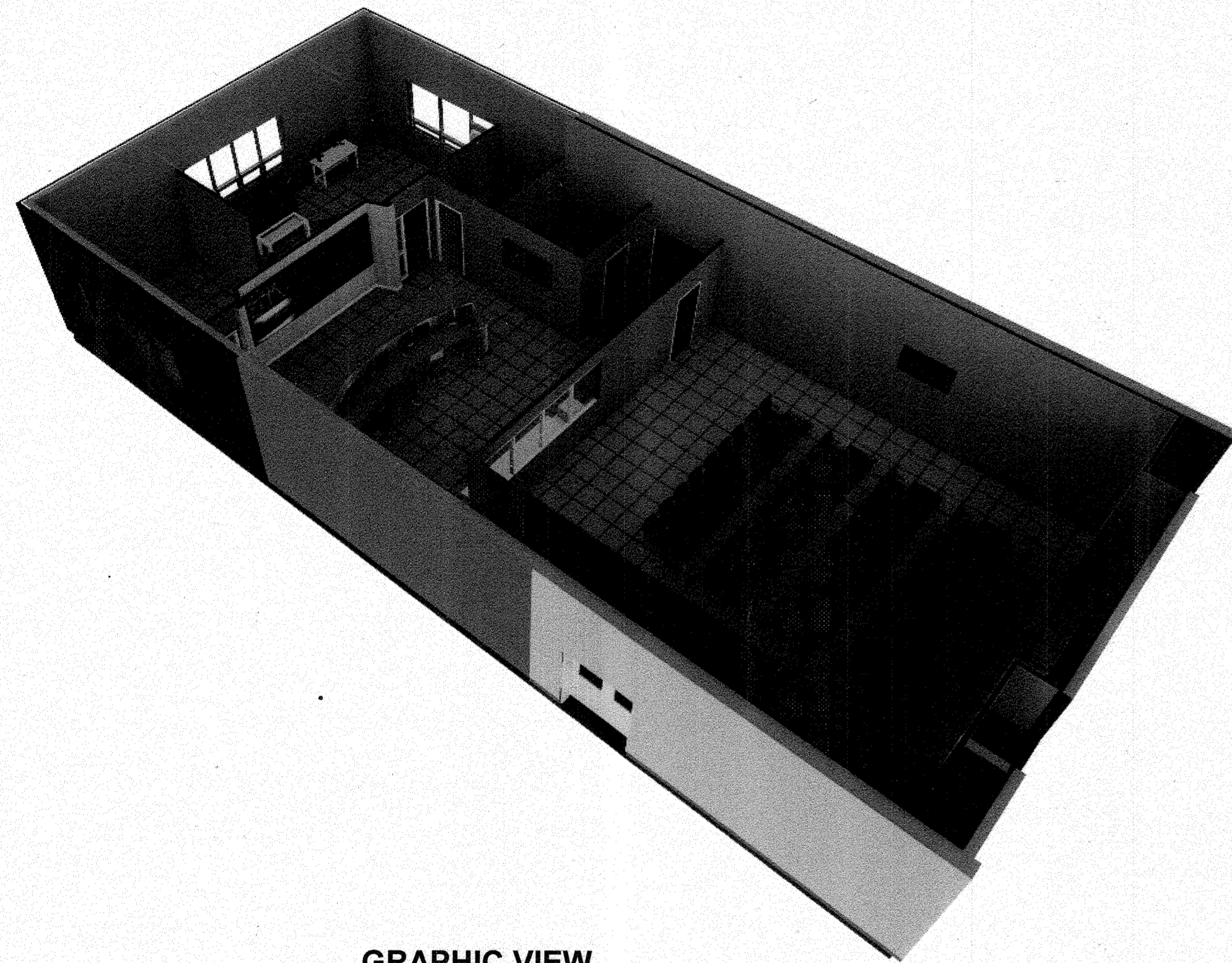


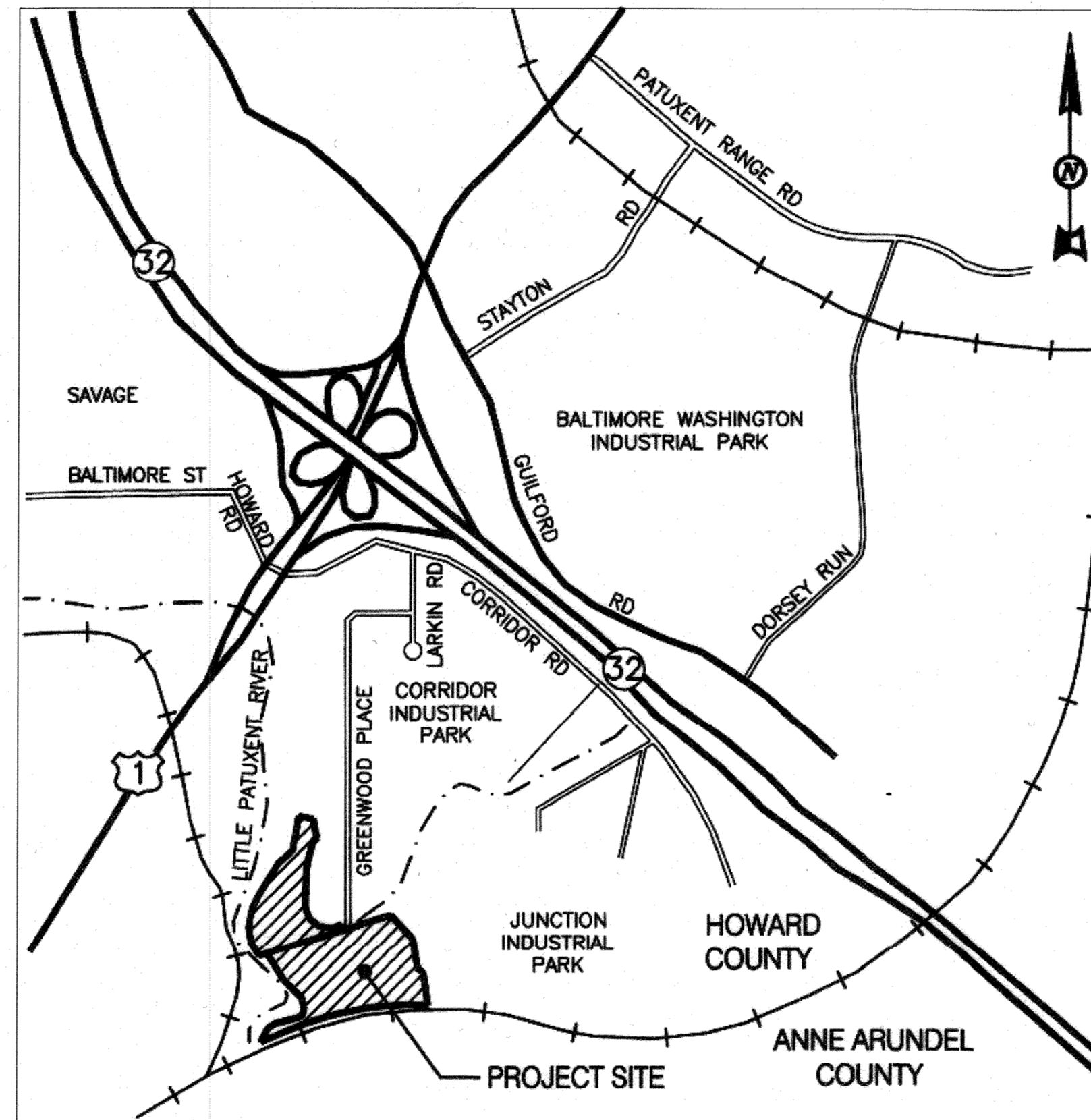
# CONTROL ROOM UPGRADE

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

## HOWARD COUNTY, MARYLAND LITTLE PATUXENT WATER RECLAMATION PLANT



**GRAPHIC VIEW**  
NOT TO SCALE



**VICINITY MAP**  
NOT TO SCALE

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THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF THIS DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

*[Signature]* *[Signature]*  
SIGNATURE DATE

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

AS-BUILT 4-30-2021

G-101

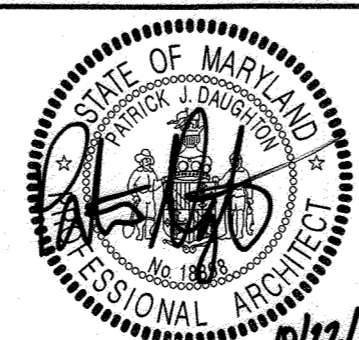
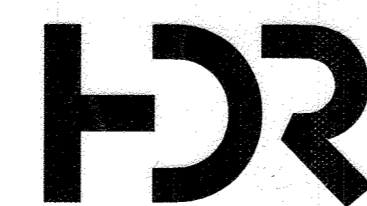
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 11/13/19  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 11/13/19  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 10-31-19  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: JT					
DRN: JW					
CHK: PJD					
10/15/2019	BY	NO.	REVISION	DATE	

COVER SHEET

600 SCALE MAP NO. BLOCK NO.

CONTROL ROOM UPGRADE

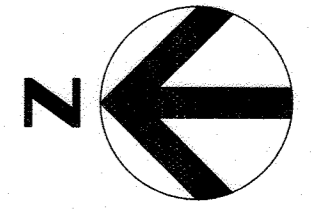
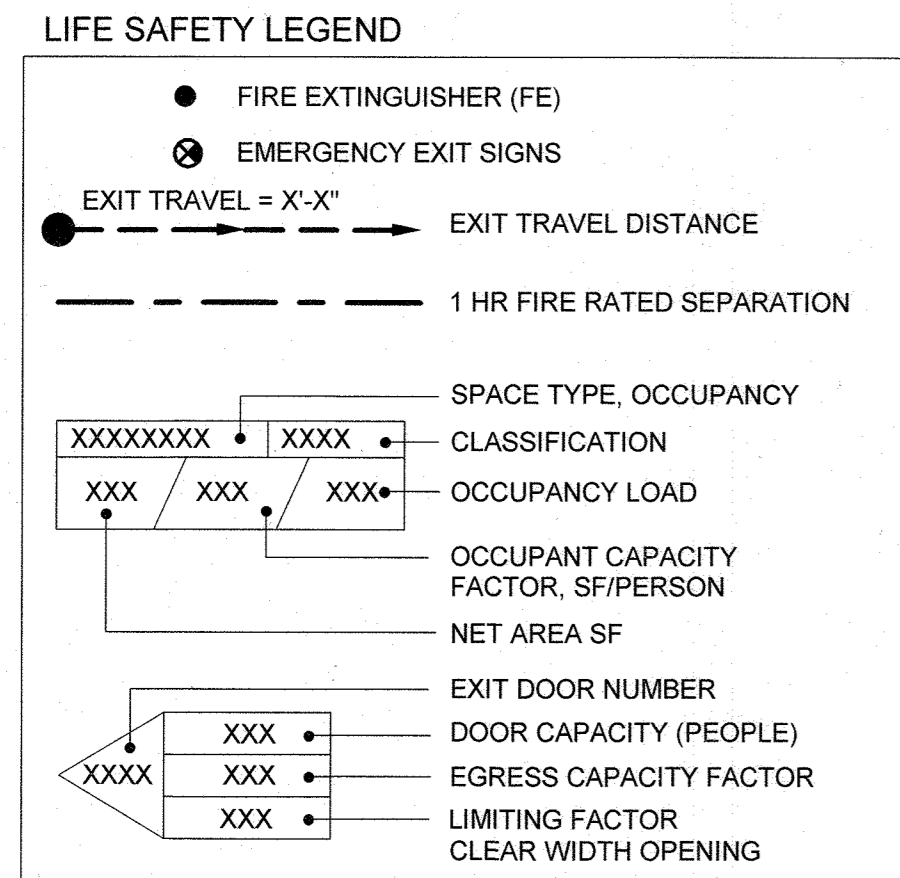
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 31

**LIFE SAFETY LEGEND**



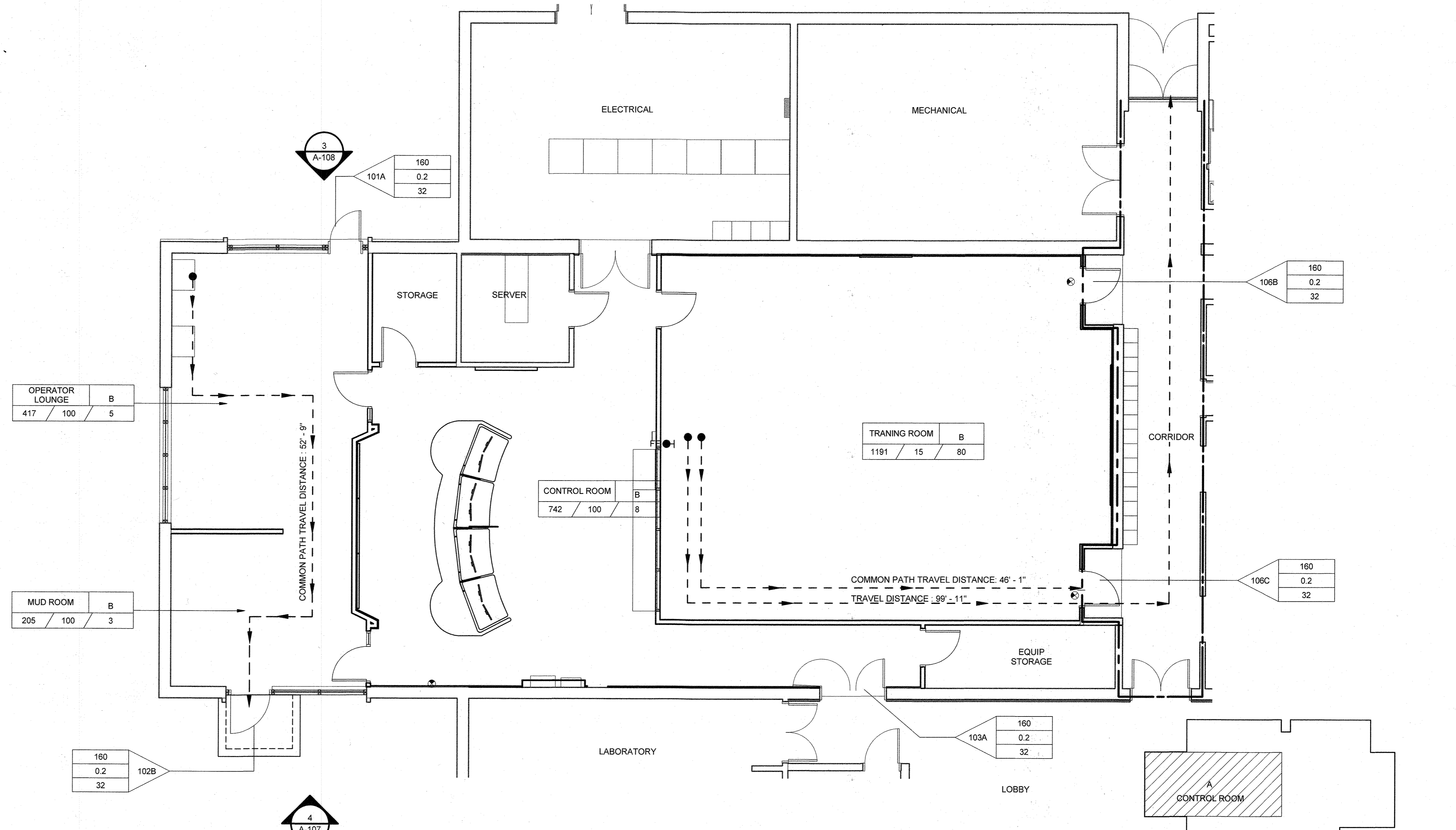
**CODE ANALYSIS**

**LIST OF CODES:**

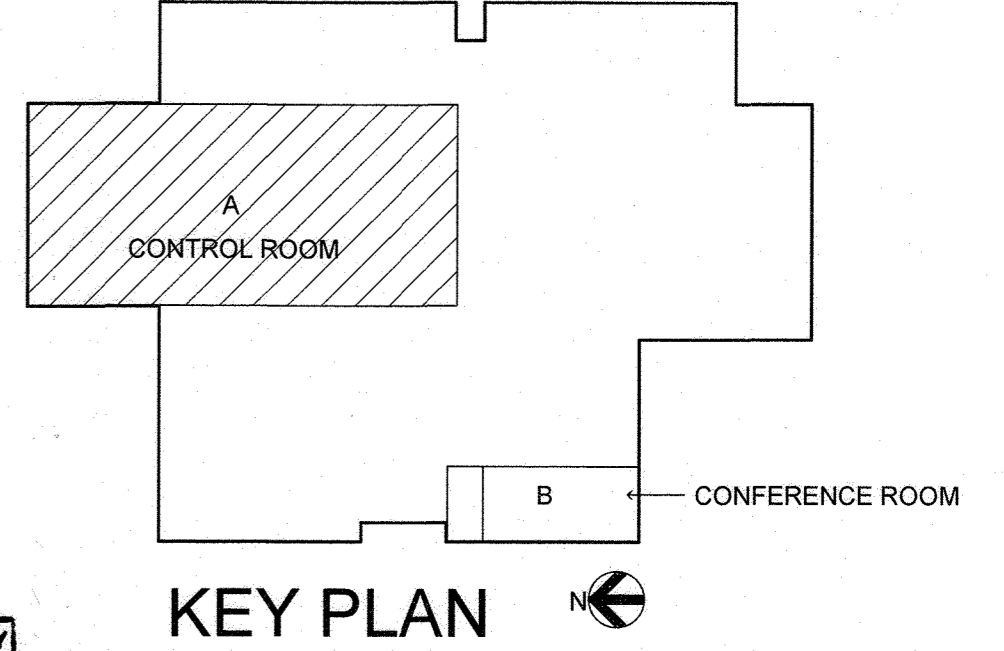
2015 INTERNATIONAL EXISTING BUILDING CODE, WITH AMENDMENTS  
 2015 INTERNATIONAL MECHANICAL BUILDING CODE, WITH AMENDMENTS  
 2015 NFPA 101 LIFE SAFETY CODE  
 2015 INTERNATIONAL BUILDING CODE, WITH AMENDMENTS  
 2014 NATIONAL ELECTRIC CODE WITH AMENDMENTS  
 2009 NATIONAL STANDARD PLUMBING CODE  
 MARYLAND STATE ACCESSIBILITY CODE

**BUILDING DATA:**

- A. OCCUPANCY : B, BUSINESS (304)
- B. CONSTRUCTION TYPE (601): II B
- C. TOTAL RENOVATED BUILDING AREA: 2,986 SQ FT
- D. TOTAL OCCUPANCY LOAD: (1004,1.2)
  - 1. BUSINESS=1795 SF /100=18
  - 2. ASSEMBLY=1191 SF/15=80
- E. EGRESS
  - 1. MAXIMUM ALLOWABLE COMMON PATH OF EGRESS TRAVEL (1006.2) : 75'-0"
  - 2. ACTUAL PATH OF EGRESS TRAVEL=52'-9"
  - 3. MAXIMUM ALLOWABLE EXIT ACCESS TRAVEL DISTANCE (1017.2) 200'-0"
  - 4. ACTUAL MAXIMUM EXIT ACCESS TRAVEL DISTANCE = 46'-11"
- F. NUMBER OF EXITS REQUIRED / PROVIDED : 2/3
- G. AUTOMATIC SPRINKLER SYSTEM (903.2): NOT REQUIRED  
 EXISTING BUILDING IS NOT SPRINKLER
- H. PANIC HARDWARE: PROVIDED ON DOORS SCHEDULE



**FIRST LEVEL LIFE SAFETY PLAN**  
 3/16" = 1'-0"



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*[Signature]* 4/10/21  
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**DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND**

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*[Signature]* 11/13/19  
 CHIEF, UTILITY DESIGN DIVISION DATE



DES: J.T					
DRN: JW					
CHK: PJD					
10/15/2019					
BY	NO.	REVISION	DATE	600 SCALE MAP NO.	BLOCK NO.

**ADMINISTRATION BUILDING LIFE SAFETY PLAN**

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
 CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**G-102**

SCALE AS SHOWN

SHEET 2 OF 31

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A/C AIR CONDITIONING	CLKG CAULKING	F TO F FACE TO FACE	ID INSIDE DIAMETER, INTERIOR DIMENSION	N NORTH, NEUTRAL	R&R REMOVE AND REPLACE	TOB TOP OF BOLT, TOP OF BANK
AVE ARCHITECT/ENGINEER	CLR CLEAR	F&B FACE AND BYPASS	IE INVERT ELEVATION, FOR EXAMPLE	R&S REMOVE AND SALVAGE	TCC TOP OF CURB, TOP OF CONCRETE	
A AMPERE	CMH COMMUNICATION MANHOLE	FAB FABRICATE	IF INSIDE FACE	RA RETURN AIR	TOD TOP OF DUCT	
AB ANCHOR BOLT	CMP CORRUGATED METAL PIPE	FB FLOOR BEAM	IH INTAKE HOOD	RB RESILIENT BASE, ROCK BERM	TOF TOP OF FOOTING	
ABAN ABANDON	CMU CONCRETE MASONRY UNIT	FBD FIBERBOARD	IMP IMPACT	RCPT RECEPTACLE	TOG TOP OF GRATING	
ABC AGGREGATE BASE COURSE	COL CLEANOUT, CONCRETE OPENING	FBG FIBERGLASS	INC INCLUDE, INCANDESCENT	RD ROOF DRAIN	TOL TOLERANCE, TOP OF LEDGER	
ABT ABOUT	CO COLUMN	FBM BOARD FOOT MEASURE	INF INFLUENT	REC RECESS	TOM TOP OF MASONRY	
ACK ALTERNATING CURRENT	COM COMMON	FBO FURNISHED BY OWNER	INSR INSTRUMENTATION	RECD RECEIVED	TOP TOP OF PLATE	
ACP ACQUISITION CEILING PANEL	COMB COMBINATION	FC FLOOR CONNECTION	INSUL INSULATION	RECT RECTANGULAR	TOPO TOPOGRAPHY	
ACST ASPHALTIC CONCRETE PAVEMENT	COMM COMMUNICATION	FDA FLOOR DRAIN	INT INTERIOR, INTERSECTION	RED REDUCER	TOS TOP OF SLAB, TOP OF STEEL	
AD ACOUSTIC	COMP COMPOSITION, COMPRESSIBLE	FDC FLEXIBLE DUCT CONNECTION	INTR INTERMEDIATE, INTERIOR	REF REFERENCE	TOW TOE OF SLOPE	
ADDL ADDENDUM, AREA DRAIN	CON CONCENTRIC	FDR FEEDER	INV INVERT	REIN REINFORCING	TP TOP OF WALL	
ADH ADHESIVE	CONC CONCRETE	FDTN FOUNDATION	IPS IRON PIPE SIZE	REM REMOVE	TP TOILET PARTITION, TELEPHONE POLE,	
ADJ ADJUSTABLE, ADJACENT	CONN CONNECTION	FE FLANGED END	IPR INTERNAL PIPE THREAD	REQD REQUIRED	TR TOE PLATE, TRAP PRIMER	
AFF AMP FRAME, AMP FUSE	CONSTR CONSTRUCTION	FEC FIRE EXTINGUISHER CABINET	IR INSIDE RADIUS, IRON ROD	RESIL RESILIENT	TPD TOILET PAPER DISPENSER	
AFG ABOVE FINISH FLOOR	CONT CONTINUOUS	FES FLARED END SECTION	IRR IRRIGATION	RET RETAINING, RETURN	TPG TOPPING, THROUGH PLATE GIRDER	
AGGR AGGREGATE	COOR COORDINATE	FEXT FIRE EXTINGUISHER	ISO ISOMETRIC	RFV REVISION, REVERSE	TR TRANSOM	
AI AREA INLET, ANALOG INPUT	CORR CORROSIIVE, CORRUGATED	FF FAR FACE, FACTORY FINISH, FLAT FACE		RF OVER CURRENT PROTECTION DEVICE	TRNS TRANSITION	
AIC AMPS INTERRUPTING CAPACITY	CP CHECKER PLATE, CONTROL POINT	FG FINISHED GRADE		OD OUTSIDE DIAMETER	TRD TRENCH DRAIN	
ALIGN ALIGNMENT	CPLG COUPLING	FH FIRE HYDRANT		OED OPEN END DUCT	TYP TYPICAL	
ALG ALTERNATE, ALTITUDE	CRL CORROSION-RESISTANT LINING	FIG FIGURE		OF OUTSIDE FACE, OFFICE FURNISHING		
ALUM ALUMINUM	CSC COMPRESSION SLEEVE COUPLING	FIN FINISH		OCFI OWNER FURNISHED CONTRACTOR		
AM ACOUSTICAL MATERIAL	CSK COUNTERSINK	FJT FLUSH JOINT		OG OWNER FURNISHED OWNER INSTALLED	U URINAL	
AMB AMBIENT	CSS CLINIC SERVICE SINK	FJT FLOW, FLOW LINE		OH ORIGINAL GROUND	UL UNDERGROUND	
ANC ANCHOR	CT CERAMIC TILE	FLEX FLEXIBLE		OH OVERHEAD	ULT ULTIMATE	
AO ANALOG OUTPUT	CTJ CONTRACTION JOINT	FLG FLANGE		OPNG OPENING	UNFN UNFINISHED	
AP ACCESS PANEL	CTR CENTER	FLOR FLUORESCENT		OPP OPPOSITE	UNO UNLESS NOTED OTHERWISE	
APRX APPROXIMATE	CTRL CONTROL	FLR FLOOR		OPT OPTIONAL	UTIL UTILITY	
APVD APPROVED	CVT CULVERT	FLS FLASHING, FLUSH		OR OUTSIDE RADIUS	V VENT, VELOCITY, VOLT	
ARCH ARCHITECTURAL	CU COPPER, CUBIC	FN FENCE		ORD OVERFLOW ROOF DRAIN	VA VOLT AMPERE	
ASSY ASSEMBLY	CW CLOCKWISE	FO FINISHED OPENING		ORIG ORIGINAL	VAC VACUUM	
AT ACOUSTICAL TILE, AMP TRIP	CY CUBIC YARD	FOB FLAT ON BOTTOM		ORIG OVERFLOW	VAR VARNISH, VARIABLE	
ATC ACOUSTICAL TILE CEILING		FOC FACE OF CONCRETE, FACE OF CURB		OVHG OVERHANG	VB VAPOR BARRIER, VINYL BASE,	
ATM ATMOSPHERE		FOM FACE OF MASONRY		OZ OUNCE	VV VALVE BOX	
AUTO AUTOMATIC		FOT FLAT ON TOP			VC VERTICAL CURVE	
AUX AUXILIARY		FPT FEMALE PIPE THREAD			VCP VITRIFIED CLAY PIPE	
AVE AVENUE		FR FRAME			VCT VINYL COMPOSITION TILE,	
AVG AVERAGE		FRP FIBERGLASS REINFORCED PLASTIC			VCL VERTICAL CENTERLINE	
AWG AMERICAN WIRE GAGE		FRTM FIRE RETARDANT TREATED MATERIAL			VEL VELOCITY	
AWT ACOUSTICAL WALL TILE		FS FLOOR SINK, FAR SIDE			VENT VENTILATION	
B TO B BACK TO BACK		FT FEET, FOOT			VERTS VERTICAL REINFORCING	
BAL BALANCE		FTG FOOTING, FITTING			VG VERTICAL GRAIN	
BBD BULLETIN BOARD		FUR FURRED, FURRING			VIF VERIFY IN FIELD	
BC BASE CABINET, BOTTOM CHORD,		FURN FURNITURE, FURNISH			VIN VINYL	
BC BOLT CENTER, BOLT CIRCLE		FUT FUTURE			VOL VOLUME	
BD BOARD		FV FACE VELOCITY			VPC VERTICAL POINT OF CURVATURE	
BE BOTH ENDS, BELL END		FW FIELD WELD, FIRE WALL			VPI VERTICAL POINT OF INTERSECTION	
BF BOTH FACES, BOTTOM FACE,		FWD FORWARD			VPT VERTICAL POINT OF TANGENCY	
BL BLIND FLANGE, BOARD FEET		FWE FURNISHED WITH EQUIPMENT			VS VENT THROUGH ROOF	
BITUM BITUMINOUS		FXTR FIXTURE			VTR VENT THROUGH ROOF	
BKG BACKING		G GRILLE, GROUND			VWC VINYL WALL COVERING	
BL BASE LINE		GA GAGE (METAL THICKNESS)			W WITH	
BLDG BUILDING		GAL GALLON			W/O WITHOUT	
BLK BLOCK		GALV GALVANIZED			W WATT, WEST, WIDE, WINDOW, WIRE,	
BLKG BLOCKING		GB GRAB BAR, GRADE BREAK			WB WIDE FLANGE BEAM	
BM BENCHMARK, BEAM		GC GROOVED COUPLING			WC WOOD BASE	
BOC BACK OF CURB		GD GUARD			WC WATER CLOSET, WATER COLUMN	
BOD BOTTOM OF DUCT		GEN GENERAL			WD WOOD, WIDTH	
BOG BOTTOM OF GRILLE		GFCI GROUND FAULT CIRCUIT INTERRUPTER			WF WIDE FLANGE, WATER FOUNTAIN	
BOL BOTTOM OF LOUVER, BOLLARD		GFMU GROUND FACE MASONRY UNIT			WG WIRE GLASS, WASH GAGE	
BOP BOTTOM OF PIPE		GG GUTTER GRADE			WH WALL HYDRANT, WEEP HOLE	
BOR BOTTOM OF REGISTER		GJ GROOVED JOINT			WI WROUGHT IRON	
BOT BOTTOM		GL GLASS			WL WATER LEVEL	
BOU BOTTOM OF UNIT		GLB GLASS BLOCK, GLULAM BEAM			WLD WELDED	
BP BASE PLATE		GND GROUND			WM WIRE MESH	
BRG BEARING		GP GUY POLE			WP WATERPROOF	
BRGP BEARING PLATE		GR GRADE			WS WATERSTOP, WATER SURFACE	
BRKT BRACKET		GRTG GRATING			WSCOT WAJNSCOT	
BS BOTH SIDES		GSB GYPSUM SHEATHING BOARD			WT WEIGHT, WATER TIGHT	
BTU BRITISH THERMAL UNIT		GT GREASE TRAP			WTHP WATERPROOF, WORKING POINT	
BTW BETWEEN		GVL GRAVEL			WWF WELDED WIRE FABRIC	
BTWLD BUTT WELD		GW GUY WIRE				
BU BELL UP, BUILT-UP		GWB GYPSUM WALLBOARD				
BUR BUILT-UP ROOFING		GYP GYPSUM HARDBOARD				
BW BOTHWAYS		H HIGH	MCB METAL CORNER BEAD		XP EXPLOSION-PROOF	
BYP BYPASS		HB HOSE BIBB	MCJ MASONRY CONTROL JOINT		XS EXTRA STRONG	
		HBD HARDBOARD	MDMJ MODIFIED DOUBLE MECHANICAL JOINT		XSECT CROSS SECTION	
		HC HANDICAPPED, HOLLOW CORE, HORIZONTAL	MECH MECHANICAL		XXS DOUBLE EXTRA STRONG	
		HD HEAD, HOT DIP	MED MEDIUM			
		HDR HEADER	MFR MANUFACTURER			
		HDW HARDWARE	MH MANHOLE, METAL HALIDE			
		HEX HEXAGONAL	MIN MINIMUM			
		HGR HANGER	MIR MIRROR			
		HH HANDHOLE	MISC MISCELLANEOUS			
		HID HIGH-INTENSITY DISCHARGE	MJ MECHANICAL JOINT			
		HM HOLLOW METAL	ML MASONRY LINTEL			
		HORIZ HORIZONTAL	MLO MAIN LUGS ONLY			
		HP HIGH POINT, HORSEPOWER	MMB MEMBRANE			
		HPC HORIZONTAL POINT OF CURVATURE	MO MASONRY OPENING			
		HPS HIGH-PRESSURE SODIUM	MOD MODULAR, MODIFY			
		HPT HORIZONTAL POINT OF TANGENCY	MON MONUMENT			
		HR HOSE REEL, HOUR	MPT MALE PIPE THREAD			
		HS HEADED STUD, HIGH STRENGTH	MQRWBS MOISTURE-RESISTANT GYPSUM WALLBOARD			
		HSS HOLLOW STRUCTURAL SHAPE	MS MOP SINK			
		HT HEIGHT	MSL MEAN SEA LEVEL			
		HTG HEATING	MT MOUNT			
		HV HIGH VOLTAGE	MU MASONRY UNIT			
		HVAC HEATING, VENTILATING AND AIR CONDITIONING	MULL MULLION			
		HWD HARDWOOD	MV MEDIUM VOLTAGE			
		HWL HIGH WATER LEVEL	MW MONITORING WELL			
		HYD HYDRAULIC				
		HZ HERTZ, CYCLES PER SECOND				

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SIGNATURE: [Signature] DATE: 4/12/2021

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<b>DEPARTMENT OF PUBLIC WORKS</b> <b>HOWARD COUNTY, MARYLAND</b>				<b>CONTROL ROOM UPGRADE</b>				<b>G-103</b>	
DES: J.T. DRN: J.W. CHK: P.J.D. 10/15/2019		<b>ABBREVIATIONS</b>				CAPITAL PROJECT S-6264 CONTRACT NO. 20-5099 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND			
SCALE AS SHOWN SHEET 3 OF 31									

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MATERIALS IN PLAN/SECTION	GENERAL SYMBOLOGY	IDENTIFICATION SYMBOLOGY	SHEET NAMING CONVENTION																																																																																																					
<p><b>ACOUSTICAL CEILING TILE (SECTION)</b></p> <p><b>ASPHALT (PLAN OR SMALL-SCALE SECTION)</b></p> <p><b>ASPHALT (LARGE-SCALE SECTION)</b></p> <p><b>BATT INSULATION (SECTION)</b></p> <p><b>BRICK MASONRY (PLAN AND/OR SECTION)</b></p> <p><b>CHECKERED PLATE (PLAN)</b></p> <p><b>CONCRETE (PLAN AND/OR SECTION)</b></p> <p><b>CONCRETE MASONRY (PLAN AND/OR SECTION)</b></p> <p><b>DEMOLITION (PLAN AND/OR SECTION)</b></p> <p><b>EARTH (SECTION)</b></p> <p><b>FILTER POINT MAT (PLAN)</b></p> <p><b>FINISHED WOOD (SECTION)</b></p> <p><b>GLULAM LUMBER (SECTION)</b></p> <p><b>GRANULAR FILL (SECTION)</b></p> <p><b>GRATING (SECTION)</b></p> <p><b>GRATING (PLAN)</b></p> <p><b>GROUT (SECTION)</b></p> <p><b>GYPSUM BOARD (SECTION)</b></p> <p><b>METAL (SECTION)</b></p> <p><b>ORIENTED STRAND BOARD (SECTION)</b></p> <p><b>PARTICLE BOARD (SECTION)</b></p> <p><b>PLYWOOD (LARGE-SCALE SECTION)</b></p> <p><b>PLYWOOD (SMALL-SCALE SECTION)</b></p> <p><b>PRECAST CONCRETE (PLAN AND/OR SECTION)</b></p> <p><b>RIGID INSULATION (SECTION)</b></p> <p><b>RIPRAP (PLAN AND/OR SECTION)</b></p> <p><b>SAND (SECTION)</b></p> <p><b>SOD (SECTION)</b></p> <p><b>WEEP JOINT MORTAR PROTECTION SYSTEM (SECTION)</b></p> <p><b>WOOD - CONTINUOUS (SECTION)</b></p> <p><b>WOOD - BLOCKING (SECTION)</b></p>	<p><b>ARROW INDICATES DIRECTION OF PLAN NORTH</b></p> <p><b>NORTH ARROW</b></p> <p><b>PLAN</b> 1/4" = 1'-0" <b>PLAN TITLE</b></p> <p><b>ARROW INDICATES DIRECTION OF SECTION CUT</b></p> <p><b>SECTION LETTER</b></p> <p><b>SHEET WHERE SECTION IS LOCATED</b></p> <p><b>FULL BUILDING SECTION CUT MARKER</b></p> <p><b>SECTION LETTER</b></p> <p><b>FLAG INDICATES DIRECTION OF SECTION CUT</b></p> <p><b>SHEET WHERE SECTION IS LOCATED</b></p> <p><b>SECTION CUT MARKER</b></p> <p><b>SECTION LETTER</b></p> <p><b>SECTION</b> 3/8" = 1'-0" <b>SHEET WHERE SECTION VIEW IS FIRST CUT *</b></p> <p><b>SECTION TITLE</b></p> <p><b>DETAIL NUMBER</b></p> <p><b>SHEET WHERE DETAIL IS LOCATED *</b></p> <p><b>DETAIL MARKER</b></p> <p>FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.</p> <p><b>DETAIL MARKER</b></p> <p>FOR REFERENCING DETAILS BOUND IN SPECIFICATIONS OR SEPARATE VOLUME.</p> <p><b>DETAIL NUMBER</b></p> <p><b>DETAIL</b> 1/4" = 1'-0" <b>SHEET WHERE DETAIL IS LOCATED *</b></p> <p><b>DETAIL TITLE</b></p> <p>*EXCEPTIONS WHERE THE SHEET NUMBER IS REPLACED BY A DASH (-) 1) FOR COMMON DETAILS, SECTIONS, ELEVATIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS. 2) SECTIONS, ELEVATIONS OR DETAILS THAT ARE LOCATED ON THE SAME SHEET THEY ARE CUT OR CALLED OUT ON.</p>	<p><b>ARROW INDICATES POINT OF VIEW</b></p> <p><b>ELEVATION NUMBER</b></p> <p><b>INTERIOR</b>   <b>EXTERIOR</b></p> <p><b>SHEET WHERE ELEVATION IS LOCATED *</b></p> <p><b>SINGLE ELEVATION OR PHOTO MARKER</b></p> <p><b>ELEVATION NUMBER</b></p> <p><b>ARROW INDICATES POINT OF VIEW ELEVATION</b></p> <p><b>INDICATES SHEET WHERE ELEVATION IS LOCATED</b></p> <p><b>MULTIPLE ELEVATION OR PHOTO MARKER</b></p> <p><b>ELEVATION IDENTIFICATION NUMBER</b></p> <p><b>ELEVATION</b> 3" = 1'-0" <b>SHEET WHERE POINT OF VIEW MARKER CAN BE FOUND *</b></p> <p><b>ELEVATION TITLE</b></p> <p><b>TARGET ELEVATION</b></p> <p><b>ARCHITECTURAL</b></p> <p><b>ROOM NAME</b> XX-XX   <b>ROOM NUMBER</b></p> <p>XXX   <b>DOOR NUMBER</b></p> <p>A   <b>COLUMN GRID LINE</b></p> <p>X   <b>WALL TYPE</b></p> <p>X   <b>WINDOW TYPE</b></p> <p>X   <b>LOUVER</b></p> <p>X   <b>ACCESSORY, FURNITURE, AND MISCELLANEOUS EQUIPMENT IDENTIFIER</b></p> <p><b>KEY NOTE DESIGNATION</b></p> <p><b>KEY NOTE NUMBER</b></p> <p><b>GENERAL LINE SYMBOLOGY</b></p> <p>4-HOUR FIRE RATED WALL</p> <p>3-HOUR FIRE RATED WALL</p> <p>2-HOUR FIRE RATED WALL</p> <p>1-HOUR FIRE RATED WALL</p> <p>COLUMN GRID LINE/CENTERLINE</p>	<p><b>PIPING</b></p> <p><b>FIGURE</b>   <b>EXAMPLE</b></p> <p>LINE SIZE   36"</p> <p>SERVICE   PLANT EFFLUENT</p> <p><b>EQUIPMENT IDENTIFICATION</b></p> <p><b>ALTERNATIVE 1</b></p> <p><b>FIGURE</b>   <b>EXAMPLE</b></p> <p>SERVICE ABBREVIATION   NPWP2023   INDICATES NON-POTABLE WATER</p> <p>EQUIPMENT ABBREVIATION   INDICATES PUMP</p> <p>BUILDING OR STRUCTURE NUMBER   BUILDING 20</p> <p>EQUIPMENT NUMBER   PUMP 23</p> <p><b>ALTERNATIVE 2</b></p> <p><b>FIGURE</b>   <b>EXAMPLE</b></p> <p>SERVICE ABBREVIATION   NPWP-23   INDICATES NON-POTABLE WATER</p> <p>EQUIPMENT ABBREVIATION   INDICATES PUMP</p> <p>EQUIPMENT NUMBER   PUMP 23</p>	<p><b>AREA DESIGNATION</b></p> <p>TO BE EDITED ON AN A PROJECT BASIS. TO BE DETERMINED BY THE PROJECT MANAGER, THEN ADDED TO THE GENERAL LEGEND.</p> <p><b>EXAMPLE:</b></p> <p>01 BUILDING OR AREA NAME 02 BUILDING OR AREA NAME 03 BUILDING OR AREA NAME</p> <p><b>DISCIPLINE DESIGNATOR &amp; DISCIPLINE ORDER</b></p> <p>G GENERAL V SURVEYING/MAPPING X DEMOLITION C CIVIL U MULTI-DISCIPLINE S STRUCTURAL A ARCHITECTURAL D PROCESS M MECHANICAL (HVAC) P PLUMBING E ELECTRICAL Y INSTRUMENTATION</p> <p><b>SHEET TYPE DESIGNATOR</b></p> <p>0 GENERAL (SYMBOLS, LEGENDS) 1 PLANS 2 ELEVATIONS 3 SECTIONS 4 LARGE SCALE VIEWS 5 DETAILS 6 SCHEDULES AND DIAGRAMS 8 PROFILES 9 3D REPRESENTATIONS</p> <p><b>EXAMPLE</b></p> <p>GRAVITY THICKENER ARCHITECTURAL SECTION, DRAWING 01</p> <table border="1"> <tr> <td>0</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="10">BUILDING OR AREA DESIGNATION</td> </tr> <tr> <td></td><td></td><td>A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="10">DISCIPLINE DESIGNATOR</td> </tr> <tr> <td></td><td></td><td></td><td></td><td>3</td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="10">SECTIONS</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td>0</td><td>1</td><td></td><td></td> </tr> <tr> <td colspan="10">SHEET NUMBER</td> </tr> <tr> <td>0</td><td>2</td><td>A</td><td>3</td><td>0</td><td>1</td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="10">EXAMPLE</td> </tr> </table> <p><b>THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF THIS DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.</b></p> <p><b>SIGNATURE</b>   <b>DATE</b></p> <p><b>GENERAL NOTES:</b></p> <ol style="list-style-type: none"> <li>THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.</li> <li>SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.</li> </ol>	0	2									BUILDING OR AREA DESIGNATION												A								DISCIPLINE DESIGNATOR														3						SECTIONS																0	1			SHEET NUMBER										0	2	A	3	0	1					EXAMPLE									
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\*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

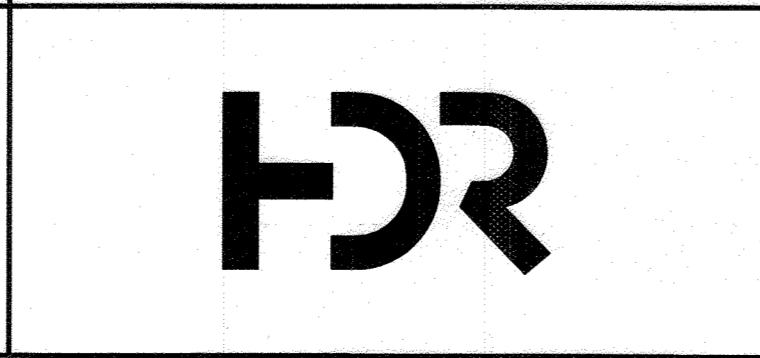
**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*James E. Smith* 11/13/19  
DIRECTOR OF PUBLIC WORKS   DATE

*Thomas E. Smith* 11/13/19  
CHIEF, BUREAU OF ENGINEERING   DATE

*James E. Smith* 11/13/19  
CHIEF, BUREAU OF UTILITIES   DATE

*James E. Smith* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION   DATE



DES: J.T					
DRN: JW					
CHK: PJD					
10/15/2019	BY	NO.	REVISION	DATE	

<b>GENERAL LEGEND</b>	
600 SCALE MAP NO.	BLOCK NO.

**AS-BUILT 4-30-2021**

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

HVAC SYMBOLOGY

	RECTANGULAR DUCT		HIDDEN DUCT		VD = VOLUME DAMPER BDD = BACKDRAFT DAMPER
	ROUND DUCT		DUCT ELEVATION TAG ABOVE FINISH FLOOR		MOTOR OPERATED DAMPER
	SUPPLY DUCT SECTION, RECTANGULAR		PRESSURE/TEMPERATURE TEST PLUG (PETE PLUG OR EQUAL)		FIRE DAMPER
	RETURN DUCT SECTION, RECTANGULAR		SOUND ATTENUATOR		SMOKE DAMPER
	EXHAUST DUCT SECTION, RECTANGULAR		SUPPLY DIFFUSER (ROUND)		SMOKE AND FIRE DAMPER
	90° ELBOW TURNED UP, RECTANGULAR		SUPPLY AIR REGISTER OR GRILLE - W/DUCT-MOUNTED EXTRACTOR		FLEXIBLE CONNECTION
	90° ELBOW TURNED UP, RECTANGULAR		EXHAUST OR RETURN AIR REGISTER OR GRILLE		FLEXIBLE DUCT
	90° ELBOW TURNED UP, ROUND		DIFFUSER, GRILLE OR REGISTER DESIGNATION TAG		ACOUSTICAL LINING - DUCT DIMENSIONS FOR NET FREE AREA
	90° ELBOW TURNED UP, ROUND		RETURN AIR GRILLE		SPLITTER DAMPER
	TRANSITION - DOUBLE SIDED		EXHAUST AIR GRILLE		ACCESS DOOR
	TRANSITION - ONE SIDED		SUPPLY DIFFUSER (NO ARROWS INDICATE 4-WAY)		UNDERCUT DOOR 3/4"
	TRANSITION - RECTANGULAR TO ROUND DUCT				NEW CONNECTION TO EXISTING
	STANDARD BRANCH - FOR SUPPLY AIR W/EXTRACTOR AND RETURN AIR W/O EXTRACTOR				THERMOSTAT
	RECTANGULAR DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW				
	ROUND DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW				
	ELBOW - W/TURNING VANE (RECTANGULAR)				
	ELBOW - W/TURNING VANES (RECTANGULAR), SMOOTH RADIUS				

HVAC ABBREVIATIONS

AD ACCESS DOOR	EFF EFFICIENCY	NRC NOISE REDUCTION COEFFICIENT
ADJ ADJUSTABLE	EMCS ENERGY MANAGEMENT CONTROL SYSTEM	NTS NOT TO SCALE
AFF ABOVE FINISHED FLOOR	ESP EXTERNAL STATIC PRESSURE	OD OUTSIDE DIAMETER
AFR ABOVE FINISHED ROOF	EWT ENTERING WATER TEMPERATURE	OFCI OWNER FURNISHED CONTRACTOR INSTALLED
AHU AIR HANDLING UNIT	F FUTURE	OFOI OWNER FURNISHED OWNER INSTALLED
AI ANALOG INPUT	FA FREE AREA	OS&Y OUTSIDE SCREW AND YOKE
ALT ALTERNATIVE	FCP FAN CONTROL PANEL	PD PRESSURE DROP
AMB AMBIENT	FCU FAN COIL UNIT	PH PHASE
AO ANALOG OUTPUT	FL FILTER, FLOOR	PLBG PLUMBING
APD AIR PRESSURE DROP	FLA FULL LOAD AMPS	PPH POUNDS PER HOUR
ARF ABOVE RAISED FLOOR	FPB FAN POWERED BOX	PSI POUNDS PER SQUARE INCH
AV AIR VALVE	FPM FEET PER MINUTE	PSIA POUNDS PER SQUARE INCH ABSOLUTE
AVG AVERAGE	GAL GALLONS	PSIG POUNDS PER SQUARE INCH GAUGE
BAS BUILDING AUTOMATION SYSTEM	GPH GALLONS PER HOUR	QTY QUANTITY
BHP BRAKE HORSE POWER	GPM GALLONS PER MINUTE	RA RETURN AIR
BDD BACK DRAFT DAMPER	HP HORSE POWER	REQD REQUIRED
BOD BOTTOM OF DUCT	HR HOUR	RH RELATIVE HUMIDITY
BOE BOTTOM OF EQUIPMENT	HTG HEATING	RPM REVOLUTIONS PER MINUTE
BOF BOTTOM OF PIPE	HVAC HEATING, VENTILATION, & AIR CONDITIONING	RTU ROOFTOP UNIT
BTUH BRITISH THERMAL UNITS PER HOUR	HZ HERTZ	S SIGNAL PORT
CAV CONSTANT AIR VOLUME	IAQ INDOOR AIR QUALITY	SA SUPPLY AIR, SOUND ATTENUATOR
CFH CUBIC FEET PER HOUR	ID INSIDE DIAMETER	SCFM STANDARD CUBIC FEET PER MINUTE
CFM CUBIC FEET PER MINUTE	IE INVERT ELEVATION	SF SQUARE
CLG CEILING, COOLING	IN INCHES	SQ SQUARE
CO CLEAN OUT	I/O INPUT/OUTPUT	TEMP TEMPERATURE CONTROL PANEL
CONN CONNECTION	IP CURRENT TO PNEUMATIC	TD TEMPERATURE DIFFERENTIAL
CONT CONTINUOUS	KEF KITCHEN EXHAUST FAN	TEMP TEMPERATURE, TEMPORARY
CRAC COMPUTER ROOM AIR CONDITIONER	KW KILOWATT	TES THERMAL ENERGY STORAGE
CU CONDENSING UNIT	LAT LEAVING AIR TEMPERATURE	TYP TYPICAL
DB DRY BULB	LB POUNDS	UNO UNLESS NOTED OTHERWISE
dB DECIBEL(S)	LV LOUVER	UH UNIT HEATER
DDC DIRECT DIGITAL CONTROL	LWT LEAVING WATER TEMPERATURE	V VOLTS
DEG F DEGREES FAHRENHEIT	MAU MAKE-UP AIR UNIT	VAV VARIABLE AIR VOLUME
DH DEHUMIDIFIER	MAX MAXIMUM	V&C VALVE AND CAP
DIA DIAMETER	MBH THOUSAND BTUH	VD MANUAL VOLUME DAMPER
DN DOWN	MCC MOTOR CONTROL CENTER	VRF VARIABLE REFRIGERANT FLOW
DX DIRECT EXPANSION	MISC MISCELLANEOUS	VTR VENT THROUGH ROOF
E EXISTING	MIN MINIMUM MINUTES	W WATTS
EA EXHAUST AIR	MFG MANUFACTURING	WB WET BULB
EAT ENTERING AIR TEMPERATURE	MOD MOTOR OPERATED DAMPER	WG WATER GAUGE
EDH ELECTRIC DUCT HEATER	NC NORMALLY CLOSED, NOISE CRITERIA	WPD WATER PRESSURE DROP
EER ENERGY EFFICIENCY RATIO	NIC NOT IN CONTRACT	
EF EXHAUST FAN	NO NORMALLY OPEN, NUMBER	

GENERAL NOTES

- PROVIDE AND INSTALL ALL MECHANICAL SYSTEMS IN ACCORDANCE WITH THE MARYLAND BUILDING PERFORMANCE STANDARDS (MBPS), THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE, AND ALL OTHER APPLICABLE STATE AND LOCAL CODES.
- CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. PLANS SHOULD NOT BE SCALED.
- VERIFY ALL CLEARANCES BEFORE FABRICATING AND INSTALLING WORK. COORDINATE WITH ALL OTHER TRADES.
- COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
- ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE INTERNATIONAL ELECTRICAL CODE (IEC) AND NFPA 70.
- ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR DUCTWORK (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- PROVIDE ACCESS PANELS FOR INSTALLATION IN DUCTWORK, WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE CONTROLS DEVICES, DAMPERS, VALVES, DUCTWORK, SMOKE DETECTORS, AND OTHER CONCEALED MECHANICAL EQUIPMENT. ACCESS PANEL INSTALLATION SHALL BE COORDINATED WITH PROCESS REQUIREMENTS, ARCHITECTURAL WORK TO MATCH MATERIALS AND FINISHES.
- ALL DUCTWORK SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH ALL TRADES. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS OR AS SHOWN ON THE MECHANICAL AND STRUCTURAL DRAWINGS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED.
- PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK AND PIPING SYSTEMS CONNECTED TO FANS, PUMPS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION.

THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

*[Signature]* 4/30/21  
DATE

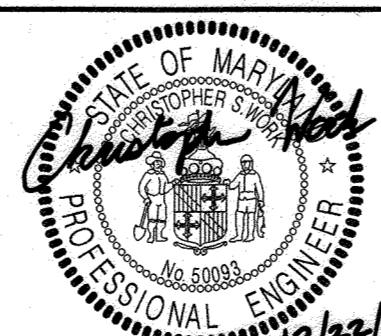
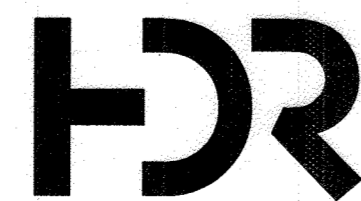
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. \_\_\_\_\_, EXPIRATION DATE: \_\_\_\_\_"

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 10/31/19  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 11/13/19  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: CK

DRN: BR

CHK: CW

10/15/2019

LEGEND, ABBREVIATIONS AND GENERAL NOTES

AS-BUILT 4-30-2021

G-105

CONTROL ROOM UPGRADE

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 5 OF 31

ONE-LINE, POWER, AND LIGHTING SYMBOLOGY

<p><b>LOW-VOLTAGE CIRCUIT BREAKER (CB), RATING AND NO. OF POLES AS SHOWN. WHEN SPECIFIC TYPE, OTHER THAN MCCB, IS REQUIRED, X INDICATES TYPE.</b></p> <p><b>TYPES:</b>  MCCB - MOLDED CASE  ICCB - INSULATED CASE  LVP - LOW VOLTAGE POWER  MCP - MOTOR CIRCUIT PROTECTOR (RATING PER CONNECTED LOAD)</p> <p><b>TRIP UNIT:</b>  L - LONG TIME PICKUP  S - SHORT TIME PICKUP  I - INSTANTANEOUS PICKUP  G - GROUND FAULT PICKUP  A - ARC FLASH MAINTENANCE</p> <p><b>GROUND FAULT PROTECTION</b>   GROUND FAULT PROTECTION</p> <p><b>MEDIUM-VOLTAGE CIRCUIT BREAKER</b>   MEDIUM-VOLTAGE CIRCUIT BREAKER</p> <p><b>FUSE, SIZE, AND NUMBER OF FUSES AS NOTED</b>   FUSE, SIZE, AND NUMBER OF FUSES AS NOTED</p> <p><b>FUSED CUTOUT, CURRENT RATING, FUSE SIZE, AND NUMBER OF POLES AS NOTED</b>   FUSED CUTOUT, CURRENT RATING, FUSE SIZE, AND NUMBER OF POLES AS NOTED</p> <p><b>FUSIBLE SWITCH, CURRENT RATING, FUSE SIZE, AND QUANTITY AS NOTED</b>   FUSIBLE SWITCH, CURRENT RATING, FUSE SIZE, AND QUANTITY AS NOTED</p> <p><b>NON-FUSED SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED</b>   NON-FUSED SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED</p> <p><b>DISCONNECT OR DRAWOUT CONNECTION</b>   DISCONNECT OR DRAWOUT CONNECTION</p> <p><b>MAGNETIC MOTOR STARTER AND SEPARATELY MOUNTED COMBINATION MAGNETIC MOTOR STARTER</b>   MAGNETIC MOTOR STARTER AND SEPARATELY MOUNTED COMBINATION MAGNETIC MOTOR STARTER</p> <p><b>MOTOR CONTROLLER AND SEPARATELY MOUNTED MOTOR CONTROLLER WITH SHORT CIRCUIT PROTECTION AND DISCONNECT</b>   MOTOR CONTROLLER AND SEPARATELY MOUNTED MOTOR CONTROLLER WITH SHORT CIRCUIT PROTECTION AND DISCONNECT</p> <p><b>MOTOR STARTER AND CONTROLLER SUBSCRIPTS:</b>  A - MAGNETIC STARTER NEMA SIZE  B - STARTER TYPE  NONE - FULL VOLTAGE NON-REVERSING (FVNR)  FVR - FULL VOLTAGE REVERSING  2S - TWO SPEED  RVAT - REDUCED VOLTAGE AUTO TRANSFORMER</p> <p><b>C - CONTROL DIAGRAM OR CONTROLS SCHEDULE NUMBER (IF REQUIRED)</b></p> <p><b>D - CONTROLLER TYPE</b>  VFD - VARIABLE FREQUENCY DRIVE  SS - SOLID STATE  CONT - CONTACTOR</p> <p><b>SEPARATELY MOUNTED COMBINATION MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</b>   SEPARATELY MOUNTED COMBINATION MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</p> <p><b>SEPARATELY MOUNTED MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</b>   SEPARATELY MOUNTED MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</p> <p><b>DISCONNECT OR SAFETY SWITCH, 30A, 3P, X INDICATES AMP RATING GREATER THAN 30A, NON-FUSED UNLESS OTHERWISE NOTED</b>   DISCONNECT OR SAFETY SWITCH, 30A, 3P, X INDICATES AMP RATING GREATER THAN 30A, NON-FUSED UNLESS OTHERWISE NOTED</p> <p><b>FUSED DISCONNECT OR SAFETY SWITCH, 3P, X INDICATES AMP RATING GREATER THAN 30A, Y INDICATES FUSE SIZE</b>   FUSED DISCONNECT OR SAFETY SWITCH, 3P, X INDICATES AMP RATING GREATER THAN 30A, Y INDICATES FUSE SIZE</p> <p><b>SEPARATELY MOUNTED CIRCUIT BREAKER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</b>   SEPARATELY MOUNTED CIRCUIT BREAKER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</p> <p><b>MOTOR WITH DESIGN HORSEPOWER (WHEN INDICATED)</b>   MOTOR WITH DESIGN HORSEPOWER (WHEN INDICATED)</p>	<p><b>GENERATOR</b>   GENERATOR</p> <p><b>TRANSFER SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED</b>   TRANSFER SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED</p> <p><b>ATS - AUTOMATIC  MTS - MANUAL</b></p> <p><b>TRANSFORMER</b>   TRANSFORMER  Δ - 3-PHASE, 3-WIRE DELTA CONNECTION  W - 3-PHASE, 4-WIRE GROUNDED WYE CONNECTION</p> <p><b>SWITCHBOARD OR PANELBOARD; NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED</b>   LP-100 208/120V 3Ø, 4W</p> <p><b>NON-MOTOR LOAD WITH DESIGN KVA, KW, OR AMP</b>   100 KVA</p> <p><b>VOLTAGE TRANSFORMER (VT OR PT)</b>   VOLTAGE TRANSFORMER (VT OR PT)</p> <p><b>CURRENT TRANSFORMER (CT)</b>   CURRENT TRANSFORMER (CT)</p> <p><b>UTILITY WATT-HOUR METER PER UTILITY REQUIREMENTS</b>   UTILITY WATT-HOUR METER PER UTILITY REQUIREMENTS</p> <p><b>DIGITAL METERING PACKAGE</b>   DIGITAL METERING PACKAGE</p> <p><b>GROUND</b>   GROUND</p> <p><b>LIGHTNING ARRESTER</b>   LIGHTNING ARRESTER</p> <p><b>LOW VOLTAGE SURGE PROTECTIVE DEVICE</b>   LOW VOLTAGE SURGE PROTECTIVE DEVICE</p> <p><b>SELECTOR SWITCH</b>   SELECTOR SWITCH</p> <p><b>PUSHBUTTON</b>   PUSHBUTTON</p> <p><b>INSTRUMENTATION/CONTROL DEVICE</b>   INSTRUMENTATION/CONTROL DEVICE</p> <p><b>CONTROL PANEL INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT</b>   CONTROL PANEL INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT</p> <p><b>CONTROL PANEL WITH DISCONNECT SWITCH INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT</b>   CONTROL PANEL WITH DISCONNECT SWITCH INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT</p> <p><b>JUNCTION OR PULL BOX</b>   JUNCTION OR PULL BOX</p> <p><b>PANELBOARD (250V TO 600V)</b>   PANELBOARD (250V TO 600V)</p> <p><b>PANELBOARD (LESS THAN 250V)</b>   PANELBOARD (LESS THAN 250V)</p> <p><b>ELECTRICAL EQUIPMENT ENCLOSURE; SWITCHBOARD, MOTOR CONTROL CENTER, CONTROL PANEL, TRANSFORMER OR OTHER EQUIPMENT AS INDICATED. ESTIMATED SIZE AS INDICATED. WHEN USED X INDICATES EQUIPMENT TYPE.</b>   ELECTRICAL EQUIPMENT ENCLOSURE; SWITCHBOARD, MOTOR CONTROL CENTER, CONTROL PANEL, TRANSFORMER OR OTHER EQUIPMENT AS INDICATED. ESTIMATED SIZE AS INDICATED. WHEN USED X INDICATES EQUIPMENT TYPE.</p> <p><b>EQUIPMENT TYPES:</b>  ATS - AUTOMATIC TRANSFER SWITCH  CP - CONTROL PANEL  MTS - MANUAL TRANSFER SWITCH  MCC - MOTOR CONTROL CENTER  UPS - UNINTERRUPTIBLE POWER SUPPLY  VFD - VARIABLE FREQUENCY DRIVE  SB - SWITCHBOARD  SG - SWITCHGEAR  T - TRANSFORMER</p>	<p><b>CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</b>   CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p><b>CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</b>   CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p><b>WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</b>   WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p><b>WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</b>   WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p><b>WALL MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED</b>   WALL MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p><b>POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</b>   POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p><b>POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</b>   POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p><b>POLE/STANCHION MOUNTED FLOOR LUMINAIRE, LAMP TYPE AS SPECIFIED</b>   POLE/STANCHION MOUNTED FLOOR LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p><b>CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</b>   CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p><b>WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</b>   WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p><b>CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</b>   CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p><b>WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</b>   WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p><b>EMERGENCY LIGHT, 2 ATTACHED HEADS AS SHOWN</b>   EMERGENCY LIGHT, 2 ATTACHED HEADS AS SHOWN</p> <p><b>EMERGENCY LIGHT, REMOTE MOUNTED HEAD</b>   EMERGENCY LIGHT, REMOTE MOUNTED HEAD</p> <p><b>DOUBLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS</b>   DOUBLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS</p> <p><b>SINGLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS</b>   SINGLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS</p> <p><b>LIGHTING FIXTURE SUBSCRIPTS:</b>  X - INDICATES LUMINAIRE TYPE PER LUMINAIRE SCHEDULE  Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD  Z - INDICATES CONTROLLING SWITCH (IF REQUIRED)  NL - NIGHT LIGHT UNSWITCHED</p> <p><b>WALL SWITCH</b>  <b>SUBSCRIPTS:</b>  X - INDICATES TYPE  NONE - SINGLE POLE  2 - DOUBLE POLE  3 - THREE-WAY  4 - FOUR-WAY  K - KEY SWITCH  P - PILOT LIGHT  L - LIGHTED HANDLE  DM - DIMMING  MC - MOMENTARY CONTACT  T - TIMER  Y - INDICATES CONTROLLING SWITCH (IF REQUIRED)</p> <p><b>MANUAL MOTOR STARTER</b>  <b>SUBSCRIPTS:</b>  X - INDICATES TYPE  HP - HORSEPOWER RATED  TE - HORSEPOWER RATED WITH THERMAL ELEMENT  FT - HORSEPOWER RATED WITH FUSETRON FUSE  Y - INDICATES SWITCH TYPE  NONE - TOGGLE SWITCH TYPE  R - ROTARY SWITCH TYPE</p> <p><b>PHOTOCELL</b>   PHOTOCELL</p> <p><b>TIME CLOCK</b>   TIME CLOCK</p> <p><b>LIGHTING CONTROL OCCUPANCY SENSOR, WALL MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED</b>   LIGHTING CONTROL OCCUPANCY SENSOR, WALL MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED</p> <p><b>LIGHTING CONTROL OCCUPANCY SENSOR, CEILING MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED</b>   LIGHTING CONTROL OCCUPANCY SENSOR, CEILING MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED</p>	<p><b>PLUG-IN RECEPTACLE STRIP, QUANTITY AND SPACING OF RECEPTACLES AS NOTED OR SPECIFIED</b>   PLUG-IN RECEPTACLE STRIP, QUANTITY AND SPACING OF RECEPTACLES AS NOTED OR SPECIFIED</p> <p><b>SPECIAL-PURPOSE RECEPTACLE AS DEFINED ON PLANS</b>   SPECIAL-PURPOSE RECEPTACLE AS DEFINED ON PLANS</p> <p><b>TWO RECEPTACLES IN 2-GANG BOX UNDER COMMON COVER PLATE</b>   TWO RECEPTACLES IN 2-GANG BOX UNDER COMMON COVER PLATE</p> <p><b>DUPLEX RECEPTACLE</b>   DUPLEX RECEPTACLE</p> <p><b>SIMPLEX RECEPTACLE</b>   SIMPLEX RECEPTACLE</p> <p><b>RECESSED FLOOR MOUNTED BOX, QUANTITY AND TYPE OF RECEPTACLES AS INDICATED</b>   RECESSED FLOOR MOUNTED BOX, QUANTITY AND TYPE OF RECEPTACLES AS INDICATED</p> <p><b>SUBSCRIPTS:</b>  X - INDICATES TYPE  GFCI - GROUND FAULT CIRCUIT INTERRUPTER  IG - ISOLATED GROUND  TR - TAMPER RESISTANT  PLH - PLUG LOAD HALF CONTROLLED  PLD - PLUG LOAD DUAL CONTROLLED  USB - USB CHARGING STATION  SPD - SURGE PROTECTIVE DEVICE  Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD</p> <p><b>CONDUIT TURNING UP</b>   CONDUIT TURNING UP</p> <p><b>CONDUIT TURNING DOWN</b>   CONDUIT TURNING DOWN</p> <p><b>HOMERUN TO PANEL</b>  SINGLE PHASE: 2 #12, 1 #12G IN 3/4" C  THREE PHASE: 3 #12, 1 #12G IN 3/4" C  UNLESS OTHERWISE NOTED</p> <p><b>CONDUIT CONNECTION TO EQUIPMENT</b>   CONDUIT CONNECTION TO EQUIPMENT</p> <p><b>CIRCUIT RUN BETWEEN DEVICES EXPOSED IN NON-ARCHITECTURALLY FINISHED AREAS; CONCEALED IN ARCHITECTURALLY FINISHED AREAS. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.</b>   CIRCUIT RUN BETWEEN DEVICES EXPOSED IN NON-ARCHITECTURALLY FINISHED AREAS; CONCEALED IN ARCHITECTURALLY FINISHED AREAS. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.</p> <p><b>CONDUIT RUN BETWEEN DEVICES CONCEALED IN NON-ARCHITECTURALLY FINISHED AREAS OR UNDER FLOOR SLAB. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.</b>   CONDUIT RUN BETWEEN DEVICES CONCEALED IN NON-ARCHITECTURALLY FINISHED AREAS OR UNDER FLOOR SLAB. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.</p> <p><b>CIRCUIT HASH MARKS (WHEN INDICATED); LONG, SHORT, SINGLE DOT, AND DOUBLE DOT REPRESENT SINGLE, NEUTRAL, EQUIPMENT GROUND, AND ISOLATED EQUIPMENT GROUND, RESPECTIVELY. #12 IN 3/4" CONDUIT UNLESS OTHERWISE INDICATED.</b>   CIRCUIT HASH MARKS (WHEN INDICATED); LONG, SHORT, SINGLE DOT, AND DOUBLE DOT REPRESENT SINGLE, NEUTRAL, EQUIPMENT GROUND, AND ISOLATED EQUIPMENT GROUND, RESPECTIVELY. #12 IN 3/4" CONDUIT UNLESS OTHERWISE INDICATED.</p> <p><b>CIRCUIT CONTINUATION</b>   CIRCUIT CONTINUATION</p> <p><b>CONDUIT STUBBED OUT AND CAPPED</b>   CONDUIT STUBBED OUT AND CAPPED</p> <p><b>CORD AND PLUG CONNECTION</b>   CORD AND PLUG CONNECTION</p> <p><b>CONDUIT TAG OR CIRCUIT NUMBER - WIRE AND CONDUIT SIZE AS SPECIFIED IN CIRCUIT SCHEDULE ON THE SHEETS</b>   CONDUIT TAG OR CIRCUIT NUMBER - WIRE AND CONDUIT SIZE AS SPECIFIED IN CIRCUIT SCHEDULE ON THE SHEETS</p> <p><b>GROUND CABLE</b>   GROUND CABLE</p> <p><b>GROUND ROD</b>   GROUND ROD</p> <p><b>GENERAL NOTES:</b></p> <ol style="list-style-type: none"> <li>THIS IS A STANDARD ELECTRICAL SYMBOLOGY SHEET. NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT.</li> <li>SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.</li> <li>SEE P&amp;ID LEGEND SHEET FOR PROJECT SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.</li> </ol>
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"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 37997, EXPIRATION DATE: 12/16/2019

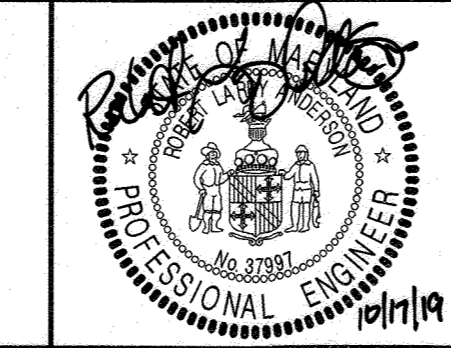
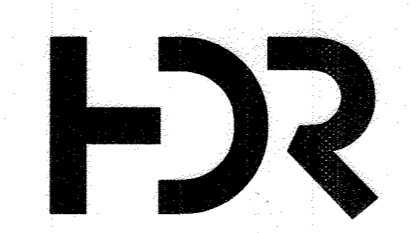
**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*Jay...* 11/16/19  
DIRECTOR OF PUBLIC WORKS DATE

*Monroe P. Butler* 11/13/19  
CHIEF, BUREAU OF ENGINEERING DATE

*...* 10-31-19  
CHIEF, BUREAU OF UTILITIES DATE

*...* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: RLA	
DRN: CLS	
CHK: RG	
10/15/2019	
BY NO.	
REVISION	
DATE	

<b>ELECTRICAL LEGEND 1</b>	
600 SCALE MAP NO.	BLOCK NO.

THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

*[Signature]* 4/30/20  
SIGNATURE DATE

AS-BUILT 4-30-2021

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**G-106**

SCALE AS SHOWN

SHEET 6 OF 31

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COMMUNICATION SYMBOLOGY	MASS NOTIFICATION SYMBOLOGY	CONTROL SYMBOLOGY	CONTROL SYMBOLOGY
WALL MOUNTED TELEPHONE OUTLET WALL MOUNTED DATA OUTLET WALL MOUNTED COMBINATION TELEPHONE AND DATA OUTLET RECESSED FLOOR MOUNTED TELEPHONE OUTLET RECESSED FLOOR MOUNTED DATA OUTLET RECESSED FLOOR MOUNTED COMBINATION TELEPHONE AND DATA OUTLET	EXTERIOR LOCATION HIGH POWER SPEAKER ARRAY (HPSA) LOCAL OPERATING CONSOLE TEXT MESSAGE DISPLAY UNIT MASS NOTIFICATION SYSTEM CONTROL PANEL COMBINATION SPEAKER/STROBE NOTIFICATION APPLIANCE SPEAKER NOTIFICATION APPLIANCE STROBE NOTIFICATION APPLIANCE CEILING MOUNTED SPEAKER WALL MOUNTED SPEAKER COMBINATION MASS NOTIFICATION/FIRE ALARM CONTROL PANEL COMBINATION MASS NOTIFICATION/FIRE ALARM SPEAKER NOTIFICATION APPLIANCE COMBINATION MASS NOTIFICATION/FIRE ALARM STROBE NOTIFICATION APPLIANCE COMBINATION MASS NOTIFICATION/FIRE ALARM STROBE NOTIFICATION APPLIANCE <p>LENS: FIRE ALARM - CLEAR MASS NOTIFICATION - AMBER</p>	ELECTRICAL CONNECTION NO ELECTRICAL CONNECTION SOLENOID VALVE <p>CONTROL/RELAY COIL: X-INDICATES TYPE Y-INDICATES LOOP NUMBER, WHEN USED</p> <p>TYPES: CR-CONTROL RELAY TC-TIME CLOCK PC-PHOTOCELL LC-LIGHTING CONTACTOR DP-DEFINITE PURPOSE TR-TIMING RELAY M-MOTOR STARTER</p> NORMALLY OPEN CONTACT (N.O.) NORMALLY CLOSED CONTACT (N.C.) NORMALLY OPEN TIME DELAY RELAY CONTACT WITH TIME DELAY ON CLOSING AFTER COIL IS ENERGIZED NORMALLY CLOSED TIME DELAY RELAY CONTACT WITH TIME DELAY ON OPENING AFTER COIL IS ENERGIZED NORMALLY OPEN TIME DELAY RELAY CONTACT WITH TIME DELAY ON OPENING AFTER COIL IS DE-ENERGIZED NORMALLY CLOSED TIME DELAY RELAY CONTACT WITH TIME DELAY ON CLOSING AFTER COIL IS DE-ENERGIZED NORMALLY OPEN TEMPERATURE SWITCH; CLOSE ON RISING TEMPERATURE NORMALLY CLOSED TEMPERATURE SWITCH; OPEN ON RISING TEMPERATURE NORMALLY OPEN FLOW SWITCH; CLOSE ON INCREASING FLOW NORMALLY CLOSED FLOW SWITCH; OPEN ON INCREASING FLOW NORMALLY OPEN LEVEL SWITCH, CLOSE ON RISING LEVEL NORMALLY CLOSED LEVEL SWITCH, OPEN ON RISING LEVEL NORMALLY OPEN PRESSURE SWITCH, CLOSE ON INCREASING PRESSURE NORMALLY CLOSED PRESSURE SWITCH, OPEN ON INCREASING PRESSURE NORMALLY OPEN LIMIT SWITCH, CLOSE ON REACHING LIMIT NORMALLY CLOSED LIMIT SWITCH, OPEN ON REACHING LIMIT MICROPROCESSOR (PLC, RTU, ETC.) OUTPUT MICROPROCESSOR (PLC, RTU, ETC.) INPUT FIELD WIRING EXTERNAL TO CONTROL PANEL INTERLOCK: X - INDICATES TYPE <p>TYPES: E - ELECTRICAL M - MECHANICAL K - KEY</p> 3 POSITION SELECTOR SWITCH, MAINTAINED CONTACTS; UNLESS OTHERWISE NOTED, 2-POSITION SIMILAR NORMALLY OPEN PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED NORMALLY CLOSED PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED	INDICATING LIGHT: X INDICATES LENS COLOR PUSH TO TEST INDICATING LIGHT: X INDICATES LENS COLOR <p>LENS COLORS: R - RED Y - YELLOW G - GREEN W - WHITE B - BLUE A - AMBER</p> THERMAL OVERLOAD ELEMENT THERMAL OVERLOAD RELAY CONTACT. WHEN SHOWN X INDICATES QUANTITY. CONTROL POWER TRANSFORMER (CPT) RUN TIME METER
AUDIO/VISUAL SYMBOLOGY			FIRE ALARM SYMBOLOGY
TELEVISION OUTLET CEILING MOUNT SPEAKER WALL MOUNT SPEAKER <p>SPEAKER SUBSCRIPTS: X - INDICATES HEIGHT</p> HORN TYPE TRANSDUCER VOLUME CONTROL HEAD END EQUIPMENT FLOOR MOUNTED MICROPHONE JACK WALL MOUNTED MICROPHONE JACK	EMERGENCY ALARM SYMBOLOGY		FIRE ALARM CONTROL PANEL FIRE ALARM ANNUNCIATOR FIRE ALARM MANUAL PULL STATION FLOW SWITCH TAMPER SWITCH PRESSURE SWITCH SPOT AND DUCT SMOKE DETECTOR: X INDICATES TYPE <p>SUBSCRIPT: I - IONIZATION P - PHOTOELECTRIC D - FIRE OR SMOKE DAMPER</p> HEAT DETECTOR <p>SUBSCRIPT: R/C - RATE COMPENSATION R/F - COMBINATION RATE OF RISE AND FIXED TEMP R - FIXED TEMP F - RATE OF RISE FIXED</p> FLAME DETECTOR <p>SUBSCRIPT: IR - INFRARED UV - ULTRAVIOLET</p> DOOR HOLDER BELL HORN/SPEAKER FLASHING LIGHT HORN/SPEAKER AND FLASHING LIGHT COMBINATION UNIT BELL/SPEAKER AND FLASHING LIGHT COMBINATION UNIT
SECURITY SYMBOLOGY	SITE SYMBOLOGY		
DOOR POSITION SWITCH COMBINATION ELECTRIC DOOR STRIKE AND POSITION SWITCH PROXIMITY CARD READER PROXIMITY CARD READER WITH KEYPAD DUAL TECHNOLOGY MOTION DETECTOR REQUEST TO EXIT MOTION DETECTOR REQUEST TO EXIT PUSH BUTTON GLASS BREAK DETECTOR CCTV CAMERA PAN/TILT/ZOOM WHEN INDICATED SECURITY EQUIPMENT CABINET REMOTE KEYPAD/CONTROL STATION	EXTERIOR PAD MOUNTED TRANSFORMER POLE - MOUNTED TRANSFORMER ELECTRICAL HANDHOLE OR MANHOLE <p>Y - MHX OR HHX X - INDICATES SEQUENCE NUMBER</p> POLE/STANCHION MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED POLE MOUNTED AREA OR ROADWAY LUMINAIRE, LAMP TYPE AS SPECIFIED HIGH MAST LIGHTING, NUMBER OF LUMINAIRES AS SPECIFIED <p>LIGHTING FIXTURE SUBSCRIPTS: X - INDICATES LUMINAIRE TYPE PER LUMINAIRE SCHEDULE Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD</p> POWER POLE DOWNGUY UNDERGROUND (UNO) ELECTRICAL AND COMMUNICATION SYSTEMS PATHWAY OVERHEAD ELECTRICAL AND COMMUNICATION SYSTEMS PATHWAY		

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*[Signature]* 4/20/21  
SIGNATURE DATE

AS-BUILT 4-30-2021

G-107

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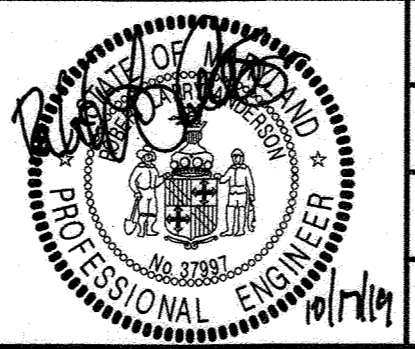
**DEPARTMENT OF PUBLIC WORKS**  
**HOWARD COUNTY, MARYLAND**

*[Signature]* 11/13/19  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 11/13/19  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 10-31-19  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: RLA				
DRN: CLS				
CHK: RG				
10/15/2019	BY	NO.	REVISION	DATE

**ELECTRICAL LEGEND 2**

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

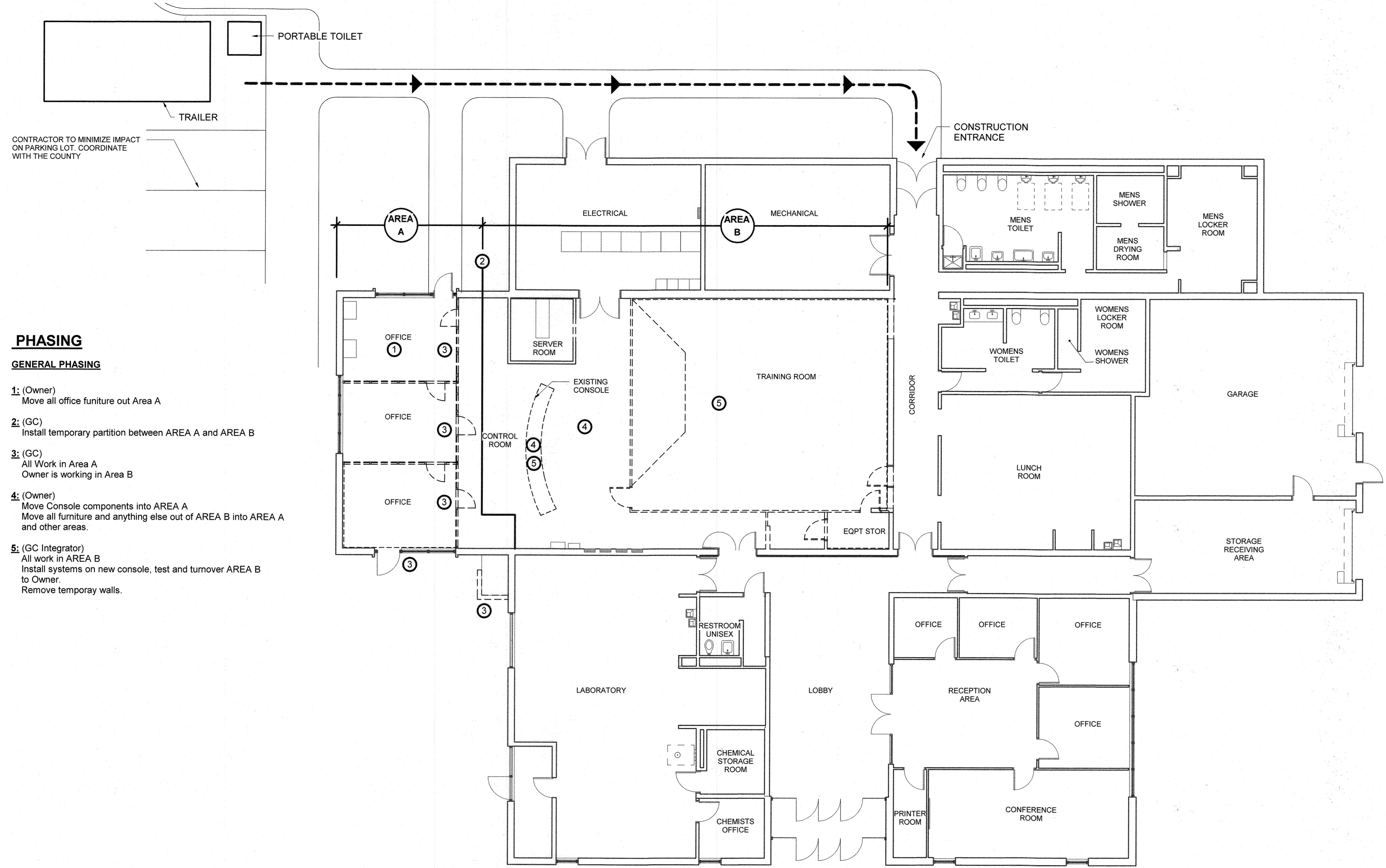
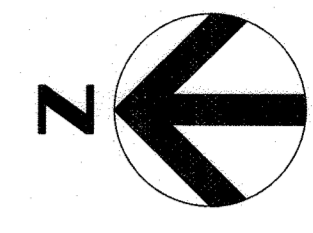
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 7 OF 31

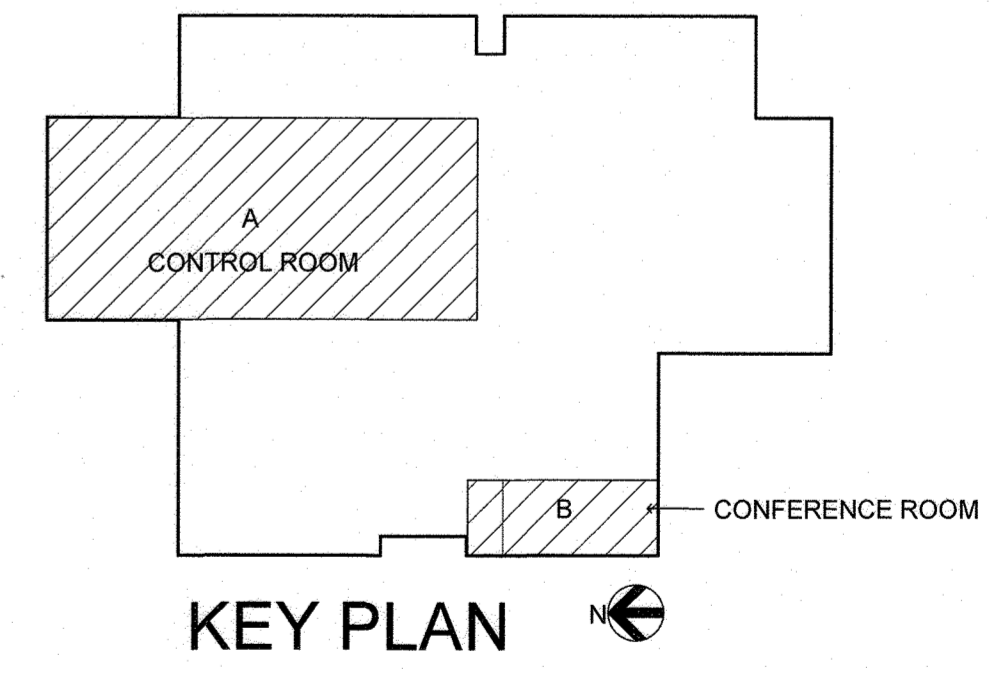
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**PHASING**  
**GENERAL PHASING**

- 1: (Owner)  
Move all office furniture out Area A
- 2: (GC)  
Install temporary partition between AREA A and AREA B
- 3: (GC)  
All Work in Area A  
Owner is working in Area B
- 4: (Owner)  
Move Console components into AREA A  
Move all furniture and anything else out of AREA B into AREA A and other areas.
- 5: (GC Integrator)  
All work in AREA B  
Install systems on new console, test and turnover AREA B to Owner.  
Remove temporary walls.

**PHASING PLAN**  
1/8" = 1'-0"



**KEY PLAN**

THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

*[Signature]* *[Signature]*  
SIGNATURE DATE

AS-BUILT 4-30-2021

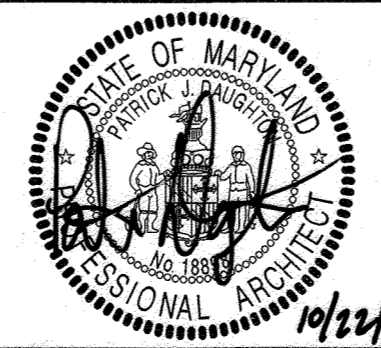
G-108

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS**  
**HOWARD COUNTY, MARYLAND**

*[Signature]* *[Signature]*  
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* *[Signature]*  
CHIEF, BUREAU OF UTILITIES DATE CHIEF, UTILITY DESIGN DIVISION DATE



DES: J.T					
DRN: JW					
CHK: PJD					
10/15/2019	BY	NO.	REVISION	DATE	

**ADMINISTRATION BUILDING PHASING PLAN**

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 8 OF 31

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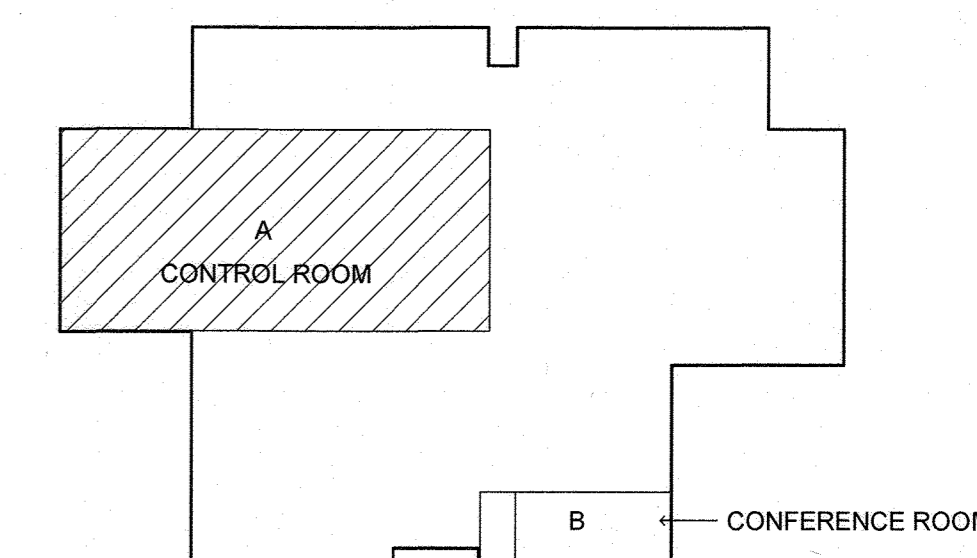


**GENERAL NOTES:**

1. REMOVE SUSPENDED ACOUSTICAL TILE CEILING SYSTEM IN THREE OFFICES CONTROL ROOM TRAINING ROOM, EQUIPMENT STORAGE AND SERVER ROOM.
2. EXISTING ACCESS FLOOR SYSTEM IS MANUFACTURED BY LISKEY
3. CONTRACTOR TO PROTECT EXISTING EQUIPMENT IN SERVER ROOM DURING DEMOLITION AND NEW WORK.
4. EXISTING ACCESS FLOOR SYSTEM TO REMAIN IN ALL ROOMS UNDER BASE BID
5. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES

**KEYNOTES** (X)

- 1 SALVAGE ALL DEMOUNTABLE PARTIONS, FRAMING, DOORS AND ASSOCIATED HARDWARE AND TURN OVER TO OWNER FOR REUSE. DO NOT DAMAGE DURING REMOVAL PROCESS.
- 2 REMOVE DRYWALL & FURRING.
- 3 REMOVE SECTION OF CONCRETE MASONRY UNIT WALL AS REQUIRED TO FIT NEW CONDITIONS REFER TO NEW WORK SHEET A-101.
- 4 REMOVE FIVE LOCKERS AS REQUIRED TO COMPLETE NEW WORK ( FIELD VERIFY).
- 5 REMOVE DOOR AND FRAME.
- 6 ADD ALTERNATE NO. 1 - REMOVE ACCESS FLOOR PANELS IN CONTROL ROOM AND PROVIDE NEW.
- 7 EXISTING WALLS TO REMAIN.
- 8 REMOVE INTERIOR DRYWALL AND STUD PARTITION.
- 9 EXISTING WINDOW TO REMAIN.
- 10 REMOVE RAISED STAGE ASSEMBLY.
- 11 REMOVE 40" HIGH BRICK SCREEN WALLS
- 12 REMOVE PORTION OF EXTERIOR WALL AND SECTION OF WINDOW TO PROVIDE NEW DOOR OPENING.



**KEY PLAN**

**DEMOLITION PLAN**

1/8" = 1'-0"

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*[Signature]* 4/30/21  
 SIGNATURE DATE

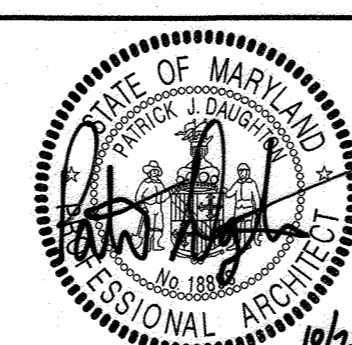
AS-BUILT 4-30-2021

AD-100

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND**

*[Signature]* 11/13/19  
 DIRECTOR OF PUBLIC WORKS DATE  
*[Signature]* 10-31-18  
 CHIEF, BUREAU OF UTILITIES DATE  
*[Signature]* 11/13/19  
 CHIEF, UTILITY DESIGN DIVISION DATE



DES: J.T					
DRN: JW					
CHK: PJD					
10/15/2019	BY	NO.	REVISION	DATE	

**ADMINISTRATION BUILDING DEMOLITION PLAN**

600 SCALE MAP NO. BLOCK NO.

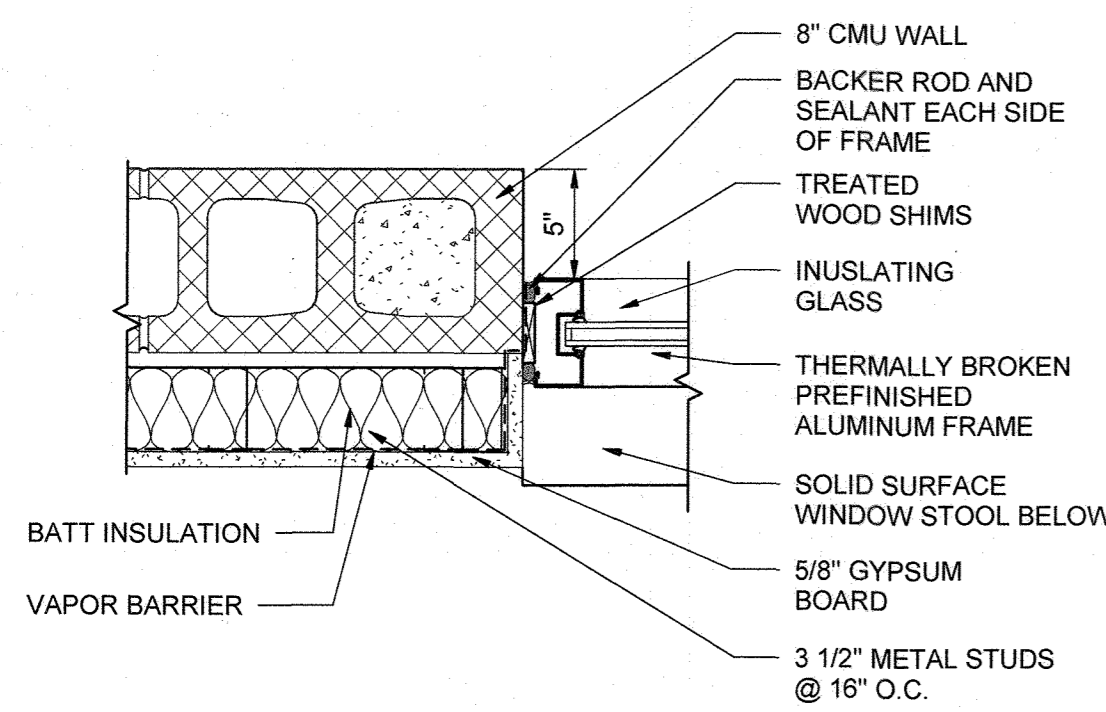
**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
 CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 9 OF 31

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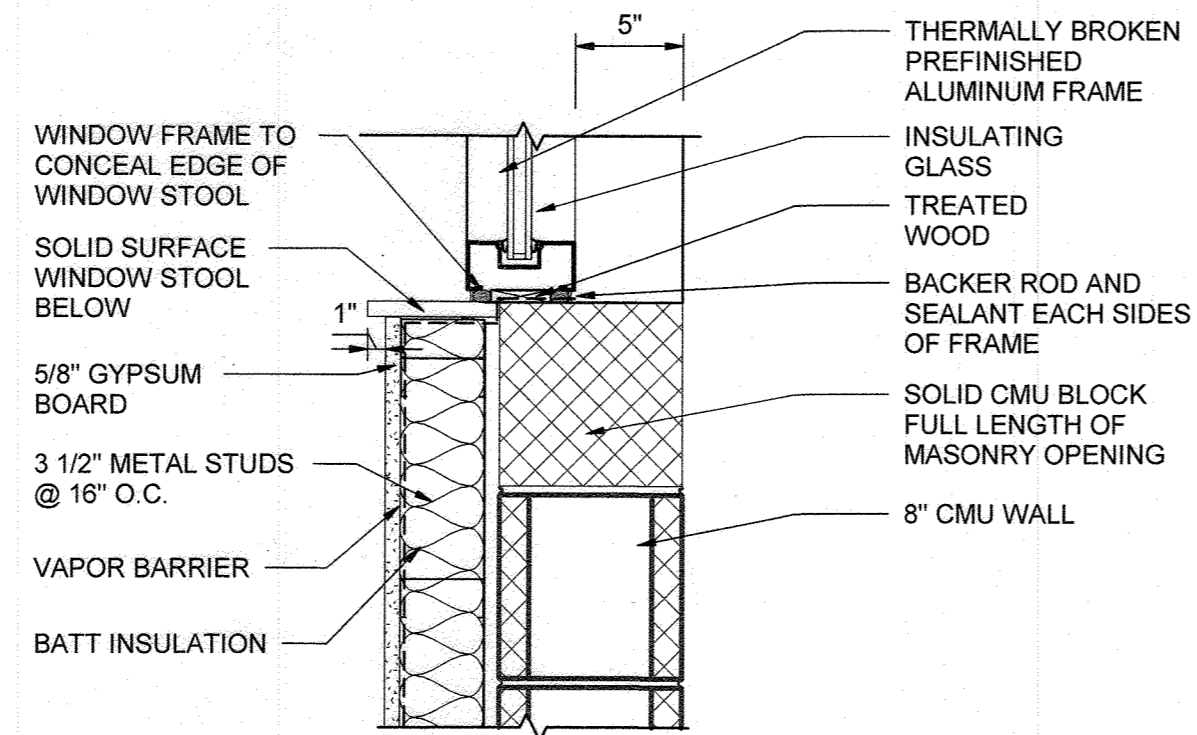


NOTE: THERMALLY BROKEN ALUMINUM WINDOW FRAME BASIS OF DESIGN KAWNEER TRIFAB 4515 (OR APPROVED EQUAL)

NOTE: HEAD CONDITION SIMILAR

**WINDOW JAMB DETAIL**

1 1/2" = 1'-0"

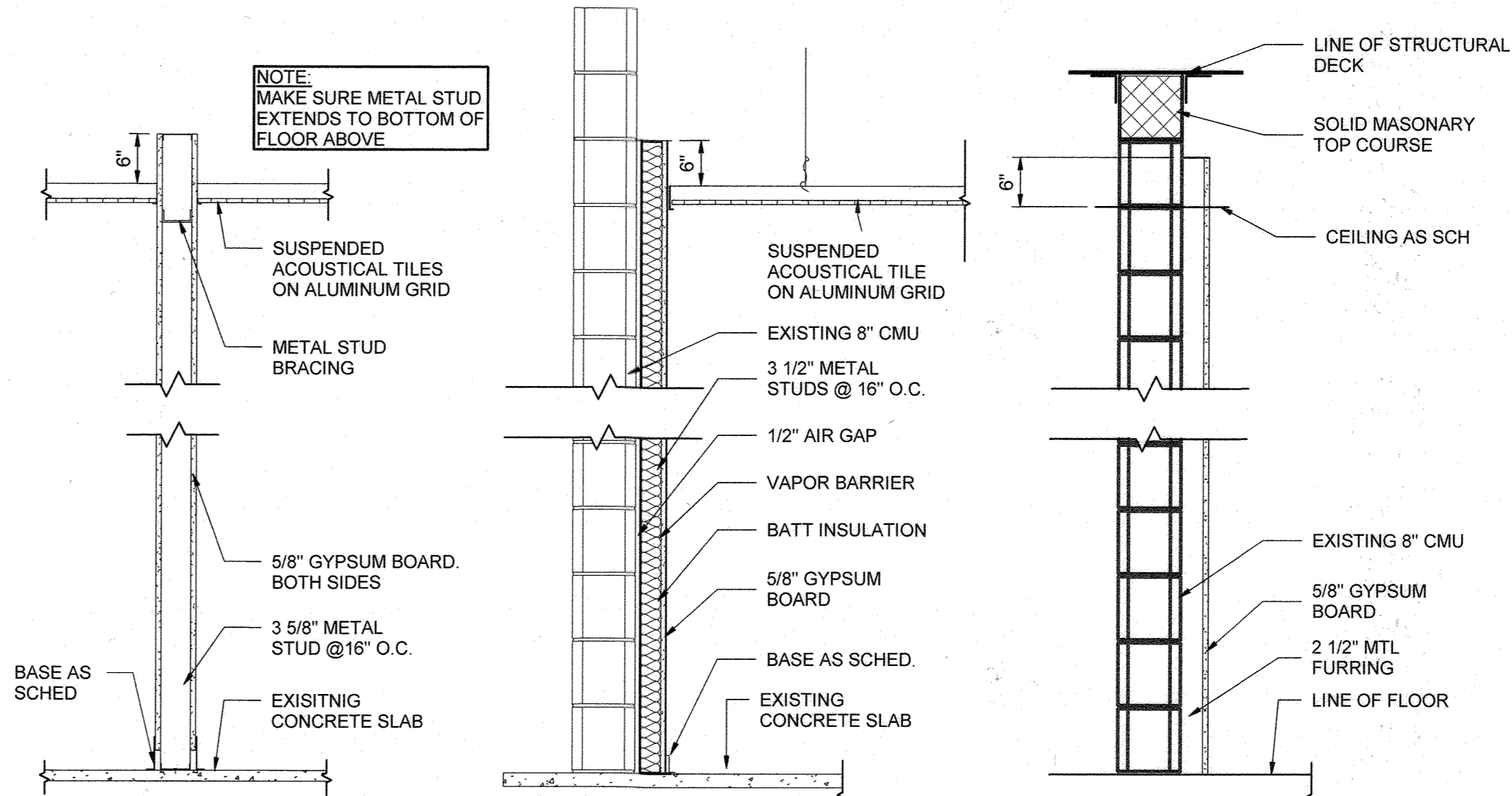


NOTE: THERMALLY BROKEN ALUMINUM WINDOW FRAME BASIS OF DESIGN KAWNEER TRIFAB 4515 (OR APPROVED EQUAL)

NOTE: HEAD CONDITION SIMILAR

**WINDOW SILL DETAIL**

1 1/2" = 1'-0"



**WALL TYPE A**

3/4" = 1'-0"

**WALL TYPE E**

3/4" = 1'-0"

**WALL TYPE F**

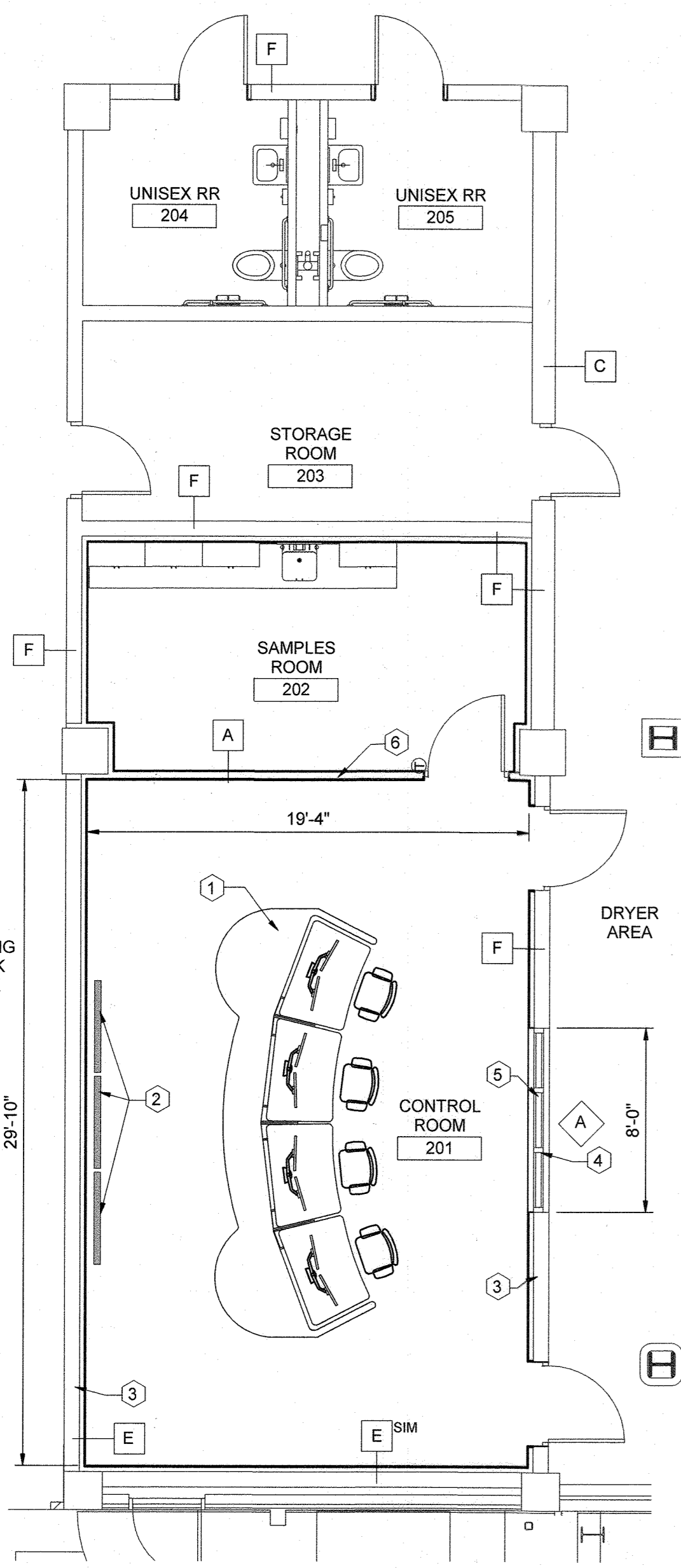
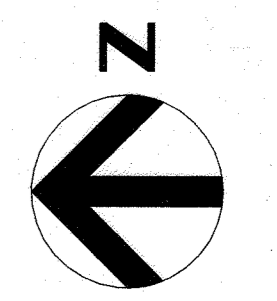
3/4" = 1'-0"

**GENERAL NOTES:**

1. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
2. PROVIDE NEW AVI CONSOLE WORKSTATIONS.
3. ADD ALTERNATE NO. 5. PROVIDE WALL FRAMING, GYPSUM BOARD (PAINT), INSULATION, SUSPEND ACOUSTIC CEILINGS, VCT FLOOR TILES AND SOLID SURFACE WINDOW SILL.
4. CONTROL ROOM CONTRACTOR TO COORDINATION INSTALLATION OF DOORS/FRAMES BY DRYER BUILDING CONTRACTOR WITH CONSTRUCTION OF NEW WALLS.
5. ALL LIGHTING FIXTURES AND HVAC EQUIPMENT BY OTHERS.
6. ALL FIXTURES AND TOILET ACCESSORIES IN TOILET ROOMS 204 & 205 BY OTHERS.

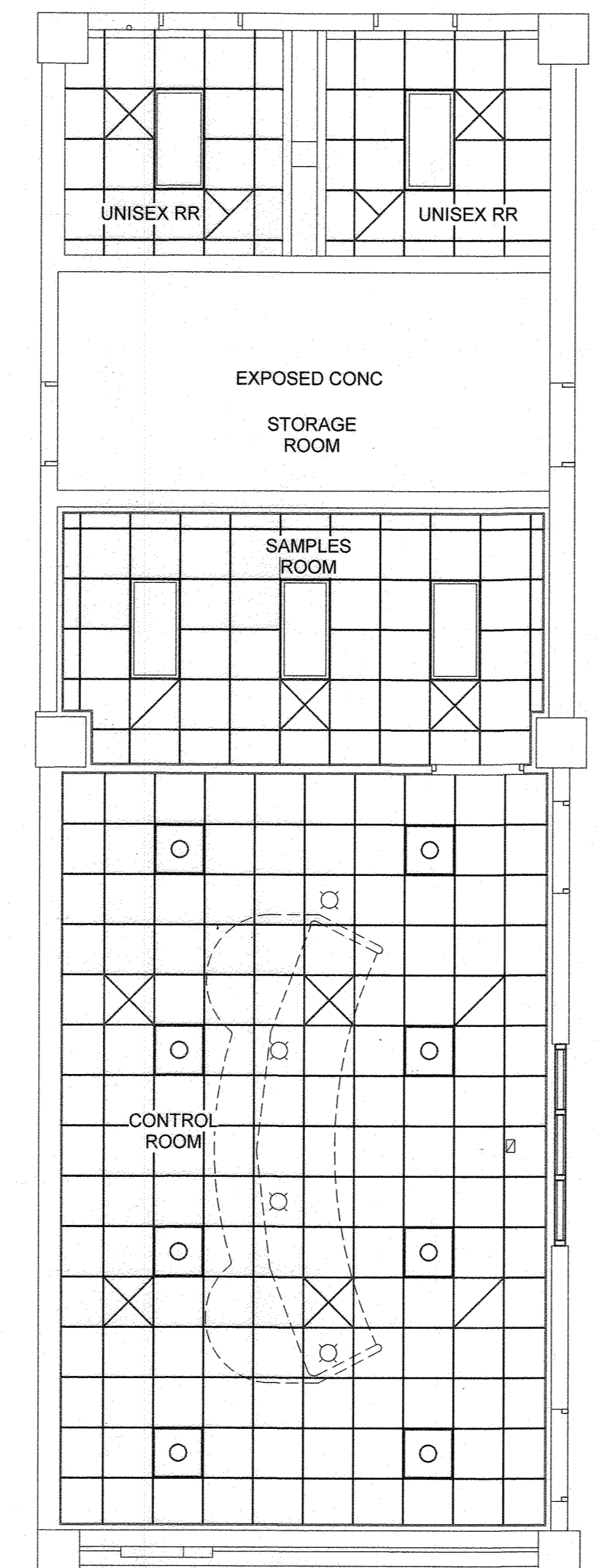
**KEY NOTES**

1. (4) MOTOR OPERATED ADJUSTABLE WORKSTATION CONSOLE WITH PLASTIC LAMINATE VERTICAL SURFACES AND SOLID SURFACE COUNTERTOPS, REFER TO A-106 FOR DETAILS
2. WALL MOUNTED VIDEO/MONITORS. COORDINATE WITH ELECTRICAL.
3. EXISTING 8" CMU WALL TO REMAIN
4. INSTALL THERMALLY BROKEN ANODIZED ALUMINUM STORE FRONT FRAMING WITH CLEAR, TEMPERED INSULATING GLASS.
5. PROVIDE SOLID SURFACE WINDOW STOOL FULL LENGTH OF WINDOW
6. NEW GYPSUM PARTITION WALL TYPE A



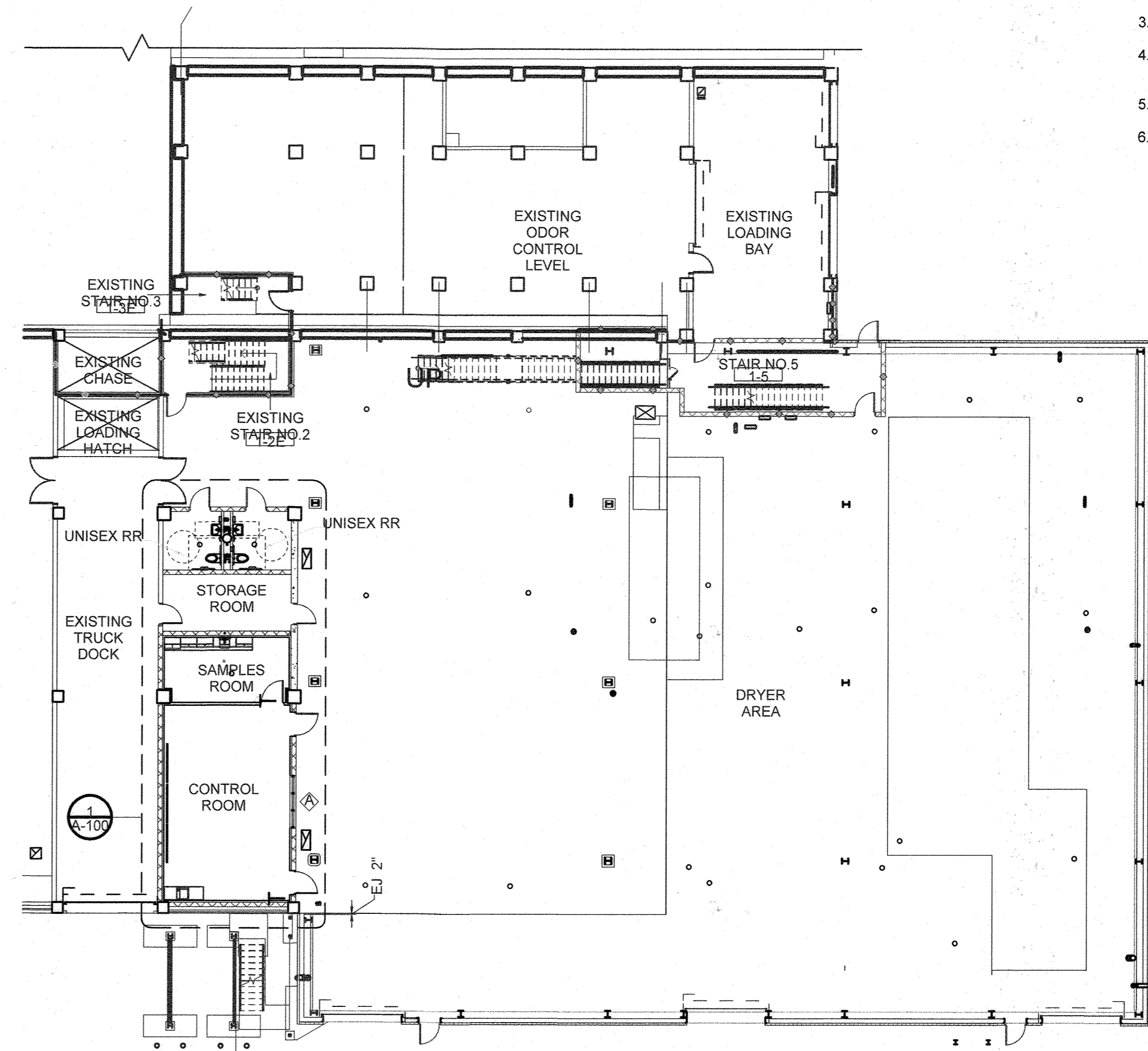
**1 ENLARGED PLAN**

3/16" = 1'-0"



**2 REFLECTIVE CEILING PLAN**

3/16" = 1'-0"

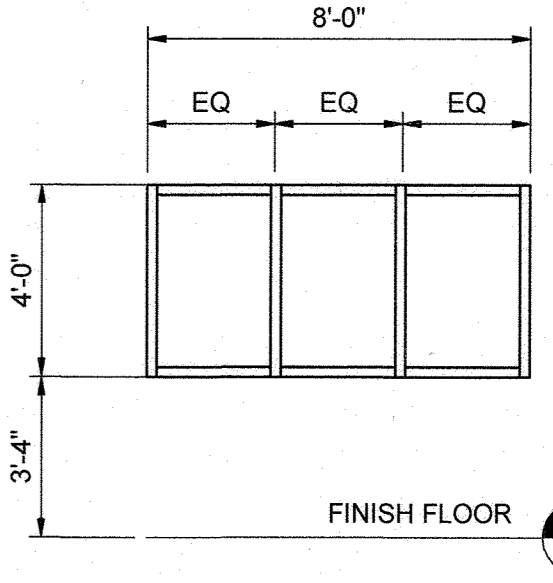


**FLOOR PENETRATION**  
 PROVIDE U.L. RATED FLOOR THROUGH PENETRATION FIRE STOP WHERE CONDUIT PENETRATES EXISTING 2 HOUR RATED FLOOR OF MCC ELECTRICAL ROOM ABOVE CONTROL ROOM 201. FIRE STOP SYSTEM TO HAVE F AND T RATING > 2 HOURS. COORDINATE FLOOR PENETRATION LOCATION WITH OWNER AND ELECTRICAL DRAWINGS. ACCEPTABLE SYSTEM " C-AJ-1518 OR APPROVED EQUAL.  
 EXISTING CONCRETE SLAB HAS REINFORCING 12" O.C. EW CORE DRILL HOLE IN CENTER OF REINFORCING GRID AVOIDING STEEL ENFORCING

THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECEIVED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.  
 [Signature] 4/30/21  
 SIGNATURE DATE

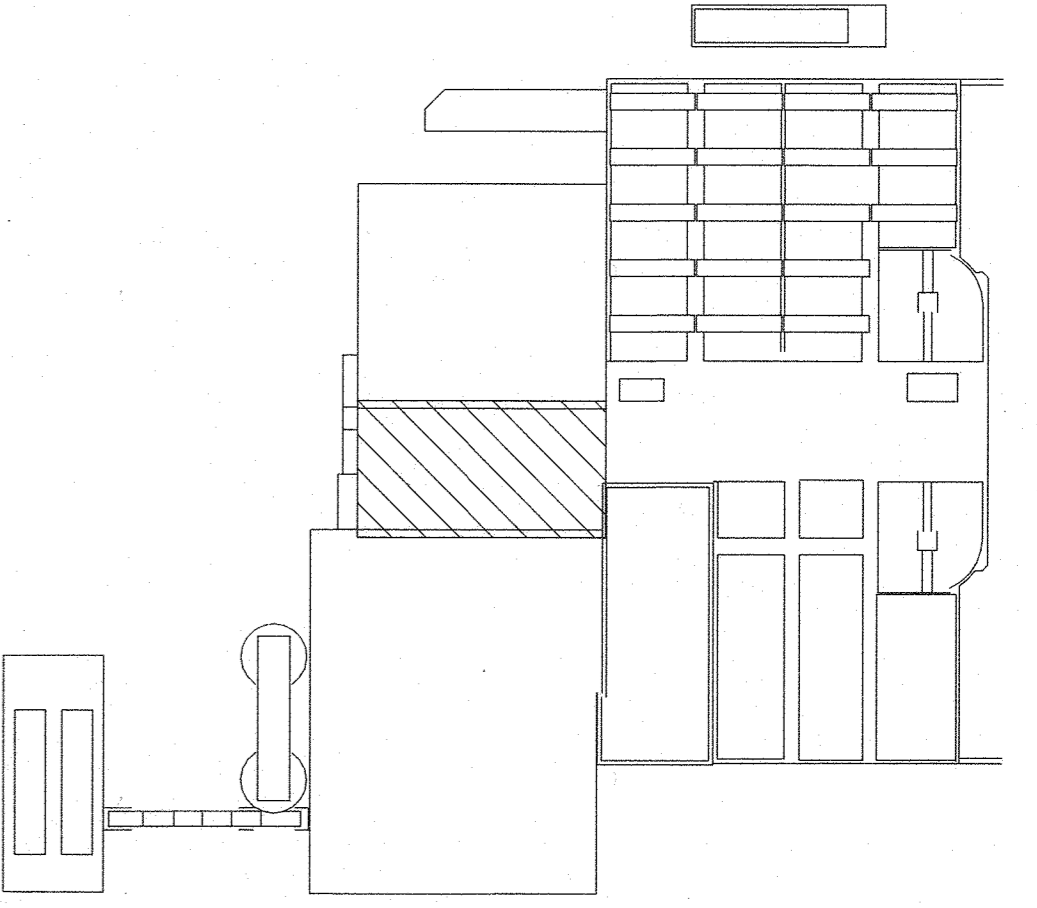
**PARTIAL FLOOR PLAN- DRYER BUILDING**

1/16" = 1'-0"



**WINDOW TYPE A**

1/4" = 1'-0"



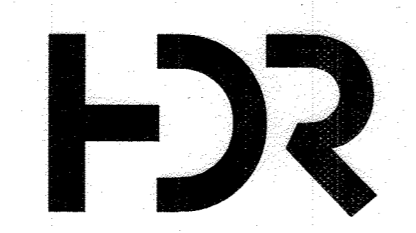
**KEY PLAN**

AS-BUILT 4-30-2021

A-100

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS**  
**HOWARD COUNTY, MARYLAND**  
 [Signatures and Dates]  
 DIRECTOR OF PUBLIC WORKS DATE 10/31/19  
 CHIEF, BUREAU OF UTILITIES DATE 11/13/19  
 CHIEF, BUREAU OF ENGINEERING DATE 11/13/19  
 CHIEF, UTILITY DESIGN DIVISION DATE 11/13/19



DES: J.T					
DRN: JW					
CHK: PJD					
10/15/2019	BY	NO.	REVISION	DATE	

**DRYER BUILDING CONTROL ROOM PLANS**  
 600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**  
 CAPITAL PROJECT S-6264  
 CONTRACT NO. 20-5099  
 6TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 10 OF 31

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**ADD ALTERNATES:**

- NO 1. NEW RAISED ACCESS FLOOR PANELS IN CONTROL ROOM ONLY.
- NO 2. SWITCHABLE GLASS IN WALL BETWEEN CONTROL ROOM 103 & TRAINING ROOM 108. REFER TO SPEC 08 88 38.
- NO 3. PROVIDE VIDEO MONITOR IN TRAINING ROOM 108, COORDINATE WITH ELECTRICAL DRAWINGS.
- NO 4. PROVIDE VIDEO MONITOR IN CONFERENCE ROOM 111 (REFER TO SHEET A-102). COORDINATE WITH ELECTRICAL DRAWINGS.
- NO 5. PROVIDE WALL FRAMING GYPSUM BOARD (PAINT), INSULATION SUSPEND ACOUSTIC CEILINGS, VCT FLOOR, TILES AND SOLID SURFACE WINDOW SILL. (DYRER BUILDING). REFER TO SHEET A-100 AND ROOM FINISH SCHEDULE ON A-107.



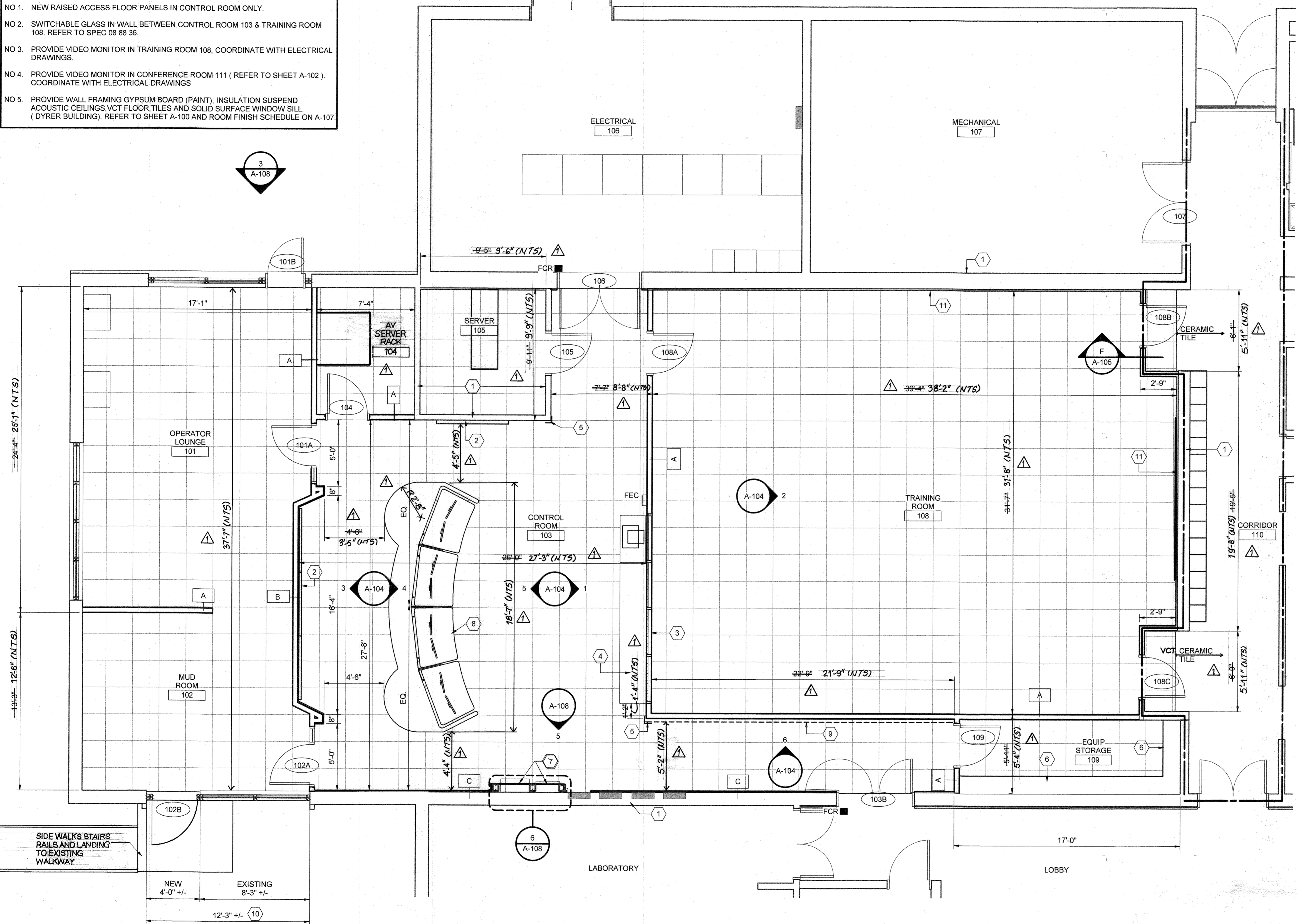
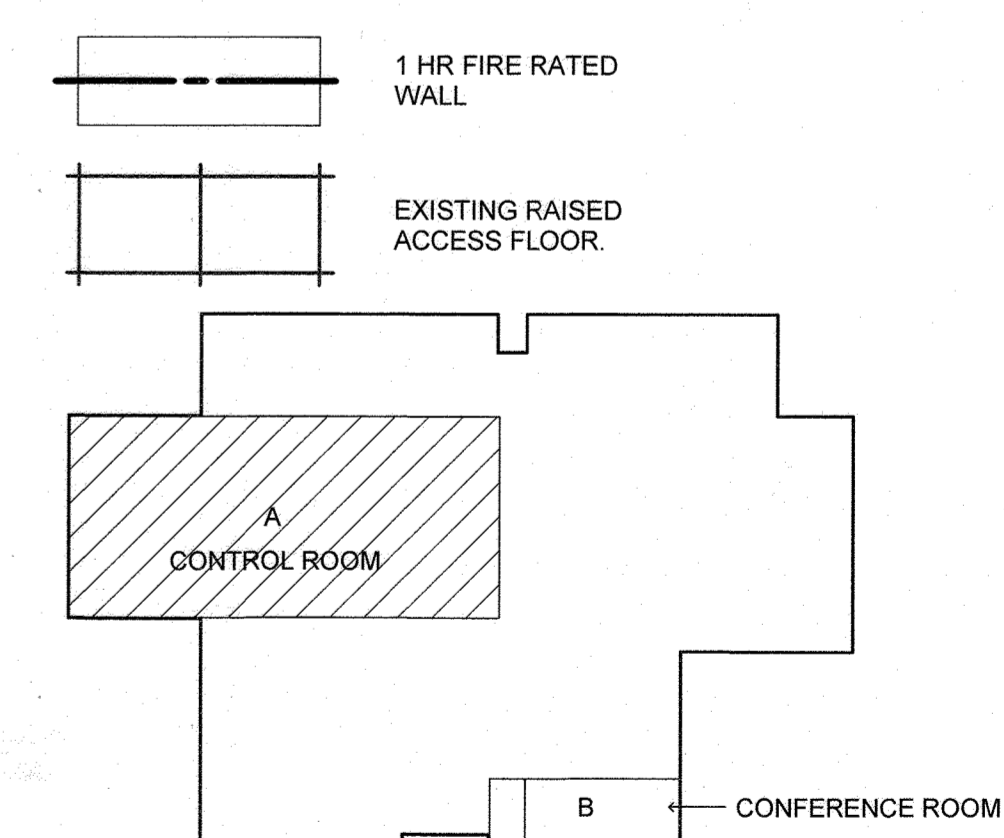
**GENERAL NOTES:**

- 1. REFER TO GENERAL NOTES ON AD-100
- 2. REFER TO DOOR & ROOM FINISH SCHEDULES ON SHEET A-107.
- 3. REFER TO REFLECTED CEILING PLAN ON SHEET A-103.
- 4. INSTALL NEW ACCESS FLOOR FRAME AND FLOOR PANELS IN ALL ROOMS INDICATED ON ROOM FINISH SCHEDULE, SEE SHEET A-108.
- 5. REFER TO A-102 FOR ENLARGED CONFERENCE ROOM AREA.
- 6. REFER TO WALL TYPES ON A-105.
- 7. ALL FURNITURE SHOWN ON DRAWINGS OTHER THAN CONSOLE WORKSTATION AND CASEWORK TO BE PROVIDED BY OWNER.

**KEYNOTES:**

- 1 EXISTING WALLS TO REMAIN.
- 2 WALL MOUNTED T.V. MONITOR. PROVIDE WOOD BLOCKING AT MOUNTING. COORDINATE WITH ELECTRICAL. PATCH & REPAIR GYP. BOARD.
- 3 BASE BID TO INCLUDE HOLLOW METAL FRAME WITH CLEAR, TEMPERED GLASS. ADD ALTERNATE NO.2 TO INCLUDE SWITCHABLE/PRIVACY GLASS AND METAL FRAME SYSTEM. COORDINATE WITH ELECTRICAL.
- 4 PLASTIC LAMINATE CASEWORK WITH SOLID SURFACE COUNTERTOPS.
- 5 VINYL CORNER GUARD (FULL HEIGHT).
- 6 PROVIDE 12" WIDE ADJUSTABLE PLASTIC LAMINATE SHELVING. SEE SPECIFICATION SECTION 06 41 00
- 7 FIXED WALL MOUNTED ELECTRICAL EQUIPMENT TO REMAIN. FURR OUT AROUND EQUIPMENT.
- 8 BUILT-IN PLASTIC LAMINATE CASEWORK WITH SOLID SURFACE COUNTERTOP AROUND ADJUSTABLE WORKSTATIONS. REFER TO ENLARGED PLAN A-106.
- 9 MURAL WALL
- 10 NEW DOOR AND FRAME TO BE COMPATIBLE WITH AND INCORPORATED INTO EXISTING STOREFRONT SYSTEM. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS. PROVIDE NEW GALVANIZED STEEL SUPPORTS THAT ARE COMPATIBLE WITH EXISTING FRAMING SYSTEM. ALL NEW PREFINISHED ALUMINUM FLASHINGS AND COVERS SHALL MATCH EXISTING.
- 11 EXISTING GYPSUM WALL CAN REMAIN

**LEGEND**



**FLOOR PLAN**  
1/4" = 1'-0"

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*[Signature]* 4/30/21  
SIGNATURE DATE

**KEY PLAN**

AS-BUILT 4-30-2021

**A-101**

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO.: 18898. EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

Director of Public Works: *[Signature]* 11/19/19  
Chief, Bureau of Engineering: *[Signature]* 11/13/19  
Chief, Bureau of Utility Design: *[Signature]* 11/13/19



DES: J.T.	
DRN: JW	
CHK: PJD	
10/15/2019	
HDR BY: [Symbol]	RECORD DRAWING REVISION
NO.	REVISION
	DATE
	4/30/21

**ADMINISTRATION BUILDING FLOOR PLAN**

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

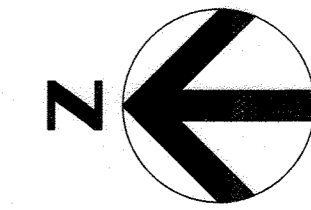
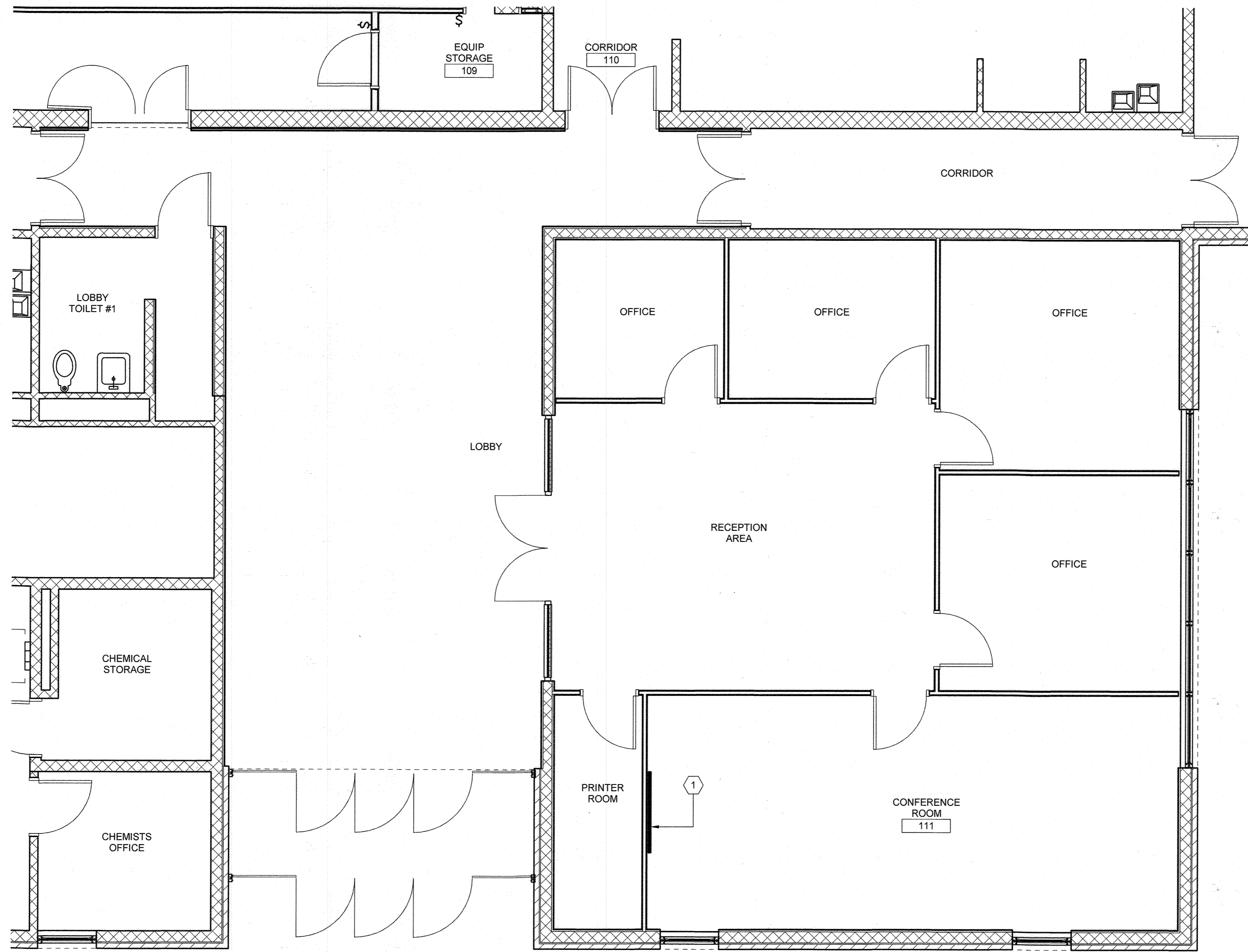
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 11 OF 31

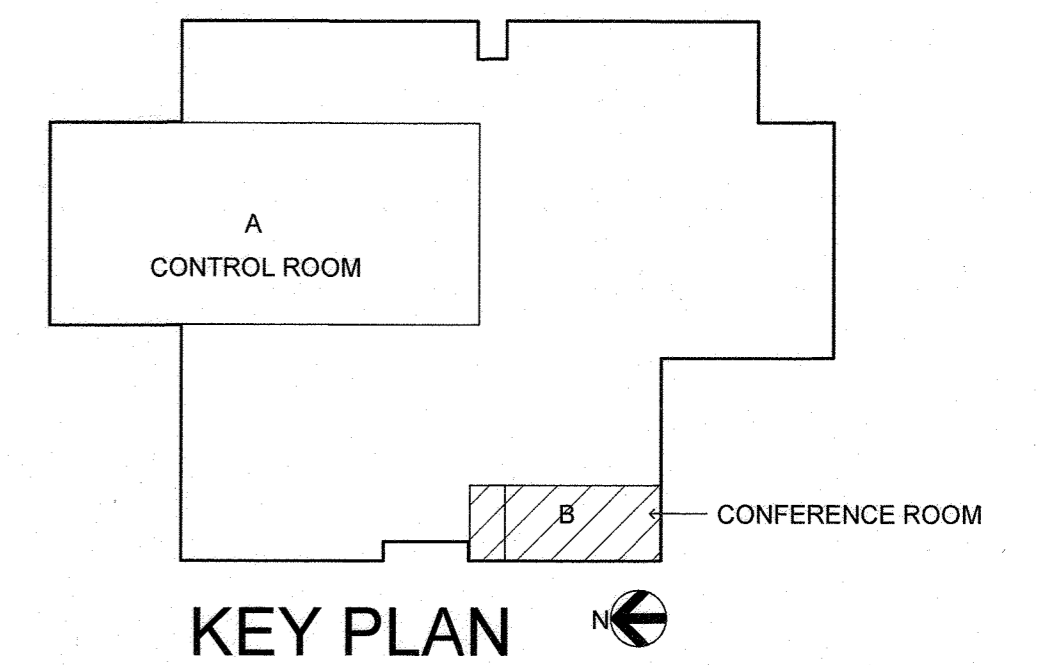
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- GENERAL NOTES:**
- COORDINATE WORK REQUIRED IN THIS AREA WITH ELECTRICAL
  - CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES

- KEYNOTES**
- ADD ALTERNATE NO.4 VIDEO MONITOR, COORDINATE WITH ELECTRICAL DRAWINGS. PROVIDE BLOCKING AS REQUIRED. PATCH AND REPAIR GYPSUM BOARD. PAINT ALL WALLS IN ROOM 111

ENLARGED ADMIN PLAN FLOOR PLAN  
1/4" = 1'-0"



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*[Signature]* 4/30/21  
DATE

AS-BUILT 4-30-2021

A-102

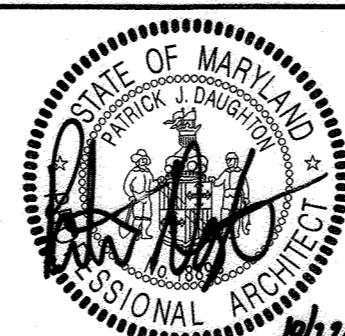
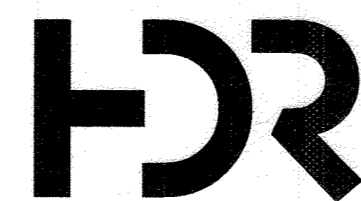
\*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* 10-31-19  
DIRECTOR, PUBLIC WORKS DATE

*[Signature]* 11/3/19  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 11/15/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: Designer	
DRN: Author	
CHK: Checker	
10/15/2019	
BY	NO.
REVISION	
DATE	

**ADMINISTRATION BUILDING CONFERENCE ROOM**

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

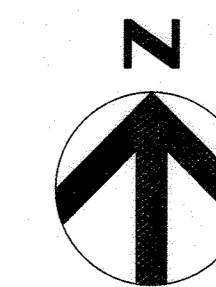
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 12 OF 31

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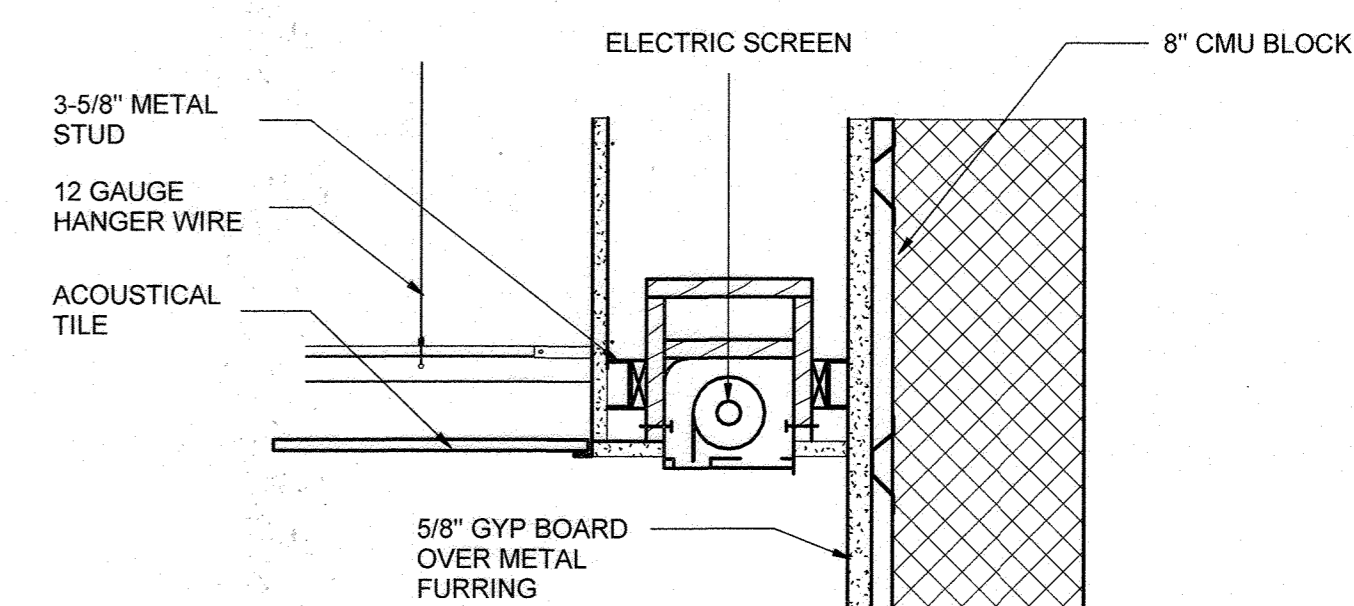
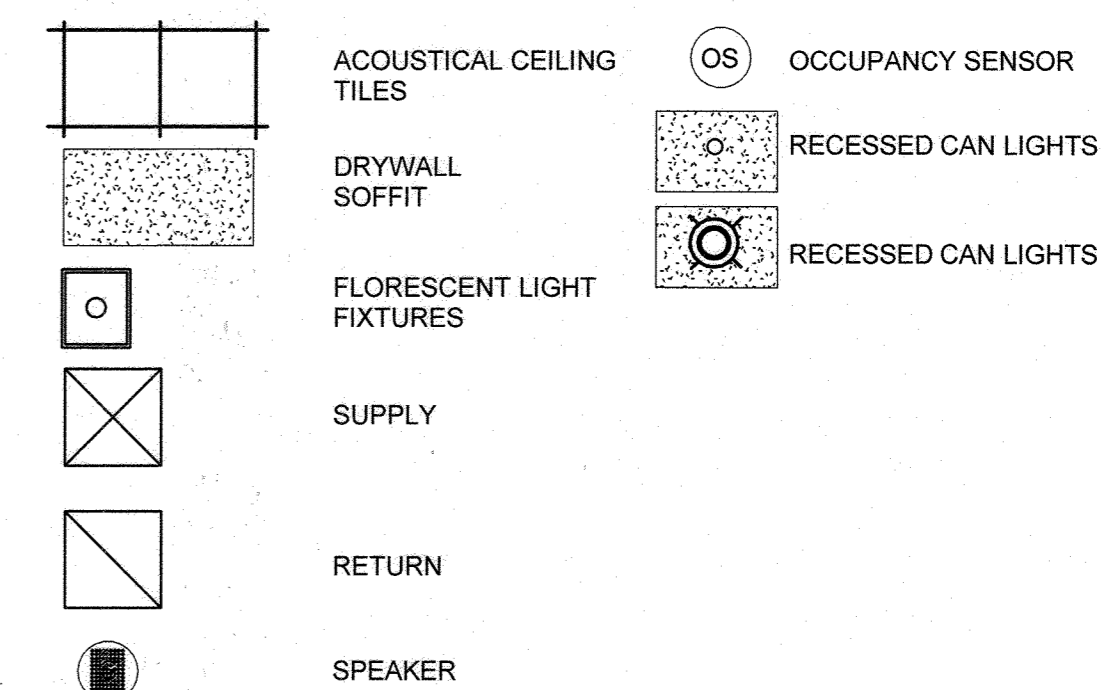
**GENERAL NOTES:**

- COORDINATE SUSPENDED CEILINGS, LIGHTING FIXTURES & HVAC SUPPLY & RETURN GRILLS WITH EXISTING DUCTWORK TO REMAIN

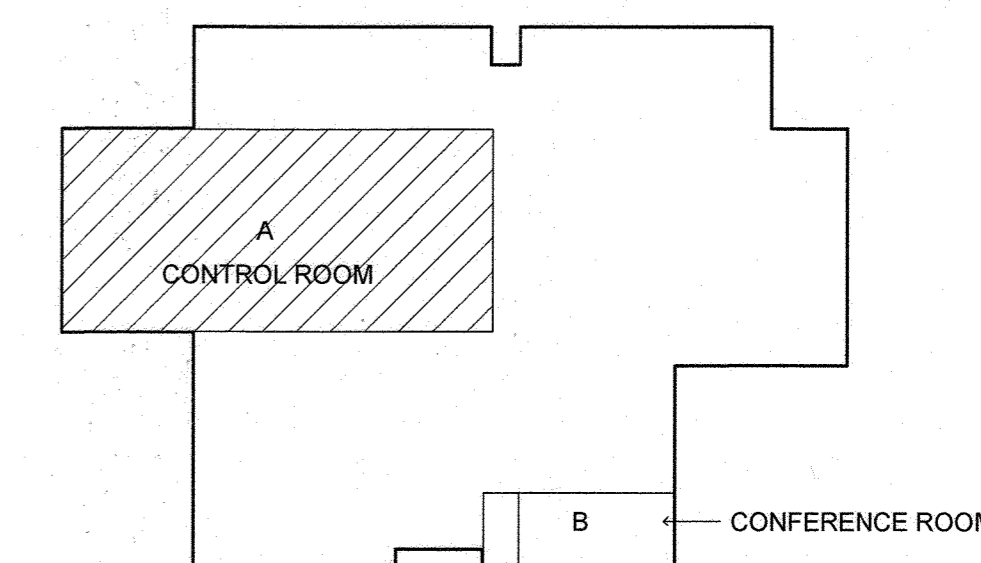
**KEYNOTES:**

- CONCEALED DROP DOWN PROJECTOR LIFT, COORDINATE WITH ELECTRICAL DRAWINGS.
- CEILING RECESSED MOTOR OPERATED PROJECTOR SCREEN, COORDINATE WITH ELECTRICAL DRAWINGS. VERIFY SIZE WITH OWNER.
- DROPPED GYPSUM BOARD SOFFIT OVER CONSOLE WORKSTATIONS. REFER TO ENLARGED PLAN A-106.

**LEGEND:**



**1 DROP CEILING WITH SCREEN**  
A-103 1 1/2" = 1'-0"



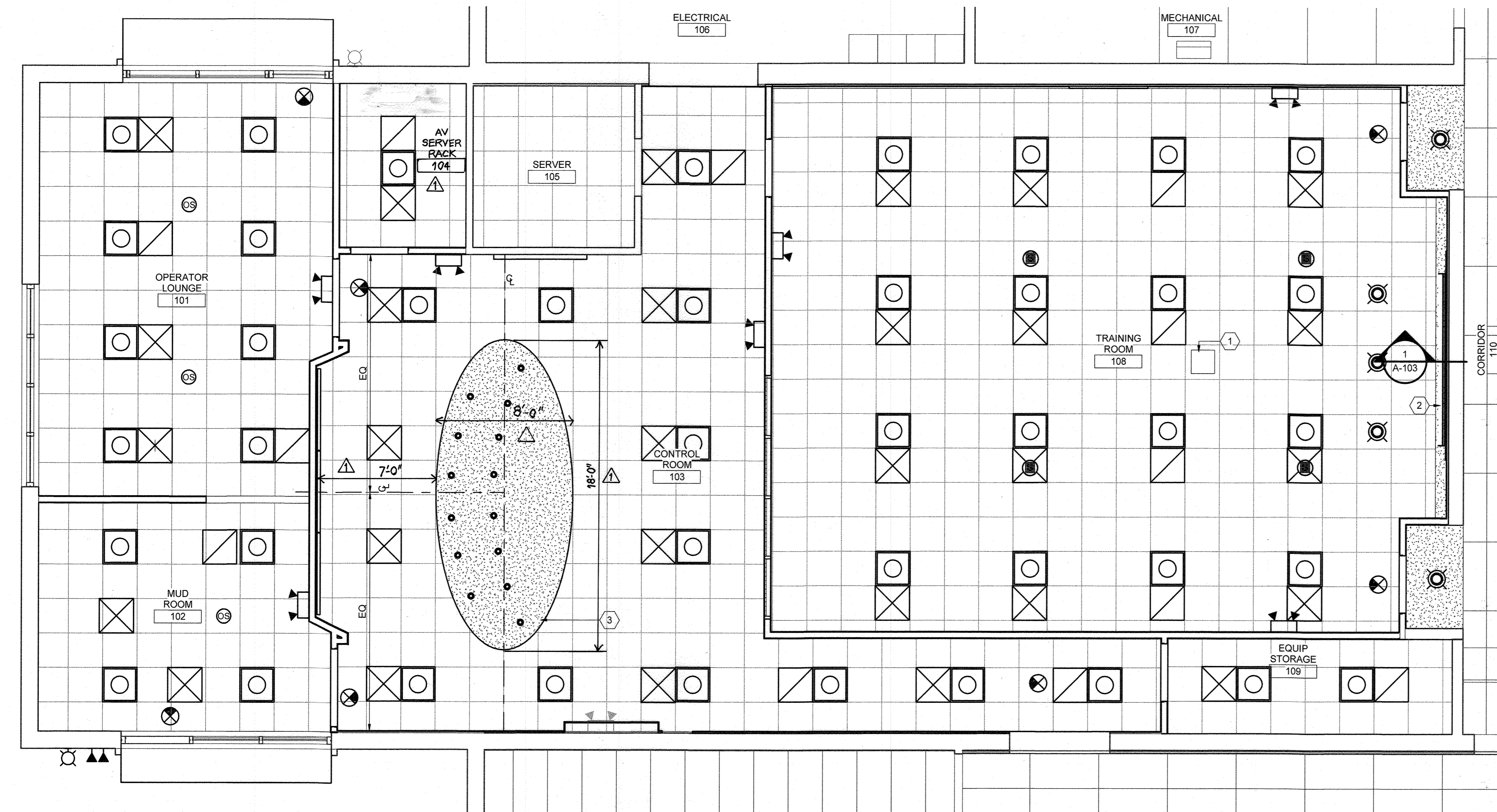
**KEY PLAN**

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*[Signature]* *[Date]*

AS-BUILT 4-30-2021

A-103



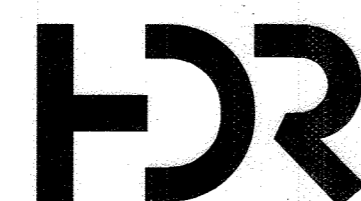
**REFLECTED CEILING PLAN**

1/4" = 1'-0"

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signatures and Dates]*  
DIRECTOR, PUBLIC WORKS DATE: 4/13/19  
CHIEF, BUREAU OF ENGINEERING DATE: 4/13/19  
CHIEF, BUREAU OF UTILITIES DATE: 10/21/19  
CHIEF, UTILITY DESIGN DIVISION DATE: 11/13/19



DES: JT			
DRN: JW			
CHK: PJD			
10/15/2019	HOR	RECORD DRAWING REVISION	4/30/21
BY	NO.	REVISION	DATE

**ADMINISTRATION BUILDING REFLECTED  
CEILING PLAN**

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

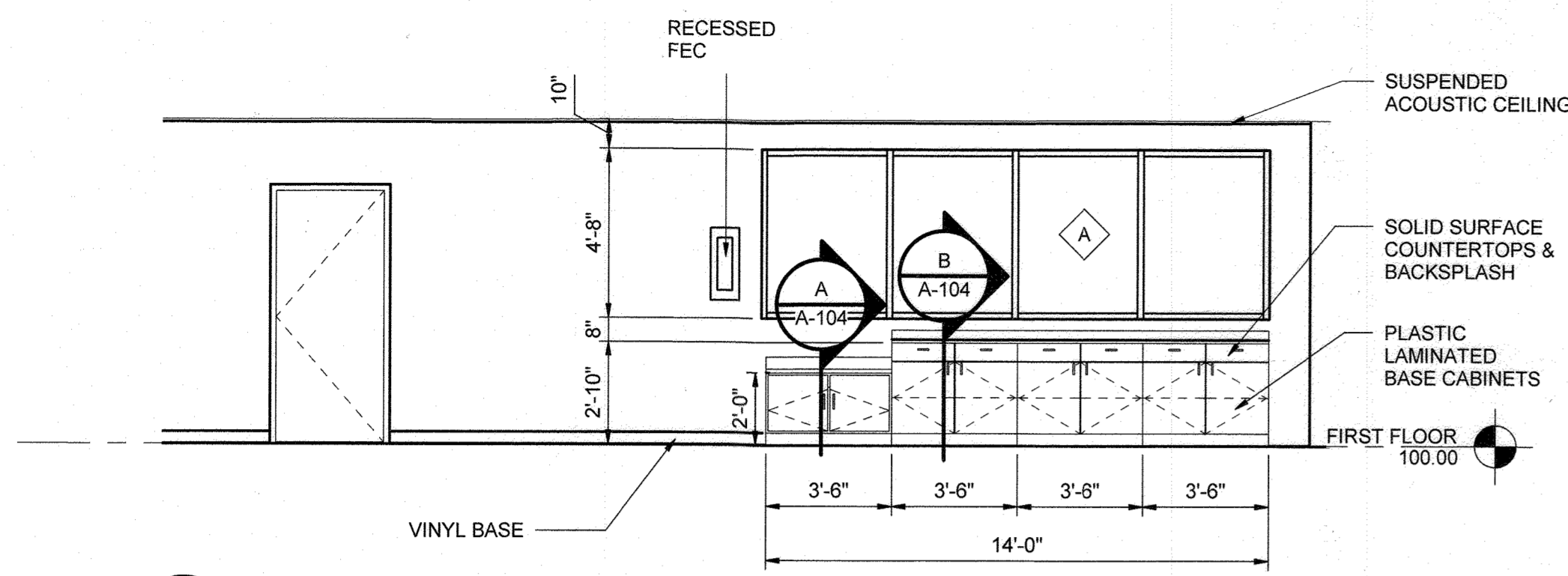
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

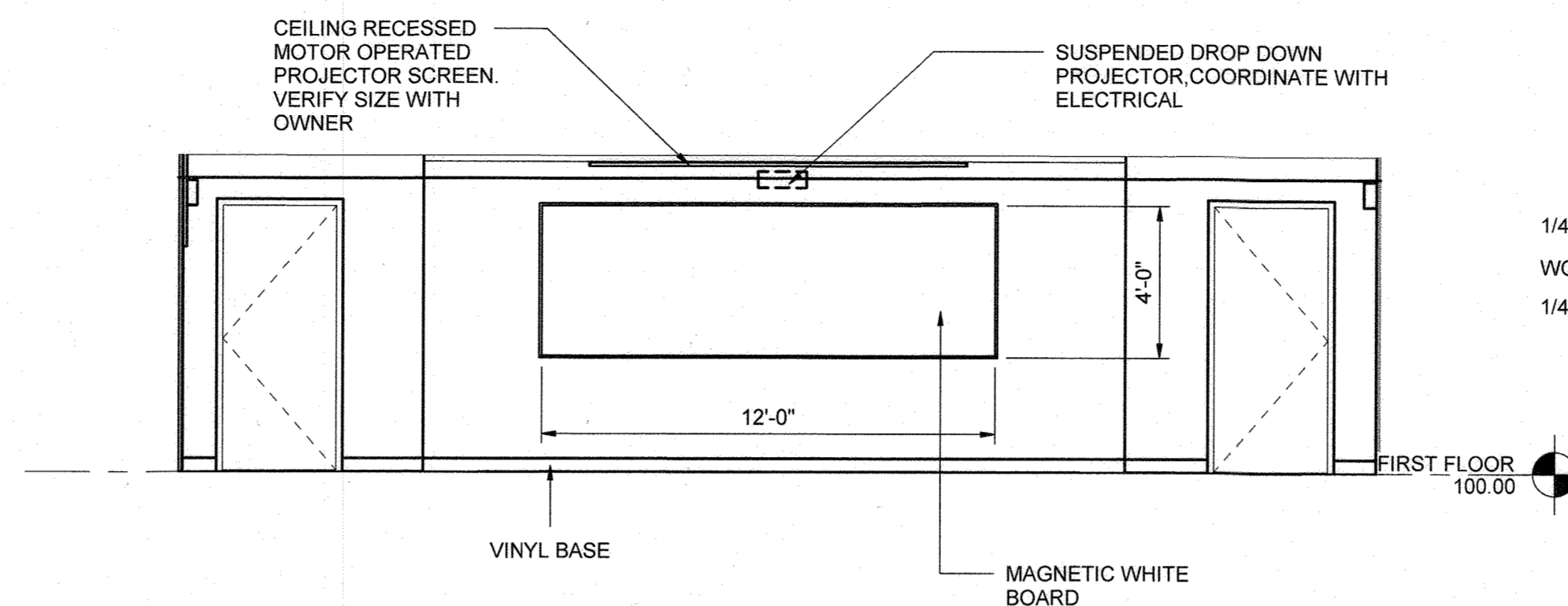
SCALE  
AS  
SHOWN

SHEET  
13 OF 31

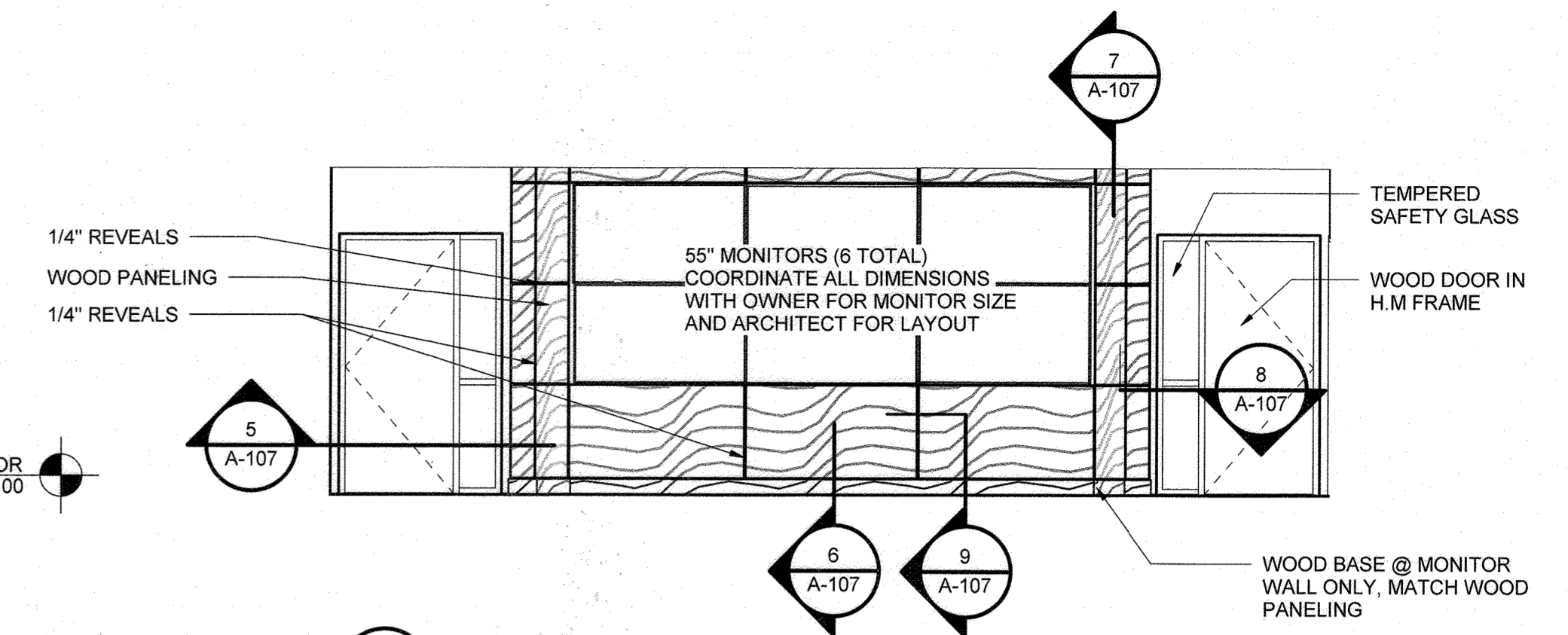
C:\p1\2018\10154930-00-A\_Jamal.Williams\RM\XL.rvt 10/15/2019 12:16:48 PM



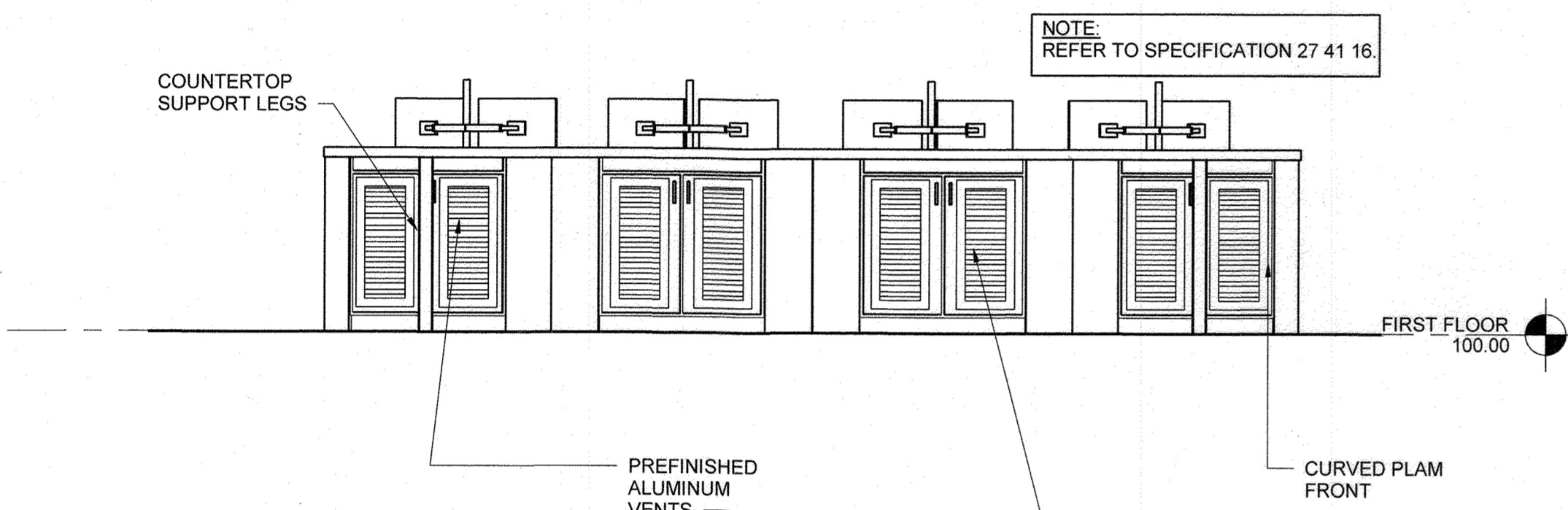
1 ELEVATION  
A-101 1/4" = 1'-0"



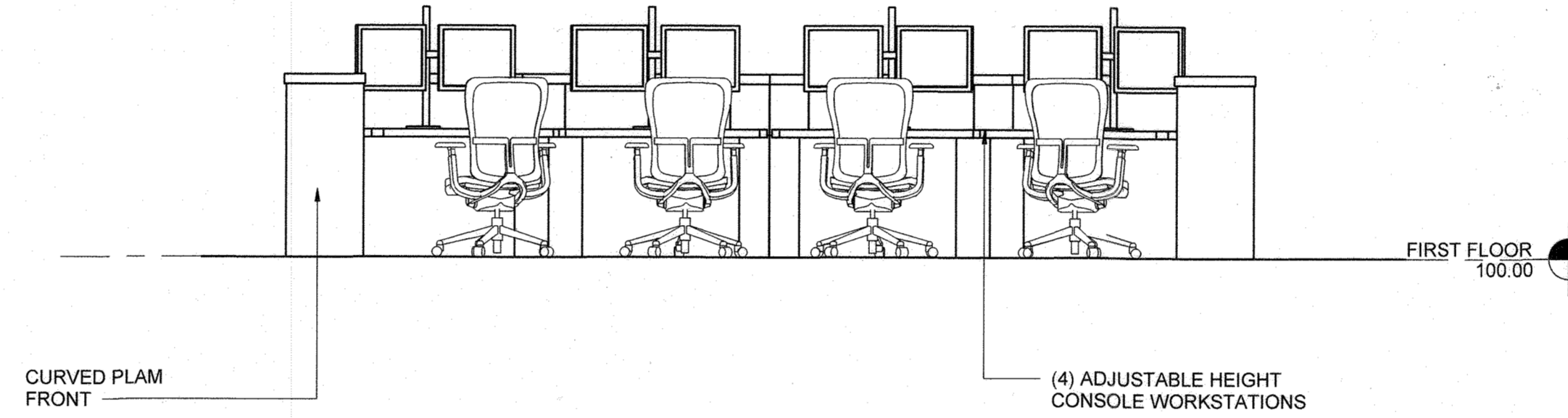
2 ELEVATION  
A-101 1/4" = 1'-0"



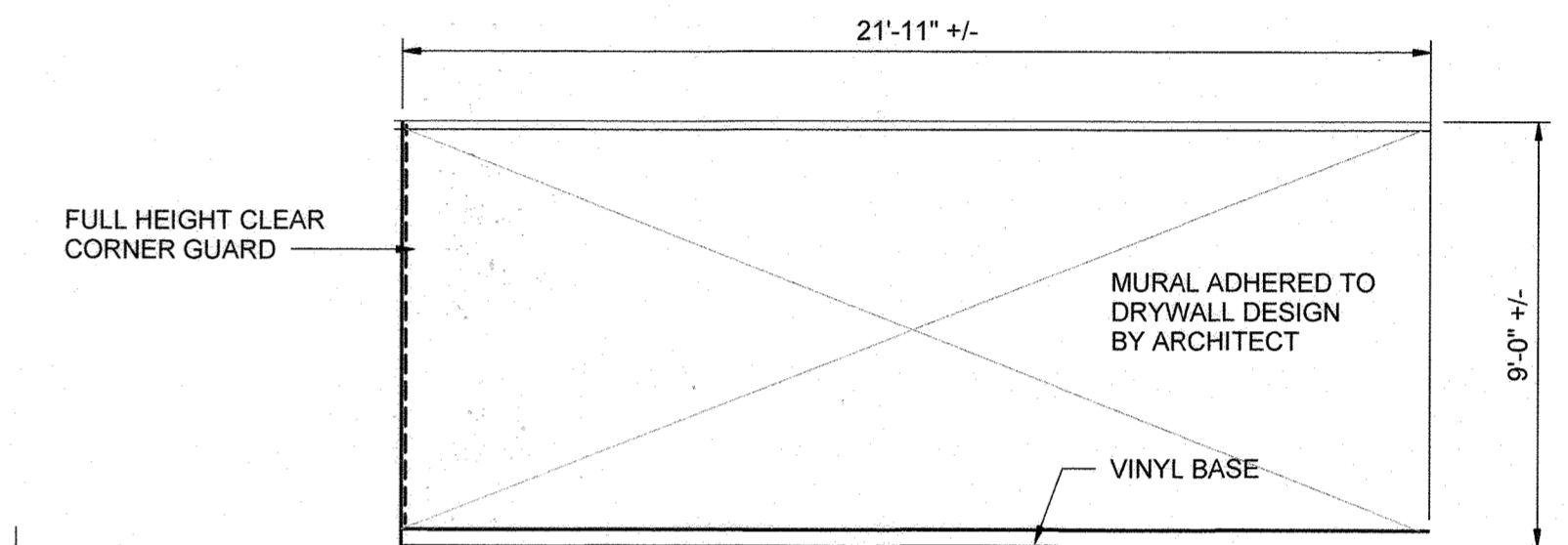
3 MONITOR WALL  
A-101 1/4" = 1'-0"



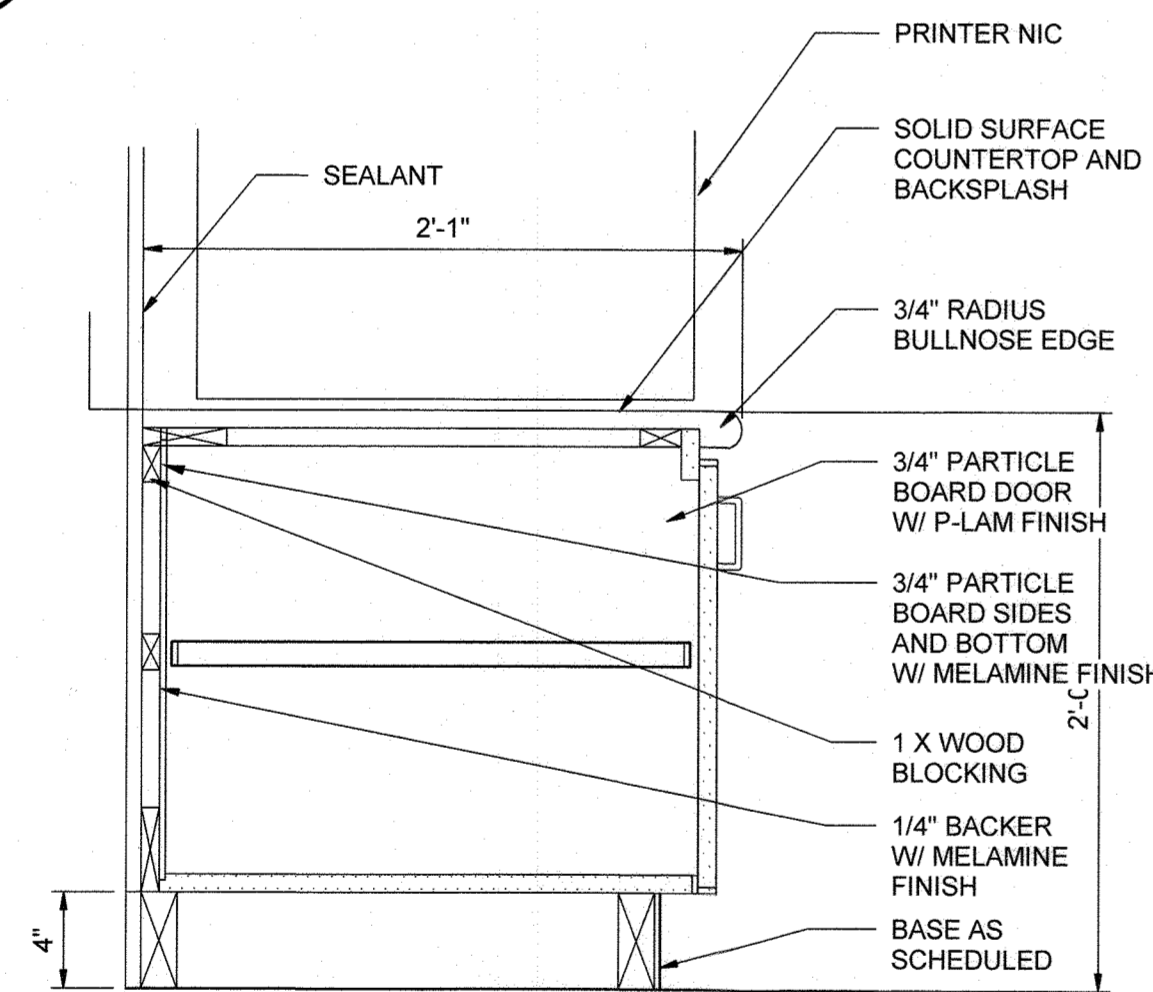
4 CONSOLE ELEVATION  
A-101 3/8" = 1'-0"



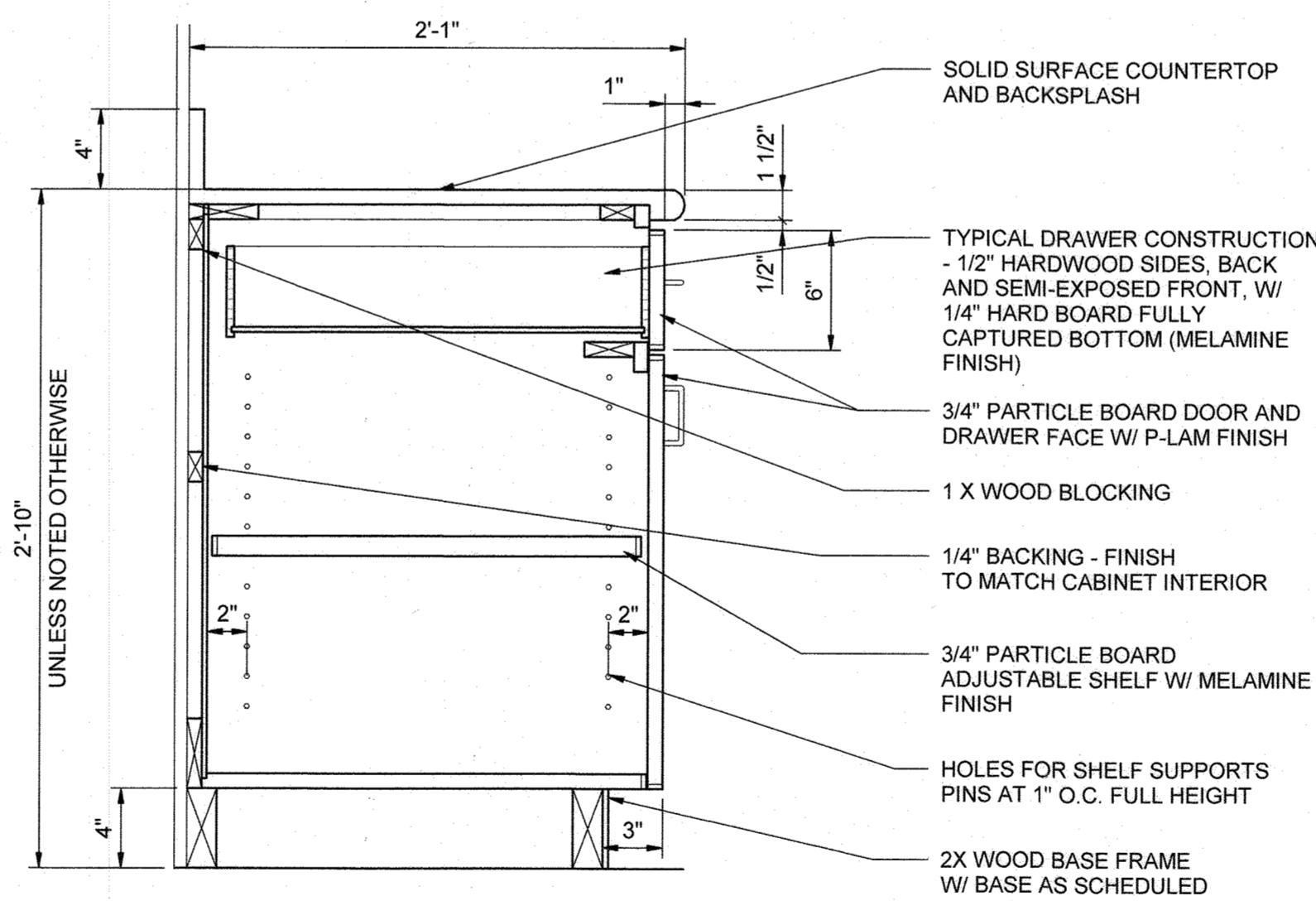
5 CONSOLE ELEVATION  
A-101 3/8" = 1'-0"



6 MURAL ELEVATION  
A-101 1/4" = 1'-0"



A BASE CABINET SECTION  
A-104 1 1/2" = 1'-0"



B BASE CABINET SECTION  
A-104 1 1/2" = 1'-0"

THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

*[Signature]* 4/30/21  
DATE

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

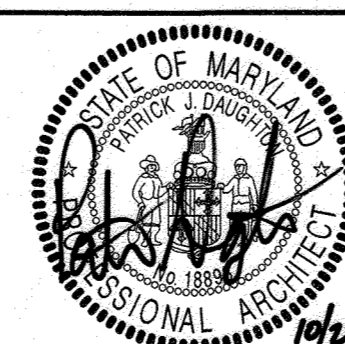
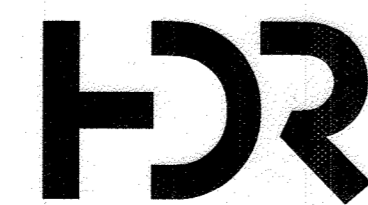
AS-BUILT 4-30-2021

A-104

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 10/31/19  
DATE  
CHIEF, BUREAU OF UTILITIES

*[Signature]* 11/15/19  
DATE  
CHIEF, UTILITY DESIGN DIVISION



DES: J.T					
DRN: JW					
CHK: PJD					
10/15/2019					
BY	NO.	REVISION	DATE	800 SCALE MAP NO.	BLOCK NO.

INTERIOR ELEVATIONS

CONTROL ROOM UPGRADE

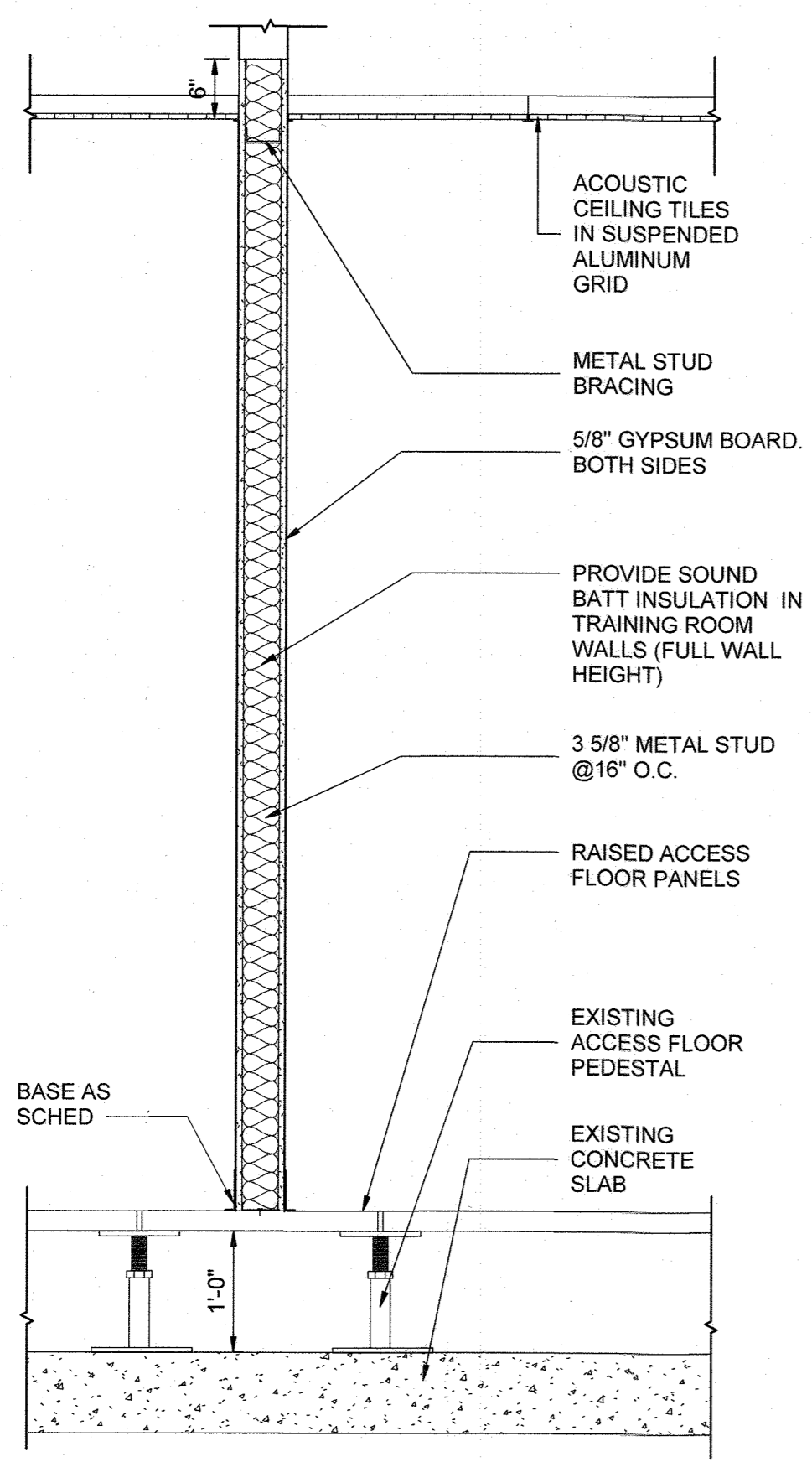
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 14 OF 31

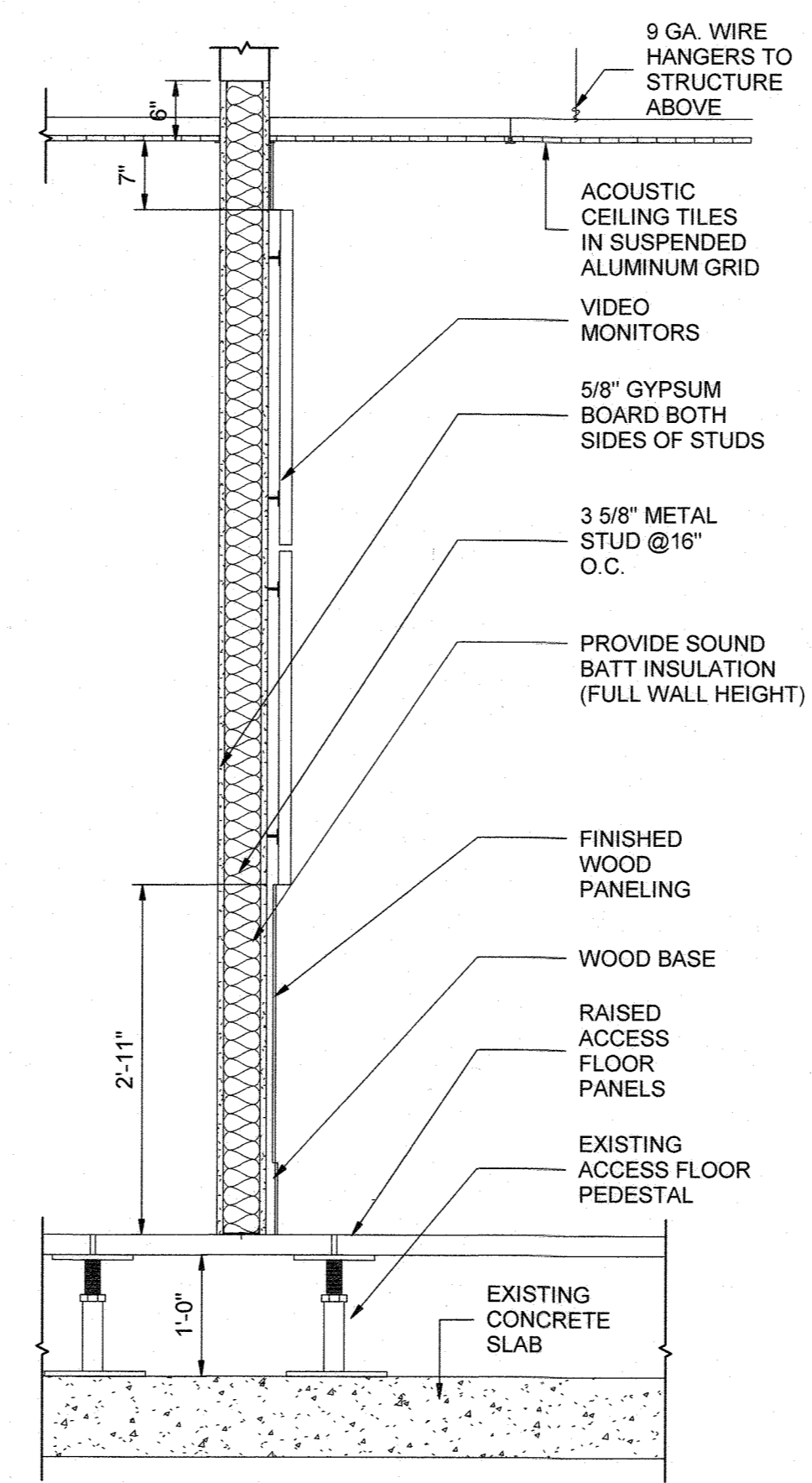
C:\p1\2019\10154930-00-A\_Jamal.Williams\RM\XL.rvt 10/15/2019 12:16:48 PM



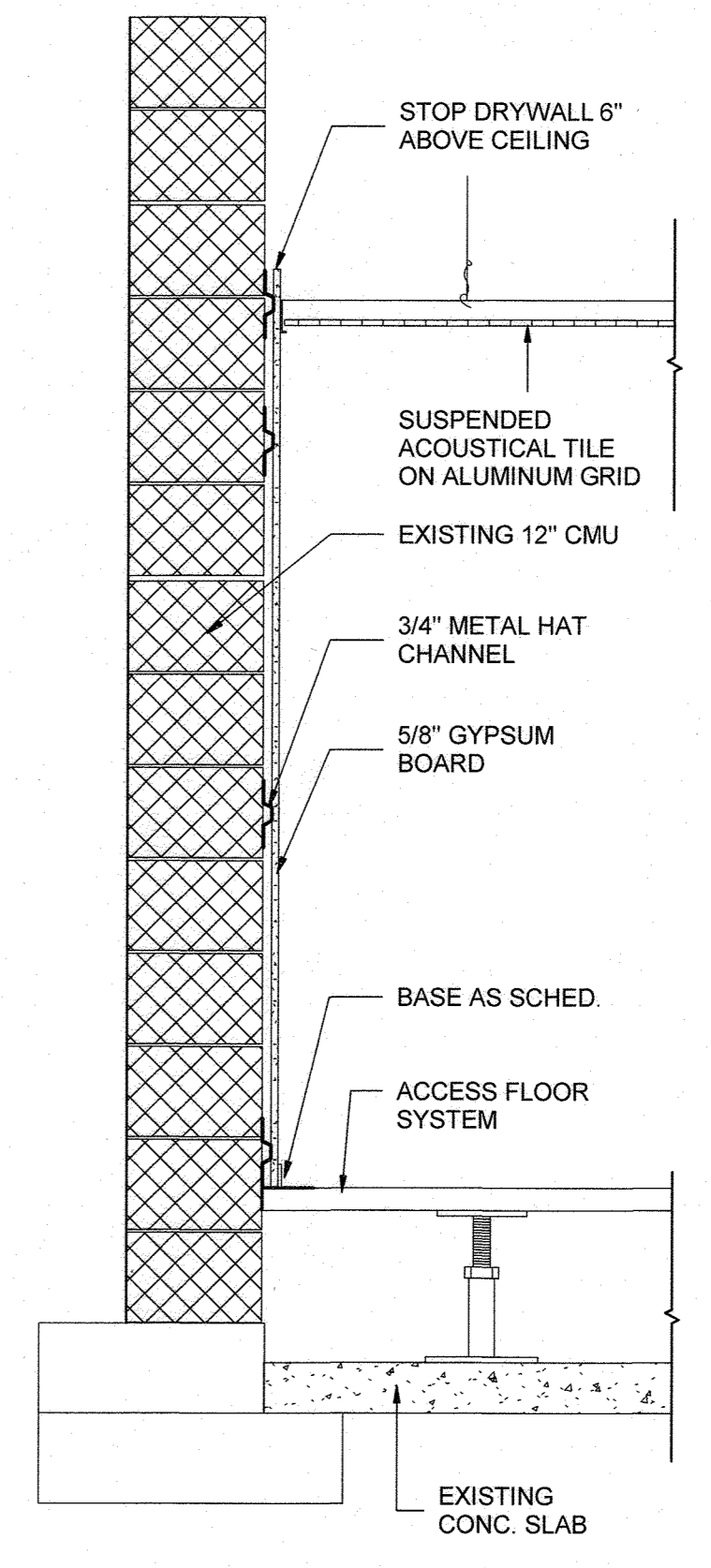
**WALL TYPE A**  
3/4" = 1'-0"

**NOTE:**  
CONTRACTOR SHALL ENGAGE AN ENGINEER TO DESIGN METAL STUD CONNECTIONS AND VERIFY SIZING. SUBMIT CALCULATIONS WITH METAL STUD SUBMITTAL. CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF MARYLAND.

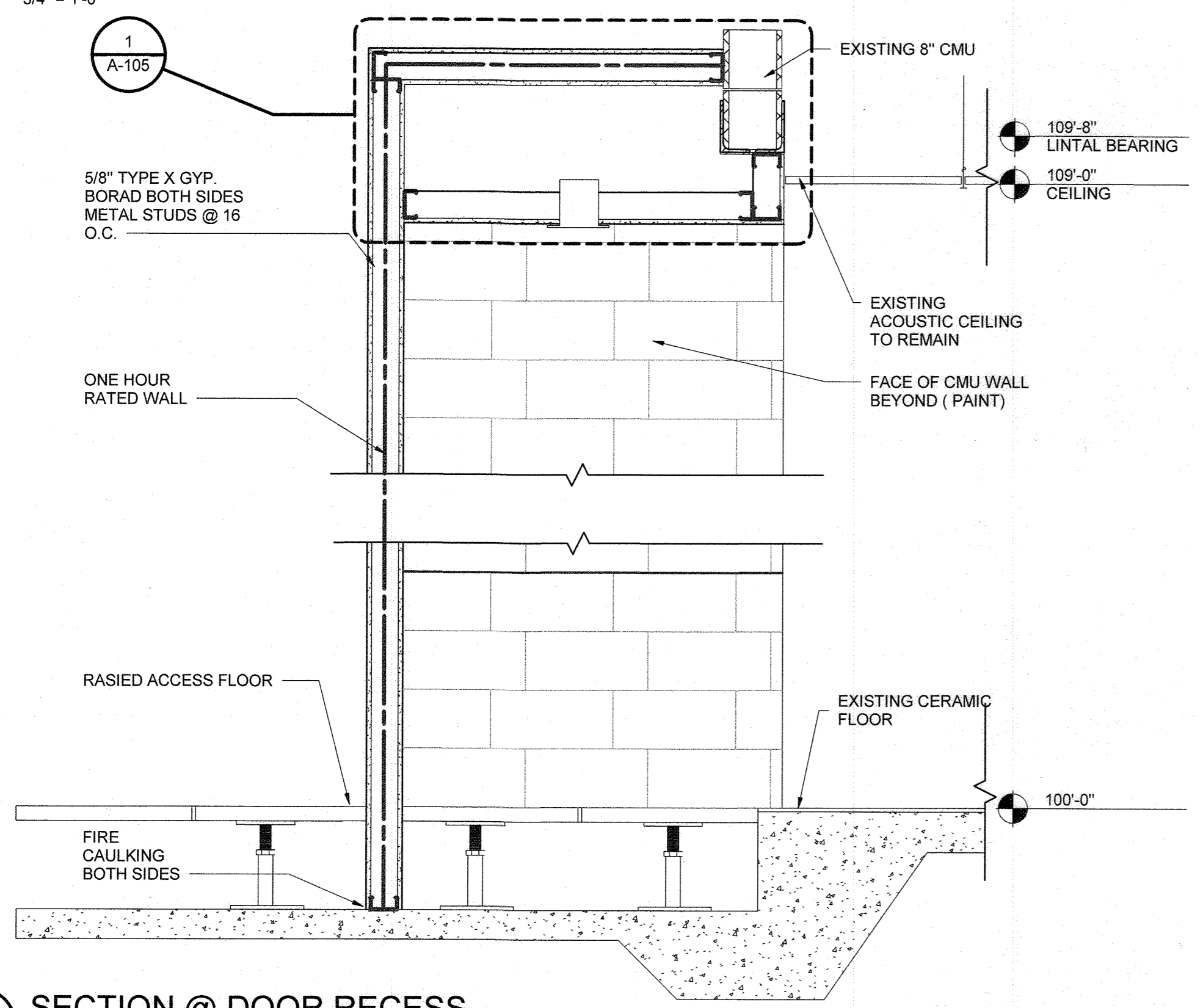
**GENERAL NOTE:  
PARTITION WALL BRACING**  
EXTEND METAL STUD PARTITION WALLS UP TO BOTTOM OF STRUCTURE. PROVIDE METAL STUD SLIP TRACK TO ALLOW FOR EXPANSION. FRAME AROUND DUCT WORK AS REQUIRED. DO NOT EXTEND GYPSUM BOARD TO BOTTOM OF STRUCTURE, STOP 6" ABOVE FINISHED CEILINGS



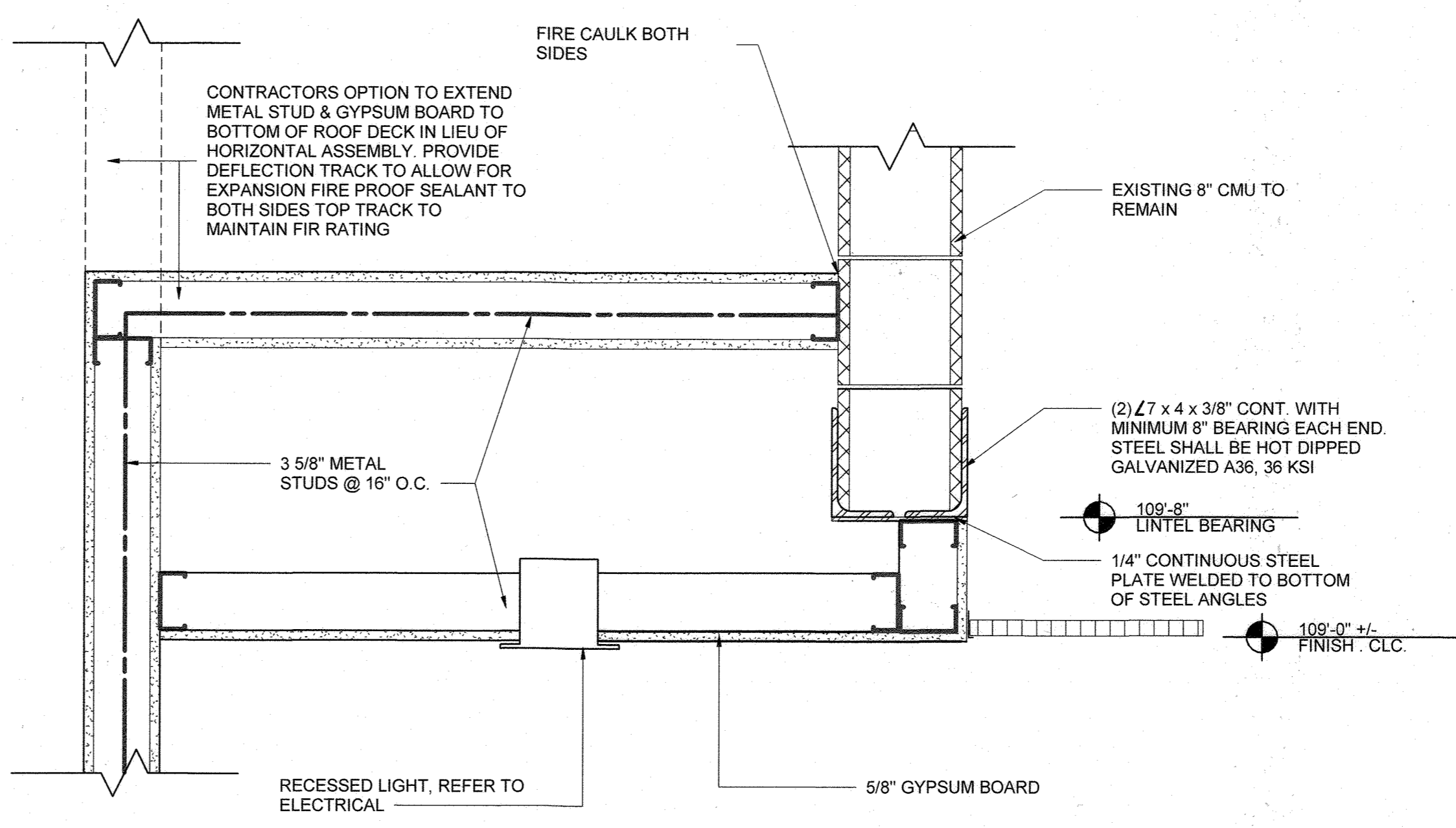
**WALL TYPE B**  
3/4" = 1'-0"



**WALL TYPE C**  
3/4" = 1'-0"



**SECTION @ DOOR RECESS**  
3/4" = 1'-0"

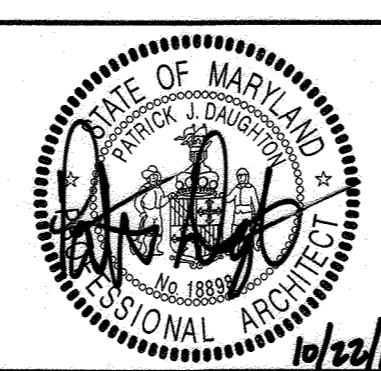
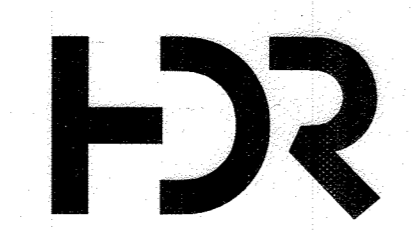


**DOOR RECESS DETAIL**  
1 1/2" = 1'-0"

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SIGNATURE: [Signature] DATE: 4/30/21

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**  
DIRECTOR OF PUBLIC WORKS: [Signature] DATE: 11/13/19  
CHIEF, BUREAU OF UTILITIES: [Signature] DATE: 10-31-19  
CHIEF, BUREAU OF ENGINEERING: [Signature] DATE: 11/13/19  
CHIEF, UTILITY DESIGN DIVISION: [Signature] DATE: 11/13/19



DES: J.T					
DRN: JW					
CHK: PJD					
10/15/2019	BY	NO.	REVISION	DATE	

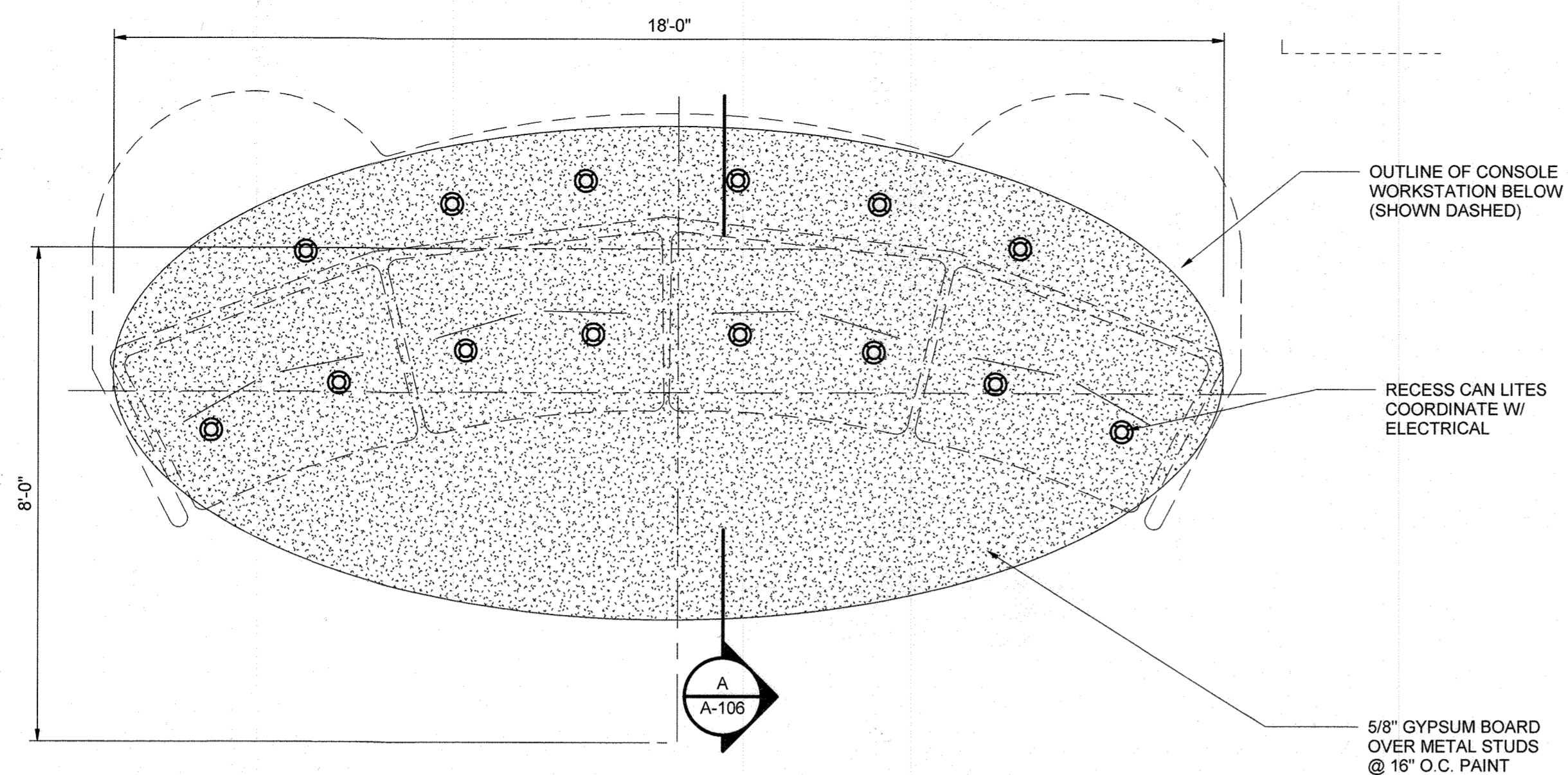
**WALL TYPES AND DETAILS**

800 SCALE MAP NO. BLOCK NO.

**AS-BUILT 4-30-2021**  
**CONTROL ROOM UPGRADE**  
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

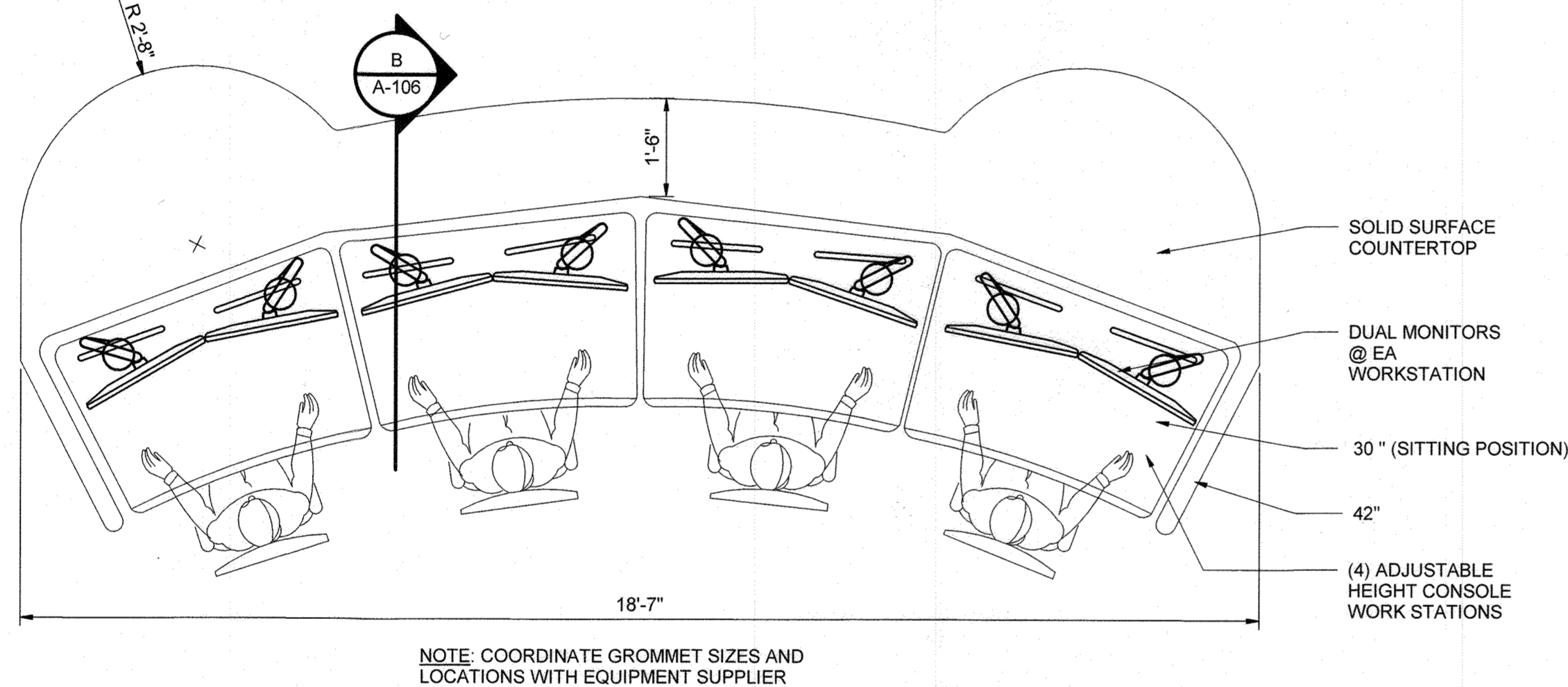
**A-105**  
SCALE AS SHOWN  
SHEET 15 OF 31

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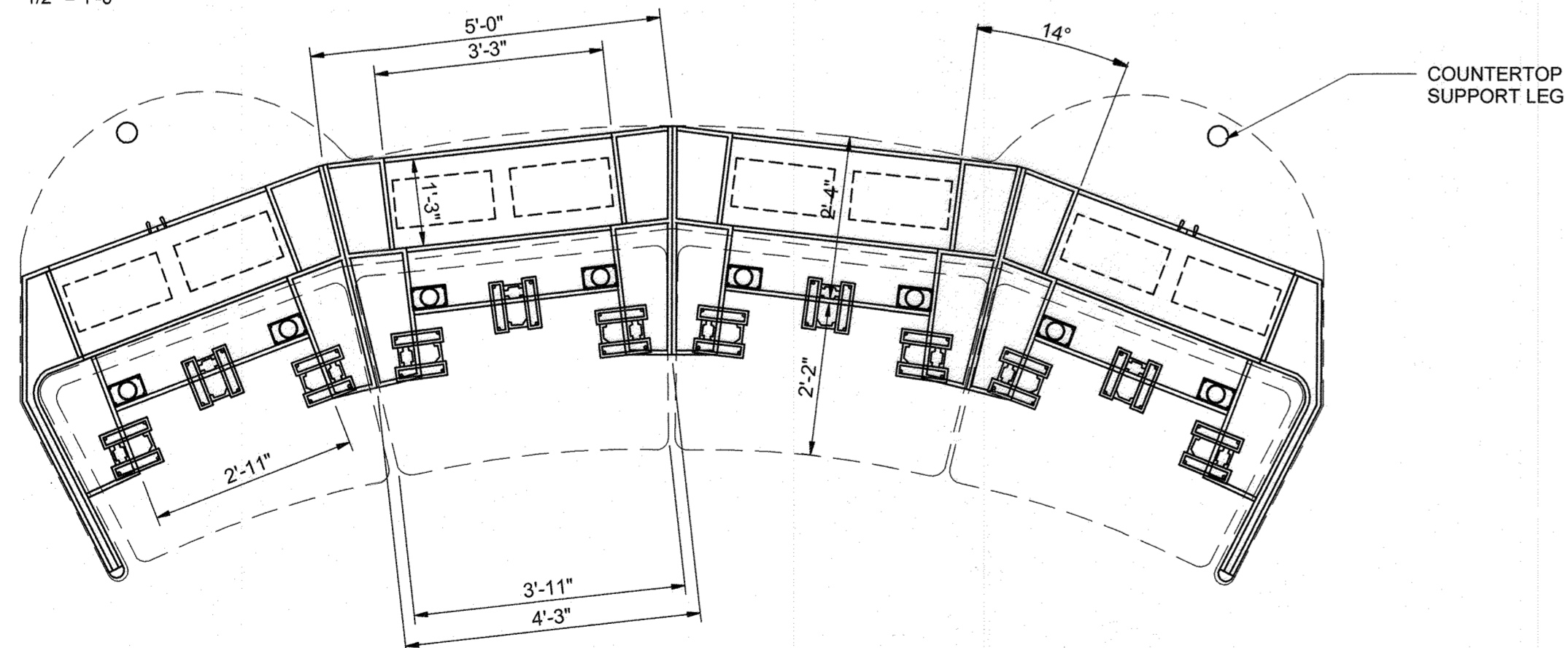
**DROPPED SOFFIT OVER CONSOLE WORKSTATIONS**

1/2" = 1'-0"



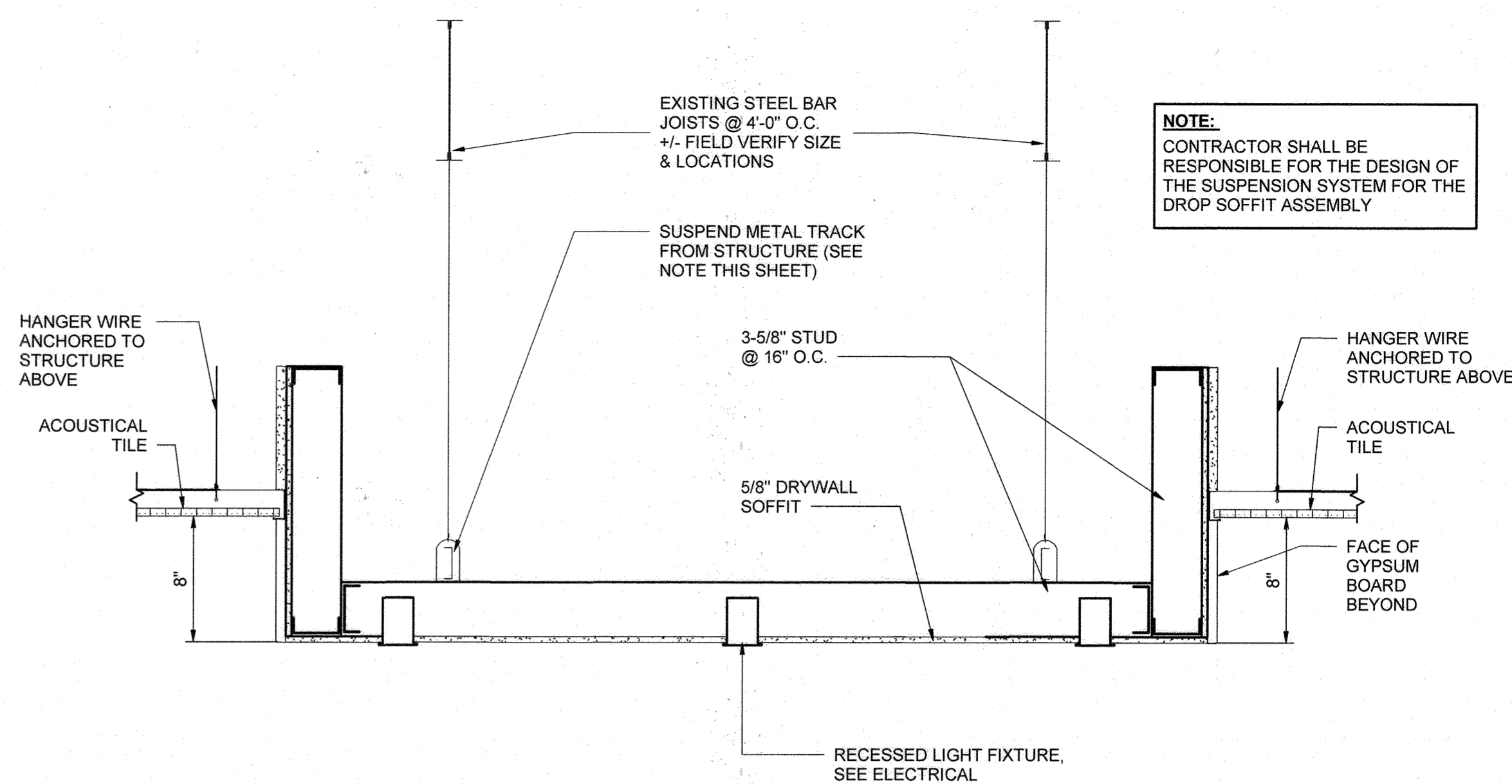
**ENLARGED CONSOLE WORKSTATION PLAN**

1/2" = 1'-0"



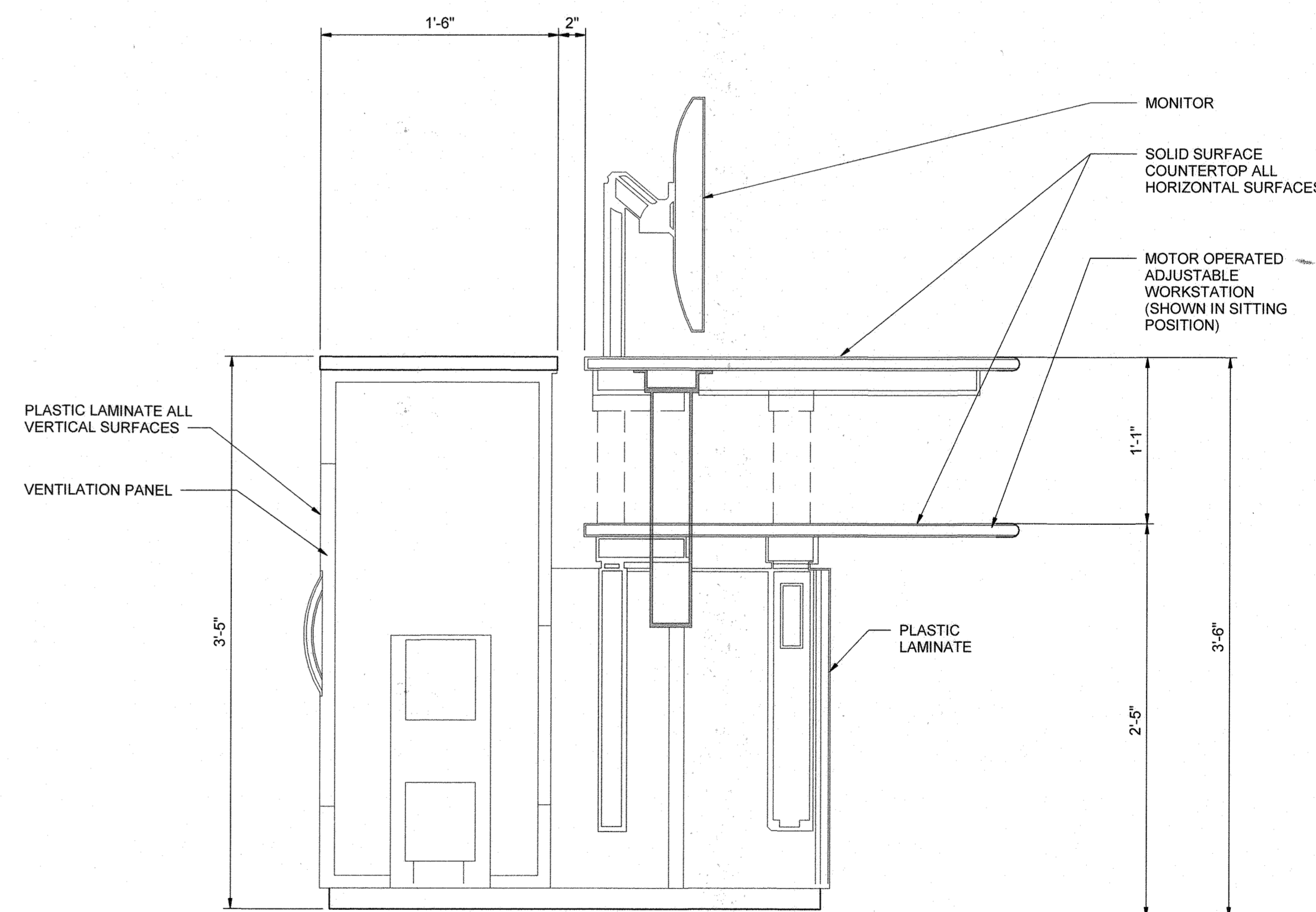
**CONSOLE PLAN**

1/2" = 1'-0"



**SECTION @ SUSPENDED SOFFIT**

1 1/2" = 1'-0"



**CONSOLE SECTION**

1 1/2" = 1'-0"

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*[Signature]* 4/30/21  
 SIGNATURE DATE

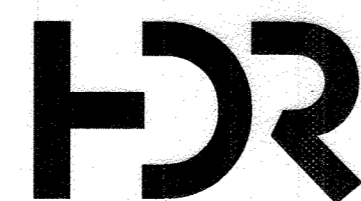
AS-BUILT 4-30-2021

A-106

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

Director of Public Works: *[Signature]* 11/13/19  
 Chief, Bureau of Engineering: *[Signature]* 11/13/19  
 Chief, Bureau of Utilities: *[Signature]* 10/31/19  
 Chief, Utility Design Division: *[Signature]* 11/13/19



DES: J.T

DRN: JW

CHK: PJD

10/15/2019

BY	NO.	REVISION	DATE

DETAILS

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 16 OF 31

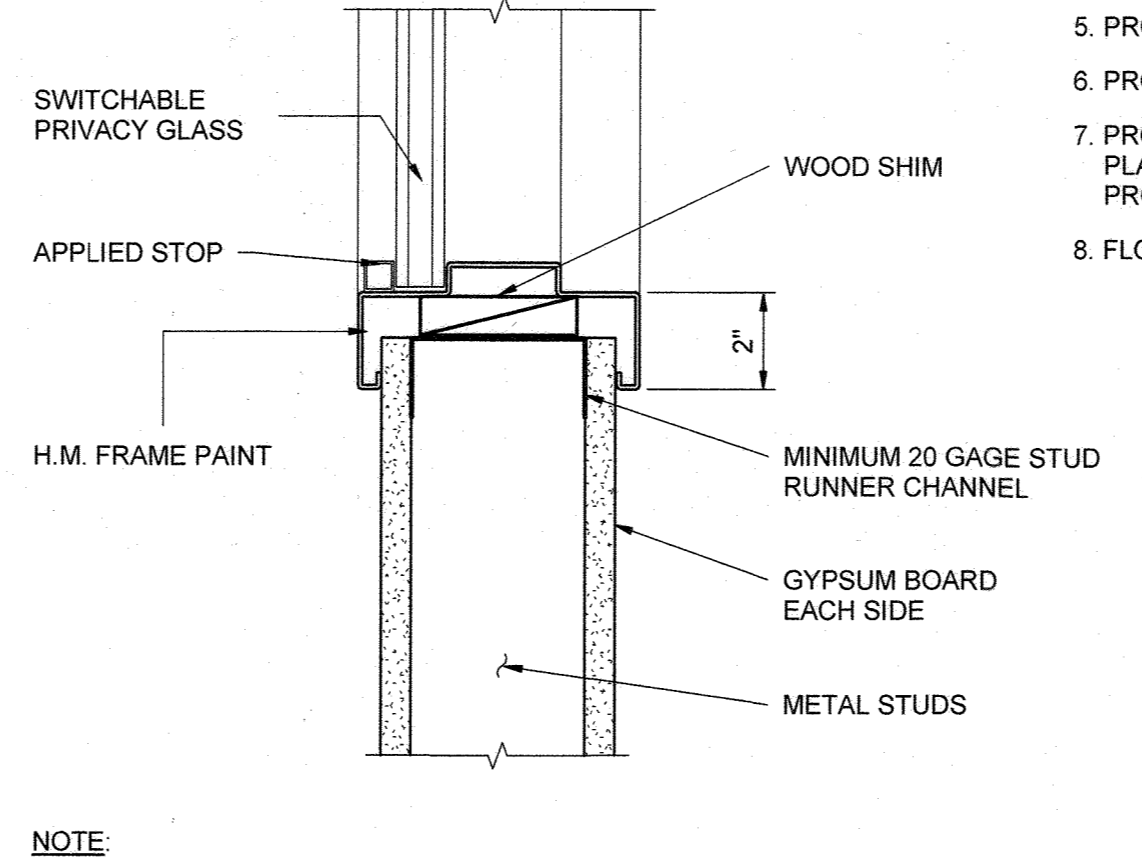
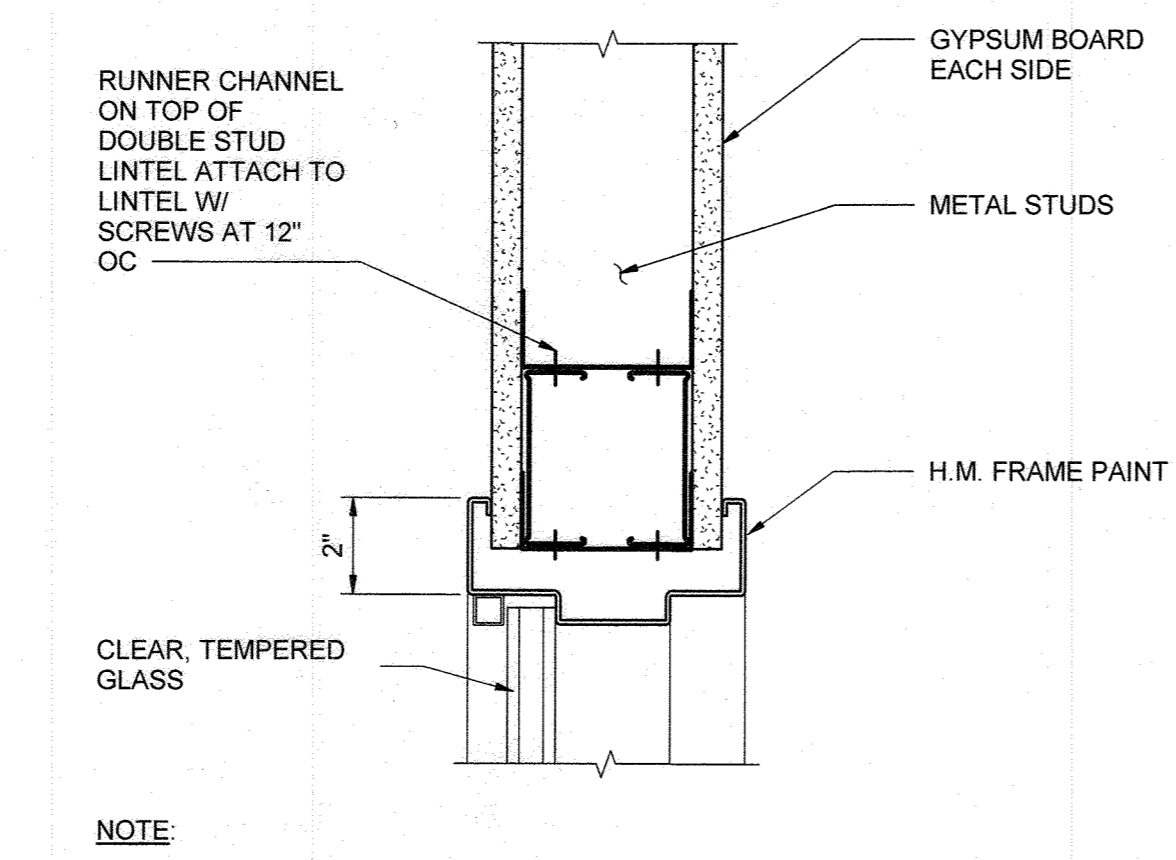
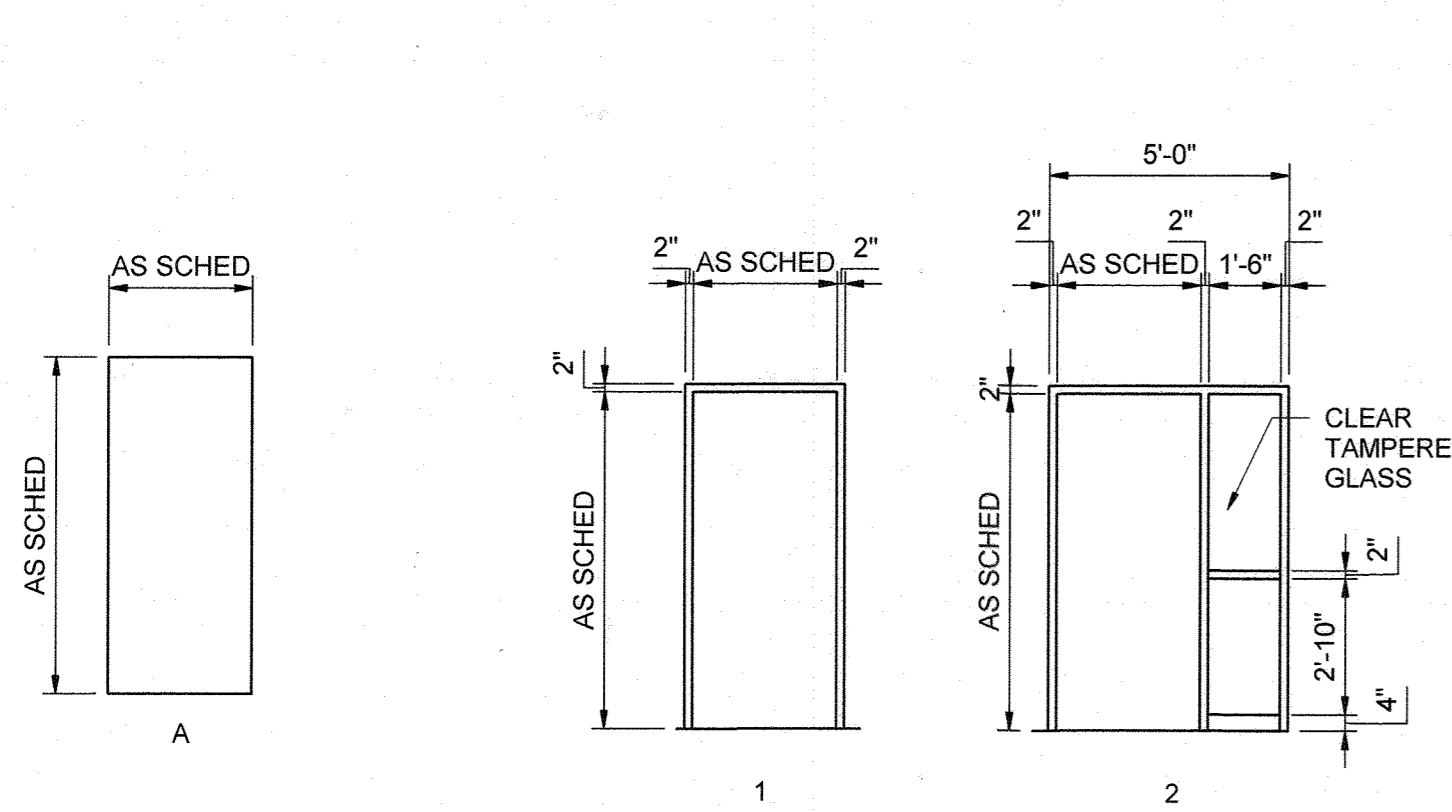


DOOR AND FRAME SCHEDULE											
DOOR NO.	DOOR			FRAME			FIRE RATING	HARDWARE	HEAD	JAMB	COMMENTS
	WIDTH	HEIGHT	TYPE	MATERIAL	TYPE	MATERIAL					
101A	3'-0"	7'-0"	A	WD	2	HM	-	1	2 / A-108	1 / A-108	
101B							EXISTING TO REMAIN				
102A	3'-0"	7'-0"	A	WD	2	HM	-	1	2 / A-108	1 / A-108	
102B	3'-5"	7'-0"	A	AL	1	AL	-	1			1,4
103B							EXISTING TO REMAIN				
104	3'-0"	7'-0"	A	HM	1	HM	-	3	2 / A-108	1 / A-108	
105	3'-0"	7'-0"	A	HM	1	HM	-	3	2 / A-108	1 / A-108	2
106							EXISTING TO REMAIN				
107							EXISTING TO REMAIN				
108A	3'-0"	7'-0"	A	WD	1	HM	-	4	2 / A-108	1 / A-108	2
108B	3'-0"	7'-0"	A	WD	1	HM	60	5	2 / A-108	1 / A-108	3
108C	3'-0"	7'-0"	A	WD	1	HM	60	5	2 / A-108	1 / A-108	3
109	3'-0"	7'-0"	A	WD	1	HM	-	3	2 / A-108	1 / A-108	

HARDWARE SCHEDULE			
Hardware Set	Quantity	Unit	Description
HW-1	1-1/2	PR	Butts
	1	EA	Lockset (Office Function)
	1	EA	Closer
HW-2	1-1/2	PR	Butts
	1	EA	Lockset (Entry Function)
	1	EA	Threshold
	1	EA	Weatherstripping
	1	EA	Closer
	1	EA	Sweep
	1	EA	Drip Cap
HW-3	1-1/2	PR	Butts
	1	EA	Lockset (Store Room)
	1	EA	Closer
HW-4	1-1/2	PR	Butts
	1	EA	Lockset (Office Function)
	1	EA	Closer
HW-5	1-1/2	PR	Butts
	1	EA	Exit Device (Classroom Function)
	1	EA	Closer
	1	Set	Smoke Seals

ROOM FINISH SCHEDULE							
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	CEILING		NOTES
					TYPE	HEIGHT	
101	OPERATOR LOUNGE	LVT	VINYL	XCMU/GWB-P	ACT	9'-0"	1,7
102	MUD ROOM	A.F.	VINYL	GWB/P	ACT	9'-0"	1
103	CONTROL ROOM	A.F.	VINYL	GWB/P	ACT	9'-0"	1,3,5
104	STORAGE	A.F.	VINYL	XCMU/GWB-P	ACT	9'-0"	1
105	SERVER			EXISTING TO REMAIN			1
106	ELECTRICAL			EXISTING TO REMAIN			1
107	MECHANICAL			EXISTING TO REMAIN			1
108	TRAINING ROOM	AF/CT	VINYL	GWB/P	ACT	9'-0"	1
109	EQUIP STORAGE	A.F.	VINYL	GWB/P	ACT	9'-0"	1
110	CORRIDOR			EXISTING TO REMAIN			2
201	DRYER BUILDING CONTROL ROOM	VCT	VINYL	GWB/X	ACT	9'-0"	4,6,8
202	SAMPLES ROOM			GWB	ACT	8'-0"	6,8
203	UNISEX RR			XCMU	ACT	8'-0"	6,8
204	UNISEX RR			XCMU	ACT	8'-0"	6,8
205	STORAGE ROOM			XCMU	ETS	ETS	8

- COMMENTS:**
- PROVIDE INSULATED DOOR
  - PROVIDE FOUR CARD READER ACCESS
  - PROVIDE FIRE RATED DOOR HARDWARE
  - FEILD VERIFY FRAME AND DOOR OPENING CONDITIONS PRIOR TO ORDERING DOOR.
- ABBREVIATIONS**
- ACT - SUSPENDED ACOUSTICAL CEILING TILES  
A.F. - RAISED ACCESS FLOOR  
CT- CARPET TILE (OVER EXISTING ACCESS FLOOR PANELS)  
AL- ALUMINUM
- GWB-P - GYPSUM WALL BOARD PAINTED  
XCMU - EXISTING CONCRETE BLOCK  
LVT- LAMINATE TILE  
ETS- EXPOSED TO STRUCTURE



**DOOR TYPES**  
1/4" = 1'-0"

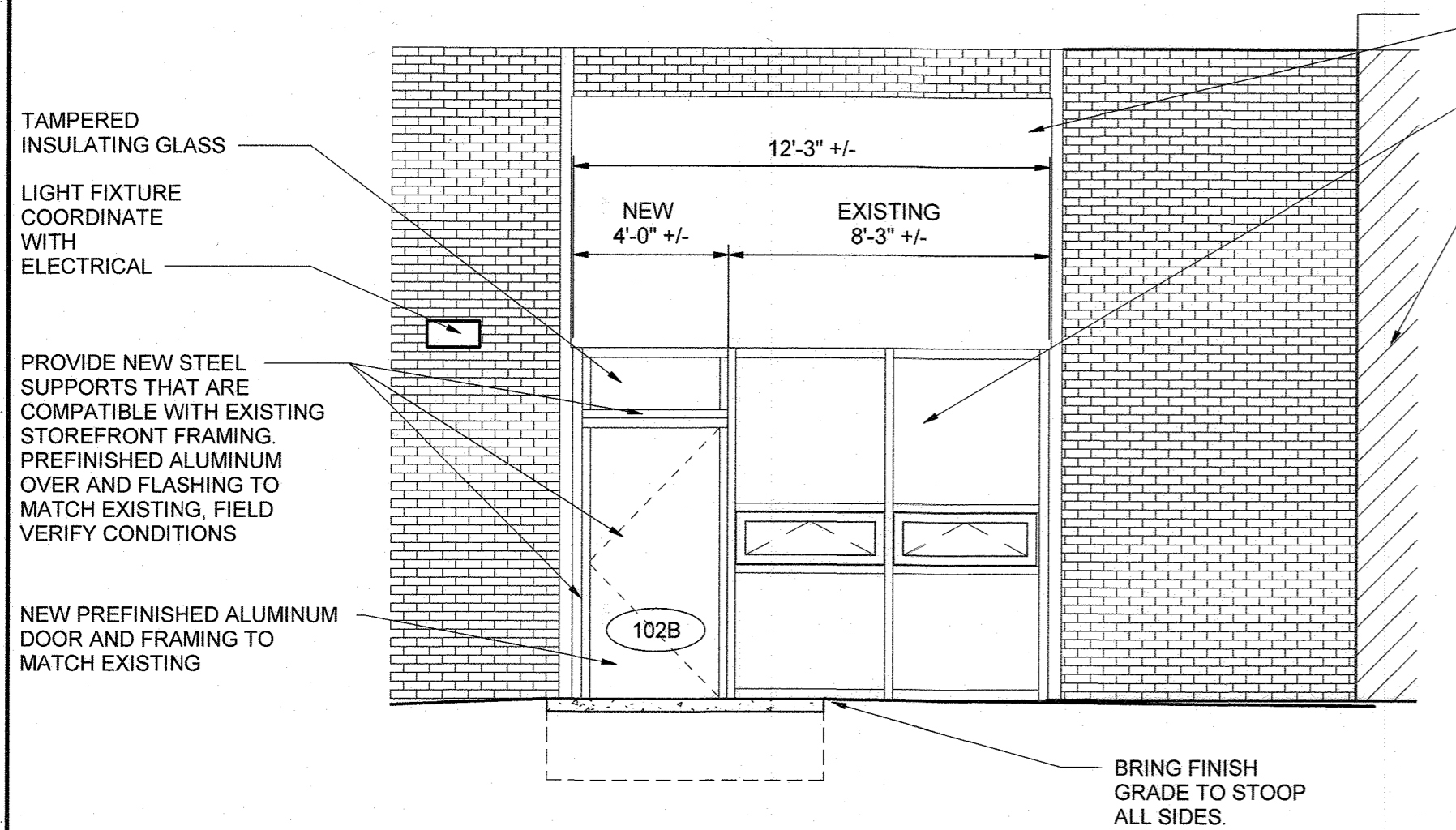
**HOLLOW METAL FRAME TYPES**  
1/4" = 1'-0"

**1 WINDOW HEAD FRAME DETAIL**  
A-107 3" = 1'-0"

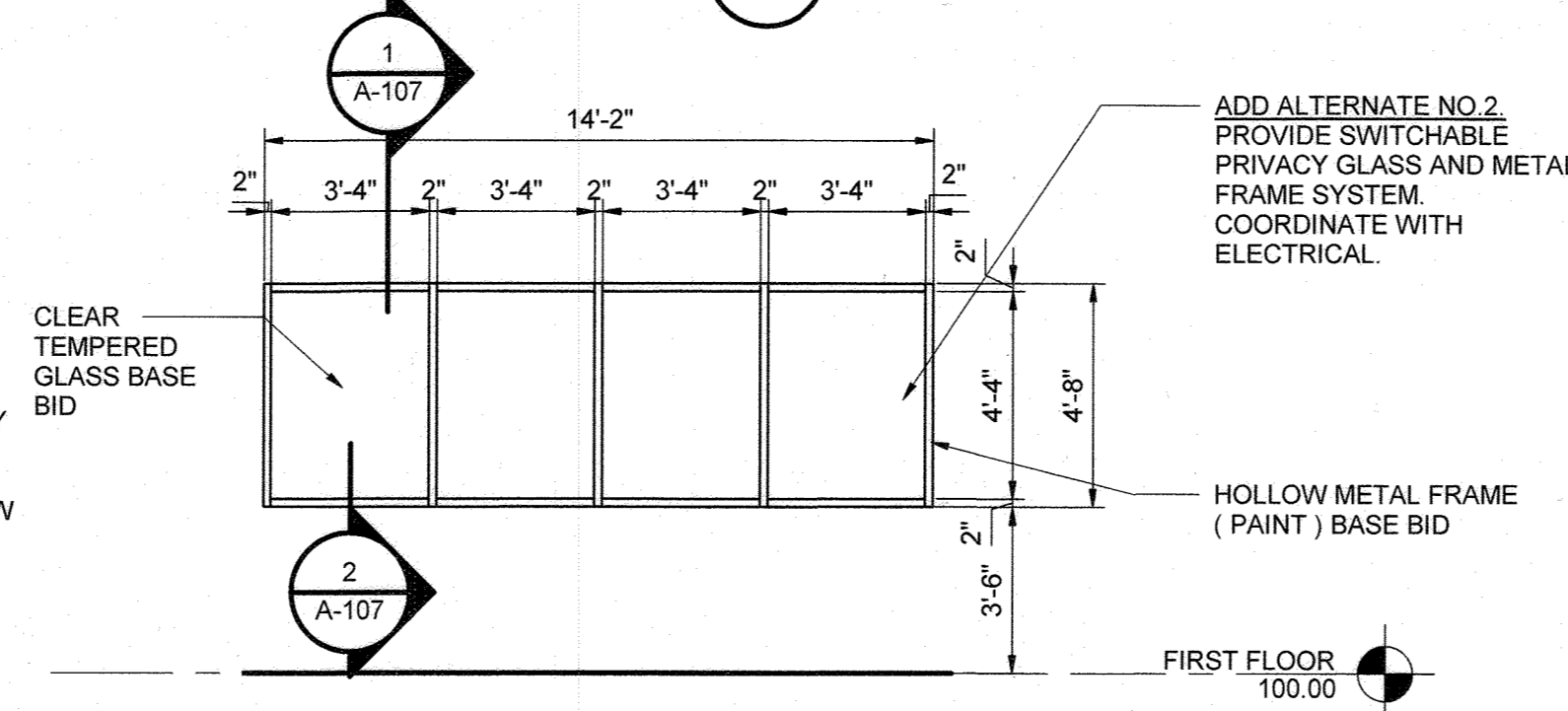
**2 WINDOW SILL FRAME DETAIL**  
A-107 3" = 1'-0"

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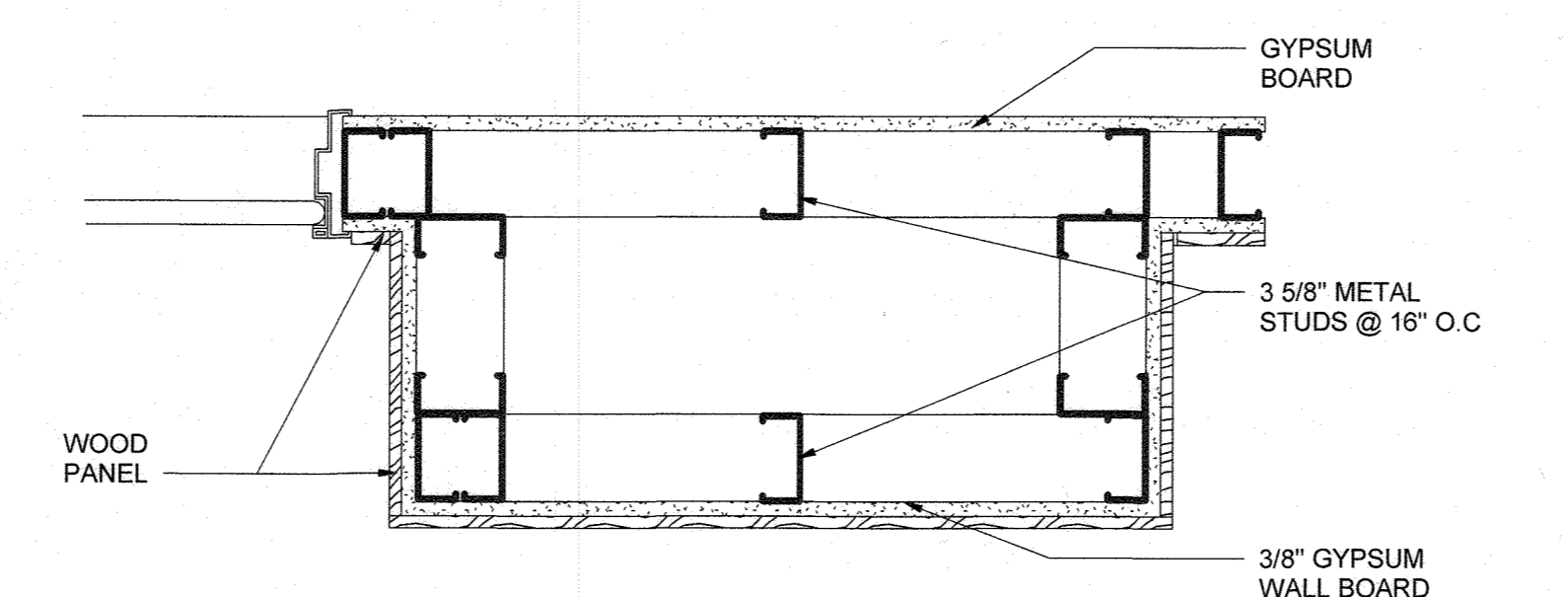
*[Signature]*  
DATE



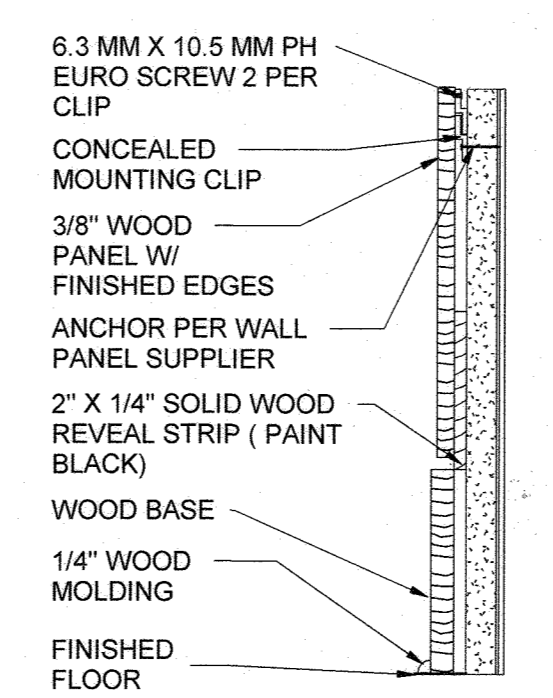
**4 NEW EXTERIOR DOOR**  
A-101 1/4" = 1'-0"



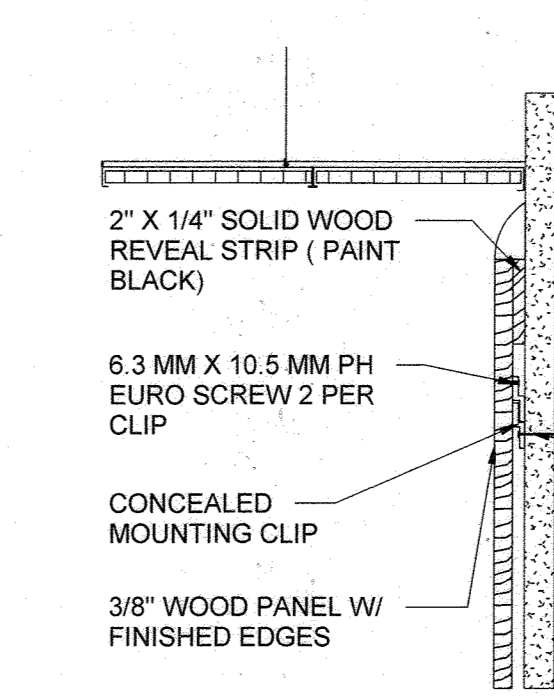
**WINDOW TYPE**  
1/4" = 1'-0"



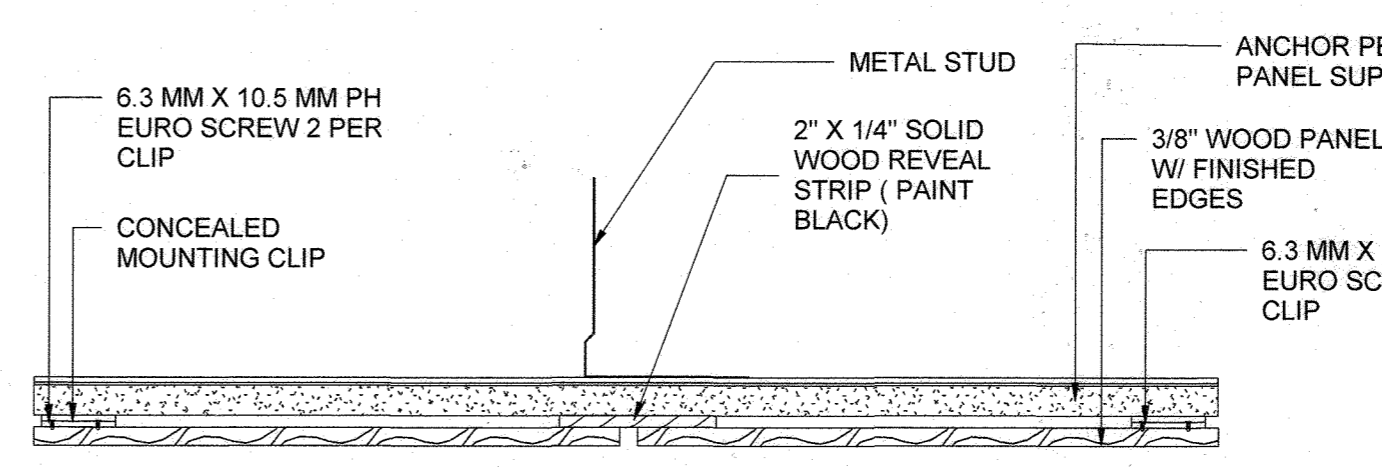
**5 WALL PANEL DETAIL**  
A-104 1 1/2" = 1'-0"



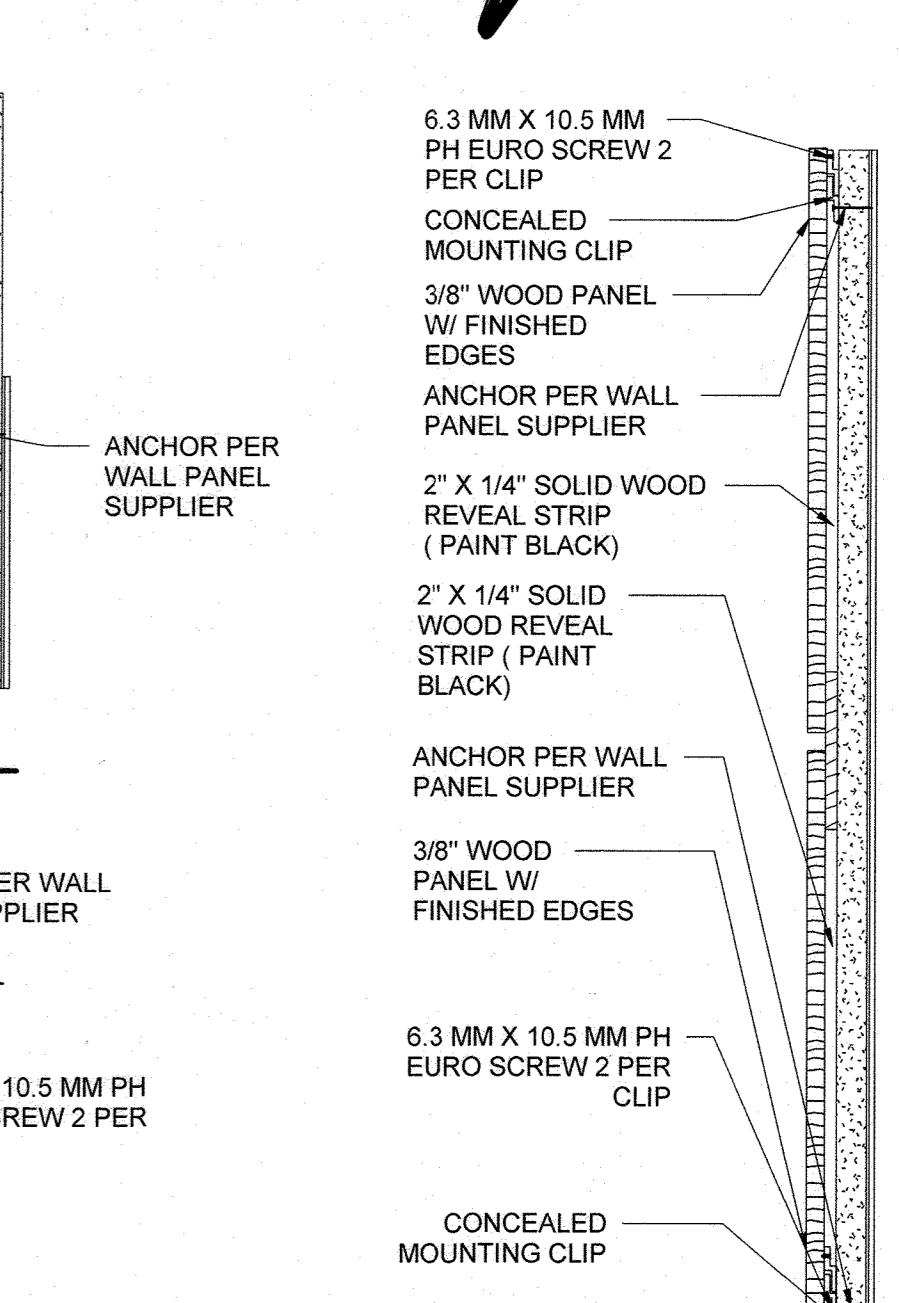
**6 BASE CONDITION**  
A-104 3" = 1'-0"



**7 TOP OF WALL**  
A-104 3" = 1'-0"



**9 VERTICAL REVEAL**  
A-104 3" = 1'-0"



**8 HORIZONTAL REVEAL**  
A-104 3" = 1'-0"

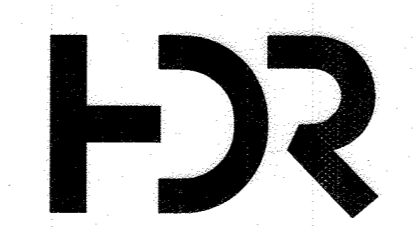
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

**DEPARTMENT OF PUBLIC WORKS**  
**HOWARD COUNTY, MARYLAND**

*[Signature]* 10/15/2019  
DIRECTOR OF PUBLIC WORKS

*[Signature]* 11/13/19  
CHIEF, BUREAU OF ENGINEERING

*[Signature]* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION



DES: J.T.					
DRN: JW					
CHK: PJD					
10/15/2019	BY	NO.	REVISION	DATE	600 SCALE MAP NO.

**SCHEDULES AND DETAILS**

DATE: 10/15/2019

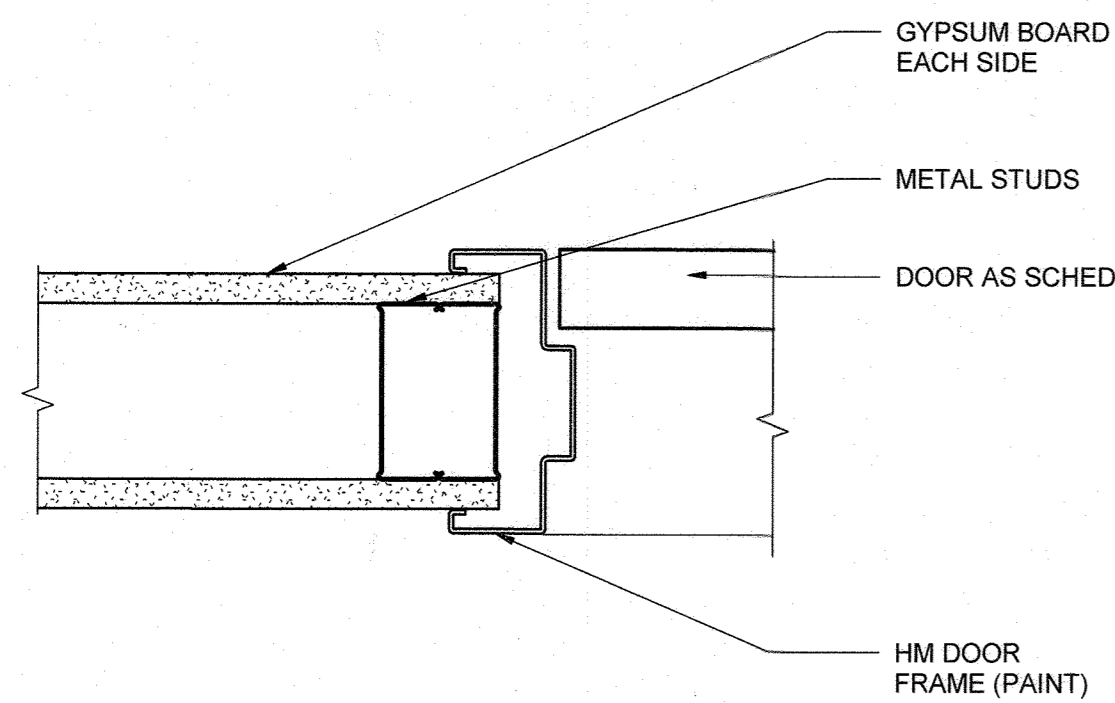
AS-BUILT 4-30-2021

**CONTROL ROOM UPGRADE**  
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**A-107**

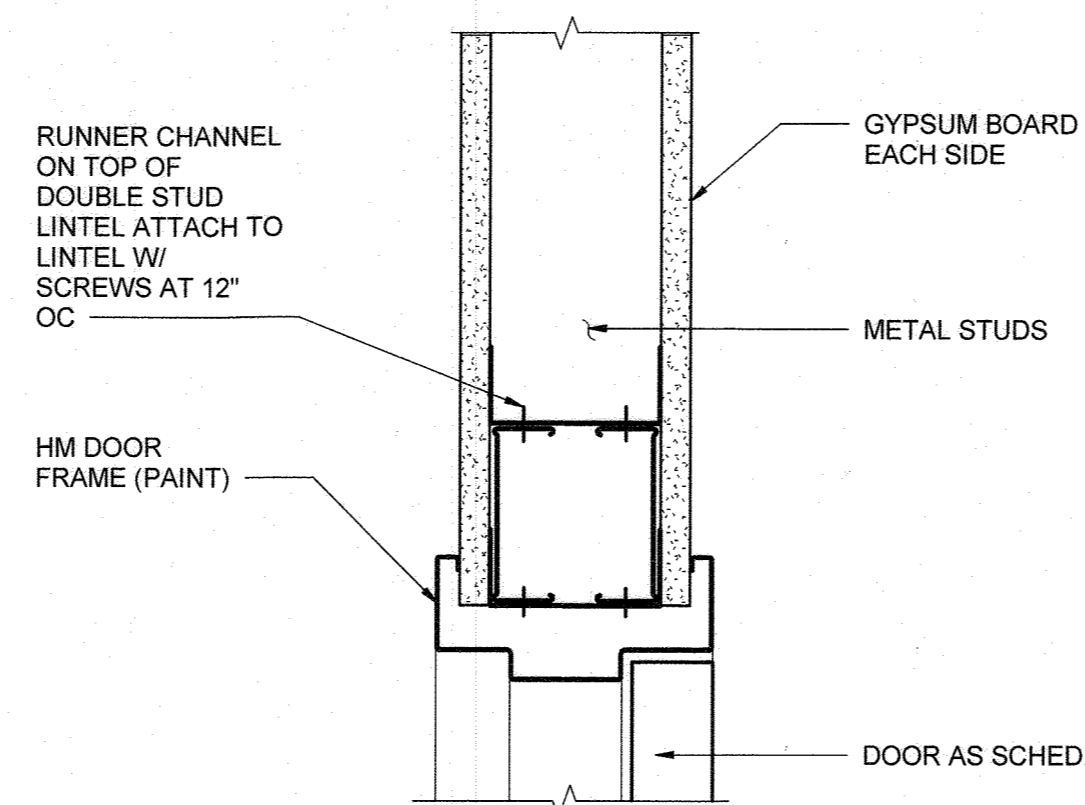
SCALE AS SHOWN  
SHEET 17 OF 31

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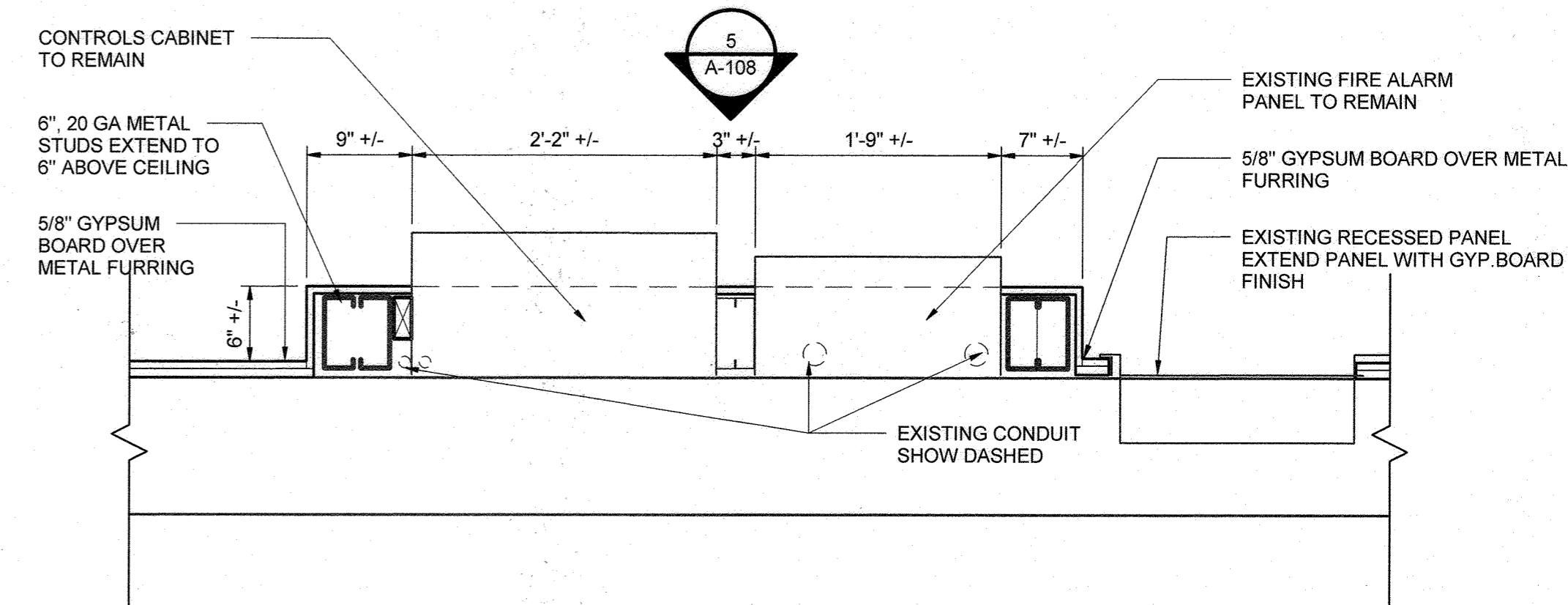
NOTE:  
1. INSULATION NOT SHOWN. SEE WALL TYPES.

1 H.M. JAMB WITH STUD/DRYWALL  
3" = 1'-0"

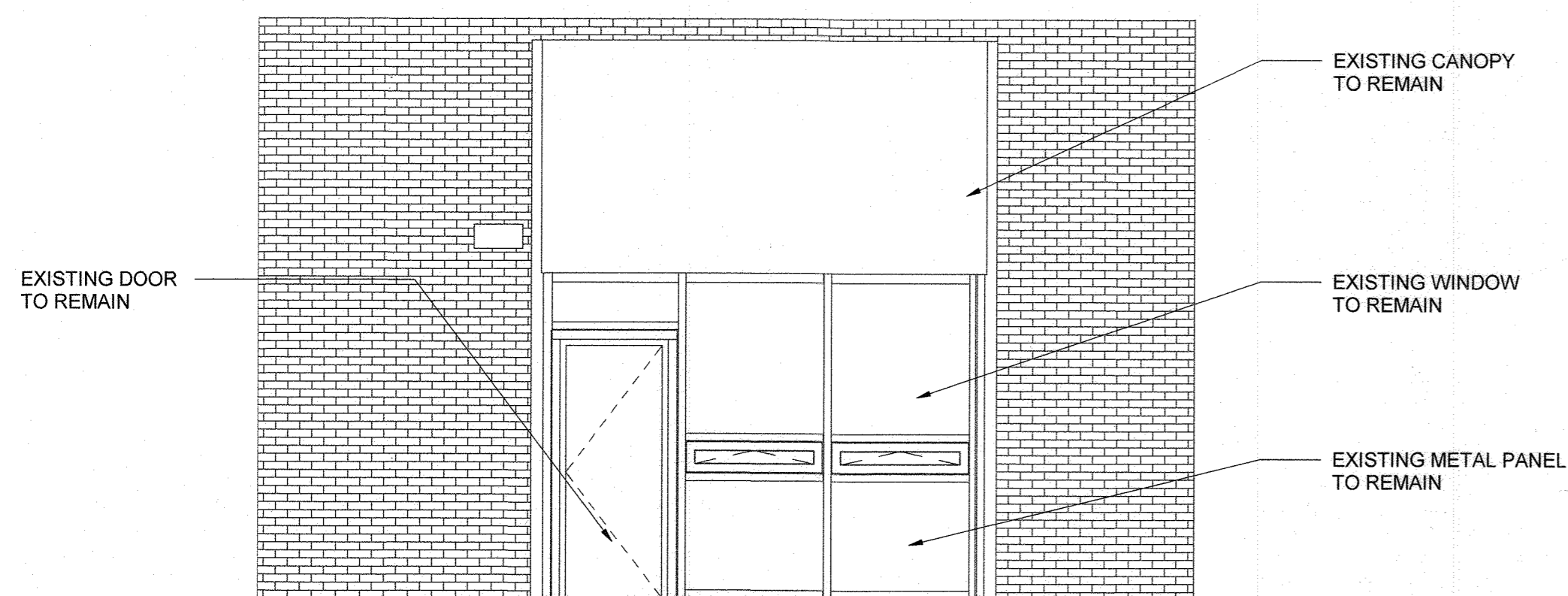


NOTE:  
1. INSULATION NOT SHOWN. SEE WALL TYPES.

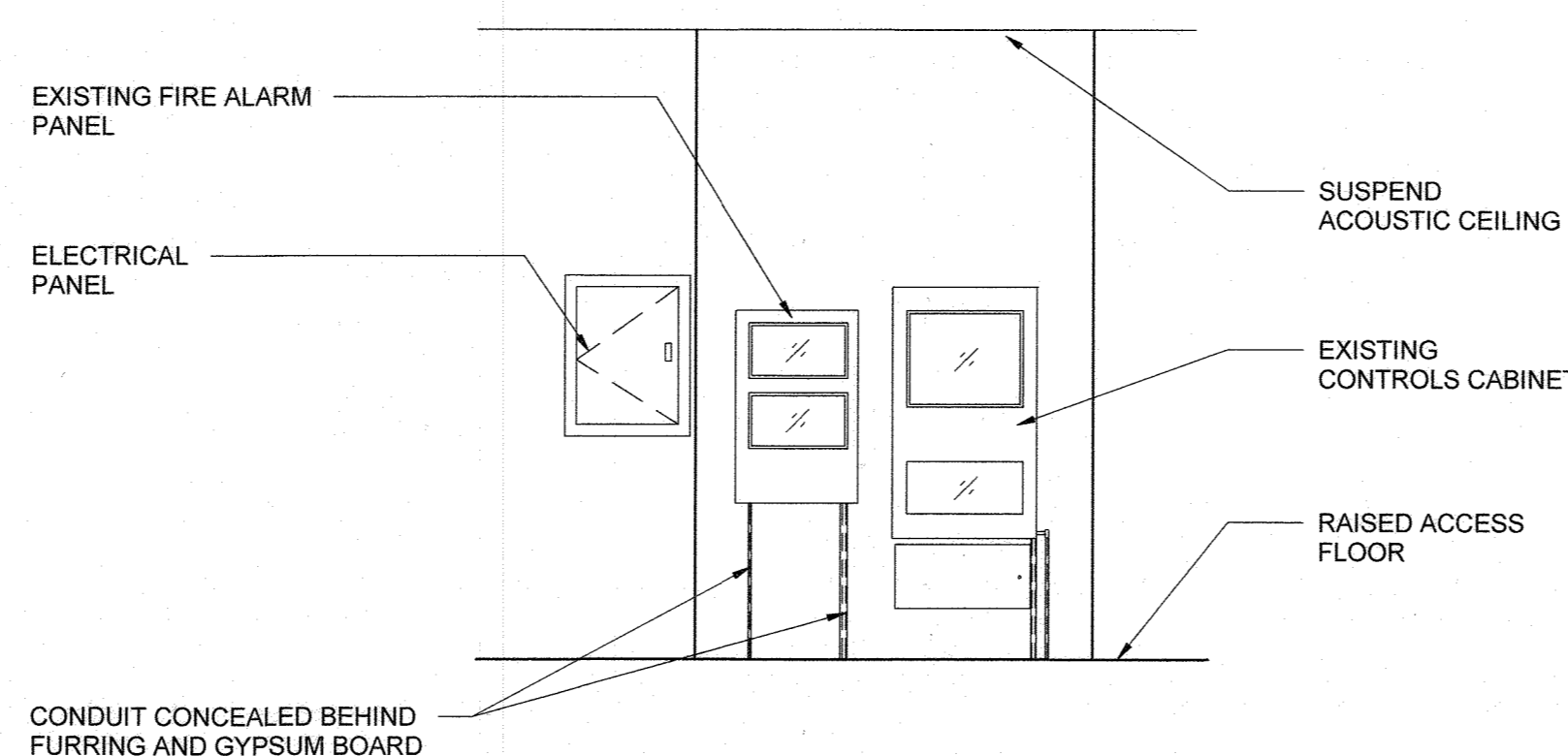
2 H.M. HEAD WITH STUD/ DRYWALL  
3" = 1'-0"



6 ELECTRICAL PANEL WALL DETAIL  
1" = 1'-0"



3 PARTIAL EXTERIOR ELEVATION  
A-101 1/4" = 1'-0"



5 PARTIAL ELEVATION  
A-101 3/8" = 1'-0"

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*[Signature]* 4/20/21  
SIGNATURE DATE

AS-BUILT 4-30-2021

A-108

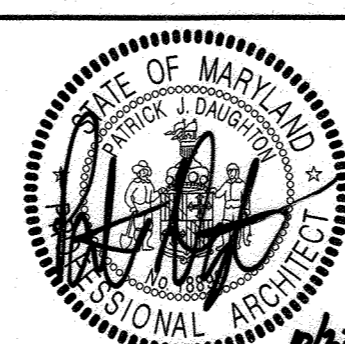
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 10/31/19  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 11/13/19  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: J.T					
DRN: J.W					
CHK: P.J.D					
10/15/2019	BY	NO.	REVISION	DATE	

DETAILS

600 SCALE MAP NO. BLOCK NO.

CONTROL ROOM UPGRADE

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

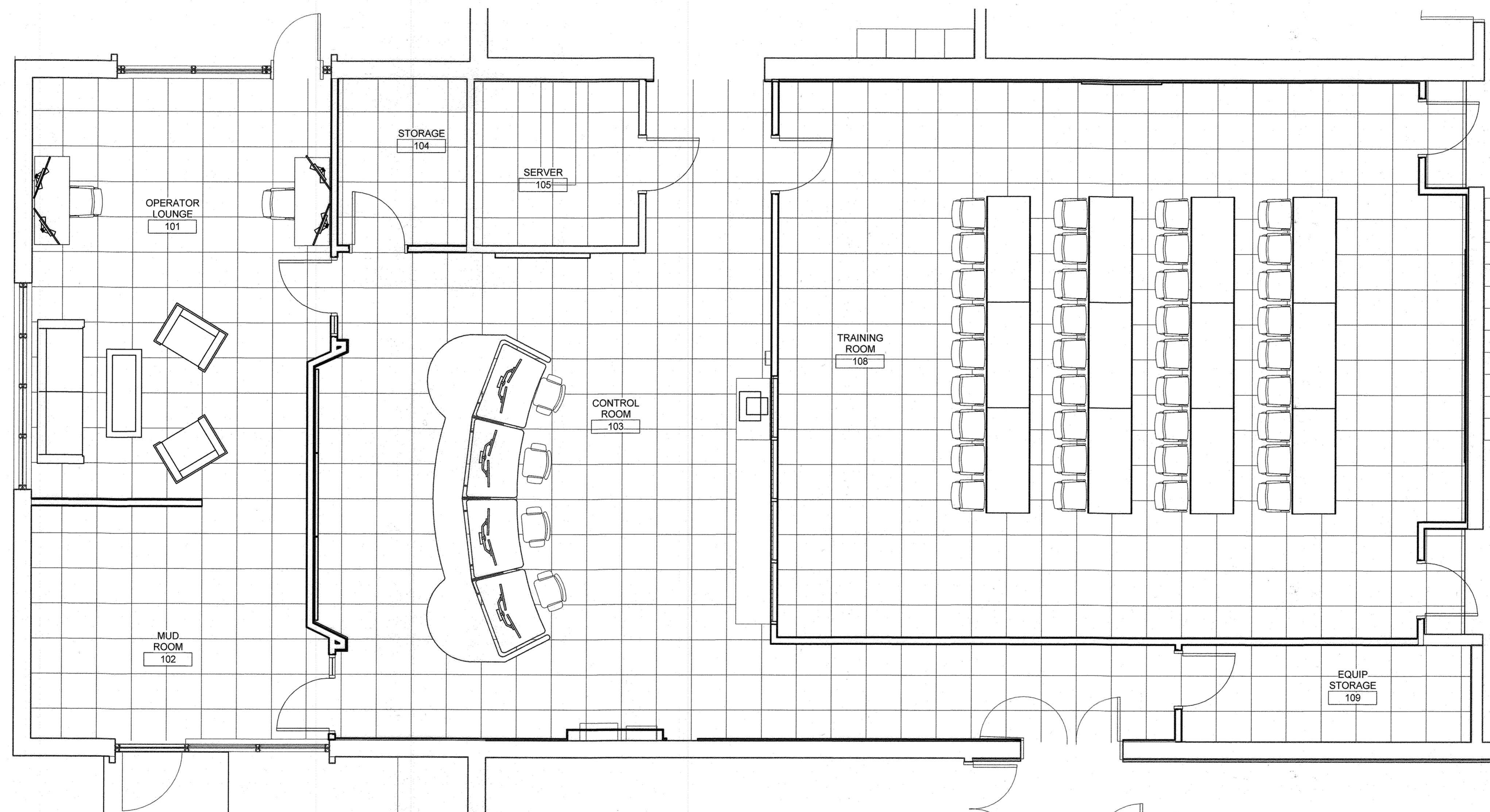
SHEET 18 OF 31

C:\p\2018\10124930-00-A\_Jamall.Williams\RM\YL.rvt 10/15/2019 12:16:51 PM



GENERAL NOTES:

1. THIS DRAWING DEPICTS POTENTIAL FURNITURE LAYOUT AND IS FOR REFERENCE PURPOSES ONLY.
2. ALL FURNITURE SHOWN IN OPERATOR LOUNGE 101 AND TRAINING ROOM 108 IS PROVIDED BY OWNER. (2) STAND ALONE WORKSTATIONS AND ALL CHAIRS IN CONTROL ROOM 103 ARE PROVIDED BY OWNER.



FURNITURE PLAN  
1/4" = 1'-0"

FOR -  
REFERENCE ONLY

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*[Signature]* *[Date]*  
SIGNATURE DATE

AS-BUILT 4-30-2021

A-109

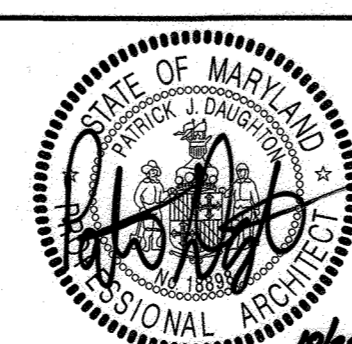
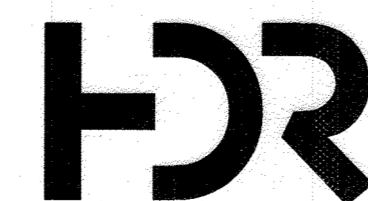
"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 18898, EXPIRATION DATE: 02-19-2021"

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 11/19/19  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 10-31-19  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: J.T

DRN: JW

CHK: PJD

10/15/2019

BY: NO.

REVISION

DATE

800 SCALE MAP NO.

BLOCK NO.

ADMINISTRATION BUILDING FURNITURE  
PLAN

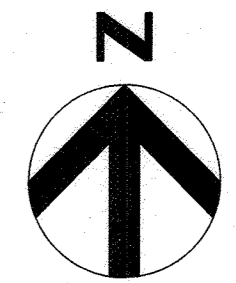
CONTROL ROOM UPGRADE

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE  
AS  
SHOWN

SHEET  
19 OF 31

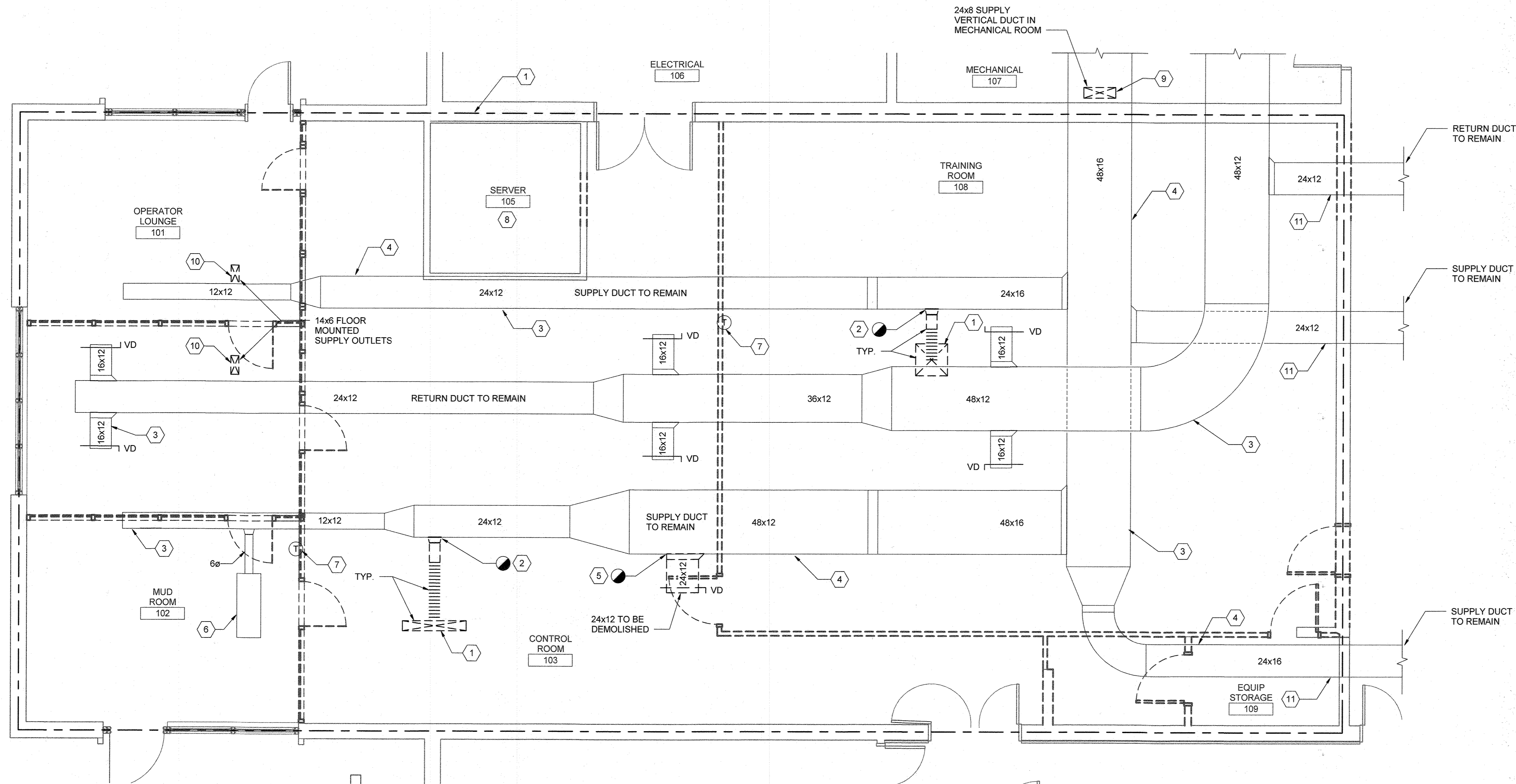


GENERAL NOTES:

- REFER TO PHASING PLAN ON G-108.

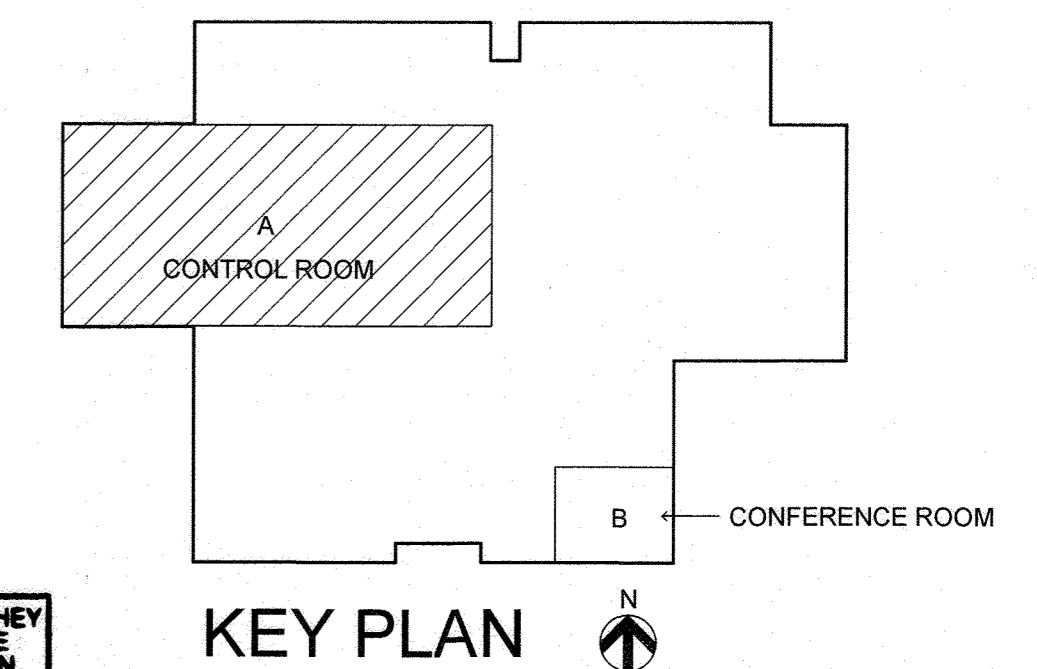
DEMOLITION KEY NOTES:

- REMOVE ALL CEILING MOUNTED SUPPLY AND RETURN AIR OUTLETS WITHIN INDICATED AREA.
- REMOVE ALL (CONNECTED AND NOT CONNECTED) SUPPLY TAKEOFFS AND BRANCH DUCTS UNLESS INDICATED OTHERWISE.
- ALL RETURN DUCTWORK TO REMAIN.
- REMOVE THERMAL INSULATION FROM SUPPLY DUCT.
- REMOVE 24" X 12" SUPPLY DUCT BRANCH AS SHOWN.
- FAN POWERED BOX TO REMAIN. 6" Ø DUCT BETWEEN BOX AND MAIN DUCT TO REMAIN. DUCT DOWNSTREAM OF THE BOX TO BE REMOVED. POWER AND CONTROL WIRING TO REMAIN.
- WALL MOUNTED THERMOSTATS WITH ASSOCIATED CONNECTION WIRING TO BE SALVAGED AND PROTECTED FROM DAMAGE.
- ALL HVAC INSTALLATIONS IN SERVER ROOM TO REMAIN.
- VERTICAL 24" X 8" SUPPLY DUCT (AS SHOWN) IN MECHANICAL ROOM TO BE DEMOLISHED, CAPPED AND SEALED.
- TWO FLOOR SUPPLY OUTLETS (AS SHOWN) TO BE DEMOLISHED, CAPPED AND SEALED.
- PERFORM AIR FLOW TRAVERSE READING (AT INDICATED LOCATION) ON SUPPLY AND RETURN DUCTS SERVING OTHER SPACES PRIOR TO DEMOLITION WORK. AIR FLOW VALUES TO BE RECORDED AND USED DURING MODIFIED SYSTEM AIR BALANCING PROCESS.



**DEMOLITION FLOOR PLAN**

1/4" = 1'-0"



**KEY PLAN**

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*[Signature]* 4/30/21  
 SIGNATURE DATE

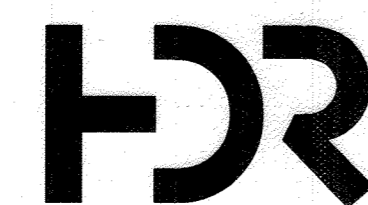
AS-BUILT 4-30-2021

HD-100

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: , EXPIRATION DATE: "

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* 11/13/19  
 DIRECTOR OF PUBLIC WORKS DATE  
*[Signature]* 10-31-19  
 CHIEF, BUREAU OF UTILITIES DATE  
*[Signature]* 11/13/19  
 CHIEF, UTILITY DESIGN DIVISION DATE



DES: CK					
DRN: BR					
CHK: CW					
10/15/2019	BY	NO.	REVISION	DATE	600 SCALE MAP NO.

**DEMOLITION FLOOR PLAN**

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 20 OF 31

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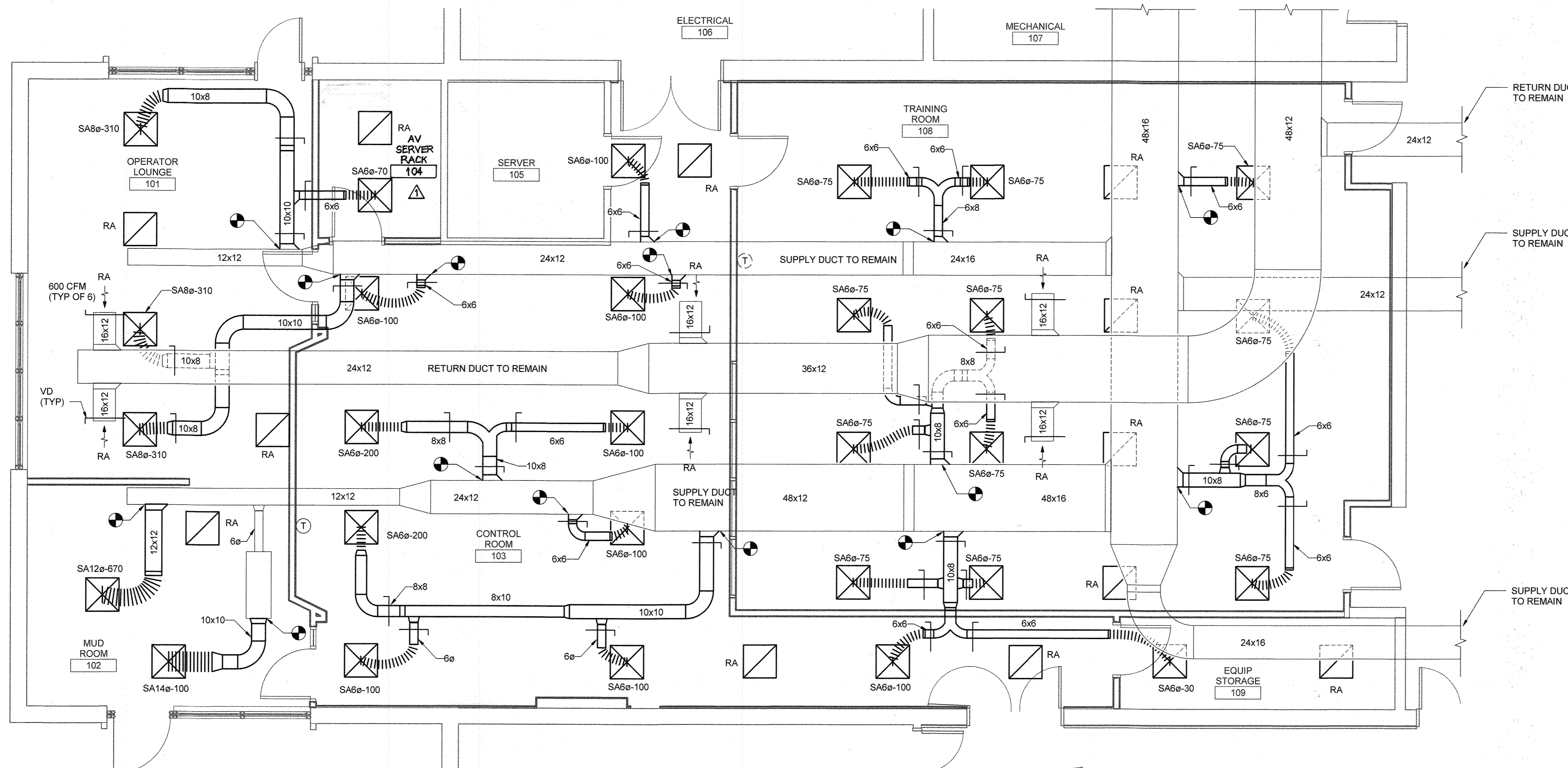


GENERAL NOTES:

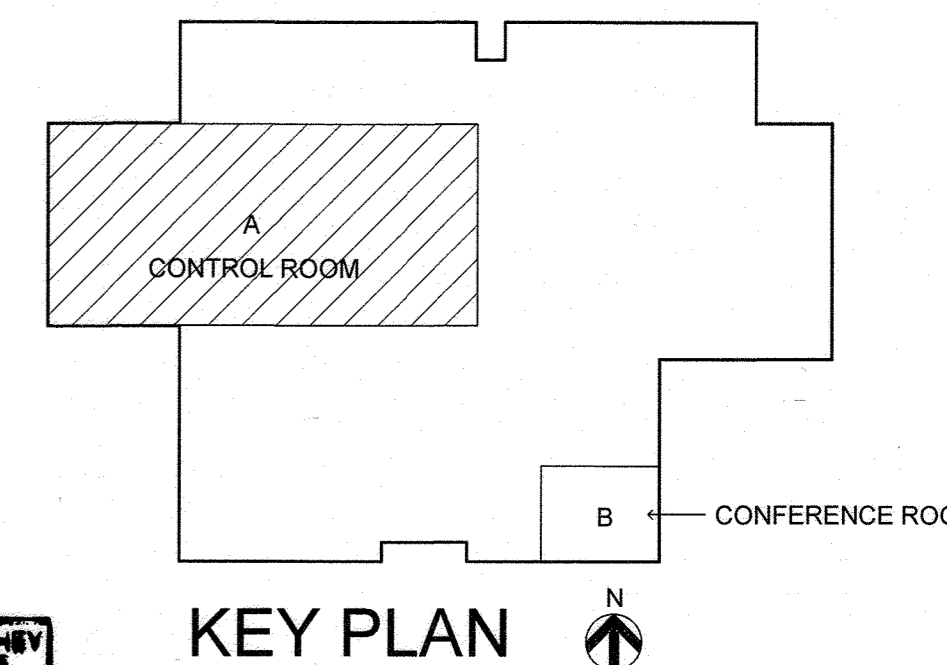
- 1. REFER TO PHASING PLAN ON G-108.

MECHANICAL NOTES:

- 1. CAP AND SEAL ALL SUPPLY DUCT OPENINGS (RESULTING FROM TAKEOFF REMOVAL).
- 2. THERMALLY INSULATE ALL EXISTING AND NEW SUPPLY DUCTWORK.
- 3. SALVAGED WALL MOUNTED THERMOSTATS TO BE REINSTALLED AND TESTED.
- 4. NO WORK SHOULD BE DONE IN SERVER ROOM OTHER THAN CAPPING SUPPLY DUCT OPENINGS.
- 5. PERFORM AIR BALANCE OF SUPPLY AND RETURN AIR AS PER INDICATED VALUES.
- 6. FLEXIBLE DUCT SIZE MATCHES DIFFUSER NECK SIZE.
- 7. SEE AIR BALANCING KEY NOTE 11 ON MECHANICAL DEMOLITION FLOOR PLAN DRAWING. RECORDED VALUES TO BE EXECUTED DURING AIR BALANCING PROCESS.



**NEW WORK FLOOR PLAN**  
1/4" = 1'-0"



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*[Signature]* *[Signature]*  
SIGNATURE DATE

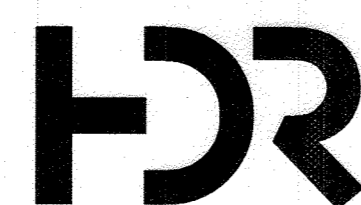
AS-BUILT 4-30-2021

\*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. , EXPIRATION DATE:

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* *[Signature]*  
DIRECTOR OF PUBLIC WORKS DATE  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* *[Signature]*  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: CK			
DRN: BR			
CHK: CW			
10/15/2019	HDR	RECORD DRAWING REVISION	4/30/21
BY	NO.	REVISION	DATE

NEW WORK FLOOR PLAN

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

H-100

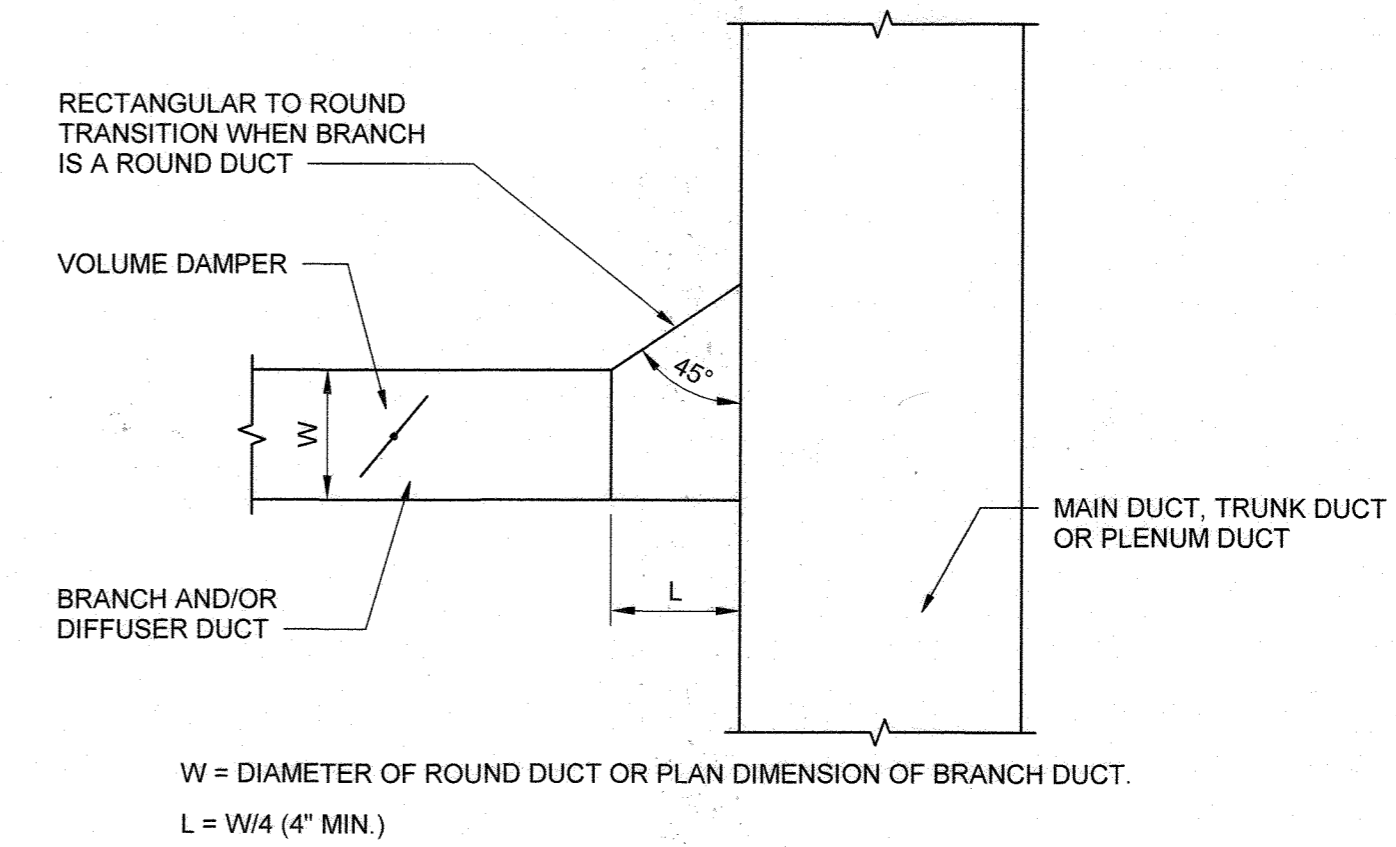
SCALE AS SHOWN

SHEET 21 OF 31

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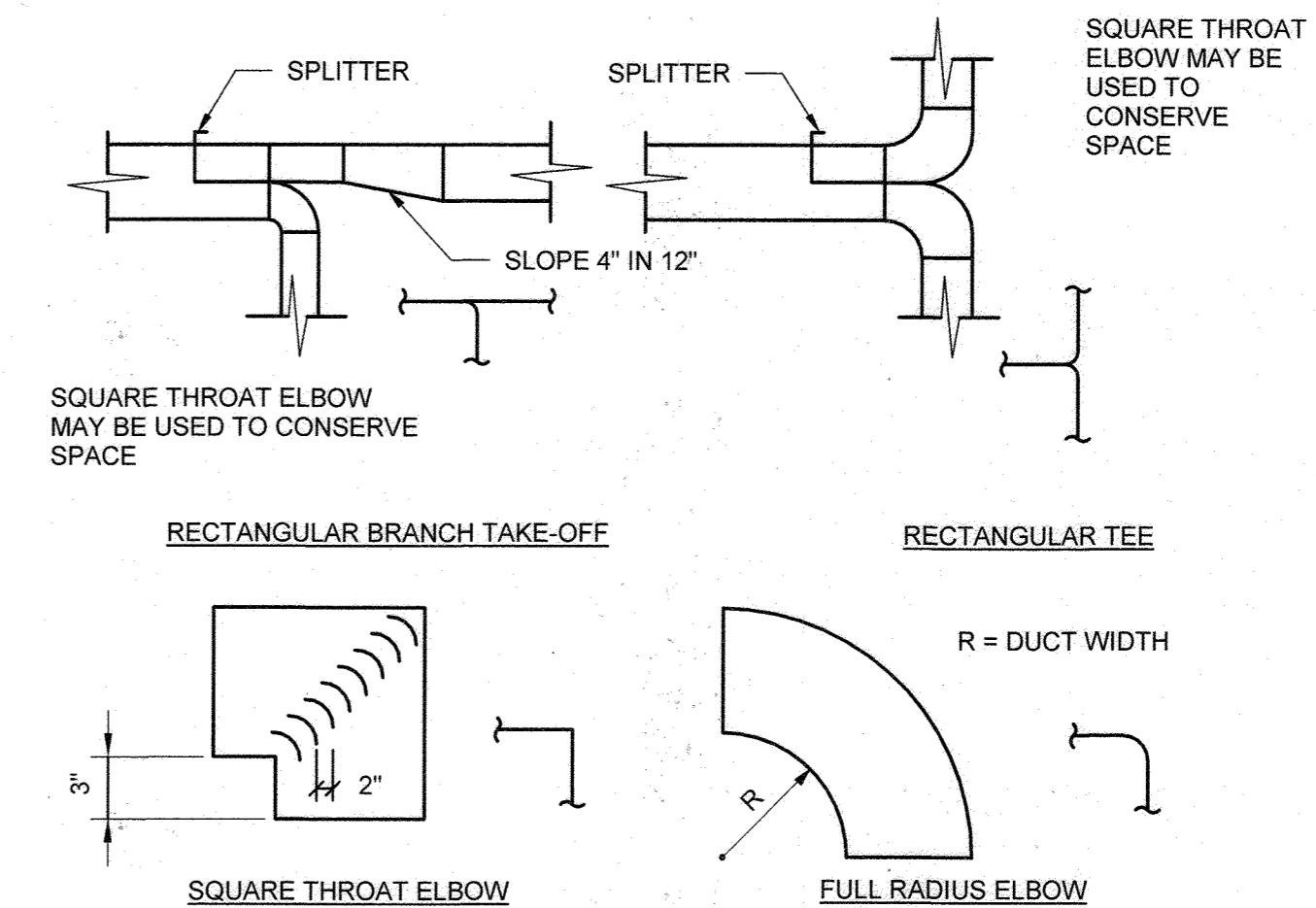
DIFFUSER, REGISTER, AND GRILLE SCHEDULE											
MARK	DESCRIPTION	FACE TYPE	MAX NC	MATERIAL	FINISH	FRAME TYPE	FACE SIZE	NECK SIZE	BASIS OF DESIGN		NOTES
									MANUFACTURER	MODEL	
SA	SQUARE CEILING SUPPLY	PLAQUE	30	ALUMINUM	WHITE	LAY-IN	24x24	SEE PLANS	PRICE	ASPD	1
RA	SQUARE CEILING RETURN	PERFORATED	30	ALUMINUM	WHITE	LAY-IN	24x24	15 INCHES ROUND	PRICE	APDDR	1

NOTES:  
1. PROVIDE BORDERS/FRAMES SUITABLE FOR SECURING TO CONSTRUCTION MATERIAL.



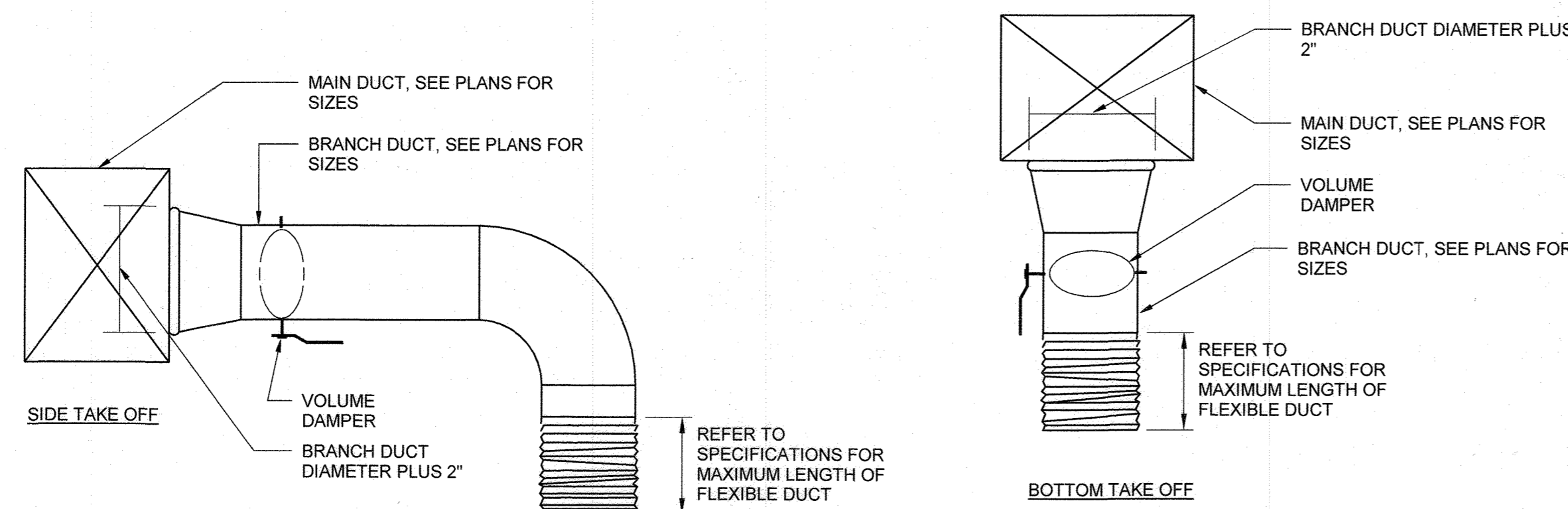
**BRANCH DUCT TAKE OFF FITTING DETAIL**  
12" = 1'-0"

- NOTES:
- INSTALL MANUAL VOLUME DAMPERS IN ALL LOW PRESSURE SUPPLY, RETURN AND EXHAUST DUCT BRANCHES.
  - INSTALL SPLITTER DAMPER IN ALL LOW PRESSURE SUPPLY, RETURN AND EXHAUST DUCT BRANCHES SERVING TWO OR MORE OUTLETS.



- NOTE:  
1. SEE "BRANCH TAKEOFF & DAMPER" DETAIL, ALSO.

**LOW PRESSURE DUCT CONNECTION**  
NOT TO SCALE



NOTE:  
ALL ROUND BRANCH DUCT TAKE-OFFS FROM RECTANGULAR DUCTS SHALL BE MADE WITH SPIN-IN TYPE FITTINGS. THE MOUNTING GROOVE SHALL BE SO CONSTRUCTED AS TO ASSURE CONSTANT FIT CONTROL. BALANCING DAMPERS SHALL BE FACTORY INSTALLED WITH SPRING LOADED RETRACTABLE BEARINGS AND A POSITIVE LOCKING WING NUT FOR EASY READJUSTMENT WHEN NEEDED. FITTING SHALL BE MASTIC SEALED AND TAPERED.

**LOW VELOCITY ROUND DUCT TAKE OFF FITTING DETAIL**  
12" = 1'-0"

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*[Signature]* *[Date]*  
SIGNATURE DATE

AS-BUILT 4-30-2021

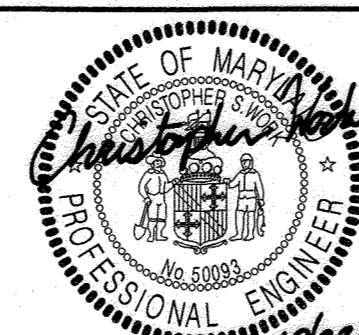
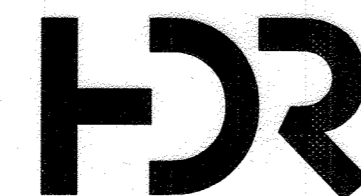
H-101

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: , EXPIRATION DATE:

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]*  
DIRECTOR OF PUBLIC WORKS DATE  
*[Signature]* 10-31-19  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 11/13/19  
CHIEF, BUREAU OF ENGINEERING DATE  
*[Signature]* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: CK				
DRN: BR				
CHK: CW				
10/15/2019	BY	NO.	REVISION	DATE

DETAILS AND SCHEDULES

600 SCALE MAP NO. BLOCK NO.

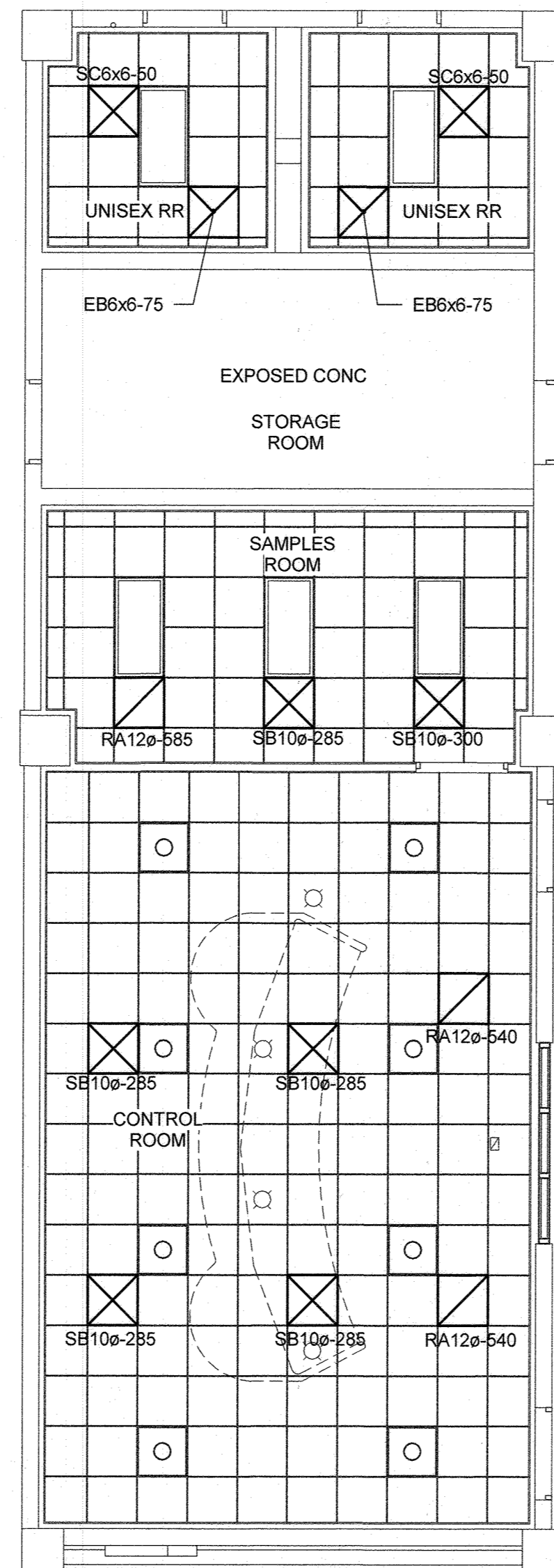
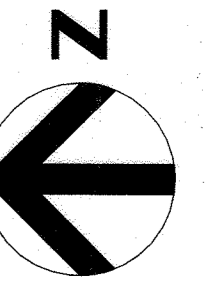
CONTROL ROOM UPGRADE

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

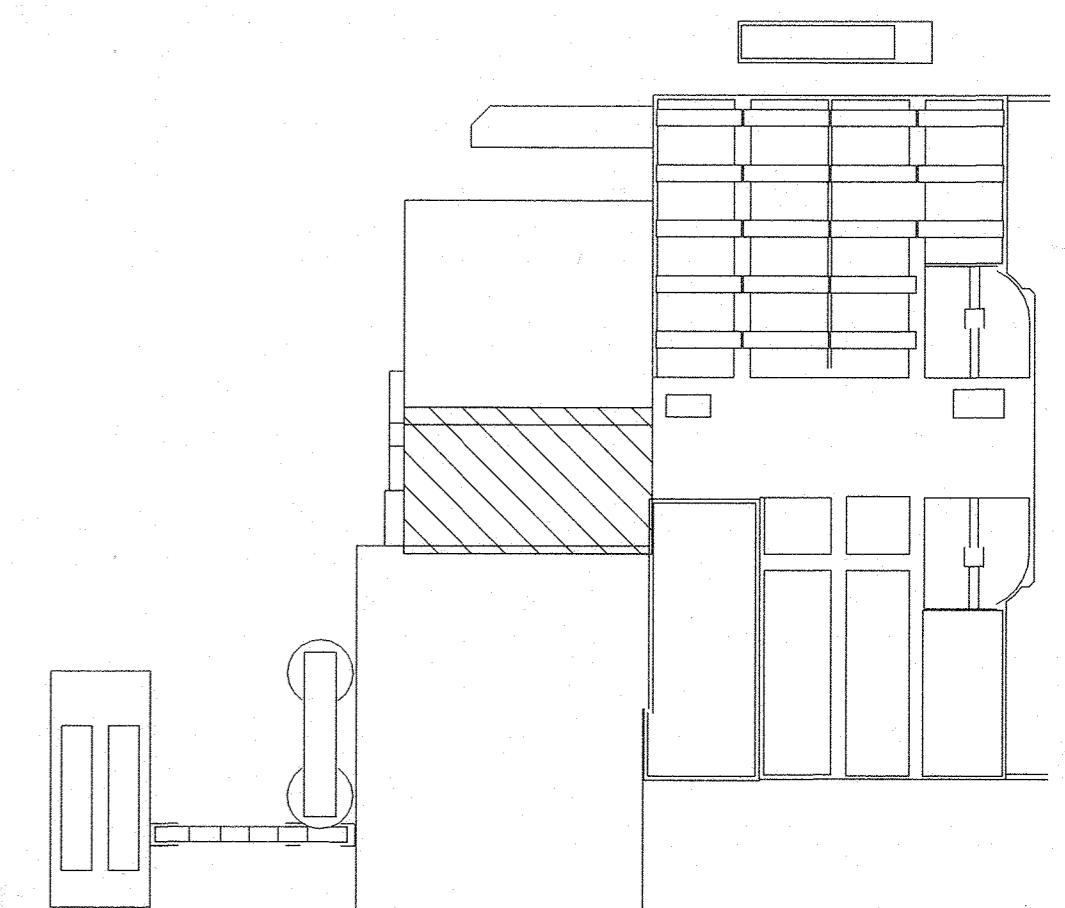
SHEET 22 OF 31



**AIR OUTLET PLACEMENT PLAN**  
3/16" = 1'-0"

**MECHANICAL NOTES:**

1. ABOVE CEILING HVAC EQUIPMENT AND DUCTWORK INSTALLATION TO BE PERFORMED BY OTHERS PRIOR TO AIR OUTLET INSTALLATION.
2. SUPPLY DIFFUSERS, RETURN GRILLES AND EXHAUST GRILLES TO BE SUPPLIED BY OTHERS.
3. EXHAUST GRILLES IN RESTROOMS TO BE HARD DUCTED TO EXISTING EXHAUST DUCT.
4. SUPPLY DIFFUSERS AND RETURN GRILLES TO BE CONNECTED TO EXISTING DUCTWORK BY MEANS OF THERMALLY INSULATED FLEXIBLE DUCT. DUCT LENGTH NOT TO EXCEED 6 FEET LENGTH. AIR OUTLET NECK SIZE - PERFORM HARD DUCT EXTENSION IF FLEXIBLE IF NEEDED TO REACH AIR OUTLET LOCATION.
5. AIR OUTLET SIZE, NECK SIZE AND AIR FLOW VOLUME ARE INDICATED BY OUTLET TAG.
6. PERFORM AIR BALANCING TO FLOW VALUES INDICATED BY AIR OUTLET.
7. INSTALL AIR OUTLETS BY FOLLOWING IDENTIFICATION:
  - A. SB- PRICE MODEL ASPD 24 x 24 PLAQUE CEILING LAY-IN SUPPLY DIFFUSER.
  - B. RA- PRICE MODEL APPDR 24 x 24 PERFORATED CEILING LAY-IN RETURN GRILLE.
  - C. SC- PRICE MODEL 510 24 x 24 LOUVERED FACE CEILING LAY-IN DIFFUSER
  - D. EB- PRICE MODEL 530 24 x 24 LOUVERED FACE CEILING LAY-IN EXHAUST GRILLE



**KEY PLAN**

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*[Signature]* *[Signature]*  
SIGNATURE DATE

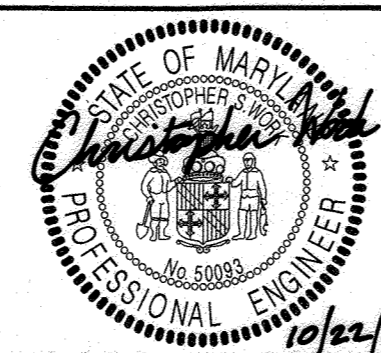
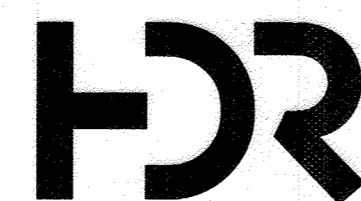
AS-BUILT 4-30-2021

H-200

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: , EXPIRATION DATE: "

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* *[Signature]*  
DIRECTOR OF PUBLIC WORKS DATE  
CHIEF, BUREAU OF UTILITIES DATE  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: CK					
DRN: BR					
CHK: CW					
10/15/2019	BY	NO.	REVISION	DATE	

DRYER BUILDING CONTROL ROOM PLANS

600 SCALE MAP NO. BLOCK NO.

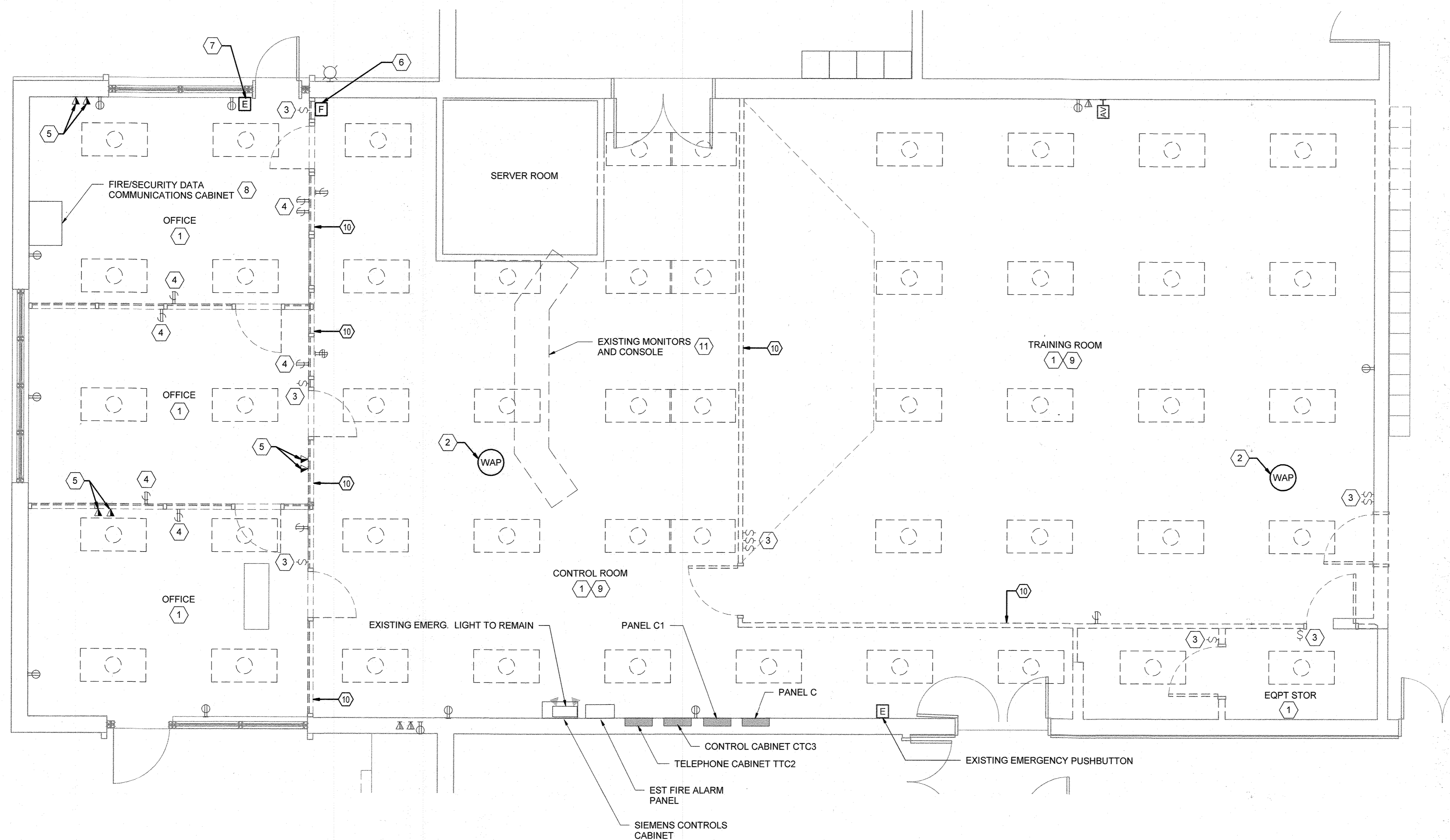
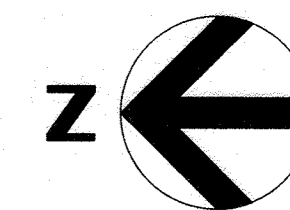
**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 23 OF 31



**GENERAL NOTES**

1. CONNECT ALL EXIT AND EMERGENCY FIXTURES TO THE NEAREST LIGHTING CIRCUIT AHEAD OF LOCAL SWITCHING.
2. REFER TO PHASING PLAN ON SHEET G-108.

**KEY NOTES**

1. REMOVE ALL RECESSED TROFFERS.
2. CEILING MOUNTED WIRELESS ACCESS POINT. REMOVE AND REINSTALL IN NEW CONFERENCE AND TRAINING ROOM. SEE SHEET E-103.
3. REMOVE LIGHT SWITCHES. EXISTING LIGHTING CIRCUIT WILL BE USED TO REFEED NEW LIGHTS. EXTEND WIRES AND CONDUITS AS REQUIRED.
4. REMOVE RECEPTACLE. EXTEND WIRING AND CONDUIT TO NEW RECEPTACLE LOCATION. SEE SHEET E-103.
5. REMOVE DATA OUTLET. EXTEND WIRING AND CONDUIT TO NEW DATA OUTLET LOCATION. SEE SHEET E-103.
6. RELOCATE FIRE ALARM PULLSTATION. EXTEND WIRING AND CONDUIT AS REQUIRED.
7. RELOCATE EMERGENCY PUSHBUTTON STATION. EXTEND WIRING AND CONDUIT AS REQUIRED.
8. SECURITY CABINET TO BE RELOCATED. EXTEND ALL WIRING AND CONDUITS TO CABINET NEW LOCATION. SEE SHEET E-103.
9. REMOVE ALL UNUSED/ABANDONED WIRING, CABLES AND CONDUITS LOCATED UNDER EXISTING RAISED FLOOR.
10. REMOVE ALL ELECTRICAL AND DATA OUTLETS PRIOR TO WALL PARTITION REMOVAL.
11. EXISTING MONITORS AND CONSOLE TO BE REMOVED. EXISTING POWER CIRCUITS TO BE REUSED TO FEED NEW CONSOLE. EXTEND EXISTING WIRING AND CONDUITS AS REQUIRED.

**ELECTRICAL DEMOLITION PLAN**

1/4" = 1'-0"

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*[Signature]* *[Signature]*  
 SIGNATURE DATE

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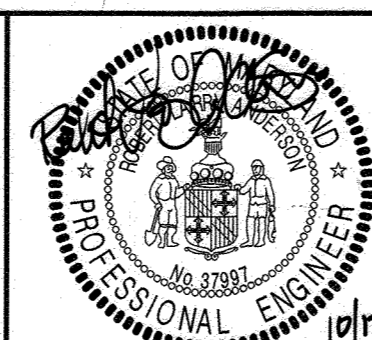
AS-BUILT 4-30-2021

ED-101

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**DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND**

*[Signature]* *[Signature]*  
 DIRECTOR OF PUBLIC WORKS DATE  
 CHIEF, BUREAU OF UTILITIES DATE  
 CHIEF, UTILITY DESIGN DIVISION DATE



DES: RLA	
DRN: CLS	
CHK: RG	
10/15/2019	
BY NO.	
REVISION	
DATE	

**ELECTRICAL DEMOLITION PLAN**

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

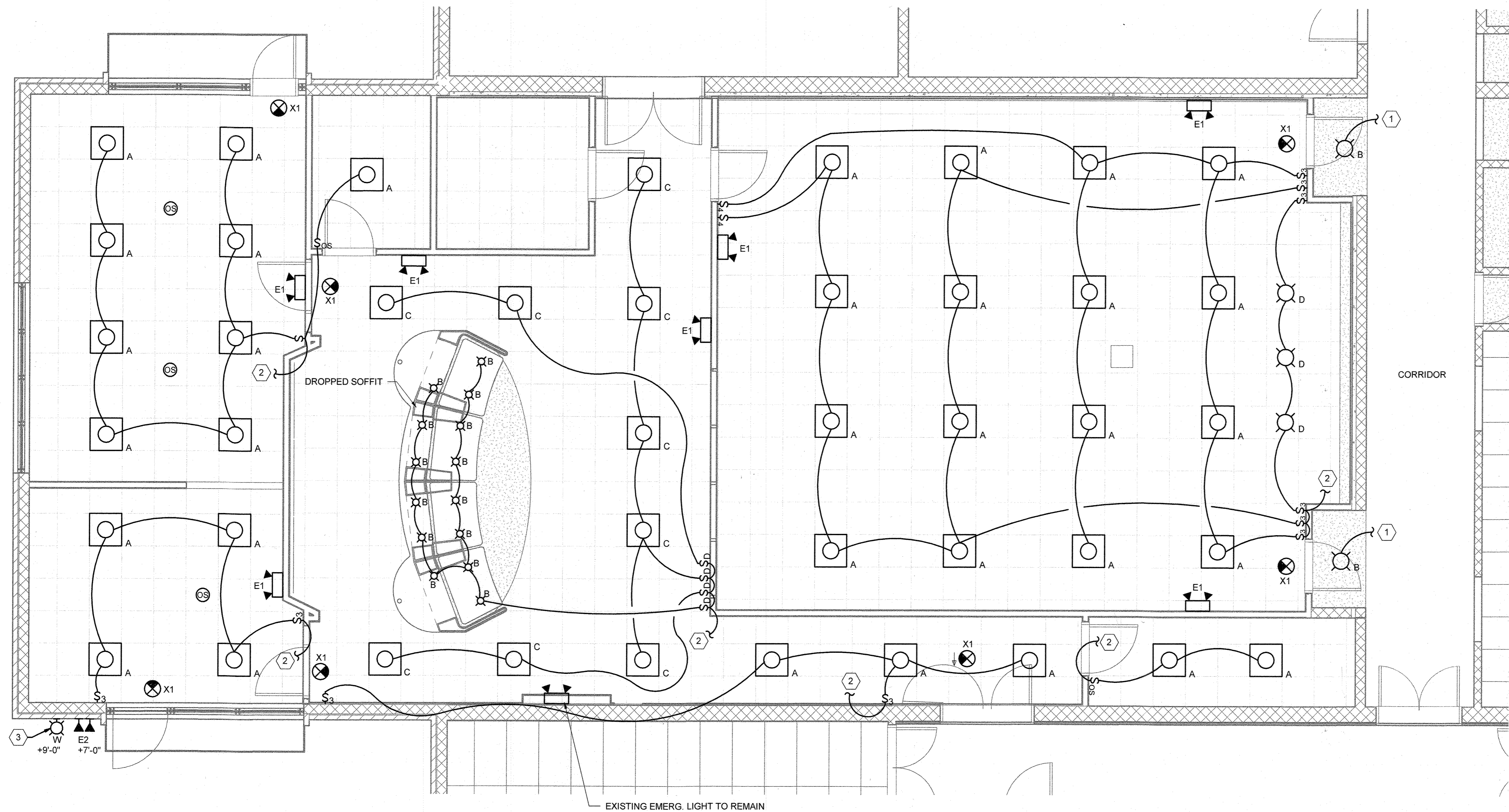
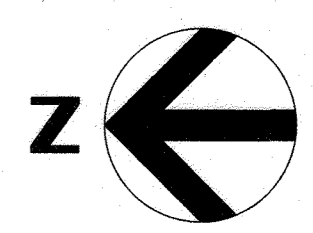
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 24 OF 31





**GENERAL NOTES**

1. CONNECT ALL EXIT AND EMERGENCY FIXTURES TO THE NEAREST LIGHTING CIRCUIT AHEAD OF LOCAL SWITCHING.
2. REFER TO SHEET E-109 FOR LIGHT FIXTURE SCHEDULE.

**KEY NOTES**

1. CONNECT TO EXISTING CORRIDOR LIGHTING CIRCUIT.
2. CONNECT TO EXISTING LIGHTING CIRCUIT.
3. CONNECT TO EXISTING EXTERIOR LIGHTING CIRCUIT.

**ELECTRICAL LIGHTING PLAN**  
1/4" = 1'-0"

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*[Signature]* 4/20/21  
SIGNATURE DATE

AS-BUILT 4-30-2021

E-102

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 37997, EXPIRATION DATE: 12/16/2019

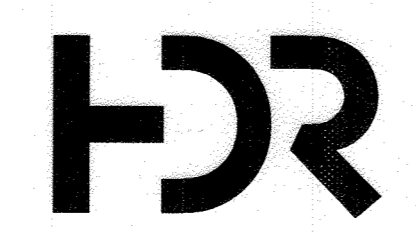
**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* 10/31/19  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 10/31/19  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 10/31/19  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 10/31/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: RLA				
DRN: CLS				
CHK: RG				
10/15/2019	BY	NO.	REVISION	DATE

ADMIN. BUILDING PARTIAL LIGHTING PLAN

**CONTROL ROOM UPGRADE**

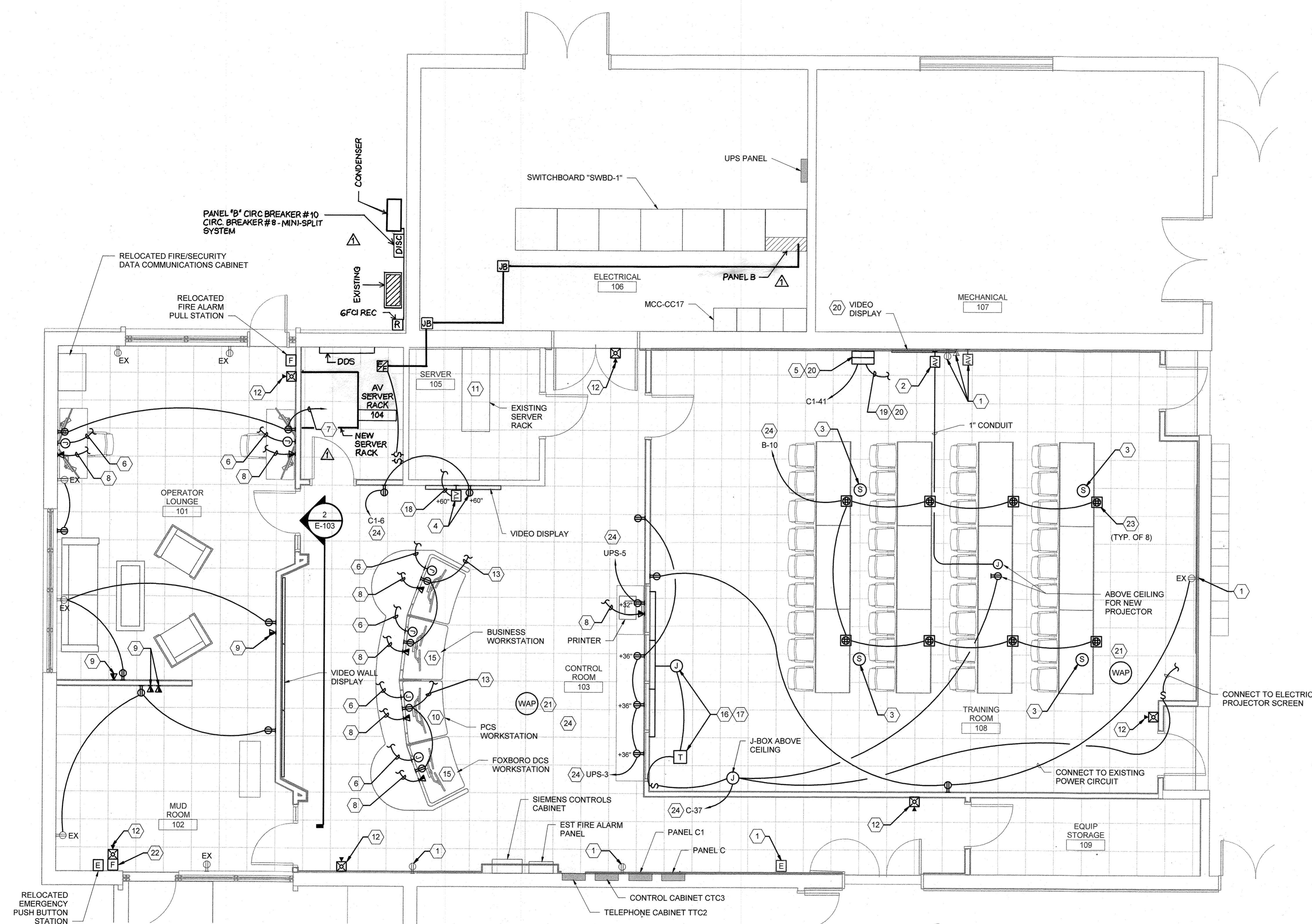
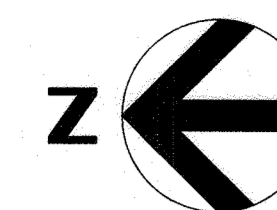
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 25 OF 31

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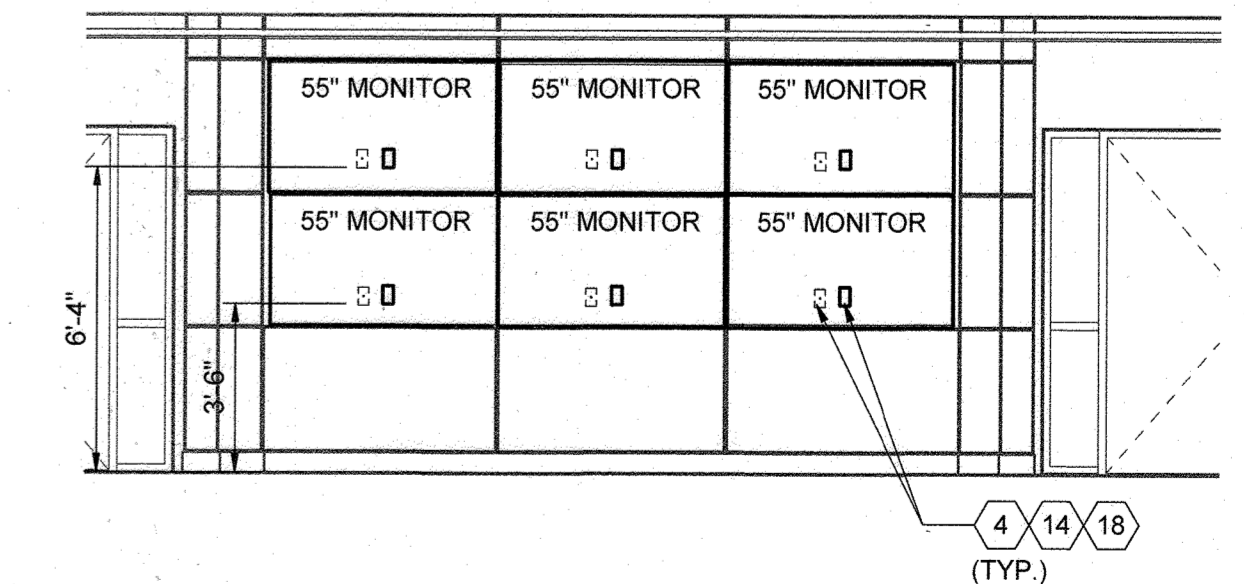
**GENERAL NOTES**

- ELECTRICAL AND COMMUNICATION DEVICES SHOWN LIGHT ARE EXISTING TO REMAIN.
- ALL POWER CIRCUITING SHOWN IS 2#12, #12G, IN 3/4" C. POWER HOMERUNS ARE ROUTED TO SPARE 20A, 1P CIRCUIT BREAKER IN PANEL C, PANEL C1, PANEL B OR UPS PANEL UNLESS OTHERWISE NOTED.
- REFER TO SHEET E-107 FOR SCADA AV BLOCK DIAGRAM.

**KEY NOTES**

- EXISTING ELECTRICAL OR COMMUNICATION OUTLET IS RECESSED IN CEMENT BLOCK WALL. PROVIDE ELECTRICAL BOX EXTENDER TO ALLOW EXISTING ELECTRICAL OR COMMUNICATION OUTLET TO BE INSTALLED IN NEW FURRED OUT WALL.
- PROVIDE A MULTIFUNCTION HDMI VGA 3RCA AV OUTLET.
- CEILING MOUNTED SPEAKER PROVIDE FOR NEW PROJECTOR.
- RECEPTACLE AND AV OUTLET PROVIDED FOR EACH WALL MOUNTED MONITOR.
- FLOOR MOUNTED NETWORK RACK WITH VIDEO CONTROLLER.
- PROVIDE PLENUM RATED HDMI CABLES FROM HUB TO IP ENCODERS/VIDEO CONTROLLERS LOCATED IN SERVER ROOM, TRAINING ROOM AND CONFERENCE ROOM. PROVIDE 1X4 HDMI SPLITTER AT EACH WORKSTATION. HDMI SPLITTER SHALL BE MANUFACTURED BY KANEXPRO OR APPROVED EQUAL. PROVIDE ONE (1) HDMI CABLE PER MONITOR.
- ROUTE 2#12, #12G, 3/4" C TO SPARE 20A, 1P CIRCUIT BREAKER IN UPS PANEL.
- ROUTE CAT.6 CABLE IN 3/4" C TO NETWORK SWITCH IN SERVER ROOM.
- RELOCATED COMMUNICATION OUTLET LOCATIONS. EXTEND WIRING AND CONDUIT AS REQUIRED.
- PCS WORKSTATION PROVIDED BY ADDITION 8 CONTRACTOR.
- INSTALL VIDEO CONTROLLER IN EXISTING FOXBORO SERVER RACK.
- CONNECT FIRE ALARM NOTIFICATION DEVICE TO EXISTING FIRE ALARM PANEL WITH CLASS "B" WIRING. VOLTAGE DROP MUST NEVER EXCEED 14%.
- CONNECT TO EXISTING CONSOLE CIRCUIT.
- PROVIDE 2#12, #12G, IN 3/4" C TO SPARE 20A, 1P CIRCUIT BREAKER IN PANEL C1, CKT. #6 FOR MONITOR POWER.
- EXISTING FOXBORO DCS AND BUSINESS WORKSTATIONS TO BE RELOCATED TO NEW CONSOLE.
- PROVIDE TRANSFORMER AND JUNCTION BOX FOR LOW VOLTAGE WIRING FOR SWITCHABLE/PRIVACY GLASS. INSTALL TRANSFORMER AND JUNCTION BOX ABOVE SUSPENDED CEILING.
- SWITCHABLE/PRIVACY GLASS WILL ONLY BE INSTALLED UNDER ADD ALTERNATE NO 2.
- PROVIDE PLENUM RATED HDMI CABLES FROM EACH MONITOR TO VIDEO CONTROLLER IN SERVER ROOM. RUN CABLES ALONG CONTROL ROOM AND TRAINING ROOM CEILING.
- PROVIDE HDMI CABLE FROM VIDEO CONTROLLER TO VIDEO DISPLAY.
- NETWORK RACK, 55" MONITOR AND ASSOCIATED WORK WILL ONLY BE INSTALLED UNDER ADD ALTERNATE NO. 3.
- REINSTALL EXISTING CEILING MOUNTED WAP IN NEW CEILING.
- CONNECT FIRE ALARM PULL STATION TO EXISTING FIRE ALARM PANEL WITH CLASS "B" WIRING.
- 1-GANG RECESSED BRASS FLOOR OUTLET. COORDINATE INSTALLATION OF FLOOR OUTLET WITH RAISED FLOOR TILE INSTALLER.
- CONNECT TO EXISTING 20A, 1P CIRCUIT BREAKER IN PANELBOARD. SEE GENERAL NOTE 2.

**PARTIAL POWER PLAN 1**  
1/4" = 1'-0"



THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

*[Signature]* 4/30/21  
SIGNATURE DATE

**E-103**  
AS-BUILT 4-30-2021

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 37997, EXPIRATION DATE: 12/16/2019

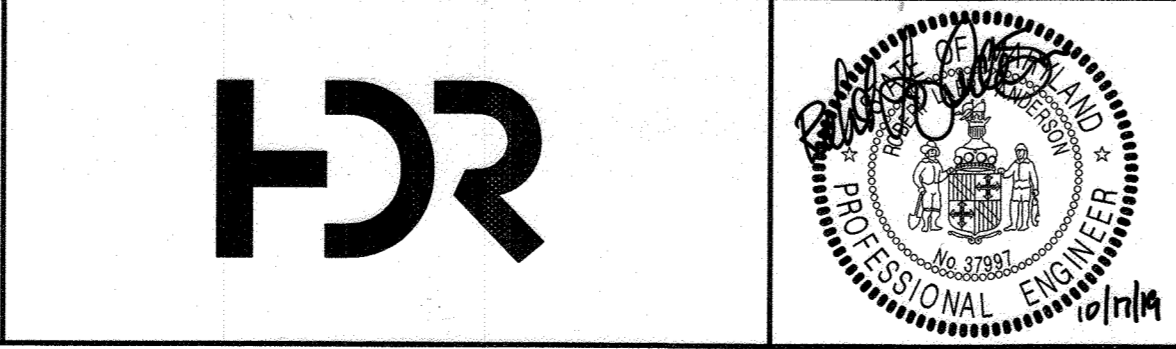
**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* 4/30/21  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 4/30/21  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 4/30/21  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 4/30/21  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: RLA	
DRN: CLS	
CHK: RG	
10/15/2019	
HDR BY: NO.	
RECORD DRAWING REVISION	4/30/21
REVISION	DATE

**ADMIN. BUILDING PARTIAL POWER PLAN**

600 SCALE MAP NO. BLOCK NO.

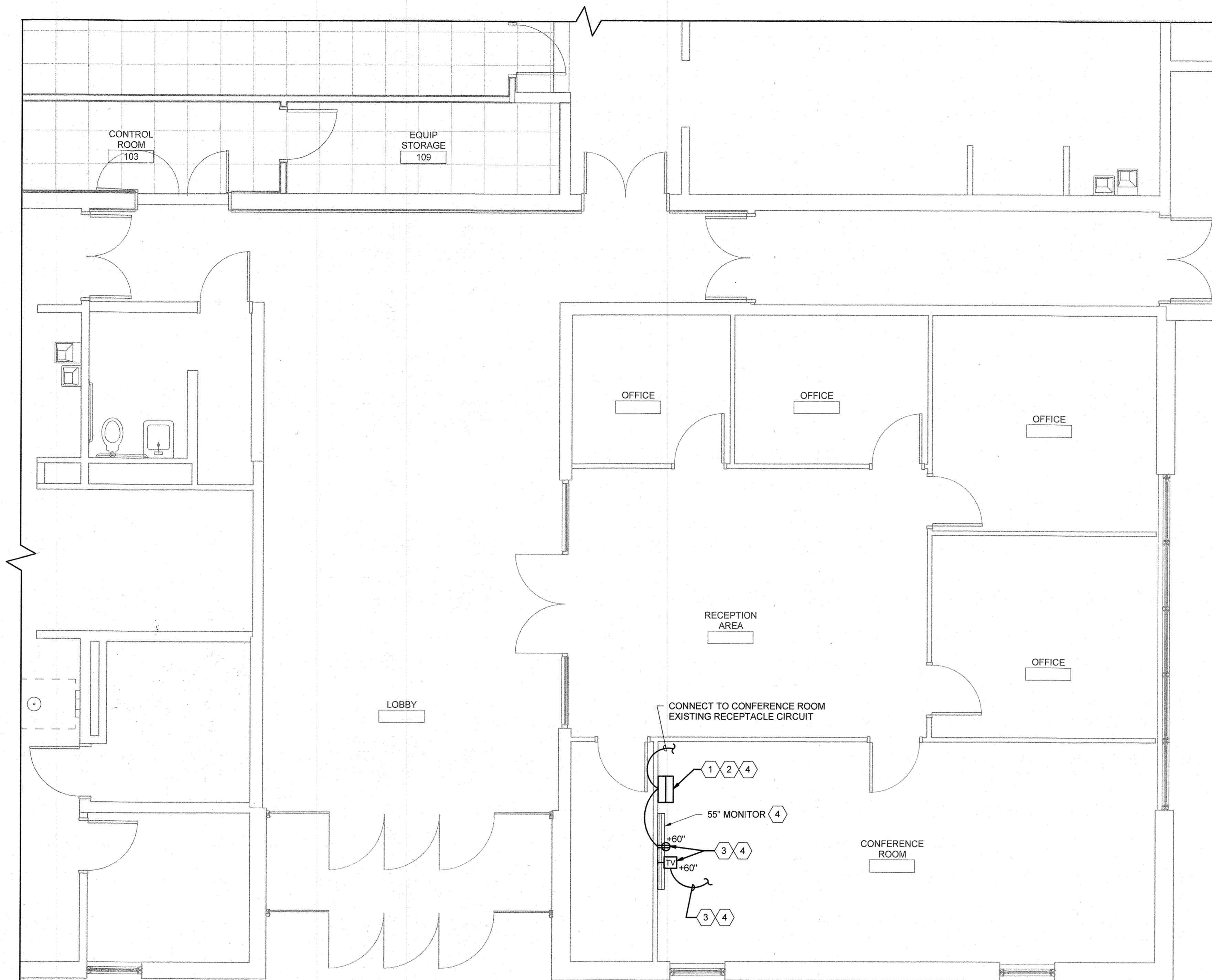
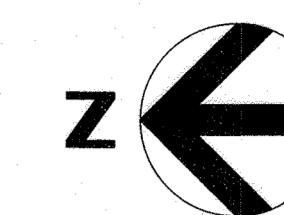
**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 26 OF 31

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**GENERAL NOTES**

- 1. ALL POWER CIRCUITING SHOWN IS 2#12, #12G. IN 3/4" C UNLESS OTHERWISE NOTED.
- 2. REFER TO SHEET E-107 FOR SCADA AV BLOCK DIAGRAM.

**KEY NOTES**

- 1. FLOOR MOUNTED NETWORK RACK WITH VIDEO CONTROLLER.
- 2. PROVIDE PLENUM RATED HDMI CABLES ROUTED ABOVE CEILING FROM NETWORK RACK TO 1X4 HDMI SPLITTER AT EACH WORKSTATION IN CONTROL ROOM.
- 3. RECEPTACLE AND AV OUTLET PROVIDED FOR WALL MOUNTED MONITOR. PROVIDE PLENUM RATED HDMI CABLE FROM MONITOR TO VIDEO CONTROLLER IN FLOOR MOUNTED NETWORK RACK.
- 4. NETWORK RACK, 55" MONITOR AND ASSOCIATED WORK WILL ONLY BE INSTALLED UNDER ADD ALTERNATE NO. 4.

**PARTIAL POWER PLAN 2**

1/4" = 1'-0"

THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

*[Signature]* *[Date]*

SIGNATURE DATE

AS-BUILT 4-30-2021

E-104

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 37997, EXPIRATION DATE: 12/16/2019

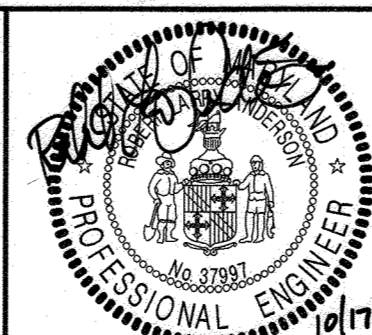
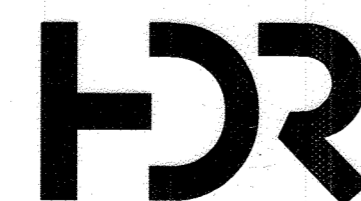
**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* 11/12/19  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 10-31-19  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 11/13/19  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 11/13/19  
CHIEF, UTILITY DESIGN DIVISION DATE



DES: RLA					
DRN: CLS					
CHK: RG					
10/15/2019	BY	NO.	REVISION	DATE	

ADMIN. BUILDING PARTIAL POWER PLAN

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

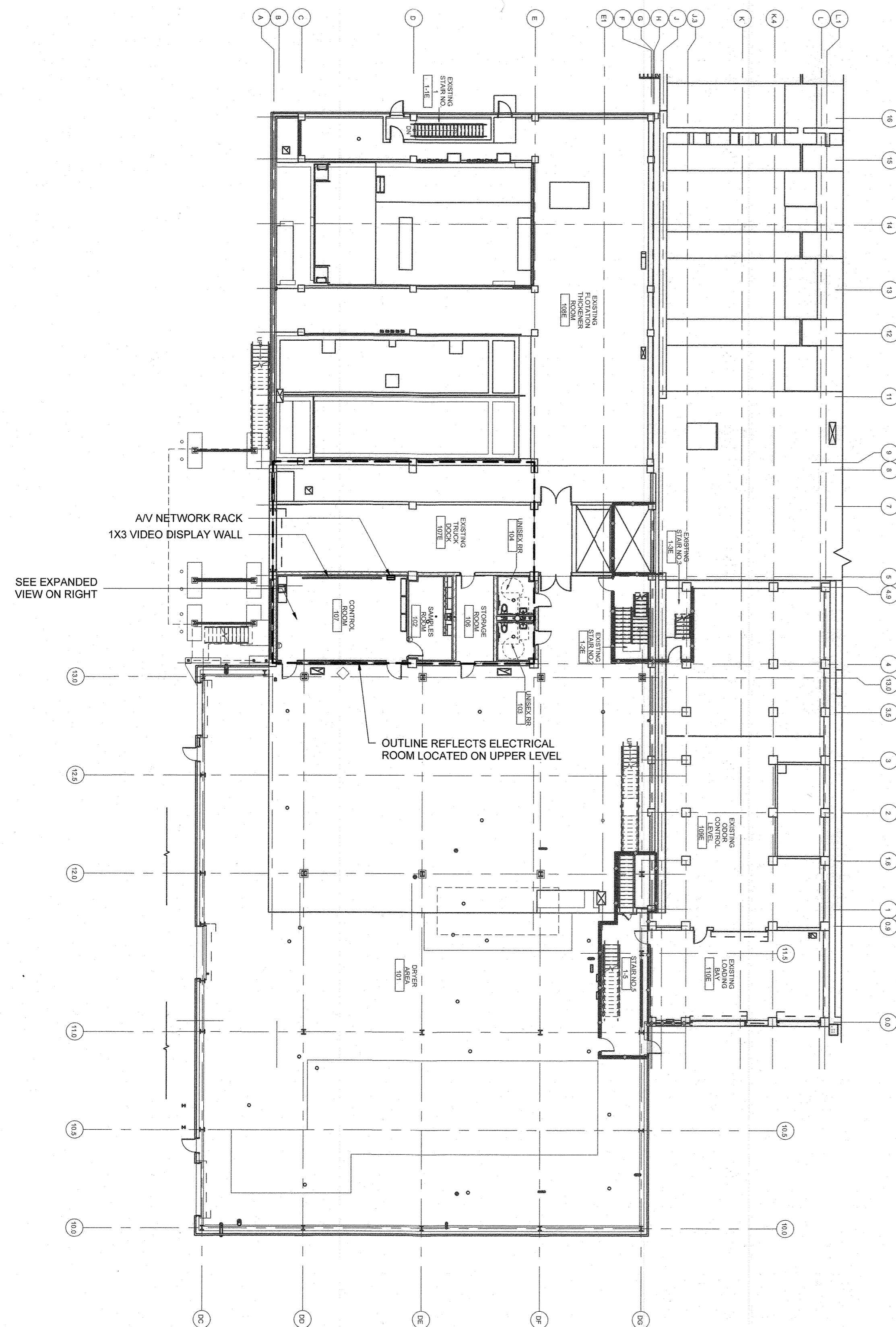
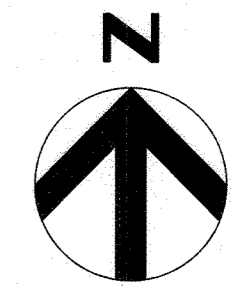
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

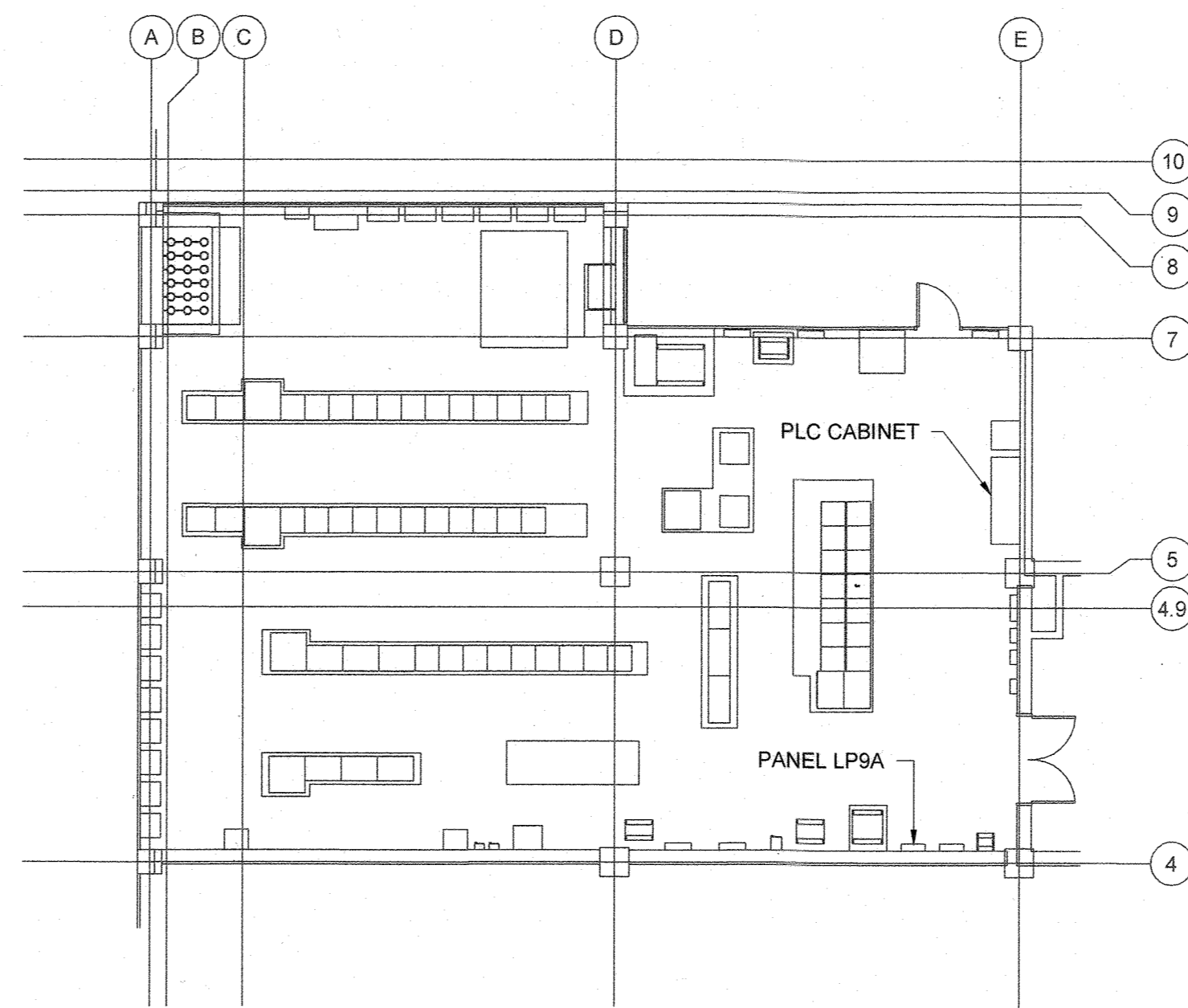
SCALE AS SHOWN

SHEET 27 OF 31

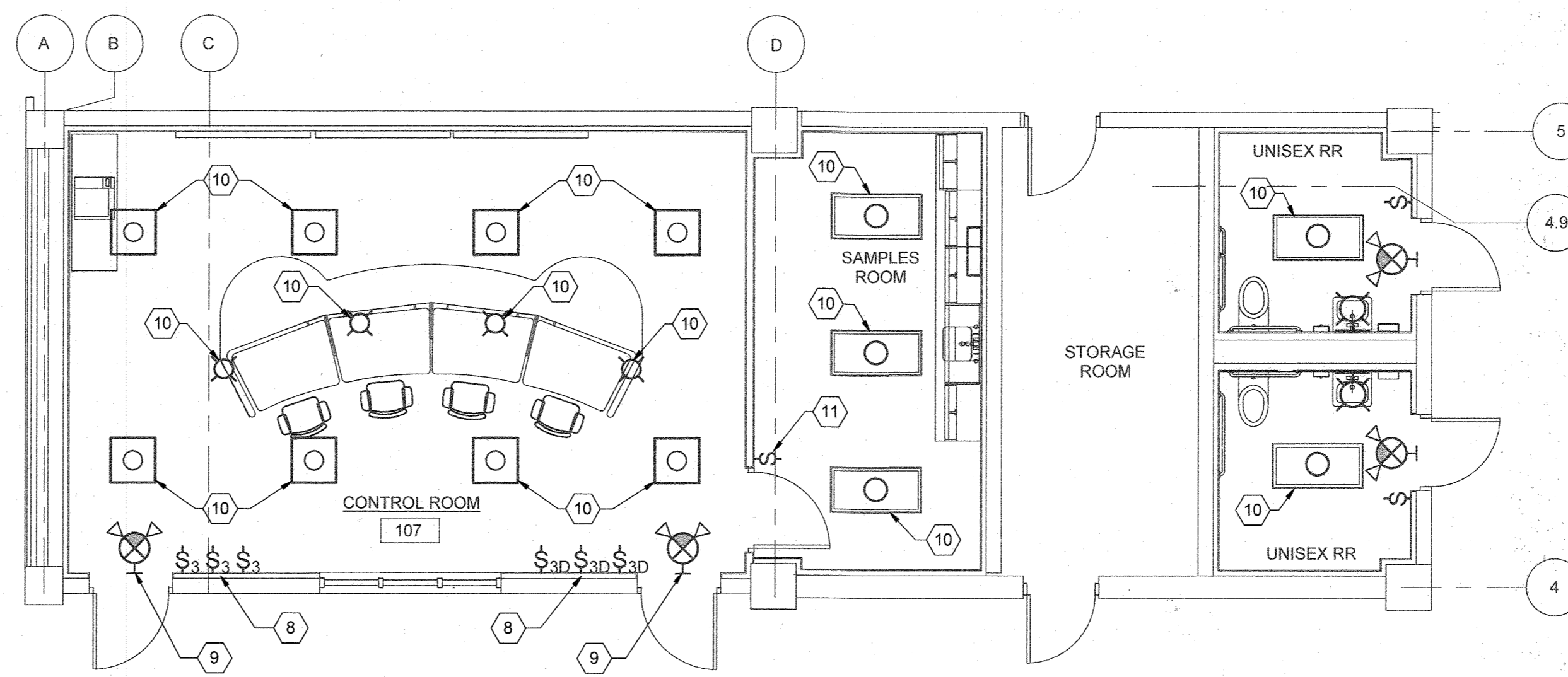
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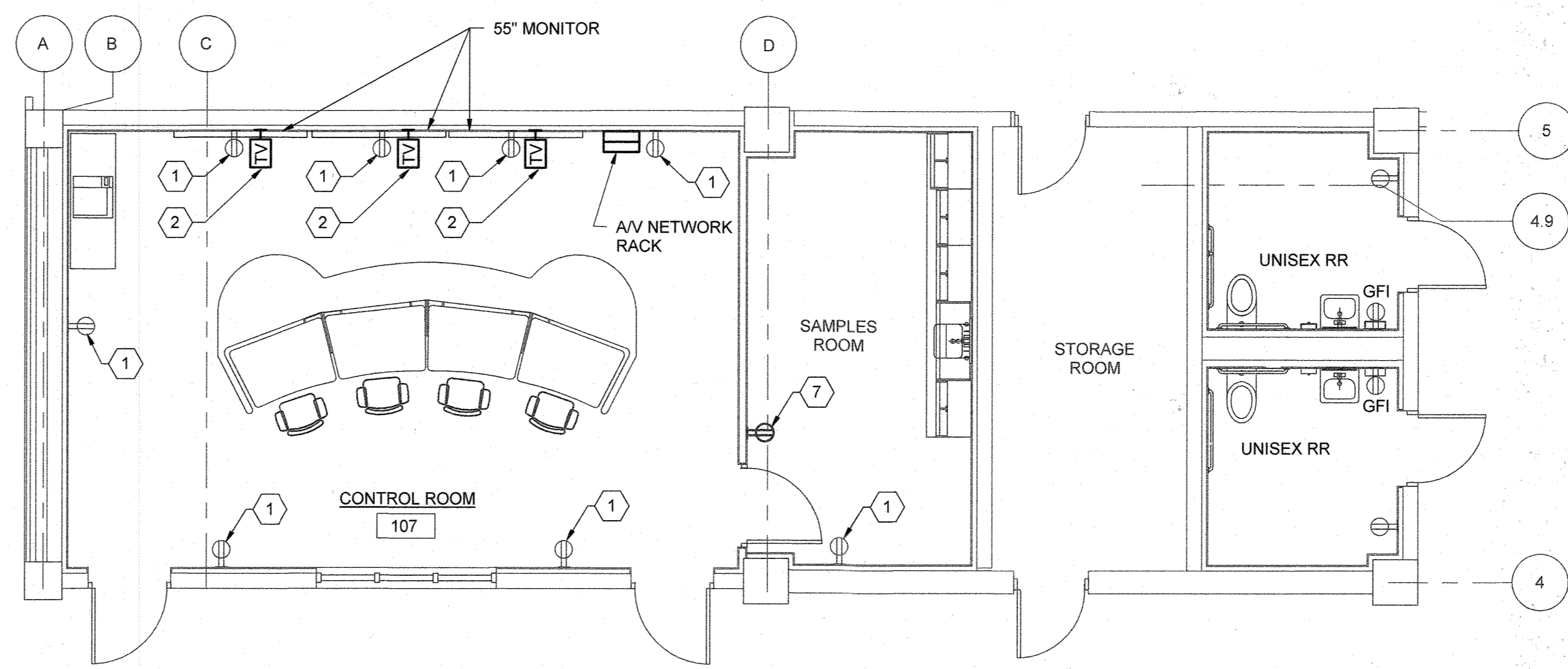
**DRYER BUILDING PLAN AT EL 141.20 I&C**  
1/16" = 1'-0"



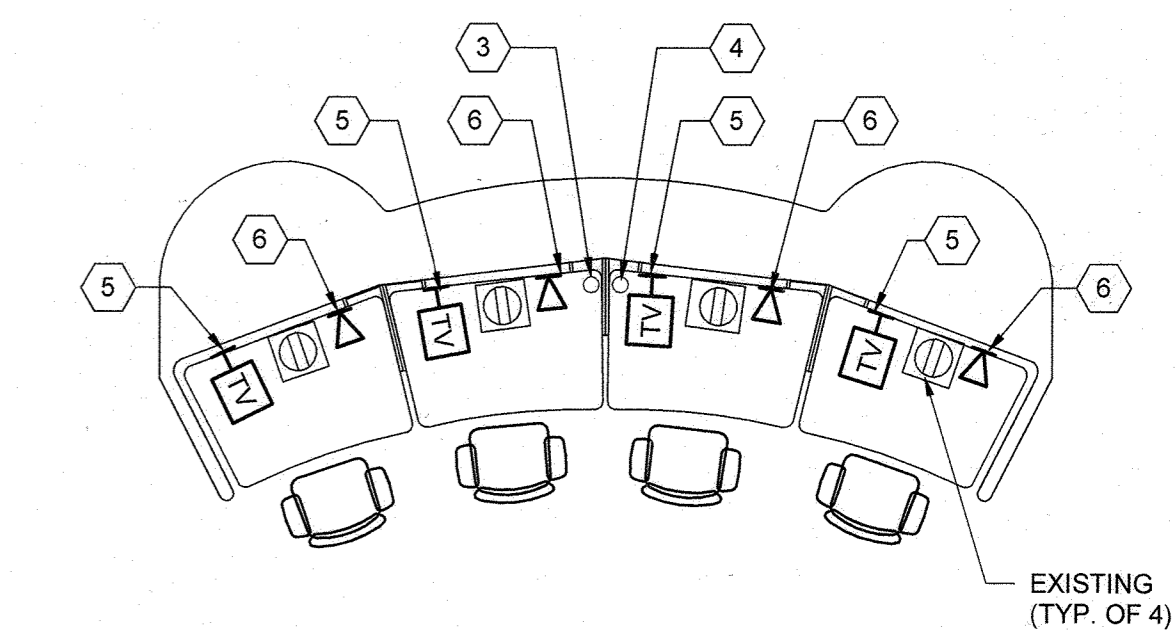
**DRYER BUILDING ELECTRICAL ROOM - EL 156**  
3/32" = 1'-0"



**DRYER BUILDING PARTIAL LIGHTING PLAN**  
3/16" = 1'-0"



**DRYER BUILDING PARTIAL POWER PLAN**  
3/16" = 1'-0"



**WORKSTATION POWER AND COMM. PLAN**  
1/4" = 1'-0"

**GENERAL NOTES**

1. LIGHT FIXTURES, LIGHT SWITCHES AND RECEPTACLES WAS PROVIDED AND INSTALLED BY OTHERS.
2. ALL POWER CIRCUITING SHOWN IS 2#12, #12G, IN 3/4" C ROUTED TO SPARE 20A, 1P CIRCUIT BREAKER IN PANEL LP9A UNLESS OTHERWISE NOTED.
3. REFER TO SHEET E-107 FOR SCADA AV BLOCK DIAGRAM.
4. FLOOR OF DRYER BUILDING ELECTRICAL ROOM IS 2 HOUR FIRE RATED.

**KEY NOTES**

1. RECEPTACLE WAS PROVIDED AND INSTALLED BY OTHERS. REMOVE RECEPTACLE, INSTALL ELECTRICAL BOX EXTENDER AND REINSTALL RECEPTACLE FLUSH WITH NEW FURRED OUT WALL.
2. PROVIDE AV OUTLET FOR NEW WALL MOUNTED MONITOR. PROVIDE PLENUM RATED HDMI CABLE IN 3/4" C ROUTED TO VIDEO CONTROLLER IN FLOOR MOUNTED NETWORK RACK. MOUNT AV OUTLET 5'-6" AFF.
3. EXISTING CONDUIT STUB UP FOR NEW HDMI CABLES FROM WORKSTATIONS TO NETWORK RACK. CONDUIT FROM WORKSTATIONS TO NETWORK RACK PROVIDED BY OTHERS. FIELD COORDINATE EXACT LOCATION.
4. EXISTING CONDUIT STUB UP FOR NEW CAT6 CABLES FROM WORKSTATIONS TO PLC CABINET IN ELECTRICAL ROOM. CONDUIT FROM WORKSTATIONS TO PLC CABINET PROVIDED BY OTHERS. FIELD COORDINATE EXACT LOCATION.
5. PROVIDE PLENUM RATED HDMI CABLE ROUTED TO VIDEO CONTROLLER IN FLOOR MOUNTED NETWORK RACK.
6. PROVIDE CAT6 CABLE ROUTED TO PLC CABINET IN ELECTRICAL ROOM.
7. RECEPTACLE WAS PROVIDED AND INSTALLED BY OTHERS. RECEPTACLE IS SUSPENDED FROM CONCRETE CEILING. RELOCATE RECEPTACLE TO NEW WALL.
8. LIGHT SWITCHES WAS PROVIDED AND INSTALLED BY OTHERS. REMOVE LIGHT SWITCH, INSTALL ELECTRICAL BOX EXTENDER AND REINSTALL LIGHT SWITCH FLUSH WITH NEW FURRED OUT WALL.
9. WALL MOUNTED LIGHT FIXTURE WAS PROVIDED AND INSTALLED BY OTHERS. REMOVE LIGHT FIXTURE, INSTALL ELECTRICAL BOX EXTENDER AND REINSTALL LIGHT FIXTURE FLUSH WITH NEW FURRED OUT WALL.
10. LAY-IN TROFFER AND/OR RECESSED LIGHT WAS PROVIDED AND INSTALLED BY OTHERS. THE FIXTURE ARE SUSPENDED FROM CONCRETE CEILING. RELOCATE FIXTURE TO NEW SUSPENDED CEILING.
11. LIGHT SWITCH WAS PROVIDED AND INSTALLED BY OTHERS. SWITCH IS SUSPENDED FROM CONCRETE CEILING. RELOCATE SWITCH TO NEW WALL.

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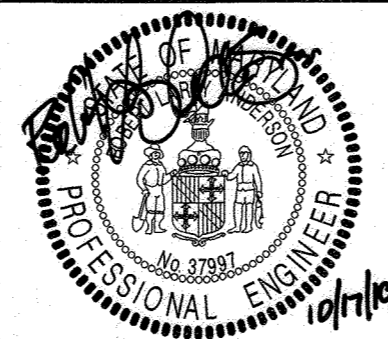
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\*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 37997, EXPIRATION DATE: 12/16/2019

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

DIRECTOR OF PUBLIC WORKS: *[Signature]* DATE: 11/13/19  
CHIEF, BUREAU OF UTILITIES: *[Signature]* DATE: 10-31-19

CHIEF, BUREAU OF ENGINEERING: *[Signature]* DATE: 11/13/19  
CHIEF, UTILITY DESIGN DIVISION: *[Signature]* DATE: 11/13/19



DES: RLA	
DRN: CLS	
CHK: RG	
10/15/2019	
BY: NO.	REVISION
	DATE

**DRYER BUILDING CONTROL ROOM SCADA  
AV**

600 SCALE MAP NO. BLOCK NO.

AS-BUILT 4-30-2021

**CONTROL ROOM UPGRADE**

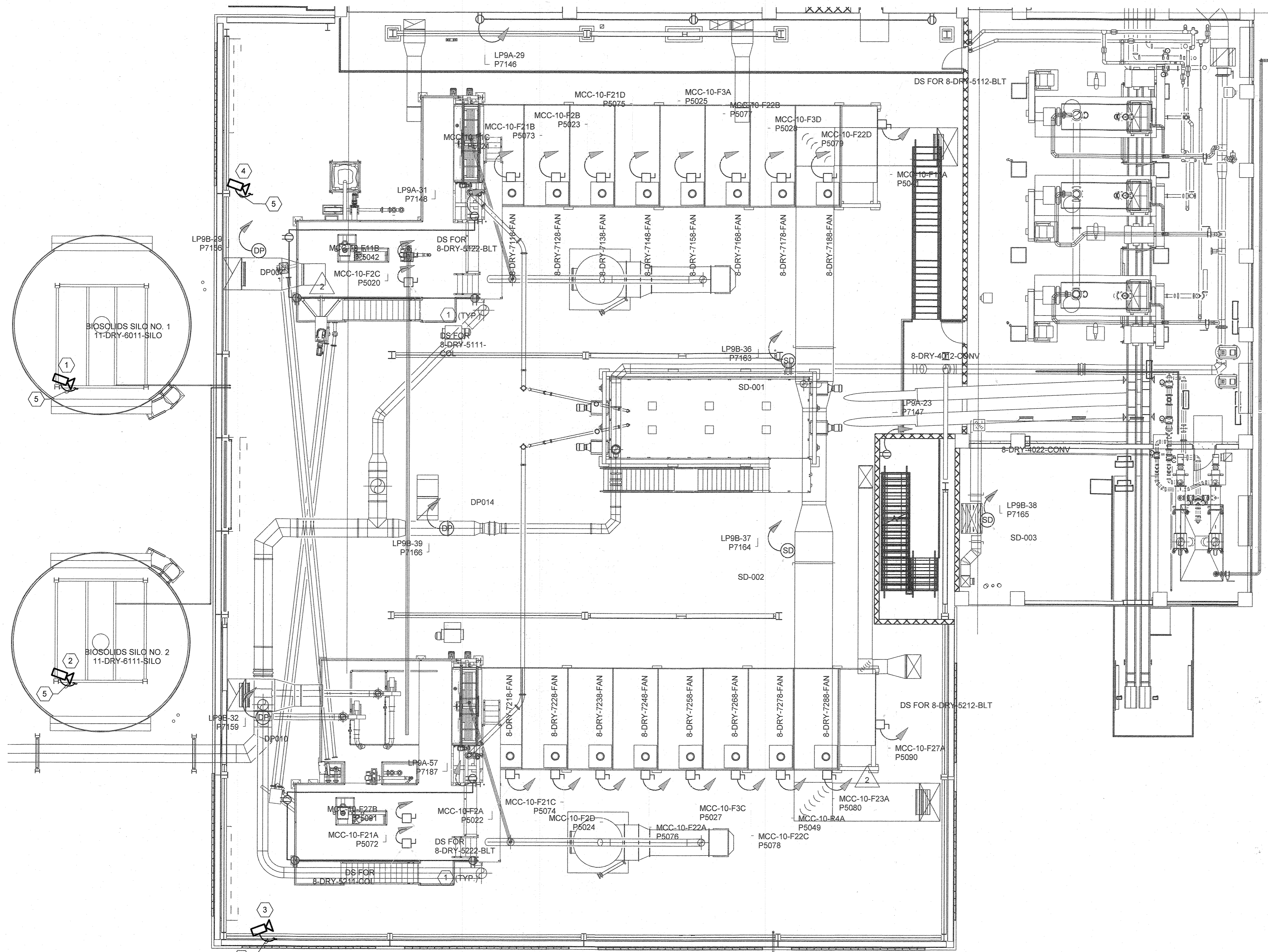
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**E-105**

SCALE  
AS  
SHOWN

SHEET  
28 OF 31



**KEY NOTES**

1. MOUNT CAMERA SUCH THAT VIEWER IS ABLE TO SEE NORTH SILO TRUCK LOADING AREA. MOUNT CAMERA OFF TO THE SIDE OF THE SILO SUCH THAT THE VIEWER IS ABLE TO SEE THE UNLOADING OF MATERIALS WITHOUT OPERATOR HAVING TO WALK ON DECK TO WATCH.
2. MOUNT CAMERA SUCH THAT VIEWER IS ABLE TO SEE SOUTH SILO TRUCK LOADING AREA. MOUNT CAMERA OFF TO THE SIDE OF THE SILO SUCH THAT THE VIEWER IS ABLE TO SEE THE UNLOADING OF MATERIALS WITHOUT OPERATOR HAVING TO WALK ON DECK TO WATCH.
3. MOUNT CAMERA SUCH THAT VIEWER IS ABLE TO SEE THE SCREEN AND CONVEYORS AREA.
4. MOUNT CAMERA SUCH THAT VIEWER IS ABLE TO SEE THE SCREEN AND DRAG CONVEYORS AREA.
5. PROVIDE CAT6 CABLE IN 3/4" FROM CAMERA TO VIDEO CONTROLLER LOCATED IN DRYER ELECTRICAL ROOM AT THE NIP. SEE SHEET E-105 FOR DRYER BUILDING ELECTRICAL ROOM LOCATION.

**DEWATERING AND DRYER BUILDING PARTIAL PLAN - CAMERAS**

1/8" = 1'-0"

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*[Signature]* / *[Signature]*  
 SIGNATURE DATE

AS-BUILT 4-30-2021

E-106

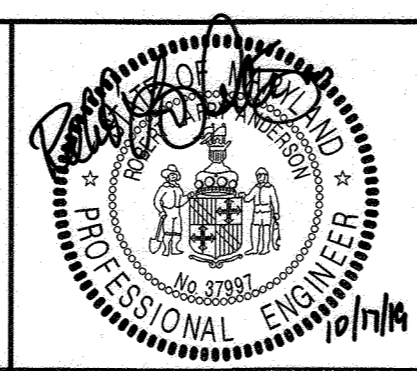
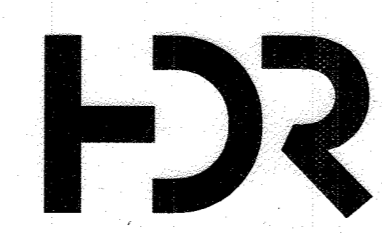
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 37997, EXPIRATION DATE: 12/16/2019

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* 11/13/19  
 DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 11/13/19  
 CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 11/13/19  
 CHIEF, UTILITY DESIGN DIVISION DATE



DES: RLA					
DRN: CLS					
CHK: RG					
10/15/2019	BY:	NO.	REVISION	DATE	600 SCALE MAP NO.

**DRYER BUILDING PARTIAL PLAN - CAMERAS ELECTRICAL AND I&C PLAN**

**CONTROL ROOM UPGRADE**

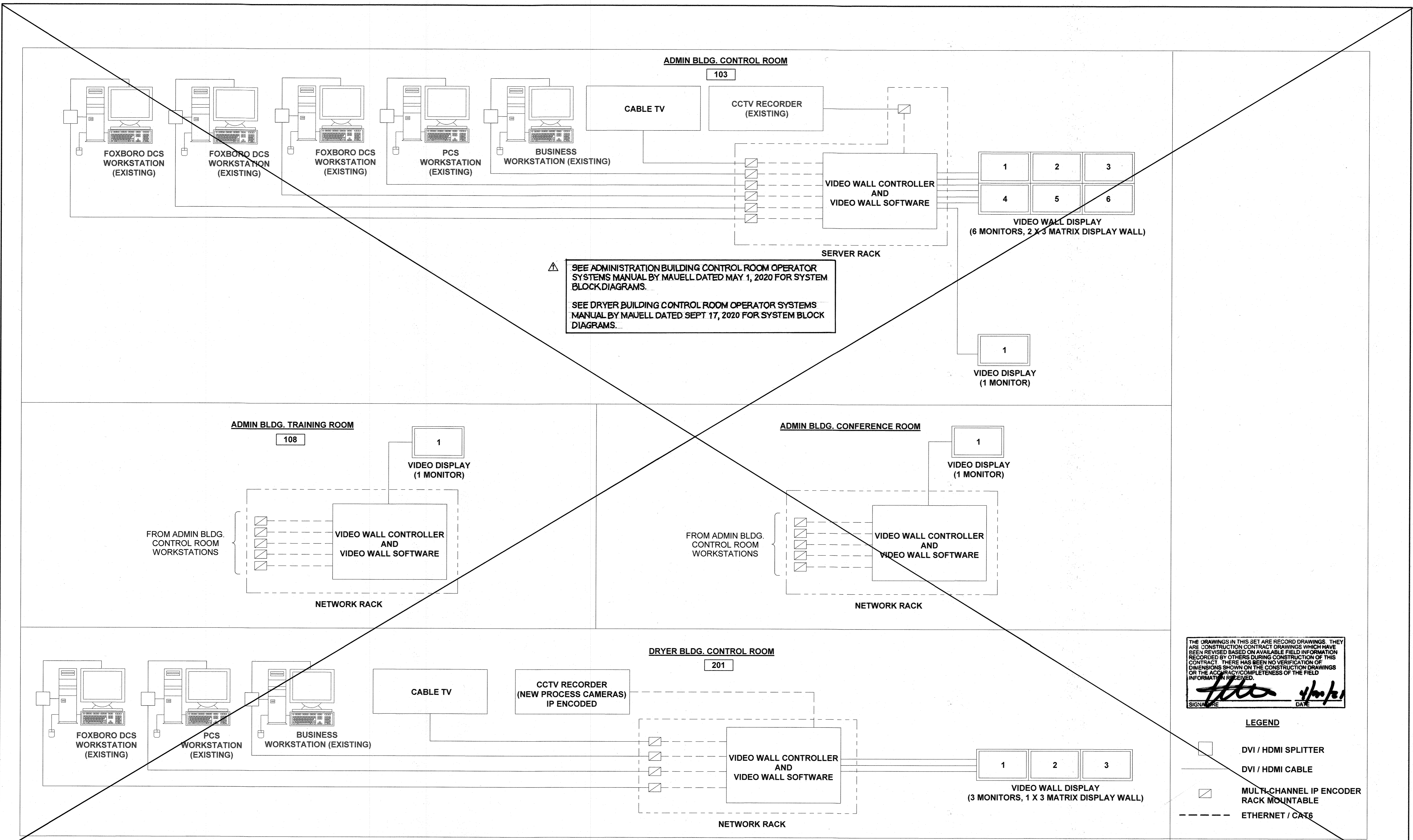
CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 29 OF 31

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THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

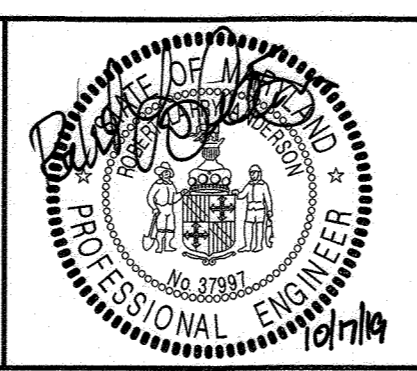
*[Signature]* *[Date]*

- LEGEND**
- DVI / HDMI SPLITTER
  - DVI / HDMI CABLE
  - MULTICHANNEL IP ENCODER RACK MOUNTABLE
  - ETHERNET / CAT6

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**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*[Signature]* *[Date]* *[Signature]* *[Date]*  
 DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE  
*[Signature]* *[Date]* *[Signature]* *[Date]*  
 CHIEF, BUREAU OF UTILITIES DATE CHIEF, UTILITY DESIGN DIVISION DATE



DES: RLA			
DRN: CLS			
CHK: RG			
10/15/2019	HDR	RECORD DRAWING REVISION	4/30/21
BY: NO.		REVISION	DATE

**ELECTRICAL A/V BLOCK DIAGRAM**

600 SCALE MAP NO. BLOCK NO.

**AS-BUILT 4-30-2021**

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**E-107**

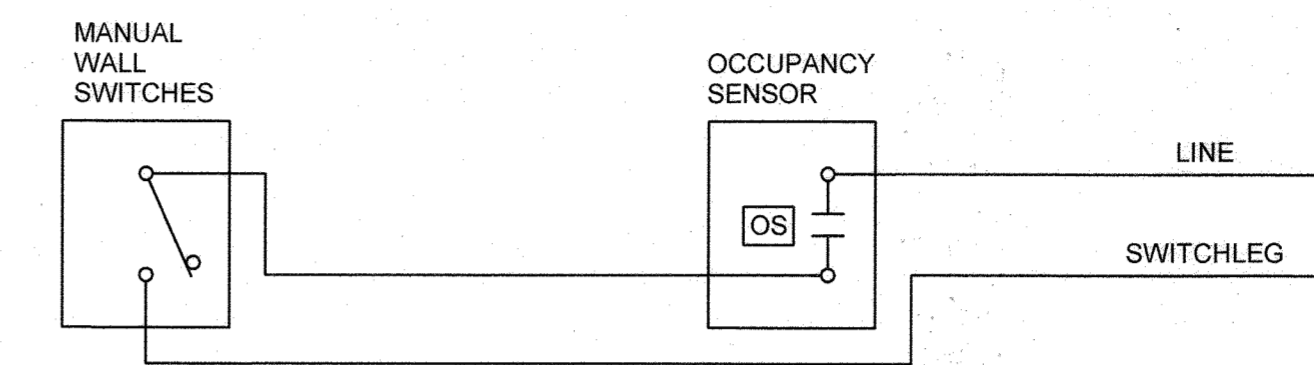
SCALE AS SHOWN

SHEET 30 OF 31

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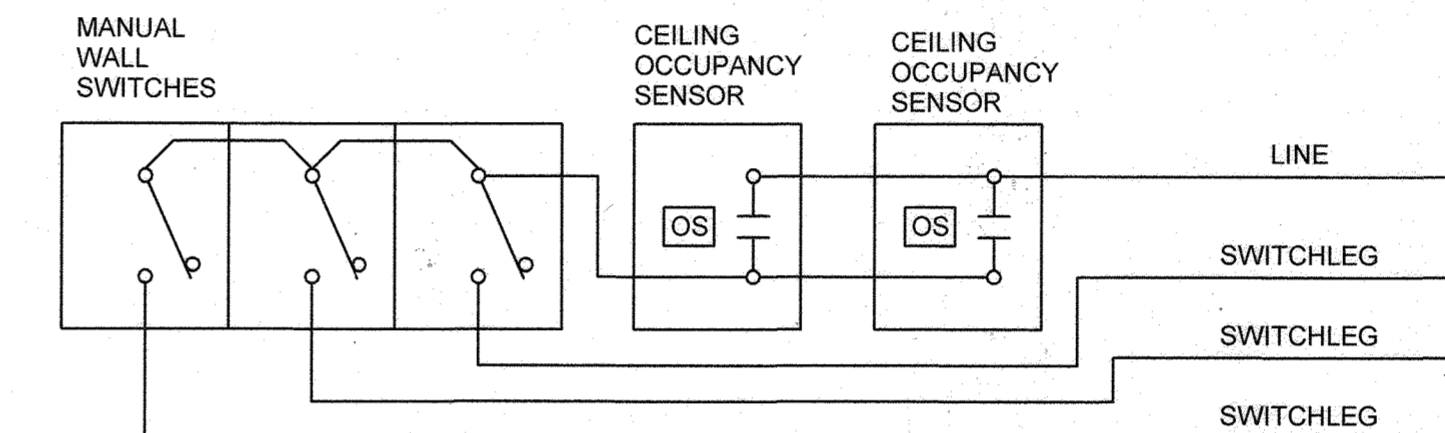
LIGHTING FIXTURE SCHEDULE											
FIXTURE DESIG.	MANUFACTURER	CATALOG SERIES	DESCRIPTION	LAMPS			BALLAST		FIXTURE WATTS	FIXTURE VOLT.	
				QTY	TYPE	WATTS	QTY	TYPE			WATTS
A	ACUTTY LITHONIA HUBBELL COLUMBIA H.E. WILLIAMS	2GTL2 LJT 22 50	LED 2'X2' RECESSED TROFFER. WHITE FINISH, ACRYLIC LENS.	1	LED 4,000 LUMENS 4000K CCT 80 CRI	-	1	SOLID STATE LED DRIVER	34	34	120/277 MULTI-VOLT
B	ACUTTY LITHONIA	LK5B	5" LED RECESSED LIGHT, WHITE FINISH, BAFFLE REFLECTOR, DIMMING DOWN TO 15%.	1	LED 660 LUMENS 3000K CCT 93 CRI	-	1	SOLID STATE LED DRIVER	10.6	10.6	120 VOLT
C	LITHONIA LIGHTING	2ESL2	LED PARABOLIC 2'X2' RECESSED TROFFER, DIMMING DRIVER	1	LED 4,000 LUMENS 4000K CCT 80 CRI	-	1	SOLID STATE LED DRIVER	34	34	120/277 MULTI-VOLT
D	ACUTTY LITHONIA	L6	6" LED RECESSED LIGHT, PARABOLIC REFLECTOR, FROSTED CONVEXED LENS WITH BAFFLE, DIMMABLE	1	LED 3,300 LUMENS 4000K CCT 80 CRI	-	1	SOLID STATE LED DRIVER	21	21	120/277 MULTI-VOLT
E1	ACUTTY LITHONIA HUBBELL DUAL LITE EATON CROUSE-HINDS	INDX DYN N2LPS	EMERGENCY LIGHTING UNIT. IMPACT-RESISTANT, CORROSION RESISTANT, NON-METALLIC HOUSING WITH STAINLESS STEEL HARDWARE, TWO INTEGRAL LIGHTING HEADS, SELF-DIAGNOSTIC ELECTRONICS, MAINTENANCE-FREE NI-CAD OR LITHIUM IRON PHOSPHATE BATTERY, MINIMUM OF 3 HOURS OF ILLUMINATION, OPERATING TEMP. OF 10 DEG. C (MIN) AND 35 DEG. C (MAX), NEMA 4X RATED.	2	LED	3	-	6V OR 12V BATTERY	-	6	120/277 MULTI-VOLT
E2	ACUTTY LITHONIA PHILIPS CHLORIDE COOPER SURE-LITES	AFN PDM AEL2	EMERGENCY LIGHTING UNIT. COMPACT, WEDGE SHAPED, DIE-CAST ALUMINUM HOUSING, DARK BRONZE FINISH, INTEGRAL LAMPS, SELF-DIAGNOSTIC ELECTRONICS, OPERATING TEMPERATURE OF -18 DEG. C (MIN) AND 40 DEG. C (MAX), MINIMUM OF 90 MINUTES OF ILLUMINATION, WET LOCATION LABEL.	2	LED	2	-	6V BATTERY	-	4	120/277 MULTI-VOLT
X1	ACUTTY LITHONIA PHILIPS CHLORIDE LSI	LV ER60MLD EWW	EMERGENCY EXIT SIGN. IMPACT-RESISTANT, FIBERGLASS REINFORCED HOUSING WITH STAINLESS STEEL HARDWARE, OPERATING TEMPERATURE OF 10 DEG. C (MIN) AND 35 DEG. C (MAX), SELF-DIAGNOSTIC ELECTRONICS, NICKEL-CADMIUM MAINTENANCE-FREE BATTERY, MINIMUM OF 90 MINUTES OF ILLUMINATION, NEMA 4X.	-	LED (RED)	-	-	6V BATTERY	-	5	120/277 MULTI-VOLT
W	HUBBELL (LAREDO LMC SERIES) ACUTTY LITHONIA COOPER MCGRAW-EDISON	LMC WST IST	MEDIUM-SIZE WALLPACK, DIE-CAST ALUMINUM PAINTED BRONZE HOUSING, TEMPERED GLASS LENS, WIDE THROW AND SHARP CUT-OFF OPTICS, WET LOCATION LABEL. CONTROLLED BY INTEGRAL PHOTOCCELL	1	LED CCT <= 5000K CCT >= 4000K 2,000 LUMENS	-	1	SOLID STATE LED DRIVER	24	24	120

NOTES:  
1. COMPLIANCE WITH NORTH CAROLINA GENERAL STATUTE 133-3 IS REQUIRED. THE MANUFACTURER AND SERIES NUMBERS PROVIDED IN THE ABOVE SCHEDULE ARE USED ONLY TO DENOTE THE QUALITY STANDARD OF PRODUCT DESIRED TO MEET THE SCHEDULED REQUIREMENTS AND DO NOT RESTRICT THE CONTRACTOR TO A SPECIFIC BRAND, MAKE, MANUFACTURER OR SPECIFIC NAME; THEY ARE USED ONLY TO SET FORTH AND CONVEY THE GENERAL STYLE, TYPE, CHARACTER AND QUALITY OF PRODUCT DESIRED TO MEET THE SCHEDULED REQUIREMENTS. EQUIVALENT PRODUCTS MAY BE ACCEPTABLE.  
2. IF A CONFLICT OCCURS BETWEEN THE FEATURES LISTED IN THE SCHEDULED REQUIREMENTS AND THE FEATURES AVAILABLE FOR A LISTED MANUFACTURER/SERIES, THE SCHEDULED REQUIREMENTS SHALL TAKE PRECEDENCE.



LIGHTING CONTROLS WITH OCCUPANCY SENSOR AND MANUAL SWITCHES

NTS



LIGHTING CONTROLS WITH MULTIPLE OCCUPANCY SENSORS AND MANUAL SWITCHES

NTS

CONTROLS DIAGRAM NOTES:

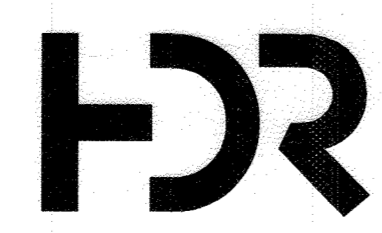
1. LIGHTING CONTROLS DIAGRAMS INDICATE THE DESIGN INTENT FOR THE CONTROLS. PROVIDE ALL CONTROL WIRING, CONNECTIONS, CONTACTORS AND CONTROLS COMPONENTS NECESSARY TO ACHIEVE THE CONTROL FUNCTIONS INDICATED ON THE PLANS AND LIGHTING CONTROLS DIAGRAMS.
2. SEE LIGHTING PLANS FOR EXACT NUMBER OF OCCUPANCY SENSORS AND MANUAL WALL SWITCHES.
3. THE TIME DELAY SETTING FOR ALL OCCUPANCY SENSORS SHALL BE SET TO 30 MINUTES.

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"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 37997, EXPIRATION DATE: 12/16/2019

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

Director of Public Works: *Jay R...* 10/16/19  
Chief, Bureau of Engineering: *Thomas B. Butler* 11/15/19  
Chief, Bureau of Utility Design: *...* 10-31-19



DES: RLA	
DRN: CLS	
CHK: RG	
10/15/2019	
BY: NO.	
REVISION	
DATE	

**ELECTRICAL SCHEDULES**

600 SCALE MAP NO. BLOCK NO.

**CONTROL ROOM UPGRADE**

CAPITAL PROJECT S-6264  
CONTRACT NO. 20-5099

6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

THE DRAWINGS IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED BASED ON AVAILABLE FIELD INFORMATION RECORDED BY OTHERS DURING CONSTRUCTION OF THIS CONTRACT. THERE HAS BEEN NO VERIFICATION OF DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR THE ACCURACY/COMPLETENESS OF THE FIELD INFORMATION RECEIVED.

*Jamail Williams* 10/15/19  
SIGNATURE DATE

AS-BUILT 4-30-2021 **E-108**

SCALE AS SHOWN  
SHEET 31 OF 31