



PSB - Detention Area

Automation Upgrades

2100 Martin Luther King Jr. Way, Berkeley, CA 94704

21827.00 - BID SET - 01/27/2026

City of Berkeley

This Bid Set includes post-permit, owner-requested changes to the Automation System

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:

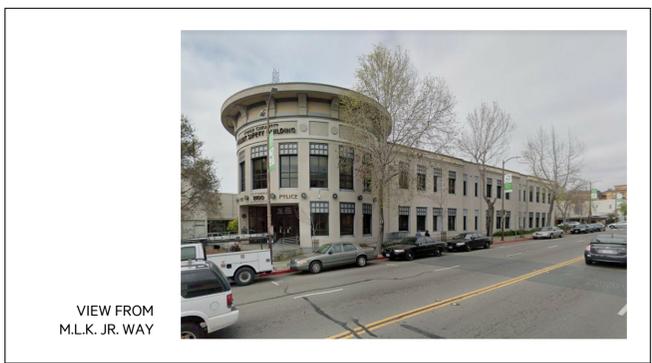
- Smoking shall be prohibited except in designated areas with approved ashtrays. All other areas must have "No Smoking" signage posted around construction areas in accordance with CFC§310. [CFC§3304.1]
- Combustible debris shall not be allowed to accumulate within building. Combustible debris, rubbish 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.

DEFERRED SUBMITTALS

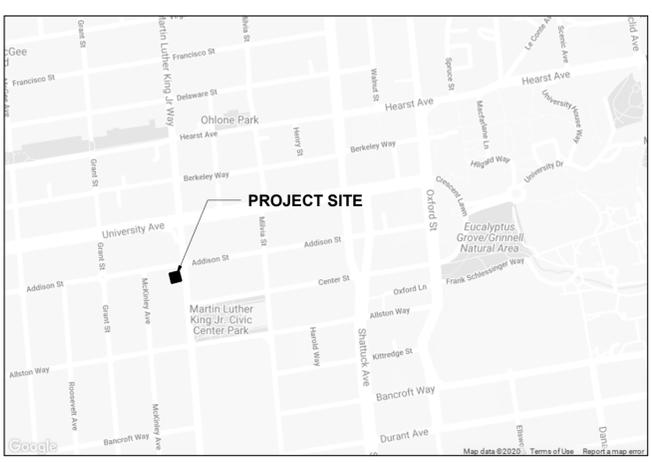
DEFERRED SUBMITTALS FOR THIS PROJECT MAY INCLUDE:

- FIRE PERMIT TO CERTIFY ANY REQUIRED MODIFICATIONS TO CURRENT SPRINKLER SYSTEM
- DESIGN-BUILD ANCHORAGE DETAILS FOR NON-STRUCTURAL WIRE-MESH PARTITION IN SERVER ROOM 1111

STREET VIEW



CONTEXT MAP



APPLICABLE CODES

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

CODE ANALYSIS

All construction shall conform to the 2022 California Building, Fire, Mechanical, Plumbing, Electrical, Energy Code and Green Building Code.

The applicable codes are the 2022 California Building Code Vol. 1 and 2, 2022 California Energy Code, 2022 California Green Building Standards, 2022 California Electrical Code, 2022 Electrical Code Errata, 2022 California Plumbing Code, 2022 California Mechanical Code, 2022 California Fire Code, 2022 California Existing Building Code.

The existing 60,108 square-foot building was permitted and constructed in 2000 as a sprinkled, type II-FR, with concrete frame, shearwalls & base isolators. Current code designation is Type II A. Building is two-stories with a basement.

The zoning district is R-2 and the Assessor Parcel No. is: 057-201701601.

The proposed project consists primarily of new, digital, low-voltage system upgrades for the first floor, detention area cell door automation and monitoring system to replace the existing analog technology in the I-3 detention area per 308.4.5 Condition 5.

It is assumed that this work will fall under the California Building Code, Chapter 11B - 202.4 Exception 7.

The building occupancy is classified as B for police and fire department offices, I-3 for the detention holding facility, and S-2 for the vehicle sallyport.

MAIN BUILDING	
BUILDING AREA:	60,108 SF
PARKING AREA:	11,500 SF
OCCUPANCY:	B POLICE & FIRE DEPT. OFFICES I-3 DETENTION HOLDING FACILITY S-4 VEHICLE SALLYPORT
CONSTRUCTION TYPE:	TYPE II-FR
STRUCTURAL SYSTEM:	CONCRETE FRAME WITH SHEARWALLS & BASE ISOLATORS
FIRE PROTECTION:	AUTOMATIC SPRINKLER
THERMAL INSULATION:	ROOF: R-30 WALLS: R-19

Table from 1998 building permit set

PROJECT DESCRIPTION

THE PROJECT SCOPE CONSISTS OF LOW VOLTAGE SYSTEM UPGRADES FOR THE FIRST FLOOR, DETENTION AREA AUTOMATION SYSTEM.

THE PROJECT SCOPE INCLUDES, BUT IS NOT LIMITED TO, MODIFICATIONS TO: DETENTION AREA CELL AND ENTRY DOOR CONTROLS, CHANGE OF USE OF AN EXISTING STORAGE ROOM INTO A TELECOMMUNICATION ROOM, AND INTRODUCTION OF A CLIMATE CONTROL SYSTEM FOR THAT ROOM. THE CONTROL CENTER WILL HAVE NEW MONITORING EQUIPMENT INSTALLED TO REPLACE THE EXISTING.

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.

EXISTING CONSTRUCTION TYPE IS II-FR, FULLY SPRINKLED, CONCRETE FRAME WITH SHEARWALLS AND BASE ISOLATORS. SPRINKLER ALTERATIONS, IF REQUIRED, SHALL BE UNDER A SEPARATE FIRE PERMIT. NONE ARE CURRENTLY ANTICIPATED.

EXISTING OCCUPANCY TYPE IS PRIMARILY B; WITH I-3 AND S-4. THE BUILDING IS APPROXIMATELY 60,108 S.F. WITH AN 11,500 S.F. PARKING AREA. NO CHANGES TO USE OR OCCUPANCY ARE PROPOSED.

NO WORK IS PROPOSED FOR THE SITE OR THE BUILDING EXTERIOR - WITH THE EXCEPTION OF A NEW ROOF-MOUNTED MECHANICAL UNIT.

Structural
IDA Structural Engineers Inc.
1630 Telegraph Avenue
Suite 300
Oakland CA 94612-2114
Tel: (510) 834-1629

Communications
Smith, Fause & McDonald
351 8th Street
San Francisco CA 94103
Tel: (415) 255 9140

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Mechanical - Electrical
Stanton Engineering
11344 Coloma Road Suite 445
Gold River CA 95670
Tel: (916) 288 6250

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

Client
City of Berkeley
Public Works Department
1947 Center Street
Tel: (510) 981-6300
Fax: 000.000.0000

APPROVALS

PROJECT TITLE

City of Berkeley
PSB - Detention Area Automation Upgrades

2100 Martin Luther King Jr. Way, Berkeley, CA 94704

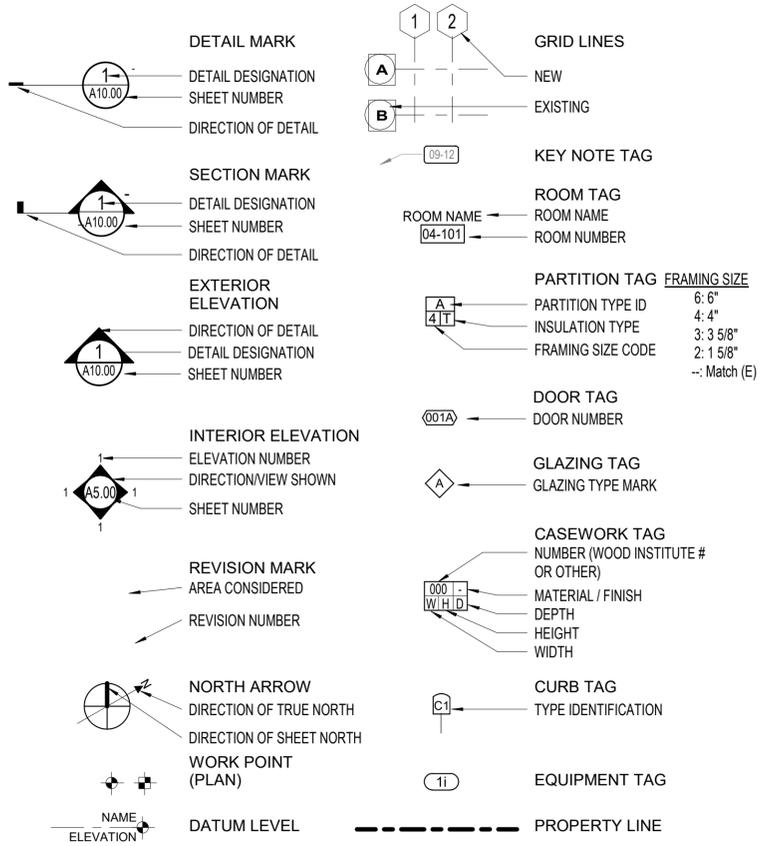
BID SET

ISSUE DATE	10/20/2025
N&T JOB NUMBER	21827.00
REVISIONS	
DATE	DESCRIPTION
1 03/31/2025	Plan Check 1
2 06/06/2025	Plan Check 2
3 12/16/2025	Addendum 2
4 01/27/2026	Addendum 4

SHEET TITLE
COVER SHEET

SHEET NUMBER
A0.01

SYMBOLS LEGEND



GENERAL NOTES

- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
- ALL WORK SHALL MEET OR EXCEED THE MINIMUM STANDARDS OF THE 2022 CALIFORNIA BUILDING CODE AND ALL APPLICABLE CODES AND ORDINANCES.
- INFORMATION CONTAINED WITHIN THESE DOCUMENTS SHALL NOT BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE APPLICABLE CODES.
- CONTRACTOR SHALL EXAMINE THE DOCUMENTS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY BE FOUND PRIOR TO THE START OF WORK.
- CONTRACTOR SHALL REVIEW ALL DOCUMENTS TO COORDINATE W/ THE (E) BLDG CONDITIONS. ANY VARIATIONS AND DISCREPANCIES THAT ARISE IN THIS REVIEW ARE TO BE BROUGHT IMMEDIATELY TO THE ARCHITECT'S ATTENTION.
- THE CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO VISIT AND INSPECT THE SITE AND AREA OF WORK PRIOR TO CONSTRUCTION OR ORDERING ANY MATERIALS.
- ALL DETAILS, SCHEDULES, ADDENDA AND SPECIFICATIONS BOUND SEPARATELY ARE A PART OF THE CONTRACT DOCUMENTS.
- ITEMS MARKED "NIC" ARE NOT IN CONTRACT. SUCH ITEMS ARE INCLUDED IN THE DOCUMENTS WHEN CONTRACTOR'S COORDINATION IS REQUIRED OR FOR CLARIFICATION OF PROJECT LIMITS.
- DIMENSIONS:
 A. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM THE DRAWINGS.
 B. OPENINGS: DOOR DIMENSIONS ARE TO THE FACE OF JAMB, UON. LOCATE UNDIMENSIONED DOORS 4" FROM FINISHED FACE OF INTERSECTING PARTITION TO HINGE EDGE OF DOOR. REFER TO DETAILS FOR LOCATION OF DIMENSIONS OF WINDOWS AND OTHER OPENINGS
 C. ALL DIMENSIONS TO WALLS ARE TO THE FACE OF STUD, UON.
 D. CEILING HEIGHT DIMENSIONS ARE FROM FINISHED FLOOR TO FINISHED FACE OF CEILING, UON.
 E. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY GENERAL CONTRACTOR AND ALL SUBCONTRACTORS PRIOR TO PROCEEDING WITH CONSTRUCTION.
 F. COORDINATE WITH EQUIPMENT CONTRACTORS FOR ROUGH-IN DIMENSIONS AND TEMPLATES.
 G. ALL DIMENSIONS NOTED "CLEAR" OR "CLR" MUST BE STRICTLY MAINTAINED. "CLEAR" MEANS DIMENSION FROM FACE OF FINISH TO FACE OF FINISH OR OBJECT.
 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.
- DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL CASES, UON.
- WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING OR CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THE PROJECT.
- EXISTING CONDITIONS TO REMAIN, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL MEET W/ THE ARCHITECT PRIOR TO THE START OF DEMOLITION TO NOTE WHAT ITEMS, IF ANY, ARE TO BE SALVAGED OR REUSED. REFER TO DIVISION 1 OF THE PROJECT SPECIFICATIONS.
- THE DRAWINGS INDICATE THE GENERAL EXTENT OF (N) CONSTRUCTION NECESSARY FOR THE WORK, BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE. ALL DEMO AND (N) WORK NECESSARY FOR A FINISHED JOB, IN ACCORDANCE W/ THE INTENTIONS OF THE CONTRACT DOCUMENTS, IS INCLUDED REGARDLESS OF WHETHER SHOWN IN THE CONTRACT DOCUMENTS.
- (E) BUILDING AND SITE DOCUMENTATION IS BASED ON "AS-BUILT" DRAWINGS AND OBSERVATIONAL SITE INVESTIGATIONS. ACTUAL BUILT CONDITIONS MAY VARY. CONTRACTOR IS TO USE CAUTION IN DEMOLITION, AND IS TO NOTIFY ARCHITECT IMMEDIATELY IF ANY VARIATIONS OR DISCREPANCIES ARE UNCOVERED.
- PROTECT ALL (E) BUILDING AND SITE CONDITIONS TO REMAIN.

VICINITY MAP



NOLL & TAM ARCHITECTS

729 Heinz Avenue
 Berkeley, CA 94710
 tel 510.542.2200
 fax 510.542.2201



APPROVALS

PROJECT TITLE

**City of Berkeley
 PSB - Detention
 Area Automation
 Upgrades**

2100 Martin Luther King Jr. Way,
 Berkeley, CA 94704

BID SET

ISSUE DATE	07/18/2024
N&T JOB NUMBER	21827.00
REVISIONS	
DATE	DESCRIPTION

**SHEET TITLE
 GENERAL NOTES /
 ABBREVIATIONS**

SHEET NUMBER

A0.02

ABBREVIATIONS

&	AND	CEM	CEMENT/CEMENTITIOUS	DN	DOWN	FOC	FACE OF CONCRETE	HM	HOLLOW METAL	MTL	METAL	PTD	PAINTED	SHT	SHEET	TO	TOP OF
(E)	EXISTING	CER	CERAMIC	DR	DOOR	FOF	FACE OF FINISH	HORIZ	HORIZONTAL	MUL	MULLION	PVC	POLYVINYLCHLORIDE	SHTG	SHEATHING	TOC	TOP OF CONCRETE/CURB
(N)	NEW	CFMF	COLD FORMED METAL FRAMING	DS	DOWNSPOUT	FOS	FACE OF STUD	HR	HOUR	N	NORTH	QTY	QUANTITY	SIM	SIMILAR	TOP	TOP OF PAVING
@	AT	CI	CAST IRON	DTL	DETAIL	FR	FIRE RESISTANT/FIRE	HT	HEIGHT	NA	NOT APPLICABLE	R	RISER	SLD	SEE LANDSCAPE DRAWINGS	TOS	TOP OF STEEL
AB	ANCHOR BOLT	CJ	CONTROL JOINT	DWG	DRAWING	FRP	FIBERGLASS REINFORCED	HVAC	HEATING VENTILATION & AIR	NIC	NOT IN CONTRACT	RAD	RADIUS	SMD	SEE MECHANICAL DRAWINGS	TOW	TOP OF WALL
AC	ASPHALTIC CONCRETE	CLG	CEILING	DWR	DRAWER	PANEL	RETARDANT	NO	NUMBER	RD	ROOF DRAIN	REF	REFERENCE	SOG	SLAB ON GRADE	TS	TUBE STEEL
ACC	ACCESS	CLKG	CAULKING	E	EAST	FRT	FIRE RETARDANT TREATED	ID	INSIDE DIAMETER	NOM	NOMINAL	REFR	REFRIGERATOR	SP	SPACE	TYP	TYPICAL
ACOUS	ACOUSTICAL	CLO	CLOSET	EA	EACH	FSP	FIBERGLASS SANDWICH PANEL	IF	INSIDE FACE	NTS	NOT TO SCALE	REFR	REFRIGERATOR	SPA	SANDWICH PANEL ASSEMBLY	UON	UNLESS OTHERWISE NOTED
ACT	ACOUSTIC CEILING TILE	CLR	CLEAR	EJ	EXPANSION JOINT	FT	FOOT/FEET	INC	INCANDESCENT	OA	OVERALL	REG	REGISTER	SPD	SEE PLUMBING DRAWINGS	UR	URINAL
AD	AREA DRAIN	CMU	CONCRETE MASONRY UNIT	ELEC	ELECTRICAL	FTG	FOOTING	INCL	INCLUDE/INCLUDING	OC	ON CENTER	REINF	REINFORCE/REINFORCING	SPEC	SPECIFICATION	VCT	VINYL COMPOSITION TILE
ADDL	ADDITIONAL	CNTR	COUNTER	ELEV	ELEVATION/ELEVATOR	FURN	FURNITURE	INSUL	INSULATION	OD	OCCUPANT	REQD	REQUIRED	SQ	SQUARE	VENT	VENTILATION
ADJ	ADJACENT/ADJUSTABLE	CO	CLEAN OUT	ENLG	ENLARGED	FX	FIXED	INT	INTERIOR	OOD	OUTSIDE DIAMETER/OVERFLOW	REQT	REQUIREMENTS	SS	STAINLESS STEEL	VERT	VERTICAL
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL	COL	COLUMN	EOS	EDGE OF SLAB	GA	GAUGE	JAN	JANITOR	OF	OUTSIDE FACE	RES	RESILIENT	SSD	SEE STRUCTURAL DRAWINGS	VEST	VESTIBULE
AFF	ABOVE FINISHED FLOOR	CONN	CONNECTION	EP	ELECTRICAL PANEL	GALV	GALVANIZED	JBOX	JUNCTION BOX	OFI	OWNER FURNISHED CONTRACTOR INSTALLED	REV	REVISION	SSGD	SEE SIGNAGE DRAWINGS	VIF	VERIFY IN FIELD
AGG	AGGREGATE	CONT	CONTINUOUS	EQ	EQUAL	GB	GRAB BAR	JST	JOIST	OP	OPERABLE	ROOM	ROOM	RO	ROUGH OPENING	W	WEST/WIDTH
ALT	ALTERNATE	CONTR	CONTRACTOR	EQUIP	EQUIPMENT	GC	GENERAL CONTRACTOR	JT	JOINT	OPD	OVERFLOW DRAIN	RO	ROUGH OPENING	RWL	RAIN WATER LEADER	W/	WITH
ALUM	ALUMINUM	CORR	CORRIDOR	EWC	ELECTRIC WATER COOLER	GFI	GROUND FAULT INTERRUPT	LAM	LAMINATE	OFF	OFFICE	S	SOUTH	RWL	RAIN WATER LEADER	W/O	WITHOUT
ANOD	ANODIZED	CPT	CARPET	EXH	EXHAUST	GI	GALVANIZED IRON	LAV	LAVATORY	OP	OPERABLE	SASF	SELF ADHERING SHEET FLASHING	S	SOUTH	WC	WATER CLOSET
APPROX	APPROXIMATE	CSMT	CASEMENT	EXP	EXPANSION	GL	GLASS/GLAZING	LB	LAG BOLT	OPNG	OPENING	SASF	SELF ADHERING SHEET FLASHING	STOR	STORAGE	WD	WOOD
AV	AUDIO VISUAL	CSMT	CASEMENT	EXT	EXTERIOR	GLAM	GLUE LAMINATED	LF	LINEAR FEET	OPP	OPPOSITE	SASM	SELF ADHERING SHEET MEMBRANE	STED	SEE TELECOM DRAWINGS	WH	WATER HEATER
BD	BOARD	CTR	CENTER	FD	FIRE ALARM	GR	GRADE	LKR	LOCKER	OPP HD	OPPOSITE HAND	STRL	STRUCTURAL	STRUC	STRUCTURAL	WIN	WINDOW
BLDG	BUILDING	CTS	COUNTERSINK	FA	FLOOR DRAIN	GR	GRADE	LT	LIGHT	PA	PUBLIC ADDRESS	STRUC	STRUCTURAL	STRUC	STRUCTURAL	WO	WHERE OCCURS
BLK	BLOCK	DBL	DOUBLE	FE	FIRE EXTINGUISHER	GSM	GALVANIZED SHEET METAL	MAS	MASONRY	PCP	PORTLAND CEMENT PLASTER	SUSP	SUSPENDED	SUSP	SUSPENDED	WP	WORK POINT
BLKG	BLOCKING	DEMO	DEMOLITION	FEC	FIRE EXTINGUISHER CABINET	GWB	GYPSUM WALL BOARD	MATL	MATERIAL	PL	PLATE	SCHD	SCHEDULE	SE	STRUCTURAL ENGINEER	WR	WATER RESISTANT
BM	BEAM	DEPT	DEPARTMENT	FHC	FIRE HOSE CABINET	GYP	GYPSUM	MAX	MAXIMUM	PLAS	PLASTIC	SE	SECTION	SED	SEE ELECTRICAL DRAWINGS	WT	WEIGHT
BO	BOTTOM OF	DF	DOUGLAS FIR/DRINKING	FIN	FINISH	H	HIGH	MB	MACHINE BOLT	PLY	PLYWOOD	SF	SUPPLY FAN	SE	SECTION	T&G	TONGUE & GROOVE
BOT	BOTTOM	FIN FLR	FINISH FLOOR	FLR	FLOOR	HB	HOSE BIB	MECH	MECHANICAL	PR	PAIR	SFRM	SPRAY-APPLIED FIRE	SEC	SECTION	TBD	TO BE DETERMINED
BUR	BUILT UP ROOF	FLR	FLOOR	FLRG	FLOORING	HC	HOLLOW CORE	MFR	MANUFACTURER	PROJ	PROJECT/PROJECTOR	THK	THICK/THICKNESS	SED	SEE ELECTRICAL DRAWINGS	TEL	TELEPHONE
CAB	CABINET	FLUOR	FLUORESCENT	FLRG	FLOORING	HD	HEADER	MIN	MINIMUM	PT	POINT/PRESSURE TREATED	THRESH	THRESHOLD	SF	SUPPLY FAN	TEMP	TEMPERED
CB	CARRIAGE BOLT	FLUOR	FLUORESCENT	FLRG	FLOORING	HDW	HARDWARE	MISC	MISCELLANEOUS	PT	POINT/PRESSURE TREATED	THRESH	THRESHOLD	SFRM	SPRAY-APPLIED FIRE	THK	THICK/THICKNESS
CE	CIVIL ENGINEER	FLUOR	FLUORESCENT	FLUOR	FLUORESCENT	HDWD	HARDWOOD	MTD	MOUNTED	PT	POINT/PRESSURE TREATED	TJI	TRUSS JOIST	SH	SINGLE HUNG	THRESH	THRESHOLD



Date signed: 06/06/2025

APPROVALS

PROJECT TITLE

City of Berkeley PSB - Detention Area Automation Upgrades

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

BID SET

ISSUE DATE 10/20/2025

N&T JOB NUMBER 21827.00

REVISIONS	DATE	DESCRIPTION
1	03/31/2025	Plan Check 1

SHEET TITLE CAL GREEN CHECKLIST

SHEET NUMBER

A0.03

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 4 of 7

- b. The door is protected by a roof overhang at least 4 feet in depth.
- c. The door is recessed at least 4 feet.
- d. Other methods which provide equivalent protection.
- **Flashing.** Install flashings integrated with a drainage plane. [CGBSC 5.407.2.2.2]
- **Construction Waste Reduction, Disposal and Recycling** **[NOT-APPLICABLE]**
- **Construction waste management plan & excavated soil and land clearing debris.** Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste and a minimum of 100 percent of excavated soil, land-clearing debris, concrete and asphalt. Provide a completed City of Berkeley [Construction Waste Management Plan](#). [CGBSC 5.408.1 and 5.408.9]
- **Universal waste.** [A] Additions and alterations to a building or tenant space shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. [CGBSC 5.408.2]
- **Building Maintenance and Operation** **[NOT-APPLICABLE]**
- **Recycling by occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals. [CGBSC 5.410.1]
- **Additions.** [A] All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30 percent or more in floor area, shall provide recycling areas on site. [CGBSC 5.410.1.1]
- **Commissioning.** [N] For newly constructed buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed by trained personnel with experience on projects of comparable size and complexity. All building operating systems covered by Title 24, Part 6, California Energy Code as well as process equipment and controls, and renewable energy systems shall be included in the scope of the commissioning requirements. [CGBSC 5.410.2]
- **Owner's or Owner representative's Project Requirements (OPR).** [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following: [CGBSC 5.410.2.1]
 - Environmental and sustainability goals.
 - Energy efficiency goals.
 - Indoor environmental quality requirements.
 - Project program, including facility functions and hours of operation, and need for after hours operation.
 - Equipment and systems expectations.
 - Building occupant and operation and maintenance (O&M) personnel expectations.
- **Basis of Design (BOD).** [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover: [CGBSC 5.410.2.2]
 - Heating, ventilation, air conditioning systems and controls.
 - Indoor lighting system and controls.
 - Water heating system.
 - Renewable energy systems.
 - Landscape irrigation systems.
 - Water reuse systems.
- **Commissioning plan.** [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be 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:
 - a. An explanation of the original design intent.
 - b. Equipment and systems to be tested, including the extent of tests.
 - c. Functions to be tested.
 - d. Conditions under which the test shall be performed.
 - e. Measurable criteria for acceptable performance.

Note: This form includes the City of Berkeley's amendments to the 2019 California Green Building Standards Code.

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 3 of 7

- **Indoor Water Use: Water Conservation**
- **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]
- **Urinals**
- **Wall-mounted urinals.** The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. [CGBSC 5.303.3.2.1]
- **Floor-mounted urinals.** The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush. [CGBSC 5.303.3.2.2]
- **Showerheads**
- **Single showerhead.** Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the US EPA WaterSense Specification for Showerheads. [CGBSC 5.303.3.3.1]
- **Multiple showerheads serving one shower.** When a shower is served by more than one showerhead, the 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 time. Note: A hand-held shower shall be considered a showerhead. [CGBSC 5.303.3.3.2]
- **Faucets and Fountains**
- **Nonresidential lavatory faucets.** Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi. [CGBSC 5.303.3.4.1]
- **Kitchen faucets.** Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. [CGBSC 5.303.3.4.2]
- **Wash fountains.** Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi]. [CGBSC 5.303.3.4.3]
- **Metering faucets.** Metering faucets shall not deliver more than 0.20 gallons per cycle. [CGBSC 5.303.3.4.4]
- **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**
- **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/loam) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water. [CGBSC 5.303.4.1]
- **Outdoor Water Use**
- **Outdoor potable water use in landscape areas.** Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. [CGBSC 5.304.1]
- Note: The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.
- **Material Conservation and Resource Efficiency**
- **Low-carbon Concrete**
- **Reduction in cement use.** As allowed by the enforcing agency, cement used in concrete mix design shall be reduced not less than 25 percent. Products commonly used to replace cement in concrete mix designs include, but are not limited to fly ash, slag, silica fume, and rice hull ash. [CGBSC 5.405.1]
- **Water Resistance and Moisture Management** **[NOT-APPLICABLE]**
- **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 water intrusion into buildings as follows: [CGBSC 5.407.2.2]
 - **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 one of the following: [CGBSC 5.407.2.2.1]
 - a. An installed awning at least 4 feet in depth.

Note: This form includes the City of Berkeley's amendments to the 2019 California Green Building Standards Code.

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 2 of 7

- equipment allowing charging of electric vehicles. Electric vehicle charging stations are not considered parking spaces.
- **ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.**
- **Identification.** The service panel or subpanel circuit directory shall identify the overcurrent protective device for future EV charging as "EV CAPABLE" and identify the overcurrent protective devices serving EVCS as "EV CHARGER". Raceway termination locations shall be permanently and visibly marked as "EV CAPABLE". [CGBSC 5.106.6.3.4]
- **Raceways.** Listed raceways and associated conductors shall be sized to accommodate a dedicated 208/240-volt branch circuit for a future EV charger. The raceway shall not be less than nominal 1-inch inside diameter. Raceways shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Construction documents shall identify the raceway termination point. [CGBSC 5.106.5.3.1 and 5.106.5.3.2]
- **Electric Vehicle Charging Stations**
- **Single EVCS.** The service panel and/or subpanel shall be provided with a 40 ampere minimum dedicated branch circuit and overcurrent protective device to serve EVSE. [CGBSC 5.106.5.3.1]
- **Multiple EVCS.** Construction documents shall provide information on amperage of dedicated branch circuits, EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. [CGBSC 5.106.5.3.2]
- **Accessibility**
- **Minimum number.** Where EVCS are required, EVCS complying with CBC Section 11B-228.3.1 and 11B-812 shall be provided in accordance with CBC Table 11B-228.3.2.1. Where an EV charger can simultaneously charge more than one vehicle, the number of EV chargers provided shall be considered equivalent to the number of electric vehicles that can be simultaneously charged. [CBC 11B-228.3.2]
- **EV Spaces**
- **EV charging space calculation.** When 10 or more parking spaces are constructed: [CGBSC 5.106.5.3.3]
 - 10 percent of the total number of parking spaces shall be EVCS and equipped with EV chargers. Installation of a Direct Current Fast Charger with the capacity to provide at least 80 kW of output may substitute for up to 10 EV Spaces.
 - 40 percent of the total number of parking spaces shall be EV Spaces Raceway Equipped capable of supporting future EVSE.
- **Light Pollution**
- **Light pollution reduction.** [N] Outdoor lighting systems shall be designed and installed to comply with Backlight, Upkill and Glare regulations in CALGreen Table 5.106.8 or comply with the City of Berkeley's ordinances, whichever is more stringent [CGBSC 5.106.8].
- **Water Efficiency and Conservation** **[NOT-APPLICABLE]**
- **Indoor Water Use: Metering Devices**
- **New buildings or additions in excess of 50,000 square feet.** Separate sub-meters shall be installed as follows: [CGBSC 5.303.1.1]
 - For each individual leased, rented, or other tenant space within the building restricted to consume more than 100 gal/day, including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
 - Where separate sub-meters for individual building tenants are unfeasible, for water supplied to the following subsystems:
 - a. 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.
- **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]

Note: This form includes the City of Berkeley's amendments to the 2019 California Green Building Standards Code.

Code Compliance Checklist CALGREEN NON-RESIDENTIAL Form #165

- **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:**
- 1. 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.
- 4. 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
- **Project Information**
- Project Address: 2100 M.L. King Jr. Way
- Permit Number: B2021-03038
- New Building [N] Addition [A] Alteration
- **Planning and Design** **[NOT-APPLICABLE]**
- **Storm Water** **[NOT-APPLICABLE]**
- **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 or more of the following measures: [CGBSC 5.106.1]
 - **Stormwater management.** Comply with the [Stormwater](#) management and erosion control requirements per Title 17 of the City of Berkeley Municipal Code. [CGBSC 5.106.1.1]
 - **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** **[NOT-APPLICABLE]**
- **Bicycle Parking.** Projects adding 10 or more vehicular parking spaces shall comply with 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 two-bike 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** **[NOT-APPLICABLE]**
- **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** **[NOT-APPLICABLE]**
- **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
- Last Revised 05/06/20

Note: This form includes the City of Berkeley's amendments to the 2019 California Green Building Standards Code.

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 7 of 7

- **Outdoor Air Quality**
- **Ozone depletion and greenhouse gas reductions.** Installations of HVAC, refrigeration and fire suppression equipment shall comply with the following: [CGBSC 5.508.1]
 - **Chlorofluorocarbons (CFCs).** Install HVAC, re-igeration & fire suppression equipment that do not contain CFCs. [CGBSC 5.508.1.1]
 - **Halons.** Install HVAC, refrigeration and fire suppression equipment that do not contain Halons. [CGBSC 5.508.1.2]
 - **Supermarket refrigerant leak reduction.** New commercial refrigeration systems containing high-global-warming 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]
- **Additional:**
- **Carpet systems.** All carpet installed in the building interior shall meet at least one of the following testing and product requirements: [CGBSC 5.504.4.1]
 - 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 5.504.4.1]
- **Carpet adhesive.** All carpet adhesive shall meet the requirements of CALGreen Table 5.504.4.1. [CGBSC 5.504.4.2]
- **Composite Wood Products** **[NOT-APPLICABLE]**
- **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** **[NOT-APPLICABLE]**
- **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 1532, 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 includes the City of Berkeley's amendments to the 2019 California Green Building Standards Code.

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 5 of 7

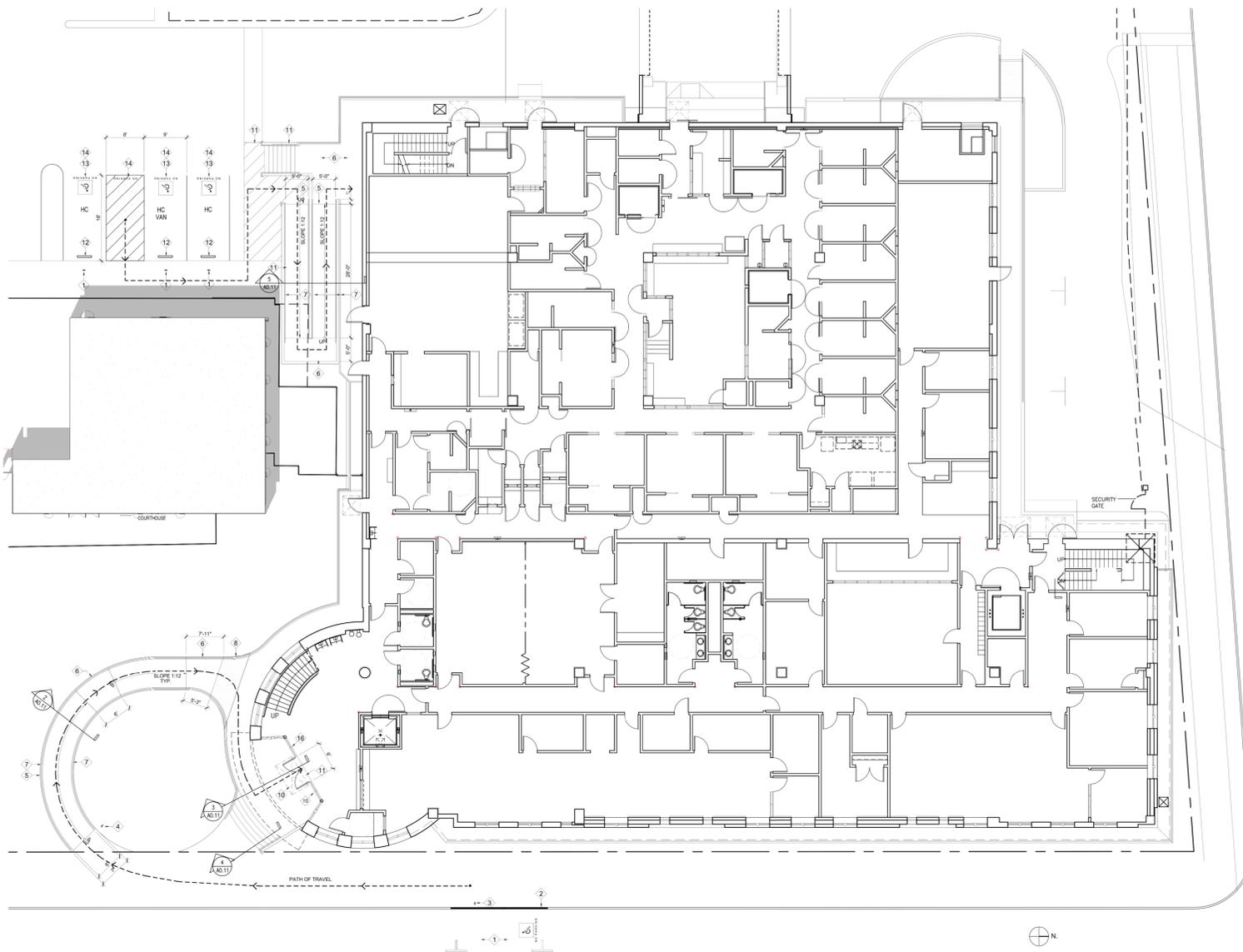
- Commissioning team information.
- Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.
- **Functional performance testing.** [N] Functional performance tests shall demonstrate the correct installation and operation of each component, 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 construction phases of the building project shall be completed and provided to the owner or representative. [CGBSC 5.410.2.6]
- **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]
 - HVAC systems and controls.
 - Indoor and outdoor lighting and controls.
 - Water heating systems.
 - Renewable energy systems.
 - Landscape irrigation systems.
 - Water reuse systems.
- **Procedures.** Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system. [CGBSC 5.410.4.3]
- **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 5.410.3.1]
- **Reporting.** After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services. [CGBSC 5.410.4.4]
- **Operation and maintenance (O&M) manual.** Provide the building owner or representative with detailed operating and maintenance instructions and copies of warranties/warranties for each system. O&M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations. [CGBSC 5.410.4.5]
- **Environmental Quality**
- **Fireplaces** **[NOT-APPLICABLE]**
- **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. [CGBSC 5.503.1]
- **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 emission limits. [CGBSC 5.503.1.1]
- **Pollutant Control: Mechanical Systems**
- **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 construction. [CGBSC 5.504.1]
- **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

Note: This form includes the City of Berkeley's amendments to the 2019 California Green Building Standards Code.

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 6 of 7

- which may enter the system. [CGBSC 5.504.3]
- **Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media 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 5.504.5.3]
 - **Labeling.** Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating. [CGBSC 5.504.5.3.1]
- **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** **[NOT-APPLICABLE]**
- **Carpet systems.** All carpet installed in the building interior shall meet at least one of the following testing and product requirements: [CGBSC 5.504.4.1]
 - 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 5.504.4.1]
- **Carpet adhesive.** All carpet adhesive shall meet the requirements of CALGreen Table 5.504.4.1. [CGBSC 5.504.4.2]
- **Composite Wood Products** **[NOT-APPLICABLE]**
- **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** **[NOT-APPLICABLE]**
- **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 1532, using either the prescriptive or performance method in CGBSC Section 5.507.4.1 or 5.507.4.2. [CGBSC 5.507.4]

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- KEY NOTES:**
- ① (E) DESIGNATED H.C. CURB PARKING SPACE
 - ② (E) BLUE PAINTED H.C. CURB
 - ③ (E) ACCESSIBLE PARKING SIGNAGE
 - ④ (E) ENTRY PATH OF TRAVEL SIGNAGE/ INTERNATIONAL SYMBOL OF ACCESSIBILITY
 - ⑤ (E) H.C. RAMP TO SLOPE AT 1:12 w/ MAX 2% CROSS SLOPE
 - ⑥ (E) H.C. LANDING
 - ⑦ (E) CONTINUOUS HANDRAILS & GUARDRAILS
 - ⑧ (E) DETECTABLE WARNING DOMES AT TOP OF RAMP
 - ⑨ NOT USED
 - ⑩ (E) RECESSED WALK-OFF MAT NOT TO EXCEED 1/2" CHANGE IN LEVEL
 - ⑪ (E) H.C. ACCESSIBLE THRESHOLD NOT TO EXCEED 1/2" CHANGE IN LEVEL
 - ⑫ (E) WHEEL STOP
 - ⑬ (E) INTERNATIONAL ACCESSIBILITY SYMBOL
 - ⑭ (E) "NO PARKING" VISIBLE TO LAW ENFORCEMENT
 - ⑮ AUTOMATIC ASSIST DOOR FISH PLATE ACTUATORS TO BE ADJUSTED BY CONTRACTOR TO MATCH 2010 CBC REQUIREMENTS. (U) INTERIOR UPPER PLATE ACTUATOR TO BE CENTERED AT 4" A.F.F. & LOWER ACTUATOR TO BE CENTERED AT 37" A.F.F. (U) EXTERIOR UPPER PLATE ACTUATOR IS REQUIRED & TO BE PROVIDED BY CONTRACTOR.
 - ⑯ (E) AUTOMATIC ASSIST DOOR FISH PLATE ACTUATORS. CONTRACTOR TO VERIFY HEIGHT COMPLIANCE.

1 SITE: ACCESSIBLE PATH OF TRAVEL Reference Only - No work proposed
 A0.04 1/32" = 1'-0"

CODE ANALYSIS

The applicable codes are the 2019 California Building Code Vol. 1 and 2, 2019 California Energy Code, 2019 California Green Building Standards, 2019 California Electrical Code, 2019 Electrical Code Errata, 2019 California Plumbing Code, 2019 California Mechanical Code, 2019 California Fire Code, 2019 California Existing Building Code.

CBC Section 11B-202.4, Exception 7 and DSA IR 11B-6 exempts "Mechanical Only" projects from accessibility review. Structural work required solely for the purpose of performing the mechanical work is considered incidental to the mechanical project per CBC Section 1134B.2.1, Exception 4.

The existing 60,108 square-foot building was permitted and constructed in 2000 as a sprinkled, type II-FR, with concrete frame, shearwalls & base isolators. Current code designation is Type II A. Building is two-stories with a basement.

Drawing 1/A0.04 is included for reference only.

The zoning district is R-2 and the Assessor Parcel No. is: 057-201701601.

The proposed project consists of a new cell door automation control system to replace the existing, original system.

The building occupancy is classified as B for police and fire department offices, I-3 for the detention holding facility, and S-2 for the vehicle sallyport.



APPROVALS

PROJECT TITLE

**City of Berkeley
 PSB - Detention
 Area Automation
 Upgrades**

2100 Martin Luther King Jr. Way,
 Berkeley, CA 94704

BID SET

ISSUE DATE	10/20/2025
N&T JOB NUMBER	21827.00
REVISIONS	
△ DATE DESCRIPTION	
1 03/31/2025	Plan Check 1

SHEET TITLE
**ACCESSIBILITY PLANS
 & CODE ANALYSIS**

SHEET NUMBER

A0.04



DETENTION AREA OCCUPANT LOAD

DETENTION AREA	RM. NO.	PER. BED.	PER. 18" BENCH.	PER. 10SF AREA
A. INDIVIDUAL CELLS	1102	02	XX	XX
	1103	02	XX	XX
	1133	02	XX	XX
	1134	02	XX	XX
	1135	02	XX	XX
	1136	02	XX	XX
	1137	02	XX	XX
	1138	02	XX	XX
	1139	02	XX	XX
	1140	02	XX	XX
B. SAFETY CELLS	1117	XX	XX	05-(08.25X06.25=51.56SF)
	1123	XX	XX	05-(10.00X05.08=50.80SF)
	1130	XX	XX	05-(06.50X08.00=52.00SF)
C. DETOX CELLS	1115	XX	XX	09-(07.50X12.00=90.00SF)
	1119	XX	XX	08-(09.75X09.50=92.90SF)
D. DORM CELLS	1116	04	XX	XX
	1151	04	XX	XX
	1152	04	XX	XX
	1153	04	XX	XX
E. JUVENILE CELLS	1102	XX	01(STOOL)	XX
	1103	XX	01(STOOL)	XX
F. TEMPORARY HOLD	PREBOOK INT.	1121	XX	07
	STRIP SEARCH	1118	XX	05
SUB TOTALS		36	14	32
TOTAL		82		

- TABLE FROM ORIGINAL 1998 DRAWINGS ABOVE, NO CHANGES PROPOSED
- WORK SCOPE IS LIMITED TO THE NEW ACCESS CONTROL SYSTEM IDENTIFIED ON SHEETS E0.3 AND TY7.01.
- NO OCCUPANCY CHANGES PROPOSED
- NO ALTERATIONS TO EXISTING EXTERIOR OR INTERIOR WALLS OR PARTITIONS IS PROPOSED
- NO ALTERATIONS TO EXISTING EXITING SYSTEM IS PROPOSED
- THE ENTIRE BUILDING INCLUDES AN ADDRESSABLE FIRE ALARM SYSTEM AND INCLUDES ADDRESSABLE MONITORING AND CONTROL DEVICES, AUXILIARY POWER SUPPLIES, AND SIGNALING DEVICES. THE AUXILIARY POWER SUPPLIES WILL POWER THE HORNS & STROBES, WHEN TRIPPED BY THE FIRE ALARM CONTROL PANEL ADDRESSABLE SIGNAL MODULE. ANY ALTERATIONS TO THE EXISTING FIRE ALARM SYSTEM WILL REQUIRE A DEFERRED SUBMITTAL.

- STATE FIRE MARSHALL, 1998 FIRE ALARM PLAN REVIEW NOTATION:**
- DESIGN NOTES**
- THE REVIEW AND APPROVAL OF THE AUTOMATIC FIRE ALARM SYSTEM BY THE SFM ON THIS PROJECT IS LIMITED TO THE DETENTION AREAS OF THE BUILDING AND DOES NOT EXTEND TO OTHER AREAS. THE LOCAL FIRE AUTHORITY SHOULD BE CONSULTED REGARDING OTHER AREAS OF THE BUILDING.
 - THE FIRE ALARM SYSTEM SHALL CONFIRM TO ARTICLE 760, CAL. ELEC. CODE AND CFC SEC. 1007. INSTALLATION OF THE SYSTEM SHALL NOT BEGIN UNTIL PLANS AND SPECS, INCLUDING SFM LISTING NUMBERS FOR EACH COMPONENT, HAVE BEEN APPROVED BY THE SFM. UPON COMPLETION OF THE INSTALLATION, A TEST OF THE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE FIRE DEPARTMENT.
 - THE AUTOMATIC FIRE ALARM SYSTEM SHALL COVER ALL ROOM AND SPACES IN THE DETENTION.

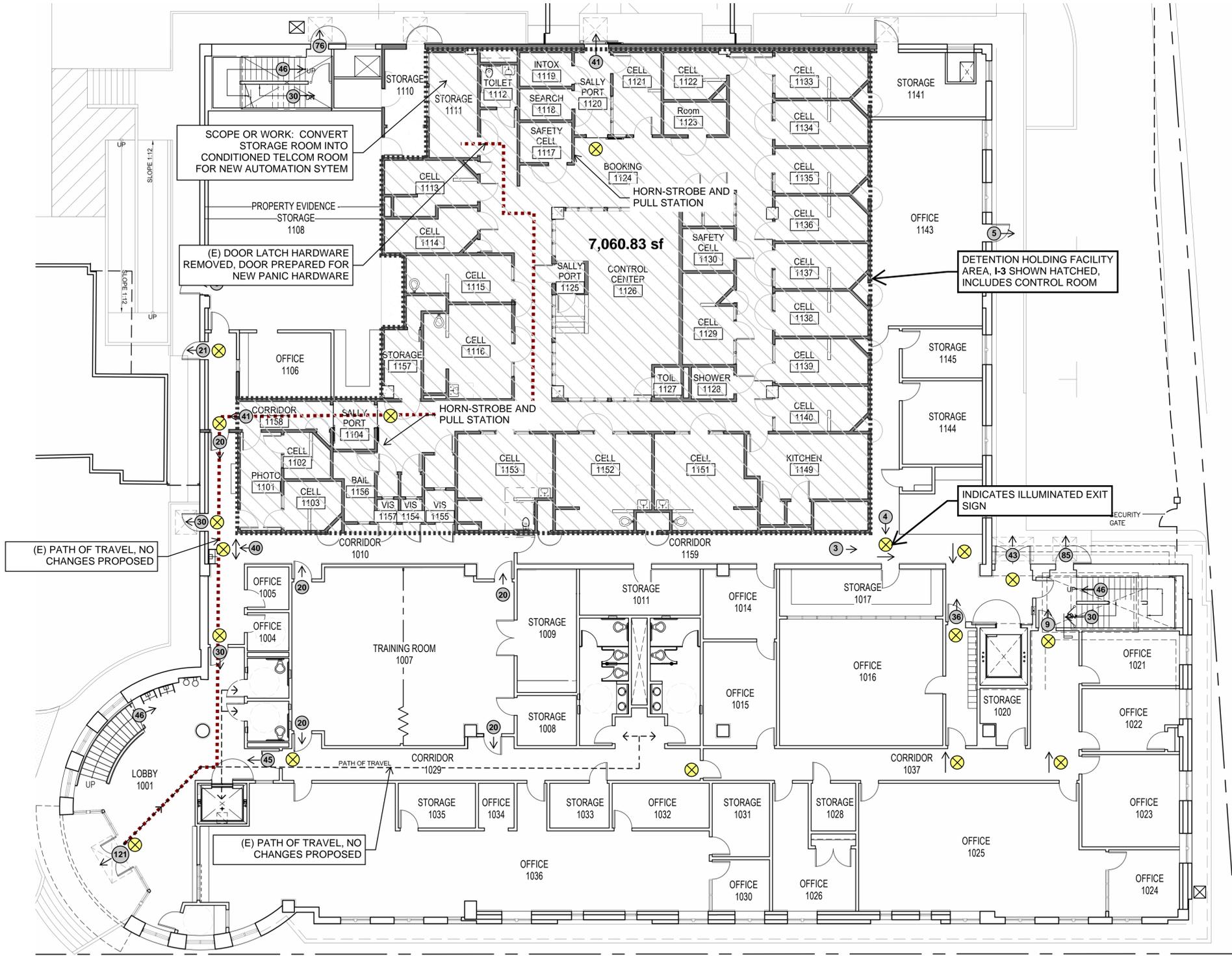
- EXISTING POWER OPERATED SALLY-PORT (SLIDING) DOORS AND DETENTION CELL DOORS:**
- ALL SALLY-PORT DOORS ARE EQUIPPED WITH A REMOTE MECHANICAL RELEASE MECHANISM
 - ALL SALLY-PORT DOORS ARE EQUIPPED WITH A REDUNDANT REMOTE RELEASE CONTROL AND A MECHANICALLY OPERATED EMERGENCY RELEASE AT EACH DOOR
 - WHEN REMOTELY UNLOCKED UNDER EMERGENCY CONDITIONS, DOORS WILL REMAIN UNLOCKED UNTIL STAFF DETERMINES THAT THE EMERGENCY HAS PASSED.
 - DETENTION CELL DOORS ARE EQUIPPED WITH A REMOTE, STAFF-OPERATED RELEASE MECHANISM OPERABLE BY ONE STAFF MEMBER. A MINIMUM OF THREE STAFF MEMBERS ARE ON DUTY IN THE CONTROL CENTER AT ALL TIMES.
 - THE I-3 OCCUPANCY FALLS UNDER CBC 308.4.5 CONDITION 5

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.



1 FIRST FLOOR PLAN - EXISTING, NO CHANGES TO PARTITIONS OR OCCUPANCY PROPOSED
A1.20 1" = 10'-0"

APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

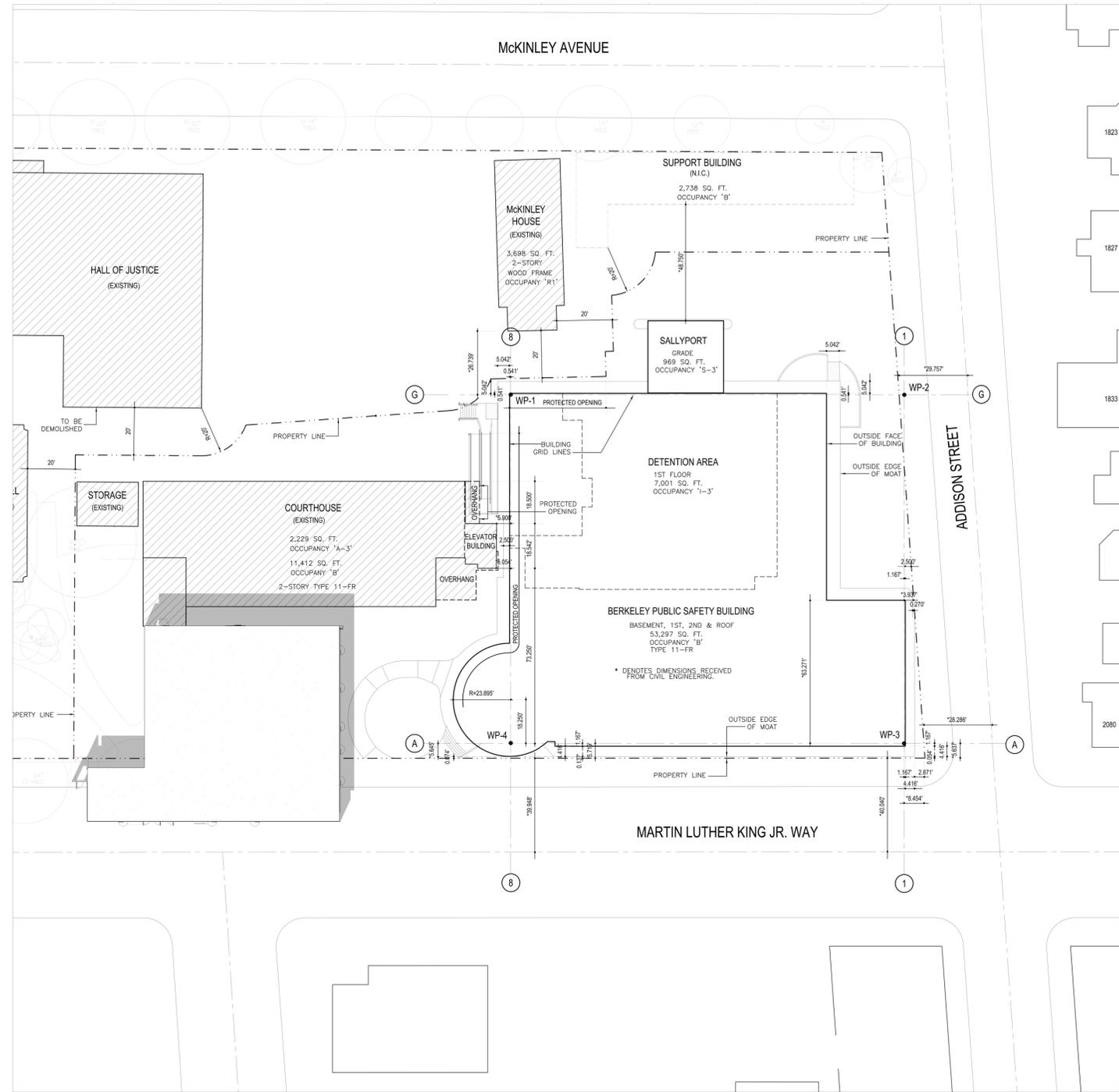
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ISSUE DATE	07/18/2024
N&T JOB NUMBER	21827.00
REVISIONS	
1	DATE DESCRIPTION

DRAWN BY **Author** CHECKED BY **Checker**
SHEET TITLE

FIRST FLOOR PLAN - EXISTING
1/8" = 1'-0"

SHEET NUMBER **A1.20**



1 SITE PLAN
A2.01 1" = 30'-0"

SEAL



Date signed: 06/06/2025

APPROVALS

PROJECT TITLE

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PSB - Detention
Area Automation
Upgrades**

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

BID SET

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REVISIONS
DATE DESCRIPTION

SHEET TITLE

SITE PLAN
1/8" = 1'-0"

SHEET NUMBER

A2.01

SEAL



Date signed: 06/06/2025

APPROVALS

PROJECT TITLE

City of Berkeley PSB - Detention Area Automation Upgrades

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

BID SET

ISSUE DATE	10/20/2025
N&T JOB NUMBER	21827.00
REVISIONS	
2	06/06/2025 Plan Check 2

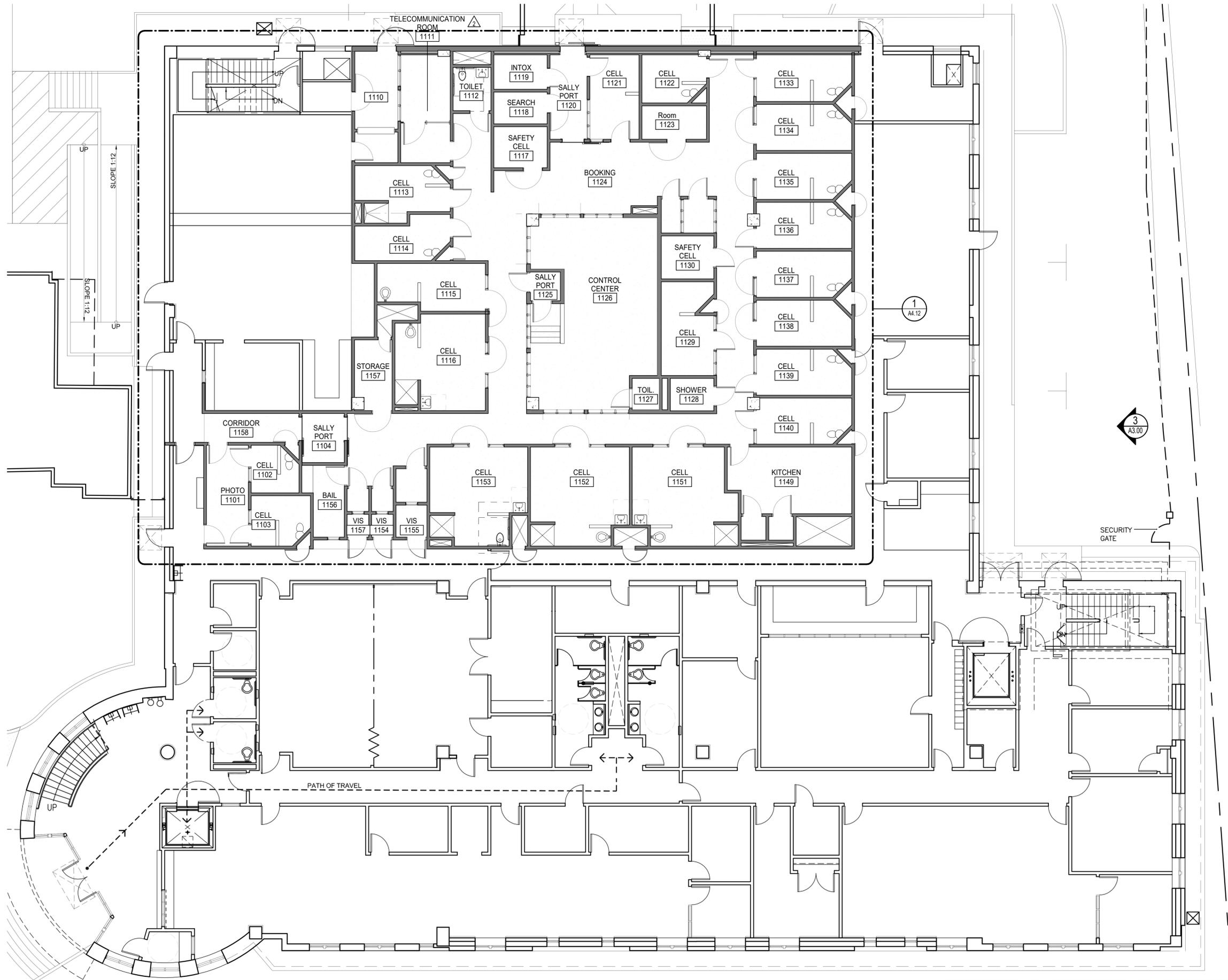
DRAWN BY **Author** CHECKED BY **Checker**
SHEET TITLE

FIRST FLOOR PLAN

1/8" = 1'-0"

SHEET NUMBER

A2.31



1 FIRST FLOOR PLAN
A2.31 1/8" = 1'-0"

SEAL



Date signed: 06/06/2025

APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

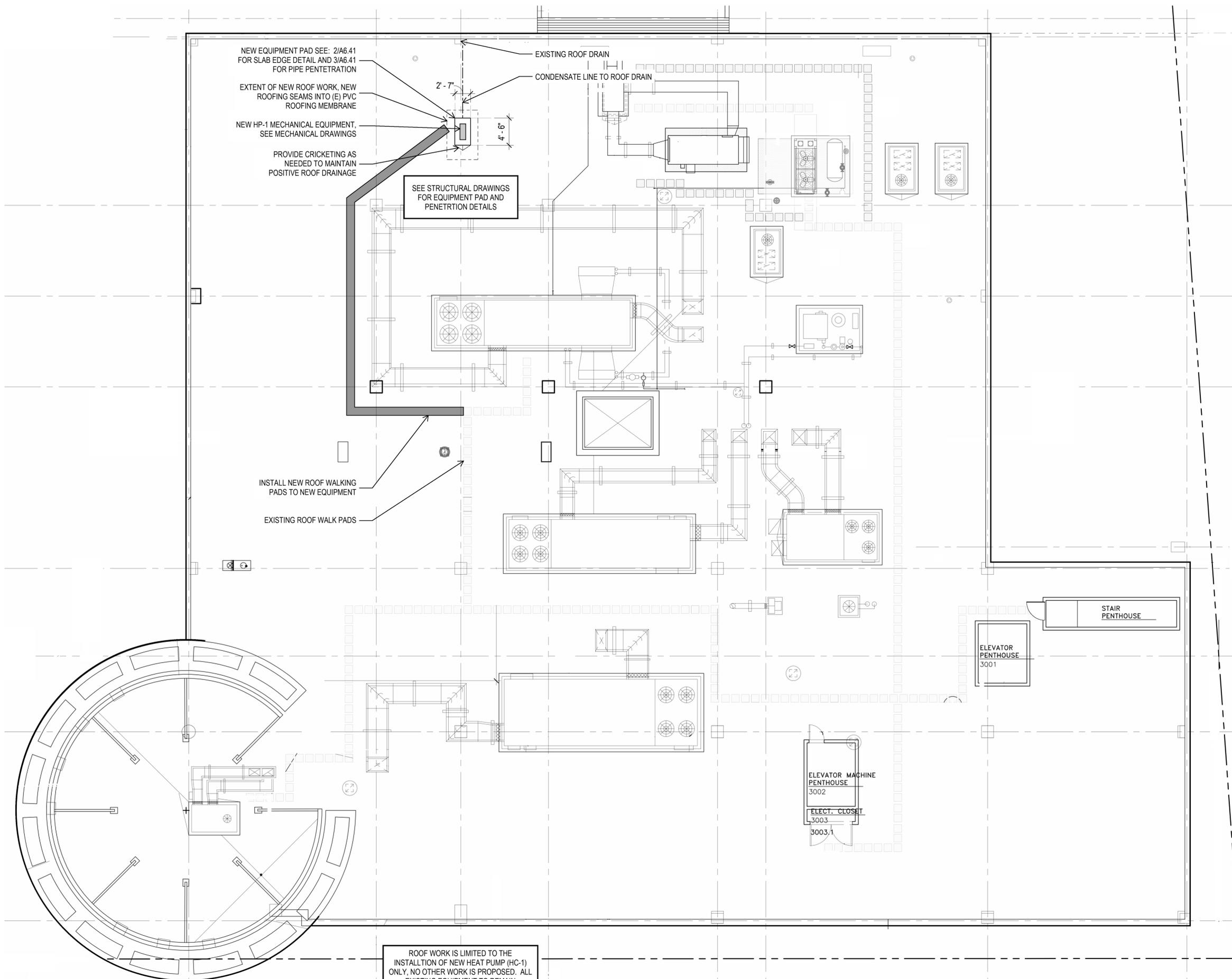
2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

BID SET

ISSUE DATE	10/20/2025
N&T JOB NUMBER	21827.00
REVISIONS	
1	03/31/2025 Plan Check 1

SHEET TITLE
**ROOF / PENTHOUSE
PLAN**

SHEET NUMBER
A2.33



NEW EQUIPMENT PAD SEE: 2/A6.41
FOR SLAB EDGE DETAIL AND 3/A6.41
FOR PIPE PENETRATION

EXTENT OF NEW ROOF WORK, NEW
ROOFING SEAMS INTO (E) PVC
ROOFING MEMBRANE

NEW HP-1 MECHANICAL EQUIPMENT,
SEE MECHANICAL DRAWINGS

PROVIDE CRICKETING AS
NEEDED TO MAINTAIN
POSITIVE ROOF DRAINAGE

SEE STRUCTURAL DRAWINGS
FOR EQUIPMENT PAD AND
PENETRATION DETAILS

INSTALL NEW ROOF WALKING
PADS TO NEW EQUIPMENT

EXISTING ROOF WALK PADS

ROOF WORK IS LIMITED TO THE
INSTALLATION OF NEW HEAT PUMP (HC-1)
ONLY, NO OTHER WORK IS PROPOSED. ALL
EXISTING EQUIPMENT TO REMAIN

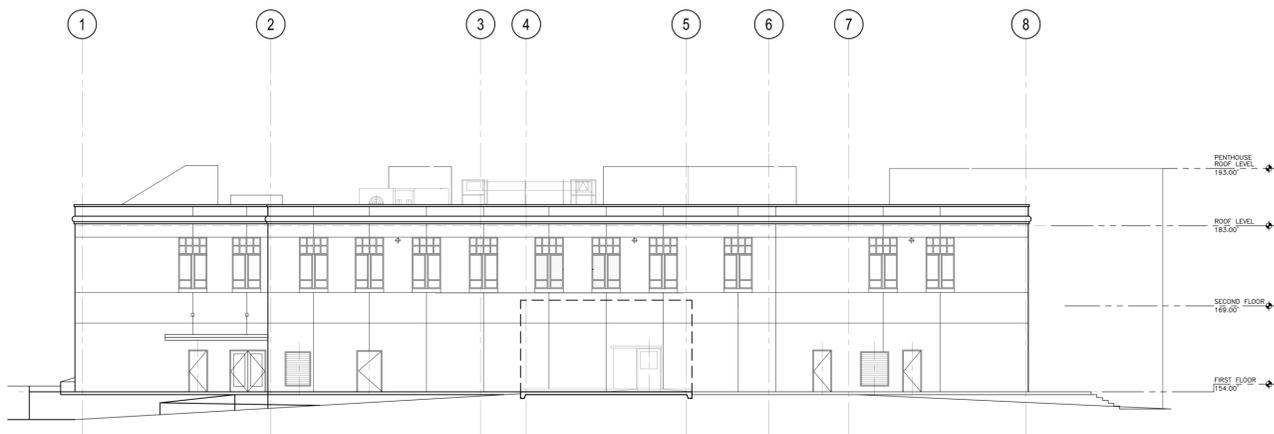
1 ROOF PLAN
A2.33 1/8" = 1'-0"



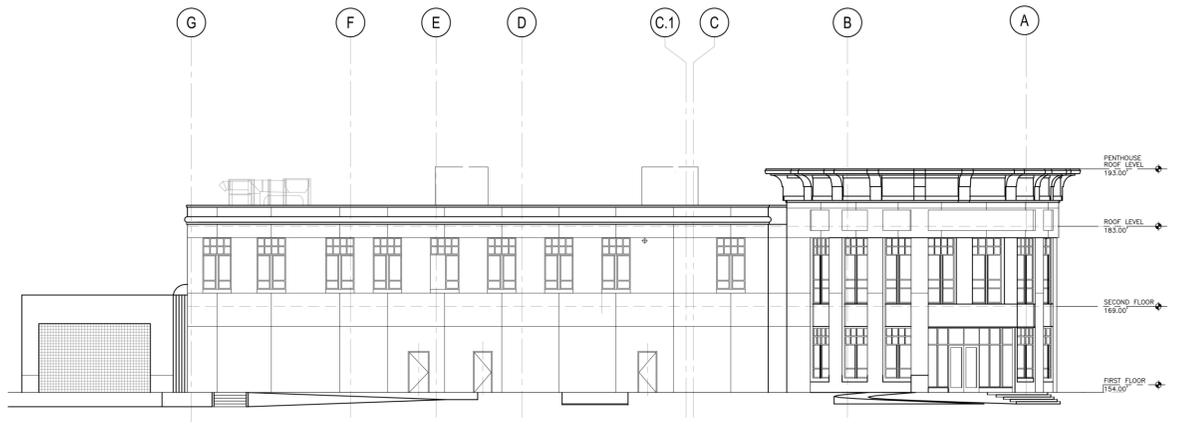
2 EAST ELEVATION For Reference Only - no work proposed
A3.00 1/16" = 1'-0"



1 NORTH ELEVATION For Reference Only - no work proposed
A3.00 1/16" = 1'-0"



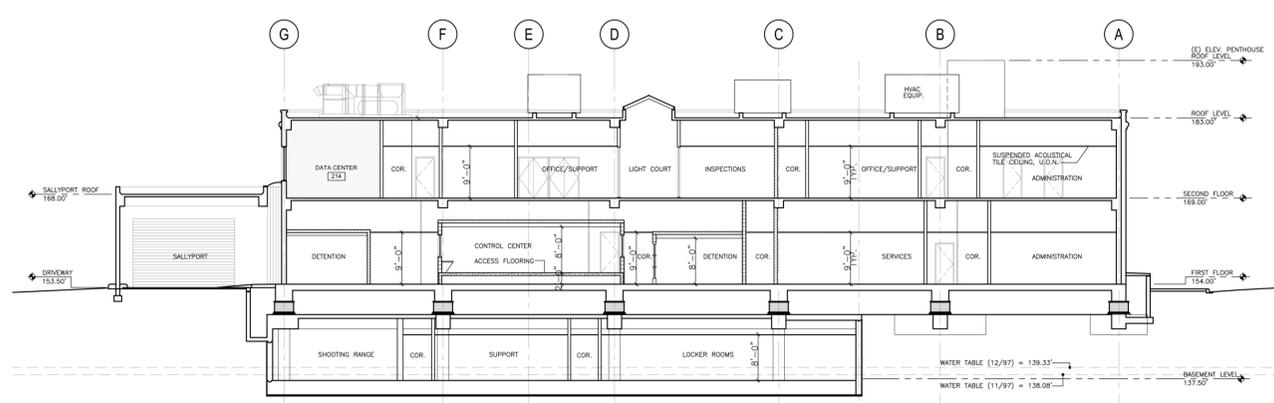
4 WEST ELEVATION For Reference Only - no work proposed
A3.00 1/16" = 1'-0"



3 SOUTH ELEVATION For Reference Only - no work proposed
A3.00 1/16" = 1'-0"



5 BUILDING SECTION - 1 For Reference Only - no work proposed
A3.00 1/16" = 1'-0"



6 BUILDING SECTION - 2 For Reference Only - no work proposed
A3.00 1/16" = 1'-0"

APPROVALS

PROJECT TITLE

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Area Automation
Upgrades**

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Berkeley, CA 94704

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REVISIONS	
DATE	DESCRIPTION

SHEET TITLE
**EXTERIOR ELEVATIONS
and SECTIONS**

SHEET NUMBER

A3.00

SEAL



Date signed: 06/06/2025

APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

BID SET

ISSUE DATE 10/20/2025

N&T JOB NUMBER 21827.00

REVISIONS

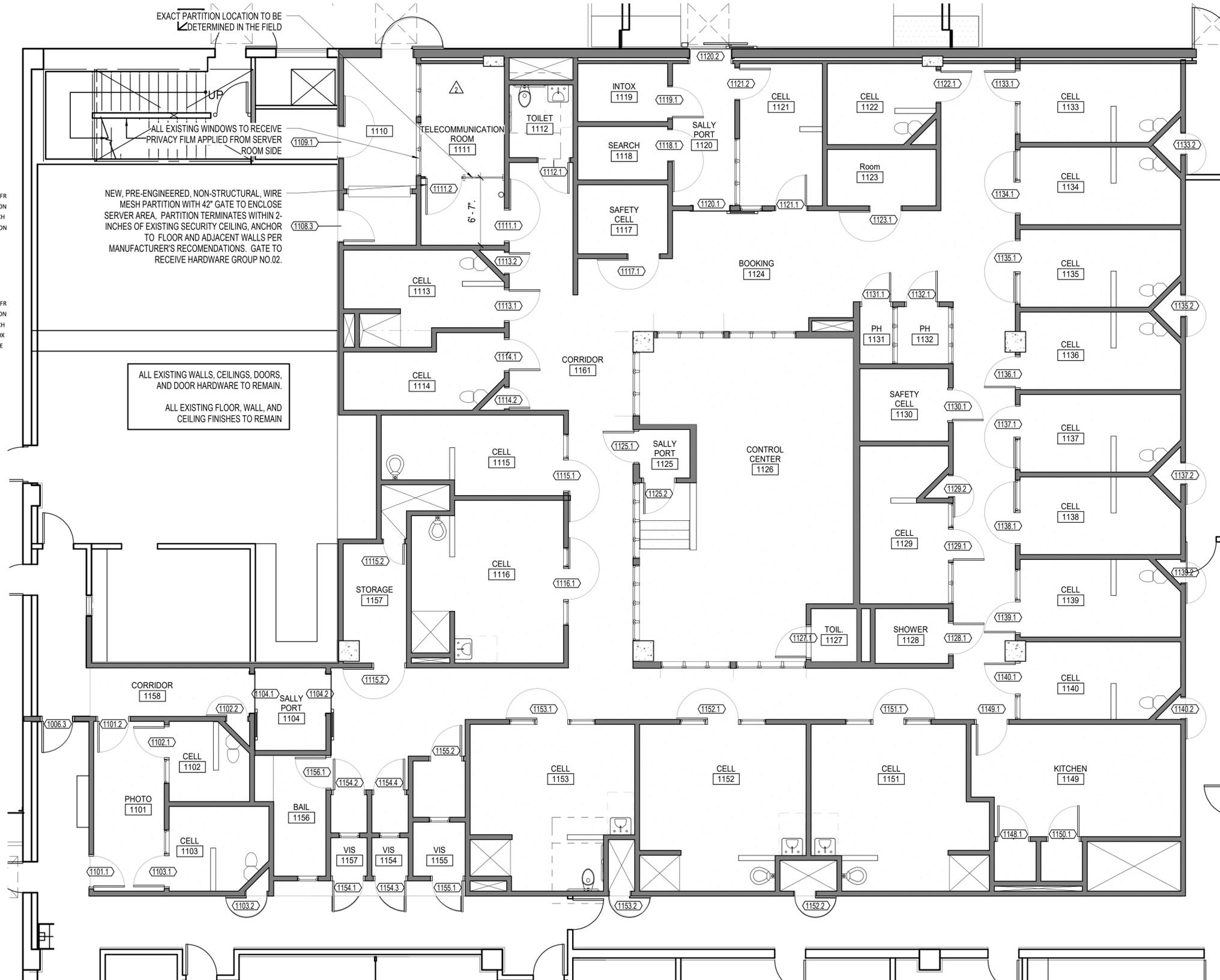
DATE	DESCRIPTION
03/31/2025	Plan Check 1
06/06/2025	Plan Check 2

SHEET TITLE

ENLARGED PLAN

SHEET NUMBER

A4.12



DOOR HARDWARE SPECIFICATION

HARDWARE GROUP NO. 01

For use on Door #(s): 1111.1

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA PANIC HARDWARE	LD-PA-AX-98-L-NL-06	626	VON
1	EA RIM CYLINDER	20-057	626	SCH
1	EA WRAP AROUND PLATE	30 CW	630	DON
BALANCE OF HARDWARE EXISTING				

HARDWARE GROUP NO. 02

For use on Door #(s): 1111.2

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA PANIC HARDWARE	LD-PA-AX-98-L-NL-06	626	VON
1	EA RIM CYLINDER	20-057	626	SCH
1	EA CLOSER	MAMMOTH-180	630	LOX
1	EA WALL STOP	WS406/407/CVX	630	IVE

The lever type is specified as 06, but it can be changed to match the rest of the door hardware in the building.

NOTES FROM 1998 FIRE ALARM DOCUMENTS

SCOPE OF WORK

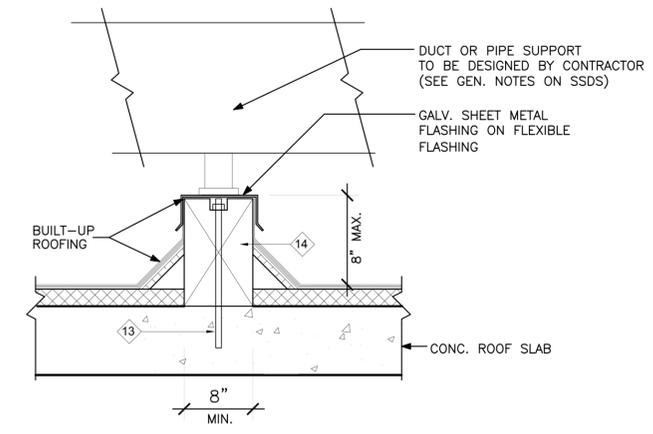
THE SCOPE OF THIS PROJECT IS TO PROVIDE A NEW ADDRESSABLE FIRE ALARM SYSTEM FOR BERKELEY PUBLIC SAFETY BUILDING, 2100 MARTIN LUTHER KING JR. WAY., BERKELEY, CA 94703.

THIS FIRE ALARM SYSTEM INCLUDES ADDRESSABLE MONITORING AND CONTROL DEVICES, AUXILIARY POWER SUPPLIES, AND SIGNALING DEVICES. THE AUXILIARY POWER SUPPLIES WILL POWER THE HORNS & STROBES, WHEN TRIPPED BY THE FIRE ALARM CONTROL PANEL ADDRESSABLE SIGNAL MODULE. SEE OPERATIONAL MATRIX FOR MORE SPECIFIC SYSTEM SEQUENCE OF OPERATIONS.

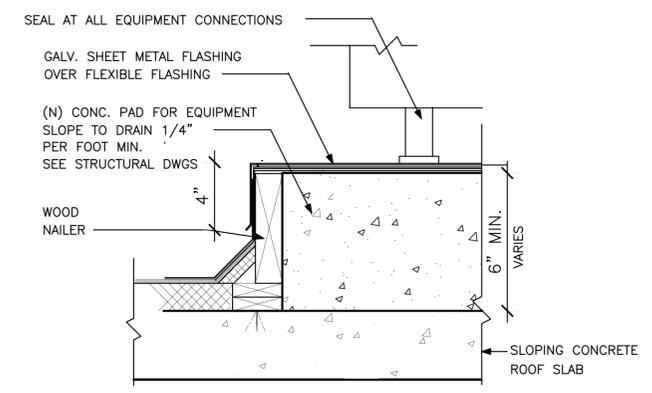
DESIGN NOTES

1. THE REVIEW AND APPROVAL OF THE AUTOMATIC FIRE ALARM SYSTEM BY THE SFM ON THIS PROJECT IS LIMITED TO THE DETENTION AREAS OF THE BUILDING AND DOES NOT EXTEND TO OTHER AREAS. THE LOCAL FIRE AUTHORITY SHOULD BE CONSULTED REGARDING OTHER AREAS OF THE BUILDING.
2. THE FIRE ALARM SYSTEM SHALL CONFIRM TO ARTICLE 760, CAL ELEC. CODE AND CFC SEC. 1007. INSTALLATION OF THE SYSTEM SHALL NOT BEGIN UNTIL PLANS AND SPECS, INCLUDING SFM LISTING NUMBERS FOR EACH COMPONENT, HAVE BEEN APPROVED BY THE SFM. UPON COMPLETION OF THE INSTALLATION, A TEST OF THE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE FIRE DEPARTMENT.
3. THE AUTOMATIC FIRE ALARM SYSTEM SHALL COVER ALL ROOM AND SPACES IN THE DETENTION.

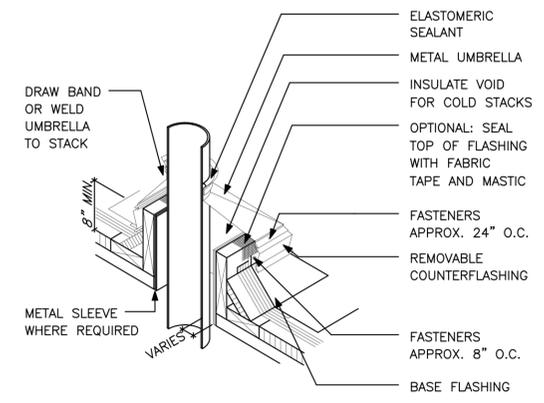
1 ENLARGED FLOOR PLAN
A4.12 3/16" = 1'-0"



1 TYPICAL EQUIPMENT ROOF CURB
A6.41 3" = 1'-0"



2 TYPICAL NEW SLAB EDGE
A6.41 3" = 1'-0"



3 TYPICAL PIPE PENETRATION
A6.41 3" = 1'-0"

APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

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DATE	DESCRIPTION

SHEET TITLE
**EXTERIOR - ROOF
ASSEMBLIES AND
DETAILS**

SHEET NUMBER

A6.41

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.
- 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 WALLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PROGRAMS 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 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.
- 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.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY SHORE AND BRACE EXISTING BUILDING AS REQUIRED DURING CONSTRUCTION.
- 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.
- CONTRACTOR SHALL FIELD VERIFY EXISTING FRAMING CONDITIONS AND SHALL 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 GENERAL REFERENCE ONLY.
- MECHANICAL UNIT LOCATIONS SHOWN ON STRUCTURAL DRAWINGS ARE SCHEMATIC ONLY. GENERAL CONTRACTOR TO COORDINATE STRUCTURAL TRADES WITH MECHANICAL CONTRACTOR TO DETERMINE EXACT LOCATION OF UNITS AND SUPPORTING STRUCTURE.
- DO NOT SCALE DRAWINGS.

DESIGN CRITERIA

- VERTICAL LOADS:
 - DEAD LOADS: SEE SCHEDULE
 - EQUIPMENT LOAD
- LATERAL LOADS:
 - WIND DESIGN LOADS – PER CBC SECTION 1609: BASIC WIND SPEED 105 MPH
EXPOSURE CATEGORY C
 - SEISMIC DESIGN – PER CBC SECTION 1613: RISK CATEGORY IV
SEISMIC DESIGN CATEGORY F
SITE CLASS D
MAPPED SHORT PERIOD ACCELERATION $S_s = 2.145 g$
SITE COEFFICIENT $F_a = 1.2$
DESIGN SHORT PERIOD ACCELERATION $SDS = 1.716 g$
MAPPED ONE SECOND PERIOD ACCELERATION $S_1 = 0.827 g$
SITE COEFFICIENT $F_v = 1.7$
DESIGN ONE SECOND ACCELERATION $SD1 = 0.937 g$
RESPONSE MODIFICATION FACTOR $R = NA$
IMPORTANCE FACTOR $I = 1.5$

CONCRETE NOTES

- ALL CONCRETE SHALL BE REINFORCED UNLESS NOTED "NOT REINFORCED".
- SEE THE CALIFORNIA BUILDING CODE FOR THE REQUIREMENTS IN THE PRODUCTION, TESTING AND INSTALLATION OF CONCRETE.
- SEE ARCHITECTURAL DRAWINGS FOR THE LOCATION AND EXTENT OF EXTERIOR WALKS AND PAVEMENTS AND FOR REINFORCEMENT REQUIREMENTS.
- REINFORCING STEEL SHALL BE PER ASTM A615, GRADE 60 WITH BAR MARKS LEGIBLY ROLLED INTO THE SURFACE INDICATING SIZE, TYPE OF STEEL, AND YIELD STRENGTH DESIGNATION.
- REINFORCEMENT FOR WELDING, FOR SHEAR WALLS, OR FOR MOMENT FRAMES SHALL BE PER ASTM A706, GRADE 60 WITH BAR MARKS LEGIBLY ROLLED INTO THE SURFACE INDICATING SIZE, TYPE OF STEEL, AND YIELD STRENGTH DESIGNATION.
- CONCRETE SHALL CONFORM TO THE FOLLOWING:
 - 28 DAY STRENGTH 4000 PSI
 - MAX AGGREGATE SIZE 3/4 INCH
 - CONCRETE WEIGHT 145 PCF
 - MAX W/C RATIO 0.50
 - FLY ASH 30% MAX
- PORTLAND CEMENT SHALL BE PROPORTIONED IN ACCORDANCE WITH ASTM C94, TYPE I OR II.
- REPLACEMENT CONCRETE WITH FLY ASH CONFORMING TO ASTM C618 CLASS C OR F, OR GROUND GRANULATED BLAST FURNACE SLAG CONFORMING TO ASTM 989, CLASS 100 OR 120, PER TABLE ABOVE.
- REINFORCEMENT, ANCHOR BOLTS, PIPE SLEEVES, AND OTHER INSERTS SHALL BE POSITIVELY SECURED IN PLACE BEFORE CONCRETE IS POURED. "WET-SETTING" WILL NOT BE ALLOWED. BAR COVERAGE TO FACE OF BAR, EXCEPT AS OTHERWISE SHOWN, SHALL BE:
 - FOR BARS LARGER THAN #5, WHERE CONCRETE SURFACES ARE EXPOSED TO EARTH OR TO WEATHER AFTER REMOVAL OF FORMS.
 - FOR #5 BARS OR SMALLER, WHERE CONCRETE SURFACES ARE EXPOSED TO EARTH OR TO WEATHER AFTER REMOVAL OF F FORMS
- ALL CONCRETE CURBS ARE 6 INCHES HIGH UNLESS OTHERWISE NOTED.
- WHERE NEW CONSTRUCTION IS INTEGRATED WITH EXISTING CONCRETE CONSTRUCTION, CARE SHALL BE TAKEN SO AS NOT TO DAMAGE EXISTING REMAINING CONCRETE AND REINFORCING. WHERE NEW CONCRETE ABUTS EXISTING CONCRETE, CLEAN EXISTING CONCRETE SURFACE WITH HIGH PRESSURE WATER SPRAY. APPLY APPROVED BONDING AGENT TO SURFACE OF EXISTING CONCRETE.
- HOLES FOR GROUTED ANCHORS SHALL BE DRILLED WITH ROTARY HAMMER OR OTHER SUITABLE METHODS TO ENSURE EXISTING REINFORCEMENT IS NOT DAMAGED. HOLE DIAMETER SHALL BE 1/8" GREATER THAN ANCHOR ROD DIAMETER, UNLESS OTHERWISE NOTED. GROUT SHALL BE NON-SHRINK EPOXY. LOCATE EXISTING REINFORCING BARS 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.
- TERMINATION OF REINFORCEMENT:
 - TERMINATE ALL BARS IN LAPS, OR 90 DEGREE BENDS.
 - ALL REINFORCEMENT SHALL LAP PER THE LAP SPLICE SCHEDULE. LAP NO MORE THAN EVERY OTHER BAR AT A SINGLE LOCATION (50% BARS), STAGGER LAPS 3'-0".
- ROUGHEN SURFACES AND KEY JOINTS AT HARDENED CONCRETE. ROUGHEN ALL SURFACES AT COLD JOINTS TO 1/4 INCH AMPLITUDE UNLESS NOTED OTHERWISE IN DETAILS.

STRUCTURAL STEEL NOTES

- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERRECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, LATEST EDITION.
- ANCHOR BOLTS SHALL BE ASTM F1554, $F_y = 36$ KSI. THREADED RODS SHALL BE PER ASTM A193 GRADE B7.
- BOLT HOLES IN STEEL SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED.

SEISMIC BRACING AND ANCHORAGES AND GRAVITY SUPPORTS OF MECHANICAL AND ELECTRICAL EQUIPMENT, PIPES AND DUCTS

- CONTRACTOR SHALL PROVIDE SEISMIC BRACING AND/OR ANCHORAGES AND GRAVITY SUPPORTS (WHERE COMPONENTS ARE SUSPENDED OR MOUNTED ON WALLS) OF MECHANICAL AND ELECTRICAL EQUIPMENT, PIPES AND DUCTS BY ONE OF THE FOLLOWING METHODS:
 - EMPLOY A STRUCTURAL OR CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA
 - USING OSHPD PRE-APPROVED DETAILS
- ALL THE DESIGN SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT BUILDING CODE.
- SEE DESIGN CRITERIA SECTION FOR SEISMIC DESIGN PARAMETERS
- IT IS NOT ACCEPTABLE TO DAMAGE REINFORCEMENT IN EXISTING CONCRETE. SEE NOTES ON THIS PAGE REGARDING EXISTING BUILDINGS. ANCHORAGE DESIGNS SHALL HAVE FLEXIBILITY TO MOVE THE ANCHOR POINTS IN ALL DIRECTIONS TO AVOID THE EXISTING REINFORCEMENT
- SUBMIT THE DESIGN DRAWINGS AND CALCULATIONS, INCLUDING LOCATIONS AND MAGNITUDE OF THE REACTIONS TO THE BUILDING STRUCTURE, STAMPED AND SIGNED BY THE ENGINEER EMPLOYED BY THE CONTRACTOR, OR WITH OSHPD PRE-APPROVED DETAILS TO THE CITY, THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO DRILLING HOLES IN THE EXISTING CONCRETE. THE SUBMITTAL SHALL INDICATE LOCATIONS AND MAGNITUDES OF THE REACTIONS TO THE BUILDING STRUCTURE. THE REVIEW BY THE STRUCTURAL ENGINEER OF RECORD IS ONLY FOR EFFECTS ON THE EXISTING BUILDING STRUCTURE.

EXPANSION ANCHORS IN HARDENED CONCRETE NOTES

- INSTALLATION: THE ANCHORS MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN ICBO RESEARCH COMMITTEE RECOMMENDATIONS FOR THE SPECIFIC ANCHOR.
- HOLES FOR EXPANSION ANCHORS SHALL BE DRILLED WITH ROTARY HAMMER OR OTHER SUITABLE METHODS TO ENSURE EXISTING REINFORCEMENT IS NOT DAMAGED. HOLE DIAMETER SHALL BE AS REQUIRED BY MANUFACTURER. LOCATE EXISTING REINFORCING BARS 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.
- JOB TESTING AND INSPECTION: CONTINUOUS VISUAL INSPECTION OF ANCHOR INSTALLATION IS REQUIRED. TEST FIRST TEN INSTALLED ANCHORS OF EACH SIZE TO TENSION PROOF LOAD. IF ALL PASS, TEST 10% OF REMAINING ANCHORS. IF ANY ANCHOR FAILS, TEST ALL ANCHORS UNTIL 10 SUCCESSFUL CONSECUTIVE TESTS ARE MADE. THEN RESUME 10% TESTING FREQUENCY. THE LOAD TEST SHALL BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR. THE LOAD MAY BE APPLIED BY ANY METHOD 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 WHILE APPLYING TENSION TO THE BOLT MAY NOT BE VERIFIED WITH A TORQUE WRENCH.
- ALL EXPANSION ANCHORS IN CONCRETE SHALL BE HILTI KB-TZ, (PER ESR-1917), 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.

EPOXY ANCHORS AND DOWELS IN HARDENED CONCRETE NOTES

- EPOXY FOR SETTING ANCHORS OR DOWELS IN HARDENED CONCRETE SHALL BE SIMPSON SET-3G PER ESR 4057, HILTI HIT-RE 500v3 PER ESR 3814, OR APPROVED EQUAL.
- HOLES FOR EPOXY ANCHORS SHALL BE DRILLED WITH ROTARY HAMMER OR OTHER SUITABLE METHODS TO ENSURE EXISTING REINFORCEMENT IS NOT DAMAGED. HOLE DIAMETER SHALL BE AS REQUIRED BY MANUFACTURER. LOCATE EXISTING REINFORCING BARS (AS REQUIRED USING X-RAY) 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.
- JOB TESTING AND INSPECTION: CONTINUOUS SPECIAL INSPECTION OF ALL ANCHOR AND DOWEL INSTALLATION IS REQUIRED. TESTING SHALL BE AS FOLLOWS:
 - THREADED RODS: TEST FIRST 5 INSTALLED RODS OF EACH SIZE TO TENSION PROOF LOAD SHOWN ON EPOXY ANCHOR SCHEDULE. IF ALL PASS, TEST 5% OF REMAINING RODS. IF ANY ROD FAILS, TEST ALL RODS UNTIL 10 SUCCESSFUL CONSECUTIVE TESTS ARE MADE. THEN RESUME 5% TESTING FREQUENCY. THE LOAD TEST SHALL BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR.
 - REINFORCING BAR ANCHORS, #5 AND LARGER: TEST PER THREADED ROD REQUIREMENTS ABOVE.
 - REINFORCING BAR ANCHORS #4 AND SMALLER: NO TESTING REQUIRED. VISUAL OBSERVATION ONLY.
- UNLESS OTHERWISE SHOWN IN THE DRAWINGS, ALL HOLES SHALL BE DRILLED PERPENDICULAR TO THE CONCRETE SURFACE

TESTS, INSPECTIONS AND OBSERVATIONS NOTES

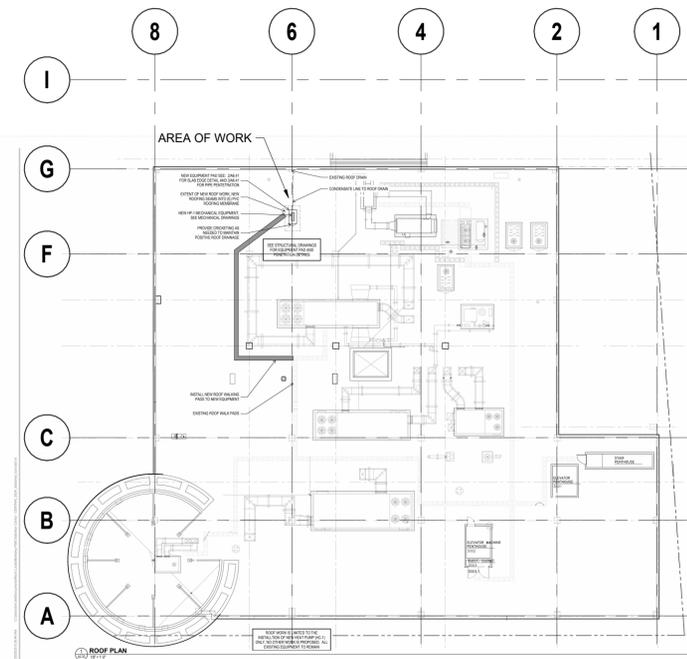
- TESTS AND INSPECTIONS SHALL BE PROVIDED FOR ALL ITEMS AS REQUIRED BY THE CALIFORNIA BUILDING CODE. SEE STATEMENT OF SPECIAL INSPECTIONS, WHEN INCLUDED, FOR SPECIAL INSPECTION REQUIREMENTS.
- THE FOLLOWING ITEMS SHALL HAVE SPECIAL INSPECTION.
 - REINFORCING STEEL
 - CONCRETE PLACEMENT
 - ALL STRUCTURAL WELDING
 - POST INSTALLED ANCHORS IN CONCRETE – EXPANSION ANCHORS, EPOXY ANCHORS, ETC.
- IN ADDITION TO SPECIAL INSPECTIONS, THE FOLLOWING SPECIFIED ITEMS SHALL HAVE PERIODIC STRUCTURAL OBSERVATION BY THE STRUCTURAL ENGINEER OF RECORD:
 - REINFORCING STEEL
- THE OWNER SHALL BE RESPONSIBLE FOR RETAINING AN INDEPENDENT TESTING AND INSPECTION LABORATORY TO PERFORM ALL REQUIRED TESTING AND INSPECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TESTING AND INSPECTION LABORATORY WITH CONSTRUCTION SCHEDULES TO ENSURE PROPER COORDINATION OF WORK.

THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OR INSPECTOR A MINIMUM OF 48 HOURS (EXCLUDING WEEKEND DAYS) PRIOR TO THE TIME OF A REQUIRED INSPECTION.

SYMBOLS AND ABBREVIATIONS

A/S2.1	SECTION A ON DRAWING S2.1	REINF	REINFORCING
@	AT	REQD	REQUIRED
&	AND	SAD	SEE ARCHITECTURAL DRAWING OR SEE ARCHITECTURAL DETAIL
°	DEGREE	SCHED	SCHEDULE
Ø OR DIA	DIAMETER	SEC	SECTION
#	NUMBER OR POUND	SIM	SIMILAR
(E)	EXISTING	SMS	SEE MECHANICAL DRAWINGS OR SEE MECHANICAL DETAIL
(N)	NEW	SMD	SHEET METAL SCREW
AB	ANCHOR BOLT	T&B	TOP & BOTTOM
ADDL	ADDITIONAL	TYP	TYPICAL
ADJ	ADJACENT	UON	UNLESS OTHERWISE NOTED
APPROX	APPROXIMATE	VIF	VERIFY IN FIELD
ARCH	ARCHITECT OR ARCHITECTURAL	W/	WITH
		WD	WIDE
		W/O	WITHOUT
		WT	WEIGHT
BLDG	BUILDING		
C	CONTROL JOINT		
CBC	CALIFORNIA BUILDING CODE		
CIP	CAST-IN-PLACE		
CL	CENTERLINE		
CLR	CLEAR		
COL	COLUMN		
CONC	CONCRETE OR CONCENTRATED		
COND	CONDITION		
CONN	CONNECTION		
CONT	CONTINUOUS		
CTRD	CENTERED		
DIM(S)	DIMENSION(S)		
DJ	DOUBLE JOIST		
DL	DEAD LOAD		
DO	DITTO		
DP	DEEP		
DTLS	DETAILS		
DWG(S)	DRAWING(S)		
EA	EACH		
EE	EACH END		
EF	EACH FACE		
EMBED	EMBEDMENT		
ENGR	ENGINEER		
EQ	EQUAL		
EQUIP	EQUIPMENT		
ES	EACH SIDE		
ETC	ETCETERA		
EW	EACH WAY		
FT	FEET		
HDG	HOT-DIPPED GALVANIZED		
HT	HEIGHT		
K	KIPS (1000 LBS)		
LBS	POUNDS		
LG	LONG		
LL	LIVE LOAD		
MECH	MECHANICAL		
MFR	MANUFACTURER		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MTL	METAL		
NTS	NOT TO SCALE		
PL	PLATE		

SCOPE OF WORK
NEW CONCRETE PADS TO SUPPORT ONE NEW EQUIPMENT AND ANCHORAGE OF ONE NEW EQUIPMENT AT ROOF OF EXISTING BASE ISOLATED BUILDING



1
S1.01 **OVERALL PLAN**
1" = 30'-0"



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IDA PROJECT NUMBER: 25015

APPROVALS

PROJECT TITLE

City of Berkeley
PSB Data Center -
Redundant
Cooling

210 Martin Luther King Jr. Way
Berkeley, CA 94704

BID SET

ISSUE DATE	2025-04-01
N&T JOB NUMBER	25015
REVISIONS	
DATE	DESCRIPTION

DRAWN BY **ERG** CHECKED BY **ERG**
SHEET TITLE

GENERAL NOTES,
SYMBOLS,
ABBREVIATIONS,
SCOPE OF WORK

SHEET NUMBER

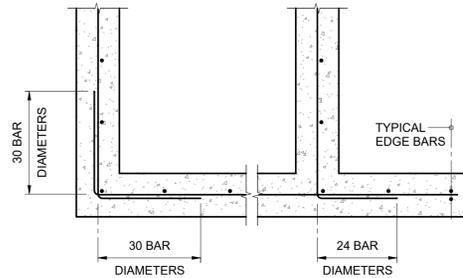
S1.01

CONCRETE STRENGTH PSI	BAR TYPE	BAR SIZE									
		#3		#4		#5		#6		#7	
		CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS
4000	TOP BAR	19	24	25	33	31	41	37	49	54	71
	ALL OTHER BARS	15	19	19	25	24	31	29	37	42	54

- NOTES:**
1. SPLICE LENGTH IN INCHES.
 2. USE CLASS B FOR ALL LAP SPLICES EXCEPT CLASS A MAY BE USED FOR NON-STRUCTURAL SLABS ON GRADE.
 3. TOP BARS = HORIZONTAL BARS (OTHER THAN IN WALLS) PLACED WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW BARS.
 4. TABLE IS BASED UPON MINIMUM CLEAR COVER GREATER THAN ONE BAR DIAMETER AND MINIMUM CLEAR SPACING GREATER THAN TWO BAR DIAMETERS. WHERE EITHER OF THESE REQUIREMENTS IS NOT MET, INCREASE LAP LENGTH BY 50%.

7 REINFORCING BAR LAP SPLICE SCHEDULE IN CONCRETE

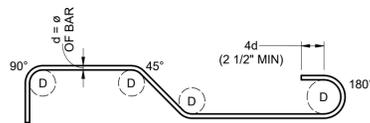
S1.02 NTS



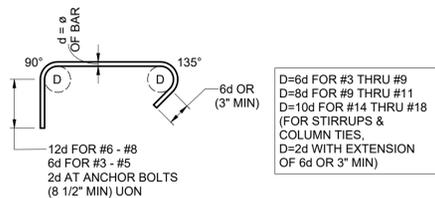
SINGLE CURTAIN PLAN

8 TYPICAL REINFORCING AT WALL & FOOTING CORNERS

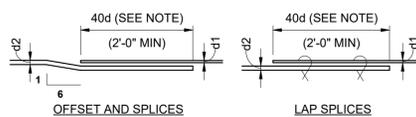
S1.02 NTS



STANDARD HOOKS AND BENDS



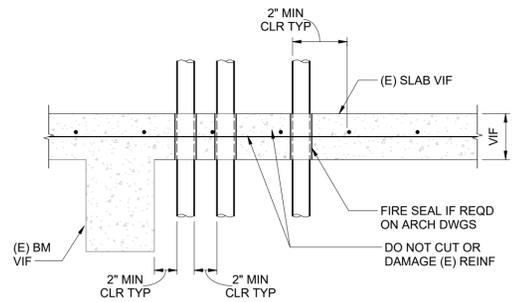
TIES AND STIRRUPS



NOTE: ALL LAP SPLICES ARE CLASS B LAP SPLICES

9 TYPICAL REINFORCING BAR BENDS

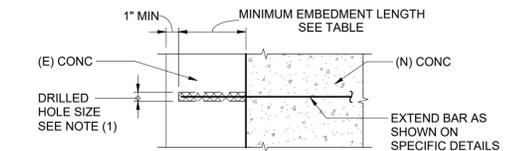
S1.02 3/4" = 1'-0"



- NOTES:**
1. SEE PROCEDURE NOTES FOR CORING IN (E) CONCRETE. REINFORCING SHOWN IS SCHEMATIC ONLY. CONTRACTOR TO VERIFY ACTUAL REINFORCING LOCATION.
 2. DO NOT CORE WITHIN 12" OF ANY (E) PENETRATION.
 3. DO NOT CORE WITHIN 2" OF ANY CONCRETE BEAM, COLUMN, OR COLUMN CAP.
 4. SEE ELECTRICAL DRAWINGS FOR SIZE, NUMBER, AND LOCATIONS OF CORES.
 5. CONSULT WITH DESIGN TEAM FOR INSTRUCTIONS IF CLEARANCES SHOWN CAN NOT BE ACHIEVED.

4 TYP CORING THRU SUPPORTED CONCRETE SLAB

S1.02 NTS



BAR SIZE	THREADED ROD SIZE	MINIMUM EMBEDMENT LENGTH (2), (3)	TENSION PROOF LOAD (LBS)	
			REINFORCING BAR	THREADED ROD
#3	3/8"ø	3 1/2"	-	5,100
#4	1/2"ø	4 1/4"	-	8,850
#5	5/8"ø	5"	12,300	13,360

- NOTES:**
1. FOLLOW SPECIFIC MANUFACTURER GUIDELINES FOR DRILLED HOLE DIAMETER.
 2. EMBEDMENT LENGTHS SHOWN ON SPECIFIC DETAILS SUPERCEDE THIS SCHEDULE.
 3. ANCHOR EMBEDMENT INTO WALLS AND SLABS SHALL NOT EXCEED THICKNESS (IN DIRECTION OF DRILLING) MINUS ONE INCH.
 4. SEE SPECIFICATIONS FOR GROUT REQUIREMENTS. SUBMIT GROUT TECHNICAL INFORMATION TO STRUCTURAL ENGINEER FOR APPROVAL.
 5. THREADED RODS SHALL BE PER ASTM A193 GRADE B7.
 6. TENSION PROOF LOAD IS 2x ALLOWABLE LOAD IN 2000 PSI CONCRETE BASED ON A.S.D.

5 GROUTED ANCHOR SCHEDULE

S1.02 3/4" = 1'-0"

- PROCEDURE FOR CORING NEW HOLES IN EXISTING CONCRETE**
1. DRAWINGS OF EXISTING CONSTRUCTION ARE AVAILABLE FROM THE OWNER. THE OWNER ASSUMES NO RESPONSIBILITY FOR THE CORRECTNESS OR ACCURACY OF THESE DRAWINGS, BUT THEIR STUDY IS IMPERATIVE IN UNDERSTANDING EXISTING CONDITIONS.
 2. THE METHOD OF INSTALLING THE NECESSARY HOLES WITHOUT DAMAGING EXISTING REINFORCING SHALL BE DETERMINED BY THE CONTRACTOR. THE METHOD OUTLINED BELOW IS FOR GENERAL INFORMATION ONLY. CONTRACTOR MAY SUBMIT ALTERNATE METHOD FOR REVIEW AND APPROVAL. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES OF CONSTRUCTION, AND SAFETY PROGRAMS.
 - a. AFTER A STUDY OF EXISTING DRAWINGS AND PRIOR TO MAKING ANY PENETRATION, USE A PACHOMETER OR OTHER SUITABLE METHOD TO DETERMINE THE ACTUAL LOCATIONS OF REINFORCING IN THE IMMEDIATE AREA SURROUNDING EACH HOLE TO BE DRILLED.
 - b. THE LOCATION AND LEVEL OF ANY REINFORCING SHALL BE ACCURATELY MARKED ON THE CONCRETE. HOLES SHALL BE LOCATED TO MEET SPECIFIC APPLICABLE TYPICAL DETAILS FOR CORING IN SUPPORTED CONCRETE SLABS OR CONCRETE BEAMS.
 - c. DRILLING PROCEDURE:
 - HOLES 1" OR LESS IN DIAMETER: USE A SMALL HAND DRILL PROCEEDING DOWNWARD FROM THE TOP OF SLAB OR SIDE OF BEAM. PROCEED SLOWLY AND IN A MANNER TO BE AWARE OF POSSIBLE ENCOUNTER OF REINFORCING.
 - HOLES GREATER THAN 1" IN DIAMETER: USE A SMALL HAND DRILL. DRILL 1/4" DIAMETER HOLE TO LOCATION WHERE ANY POSSIBLE REINFORCING MAY OCCUR. IF NO REINFORCING IS ENCOUNTERED, CORING OR OTHER EXPEDIENT METHODS OF DRILLING MAY BE USED.
 - d. IF ANY REINFORCING IS ENCOUNTERED OR DAMAGED, STOP WORK, AND NOTIFY THE ARCHITECT IMMEDIATELY.
 3. PROVIDE CORES AS SHOWN ON INCLUDED DRAWINGS ONLY.
 4. PROVIDE PROTECTION FOR ADJACENT EQUIPMENT AND FINISHES WHILE CORING. REMOVE ALL WATER AND CORING DEBRIS FROM THE SITE.
 5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE BUILDING WHICH MAY BE THE RESULT OF DRILLING OPERATIONS.

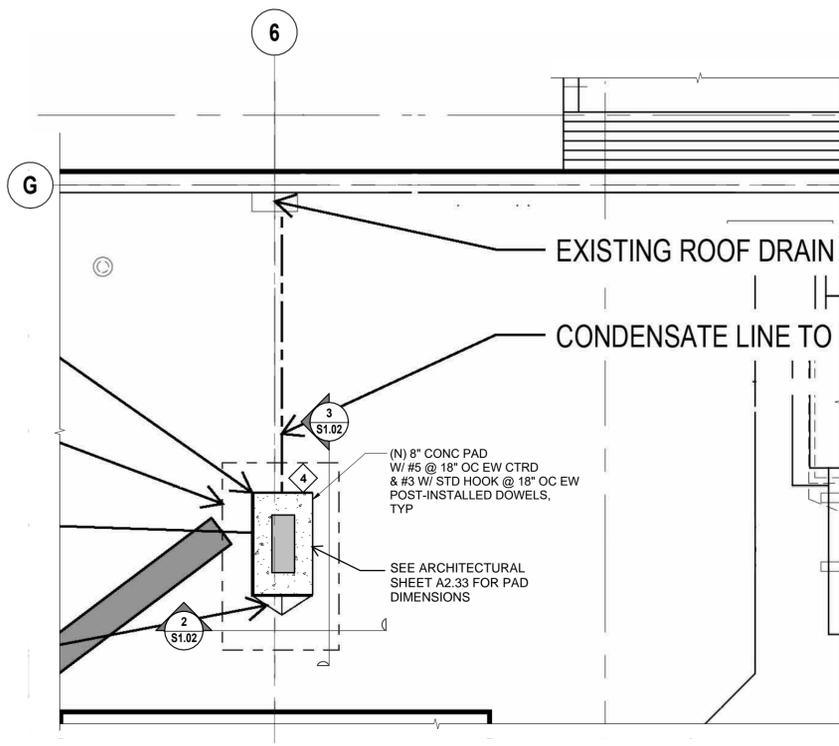
6 PROCEDURE NOTES FOR CORING IN (E) CONCRETE

S1.02 NTS

EQUIPMENT SCHEDULE				
MARK	DESCRIPTION	WEIGHT	DETAIL	DIMENSIONS (IN) LG x WD x HT
4	OUTDOOR HEAT PUMP	100 LBS (MAX)	2/-	30.12 x 11.93 x 21.85

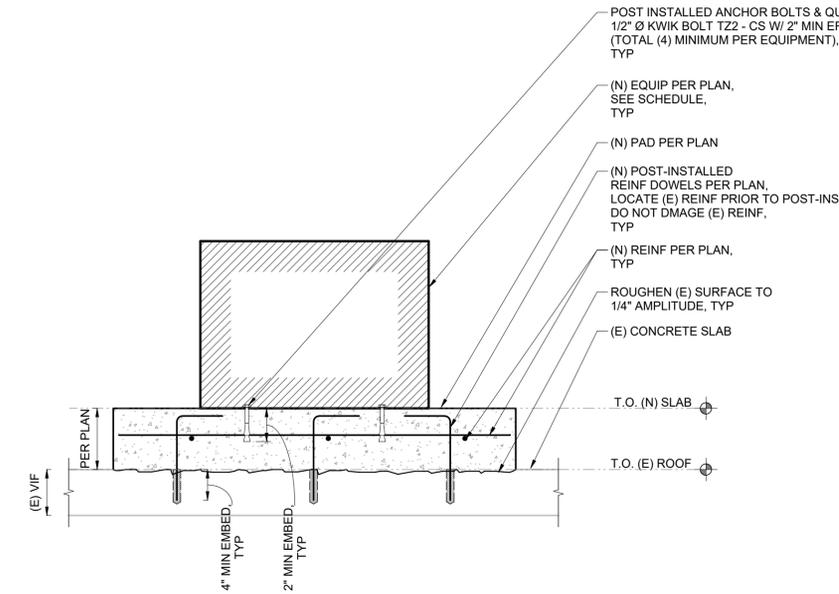
- SHEET NOTES**
1. SEE GENERAL NOTES AND TYPICAL DETAILS FOR INFORMATION NOT SHOWN HEREIN.
 2. LOCATIONS OF EQUIPMENT ARE SHOWN SCHEMATICALLY. SEE MECHANICAL DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT.
 3. DO NOT DISTURB ANCHORAGE OF (E) FIXTURES AND EQUIPMENTS.

- # INDICATES EXISTING BUILDING GRID.
- X DENOTES EQUIPMENT TAG. SEE EQUIPMENT SCHEDULE TABLE FOR DESCRIPTIONS & DETAILS.
- [Hatched Box] DENOTES EQUIPMENT TO BE ANCHORED.
- [Dotted Box] DENOTES NEW PAD IN PLAN. SEE DETAILS FOR THICKNESS.



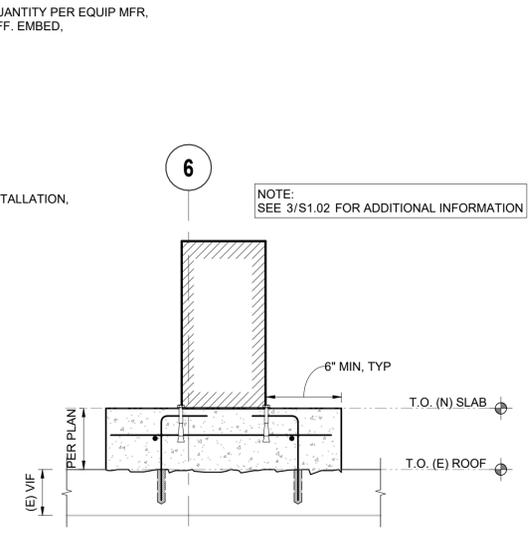
1 ANCHORAGE PLAN

S1.02 1/4" = 1'-0"



3 PAD SECTION

S1.02 1" = 1'-0"



2 PAD SECTION

S1.02 1" = 1'-0"

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IDA PROJECT NUMBER: 25015

APPROVALS

PROJECT TITLE

City of Berkeley PSB Data Center - Redundant Cooling

210 Martin Luther King Jr. Way
Berkeley, CA 94704

BID SET

ISSUE DATE	2025-04-01
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ANCHORAGE AND TYPICAL DETAILS

SHEET NUMBER

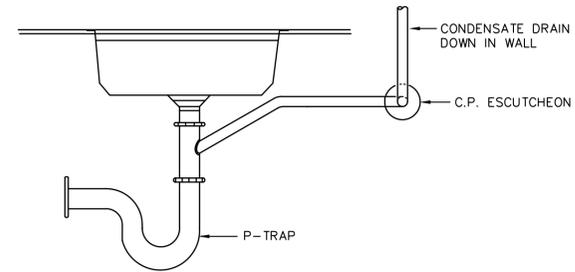
S1.02

HEAT PUMP & INDOOR FAN COIL UNIT SCHEDULE

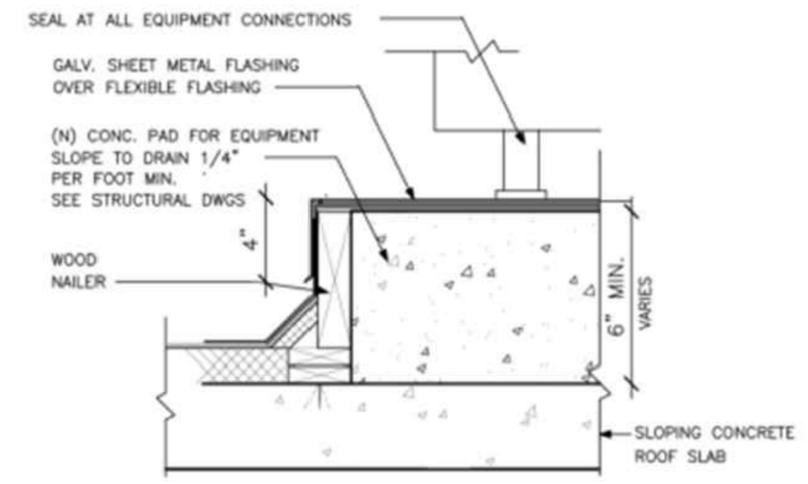
OUTDOOR UNIT TAG	INDOOR UNIT TAG	AREA SERVED	MANUFACTURER	OUTDOOR SECTION MODEL #	INDOOR SECTION MODEL #	NOM. TONS	COOLING RATED CAPACITY (MBH)	HEATING RATED CAPACITY (MBH)	OUTDOOR UNIT ELECTRICAL			INDOOR UNIT ELECTRICAL			WEIGHT (LBS)		EER/SEER @ ARI	HSPF[COP]	REMARKS
									VOLT/PH	MCA	MOCP	VOLT/PH	MCA	MOCP	OUTDOOR UNIT	INDOOR UNIT			
HP-1	FC-1	TELCOM 1111	CARRIER	38MHRCQ09AA1	40MHHAQ09XA1	.75	9.0	10.0	208/1	12.0	15	NOTE 5	NOTE 5	NOTE 5	75	26	12.6/21.5	9.4[3.24]	1 - 5

NOTES

1. INSTALL UNITS PER MANUFACTURER'S INSTRUCTIONS UNLESS OTHERWISE NOTED ON PLANS.
2. PROVIDE CONDENSATE DRAIN WITH TRAP. ROUTE TO THE CLOSEST RECEPTOR. PROVIDE CONDENSATE PUMP IF REQUIRED. CONDENSATE BY PLUMBING CONTRACTOR.
3. CONTROLLED BY FAN-COIL THERMOSTAT. PROVIDE HARD MOUNT TITLE 24 COMPLIANT THERMOSTAT.
4. PROVIDE WITH MOTOR RATED DISCONNECT SWITCH NEAR THE FAN-COIL.
5. POWERED BY OUTDOOR UNIT.



2 CONDENSATE DRAIN CONNECTION DETAIL
NO SCALE



1 ROOF MOUNTED HEAT PUMP CURB DETAIL
NO SCALE

SHEET INDEX

M0.1	MECHANICAL SCHEDULES AND DETAILS
M2.1	PUBLIC SAFETY BUILDING FIRST FLOOR MECHANICAL PLAN

NOLL & TAM ARCHITECTS

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SEAL

Date Signed: 6/5/25

capital engineering
Rancho Cordova, California
XX-XXXXXXX XX-XXXXXX
PM - DESIGN TEAM PROJECT NO.

APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

BID SET

ISSUE DATE: XXXXXX
N&T JOB NUMBER: 230612.00

REVISIONS	DATE	DESCRIPTION
1	03/31/2025	Revision #1
2	06/05/2025	Revision #2

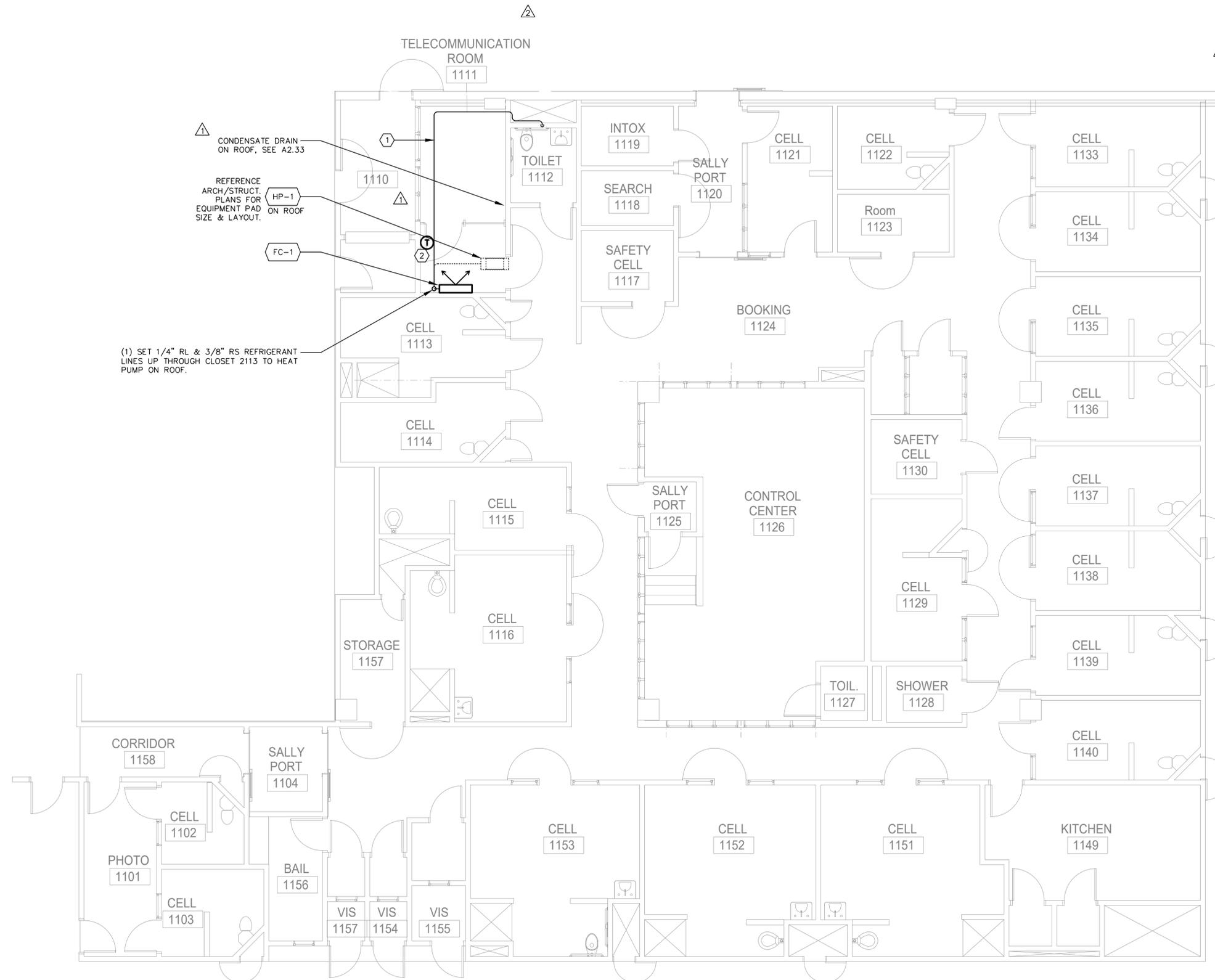
DRAWN BY **DIY** CHECKED BY **MS**
SHEET TITLE

MECHANICAL COVER SHEET

SHEET NUMBER

M0.1

C:\Users\stom.beil\Documents\Berkeley PSB Redundant Cooling - CENTRAL 2023_detached_lom.beil.rvt 6/29/2023 9:18:24 AM



1 PUBLIC SAFETY BUILDING
FIRST FLOOR MECHANICAL PLAN
SCALE: 3/16"=1'-0"

SHEET KEYNOTES

- 1 ROUTE CONDENSATE DRAIN PIPING OVER TO WALL. DROP DOWN IN WALL AND CONNECT TO SINK TAILPIECE. CONTRACTOR TO FIELD VERIFY ALL ROUTING AND TERMINATION POINTS. COORDINATE PIPING TO NOT INTERFERE OR BE ABOVE SERVER RACK.
- 2 THERMOSTAT 48" MAXIMUM AFF.

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201



Date Signed: 6/5/25



APPROVALS

PROJECT TITLE

City of Berkeley
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Area Automation
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1	03/31/2025	Revision #1
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DRAWN BY **DIY** CHECKED BY **MS**
SHEET TITLE

PUBLIC SAFETY BUILDING FIRST FLOOR MECHANICAL PLAN

SHEET NUMBER

M2.1

ELECTRICAL SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations

A	AMPERES, AMBER
AC	ALTERNATING CURRENT, AIR CONDITIONER
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AVAILABLE INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
C	CONDUIT, CLOSE, CONTROL
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED OWNER INSTALLED
CLG	CEILING
COM	COMMUNICATION
CT	CURRENT TRANSFORMER
CU	COPPER
DN	DOWN
EF	EXHAUST FAN
F	FUSE
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID STEEL CONDUIT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LED	LIGHT EMITTING DIODE
MDB	MAIN DISTRIBUTION BOARD
MDP	MAIN DISTRIBUTION PANEL
MSB	MAIN SWITCHBOARD
MT, MTD	MOUNT, MOUNTED
MT	EMPTY CONDUIT WITH NYLON PULL CORD
N/A	NOT APPLICABLE
N	NEUTRAL
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OS	OCCUPANCY SENSOR
PH	PHASE
PNL	PANEL
REF	REFERENCE
REQD	REQUIRED
S	SWITCH
SIM	SIMILAR
TELE	TELEPHONE
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
V	VOLTS, VOLTAGE
W/	WITH
W	WIRE, WHITE
WP	WEATHERPROOF
XFMR	TRANSFORMER

Fire Alarm

	FIRE ALARM CONTROL PANEL
	SUSPENDED REMOTE POWER SUPPLY
	PHOTOELECTRIC SMOKE DETECTOR
	COMBINATION SMOKE ALARM AND CARBON MONOXIDE DETECTOR, SINGLE STATION
	SPRINKLER FLOW SWITCH
	SPRINKLER POST INDICATOR VALVE
	SPRINKLER TAMPER SWITCH
	F.A ADDRESSABLE MONITOR MODULE
	FIRE ALARM CONTROL RELAY
	STROBE WITH CANDELA RATING
	HORN/STROBE WITH CANDELA RATING
	HORN
	EXTERIOR 120V SPRINKLER HORN/STROBE

General

	NEW WORK
	EQUIPMENT IDENTIFICATION
	KEYED NOTE

Lighting

	EXIT SIGN CEILING MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN
	EXIT SIGN WALL MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN
	AREA LUMINAIRE ARM MOUNTED WITH POLE AND CONCRETE BASE
	SURFACE OR PENDANT MOUNTED LUMINAIRE
	SURFACE OR PENDANT MOUNTED LUMINAIRE CONNECTED TO EMERGENCY/LIFE SAFETY CIRCUIT OR WITH INTEGRAL EMERGENCY BATTERY CONNECTED TO UNSWITCHED CIRCUIT
	PENDENT
	WALL MOUNTED LUMINAIRE

Telecommunications

	RACEWAY ONLY DATA OUTLET. PROVIDE DOUBLE GANG BACK BOX AND SINGLE GANG ADAPTER PLATE WITH 1" C. AND PULLSTRING TO ACCESSIBLE CEILING SPACE. SEE LETTER CODE LIST AT DATA/TELEPHONE OUTLET FOR OPTIONS.
	RACEWAY ONLY DATA/TELEPHONE OUTLET. PROVIDE DOUBLE GANG BACK BOX AND SINGLE GANG ADAPTER PLATE WITH 1" C. AND PULLSTRING TO ACCESSIBLE CEILING SPACE. (MULTIPLE LETTERS INDICATE MULTIPLE OPTIONS) A = ABOVE COUNTER C = CEILING MOUNTED ABOVE ACCESSIBLE CEILING F = FLUSH CEILING MOUNTED R = SURFACE MOUNTED ON RACEWAY
	RACEWAY ONLY TELEPHONE OUTLET. PROVIDE DOUBLE GANG BACK BOX AND SINGLE GANG ADAPTER PLATE WITH 3/4" C. AND PULLSTRING TO ACCESSIBLE CEILING SPACE. SEE LETTER CODE LIST AT DATA/TELEPHONE OUTLET FOR OPTIONS.

Connections / Equipment

	HEAVY DUTY FUSED DISCONNECT SWITCH
	JUNCTION BOX
	JUNCTION BOX WITH FLEX CONNECTION TO EQUIPMENT
	WALL-MOUNTED JUNCTION BOX
	NON-FUSED DISCONNECT SWITCH
	TRANSFORMER
	DOORBELL - NUTONE #LA11WH +7'-6"
	DOORBELL PUSH BUTTON

Miscellaneous

	BRANCH CIRCUIT WIRING. ARROW INDICATES HOME RUN TO PANEL WITH CIRCUITS AS NOTED. WIRE SIZE IS #12 AWG MINIMUM UNLESS NOTED OTHERWISE. SHORT TICK MARKS INDICATE PHASE CONDUCTORS. LONG TICK MARKS INDICATE NEUTRAL CONDUCTORS. A SINGLE CURVED TICK MARK INDICATES INSULATED GREEN GROUND CONDUCTOR. SECOND CURVED TICK MARK INDICATES "ISOLATED GROUND" (GREEN INSULATION WITH YELLOW STRIPE) CONDUCTOR.
	BRANCH PANEL
	CIRCUIT BREAKER
	CURRENT TRANSFORMER
	DIGITAL TYPE METER WITH VOLTMETER, AMMETER, KW METER, KVA METER, KVAR METER, AND %THD METER
	EQUIPMENT CONNECTION ITEM. REFER TO SCHEDULE
	FLUSH MOUNT EQUIPMENT ENCLOSURE AS NOTED
	FLUSH WALL MOUNTED BRANCH PANEL
	GROUND ROD
	GROUNDING POINT
	LANDING LUG
	MAIN DISTRIBUTION PANEL / SUB DISTRIBUTION PANEL
	METER WITH CONNECTION
	SURFACE MOUNT EQUIPMENT ENCLOSURE AS NOTED
	UTILITY TRANSFORMER PAD/VAULT
	WALL MOUNTING BRACKET
	WATER PIPE GROUND CONNECTION

Switches and Receptacles

	DUPLEX RECEPTACLE (MULTIPLE LETTERS INDICATE MULTIPLE OPTIONS) A = ABOVE COUNTER B = CLOCK HANGER C = CONTROLLED VIA LIGHTING CONTROL E = EMERGENCY F = ARC FAULT PROTECTED BY BREAKER IN PANEL G = GROUND FAULT CIRCUIT INTERRUPTER H = HOSPITAL GRADE K = CHILD RESISTANT COVER L = ISOLATED GROUND P = PENDANT MOUNTED WITH CORD GRIPS. VERIFY PENDANT LENGTH S = SPLIT WIRE T = TAMPER RESISTANT SHUTTERED RECEPTACLE W = WEATHERPROOF CONTINUOUS USE COVER, GFCI PROTECTED. WITH WEATHER-RESISTANT RECEPTACLE ? = DESIGNER DEFINED
	DOUBLE DUPLEX RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS
	SINGLE RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX RECEPTACLE FOR OPTIONS
	DUPLEX RECEPTACLE, FLUSH FLOOR
	EQUIPMENT ELECTRICAL CONNECTION
	SPECIAL PURPOSE RECEPTACLE. LETTER CODE DENOTES RECEPTACLE CONFIGURATION LY-XXR = NEMA CONFIGURATION TWIST-LOCK RECEPTACLE X-XXR = NEMA CONFIGURATION STRAIGHT BLADE RECEPTACLE P = PENDANT MOUNT WITH CORD GRIPS. VERIFY PENDANT LENGTH X = COORDINATE RECEPTACLE CONFIGURATION WITH EQUIPMENT BEING SUPPLIED
	OCCUPANCY SENSOR (SELF CONTAINED) P = PASSIVE INFRARED D = DUAL TECHNOLOGY U = ULTRASONIC, 360 DEG RANGE H = ULTRASONIC, HALLWAY PATTERN
	WIRELESS SYSTEM CONTROLLER
	WIRELESS RECEPTACLE CONTROLLER
	WIRELESS LIGHTING CONTROL STATION
	WIRELESS PHOTO SENSOR
	WIRELESS OCCUPANCY SENSOR
	WIRELESS OCCUPANCY/PHOTO SENSOR
	WIRELESS AREA LIGHTING CONTROL MODULE
	SINGLE POLE SWITCH 2 = DOUBLE POLE SWITCH 3 = THREE-WAY SWITCH 4 = FOUR-WAY SWITCH o THRU z (LOWERCASE) = LUMINAIRE CONTROL DESIGNATION D = DIMMER F = FAN SPEED CONTROL K = KEY OPERATED SWITCH L = LIGHTED HANDLE M = MANUAL MOTOR STARTER WITH THERMAL OVERLOAD P = SWITCH WITH PILOT LIGHT S = SENTRY SWITCH T = INTERVAL TIMER W = WEATHERPROOF SWITCH V = LOW VOLTAGE SWITCH ? = DESIGNER DEFINED SWITCH

Raceways

	CONDUIT CONCEALED IN WALL OR CEILING SPACE
	CONDUIT Routed BELOW FLOOR / GRADE
	CATV Routed BELOW FLOOR / GRADE
	TEL/DATA Routed BELOW FLOOR / GRADE
	CONDUIT ELLED DOWN
	CONDUIT ELLED UP
	CONDUIT/WIRING CONTINUATION
	CONDUIT/WIRING STUBBED OUT WITH END CAP OR INSULATED PLASTIC BUSHING
	FLEXIBLE CONDUIT
	TELEPHONE BACKBOARD

GENERAL NOTES

- THE ELECTRICAL SCOPE MUST COMPLY WITH THE LATEST ADOPTED EDITIONS OF THE CALIFORNIA ELECTRIC CODE (CEC), CALIFORNIA BUILDING CODE (CBC), CALIFORNIA FIRE CODE (CFC), CALIFORNIA MECHANICAL CODE (CMC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 72) AND THE CALIFORNIA ENERGY CODE.
- THE CONTRACTOR MUST VISIT THE JOBSITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING THE PROJECT AND MUST INCLUDE IN THEIR BID THE NECESSARY COSTS TO CONSTRUCT THIS PROJECT IN ACCORDANCE WITH THE ELECTRICAL DRAWINGS, SPECIFICATIONS, AND ALL APPLICABLE CODES.
- DRAWINGS INDICATE GENERAL ARRANGEMENT OF ELECTRICAL SYSTEMS AND WORK. VERIFY EXACT LOCATIONS WITH ARCHITECTURAL DRAWINGS. REVIEW DRAWINGS OF OTHER TRADES TO VERIFY LOCATIONS OF EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AND COORDINATE SPACE CONDITIONS WITH THEIR INSTALLATION. FINAL LOCATIONS SHALL BE ADJUSTED TO MEET FIELD CONDITIONS.
- ALL EQUIPMENT AND APPURTENANCES TO BE UL (NRTL) LISTED AND LABELED PER CEC.
- CONTRACTOR TO VERIFY THAT ALL TERMINALS ARE RATED AT 75°C OR HIGHER, PER NEC; IF A BREAKER (OR TERMINATION POINT) IS RATED AT 100 AMPS OR LESS AND IS NOT LABELED AS SUITABLE FOR TERMINATIONS AT 75°C, BY DEFAULT IT IS RATED 60°C. ALL SPECIFIED CONDUCTORS SIZES ARE BASED ON EXPECTED TERMINAL TEMPERATURE RATINGS. DO NOT CHANGE CONDUCTOR SIZE WITHOUT VERIFY THE TEMPERATURE RATING OF THE TERMINAL TO BE USED.
- PROVIDE #12 CONDUCTORS FOR ALL WIRING FOR CIRCUITS WHERE NOT SHOWN ON DRAWINGS. NUMBER AS REQUIRED IN CONDUIT SIZED PER NEC. PROVIDE CONDUIT OR METAL SHEATHED CABLE FOR ALL CONDUCTORS, UNLESS OTHERWISE ALLOWED.
- INSTALL AND CONNECT A CODE SIZE INSULATED GROUND CONDUCTOR IN ALL BRANCH CIRCUITS AND FEEDER CONDUITS. THESE EQUIPMENT GROUND WIRES MAY NOT BE SHOWN ON THE PLANS. INCREASE CONDUIT SIZE WHERE REQUIRED.
- VERIFY CONTROL REQUIREMENTS FOR ROOF EQUIPMENT, EXHAUST FANS, AIR CONDITIONING UNITS, AND FANS PRIOR TO ROUGH-IN.
- AN INTERSYSTEM BONDING TERMINATION FOR CONNECTION OF BONDING CONDUCTORS REQUIRED FOR COMMUNICATION SYSTEMS SHALL BE PROVIDED EXTERNAL TO ENCLOSURES AT THE SERVICE EQUIPMENT OR METERING EQUIPMENT ENCLOSURE. THE INTERSYSTEM BONDING TERMINATION SHALL CONSIST OF A SET OF TERMINALS WITH THE CAPACITY FOR CONNECTION OF NOT LESS THAN THREE COMMUNICATION SYSTEMS BONDING CONDUCTORS.
- PROVIDE ACOUSTIC PUTTY PADS INSTALLED AT ALL ELECTRICAL AND TELECOM DEVICE BOXES.

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

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201

SEAL



Date Signed: 12/16/25



NH - RK 230612.00
PKM - DESIGN TEAM PROJECT NO.

APPROVALS

PROJECT TITLE

City of Berkeley PSB - Detention Area Automation Upgrades

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

PERMIT SET

ISSUE DATE XXXXXX

N&T JOB NUMBER 230612.00

REVISIONS

DATE	DESCRIPTION
03/31/2025	Revision #1
06/05/2025	Revision #2
12/16/2025	Addendum 2

DRAWN BY RK CHECKED BY NH

SHEET TITLE

ELECTRICAL COVER SHEET

SHEET NUMBER

E0.1

C:\Users\toni\Documents\Berkeley PSB Redundant Cooling - CENTRAL - 2023_detailed_tom.bnl.rvt 6/29/2023 9:19:24 AM

LOAD CALCULATIONS			
EXISTING SERVICE CAPACITY	1600A	480V 3PH	
EXISTING LOADS			
EXISTING EQUIPMENT		329,724.0 VA	
25% OF EXISTING LOADS		82,431.0 VA	
NEW LOAD			
(1) HEAT PUMP 2.496KW @208V (1Φ)		2,496.0 VA	
(1) QUAD RECEPT. - RACK 1.3KW @120V (1Φ)		1,300.0 VA	
(1) SPECIALTY RECEPT. - RACK 3.744KW @208V (1Φ)		3,744.0 VA	
(1) RECEPTACLE 0.3KW @120V (1Φ)		300.0 VA	
(2) ACCESS CONTROL SYSTEM POWER 1.2KW @120V (1Φ)		2,400.0 VA	
TOTAL LOADS			
		=	422,395.0 VA
	AMPS AT 480/277V 3PH	=	508.1 AMPS
	+10% SPARE CAPACITY	=	50.8 AMPS
TOTAL		=	558.9 AMPS
THE EXISTING 1600A 480/277V SERVICE IS ADEQUATE			

PANELBOARD SCHEDULE - LUPS																																																																																																																																																																																							
DESIGNATION	FEEDER NO.	POLES & AMPS	LOAD, VA			C K	P H	C K	LOAD, VA			POLES & AMPS	FEEDER NO.	DESIGNATION																																																																																																																																																																									
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(E) COMPUTER RACK	1	3/30			1500	1	A	2			1500	3/30	1	(E) COMPUTER RACK																																																																																																																																																																									
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(E) COMPUTER RACK	1	3/30			1500	19	A	20			1500	3/30	1	(E) COMPUTER RACK																																																																																																																																																																									
(E) COMPUTER RACK	1	3/30			1500	21	B	22			1500	3/30	1	(E) COMPUTER RACK																																																																																																																																																																									
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(N) QUAD RECEPT. - RACK	2	1/20		1300		25	A	26						SPACE																																																																																																																																																																									
(N) SPECIALTY RECEPT. - RACK	3	2/30		1872		27	B	28						SPACE																																																																																																																																																																									
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SPACE						35	C	36				1/20		(E) RECEPT. MEC. MAINT.																																																																																																																																																																									
(E) COMM. RACK	1	1/20			1500	37	A	38				1/20		SPARE																																																																																																																																																																									
(E) COMM. RACK	1	1/20			1500	39	B	40			400	1/20		(E) CTRL. DAMPERS																																																																																																																																																																									
(E) COMM. RACK	1	1/20			1500	41	C	42			400	1/20		(E) MECH TOP																																																																																																																																																																									
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(E) ELEV. #1 CTRL. & CAB LGT.	1	1/20		500		1	A	2		900		1/20	1	(E) RECEPTACLES ROOF																																																																																																																																																																									
(E) ELEV. #2 CTRL. & CAB LGT.	1	1/20		580		3	B	4		700		1/20	1	(E) EF4																																																																																																																																																																									
(E) EXT. ROOF LIGHTS	1	1/20		100		5	C	6		900		1/20	1	(E) RECEPTACLES ROOF																																																																																																																																																																									
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RECEPTACLE:	2.0	5.6	1.00	2.0	5.6	PHASEWIRE:	3/4																																																																																																																																																																																
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SPECIAL LOADS:	0.0	0.0	1.00	0.0	0.0	MAINS TYPE:	MLO																																																																																																																																																																																
ELECTRIC HEATING:	0.0	0.0	1.00	0.0	0.0	BUSS TYPE:	COPPER																																																																																																																																																																																
WATER HEATING:	0.0	0.0	1.00	0.0	0.0	BRKR TYPE:	BOLT-IN																																																																																																																																																																																
EVSE/EVCS:	0.0	0.0	1.25	0.0	0.0	A.I.C. (RMS):	10,000																																																																																																																																																																																
						A Phase	3.3 Connected Kva																																																																																																																																																																																
						B Phase	3.0 Connected Kva																																																																																																																																																																																
						C Phase	2.0 Connected Kva																																																																																																																																																																																
TOTAL:	8.3	23.1		8.6	23.9																																																																																																																																																																																		

PANELBOARD SCHEDULE - ER1B																																																																																																																																																																																							
DESIGNATION	FEEDER NO.	POLES & AMPS	LOAD, VA			C K	P H	C K	LOAD, VA			POLES & AMPS	FEEDER NO.	DESIGNATION																																																																																																																																																																									
			LTG.	RECPT.	OTHER				LTG.	RECPT.	OTHER																																																																																																																																																																												
(E) RECEPTACLES	1	1/20		1280		1	A	2		2000		2/30	1	(E) HT1-1																																																																																																																																																																									
(E) RECEPTACLES	1	1/20		1440		3	B	4		2000		2/30	1	(E) HT1-1																																																																																																																																																																									
(E) WH1-1, WH1-2	1	1/20			500	5	C	6		2000		2/30	1	(E) HT1-1																																																																																																																																																																									
(E) B.C.U.-1 (TRANE)	1	1/20			1000	7	A	8		2000																																																																																																																																																																													
(E) RECEPTACLES RM 1126	1	1/20		360		9	B	10		200		1/20	1	(E) RECEPTACLES RM 1126																																																																																																																																																																									
(E) RECEPTACLES RM 1126	1	1/20		360		11	C	12		540		1/20	1	(E) RECEPTACLES RM 1126																																																																																																																																																																									
(E) REFRIG. RM 1149	1	1/20			700	13	A	14		500		1/20	1	(E) FIRE FLY RM. 1106																																																																																																																																																																									
(E) FREEZER RM 1149	1	1/20			700	15	B	16		1000		1/20	1	(E) RECEPTACLES RM 1126																																																																																																																																																																									
(E) SLIDING DOOR	1	1/20			1000	17	C	18		500		1/20	1	SPARE																																																																																																																																																																									
(E) SLIDING DOOR	1	1/20			1000	19	A	20		1200		2/20	1	(E) ROLL-UP DOOR																																																																																																																																																																									
(E) ROLL-UP DOOR	1	2/20			1200	21	B	22		1200																																																																																																																																																																													
					1200	23	C	24				1/20		SPARE																																																																																																																																																																									
(N) RECEPTACLE - TV	2	1/20		300		25	A	26		500		1/20		(N) WORK STATION RECEPT																																																																																																																																																																									
(N) ACCESS CONTROL SYSTEM	2	1/20			1200	27	B	28		500		1/20		(N) ACCESS CONTROL SYSTEM																																																																																																																																																																									
(N) ACCESS CONTROL SYSTEM	2	1/20			1200	29	C	30		500		1/20		(N) ACCESS CONTROL SYSTEM																																																																																																																																																																									
<table border="1"> <thead> <tr> <th>CATEGORY</th> <th colspan="2">CONN. LOAD</th> <th colspan="2">DESIGN LOAD</th> <th colspan="2">MOUNTING:</th> <th colspan="2">SURFACE</th> <th colspan="4">REMARKS:</th> </tr> <tr> <th></th> <th>KVA</th> <th>AMPS</th> <th>DIV.</th> <th>KVA</th> <th>AMPS</th> <th>VOLTS:</th> <th></th> <th></th> <th colspan="4"></th> </tr> </thead> <tbody> <tr> <td>LIGHTING:</td> <td>0.0</td> <td>0.0</td> <td>1.25</td> <td>0.0</td> <td>0.0</td> <td>120/208</td> <td></td> <td></td> <td colspan="4"></td> </tr> <tr> <td>RECEPTACLE:</td> <td>6.5</td> <td>18.0</td> <td>1.00</td> <td>6.5</td> <td>18.0</td> <td>PHASEWIRE:</td> <td>3/4</td> <td></td> <td colspan="4"></td> </tr> <tr> <td>MOTORS:</td> <td>21.6</td> <td>60.0</td> <td>1.00</td> <td>21.6</td> <td>60.0</td> <td>MAINS SIZE:</td> <td>225 AMPS</td> <td></td> <td colspan="4"></td> </tr> <tr> <td>SPECIAL LOADS:</td> <td>0.0</td> <td>0.0</td> <td>1.00</td> <td>0.0</td> <td>0.0</td> <td>MAINS TYPE:</td> <td>MLO</td> <td></td> <td colspan="4"></td> </tr> <tr> <td>ELECTRIC HEATING:</td> <td>0.0</td> <td>0.0</td> <td>1.00</td> <td>0.0</td> <td>0.0</td> <td>BUSS TYPE:</td> <td>COPPER</td> <td></td> <td colspan="4"></td> </tr> <tr> <td>WATER HEATING:</td> <td>0.0</td> <td>0.0</td> <td>1.00</td> <td>0.0</td> <td>0.0</td> <td>BRKR TYPE:</td> <td>BOLT-IN</td> <td></td> <td colspan="4"></td> </tr> <tr> <td>EVSE/EVCS:</td> <td>0.0</td> <td>0.0</td> <td>1.25</td> <td>0.0</td> <td>0.0</td> <td>A.I.C. (RMS):</td> <td>10,000</td> <td></td> <td colspan="4"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>A Phase</td> <td>10.5 Connected Kva</td> <td></td> <td colspan="4"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>B Phase</td> <td>9.8 Connected Kva</td> <td></td> <td colspan="4"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>C Phase</td> <td>7.8 Connected Kva</td> <td></td> <td colspan="4"></td> </tr> <tr> <td>TOTAL:</td> <td>28.1</td> <td>78.0</td> <td></td> <td>28.1</td> <td>78.0</td> <td colspan="8"></td> </tr> </tbody> </table>														CATEGORY	CONN. LOAD		DESIGN LOAD		MOUNTING:		SURFACE		REMARKS:					KVA	AMPS	DIV.	KVA	AMPS	VOLTS:							LIGHTING:	0.0	0.0	1.25	0.0	0.0	120/208							RECEPTACLE:	6.5	18.0	1.00	6.5	18.0	PHASEWIRE:	3/4						MOTORS:	21.6	60.0	1.00	21.6	60.0	MAINS SIZE:	225 AMPS						SPECIAL LOADS:	0.0	0.0	1.00	0.0	0.0	MAINS TYPE:	MLO						ELECTRIC HEATING:	0.0	0.0	1.00	0.0	0.0	BUSS TYPE:	COPPER						WATER HEATING:	0.0	0.0	1.00	0.0	0.0	BRKR TYPE:	BOLT-IN						EVSE/EVCS:	0.0	0.0	1.25	0.0	0.0	A.I.C. (RMS):	10,000												A Phase	10.5 Connected Kva												B Phase	9.8 Connected Kva												C Phase	7.8 Connected Kva						TOTAL:	28.1	78.0		28.1	78.0								
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NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201



APPROVALS

PROJECT TITLE

City of Berkeley PSB - Detention Area Automation Upgrades

2100 Martin Luther King Jr. Way, Berkeley, CA 94704

PERMIT SET

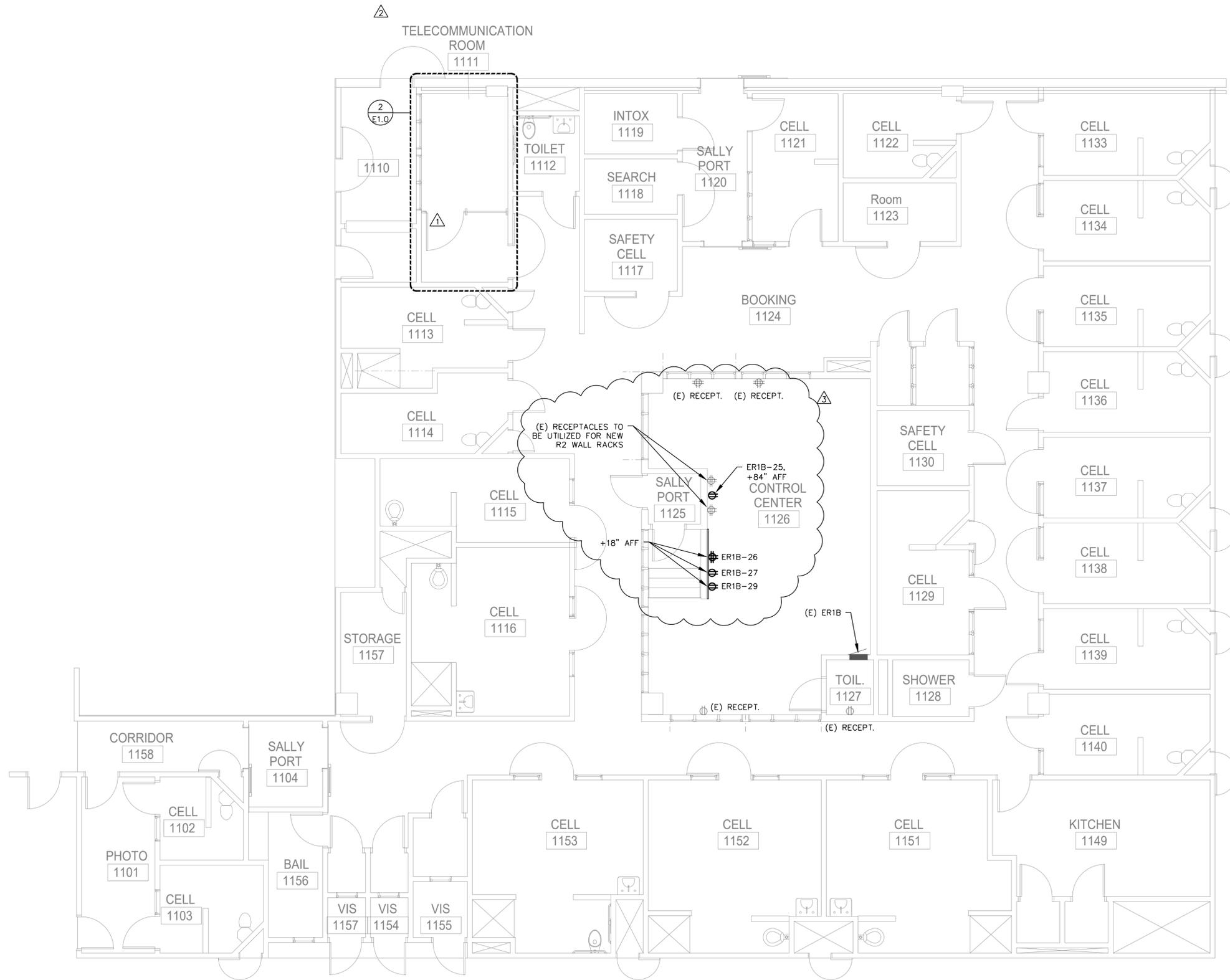
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N&T JOB NUMBER	230612.00
REVISIONS	
DATE	DESCRIPTION
1 03/31/2025	Revision #1
2 06/05/2025	Revision #2
3 12/16/2025	Addendum 2

DRAWN BY RK CHECKED BY NH

ELECTRICAL PANEL SCHEDULES

SHEET NUMBER
E0.3

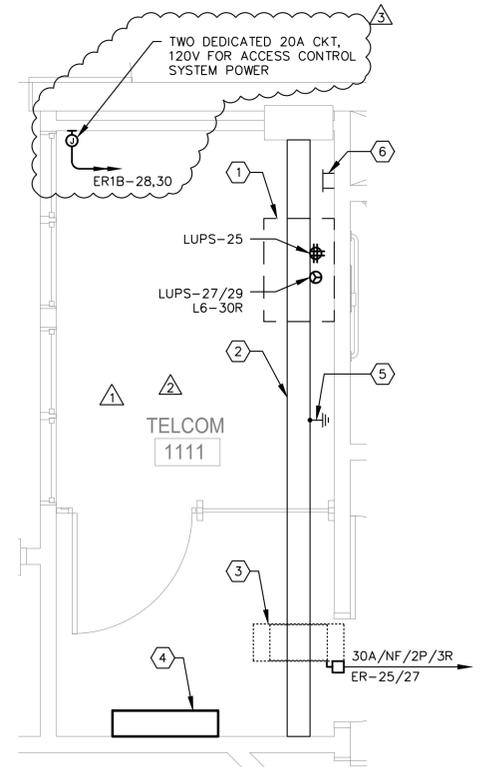
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1 ELECTRICAL POWER PLAN
FIRST FLOOR
SCALE: 3/16"=1'-0"
0 4' 8' 12'

GENERAL SHEET NOTES

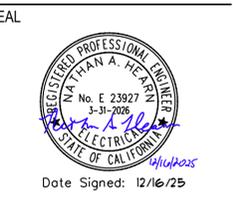
- A. NEW RECEPTACLES IN STORAGE ROOM 1111 TO BE MOUNTED ON THE CABLE TRAY. REFER TO TN4.01.
- SHEET KEYNOTES**
- 1 SERVER RACK. REFER TO TN4.01.
 - 2 18" WIDE CABLE RUNWAY SUPPORTED FROM CEILING. MOUNT BOTTOM AT 7'6" A.F.F.
 - 3 HEAT PUMP AND DISCONNECT ON ROOF. SEE SHEET M2.1
 - 4 FAN COIL. SEE SHEET M2.1
 - 5 GROUND EACH RACK, CABINET AND CABLE TRAY PER CEC ARTICLE 250 AND SPECIFICATION SECTION 27 05 29.
 - 6 PROVIDE MAIN GROUNDING BUS BAR WITH (6) #6 COMPRESSION LUGS. MINIMUM. MOUNT ON THE BACKBOARD BELOW THE CABLE TRAY.



2 ENLARGED ELECTRICAL POWER PLAN
SCALE: 3/8"=1'-0"
0 2' 4' 6'

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SHEET TITLE

**ELECTRICAL
POWER PLAN -
FIRST FLOOR**

SHEET NUMBER

E1.0



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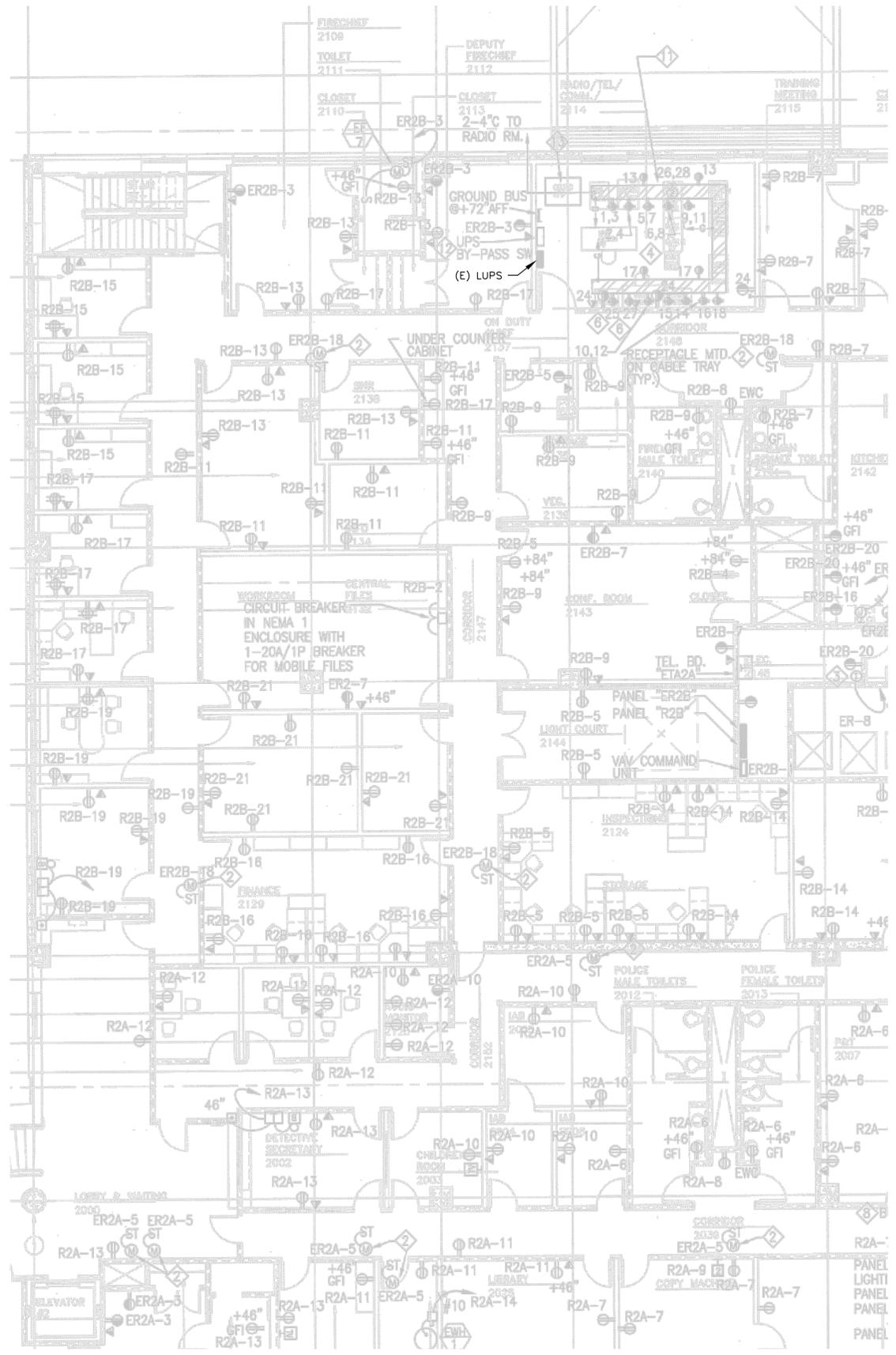
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SHEET TITLE

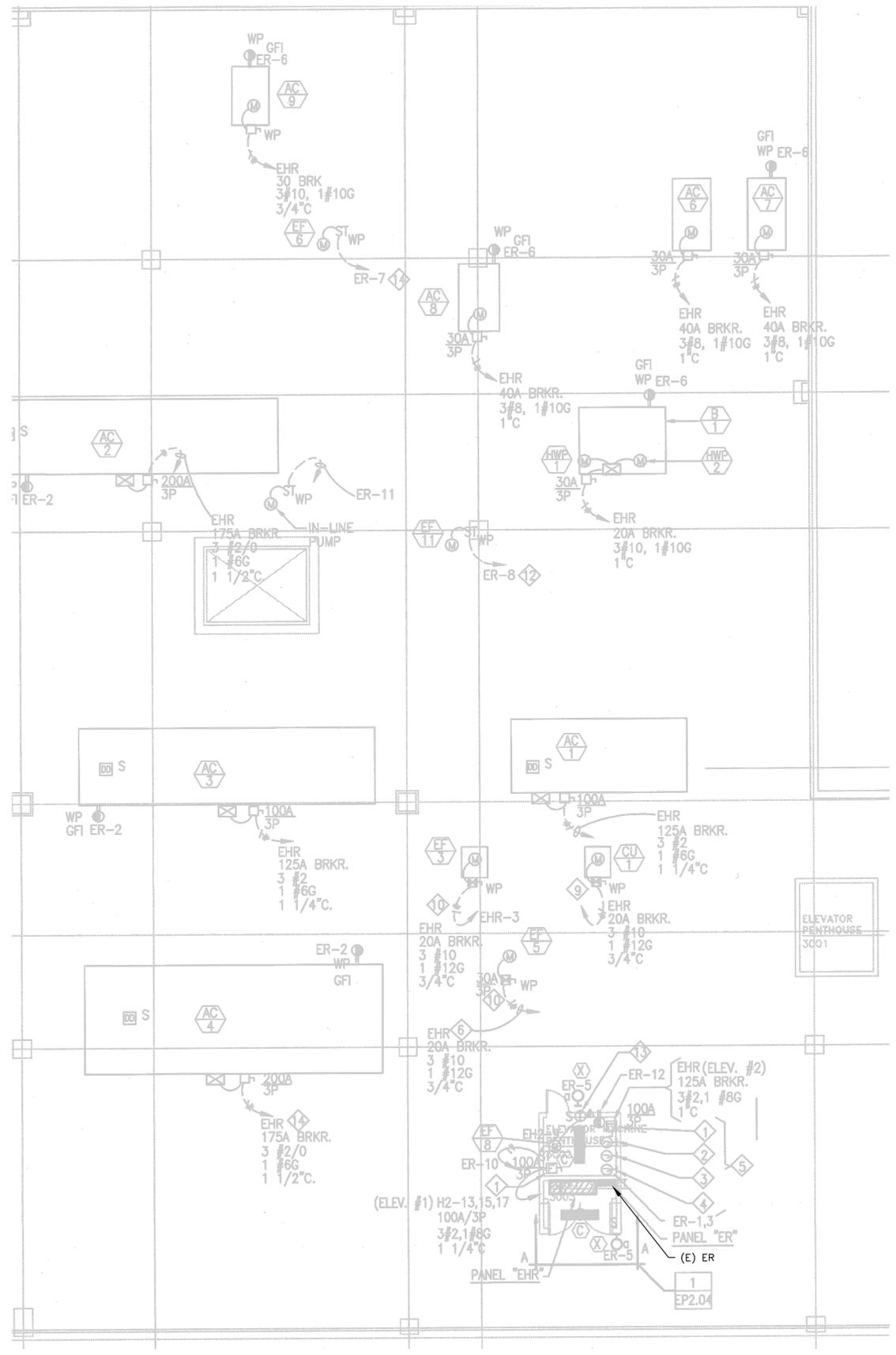
ELECTRICAL POWER PLAN FLOOR AND ROOF

SHEET NUMBER

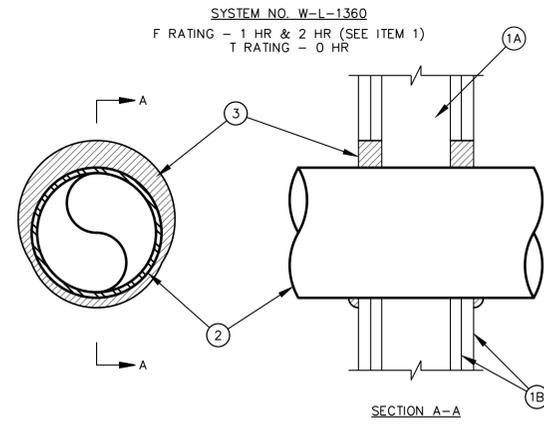
E1.1



1 ELECTRICAL POWER PLAN
PARTIAL SECOND FLOOR
SCALE: 1/8"=1'-0"
0 4' 8' 16'



2 ELECTRICAL POWER PLAN
PARTIAL ROOF
SCALE: 1/8"=1'-0"
0 4' 8' 16'



1. WALL ASSEMBLY -- THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300, U400 OR V400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
- A. STUDS -- WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. OC.
 - B. GYPSUM BOARD* -- THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300, U400 OR V400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 26-5/8 IN.
- THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. THROUGH-PENETRANT -- ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE AS SPECIFIED IN THE TABLE BELOW. (POINT CONTACT) TO MAX 1-1/2 IN. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
- A. STEEL PIPE -- NOM 24 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
 - B. IRON PIPE -- NOM 24 IN. DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE.
 - C. CONDUIT -- NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT OR NOM 4 IN DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING.
 - D. COPPER TUBING -- NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
 - E. COPPER PIPE -- NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

PIPE	MAX NOM. DIAM., IN.	MIN. - MAX. ANNULAR SPACE, IN.
A, B	10	0 to 1-1/2
A, B	24	0 to 7/8
C	6, 4	0 to 1-1/2
D, E	4	0 to 1-1/2
D, E	6	0 to 7/8

3. FILL, VOID OR CAVITY MATERIALS* -- CAULK -- MIN 5/8 IN. AND 1-1/4 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL ASSEMBLY FOR 1 OR 2 HR RATED WALLS, RESPECTIVELY. WHEN THE ANNULAR SPACE DOES NOT EXCEED 7/8 IN., IN 5/8 IN. THICKNESS OF FILL MATERIAL REQUIRED FOR BOTH 1 AND 2 HR RATED WALLS. AT THE POINT CONTACT LOCATION BETWEEN THROUGH PENETRANT AND BOARD, A MIN 1/2 IN. DIAM BEAD OF SEALANT SHALL BE APPLIED AT THE BOARD/ THROUGH PENETRANT INTERFACE ON BOTH SURFACES OF WALL ASSEMBLY.
- HILTI CONSTRUCTION CHEMICALS, DIV OF
HILTI INC -- CP601S ELASTOMERIC FIRESTOP SEALANT
- *BEARING THE UL CLASSIFICATION MARK

1 RATED WALL, FLOOR AND CEILING
CONDUIT PENETRATION DETAIL
NO SCALE

NOLL & TAM ARCHITECTS

729 Heinz Avenue
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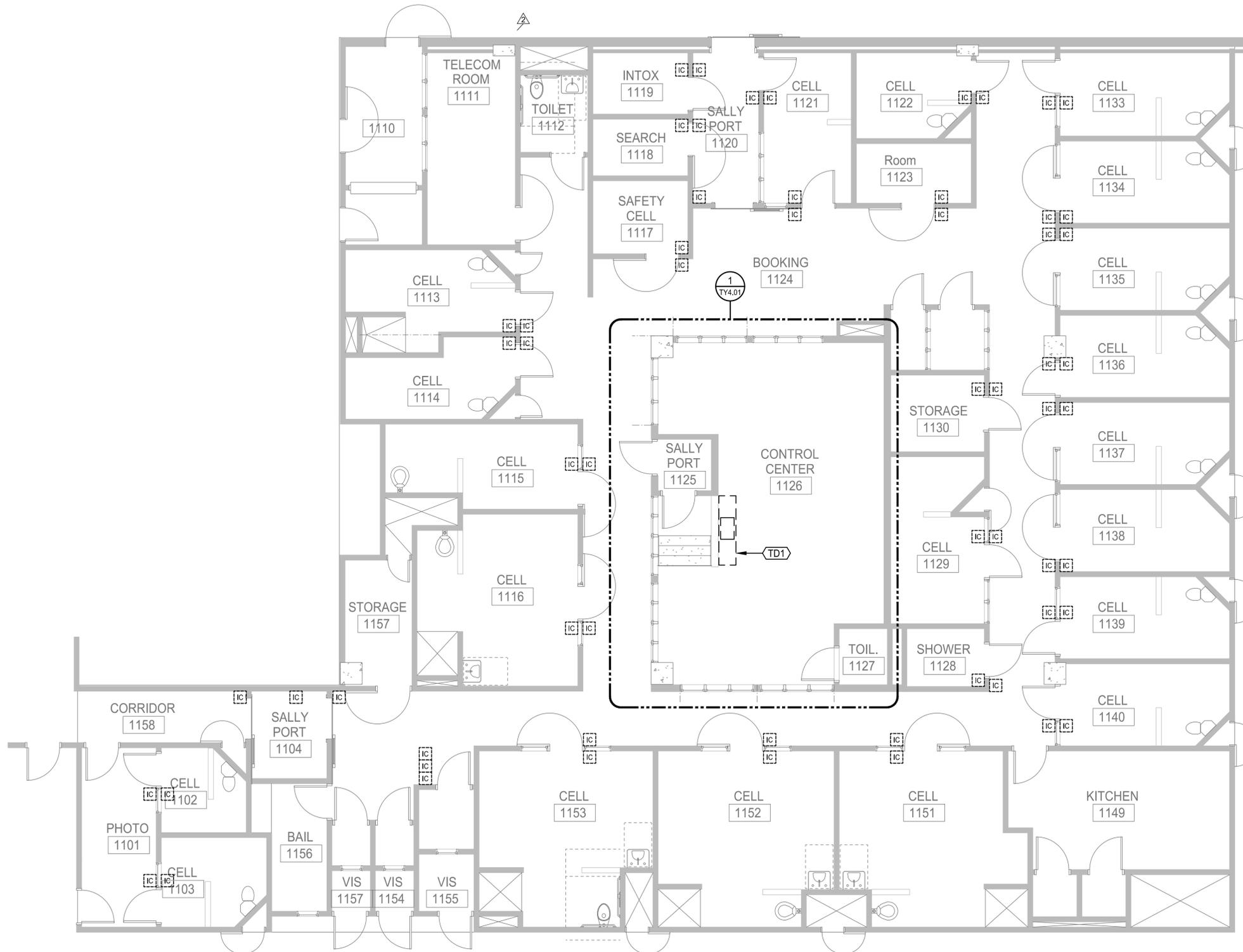
DRAWN BY **RK** CHECKED BY **NH**

SHEET TITLE

**ELECTRICAL
DETAILS**

SHEET NUMBER

E2.0



LEGEND

IC REMOVE EXISTING AUDIO INTERCOM AND REPLACE WITH NEW. SEE SHEET TY2.01. DO NOT REMOVE EXISTING CABLING SINCE IT WILL BE RE-USED.

TD1 REMOVE EXISTING PLC CONSOLE, MONITORS AND CASEWORK. DO NOT REMOVE EXISTING PLC CABLING SINCE IT WILL BE RE-USED.

KEYNOTES

TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201

SEAL

Smith & Fause & McDonald Inc.
Communications Engineering Group
351 8th Street
San Francisco, California 94103
(415) 255-9140 www.sfm.com

DATE _____

RAY ENRIQUEZ
REG. NO. 19021
EXPIRES 12/31/2025

APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

2100 Martin Luther King Jr. Way,
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PERMIT SET

ISSUE DATE 09/16/2025
N&T JOB NUMBER 21827.00

REVISIONS	DATE	DESCRIPTION
△	06/08/2025	PLAN CHECK 2
△	12/10/2025	ADDENDUM 2

DRAWN BY **IK, TT** CHECKED BY **RE**

SHEET TITLE

**ELECTRONIC SECURITY SYSTEMS - FIRST FLOOR
DEMOLITION PLAN**

SHEET NUMBER

TD2.01

1 ELECTRONIC SECURITY SYSTEMS - FIRST FLOOR DEMOLITION PLAN
3/16"=1'-0" NORTH

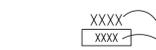
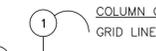
COMMUNICATIONS SYSTEMS GENERAL NOTES

- REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS.
- PROVIDE CONDUIT, BOXES AND FITTINGS SHOWN ON COMMUNICATIONS SYSTEMS (TN) SYSTEM DRAWINGS UNDER THE WORK OF SECTION 27 05 33 COMMUNICATIONS RACEWAYS, BOXES AND FITTINGS. UNLESS OTHERWISE INDICATED, PROVIDE 1 INCH TRADE SIZE MINIMUM. PROVIDE RACEWAY SIZE AS REQUIRED FOR A MAXIMUM OF 40 PERCENT WIRE FILL.
- PROVIDE FIRESTOPPING UNDER THE WORK OF SECTION 27 05 33 COMMUNICATIONS RACEWAYS, BOXES AND FITTINGS.
- LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON THE COMMUNICATIONS SYSTEMS DRAWINGS.
- DEVICE QUANTITIES SHOWN ON FLOOR PLANS AND REFLECTED CEILING PLANS TAKE PRECEDENCE OVER DEVICE QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS.
- QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS TAKE PRECEDENCE OVER QUANTITIES SHOWN ON RACK ELEVATIONS.
- QUANTITIES SHOWN ON DEVICE SCHEDULES TAKE PRECEDENCE OVER QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS, FLOOR PLANS AND REFLECTED CEILING PLANS.
- LOCATIONS SHOWN ON LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON SMALL SCALE DRAWINGS.

LEGEND

	SURFACE RACEWAY. FOR COMMUNICATIONS AND POWER SYSTEM PROVIDED UNDER DIV. 27.
	MARK INDICATES RACEWAY DROP FROM CEILING. COORDINATE EXACT LOCATION WITH DIV. 27 PLANS.
	NEW WIRE AND/OR CABLE IN EXPOSED CONDUIT OR RACEWAY. FILL PER SCHEDULE, PLANS AND SPECIFICATION SECTION 27 05 33.
	NEW WIRE AND/OR CABLE INSIDE NEW CONDUIT WALLS OR IN CEILING.
	CABLE/RACEWAY TURNS UP
	CABLE/RACEWAY TURNS DOWN
	HOME RUN
	CONDUIT TO CABLE TRANSITION POINT
	EXPOSED CABLE UNDER CEILING SUPPORTED BY CLIPS OR STAPLES @ 1'-0" O.C.
	WIRING NOTES
	KEYNOTES
	CABLE RUNWAY OR CABLE TRAY. TYPE & SIZE AS INDICATED ON PLANS AND SPECIFICATIONS SECTION 27 05 36.

GENERAL SYMBOLS

	ROOM KEY ROOM NAME ROOM NUMBER		DETAIL SYMBOL DRAWING NUMBER SHEET NUMBER
	DRAWING NUMBER SHEET NUMBER		COLUMN GRID GRID LINES
	BLDG. SECTION KEY DRAWING NUMBER SHEET NUMBER		BUILDING LABEL
	WALL SECTION KEY DRAWING NUMBER SHEET NUMBER		DRAWING MATCH LINE
	ELEVATION KEY DRAWING NUMBER SHEET NUMBER		REVISION SYMBOL REVISION NUMBER

MATERIAL & EQUIPMENT LEGEND

1IDP	1" INNERDUCT, PLENUM RATED
2IDP	2" INNERDUCT, PLENUM RATED
C6APP	CATEGORY 6A PATCH PANEL
C6PP	CATEGORY 6 PATCH PANEL.
FOH-P	FIBER OPTIC CABLE HYBRID, PLENUM RATED
FOH-OPR	FIBER OPTIC CABLE HYBRID, OUTSIDE PLANT RISER RATED
FOM-OPR	FIBER OPTIC CABLE, MULTI MODE OUTSIDE PLANT RISER RATED
FOS-OPR	FIBER OPTIC CABLE, SINGLE MODE OUTSIDE PLANT RISER RATED
FPP	FIBER PATCH PANEL
FSC	FIBER SPLICE CLOSURE
FSP	FIBER SPLICE PANEL
FTB	FIBER TERMINAL BOX
IDF	INTERMEDIATE DISTRIBUTION FACILITY
MDF	MAIN DISTRIBUTION FACILITY.
MM	MULTI MODE OPTICAL FIBER
MMP	MULTIMEDIA PLATE
MPOE	MINIMUM POINT OF ENTRY
OSP	OUTSIDE PLANT
SM	SINGLE MODE OPTICAL FIBER
T.C.	TELECOMMUNICATIONS CLOSET
T-OPD	TELEPHONE CABLE, OUTSIDE PLANT, DUCTWAY
UTP6A-4P	UNSHIELDED TWISTED PAIR, CAT. 6A PLENUM
UTP6-4P	UNSHIELDED TWISTED PAIR, CAT. 6 PLENUM
110TBXX	110 TERMINAL BLOCK, CAT.5, XX-NO OF PAIRS
110PWTBXX	110 TERMINAL BLOCK, PRE-WIRED W/50 PIN CONNECTOR, XX- NO OF PAIRS
PWC3PP	PRE-WIRED, 50 PIN CONNECTOR (REAR) & RJ45 (FRONT) CAT.3 PATCH PANEL
TB15	TERMINAL BLOCK WITH 15 AMP SWITCH BLADE.

NOTE:

SEE SPECIFICATION SECTIONS FOR REFERENCE DESCRIPTIONS AND REQUIREMENTS. FOR OTHER MATERIAL AND EQUIPMENT TYPES REFER TO SPECIFICATIONS.

JUNCTION BOX SCHEDULE

SYMBOL	H (INCHES)	W (INCHES)	(INCHES)
J1	6	6	4
J2	8	8	4
J3	12	12	4
J4	12	12	6
J5	12	12	8
J6	16	12	6
J7	18	18	8
J8	20	16	6
J9	20	16	8
J10	20	20	6
J11	20	20	8
J12	24	20	6
J13	24	20	8
J14	24	24	8
J15	30	24	8
J16	30	30	8
J17	36	30	8
J18	36	36	8

SUFFIX:

NONE	- NEMA 1	C	- NEMA 4
A	- NEMA 12	D	- NEMA 4X
B	- NEMA 3R		

EXAMPLE: J16C= 30"H X 30"W X 8"D HINGED NEMA 4 JBOX.

NOTE 1

ALL JUNCTION BOXES TO BE HINGED TYPE, PROVIDED WITHOUT PRE-PUNCHED KNOCKOUTS. PENETRATIONS IN JUNCTION BOXES SHALL BE CUT OR PUNCHED AS REQUIRED FOR INSTALLATION. PAINT ALL INTERIOR BOXES TO MATCH WALL FINISH. COORDINATE FINISH WITH ARCH. PLANS.

ABBREVIATIONS

1SR-1	SINGLE CHAMBER SURFACE RACEWAY
3SR-2.5	THREE CHAMBER SURFACE RACEWAY
A.D.A.	AMERICANS WITH DISABILITIES ACT
ADF	AREA DISTRIBUTION FACILITY
A.F.C.	ABOVE FINISHED CEILING
A.F.F.	ABOVE FINISHED FLOOR
ALT	ALTERNATE
A.M.F.F.	ABOVE MEZZANINE FINISHED FLOOR
BDF	BUILDING DISTRIBUTION FACILITY
B.F.C.	BELOW FINISHED CEILING
BLDG.	BUILDING
B.O.H.	BACK OF HOUSE
C.	CONDUIT
CAT.	CATEGORY
CBC	CALIFORNIA BUILDING CODE
CEC	CALIFORNIA ELECTRICAL CODE
COMM.	COMMUNICATIONS
C.L.	CENTERLINE
C.O.	CONDUIT ONLY
CONT.	CONTINUATION
CS	COMMUNICATIONS SYSTEM
(D)	DEMOLISH EXISTING
DED	DEDUCTIVE
φ, DIA.	DIAMETER
DIV	DIVISION
(E)	EXISTING
EA.	EACH
EIA	ELECTRONIC INDUSTRIES ASSOCIATION
ELEV.	ELEVATION
E.O.L.	END OF LINE
EQPT.	EQUIPMENT
FIN	FINISHED
FUT	FUTURE
H.R.	HOME RUN
HT.	HEIGHT
J. JBOX	JUNCTION BOX
LAN	LOCAL AREA NETWORK
MATV	MASTER ANTENNA TELEVISION
MAX.	MAXIMUM
MIN.	MINIMUM
MOD.	MODULAR
MON.	MONUMENT
(N)	NEW
NEC	NATIONAL ELECTRICAL CODE
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.E.	OWNER FURNISHED EQUIPMENT
OPP.	OPPOSITE
PNL	PANEL
PROJ.	PROJECT
P.S.R.H	PROJECT STANDARD RECEPTACLE HEIGHT +18" AFF. U.O.N.
P.S.S.H.	PROJECT STANDARD SWITCH HEIGHT +48" AFF TO Ⓢ, U.O.N.
RE:	REFER TO
REF.	REFERENCE
SIM.	SIMILAR
SM	SINGLE MODE OPTICAL FIBER
SN	SHEET NOTE
SP	SHIELDED PAIR - SEE SPECIFICATIONS
SPEC	SPECIFICATION
S.R.	SURFACE RACEWAY
STD	STANDARD
STP	SHIELDED TWISTED PAIR
T.C.	TELECOMMUNICATIONS CLOSET
TEL	TELEPHONE
TELCOM	TELECOMMUNICATIONS
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
T-OPD	TELEPHONE CABLE, OUTSIDE PLANT, DUCTWAY
TP	TWISTED PAIR
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
W/	WITH
WP	WEATHERPROOF

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APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

2100 Martin Luther King Jr. Way,
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BID SET

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N&T JOB NUMBER 21827.00

REVISIONS
DATE DESCRIPTION

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SHEET TITLE
**COMMUNICATIONS -
GENERAL NOTES,
SYMBOL, LEGEND,
ABBR. & JBOX
SCHEDULE**

SHEET NUMBER

TN0.01

SYMBOL	DEVICE	FUNCTION OR SERVICE	LOCATION	WORK OF	ROUGH-IN	RACEWAY	ELEVATION	CABLE FILL & HOMERUN DESTINATION, U.O.N.	FINISH	WEIGHT, LB	DETAIL SHEET(S)
CAM 1D V	DATA OUTLET FOR POE CCTV CAMERA.	SECURITY	INDICATED	27 05 33, 27 15 00	4" SQUARE x 2-1/8" DEEP BOX WITH 1 GANG RING. PROVIDE BLANK FACEPLATE AND A 1-PORT SMB INSIDE THE BOX.	R1	CEILING	1 PLENUM CAT 6A. HR TO SERVER ROOM 1111. NO EXPOSED CABLE ALLOWED.			

NOTE NO. DEVICE NOTES

LOCATION NOTES

RACEWAY NOTES

R1 3/4" C. UP TO ACCESSIBLE CEILING.

R2 1" C. UP TO ACCESSIBLE CEILING.

R3 1.25" C. UP TO ACCESSIBLE CEILING.

ACCESSIBLE CEILING IS A T-BAR OR SIMILAR GRID BASED, PANELIZED REMOVABLE CEILING MEETING THE DEFINITION FOR ACCESSIBLE WIRING METHODS IN ARTICLE 100 OF THE CALIFORNIA ELECTRICAL CODE.

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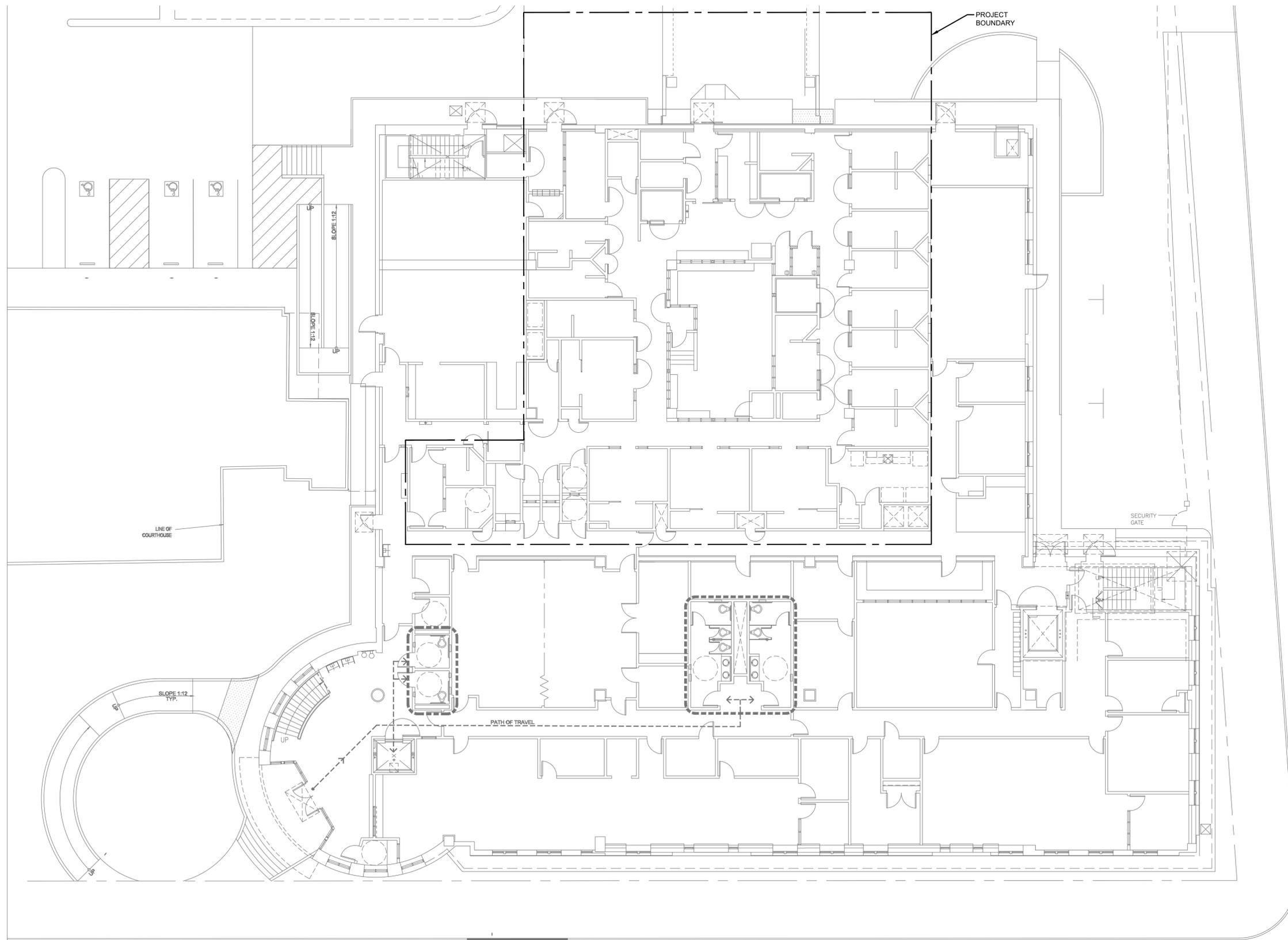
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SHEET TITLE

COMMUNICATIONS -
SYMBOL SCHEDULE

SHEET NUMBER

TN0.02



1 COMMUNICATIONS - FIRST FLOOR DEVICE PLAN OVERALL

3/32"=1'-0"

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Ray Enriquez
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RAY ENRIQUEZ
REG. NO. 19091
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SHEET TITLE

**COMMUNICATIONS -
FIRST FLOOR DEVICE
PLAN OVERALL**

SHEET NUMBER
TN1.01

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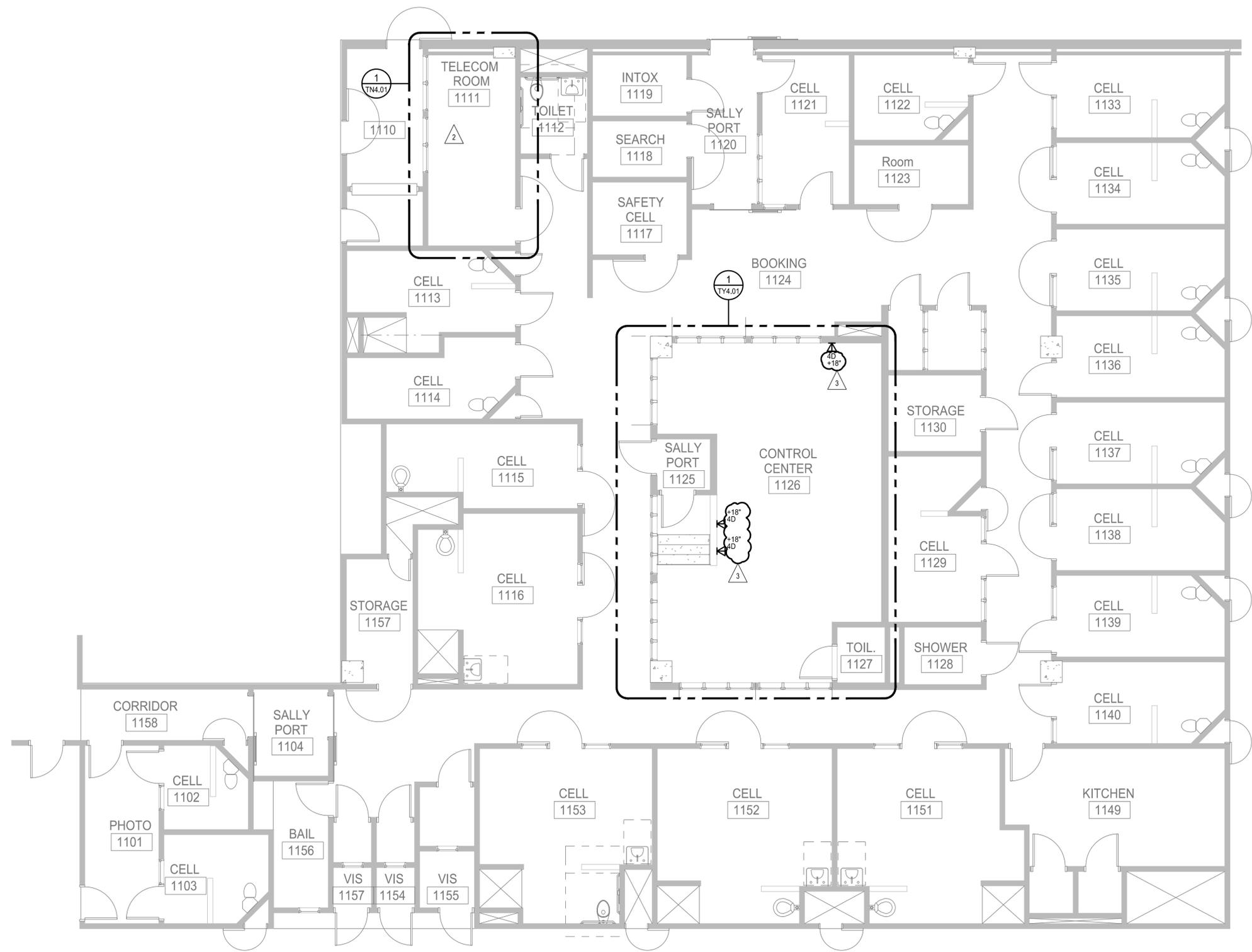
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ISSUE DATE	09/16/2025
N&T JOB NUMBER	21827.00
REVISIONS	
△ DATE	DESCRIPTION
△ 06/06/2025	PLAN CHECK 2
△ 12/10/2025	ADDENDUM 2

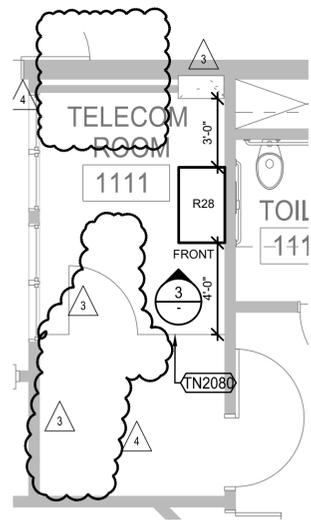
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SHEET TITLE

**COMMUNICATIONS -
FIRST FLOOR DEVICE
PLAN**

SHEET NUMBER
TN2.01

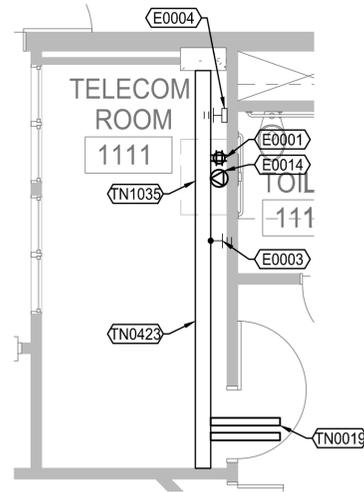


1 COMMUNICATIONS - FIRST FLOOR DEVICE PLAN
3/16"=1'-0" NORTH



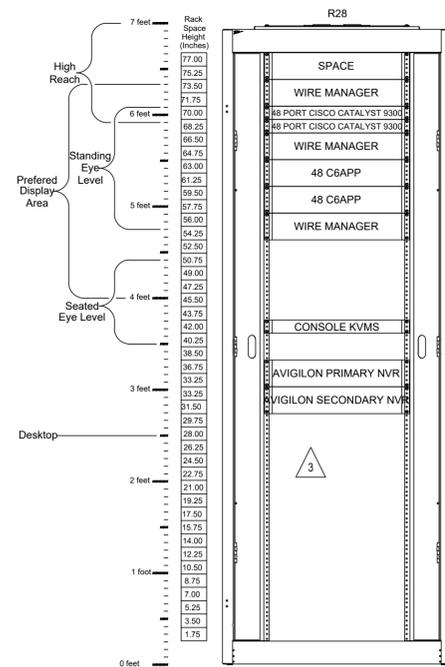
1 COMMUNICATIONS - TELECOM ROOM 1111 ENLARGED PLAN

1/4"=1'-0" NORTH



2 COMMUNICATIONS - TELECOM ROOM 1111 ENLARGED RCP

1/4"=1'-0" NORTH



3 RACK ELEVATIONS

1"=1'-0"

KEYNOTES	
A0001	NOT USED.
E0001	PROVIDE A QUAD 5-20R RECEPTACLE ON A DEDICATED CIRCUIT, PER R28 SERVER RACK, MOUNTED ON THE CABLETRAY.
E0003	GROUND EACH RACK, CABINET AND CABLE TRAY PER CEC ARTICLE 250 AND SPECIFICATION SECTION 27 05 29.
E0004	PROVIDE MAIN GROUNDING BUS BAR WITH (6) #6 COMPRESSION LUGS, MINIMUM. MOUNT ON THE BACKBOARD BELOW THE CABLE TRAY.
E0014	PROVIDE ONE L6-30R, PER R28 SERVER RACK, MOUNTED TO SIDE OF CABLE TRAY.
E0025	NOT USED.
TN0019	(2) 4" C.
TN0423	PROVIDE 12" WIDE CABLE RUNWAY (CR-12) SUPPORTED FROM CEILING/STRUCTURE. MOUNT BOTTOM @ 7'-6" A.F.F.
TN1035	PROVIDE WATERFALL DROPOUTS FOR EACH RACK, TYP.
TN1050	NOT USED.
TN1060	NOT USED.
TN2080	CHAIN LINK FENCE.

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REVISIONS	DATE	DESCRIPTION
3	06/08/2025	PLAN CHECK 2
4	12/10/2025	ADDENDUM 2
5	01/21/2026	ADDENDUM 4

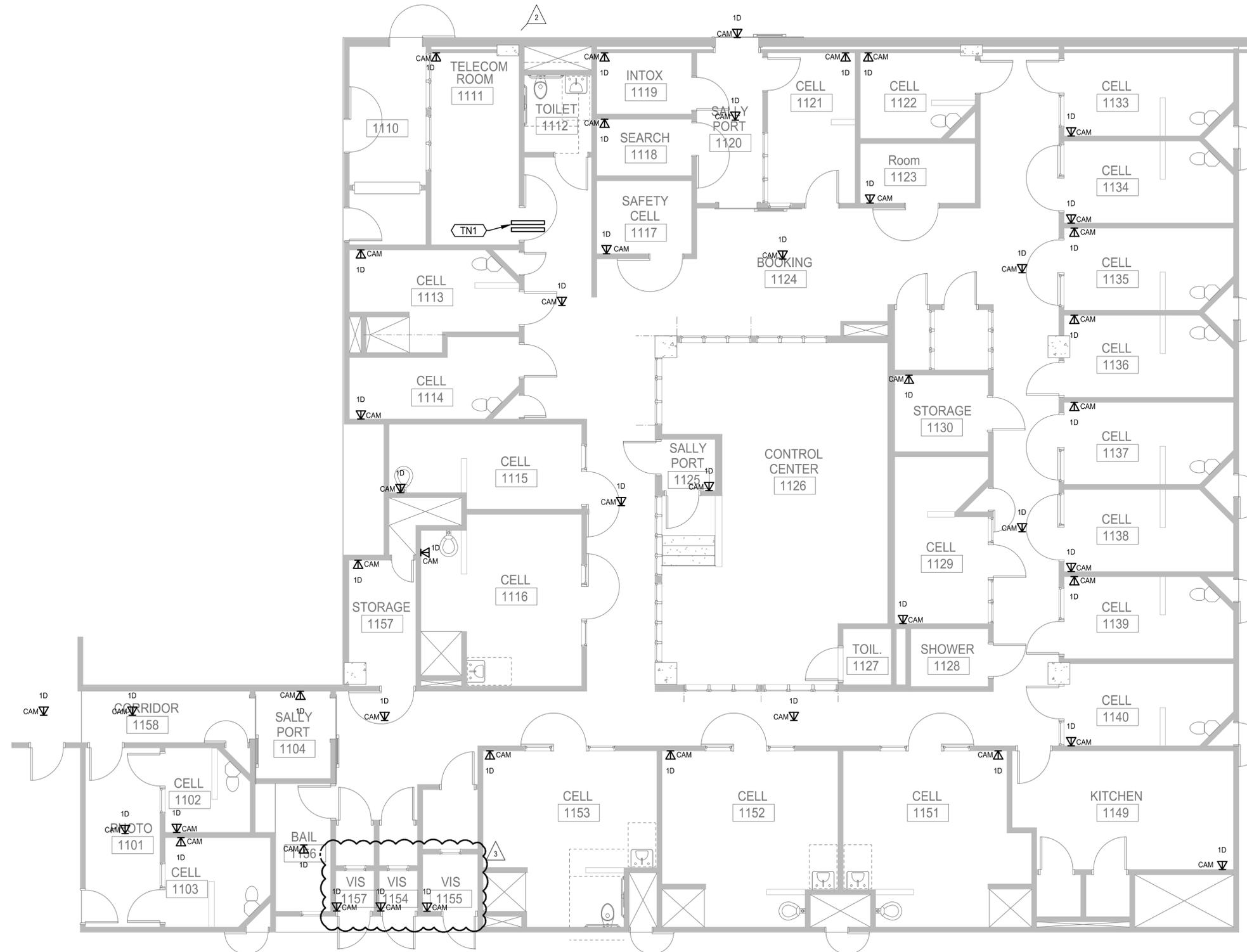
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SHEET TITLE
**COMMUNICATIONS -
TELECOM ROOM 1111
ENLARGED PLANS &
ELEVATIONS**

SHEET NUMBER

TN4.01

KEYNOTES	
TN	COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.
	(2) 4" C.



1 COMMUNICATIONS - FIRST FLOOR DEVICE RCP 3/16"=1'-0"  NORTH

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	06/08/2025	PLAN CHECK 2
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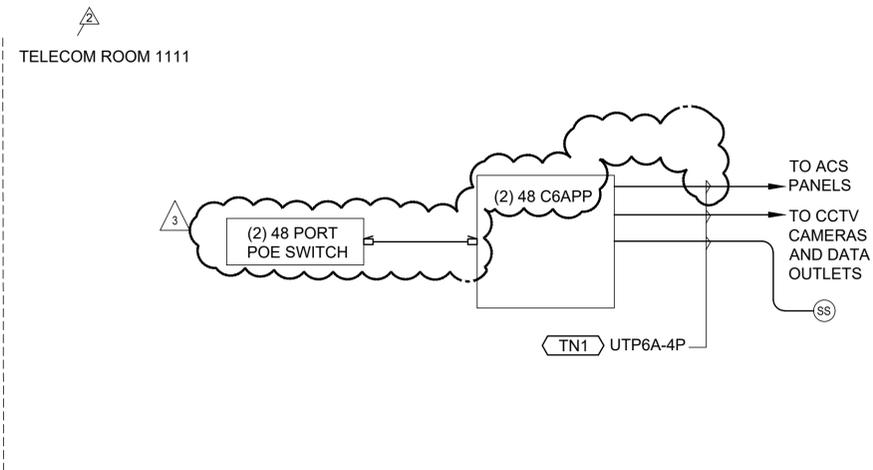
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SHEET TITLE

**COMMUNICATIONS -
FIRST FLOOR DEVICE
RCP**

SHEET NUMBER

TN6.01



1 STRUCTURED CABLING SINGLE LINE DIAGRAM

NTS

KEYNOTES

TN1 TO CCTV CAMERAS, VIDEO INTERCOM (VI) AND ACS PANELS. PROVIDE PLENUM RATED CAT 6A CABLES (UTP6A-4P). REFER TO PLANS FOR QUANTITY.

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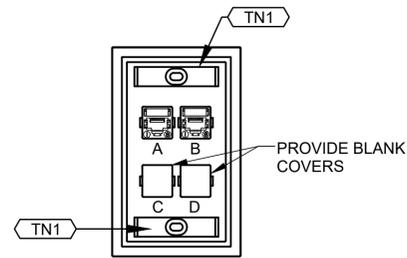
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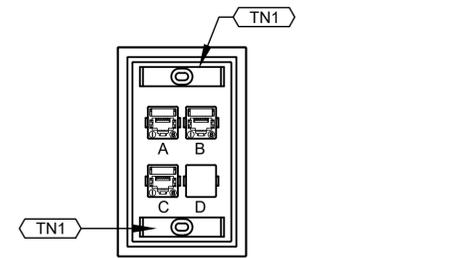
COMM. - STRUCTURED
CABLING SINGLE LINE
DIAGRAM

SHEET NUMBER

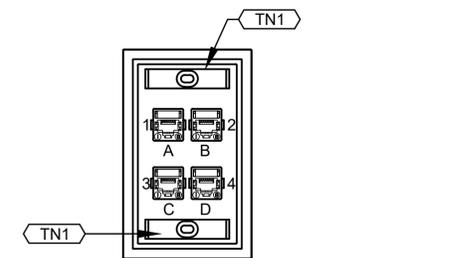
TN7.01



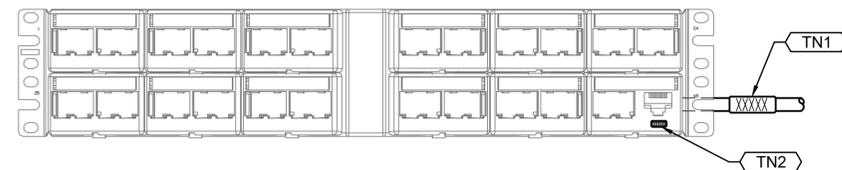
1 2D OUTLET NTS



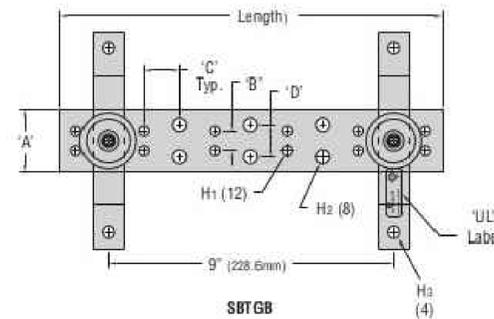
2 3D OUTLET NTS



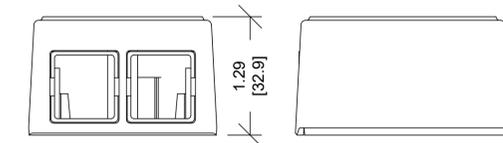
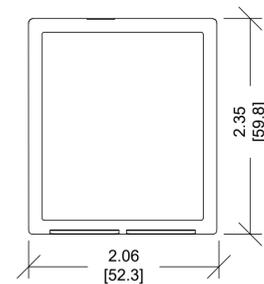
3 4D OUTLET NTS



4 FLAT PATCH PANEL AND CABLE LABELING NTS



5 GROUNDING BUS BAR DETAIL NTS



6 TWO PORT SMB NTS

SHEET NOTES

- 1 RECEPTACLE ELEVATIONS ARE PROVIDED AS A CONVENIENCE FOR THE CONTRACTOR ONLY. RECEPTACLE ELEVATIONS GENERALLY REFLECT DESIGN BASIS OR SYSTEMS DESIGN BASIS ALTERNATES. CONTRACTOR TO COORDINATE ELEVATION WITH ALTERNATE SUBMITTED.
- 2 RECEPTACLE ELEVATIONS MAY BE INCOMPLETE. REFER TO RECEPTACLE SCHEDULE FOR COMPLETE DETAILS.
- 3 WHERE RECEPTACLE ELEVATIONS AND RECEPTACLE SCHEDULE CONFLICT. RECEPTACLE SCHEDULE TAKES PRECEDENCE OVER RECEPTACLE ELEVATIONS.

KEYNOTES

- TN TELECOMMUNICATIONS SYSTEMS, WORK OF DIVISIONS 27.
- TN1 LABEL THE OUTLET WITH THE IDF ROOM NUMBER, STATION NUMBER, JACK LETTER (EXAMPLE: "132-1-A" WHERE "132" IS THE IDF, "1" IS THE STATION NUMBER "A" IS THE JACK LETTER).
- TN2 LABEL THE CABLE AND PATCH PANEL PORTS. MATCH THE JACKS LABEL.

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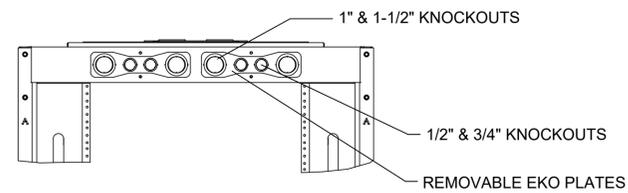
COMM. - DETAILS -
DEVICES

SHEET NUMBER

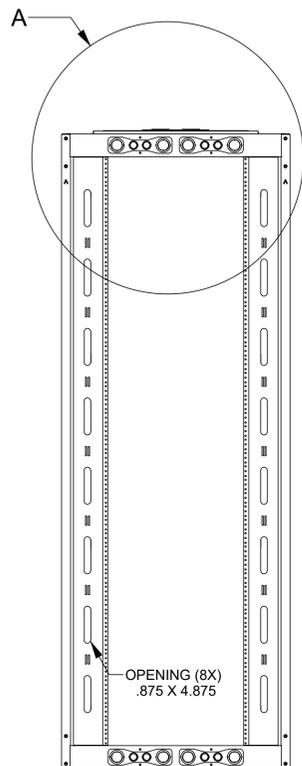
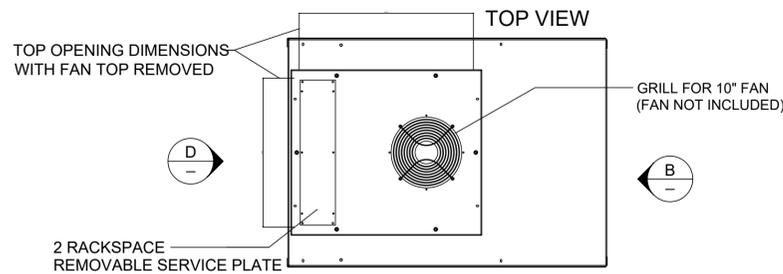
TN9.01

DIMENSIONS					
TYPE	OVERALL HEIGHT NOT TO EXCEED	VPO=VERTICAL PANEL OPENING	PANEL WIDTH	FRAME WIDTH	FRAME DEPTH
R28	84"	44 EIA RACK UNITS	19"	30"	42"

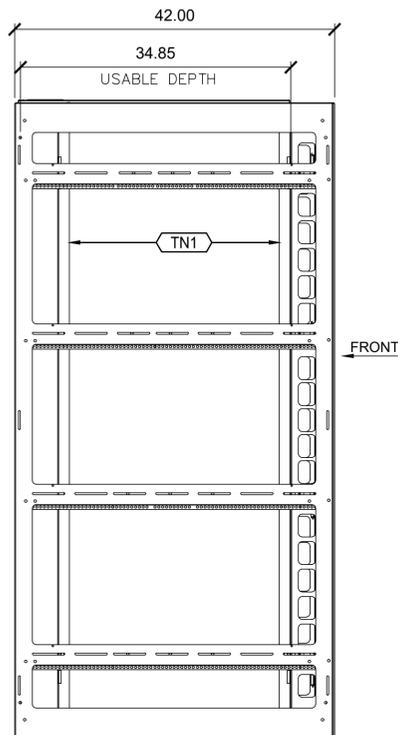
KEYNOTES	
TN	TELECOMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.
TN1	RACK RAILS, COMPLY WITH ANSI/EIA-310-D. POSITION ADJUSTABLE FRONT TO REAR.
TN2	LOCKING FRONT AND REAR FULL MESH DOORS.



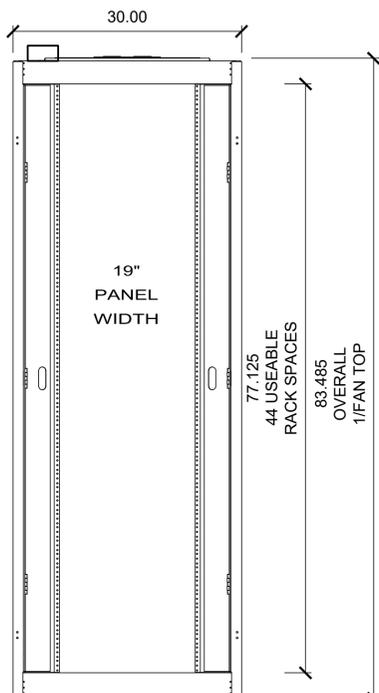
DETAIL A
SCALE: 070



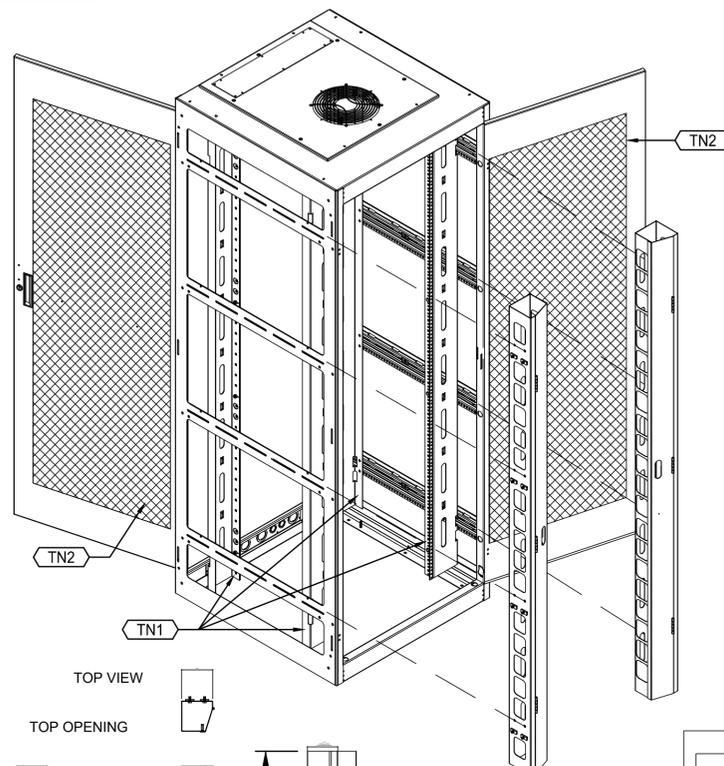
D REAR VIEW



C SIDE VIEW

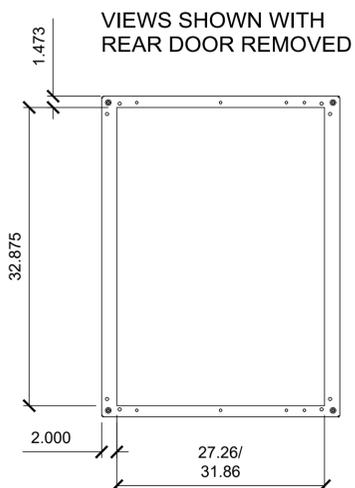


B FRONT VIEW



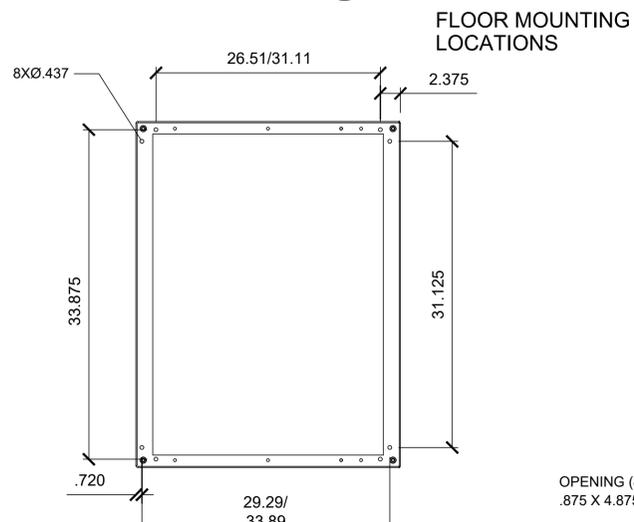
TOP VIEW

TOP OPENING



VIEWS SHOWN WITH REAR DOOR REMOVED

BOTTOM VIEW



FLOOR MOUNTING LOCATIONS

OPENING (8X) .875 X 4.875

OPENING 2.250 X 3.000 (21X THIS SIDE 17X OTHER SIDE) CABLE DUCT

REAR VIEW

SIDE VIEW

FRONT VIEW (DOOR OPEN)

MAX RACK LOADING = 900#

SECURELY FASTEN RACK TO FLOOR WITH ANCHOR BOLTS, 1/2" DIA. HILTI KB-T22 (ICC ESR 4266) WITH 3-1/4" EMBED 1 AT EACH CORNER, MIN.

SOLID HINGED DOOR WITH 4 POINT MAGNETIC CLOSURE

EXCEPT AS OTHERWISE DIRECTED, PLACE ANY BLANK PANELS AS NEAR TO THE TOP OF THE RACK AS POSSIBLE

LOAD HEAVY EQUIPMENT (UNINTERRUPTED POWER SUPPLIES, POWER AMPLIFIERS, ETC.) AS NEAR TO THE BOTTOM OF THE RACK AS POSSIBLE

1 RACK R28 DETAILS AND ELEVATIONS

NTS

2 RACK LOADING DETAIL

SHOWN WITHOUT THE DOOR.

NTS

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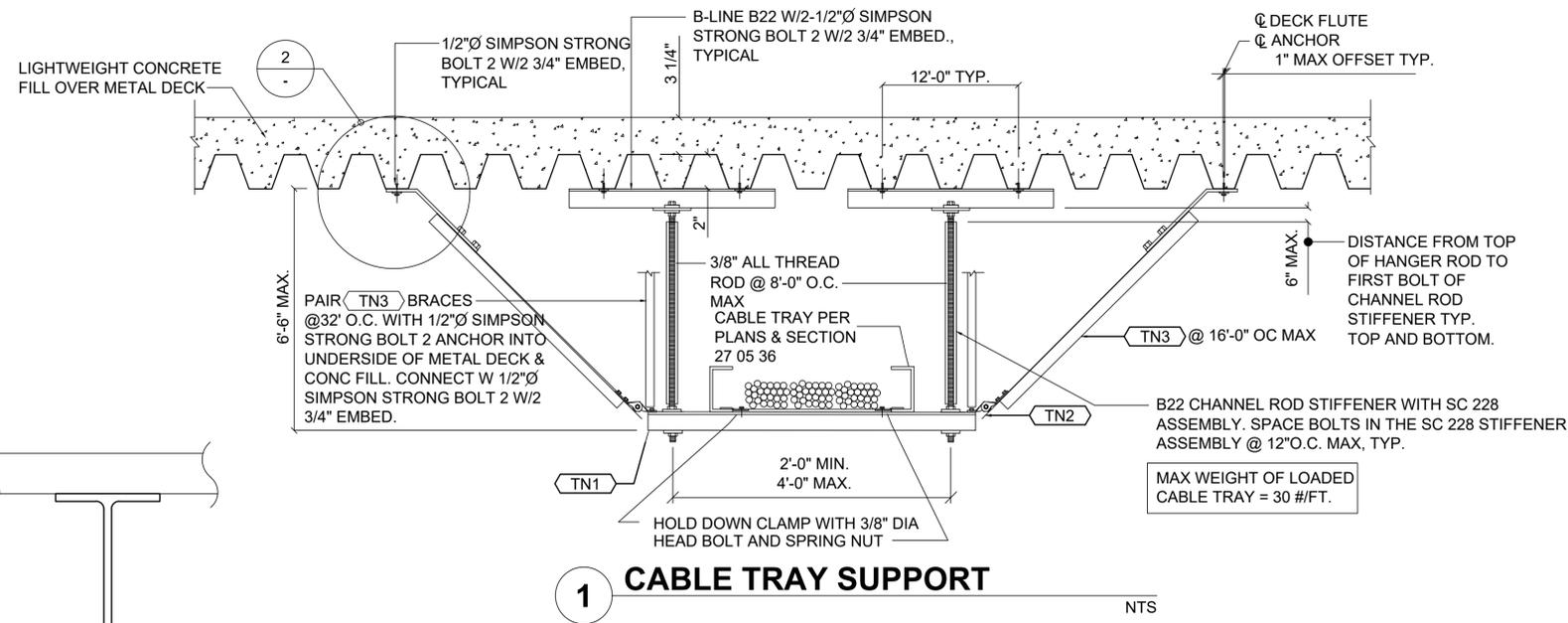
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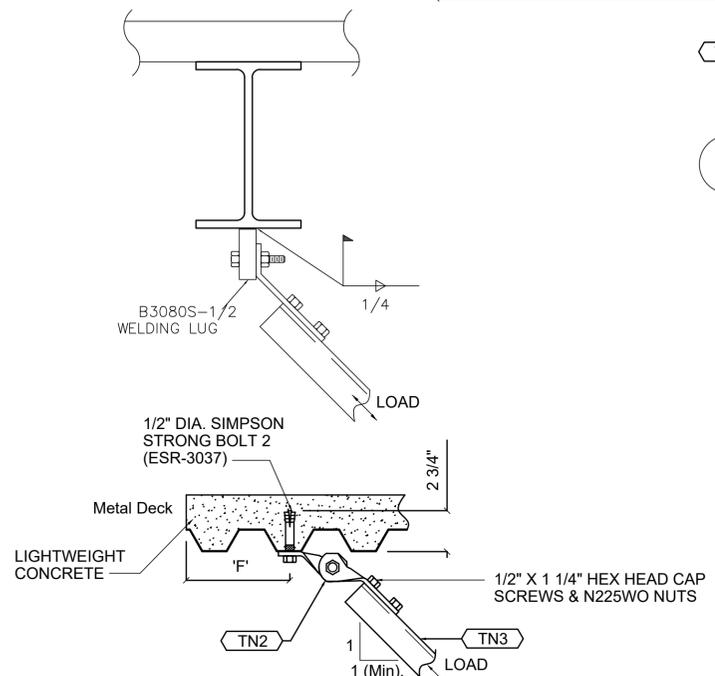
COMM. - DETAILS -
RACK R28

SHEET NUMBER

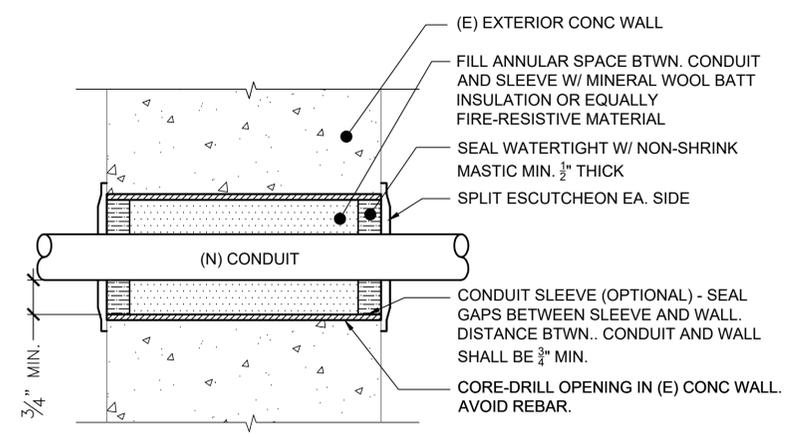
TN9.02



1 CABLE TRAY SUPPORT NTS

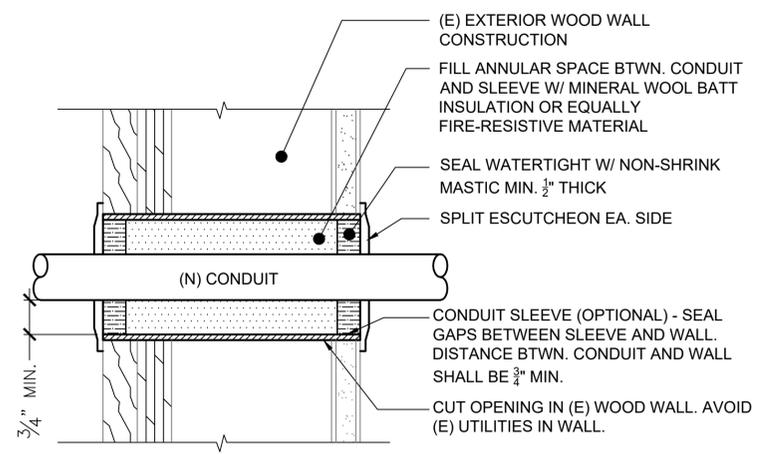


2 LONGITUDINAL OR TRANSVERSE BRACE NTS



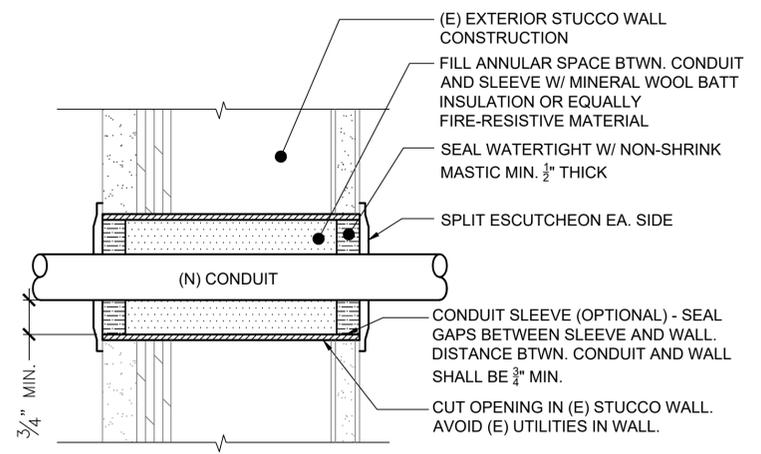
4 (N) CONDUIT THRU (E) EXT. CONC WALL NTS

NOTE: VERIFY ACTUAL WALL CONSTRUCTION AT EACH LOCATION.



5 (N) CONDUIT THRU (E) EXT. WOOD WALL NTS

NOTE: VERIFY ACTUAL WALL CONSTRUCTION AT EACH LOCATION.



6 (N) CONDUIT THRU (E) EXT. STUCCO WALL NTS

NOTE: VERIFY ACTUAL WALL CONSTRUCTION AT EACH LOCATION.

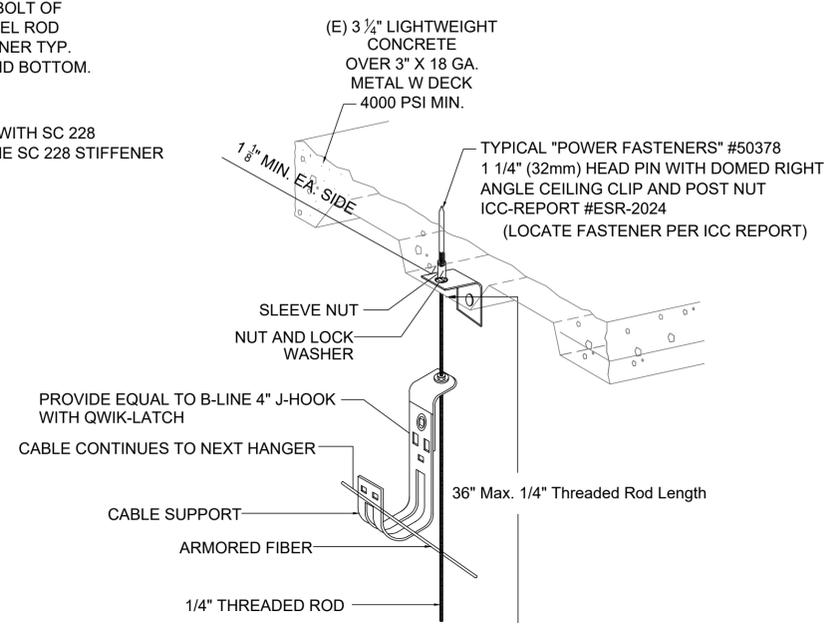
KEYNOTES

TN COMMUNICATIONS SYSTEMS: COMPLY WITH DIVISION 27.

(TN1) B-LINE B11 CHANNEL.

(TN2) B-LINE ADJUSTABLE HINGE LONGITUDINAL OR TRANSVERSE BRACE.

(TN3) B-LINE B11 CHANNEL LONGITUDINAL OR TRANSVERSE BRACE.



3 J-HOOK MOUNTING DETAIL NTS

MAX. WEIGHT PER CONNECTION = 10 LBS

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201

SEAL

Smith, Fause & McDonald Inc.
Communications Engineering Group

351 8th Street
San Francisco, California 94103
(415) 255-9140 www.sfm.com

DATE _____

RAY ENRIQUEZ
REG. NO. 19091
EXPIRES 12/31/2025

APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

BID SET

ISSUE DATE 09/16/2025

N&T JOB NUMBER 21827.00

REVISIONS

DATE	DESCRIPTION

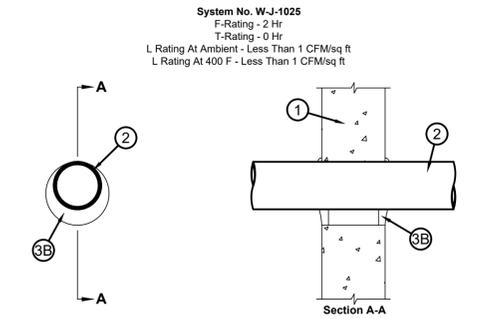
DRAWN BY **IK, TT** CHECKED BY **RE**

SHEET TITLE

COMM. - DETAILS - INTERIOR FASTENING

SHEET NUMBER

TN9.03

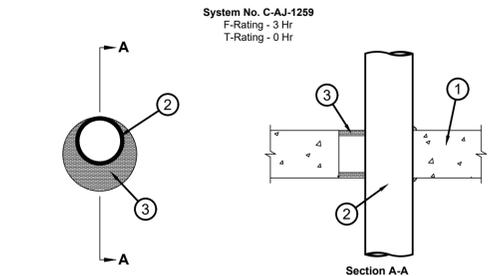


Guide XHEZ (W-J-1025 - B Card)
Through-Penetration Firestop Systems (Cont'd from W-J-1025 - A Card)

System No. W-J-1025
December 17, 1996
F Rating - 2 Hr
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft

- Wall Assembly - Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 6 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Through Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space within the firestop system is dependent upon the type of through penetrant, use of the packing material, and type and thickness of fill materials as tabulated in Item 3B. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe - Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe - Nom 4 in. diam (or smaller) cast or ductile iron pipe.
 - Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or rigid steel conduit.
 - Copper Tubing - Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe - Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
- Firestop System - The firestop system shall consist of the following:
 - Packing Material - Pipe and Equipment Covering Materials* - Nom 1 in. thick by min 2-1/2 in. long hollow cylindrical heavy density (min 3.5 pcf) unfaced glass fiber units wrapped around pipe and secured together by means of No. 24 AWG steel tie wire on both sides of the wall. Packing material shall be recessed from both surfaces of wall as required to accommodate the required thickness of fill material. The use of packing material within the firestop system is dependent upon the type of through penetrant and type and thickness of fill material within the firestop system used as tabulated in Item 3B. See Pipe and Equipment Covering - Materials (BRGU) - category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specification and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
 - Fill, Void or Cavity Material* - Caulk or Putty - Fill material applied within the annulus, on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the through penetrant. At the point contact location between through penetrant and concrete, a min 3/8 in. diam bead of fill material shall be applied at the concrete/through penetrant interface on both surfaces of wall. The type and thickness of fill material is dependent upon the type of through penetrant, annular within the firestop system and use of packing material within the firestop system as tabulated below:

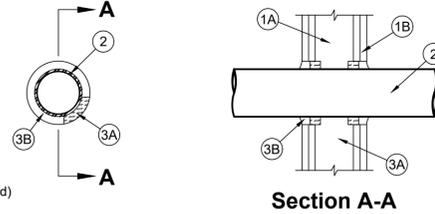
TYPE OF THROUGH PENETRANT	NOM ANNULAR SPACE IN.	MIN. MAX. ANNULAR IN.	USE OF PACKING MTL.	TYPE OF MTL.	MIN THKNS OF FILL MTL IN.
STEEL OR IRON PIPE	—	0, 1-1/2	OPTIONAL	SEALANT	5/8
STEEL OR IRON PIPE	3/4	—	REQUIRED	PUTTY	3/4
STEEL CONDUIT OR TUBING	—	0, 1-1/2	OPTIONAL	SEALANT	5/8



Guide XHEZ (C-AJ-1259 - B Card)
Through-Penetration Firestop Systems (Cont'd from C-AJ-1259 - A Card)

System No. C-AJ-1259
March 09, 1999
F Rating - 3 Hr
T Rating - 0 Hr

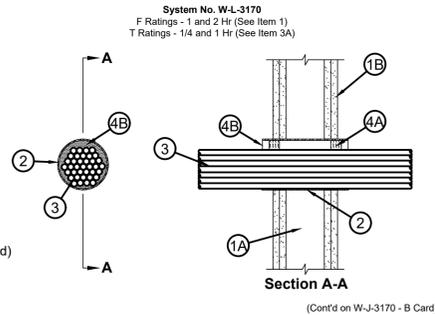
- Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Floor may also be constructed of any min 6 in. thick UL Classified hollow-core Precast Concrete Units*. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 7 in. See Concrete Blocks (CAZT) and Precast Concrete Units (CFTV) categories in the Fire Resistance Directory for names of manufacturers.
- Through Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe, conduit or tubing and the periphery of the opening shall be a min of 0 in. (point contact) to a max of 3 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduit or tubing may be used:
 - Steel Pipe - Nom 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe - Nom 6 in. diam (or smaller) cast or ductile iron pipe.
 - Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or rigid steel conduit.
 - Copper Tube - Nom 4 in. diam (or smaller) Type L (or heavier) copper tube.
- Fill, Void or Cavity Material* - Sealant - Min 1 in. thickness of fill material applied within the annulus, flush with both surfaces of floor or wall. At the point contact location between penetrating item and concrete, a min 3/8 in. thick bead of fill material shall be applied at the concrete/penetrating item interface and on both surfaces of floor or wall. SPECIFIED TECHNOLOGIES INC - SpecSeal 100, 101, 102 or 105 Sealant. *Bearing the UL Classification Marking



Guide XHEZ (W-L-1029 - B Card)
Through-Penetration Firestop Systems (Cont'd from W-L-1029 - A Card)

System No. W-L-1029
December 16, 1994
(Formerly System No. 467)
F Ratings - 1 and 2 Hr (See Item 1B)
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft

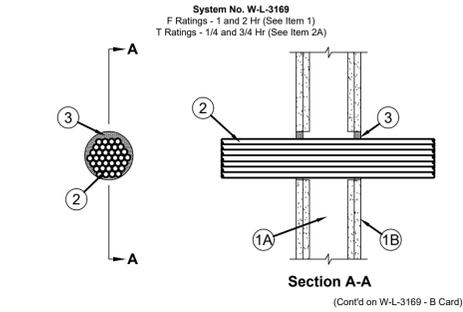
- Wall Assembly - The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 and U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
 - Gypsum Board* - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 6 in. The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. A nom annular space of 3/4 in. is required within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe - Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
 - Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
 - Copper Tubing - Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe - Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
- Firestop System - The firestop system shall consist of the following:
 - Packing Material - Min 1 in. thickness of min 3.5 pcf fiberglass insulation shall be wrapped around the through-penetrant and secured together by means of No. 24 AWG steel tie wire. Packing material shall be centered at mid-depth of opening and recessed from both surfaces of wall assembly required to accommodate the required thickness of fill material.
 - Fill, Void or Cavity Material* - Caulk or Putty - In 2 hr fire rated assemblies min 3/4 in. thickness fill material applied within the annulus, flush both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating item. In 1 hr fire-rated assemblies, min 5/8 in. thickness of fill material applied within annulus on both surfaces of wall. Additional fill material to be installed such that a min 3/8 in. crown is formed around the penetrating item and lapping 1 in. beyond the periphery of the opening. SPECIFIED TECHNOLOGIES INC - SpecSeal 100, 101 or 105 Sealant and SpecSeal Putty *Bearing the UL Classification Marking



Guide XHEZ (W-L-3170 - B Card)
Through-Penetration Firestop Systems (Cont'd from W-L-3170 - A Card)

System No. W-L-3170
October 04, 2000
F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 1/4 and 1 Hr (See Item 3A)

- Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
 - Gypsum Board* - Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 6 in. The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- Steel Sleeve - Cylindrical sleeve fabricated from 0.0125 in. thick (30 gauge) galv sheet steel and having a min 2 in. lap along the longitudinal seam. Length of the sleeve to be equal to or max 2 in. greater than the thickness of the wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers. The ends of the steel sleeve shall be flush with or extend a max 1 in. beyond each surface of the wall. As an alternate, steel sleeve may consist of nom 6 in. diam (or smaller) Schedule 5 (or heavier) steel pipe sleeve friction-fitted into circular cutouts in the gypsum board layers. The ends of the steel sleeve shall be flush with or extend a max 1 in. beyond each surface of the wall.
- Cables - Max 4-1/2 in. diam tight bundle of cables to be installed eccentrically or concentrically within the opening. The annular space between the cables and the periphery of the opening shall be min 0 in. (point contact) to max 1-1/2 in. Cable bundle to be rigidly supported on both sides of the wall assembly. The following types and sizes of cables may be used:
 - Max 200 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.
 - Max 1/C No. 350 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.
 - Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.
 - Max 3/C No. 2/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.
 - Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.
 - Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.
 - Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.
 - Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.
 - Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar jacket and insulation.
 - Through Penetrating Product* - As an alternate to the cables (Item 3), max 4-1/2 in. diam tight bundle of max 4/C No. 2/0 AWG (or smaller) aluminum or steel Armored Cable+ or Metal Clad Cable+ installed within the opening. Annular space between through-penetrating products and periphery of opening to be min 0 in. (point contact) to max 1-1/2 in. Through penetrating product rigidly supported on both sides of wall assembly. When Armored Cable or Metal Clad Cable is used, T Rating is 1/4 hr.
- Firestop System - The firestop system shall consist of the following:
 - Packing Material - Min 1 in. thickness of 4 pcf mineral wool batt insulation compressed and tightly packed into each end of sleeve. Recess packing material as required to accommodate fill material (Item 4B).
 - Fill, Void or Cavity Material* - Sealant - Min 1/2 in. thickness of fill material applied within annulus, flush with each end of steel sleeve. At point contact location, min 1/4 in. diam bead of fill material applied at cable bundle/steel sleeve interface on both sides of wall. SPECIFIED TECHNOLOGIES INC - SpecSeal LCI Sealant *Bearing the UL Classification Marking



Guide XHEZ (W-L-3169 - B Card)
Through-Penetration Firestop Systems (Cont'd from W-L-3169 - A Card)

System No. W-L-3169
October 04, 2000
F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 1/4 and 3/4 Hr (See Item 2A)

- Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
 - Gypsum Board* - Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 5 in. The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- Cables - Max 4-1/2 in. diam tight bundle of cables to be installed eccentrically or concentrically within the opening. The annular space between the cables and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. Cable bundle to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of cables may be used:
 - Max 200 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.
 - Max 1/C No. 350 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.
 - Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.
 - Max 3/C No. 2/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.
 - Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.
 - Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.
 - Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.
 - Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.
 - Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar jacket and insulation.
 - Through Penetrating Product* - As an alternate to the cables (Item 2), max 4 in. diam tight bundle of max 4/C No. 2/0 AWG (or smaller) aluminum or steel Armored Cable+ or Metal Clad Cable+ installed within the opening. Annular space between through-penetrating products and periphery of opening to be min 0 in. (point contact) to max 1 in. Through penetrating product rigidly supported on both sides of floor or wall assembly. When Armored Cable or Metal Clad Cable is used, T Rating is 1/4 hr.
- Fill, Void or Cavity Material* - Sealant - Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. Sealant to be forced into interstices of cable bundle to max extent possible. At point contact location, min 1/4 in. diam bead of fill material applied at cable bundle/gypsum board interface on both surfaces of wall. SPECIFIED TECHNOLOGIES INC - SpecSeal LCI Sealant *Bearing the UL Classification Marking

COORDINATE THROUGH PENETRATION ASSEMBLIES W/ FIRE RATED PARTITIONS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201

SEAL



APPROVALS

PROJECT TITLE

City of Berkeley PSB - Detention Area Automation Upgrades

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

BID SET

ISSUE DATE 09/16/2025

N&T JOB NUMBER 21827.00

REVISIONS

DATE	DESCRIPTION

DRAWN BY IK, TT CHECKED BY RE

SHEET TITLE

COMM. - DETAILS -
FIRESTOPPING

SHEET NUMBER

TN9.04

ELECTRONIC SECURITY SYSTEMS GENERAL NOTES

- REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS.
- PROVIDE CONDUIT, BOXES AND FITTINGS SHOWN ON ELECTRONIC SECURITY SYSTEMS (TY) SYSTEM DRAWINGS UNDER THE WORK OF SECTION 28 05 28 PATHWAYS FOR ELECTRONIC SAFETY AND SECURITY. UNLESS OTHERWISE INDICATED, PROVIDE 1 INCH TRADE SIZE MINIMUM. PROVIDE RACEWAY SIZE AS REQUIRED FOR A MAXIMUM OF 40 PERCENT WIRE FILL.
- PROVIDE FIRESTOPPING UNDER THE WORK OF SECTION 28 05 28 PATHWAYS FOR ELECTRONIC SAFETY AND SECURITY.
- LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON THE COMMUNICATIONS SYSTEMS DRAWINGS.
- DEVICE QUANTITIES SHOWN ON FLOOR PLANS AND REFLECTED CEILING PLANS TAKE PRECEDENCE OVER DEVICE QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS.
- QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS TAKE PRECEDENCE OVER QUANTITIES SHOWN ON RACK ELEVATIONS.
- QUANTITIES SHOWN ON DEVICE SCHEDULES TAKE PRECEDENCE OVER QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS, FLOOR PLANS AND REFLECTED CEILING PLANS.
- LOCATIONS SHOWN ON LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON SMALL SCALE DRAWINGS.

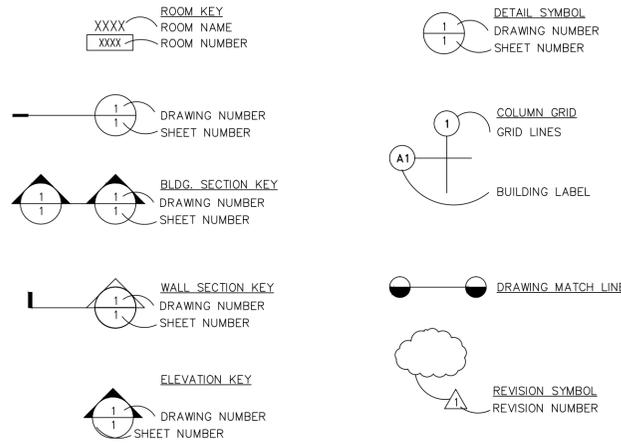
LEGEND

- SURFACE RACEWAY. FOR COMMUNICATIONS AND POWER SYSTEM
- MARK INDICATES RACEWAY DROP FROM CEILING.
- NEW WIRE AND/OR CABLE IN EXPOSED CONDUIT OR RACEWAY. FILL PER SCHEDULE, PLANS AND SPECIFICATION SECTION 28 05 13.
- NEW WIRE AND/OR CABLE INSIDE NEW CONDUIT WALLS OR IN CEILING.
- NEW WIRE AND/OR CABLE IN (N) UNDERGROUND CONDUIT. FILL PER SCHEDULE, PLANS AND SPECIFICATION SECTION 28 05 13.
- CABLE/RACEWAY TURNS UP
- CABLE/RACEWAY TURNS DOWN
- HOME RUN
- CONDUIT TO CABLE TRANSITION POINT
- KEYNOTES

ABBREVIATIONS

- 1SR-1 SINGLE CHAMBER SURFACE RACEWAY
- 3SR-2.5 THREE CHAMBER SURFACE RACEWAY
- A.D.A. AMERICANS WITH DISABILITIES ACT
- ADF AREA DISTRIBUTION FACILITY
- A.F.C. ABOVE FINISHED CEILING
- A.F.F. ABOVE FINISHED FLOOR
- ALT ALTERNATE
- A.M.F.F. ABOVE MEZZANINE FINISHED FLOOR
- BDF BUILDING DISTRIBUTION FACILITY
- B.F.C. BELOW FINISHED CEILING
- BLDG. BUILDING
- B.O.H. BACK OF HOUSE
- C. CONDUIT
- CAT. CATEGORY
- CBC CALIFORNIA BUILDING CODE
- CEC CALIFORNIA ELECTRICAL CODE
- COMM. COMMUNICATIONS
- C.L. CENTERLINE
- C.O. CONDUIT ONLY
- CONT. CONTINUATION
- CS COMMUNICATIONS SYSTEM
- (D) DEMOLISH EXISTING
- DED DEDUCTIVE
- φ, DIA. DIAMETER
- DIV DIVISION
- (E) EXISTING
- EA. EACH
- EIA ELECTRONIC INDUSTRIES ASSOCIATION
- ELEV. ELEVATION
- E.O.L. END OF LINE
- EQPT. EQUIPMENT
- FIN FINISHED
- FUT FUTURE
- H.R. HOME RUN
- HT. HEIGHT
- J, JBOX JUNCTION BOX
- LAN LOCAL AREA NETWORK
- MATV MASTER ANTENNA TELEVISION
- MAX. MAXIMUM
- MIN. MINIMUM
- MOD. MODULAR
- MON. MONUMENT
- (N) NEW
- NEC NATIONAL ELECTRICAL CODE
- N.I.C. NOT IN CONTRACT
- NTS NOT TO SCALE
- O.C. ON CENTER
- O.D. OUTSIDE DIAMETER
- O.F.E. OWNER FURNISHED EQUIPMENT
- O.F.O.I. OWNER FURNISHED, OWNER INSTALLED
- OPP. OPPOSITE
- PNL. PANEL
- PROJ. PROJECT
- P.S.R.H. PROJECT STANDARD RECEPTACLE HEIGHT +18" AFF, U.O.N.
- P.S.S.H. PROJECT STANDARD SWITCH HEIGHT +48" AFF TO C, U.O.N.
- RE: REFER TO
- REF. REFERENCE
- SIM. SIMILAR
- SM SINGLE MODE OPTICAL FIBER
- SN SHEET NOTE
- SP SHIELDED PAIR - SEE SPECIFICATIONS
- SPEC SPECIFICATION
- S.R. SURFACE RACEWAY
- STD STANDARD
- STP SHIELDED TWISTED PAIR
- T.C. TELECOMMUNICATIONS CLOSET
- TEL TELEPHONE
- TELCOM TELECOMMUNICATIONS
- TIA TELECOMMUNICATIONS INDUSTRY ASSOCIATION
- TP TWISTED PAIR
- TYP. TYPICAL
- U.O.N. UNLESS OTHERWISE NOTED
- W/ WITH
- WP WEATHERPROOF

GENERAL SYMBOLS



JUNCTION BOX SCHEDULE

SYMBOL	H (INCHES)	W (INCHES)	(INCHES)
J1	6	6	4
J2	8	8	4
J3	12	12	4
J4	12	12	6
J5	12	12	8
J6	16	12	6
J7	18	18	8
J8	20	16	6
J9	20	16	8
J10	20	20	6
J11	20	20	8
J12	24	20	6
J13	24	20	8
J14	24	24	8
J15	30	24	8
J16	30	30	8
J17	36	30	8
J18	36	36	8

SUFFIX:
 NONE - NEMA 1 C - NEMA 4
 A - NEMA 12 D - NEMA 4X
 B - NEMA 3R

EXAMPLE: J16C= 30"H X 30"W X 8"D HINGED NEMA 4 JBOX.

NOTE 1
 ALL JUNCTION BOXES TO BE HINGED TYPE, PROVIDED WITHOUT PRE-PUNCHED KNOCKOUTS. PENETRATIONS IN JUNCTION BOXES SHALL BE CUT OR PUNCHED AS REQUIRED FOR INSTALLATION. PAINT ALL INTERIOR BOXES TO MATCH WALL FINISH. COORDINATE FINISH WITH ARCH. PLANS.

MATERIAL & EQUIPMENT LEGEND

- 1IDP 1" INNERDUCT, PLENUM RATED
- 2IDP 2" INNERDUCT, PLENUM RATED
- C6APP CATEGORY 6A PATCH PANEL
- C6PP CATEGORY 6 PATCH PANEL.
- FOH-P FIBER OPTIC CABLE HYBRID, PLENUM RATED
- FOH-OPR FIBER OPTIC CABLE HYBRID, OUTSIDE PLANT RISER RATED
- FOM-OPR FIBER OPTIC CABLE, MULTI MODE OUTSIDE PLANT RISER RATED
- FOS-OPR FIBER OPTIC CABLE, SINGLE MODE OUTSIDE PLANT RISER RATED
- FPP FIBER PATCH PANEL
- FSC FIBER SPLICE CLOSURE
- FSP FIBER SPLICE PANEL
- FTB FIBER TERMINAL BOX
- IDF INTERMEDIATE DISTRIBUTION FACILITY
- MDF MAIN DISTRIBUTION FACILITY.
- MM MULTI MODE OPTICAL FIBER
- MMP MULTIMEDIA PLATE
- OSP OUTSIDE PLANT
- SM SINGLE MODE OPTICAL FIBER
- UTP6A-4P UNSHIELDED TWISTED PAIR, CAT. 6A PLENUM
- UTP6-4P UNSHIELDED TWISTED PAIR, CAT. 6 PLENUM
- 110TBXX 110 TERMINAL BLOCK, CAT.5, XX-NO OF PAIRS
- 110PWTBXX 110 TERMINAL BLOCK, PRE-WIRED W/50 PIN CONNECTOR, XX- NO OF PAIRS
- TB15 TERMINAL BLOCK WITH 15 AMP SWITCH BLADE.

NOTE:
 SEE SPECIFICATION SECTIONS FOR REFERENCE DESCRIPTIONS AND REQUIREMENTS. FOR OTHER MATERIAL AND EQUIPMENT TYPES REFER TO SPECIFICATIONS.

NOLL & TAM ARCHITECTS

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APPROVALS

PROJECT TITLE

City of Berkeley
PSB - Detention Area Automation Upgrades

2100 Martin Luther King Jr. Way,
 Berkeley, CA 94704

BID SET

ISSUE DATE 09/16/2025

N&T JOB NUMBER 21827.00

REVISIONS	DATE	DESCRIPTION

DRAWN BY **IK, TT** CHECKED BY **RE**

SHEET TITLE
ELECTRONIC SECURITY SYSTEMS - GENERAL NOTES, SYMBOL, LEGEND, ABBR. & JBOX SCHEDULE

SHEET NUMBER

TY0.01

SYMBOL	DEVICE	FUNCTION OR SERVICE	LOCATION	WORK OF	ROUGH-IN	RACEWAY	ELEVATION	CABLE FILL	FINISH	DETAIL SHEET(S)
	SINGLE SENSOR, CCTV IP CAMERA, FIXED FOCUS	VISUAL SURVEILLANCE	WALL OR CLG AS INDICATED	28 23 00	4S BOX. 2 GANG RING	(1) 3/4" C.	AS SCHEDULED	1 CAT 6A CABLE PER DIV 27. HR TO SERVER ROOM 1111.	AS SPECIFIED	TY9.02
	THREE SENSOR, 180 DEGREE, CCTV IP CAMERA, FIXED FOCUS	VISUAL SURVEILLANCE	WALL OR CLG AS INDICATED	28 23 00	4S BOX. 2 GANG RING	(1) 3/4" C.	AS SCHEDULED	1 CAT 6A CABLE PER DIV 27. HR TO SERVER ROOM 1111.	AS SPECIFIED	TY9.02
	FOUR SENSOR, 360 DEGREE, CCTV IP CAMERA, FIXED FOCUS	VISUAL SURVEILLANCE	WALL OR CLG AS INDICATED	28 23 00	4S BOX. 2 GANG RING	(1) 3/4" C.	AS SCHEDULED	1 CAT 6A CABLE PER DIV 27. HR TO SERVER ROOM 1111.	AS SPECIFIED	TY9.02
	SINGLE SENSOR, CCTV IP CAMERA, FIXED FOCUS, DETENTION GRADE HOUSING	VISUAL SURVEILLANCE	WALL OR CLG AS INDICATED	28 23 00	4S BOX. 2 GANG RING	(1) 3/4" C.	AS SCHEDULED	1 CAT 6A CABLE PER DIV 27. HR TO SERVER ROOM 1111.	AS SPECIFIED	TY9.02
	DOOR POSITION SWITCH. RE-USE EXISTING HARDWARE AND CABLING.	PLC CONTROL	LRI 1	28 46 19	LRI 1	R1	EXISTING	C1		
	ELECTRIC LOCK. RE-USE EXISTING HARDWARE AND CABLING.	PLC CONTROL	LRI 1	28 46 19	LRI 1	R1	EXISTING	C1		
	AUDIO INTERCOM	INTERCOM	LRI 2	28 15 00	LRI 2	R1	EXISTING	C2	LRI 2	
	FLOOR MOUNTED EQUIPMENT RACK WITH VERTICAL WIRE MANAGEMENT, 4 POST, ZONE 4 RATED.	TELECOMMUNICATIONS	FLOOR	27 11 16	AS SPECIFIED ON SECTION 27 11 16.		BOLTED TO THE FLOOR.	N/A	BLACK	
	(E) PUBLIC ADDRESS/PAGING SPEAKER	AUDIO	CEILING				CEILING			
	PUSH-TO-TALK MASTER INTERCOM STATION WITH GOOSE NECK MIC	INTERCOM	DESK	28 15 00						

NOTE NO. CABLING NOTES

- C1 RE-USE EXISTING CABLING.
- C2 RE-USE EXISTING CABLING. ADD CONTACT CLOSURE OR RELAY CABLE TO ENABLE THE NEAREST VIDEO SURVEILLANCE CAMERA WHEN THE IC BUTTON IS PRESSED.

NOTE NO. LOCATION & ROUGH-IN NOTES

- LRI 1 LOCATION AS INDICATED ON PLANS. RE-USE EXISTING HARDWARE.
- LRI 2 LOCATION AS INDICATED ON PLANS. RE-USE EXISTING BACK BOX AND FACEPLATE.

NOTE NO. RACEWAY NOTES

- R1 RE-USE EXISTING CONDUIT.

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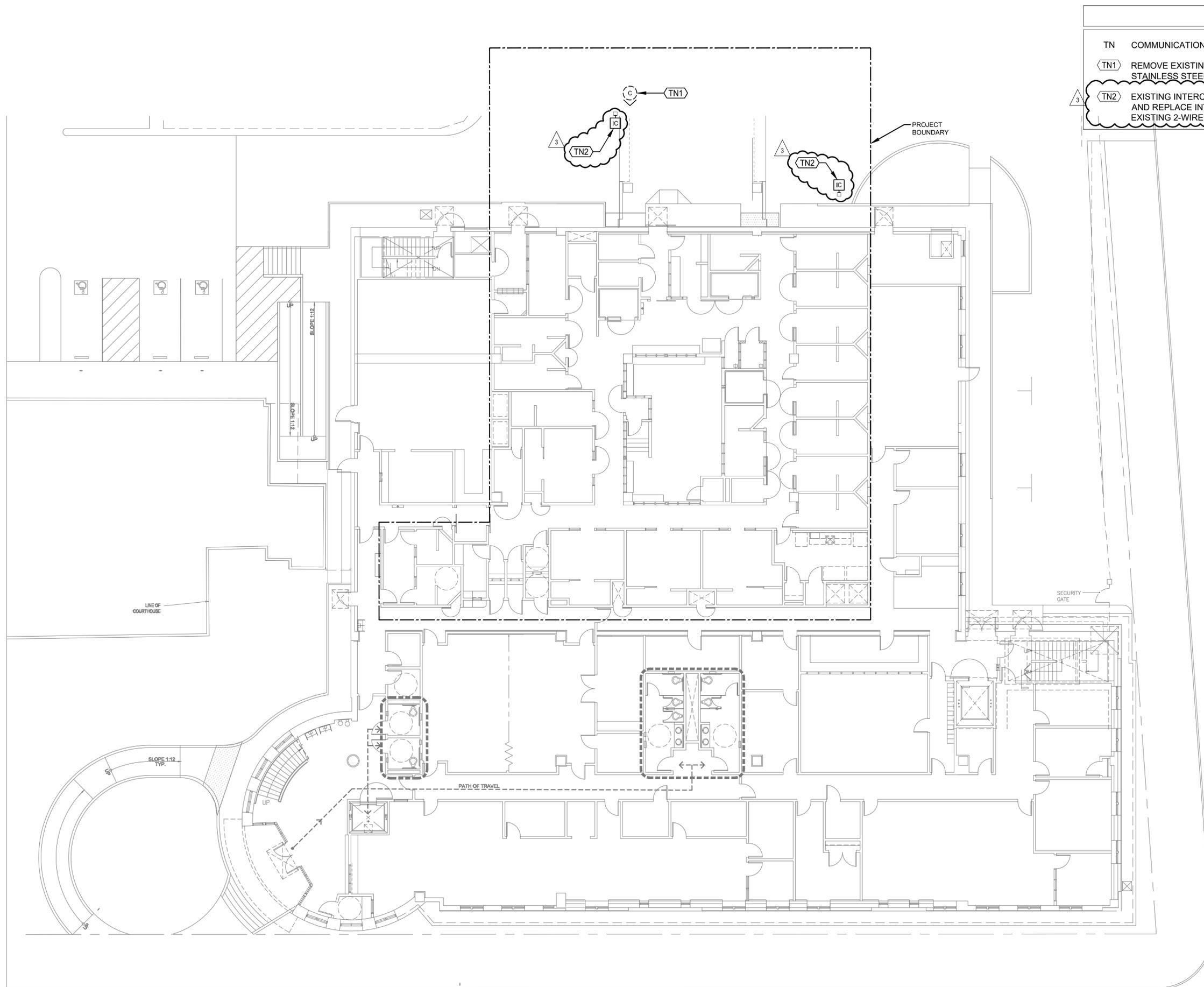
REVISIONS	DATE	DESCRIPTION
	01/21/2026	ADDENDUM 4

DRAWN BY **IK, TT** CHECKED BY **RE**
SHEET TITLE

**ELECTRONIC SECURITY
SYSTEMS - SYMBOL
SCHEDULE**

SHEET NUMBER

TY0.02



TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.

TN1 REMOVE EXISTING CAMERA. PROVIDE BLANK STAINLESS STEEL FACEPLATE.

TN2 EXISTING INTERCOM (IC) ON A PEDESTAL. REMOVE AND REPLACE INTERCOM WITH NEW IC. RE-USED EXISTING 2-WIRE CABLE.

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RAY ENRIQUEZ
REG. NO. 190911
EXPIRES 12/31/2025

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12/10/2025	ADDENDUM 2

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SHEET TITLE

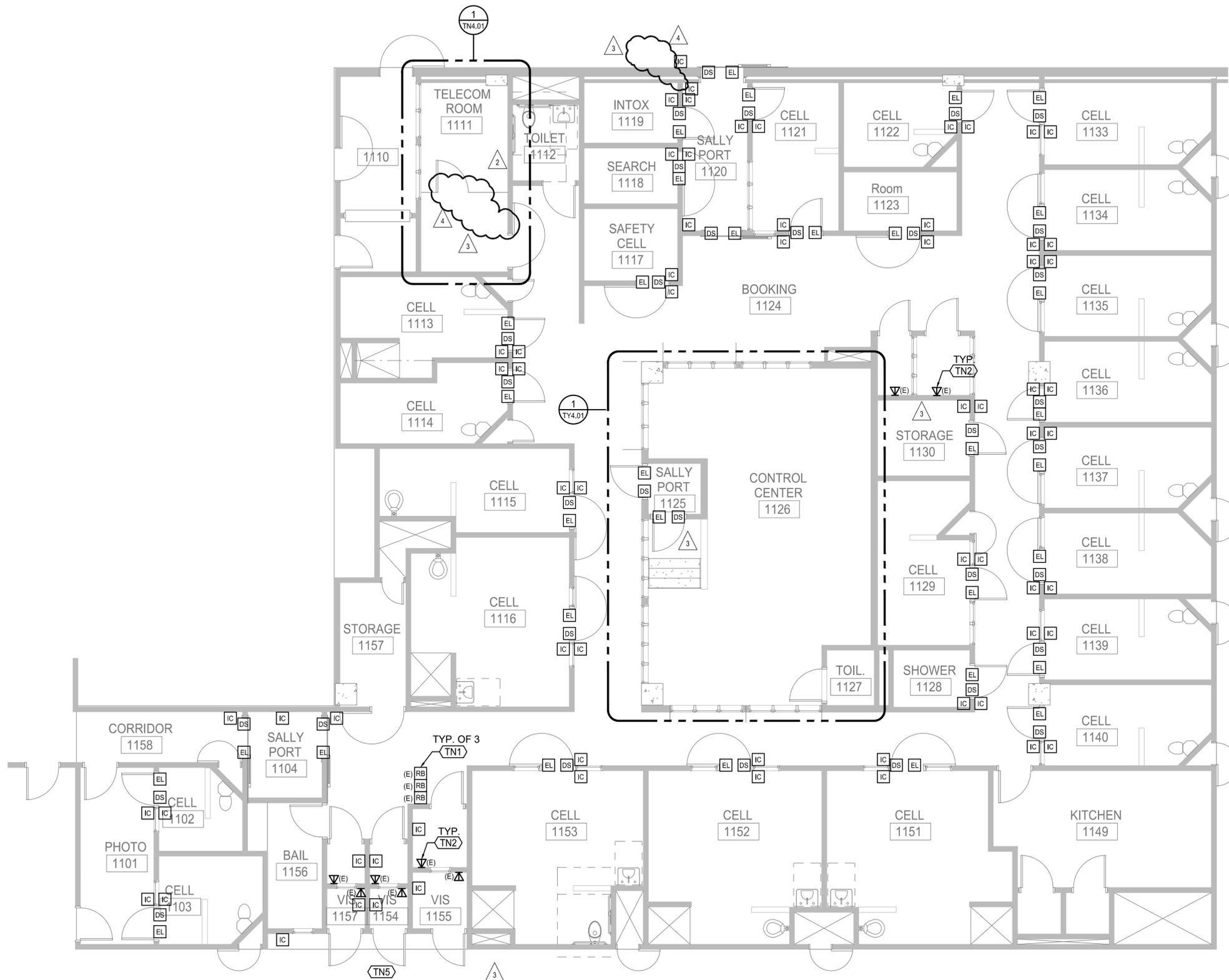
**ELECTRONIC SECURITY SYSTEMS -
FIRST FLOOR DEVICE
PLAN OVERALL**

SHEET NUMBER

TY1.01

1 ELECTRONIC SECURITY SYSTEMS - FIRST FLOOR DEVICE PLAN OVERALL

3/32"=1'-0" NORTH



KEYNOTES

TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27 & 28.

TN1 (E) DOOR RELEASE BUTTONS TO REMAIN IN PLACE, TYP OF 3. THESE BUTTONS UNLOCKS VISITOR DOORS 1154, 1155 & 1157.

TN2 NOT USED.

TN3 NOT USED.

TN4 PROVIDE EQUAL TO AIPHONE IX-NVP 3-GANG AUDIO INTERCOM STATION.

TN5 THE SCOPE OF WORK SHOWN FOR THE VISITOR ROOMS 1154, 1155 AND 1157 WILL BE UNDER BID ALTERNATE 1.

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2100 Martin Luther King Jr. Way,
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REVISIONS	DATE	DESCRIPTION
△	06/06/2025	PLAN CHECK 2
△	12/10/2025	ADDENDUM 2
△	01/21/2026	ADDENDUM 4

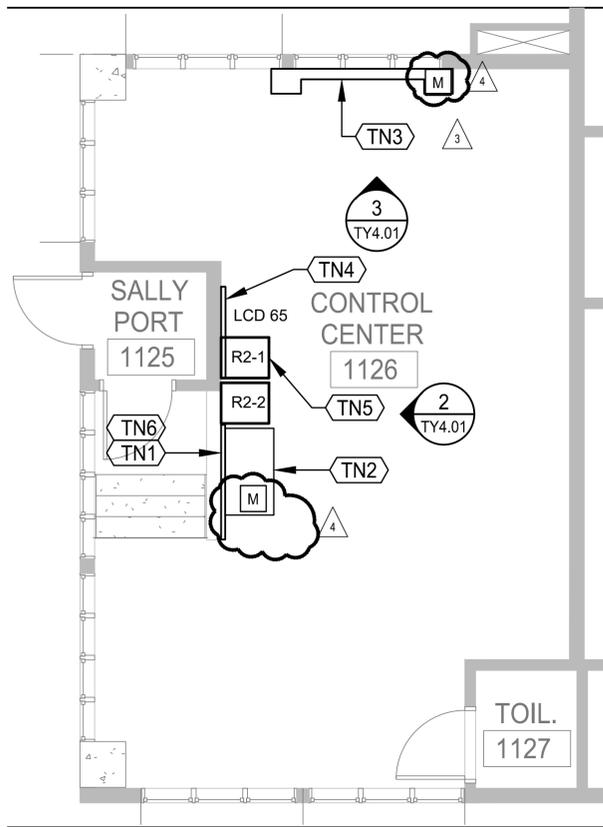
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ELECTRONIC SECURITY SYSTEMS - FIRST FLOOR DEVICE PLAN

SHEET NUMBER

TY2.01

1 ELECTRONIC SECURITY SYSTEMS - FIRST FLOOR DEVICE PLAN 3/16"=1'-0" NORTH



1 ESS - CONTROL CENTER 1126
ENLARGED PLAN

1/4"=1'-0"



2 EXISTING PLC CONSOLE

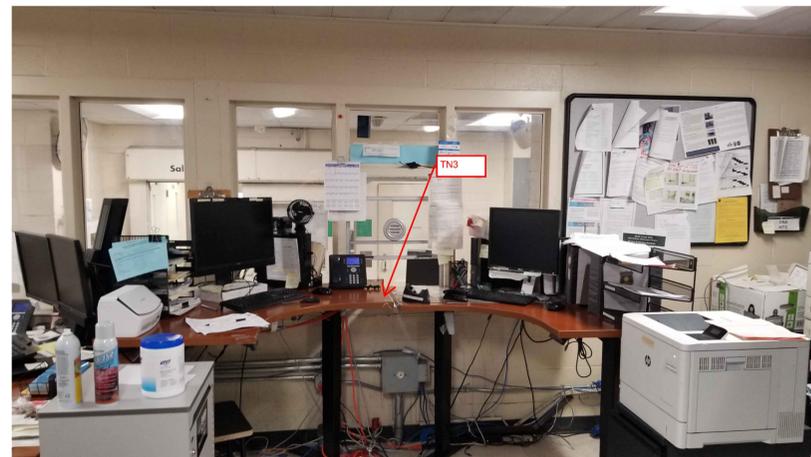
NTS

DEMOLITION KEYNOTES

- TD1 REMOVE EXISTING PLC CONSOLE, MONITORS AND CASEWORK. DO NOT REMOVE EXISTING PLC CABLING SINCE IT WILL BE RE-USED.
- TD2 REMOVE EXISTING TV MONITOR.

KEYNOTES

- TN COMMUNICATIONS SYSTEMS: WORK OF DIVISIONS 27 & 28.
- TN1 INTERCEPT AND RE-USE ALL OF THE EXISTING PLC CABLING USED FOR THE AUDIO INTERCOMS AND DETENTION CELL DOOR HARDWARE. TERMINATE EXISTING CABLING ON NEW DGP/ACS PANELS/POWER SUPPLIES.
- TN2 PROVIDE WORKSTATION FURNITURE EQUAL TO WINSTED VUE 199 OPEN BASE WITH CPU PEDESTAL. MOUNT THE FIRST WORKSTATION WITH TWO (2) 32" TOUCHSCREEN MONITORS.
- TN3 MOUNT THE SECOND WORKSTATION WITH TWO (2) 32" TOUCHSCREEN MONITORS ON THE EXISTING FURNITURE.
- TN4 PROVIDE NEW 65" LCD TV. MOUNT TOP OF TV APPROX 3" BELOW THE CEILING. CONNECT THE TV TO THE ADJACENT WORKSTATION VIA HDMI CABLE.
- TN5 PROVIDE (2) R2 SWING GATE WALL RACK MOUNTED BELOW THE WINDOWS. INSTALL THE AIPHONE IX-10AS NETWORK ADAPTORS AND POE SWITCHES IN THE WALL RACKS. INSTALL THE RACKS TO SWING-OUT IN OPPOSITE DIRECTIONS.
- TN6 PROVIDE 3/4" THICK, FIRE-RESISTANT TREATED PLYWOOD BACKBOARD FROM FLOOR TO BELOW THE WINDOW. TRIM TO FIT.



3 LOCATION OF SECOND WORKSTATION

NTS

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△	01/21/2026	ADDENDUM 4

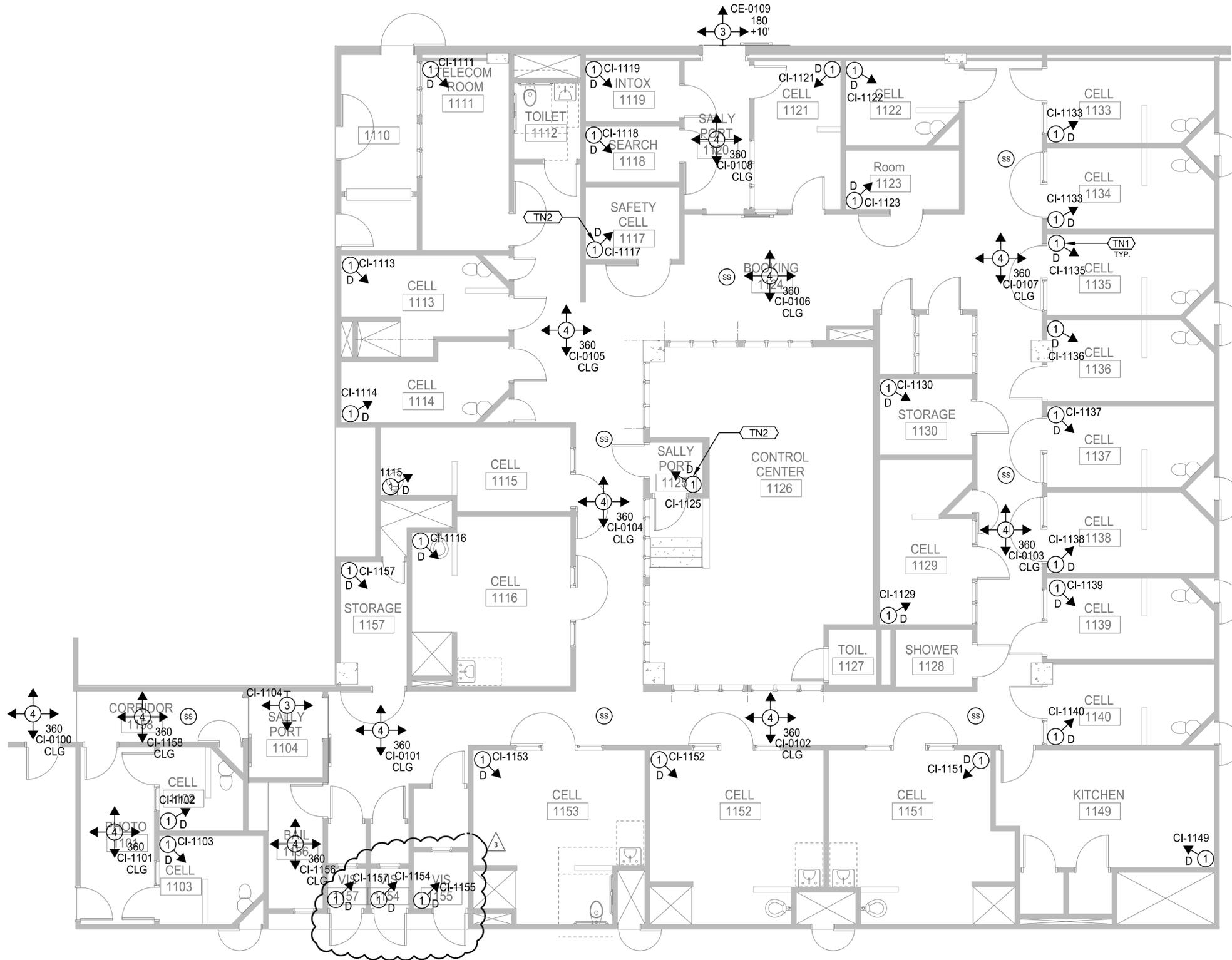
DRAWN BY **IK, TT** CHECKED BY **RE**

SHEET TITLE

ESS - CONTROL
CENTER 1126
ENLARGED PLAN &
ELEVATIONS

SHEET NUMBER

TY4.01



- KEYNOTES**
- TN ELECTRONIC SECURITY SYSTEMS: COMPLY WITH DIVISIONS 28.
 - (TN1) PROVIDE 20' OF SLACK CABLE IN THE CEILING FOR ON-SITE RELOCATION OF THE CAMERAS. RELOCATION MUST BE APPROVED BY CITY REPRESENTATIVE.
 - (TN2) PROVIDE A GUI BUTTON AT THE CONTROL CENTER DESKTOP THAT WILL TURN OFF THE CAMERAS AND RECORDING IN ROOM 1117 (SAFETY CELL) AND 1125 (SALLY PORT).
 - (TN3) THE SCOPE OF WORK SHOWN FOR THE VISITOR ROOMS 1154, 1155 AND 1157 WILL BE UNDER BID ALTERNATE 1.

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REG. NO. 10021
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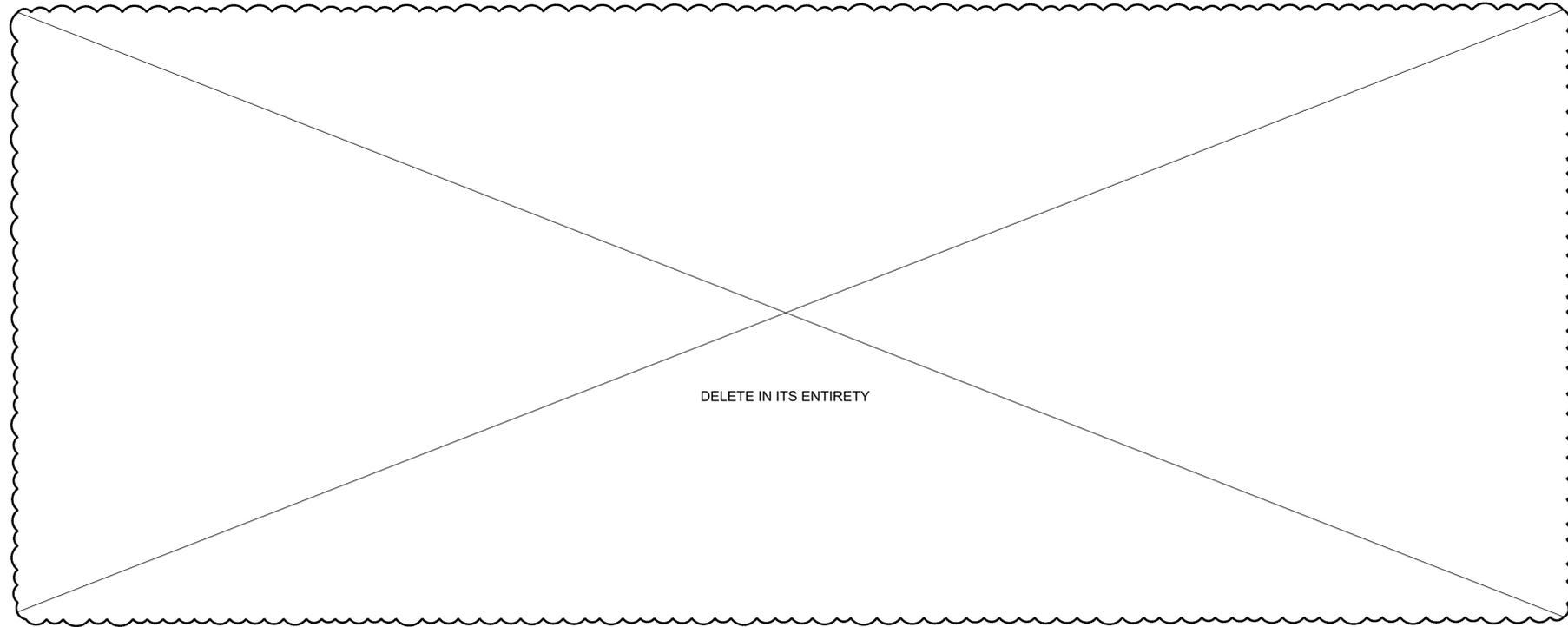
REVISIONS	DATE	DESCRIPTION

DRAWN BY **IK, TT** CHECKED BY **RE**
SHEET TITLE

**ELECTRONIC SECURITY SYSTEMS - FIRST FLOOR
DEVICE RCP**

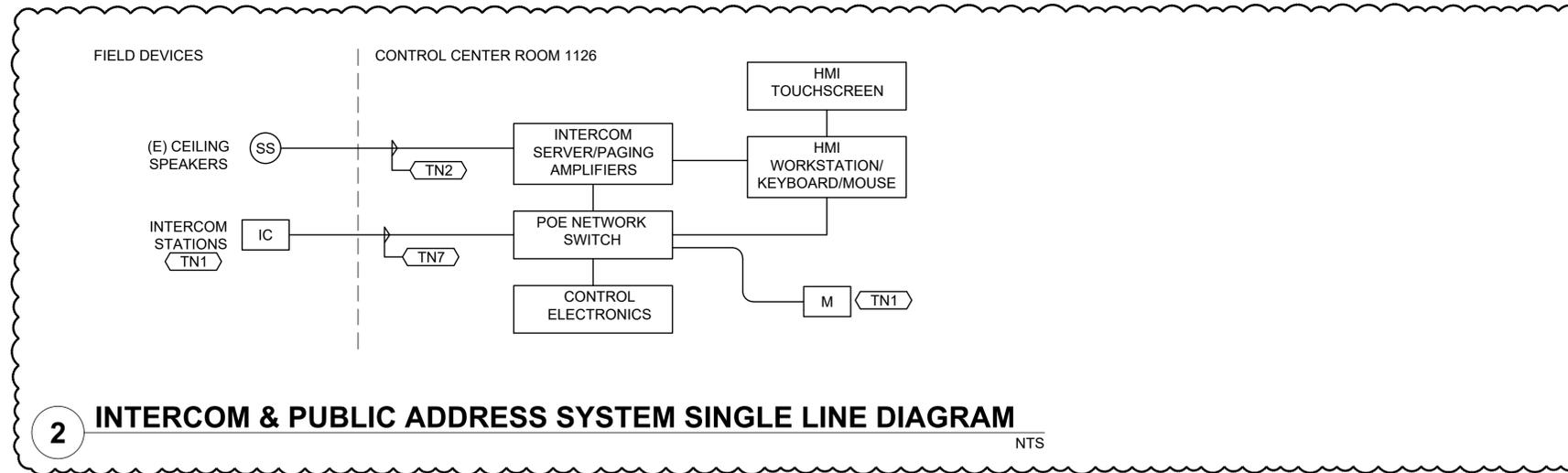
SHEET NUMBER
TY6.01

1 ELECTRONIC SECURITY SYSTEMS - FIRST FLOOR DEVICE RCP 3/16"=1'-0" NORTH



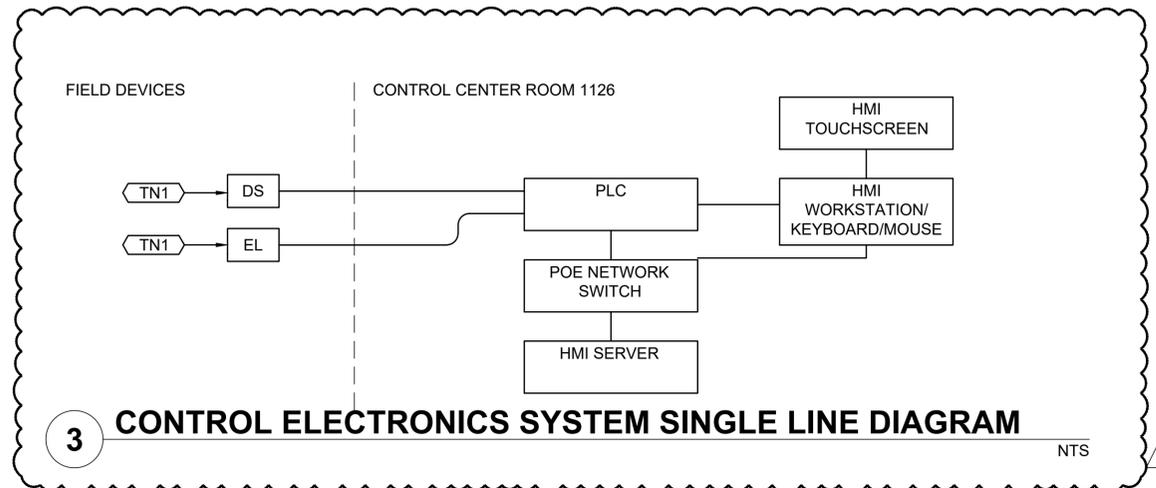
1 ACCESS CONTROL SINGLE LINE DIAGRAM

NTS 1



2 INTERCOM & PUBLIC ADDRESS SYSTEM SINGLE LINE DIAGRAM

NTS



3 CONTROL ELECTRONICS SYSTEM SINGLE LINE DIAGRAM

NTS

SHEET NOTES

1 FUNCTIONAL BLOCK DIAGRAMS ARE DIAGRAMMATIC. CONTRACTOR TO SUBMIT SHOP DRAWINGS INDICATING EXACT QTY AND LOCATION OF ACCESS CONTROLLERS AND RELATED HARDWARE REQUIRED TO MEET THE FUNCTIONAL REQUIREMENTS OF THE PROJECT.

KEYNOTES

- TN TELECOMMUNICATIONS & ELECTRONIC SECURITY SYSTEMS: COMPLY WITH DIVISIONS 27 & 28.
- TN1 REFER TO PLANS FOR QUANTITY.
- TN2 INTERCEPT EXISTING PAGING CABLING IN THE EXISTING CONSOLE IN CONTROL CENTER ROOM 1126 AND RE-USE FOR PAGING SYSTEM.
- TN3 NOT USED.
- TN4 NOT USED.
- TN5 NOT USED.
- TN6 NOT USED.
- TN7 INTERCEPT EXISTING INTERCOM CABLING IN THE EXISTING CONSOLE IN CONTROL CENTER ROOM 1126 AND RE-USE FOR INTERCOM SYSTEM.

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REVISIONS	DATE	DESCRIPTION
1	12/10/2025	ADDENDUM 2
2	01/21/2026	ADDENDUM 4

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SHEET TITLE
INTERCOM, PUBLIC ADDRESS & CONTROL ELECTRONICS

SHEET NUMBER

TY7.01

SEAL



APPROVALS

PROJECT TITLE

**City of Berkeley
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△ DATE DESCRIPTION	
△ 06/06/2025	PLAN CHECK 2

DRAWN BY **IK, TT** CHECKED BY **RE**
SHEET TITLE

**SURVEILLANCE VIDEO
SYSTEM FUNCTIONAL
DIAGRAM**

SHEET NUMBER

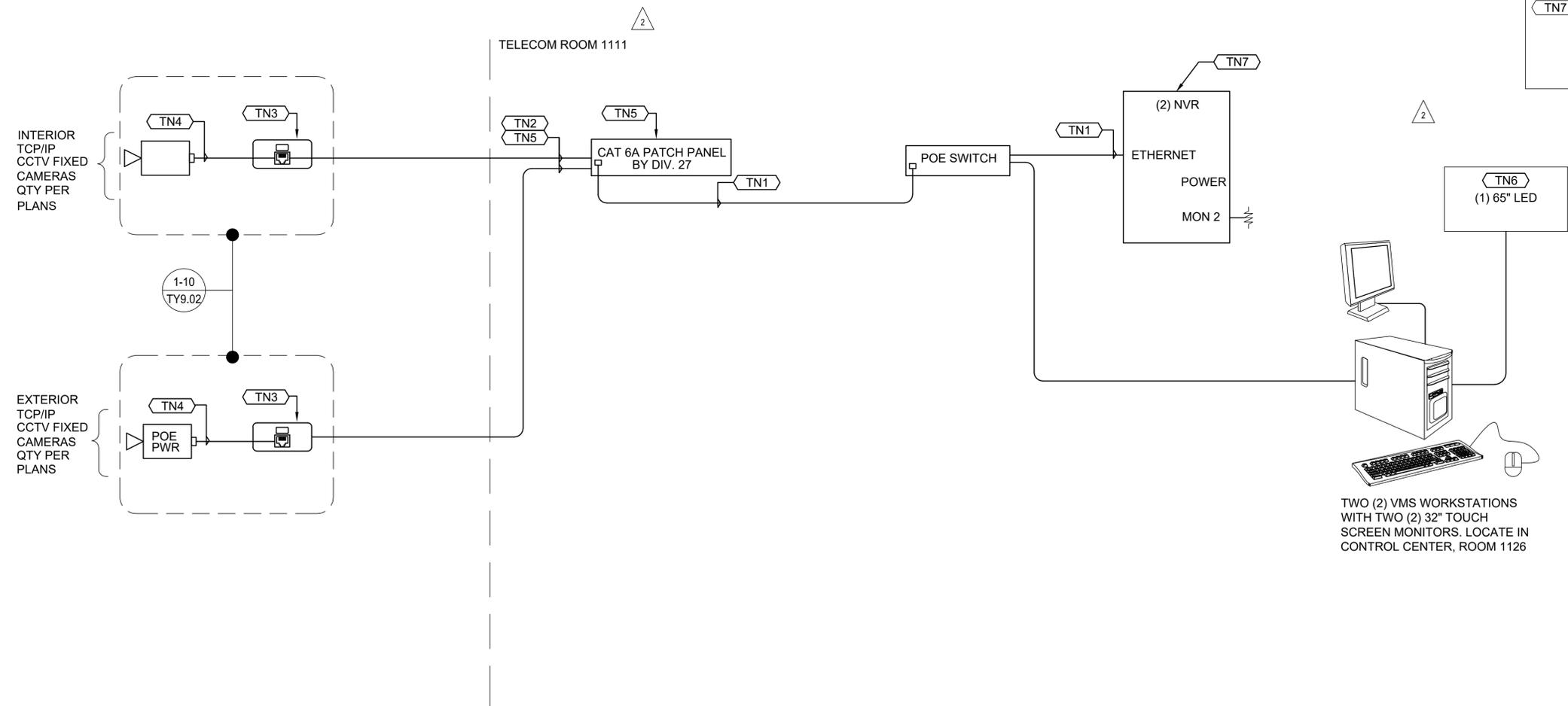
TY7.02

SHEET NOTES

1 FUNCTIONAL BLOCK DIAGRAMS ARE DIAGRAMMATIC. CONTRACTOR TO SUBMIT SHOP DRAWINGS INDICATING EXACT QTY AND LOCATION OF CAMERAS AND RELATED HARDWARE REQUIRED TO MEET THE FUNCTIONAL REQUIREMENTS OF THE PROJECT.

KEYNOTES

- TN TELECOMMUNICATIONS & ELECTRONIC SECURITY SYSTEMS: COMPLY WITH DIVISIONS 27 & 28.
- TN1 CAT6A PATCH CORDS. PROVIDE QTY. AS REQUIRED.
- TN2 1 CAT6A CABLE. REFER TO PLANS.
- TN3 MULTIMEDIA PLATE (BISCUIT BOX) DIV. 27 FOR TERMINATION OF STATION CABLING. CONCEAL INSIDE CCTV CAMERA BACK BOX.
- TN4 CAT6A PATCH CORD BY DIV. 27 - PROVIDE LENGTH AS REQUIRED. CONCEAL INSIDE CCTV CAMERA BACK BOX.
- TN5 WORK OF DIV. 27.
- TN6 PROVIDE A SEPARATE 65" LCD MONITOR. COORDINATE WITH THE CITY AS TO WHICH CAMERAS ARE TO BE SHOWN ON THIS MONITOR. LOCATE IN CONTROL CENTER 1126.
- TN7 PROVIDE TWO (2) NETWORK VIDEO RECORDERS (PRIMARY & SECONDARY) AVIGILON NVR5-PRM-432TB-S19-NA FOR 365 DAYS OF RECORDING. SEE SPEC SECTION 28 23 00. INSTALL IN R28 RACK IN SERVER ROOM 1111.



1 SURVEILLANCE VIDEO SYSTEM FUNCTIONAL DIAGRAM NTS 1

CAMERA SCHEDULE										
CAMERA NO.	SHEET NUMBER	MINIMUM CAMERA SENSOR	HORIZONTAL ANGLE	CAMERA HEIGHT INSTALLATION	MOUNTING ENCLOSURE	MOUNTING LOCATION	MOUNTING DETAIL	HOMERUN LOCATION	POE EXTENDER	NOTES
CI-0100	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-0101	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-0102	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-0103	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-0104	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-0105	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-0106	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-0107	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-0108	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CE-0109	TY6.01	3	180°	10'	WALL MOUNT ARM/DOME	WALL	6/TY9.02	SERVER ROOM 1111	0	EXTERIOR
CI-1101	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-1102	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1103	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1104	TY6.01	3	180°	10'	WALL MOUNT ARM/DOME	WALL	6/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-1111	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1113	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1114	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1115	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1116	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1117	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1118	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1119	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1121	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1122	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1123	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1125	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1129	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1130	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1133	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1134	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1135	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1136	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1137	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1138	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1139	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1140	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1149	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1151	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1152	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1153	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1154	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1155	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1156	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR
CI-1157	TY6.01	1	90°	CEILING	DOME	CEILING	4,5,10/TY9.02	SERVER ROOM 1111	0	DETENTION GRADE CAMERA
CI-1158	TY6.01	4	360°	CEILING	DOME	CEILING	9/TY9.02	SERVER ROOM 1111	0	INTERIOR

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Berkeley, CA 94704

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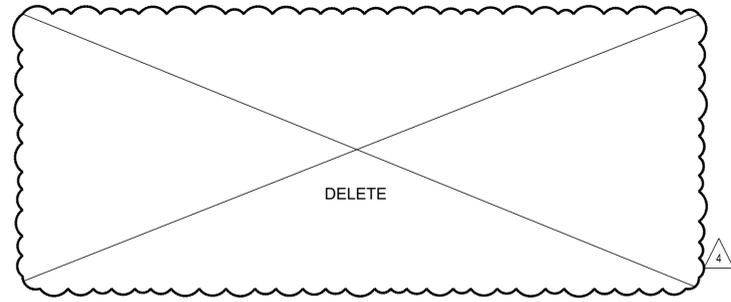
ISSUE DATE: 09/16/2025
N&T JOB NUMBER: 21827.00
REVISIONS:

DATE	DESCRIPTION
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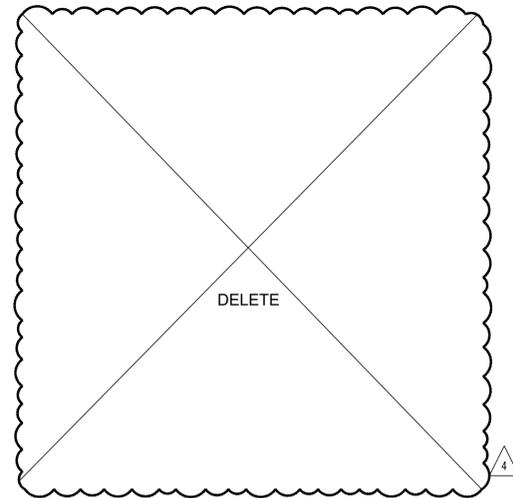
DRAWN BY: **IK, TT** CHECKED BY: **RE**
SHEET TITLE

**ELECTRONIC SECURITY
SYSTEMS - CAMERA
SCHEDULE**

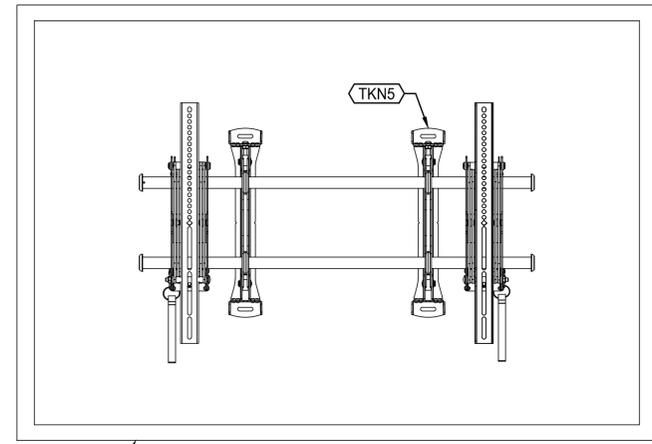
SHEET NUMBER
TY8.01



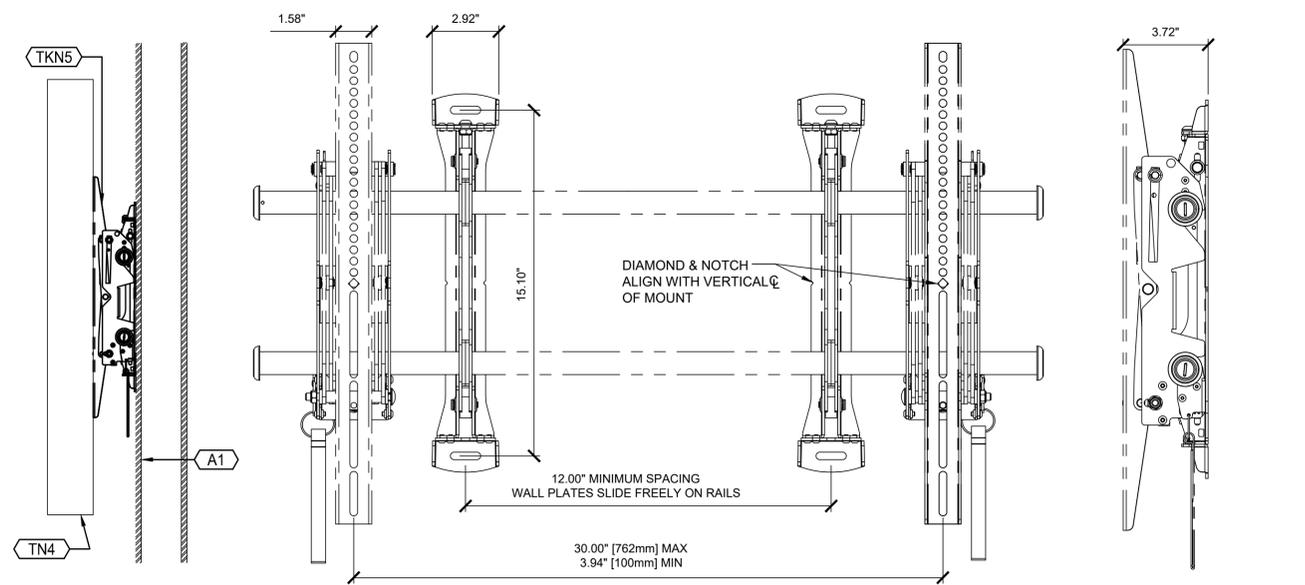
1 CARD READER - TYPE CR
NTS



2 ACS ELEVATION
VIEW FROM SECURE SIDE, CEILING ACCESS NTS



3A FRONT VIEW
NTS



3B SIDE VIEW
NTS

3C FRONT VIEW
NTS

3D SIDE VIEW
NTS

3 FLAT PANEL MOUNT ASSEMBLY
NTS

SHEET NOTES

1. NOT EVERY DOOR CONDITION IS DEPICTED. REFER TO THE FLOOR PLANS FOR THE DEVICES REQUIRED AT EACH OPENING AND PROVIDE ROUGH-IN AS REQUIRED BASED ON SIMILAR ASSEMBLIES DETAILED ON THE TY SHEETS.
2. AT ACCESSIBLE CEILING CONDITIONS, SUPPORT ELECTRONIC SECURITY CABLING ON CABLE HOOKS OR BASKET TRAYS.
3. WHERE ESS SIGNAL CABLING IS CONSOLIDATED WITH A NETWORK OF CONDUITS AND PULL BOXES, MAINTAIN 40% MAXIMUM FILL.

KEYNOTES

- EKN1 NOT USED.
- TN ELECTRONIC SECURITY SYSTEMS: COMPLY WITH DIVISION 28.
- TN1 NOT USED.
- TN2 NOT USED.
- TN3 NOT USED.
- TN4 FLAT PANEL DISPLAY/LCD - NET WEIGHT NOT TO EXCEED 135 LBS.
- TN5 FLAT PANEL MOUNT - NET WEIGHT NOT TO EXCEED 40 LBS.
- TN6 NOT USED.

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201



DATE _____
RAY ENRIQUEZ
REG. NO. 19091
EXPIRES 12/31/2025

APPROVALS

PROJECT TITLE

**City of Berkeley
PSB - Detention
Area Automation
Upgrades**

2100 Martin Luther King Jr. Way,
Berkeley, CA 94704

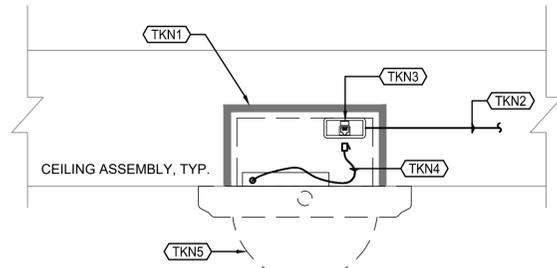
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△ DATE	DESCRIPTION
△ 01/21/2026	ADDENDUM 4

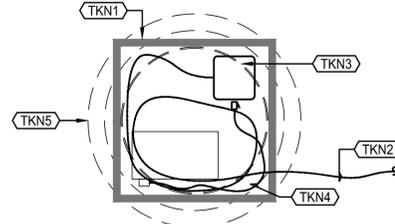
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SHEET TITLE

**DETAILS - SECURITY
SYSTEMS ACCESS
CONTROL**

SHEET NUMBER
TY9.01



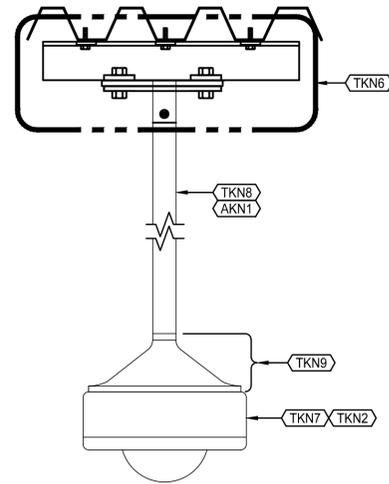
1A SIDE VIEW NTS



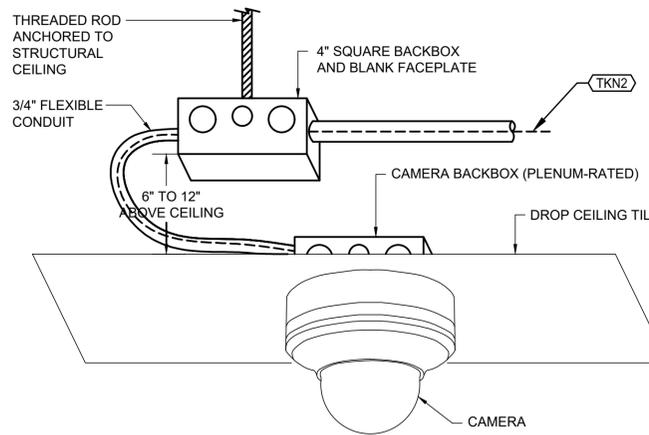
1B TOP VIEW NTS

1 IP CAMERA WIRING DETAIL

CATEGORY MEDIA STATION CABLING TO IP CAMERAS TO TERMINATE AT PERMANENT ENCLOSURE/JACK ASSEMBLY, AND A PATCH CORD SHALL BE USED TO MAKE THE CONNECTION FROM THE PERMANENTLY INSTALLED JACK TO THE CAMERA.



2 IP CAMERA PENDANT MOUNT
INTERIOR CEILING/STRUCTURE MOUNTED. NTS

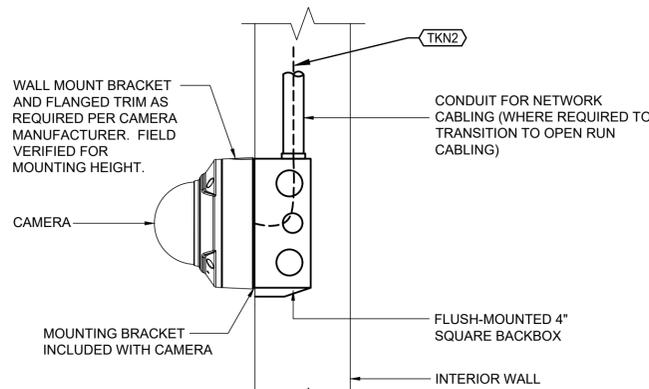


3 DOME CAMERA DROP CEILING MOUNT TYP. NTS

NOTES:

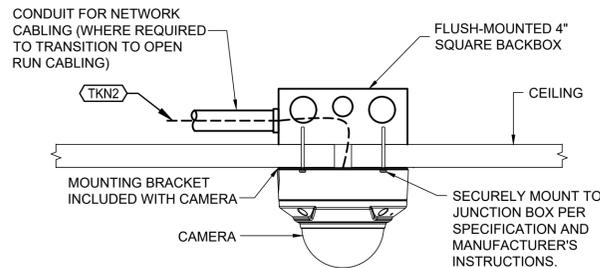
- 1) CAMERAS AND CONDUIT SHALL BE INDEPENDENTLY SUPPORTED AND SHALL NOT RELY ON CEILING SYSTEM CABLE SUPPORTS, FRAME OR TILES FOR SUPPORT.
- 2) WHERE CEILING-MOUNTED CAMERAS ARE TO BE INSTALLED ON CEILING TILES, THEY SHALL BE CENTERED ON THE TILE IN BOTH DIRECTIONS.

KEYNOTES	
AKN	ARCHITECTURAL. WORK OF DIVISIONS 3-14.
AKN1	PAINT AS DESCRIBED/REQUIRED IN DIVISION 9
TKN	ELECTRONIC SECURITY SYSTEMS: COMPLY WITH DIVISION 28.
TKN1	4S TYPE ELECTRICAL BACKBOX WITH INTEGRAL STRUCTURED CABLING BISCUIT BOX. PROVIDE EXTERIOR GRADE BOX AT EXTERIOR CONDITIONS AS REQUIRED BY SECTION 28 05 28 - PATHWAYS FOR ELECTRONIC SECURITY AND SECURITY
TKN2	CATEGORY 6A STATION CABLING BY DIVISION 27. HOMERUN TO NEAREST TR.
TKN3	SMALL FORM FACTOR MULTIMEDIA ENCLOSURE SUITABLE FOR SURFACE MOUNTING WITH INTEGRAL CATEGORY 6A JACK FOR TERMINATION OF STATION CABLING.
TKN4	CATEGORY SIX PATCH CORD PROVIDE LENGTH AS REQUIRED. WHERE CAMERA IS MOUNTED TO BACKBOX, COIL INSIDE BACKBOX.
TKN5	SURFACE MOUNT IP CAMERA SUPPORTED FROM FLUSH MOUNTED BACKBOX.
TKN6	PROVIDE EQUAL TO CHIEF MANUFACTURING CMA110, 8" X 8" STEEL PLATE CEILING PLATE FITTING WITH 1" NPT PIPE THREAD ADAPTER.
TKN7	IP SECURITY CAMERA.
TKN8	1" NPT PIPE THREADED FOR PENDENT MOUNTING FROM STRUCTURE ABOVE.
TKN9	PENDANT MOUNT ADAPTER.

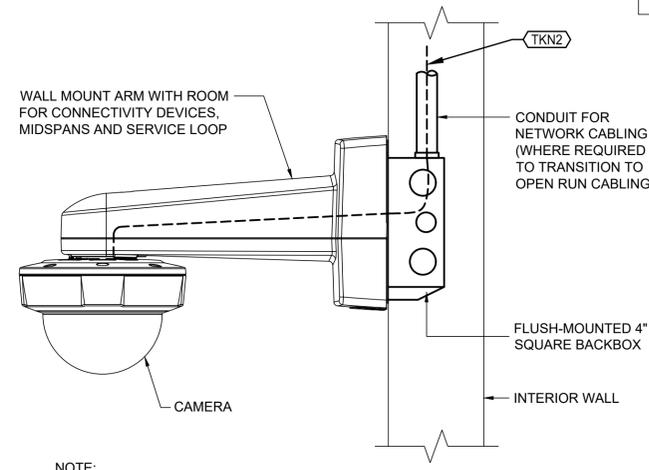


4 DOME CAMERA WALL MOUNT TYP. NTS

NOTE:
1) CAMERA SHALL BE INDEPENDENTLY FASTENED TO THE WALL VIA BACKBOX USING MANUFACTURER RECOMMENDED MOUNTING HARDWARE.

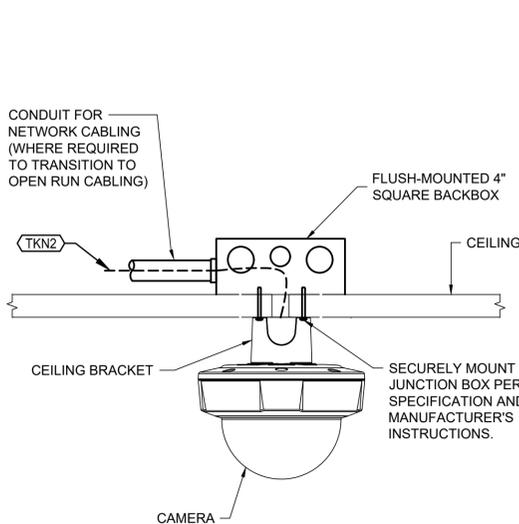


5 DOME CAMERA CEILING MOUNT TYP. NTS

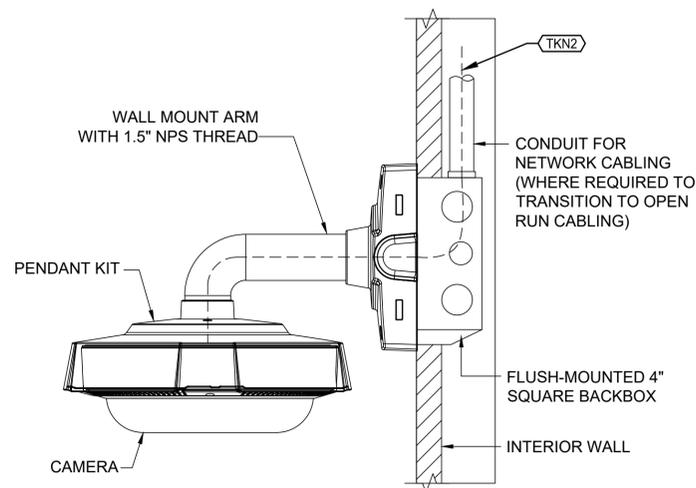


6 180° CAMERA WALL MOUNT ARM TYP. NTS

NOTE:
1) FOR EXTERIOR CAMERA USE INCLUDED WEATHERPROOF HOUSING.

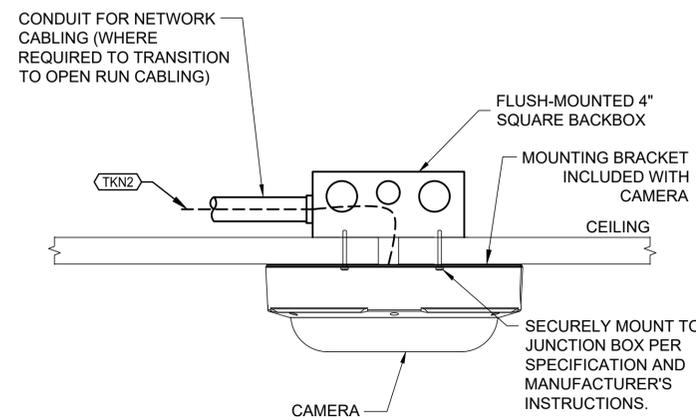


7 180° CAMERA CEILING MOUNT TYP. NTS



8 360° CAMERA WALL MOUNT ARM TYP. NTS

NOTE:
1) FOR EXTERIOR CAMERA USE INCLUDED WEATHERPROOF HOUSING.



9 360° CAMERA CEILING MOUNT TYP. NTS



10 DETENTION GRADE CAMERA NTS



APPROVALS

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DETAILS - VIDEO SURVEILLANCE SYSTEMS

SHEET NUMBER

TY9.02