.7 0.7 VT (min) 0.84 0.44	Clerestory
33 x 3 Operable Nonresidential/ Relocatable 1 CZ: : Alt. Table141.0-A Table Table Overhear (Slate used for U-factor (max) 0.58 0.58 54	Doors w/ glass 6070 - Glazed door Delevertely 4 67 - New Table 140.3-B/C/D Table 140	9048 Fixed window Delevately 1 GTL New Table 140.3-B/C/D Table
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	glass 6070 - courtyard Glazed door Relocatable 1 CZ: : New Table 140.3-B/C/D Table 140.3-B/C/D Overhang/ Slats used for RSHGC (R)SHGC (max) 0.6 0.6 42	9048 Fixed window Relocatable 1 CZ: : New Table 140.3-B/C/D lable 140.3-B/C/D Overhang/RSHGC
Nonresidential/	<u>§110.6</u> Defaults U-factor (max) 0.71 0.71	§110.6
32 Fixed window Relocatable 1 CZ: : Alt. (Replacement > 150ft2) Table141.0-A 140.3 -B/C/D \Box Overhang/Slats used for RSHGC (max) 0.41 0.4 24 VT (min) 0.42 0.48	6638 Fixed window Nonresidential/ Relocatable 1 CZ:: New Table 140.3-B/C/D Iable 140.3-B/C/D Overhang/ Slats used for RSHGC (R)SHGC (max) 0.73 0.73 23.8	12048 x 3 Fixed window Nonresidential/ Relocatable 1 CZ: : New Table 140.3-B/C/D Table 140.3-B/C/D Image: Comparison of the second
Operable Nonresidential Table <u>\$110.6</u> Defaults U-factor (max) 0.79 0.79	<u>§110.6</u> Defaults U-factor (max) 0.71 0.71	<u>§110.6</u> [
3070 SGD x 2 Operable window Nonresidential/ Table 140.3-B/C/D Table 140.3-B/C/D Table 140.3-B/C/D Table 140.3-B/C/D Image: Comparison of the state of the st	9838 x 3 Fixed window Nonresidential/ Relocatable 1 CZ: : New Table 140.3-B/C/D Table 140.3-B/C/D Table 140.3-B/C/D Table 0 Overhang/ Slats used for RSHGC (R)SHGC (max) 0.73 0.73 106.3	16048 Fixed window Nonresidential/ Relocatable 1 CZ: : New Table 140.3-B/C/D Table 140.3-B/C/D Table
RSHGC VT (min) 0.84 0.44	RSHGC VT (min) 0.88 0.84	
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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Generated Date/Time: Report Version: 2022.0.000

Schema Version: rev 20220101

Documentation Software: EnergyPro Compliance ID: EnergyPro-2729-0923-0120

Report Generated: 2023-09-14 11:31:39

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000 Schema Version: rev 20220101

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Generated: 2023-09-14 11:31:39

Generated Date/Time:

CALIFORNIA ENERGY COMMISSION NRCC-ENV-E

(Page 3 of 12) 9/14/2023

t Page: Prepared:

Ilation Requirements in <u>§141.0(b)2Biii</u> (Alts. Only) Occupancy Type Nonresidential/ Relocatable 1 CZ 16 13 14 15 Thermal Required U-factor per Design Thermal Performance Net Area⁴ ft² Unit Performance³ per JA4 per Software/ Other 1927 U-factor 0.082 0.033 per JA4 1131 U-factor 0.082 per Software 0.048 Other per JA4 0.082 1664 U-factor per Software 0.056 Other per JA4

U-factor

0.082

Documentation Software: EnergyPro Compliance ID: EnergyPro-2729-0923-0120 Report Generated: 2023-09-14 11:31:39

0.056

3450

	CALIFORNIA ENERGY COMMISSION
	NRCC-ENV-E
oort Page:	(Page 6 of 12)
te Prepared:	9/14/2023

per Software

Other

0.2(a)3 for new constructions, 141.0(a)/ 180.1 for additions, or 141.0(b)2A/ 180.2 for d should be documented on this table with fenestration. □ Vertical (new) □ Skylights Glazed Doors (new only) uirements for alterations. New construction and additions do have requirements and

					.o unu		
, Visi	ible Transmittance (VT)						
estra	tion and Glazed Doors ¹						
estra	tion and Glazed Doors ¹						
on a	nd Glazed Doors ¹						
, Visi	ible Transmittance (VT)						
	09	10	12	13			
	Calculation Method for ormance Values per Design ²	Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft ²		
§110.6 Defaults		U-factor (max)	0.71	0.71			
	Overhang/ Slats used for	(R)SHGC (max)	0.73	0.73	30		
	RSHGC	VT (min)	0.88	0.84			
	<u>§110.6</u> Defaults	U-factor (max)	0.99	0.99			
	Overhang/ Slats used for	(R)SHGC (max)	0.6	0.6	42		
	RSHGC	VT (min)	0.72	0.84			
	<u>§110.6</u> Defaults	U-factor (max)	0.79	0.79			
	Overhang/ Slats used for	(R)SHGC (max)	0.7	0.7	125		
	RSHGC	VT (min)	0.84	0.84			
	<u>§110.6</u> Defaults	U-factor (max)	0.71	0.71			
Overhang/ Slats used for		(R)SHGC (max)	0.73	0.73	50		

RSHGC

Documentation Software: EnergyPro

VT (min) 0.88 0.84

Compliance ID: EnergyPro-2729-0923-0120 Report Generated: 2023-09-14 11:31:39

> CALIFORNIA ENERGY COMMISSION NRCC-ENV-E (Page 9 of 12) 9/14/2023

Vis	ible Transmittance (VT)					
	09	10	11	12	13	
Perf	Calculation Method for formance Values per Design ²	Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft ²	
	§110.6 Defaults	U-factor (max)	0.79	0.79		
	Overhang/ Slats used for	(R)SHGC (max)	0.7	0.7	20	
	RSHGC	VT (min)	0.84	0.84		
	NFRC Certified	U-factor (max)	0.58	0.58		
	Overhang/ Slats used for	(R)SHGC (max)	0.41	0.38	7.5	
_	RSHGC	VT (min)	0.32	0.44		
	§110.6 Defaults	ults U-factor (max) 0.71		0.71		
_	Overhang/ Slats used for	(R)SHGC (max)	0.73	0.73	6	
	RSHGC	VT (min)	0.88	0.84		
	§110.6 Defaults	U-factor (max)	actor (max) 0.71 0.71			
_	Overhang/ Slats used for	(R)SHGC (max)	0.73	0.73	42	
	RSHGC	VT (min)	0.88	0.84		
	§110.6 Defaults	U-factor (max)	0.71	0.71		
_	Overhang/ Slats used for	(R)SHGC (max)	0.73	0.73	168	
	RSHGC	VT (min)	0.88	0.84		
	§110.6 Defaults	U-factor (max)	0.71	0.71		
_	Overhang/ Slats used for	(R)SHGC (max)	0.73	0.73	74.7	
_	RSHGC	VT (min)	0.88	0.84		

Report Version: 2022.0.000 Schema Version: rev 20220101 Documentation Software: EnergyPro

Compliance ID: EnergyPro-2729-0923-0120 Report Generated: 2023-09-14 11:31:39

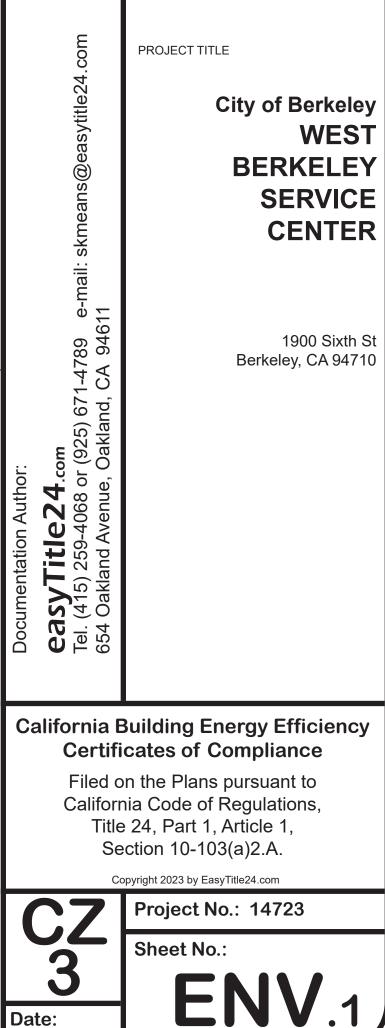
Documents to be Provided to Owner

§10-103(b)1.B: Compliance Information. At occupancy, builder/installers shall leave in the building, or with the owner, copies of the completed, signed, and submitted compliance documents for the building. For nonresidential buildings, highrise residential buildings and hotels and motels, such information shall include copies of all Certificate of Compliance, Certificate of Installation, Certificate of Acceptance and Certificate of Verification documentation submitted. These documents shall be in paper or electronic format and shall conform to the applicable requirements of Section 10-103(a).

§10-103(b)2: Operating Information. At occupancy, builder/ installers shall leave in the building, or with the owner, operating information for all applicable features, materials, components, and mechanical devices installed in the building. Operating information shall include instructions on how to operate the features, materials, components, and mechanical devices correctly and efficiently. For buildings or tenant spaces that are not individually owned and operated, or are centrally operated, such information shall be provided to the person(s) responsible for operating the feature, material, component or mechanical device installed in the building. This operating information shall be in paper or electronic format.

§10-103(b)3: Maintenance Information. At occupancy, builder/installers shall leave in the building, or with the owner, maintenance information for all features, materials, components, and manufactured devices that require routine maintenance for efficient operation. Required routine maintenance actions shall be clearly stated and incorporated on a readily accessible label. The label may be limited to identifying, by title and/or publication number, the operation and maintenance manual for that particular model and type of feature, material, component or manufactured device. For buildings or tenant spaces that are not individually owned and operated, or are centrally operated, such information shall be provided to the person(s) responsible for operating the feature, material, component or mechanical device installed in the building. This operating information shall be in paper or electronic format.

Installation forms can be downloaded from appropriate links here: https://energycodeace.com/content/get-forms Please note that this report only states some of the more significant compliance requirements and criteria; it does not purport to state how those requirements can be met, nor what equipment to install. There are generally many installation options available; although most equipment must be California Certified. In addition, "acceptance" criteria must be understood prior to installation. For this reason, we recommend consulting with lighting and/or mechanical Acceoptance Test Technicians prior to applicable installations. Those technicians are searchable from the ATTCP link here: https://www.energy.ca.gov/programsand-topics/programs, then click "Acceptance Test Technician Certification Providers" in the green sidebar.



Title 24 Envelope Compliance

9-14-2023

Envelope Compone CERTIFICATE OF COMPLIANCE				CALI		CC-ENV-E	STATE OF CALIFORNIA Envelope Component Approach CERTIFICATE OF COMPLIANCE		CAL	FORNIA ENERG
Project Name: West Berke	ely Service Center Remodel	Report Date Pi	t Page: Prepared:			10 of 12) /14/2023	Project Name: West Berkely Service Center Remodel	Report Page: Date Prepared:		
	GLAZED DOOR SCHEDULE Glazed Doors- U-factor, Solar Heat (ain Coefficient (RSHGC/ SHGC), Vis	sible Transmittance (VT)				M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION			
04 05	n II facto	07 08	09 Calculation Method for	10 1 Product Requ	uired Product	13	Selections have been made based on information provided in this docum Additional Remarks. These documents must be provided to the building in	ent. If any selection have been changed by the permit a nspector during construction and can be found online	pplicant, an explanation s	hould be includ
Tag/Plan Fenestratio Detail ID Type	n Occupancy & Status Complia		rformance Values per Design ²	Performance Proc Unit Perform	duct Performance	Area ft ²		Form/Title		
Operable	Nonresidential/	Table		U-factor (max) 0.7			NRCI-ENV-01-E - Must be submitted for all buildings			
9050 window	Relocatable 1 CZ: : New	140.3-B/C/D 140.3-B/C/D	Overhang/ Slats used for (RSHGC	(R)SHGC (max) 0. VT (min) 0.8		45	N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE			
	lual fenestration product is non-com Area-weighted calculation shown i					1	Selections have been made based on information provided in previous ta Additional Remarks. These documents must be provided to the building i	bles of this document. If any selection needs to be chan nspector during construction and can be found online a	ged, form user must provi t	de an explanat
² The NA6 Default Calculati	on can only be used for alterations o or 5% of conditioned floor area. If the	dwelling units in buildings with <= .	3 habitable stories. Alterations are	re limited to 200ft ² of s	site built glazing and d	welling	https://www.energy.ca.gov/title24/2019standards/2019_compliance_do and provide the information required for completion of the fenestration (ocuments/Nonresidential_Documents/NRCA/. Individua Certificate of Acceptance documentation are not require	ls who perform the field te ed to be licensed professio	nals. However,
or the Default Tables in 110							signs the Certificate of Acceptance document to certify compliance with t	the acceptance requirements shall be licensed as specifi form/Title	ed in Standards Section 10	Systems/Spa
requirement, the affect of t ⁴ Projecting includes casem	the overhang will be ignored.						NRCA-ENV-02-F must be submitted for all new, added or altered site buil			Vei
Area-Weighted Average U	-factor, SHGC, VT Compliance Calcu									
01 Product Performance (02 Jnit Total Area of Fenestration	03 Area-weighted	04 Calculation for Fenestration	Compliance	05 Results Using Area-W	eighted	O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION <i>There are no forms required for this project.</i>			
U-Factor	1545.3	0.58	Designed 0.573	(Calculation Option COMPLIES					
(R)SHGC VT	1545.3 1545.3	0.41	0.385		COMPLIES					
•.	1343.5	0.344	0.43							
L. DAYLIGHT IN LARGE E This section does not apply										
inis section does not apply	נס נוווס מוטיבנו.]				
		Generated Date,	٤/Time:	Doc	cumentation Software: Er	nergyPro		Generated Date/Time:	.	cumentation Soft
CA Building Energy Efficiency	Standards - 2022 Nonresidential Compl	ance Report Version:	: 2022.0.000	Complianc	ce ID: EnergyPro-2729-09	23-0120	CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance	Generated Date/Time: Report Version: 2022.0.000		cumentation Soft
		Schema Version	.: rev 20220101	Report	Generated: 2023-09-14	11:31:39		Schema Version: rev 20220101		Generated: 202

CERTIFI	CATE OF COMPLIANCE		
Project	Name: West Berkely Service Center Remodel		Report Page:
Project	Address:	1900 Sixth St	Date Prepared
DOCU	MENTATION AUTHOR'S DECLARATION STATEMENT		
l certif	y that this Certificate of Compliance documentation is a	accurate and comple	te.
Documer	ntation Author Name:		Documentation
Steve K	. Means, CEA		
Company			Signature Date:
EasyTit	-		
Address:	kland Avenue		CEA/ HERS Cert NR19-90-300
City/State			Phone:
	d CA 94611		(925) 671-47
RESPO	NSIBLE PERSON'S DECLARATION STATEMENT		
	he following under penalty of perjury, under the laws of the State of California	a:	
1.	The information provided on this Certificate of Compliance is true and corr	rect.	
2.	I am eligible under Division 3 of the Business and Professions Code to acce	,	0 0 ,
3.	The energy features and performance specifications, materials, componen of Title 24, Part 1 and Part 6 of the California Code of Regulations.	ts, and manufactured device	s for the building

Responsible Designer Name: Janet Tam

Company: Nol & Tam Architects

Address: 729 Heinz Avenue

City/State/Zip: Berkeley CA 94710

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