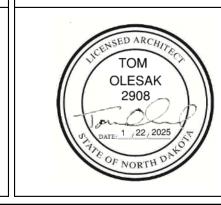


BID DOCUMENT SUBMISSION Drawing Title Project Number Project Title CONSULTANT DESIGNER OF RECORD STAMP Office of 437-CSI-241 MOUNTING HEIGHTS PERFORM SITE PREP **BID DOCUMENTS** Construction and Facilities **♦IMEG** Building Number ANDERSON FOR SPS EQUIPMENT OLESAK 2908 Drawing Number Management 2882 106TH STREET DES MOINES IA 50322 FARGO, ND

13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 17639

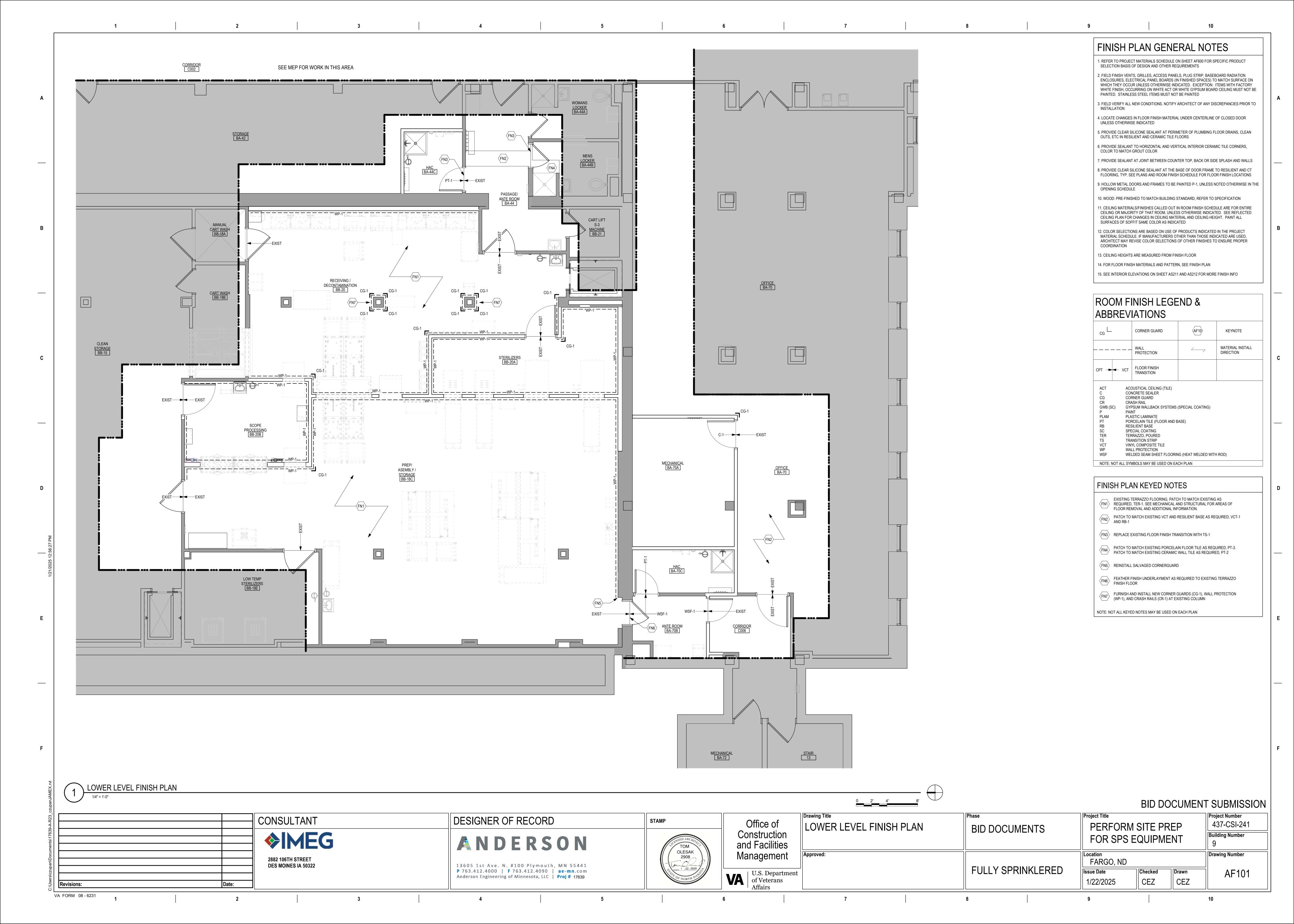


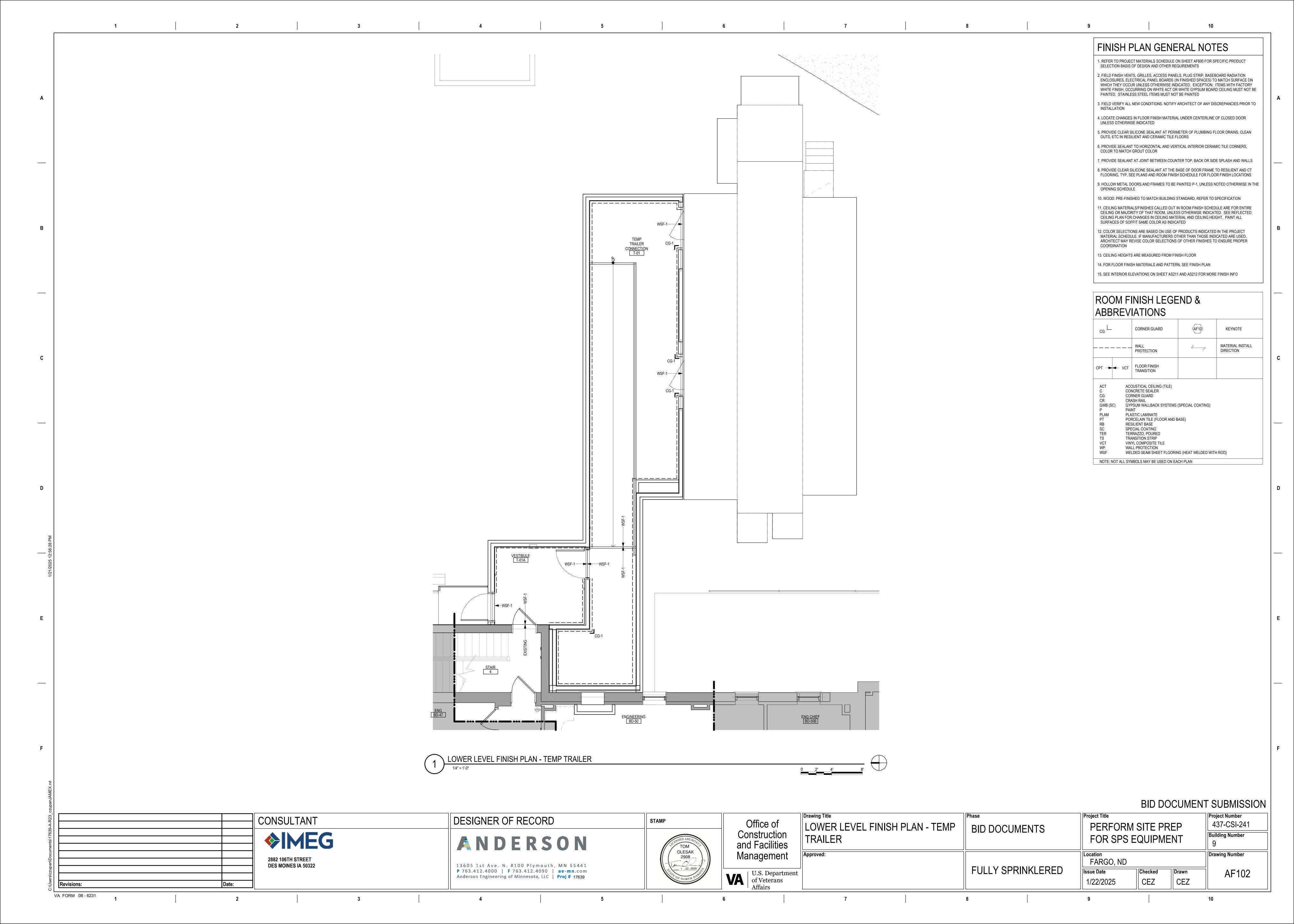
VA U.S. Department of Veterans Affairs

FULLY SPRINKLERED

Issue Date Checked Drawn AS640 1/22/2025 GJB

Revisions: VA FORM 08 - 6231

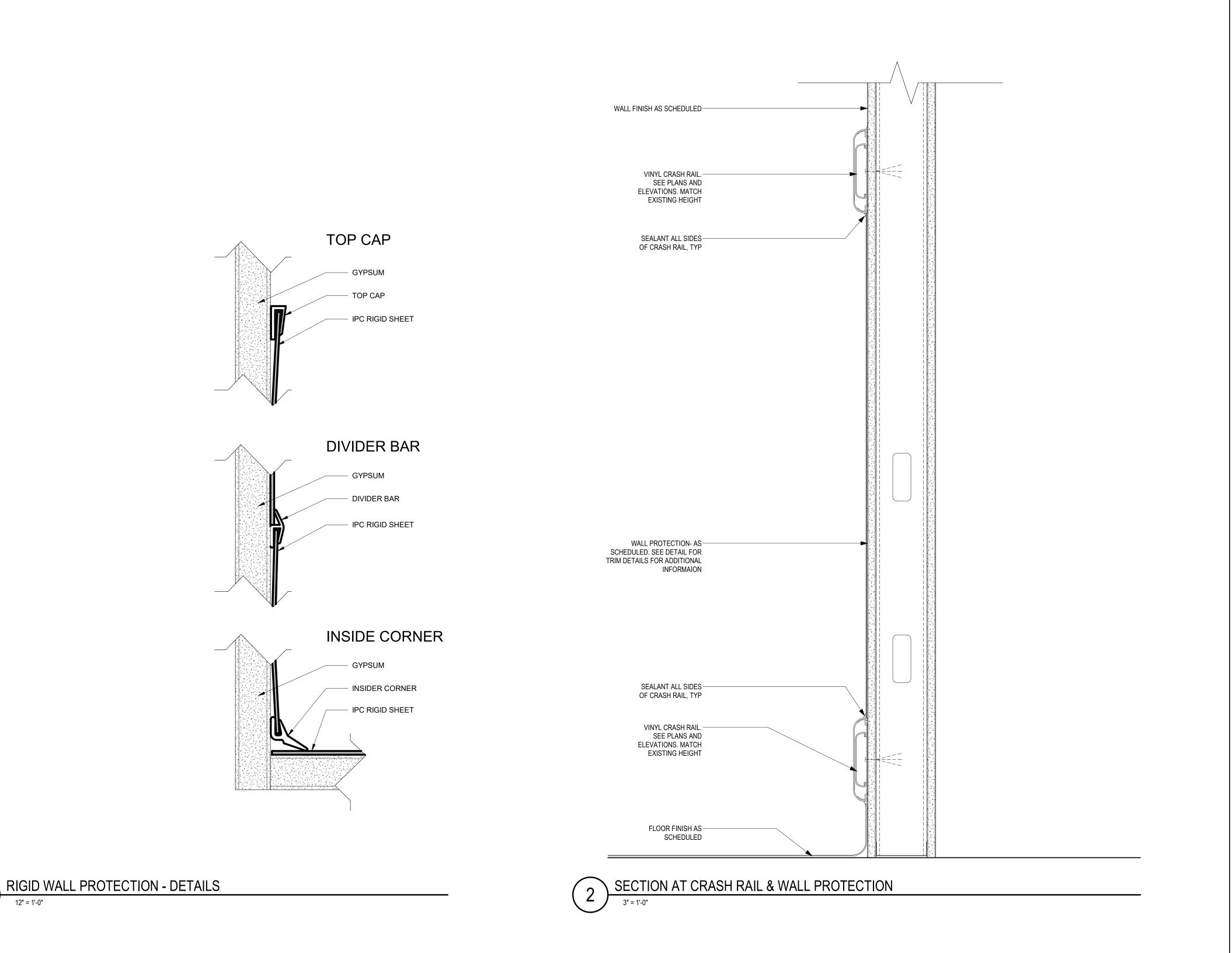


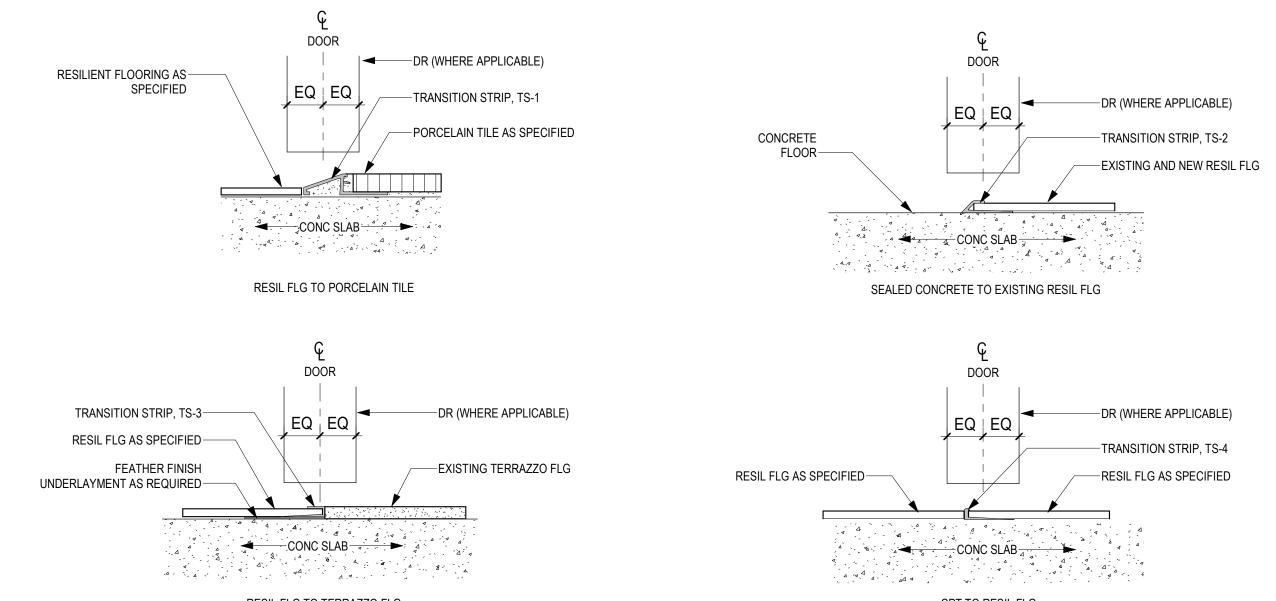




				ROOI	M FINISH S	SCHEDUL	E - TEMP	TRAILER	
NO	NAME	FLOOR FINISH	BASE FINISH	NORTH	WALL EAST	FINISH SOUTH	WEST	CEILING FINISH	REMARKS
T-01	TEMP TRAILER CONNECTION	WSF-1	WSF-1	WP-1/SC-1	WP-1/SC-1	WP-1/SC-1	WP-1/SC-1	ACT-1	WP-1 TO 4'-0"
T-01A	VESTIBULE	WSF-1	WSF-1	WP-1/SC-1	WP-1/SC-1	WP-1/SC-1	WP-1/SC-1	ACT-1	WP-1 TO 4'-0"

MATERIAL SCHEDULE									
SPEC NO.	CODE	MATERIAL	MANUFACTURER	STYLE	COLOR	SIZE	REMARKS		
9 30 00	TS-1	METAL TRANSITION STRIP	SCHLUTER	RENO-U	EB- BRUSHED STAINLESS STEEL	TBD BY INSTALLER			
	TS-2	METAL TRANSITION STRIP	POWERHOLD	BEVEL CAP	EN	TBD BY INSTALLER			
	TS-3	METAL TRANSITION STRIP	SCHLUTER	VINPRO-S	BRUSHED CHROME ANODIZED	TBD BY INSTALLER			
	TS-4	TRANSITION STRIP	MANNINGTON	FUSION TRANSITION STRIP	SKY GRAY 663	TBD BY INSTALLER			
	TR-1	TILE TRIM TRANSITION STRIP	SCHLUTER	JOLLY	EB- BRUSHED STAINLESS STEEL	TBD BY INSTALLER			
9 30 13	PT-1	PORCELAIN TILE	DALTILE	PORTFOLIO	DOVE GREY PF04 - MATTE	12" X 24"	GROUT: MAPEI KERAPOXY #93 WARM GRAY		
		CERAMIC TILE	DALTILE	COLOR WHEEL CLASSIC	ARCTIC WHITE 0190	4" X 4"	GROUT: MAPEI KERAPOXY #38 AVALANCHE		
	PT-2	CERAMIC TILE	DALTILE	COLOR WHEEL CLASSIC - COVE BASE	ARCTIC WHITE 0190	4" X 4"	GROUT: MAPEI KERAPOXY #38 AVALANCHE		
9 51 00	PT-3	PORCELAIN TILE	DALTILE	KEYSTONES MOSAIC	SUEDE GRAY D182 - MATTE	2" X 2"	GROUT: MAPEI KERAPOXY #93 WARM GRAY		
9 65 13	ACT-1	ACOUSTICAL CEILING TILE	ARMSTRONG	CLEAN ROOM VL UNPERFORATED	WHITE	24" X 24"	GRID: CO-EXTRUDED CLEAN ROOM		
	RB-1	RESILIENT BASE	TARKETT	JOHNSONITE TRADITIONAL VINYL 1/8"	PEPPERCORN TB1	4"			
9 65 16	WSF-1	WELDED SEAM SHEET FLOORING	MANNINGTON	BIOSPEC ARMOR	TANNENBAUM OR101	6' 6"	WELD ROD: 842240 BALSAM FIR IDEAL BASE: 244 OFF WHITE		
9 65 19	VCT-1	VINYL COMPOSITION TILE	ARMSTRONG	STANDARD EXCELON IMPERIAL TEXTURE	PEARL WHITE 51803	12" x 12"			
9 66 13	TER-1	TERRAZZO FLOORING	TERROXY	TM #21-1966	A2465		FINISH TO BE FIELD VERIFIED BY MANUFACTURER TO MATCH EXISTING		
9 91 00	P-1	PAINT	SHERWIN WILLIAMS	PRO INDUSTRIAL DTM ACRYLIC SEMI-GLOSS	SW 7025 BACKDROP		HOLLOW METAL DOORS AND FRAMES		
	P-2	PAINT	SHERWIN WILLIAMS	PROMAR 200 EGGSHELL	SW 7631 CITY LOFT				
	P-3	PAINT	SHERWIN WILLIAMS	PROMAR 200 EGGSHELL	PATCH TO MATCH		FINAL COLOR SELECTIONS TO BE APPROVED DURING SHOP DRAWING REVIEW		
	P-4	PAINT	SHERWIN WILLIAMS	PRO INDUSTRIAL DTM ACRYLIC SEMI-GLOSS	SW7527 NANTUCKET DUNE		EXTERIOR DOOR T-01A		
	C-1	CONCRETE SEALER	ARDEX	ARDEX CG CONCRETE GUARD	CLEAR				
9 96 00	SC-1	SPECIALTY COATING	SHERWIN WILLIAMS	PRO INDUSTRIAL PRE-CATALYZED WATERBASED EPOXY	SW 7631 CITY LOFT				
0 26 00	WP-1	WALL PROTECTION	PROTEK SYSTEMS	WCWH-80 SEAMLESS VINYL	WHITE	48" X 96"	0.080" THICK, INSTALL TO 60"		
	CR-1	CRASH RAIL	INPRO	1400 WALL GUARD	PEBBLE GRAY 0387	4"			
	CG-1	CORNER GUARDS	INPRO	160 HIGH IMPACT CORNER GUARD	PEBBLE GRAY 0387	FULL HEIGHT			





Drawing Title



BID DOCUMENT SUBMISSION

[Project Number]

Revisions:

CONSULTANT

\$\iiii \text{Date:}\$

CONSULTANT

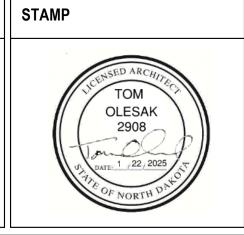
\$\iiii \text{DES MOINES IA 50322}

VA FORM 08 - 6231

DESIGNER OF RECORD

ANDERSON

13605 1st Ave. N. #100 Plymouth, MN 55441
P 763.412.4000 | F 763.412.4090 | ae-mn.com
Anderson Engineering of Minnesota, LLC | Proj # 17639



Office of
Construction
and Facilities
Management

U.S. Department
of Veterans
Affairs

MATERIAL AND ROOM FINISH SCHEDULE AND DETAILS
Approved:

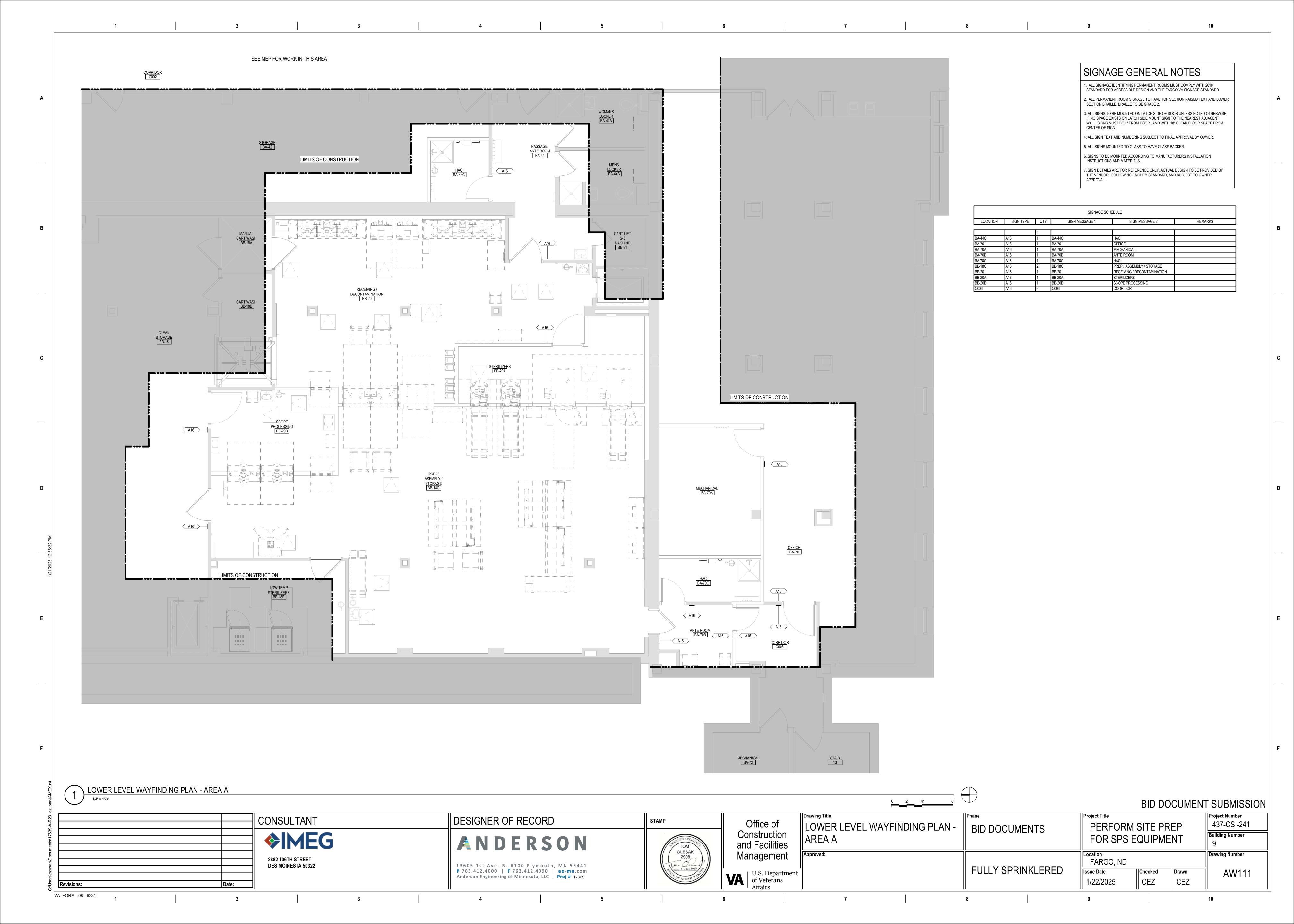
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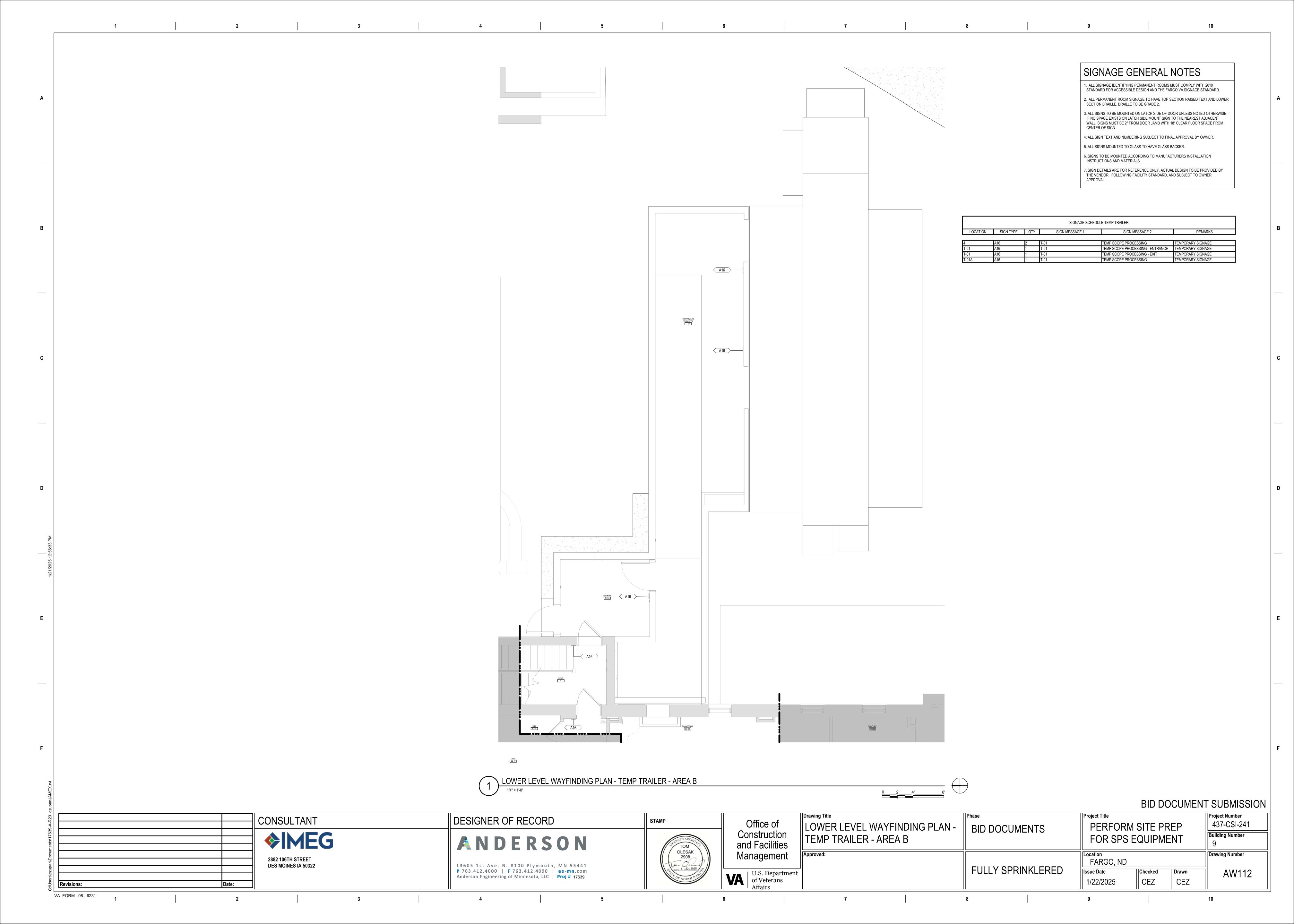
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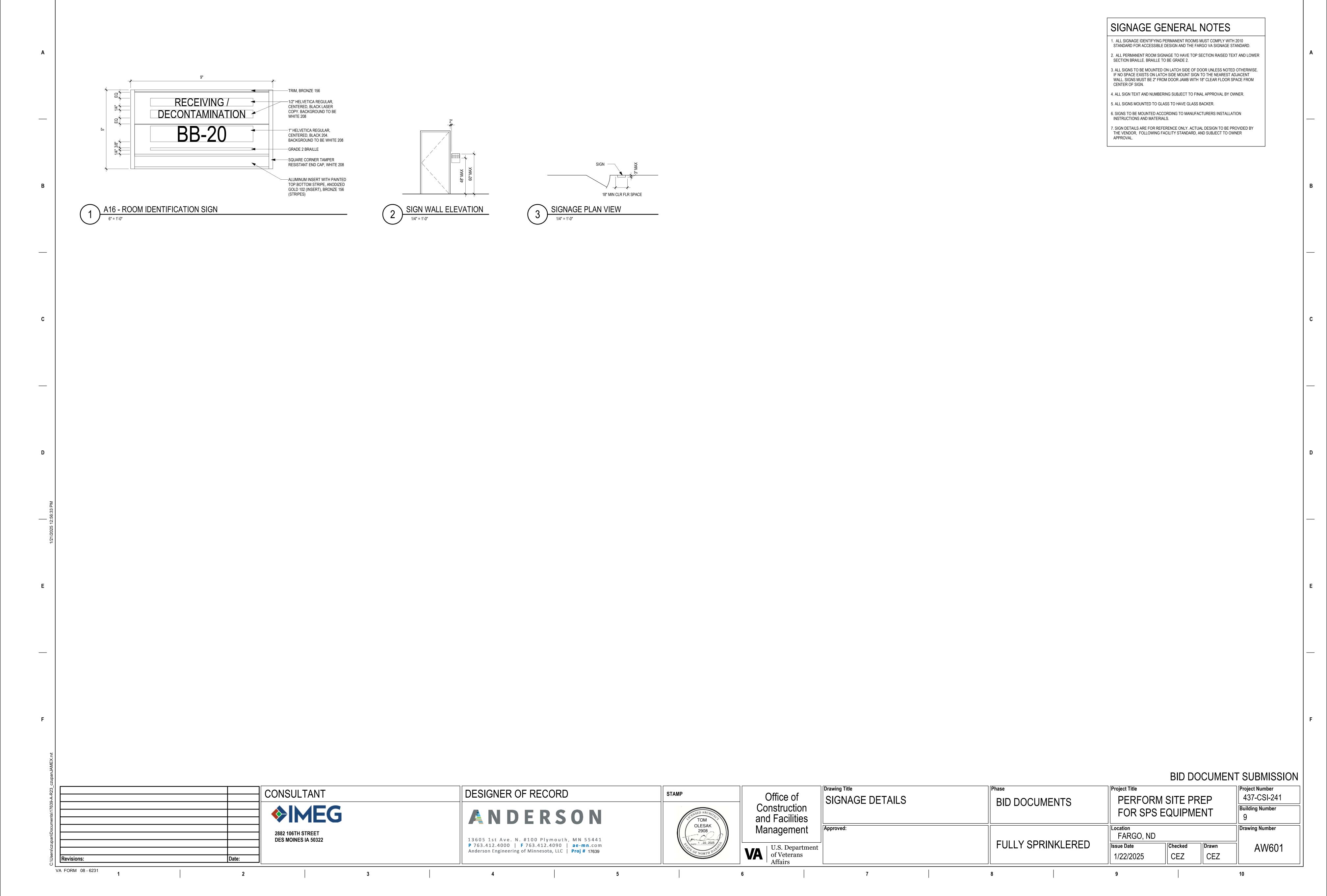
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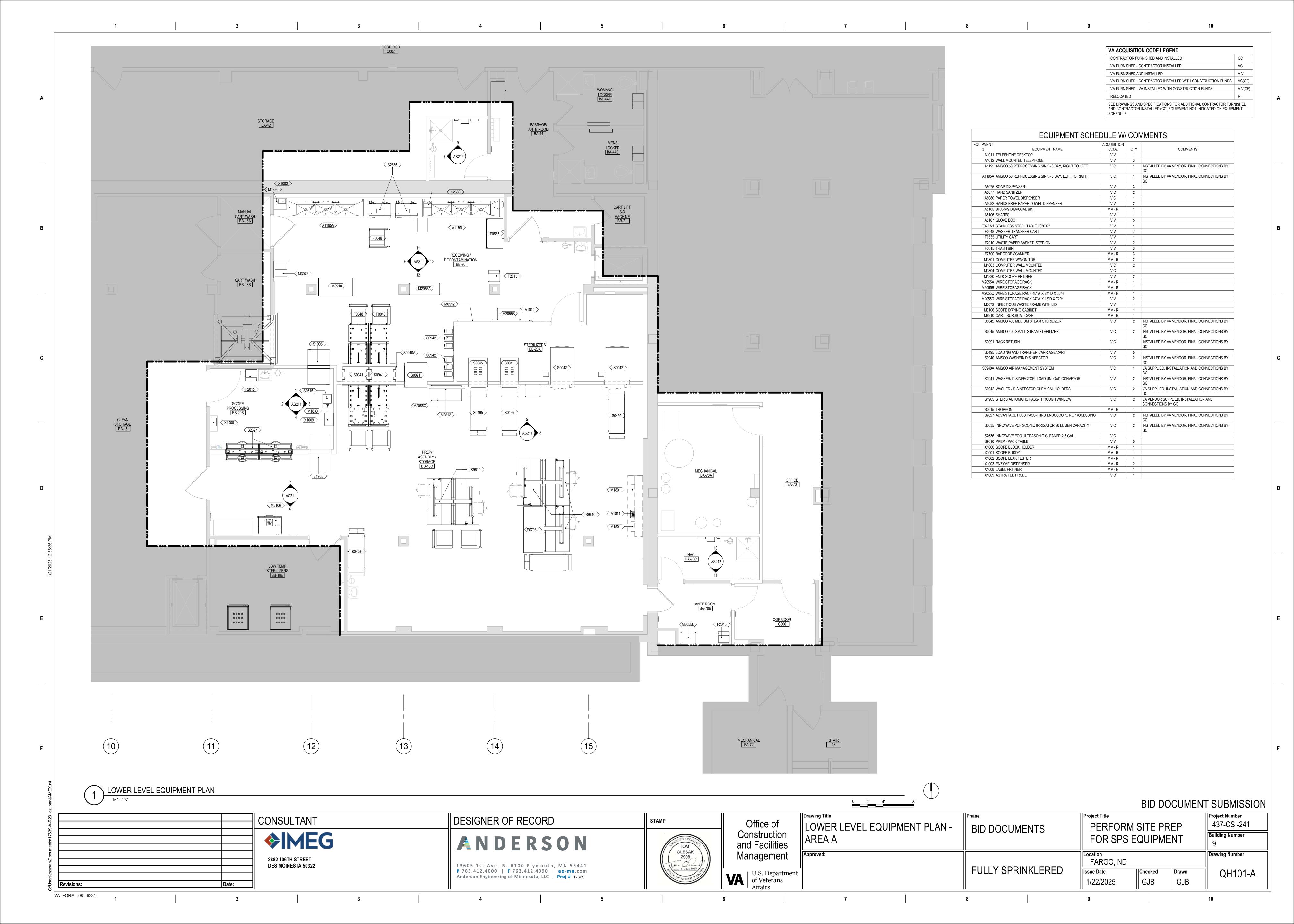
Project Title
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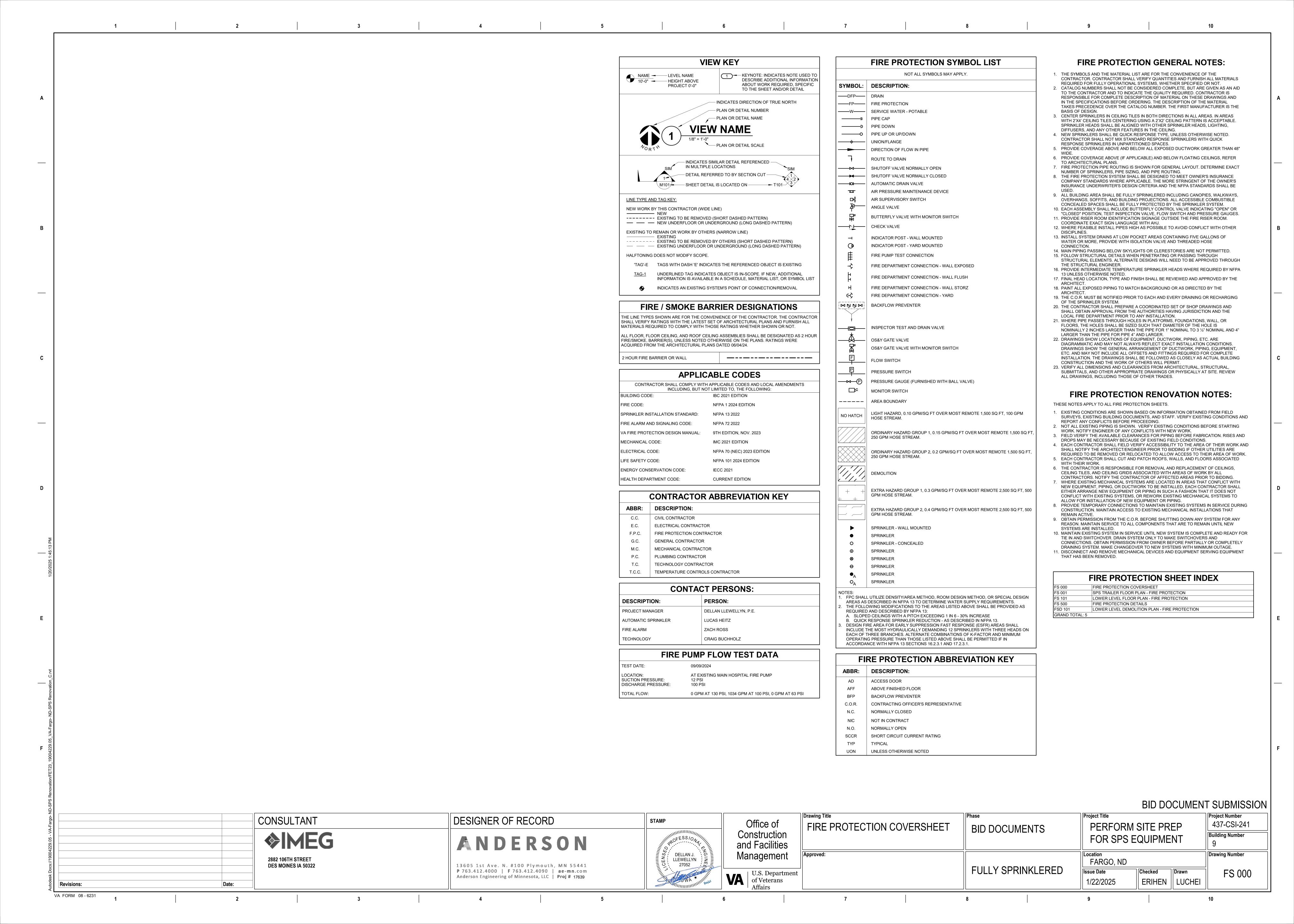
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Building Number	9			
Cocation	FARGO, ND			
Issue Date	Checked	CEZ	Drawn	CEZ
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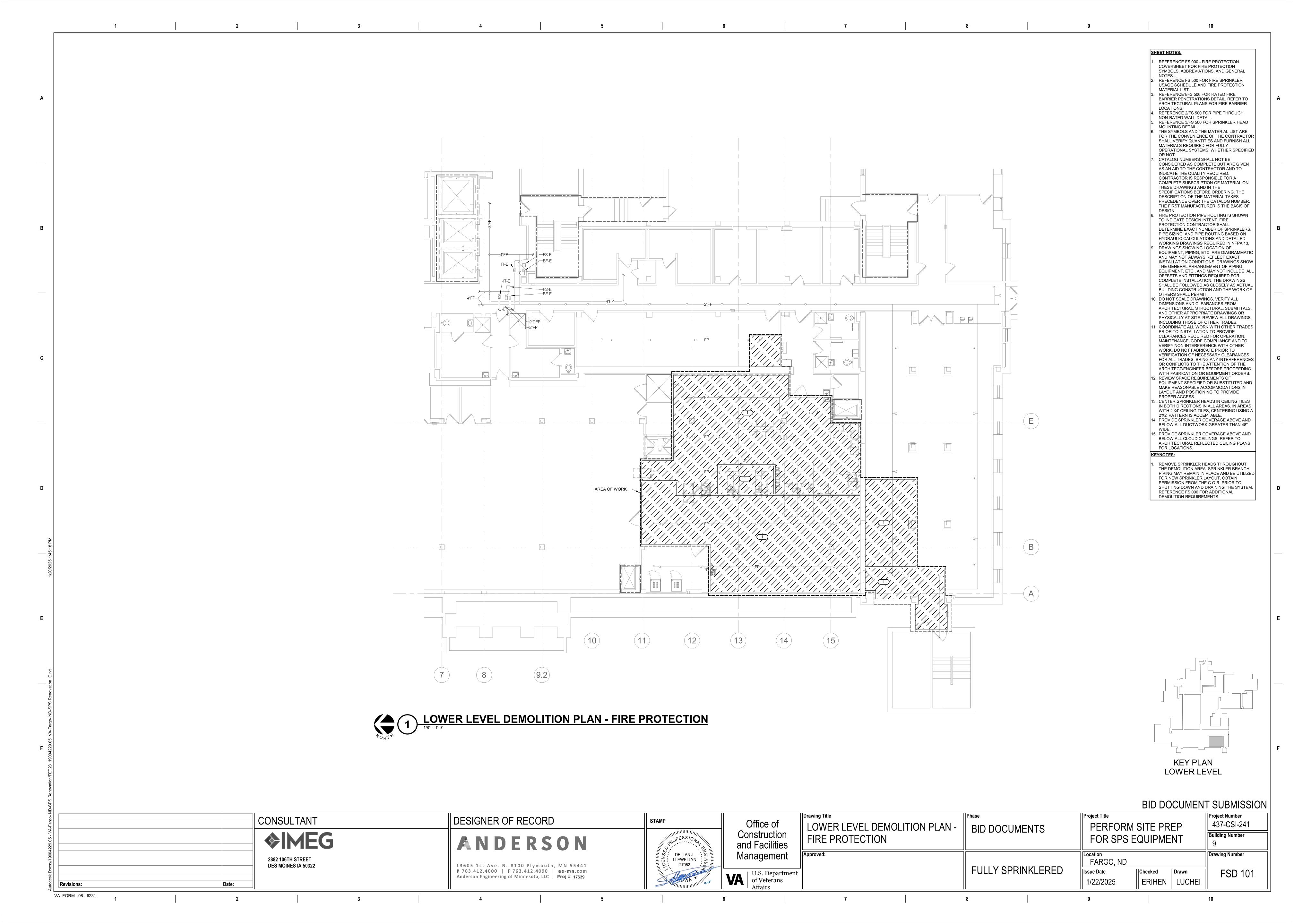


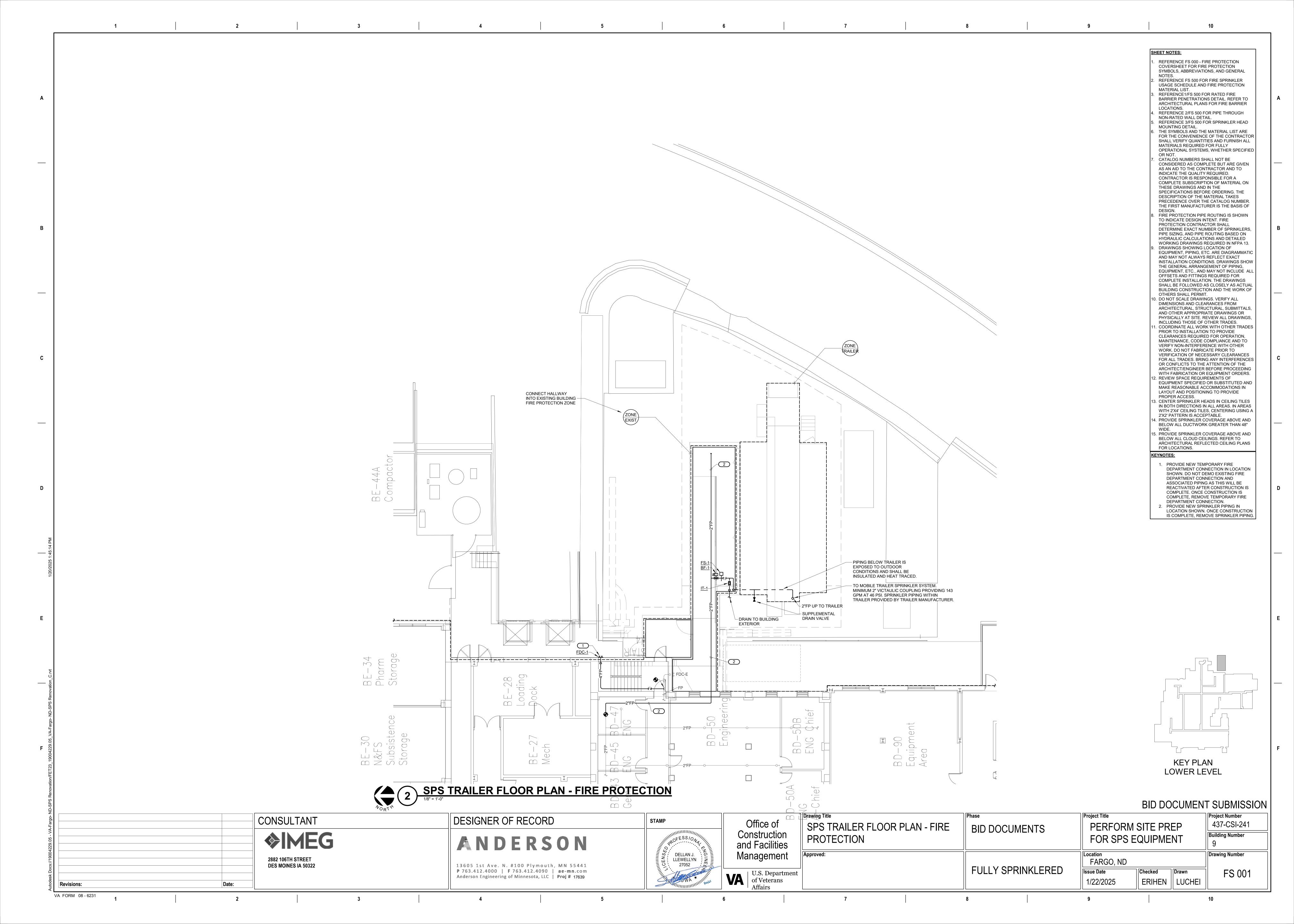


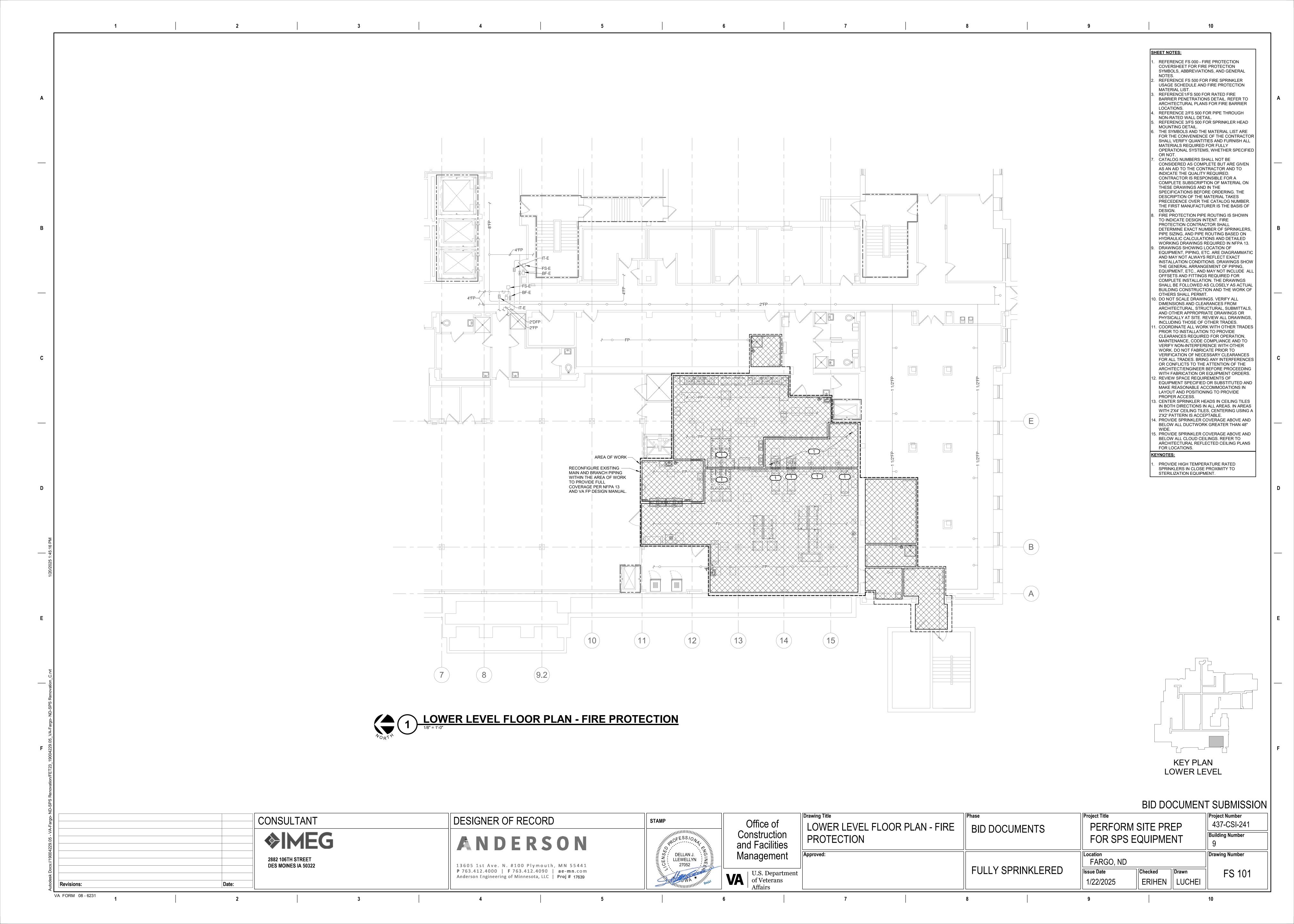


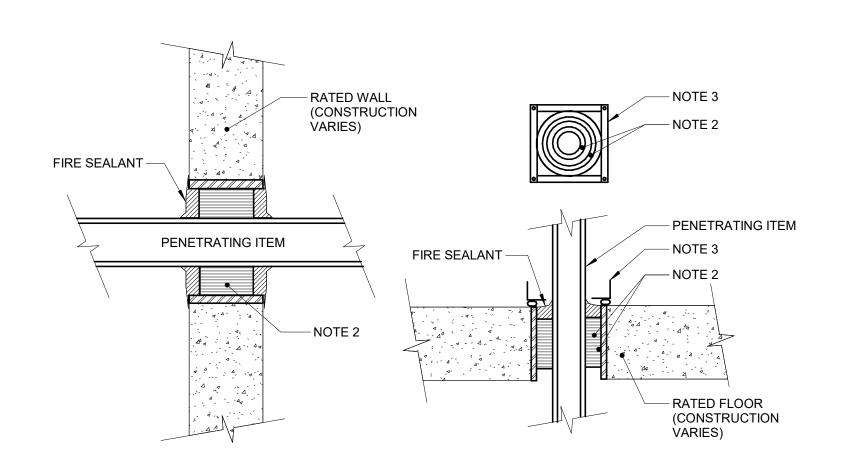












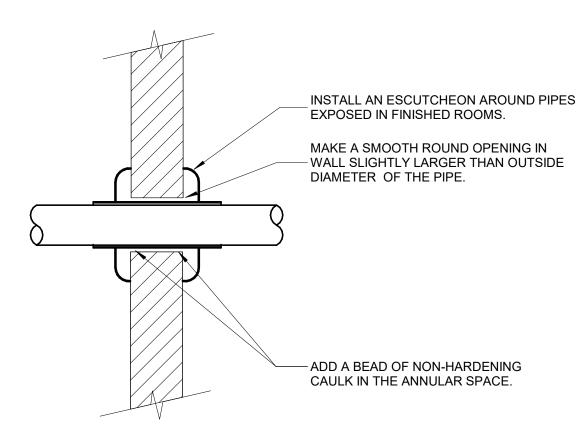
FLOOR/WALL PENETRATION - RATED FIRE BARRIER

1. THIS GENERAL DETAIL APPLIES TO ALL ITEMS PENETRATING FIRE RATED WALLS OR FLOORS. THE INTENT IS TO MAINTAIN THE FIRE RATING AND TO ALLOW LONGITUDINAL MOVEMENT. REFER TO SPECIFICATION SECTION 21 13 13 FOR SELECTION OF THROUGH PENETRATION FIRE STOPPING.

2. INSTALL BACKING MATERIAL, SUCH AS MINERAL WOOL SAFING, AS REQUIRED FOR FIRE STOP SYSTEM. INSTALL IN ACCORDANCE WITH FIRE STOP SYSTEM APPLICATION LISTING. SECURE TO WALL OR FLOOR TO ALLOW LONGITUDINAL MOVEMENT OF PENETRATING ITEM WITHOUT MOVEMENT OF

FIRE BARRIER. 3. WATERTIGHT WELDED 1"x1" 20 GAUGE MINIMUM GALVANIZED SHEET METAL ANGLE FRAME, BY CONTRACTOR IN EQUIPMENT ROOMS FOR WATER STOP. PLACE A BEAD OF WATERPROOF SEALANT BETWEEN FLOOR AND BOTTOM OF ANGLE FRAME. SECURE TO FLOOR WITH MASONRY ANCHORS IN CORNERS AND ON 12" MAXIMUM CENTERS. MULTIPLE PENETRATING ITEMS MAY BE ENCLOSED IN ONE FRAME.

AREAS WITH SUSPENDED CEILINGS SEE PLANS

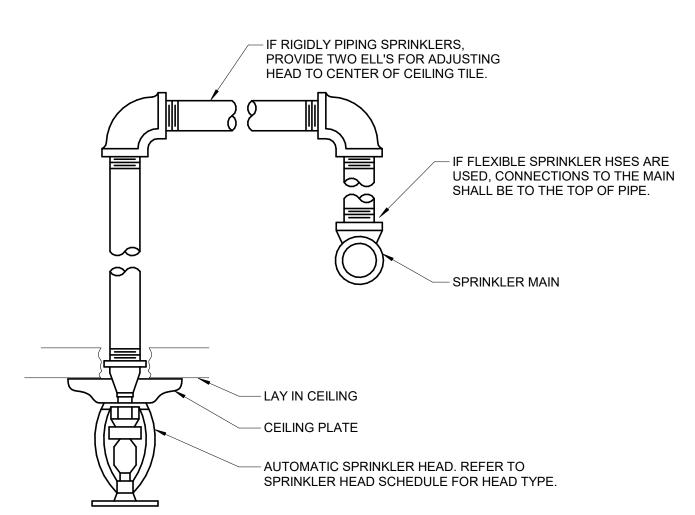


WALL PENETRATION - NON-FIRE RATED

PER NFPA VIKING, RELIABLE, TYCO, VICTAULIC NOTES 2, 3, 7, & 8

PENETRATIONS.

- 1. THIS DETAIL APPLIES TO ALL PIPES. THE INTENTION IS TO SEAL AIRTIGHT AROUND PIPES FOR NOISE TRANSMISSION
- CONTROL. 2. SEE SPECIFICATION SECTION 21 13 13 FOR ADDITIONAL
- 3. FLOOR OPENINGS ARE SIMILAR, SEE SPECIFICATION SECTION 21 13 13 FOR DIFFERENCES BETWEEN FLOOR AND WALL



SPRINKLER HEAD MOUNTING

FIRE SPRINKLER USAGE SCHEDULE 1. SEE FLOOR PLANS FOR ZONING REQUIREMENTS. 2. SPRINKLER SHALL HAVE COLOR CODED BULB THERMAL ELEMENT. B. ALL SPRINKLERS SHALL BE UL LISTED. 4. CONTRACTOR TO VERIFY SPRINKLER REQUIREMENTS BASED ON ACTUAL INSTALLATION, USAGE, ARCHITECTURAL CEILING PLAN AND NFPA 13 REQUIREMENTS. 5. TAG NAME IS PRIMARILY FOR IDENTIFYING SPRINKLERS IN SUBMITTALS. IT MAY OR MAY NOT BE FOUND ELSEWHERE ON THE DRAWINGS. CONTRACTOR TO SUBMIT ALL SPRINKLER TYPES TO BE USED. 6. AREAS ARE GENERAL IN NATURE. CONTRACTOR TO MATCH UNSCHEDULED AREAS TO SIMILAR SPACES. . SPRINKLERS SHALL HAVE A 3mm QUICK RESPONSE BULB. SPRINKLERS SPECIFIED WITHIN FIRE SPRINKLER USAGE SCHEDULE ARE STANDARD COVERAGE TYPE. EXTENDED COVERAGE SPRINKLERS ARE PERMITTED PROVIDED SPRINKLERS MEET THE REQUIREMENTS OF UL. **AREA TYPE** RESPONSE **TEMPERATURE** (NOTE 1 & 6) AREA HAZARD (NOTE 4 & 5) SPRINKLER TYPE **CATEGORY** FINISH RATING **MANUFACTURER & MODEL** AREAS WITHOUT CEILINGS SEE PLANS CHROME PER NFPA VIKING, RELIABLE, TYCO, VICTAULIC NOTES 2, 3, 7, & 8 SPR-1 UPRIGHT QUICK

QUICK

WHITE

RECESSED PENDANT

TAG NAME	DESCRIPTION	MANUFACTURER AND MODE
BF-1	INDICATING BUTTERFLY VALVE, NORMALLY OPEN, 175 PSI WWP, GROOVED TYPE, DUCTILE IRON BODY WITH PROTECTIVE COATING, ELECTROLESS NICKEL OR EPDM COATED DUCTILE IRON DISC, STAINLESS STEEL STEM AND SCREWS, CAST OR DUCTILE IRON HANDWHEEL, EPDM SEAT, INDICATOR FLAG, FACTORY MOUNTED INTEGRAL MONITOR SWITCHES, UL/FM.	NIBCO (GD-4765-8N), VICTAULIC, TYCO, KENNEDY, RELIABLE
	LUGGED OR WAFER VALVES ARE ACCEPTABLE PROVIDED THEY HAVE THE FEATURES LISTED ABOVE.	
FDC-1	FLUSH TWO WAY FIRE DEPT. INLET CONNECTION, CAST BRASS BODY WITH POLISHED BRASS FINISH, 4" OUTLET WITH TWO 2-1/2" INLETS AND DROP CLAPPERS, DOUBLE FEMALE SNOOTS WITH RIGID END N.P.T. X PIN LUG HOSE THREAD SWIVELS, PLUGS AND CHAINS, WALL PLATE WITH SAME FINISH AS BODY LABELED "AUTO SPKR", UL. HOSE THREAD TYPE SHALL MATCH LOCAL FIRE DEPARTMENT REQUIREMENTS.	SERIES, ELKHART BRASS MODEL 166, CROKER SERIES 6010/6020, GUARDIAN SERIES 6020
	CONTRACTOR TO COORDINATE PURCHASE OF LOCKING CAPS WITH LOCAL FIRE DEPARTMENT.	LOCKING CAP: KNOX COMPANY 3041
FS-1	FLOW SWITCH - VANE TYPE, 450 PSI, FLOW SENSITIVITY OF 4-10 GPM, TWO SINGLE POLE DOUBLE THROW SWITCHES, PNEUMATIC RETARD ADJUSTABLE FROM 0-90 SECONDS WITH AUTOMATIC RESET, NEMA 4 INDOOR/OUTDOOR RATED METAL HOUSING, UL/FM.	POTTER VSR, SYSTEM SENSOR WFD
IT-1	COMBINATION INSPECTOR'S TEST AND DRAIN VALVE, 300 PSI, INTEGRAL SIGHT GLASS, BALL VALVE PLATE INDICATING OFF-TEST-DRAIN POSITIONS, FURNISHED WITH TEST ORIFICE GIVING FLOW EQUIVALENT TO ONE SPRINKLER OF A TYPE HAVING THE SMALLEST ORIFICE INSTALLED ON THE SYSTEM, PRESSURE RELIEF VALVE, UL/FM.	AGF (M1011A), RELIABLE, VICTAULIC

SPR-2

BID DOCUMENT SUBMISSION

Project Number Drawing Title Project Title CONSULTANT DESIGNER OF RECORD STAMP Office of 437-CSI-241 FIRE PROTECTION DETAILS PERFORM SITE PREP BID DOCUMENTS Construction **Building Number** FOR SPS EQUIPMENT ANDERSON and Facilities Drawing Number DELLAN J. LLEWELLYN 27052 Management 2882 106TH STREET DES MOINES IA 50322 FARGO, ND 13605 1st Ave. N. #100 Plymouth, MN 55441 FULLY SPRINKLERED Checked Drawn Issue Date FS 500 P 763.412.4000 | F 763.412.4090 | ae-mn.com VA U.S. Department of Veterans Affairs Anderson Engineering of Minnesota, LLC | Proj # 17639 1/22/2025 | ERIHEN | LUCHEI Date:

Revisions: VA FORM 08 - 6231

ELECTRICAL SYMBOL LIST DESCRIPTION: SYMBOL: COMMON AND SUBSCRIPTS: TYPE / PROGRAMMING SEQUENCE OF # = 15, 30, 75, 110, 177 CANDELA RATING OPERATION SUBSCRIPTS S 4 28 31 00 AUDIO (SPEAKER) ALARM DEVICE, CEILING OR WALL MOUNTED 28 31 00 COMBINATION AUDIO (VOICE) AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED # = CANDELA RATING 28 31 00 FIRE ALARM HEAT DETECTOR BLANK = COMBINATION RATE OF RISE / FIXED TEMP 28 31 00 FIRE ALARM MANUAL PULL STATION 28 31 00 FIRE ALARM ADDRESSABLE MONITOR MODULE 28 31 00 FIRE ALARM FLOW SWITCH TO MONITOR SPRINKLER SYSTEM

FIRE ALARM RENOVATION NOTES:

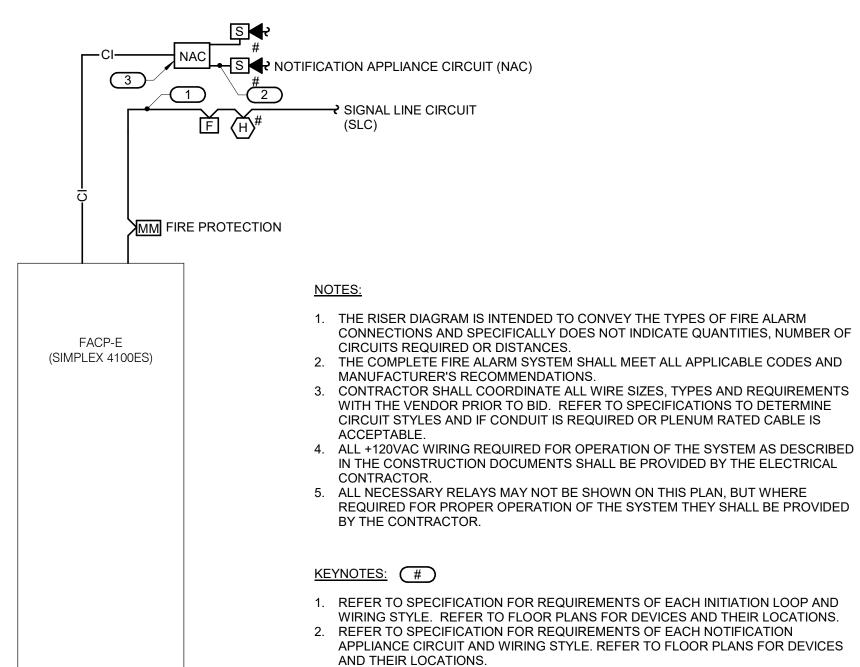
THESE NOTES APPLY TO ALL FIRE ALARM SHEETS.

- 1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS. CONTRACTOR SHALL REVIEW EXISTING
- CONDITIONS AND REPORT CONFLICTS. 2. NOT ALL EXISTING EQUIPMENT AND CONDUIT ARE SHOWN. CONTRACTOR SHALL REVIEW
- EXISTING CONDITIONS AND REPORT CONFLICTS. 3. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS PRIOR TO FABRICATION OF CABLE TRAY, BUSWAY, CONDUIT RACKS, AND OTHER SYSTEMS. RISES AND DROPS MAY BE
- NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS. 4. ELECTRICAL CONTRACTOR SHALL REVIEW EXISTING CONDITIONS TO VERIFY ACCESSIBILITY TO THE AREAS OF THEIR WORK INCLUDING WALLS, FLOOR, CEILINGS, CEILING TILES/GRID, AND ROOF. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE CUTTING, REMOVAL. PATCHING, AND REINSTALLATION OF AFFECTED AREAS ASSOCIATED WITH THEIR WORK BY COORDINATING WITH THE GENERAL CONTRACTOR OR QUALIFIED CONTRACTOR.

FIRE ALARM INSTALLATION NOTES:

- 1. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF
- THROUGH-PENETRATION FIRESTOPS. 2. MOUNT ALL FIRE ALARM PULL STATIONS AT +42" FROM FLOOR (CENTERLINE DIMENSION)
- EXCEPT WHERE OTHERWISE NOTED. 3. INSTALL ALL WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES AT 90" ABOVE FINISHED
- FLOOR OR 6" BELOW THE CEILING, WHICHEVER IS LOWER, EXCEPT WHERE OTHERWISE NOTED. HEIGHT SHALL BE MEASURED TO THE TOP OF THE DEVICE. 4. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES
- IN CEILING TILE PATTERN. SMOKE DETECTORS, CARBON MONOXIDE DETECTORS, AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE. CARBON MONOXIDE DETECTORS SHALL BE LOCATED 10 PLUS FT FROM FIRE PLACES, COOKING, AND SIMILAR FUEL-BURNING APPLIANCES 5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL
- OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS. 6. CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND
- 7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.

FIRE ALARM SHEET INDEX
ELECTRICAL SYSTEMS COVERSHEET
SPS TRAILER FLOOR PLAN - FIRE ALARM
LOWER LEVEL FLOOR PLAN - FIRE ALARM
_



3. PROVIDE NOTIFICATION APPLIANCE EXTENDER PANELS AS REQUIRED.

DETERMINATION OF NEED TO BE MADE BY FIRE ALARM VENDOR. REFER TO SPECIFICATIONS FOR REQUIREMENTS AND ACCEPTABLE MOUNTING LOCATIONS.



BID DOCUMENT SUBMISSION

				COIVILIA	
Drawing Title	Phase	Project Title			Project Number
ELECTRICAL SYSTEMS	BID DOCUMENTS	PERFORM	SITE PR	EP	437-CSI-241
COVERSHEET		FOR SPS E	QUIPME	NT	Building Number
					9
Approved:		Location			Drawing Number
		FARGO, ND			
	FULLY SPRINKLERED	Issue Date	Checked	Drawn	FA000
		1/22/2025	TONDEL	ZACROS	

CONSULTANT
♦IMEG
2882 106TH STREET DES MOINES IA 50322

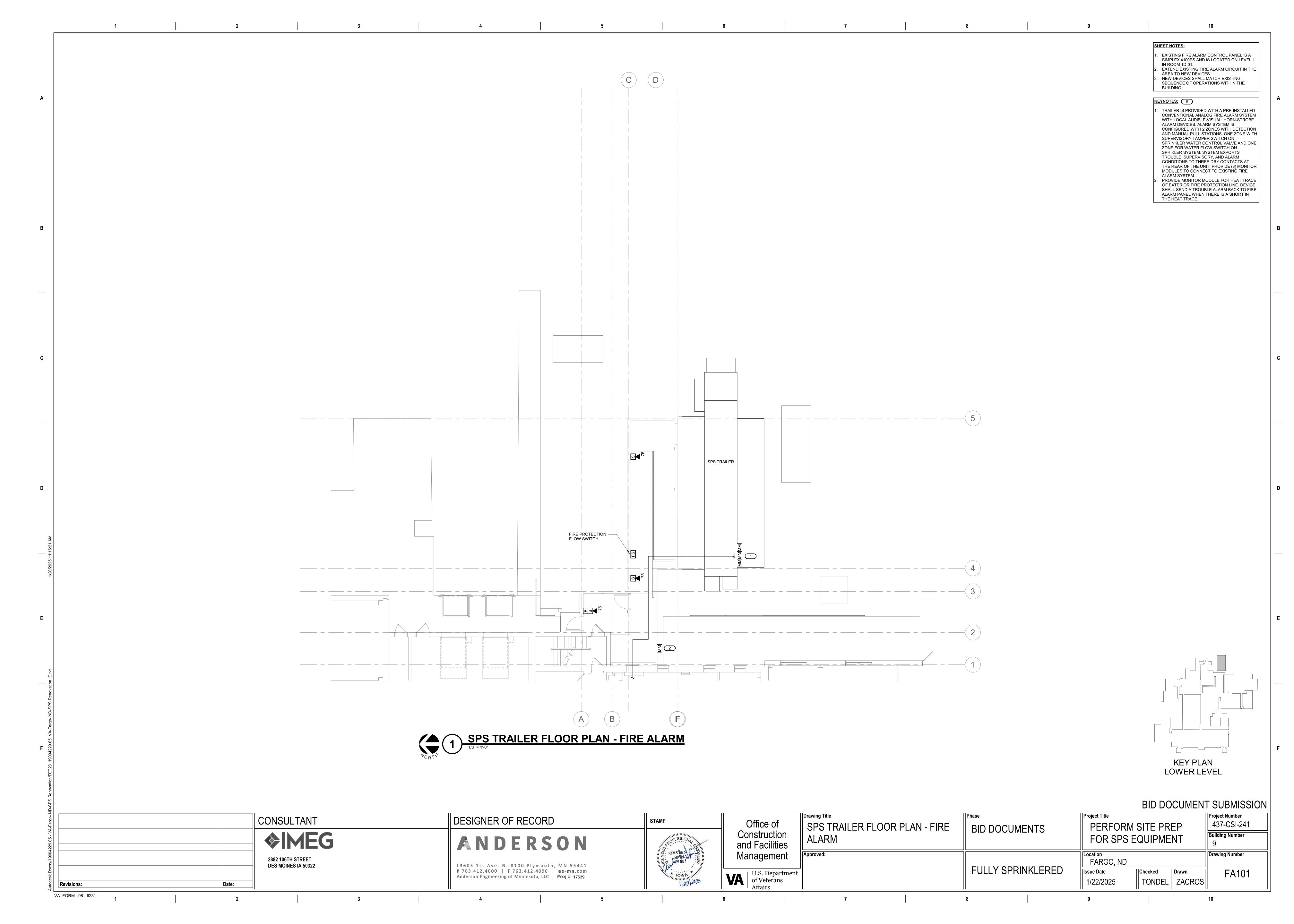
Revisions:

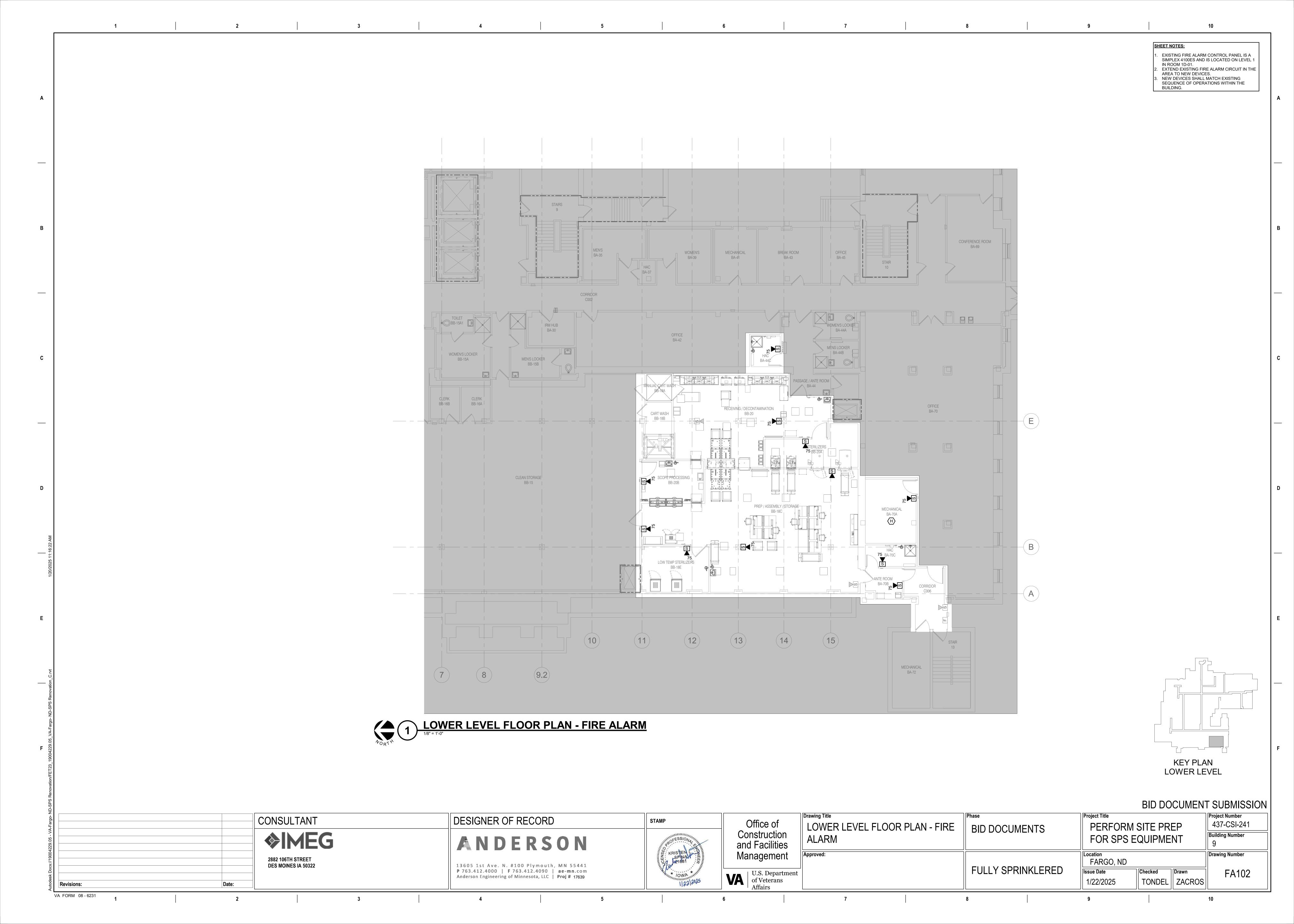
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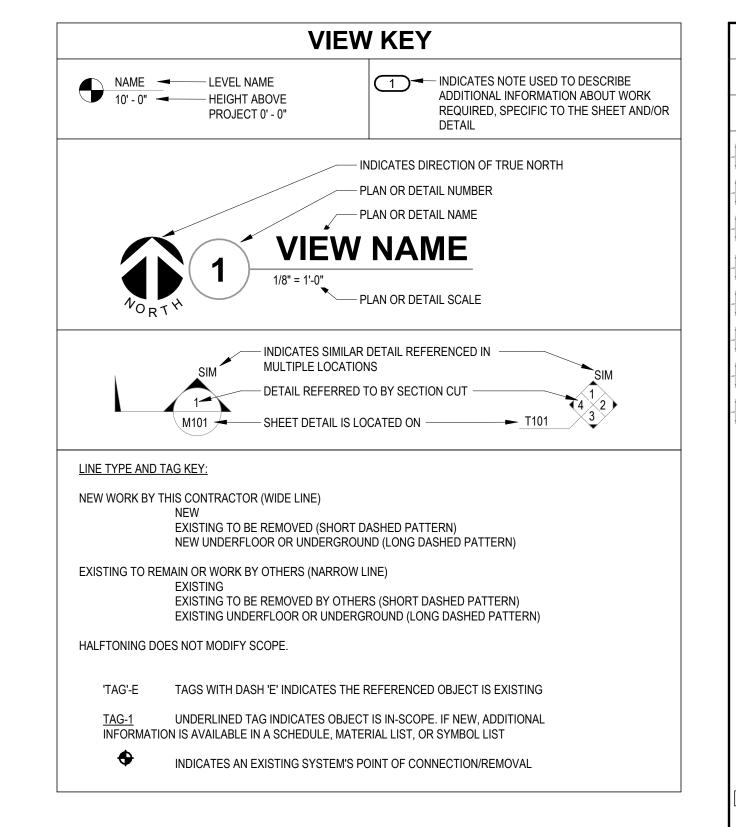
DESIGNER OF RECORD ANDERSON 13605 1st Ave. N. #100 Plymouth, MN 55441 P 763.412.4000 | F 763.412.4090 | ae-mn.com Anderson Engineering of Minnesota, LLC | Proj # 17639

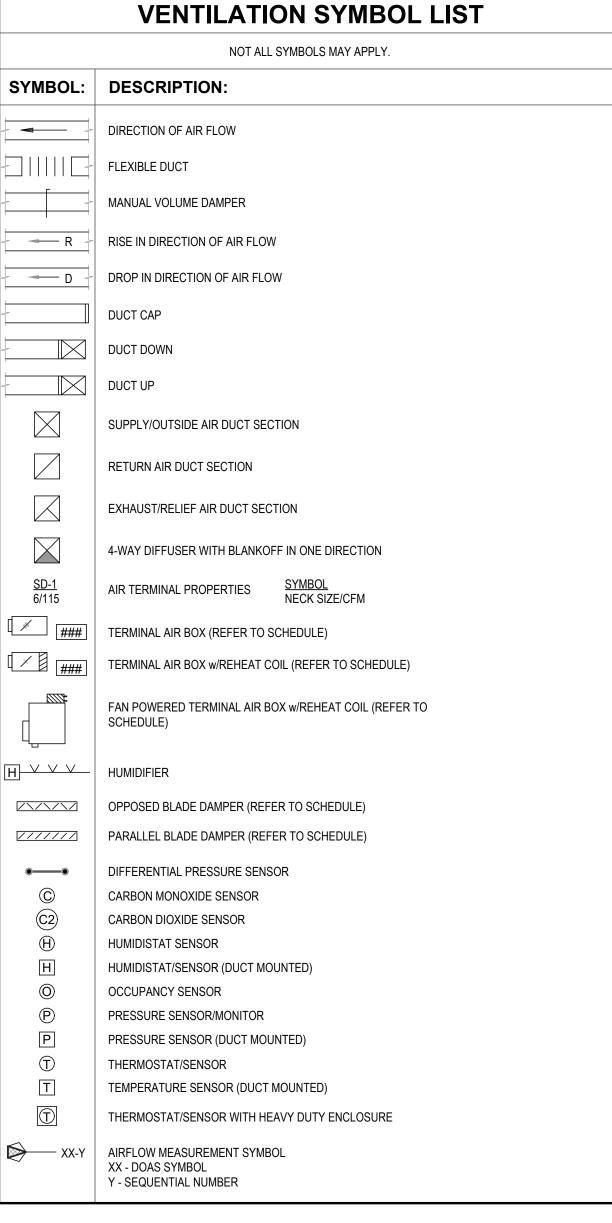


U.S. Department of Veterans Affairs









ABBR:	DESCRIPTION:			
AD	ACCESS DOOR			
AFF	ABOVE FINISHED FLOOR			
CO	CLEANOUT			
CFSD	CONTROL/FIRE/SMOKE DAMPER			
DCE	DUST COLLECTION EXHAUST			
DPG (0-2")	DIFFERENTIAL PRESSURE GAUGE (RANGE)			
DPS	DIFFERENTIAL PRESSURE SWITCH			
EA	EXHAUST/RELIEF AIR			
ECFSD	EXISTING CONTROL FIRE SMOKE DAMPER			
EFD	EXISTING FIRE DAMPER			
EFSD	EXISTING FIRE SMOKE DAMPER			
ESD	EXISTING SMOKE DAMPER			
FD	FIRE DAMPER			
FOB	FLAT ON BOTTOM			
FOT	FLAT ON TOP			
FSD	FIRE/SMOKE DAMPER			
MA	MIXED AIR			
MAU	MAKEUP AIR			
N.C.	NORMALLY CLOSED			
NIC	NOT IN CONTRACT			
N.O.	NORMALLY OPEN			
OA	OUTSIDE AIR			
RA	RETURN AIR			
SA	SUPPLY AIR			
SCCR	SHORT CIRCUIT CURRENT RATING			
SD	SMOKE DAMPER			
TAB	TERMINAL AIR BOX			
TD	TRANSFER DUCT			
TYP	TYPICAL			
UC-1	DOOR UNDERCUT BY OTHERS (1" TYPICAL)			
UON	UNLESS OTHERWISE NOTED			

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

- 1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS. EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
- 2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
- 3. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF HIS/HER WORK AND SHALL NOTIFY THE GENERAL CONTRACTOR PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO HIS/HER AREA OF WORK.
- 4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
- 5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
- 6. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH
- EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
- 7. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE. 8. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON.
- MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED. 9. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW
- SYSTEMS WITH MINIMUM OUTAGE. 10. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

PIPING GENERAL NOTES:

1. PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN. 2. INSTALL ALL REFRIGERANT LIQUID AND SUCTION PIPING SIZED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS.

THROTTLING VALVE

MIXING VALVE

SOLENOID VALVE

CHECK VALVE

—(D)—— PUMP

"WYE" - STRAINER

BASKET STRAINER

FLEXIBLE CONNECTION

AUTOMATIC BALANCING VALVE

CONTROL VALVE (THREE-WAY)

CONTROL VALVE (TWO-WAY)

BACKFLOW PREVENTER

SAFETY/RELIEF VALVE

PRESSURE REDUCING VALVE (STEAM)

TRIPLE DUTY VALVE (IN-LINE TYPE)

VACUUM BREAKER

PRESSURE/TEMPERATURE TEST PLUG

SUCTION DIFFUSER WITH SUPPORT FOOT

REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB

"WYE" - STRAINER W/SHUTOFF VALVE AND HOSE CONNECTION WITH CAP

TRIPLE DUTY VALVE (ANGLE TYPE)

PRESSURE REDUCING VALVE (LIQUID/GAS)

BALANCING VALVE (NUMBER INDICATES GPM)

PIPING SYMBOL LIST NOT ALL SYMBOLS MAY APPLY SYMBOL: DESCRIPTION: ——DPP—— DRAIN GAS REGULATOR VENT HG—REFRIGERANT HOT GAS LOW PRESSURE CONDENSATE LOW PRESSURE STEAM MEDIUM PRESSURE CONDENSATE MEDIUM PRESSURE STEAM REFRIGERANT PIPING SUC—— REFRIGERANT SUCTION PIPE CAP PIPE DOWN PIPE UP PITCH PIPE IN DIRECTION DIRECTION OF FLOW IN PIPE DIELECTRIC CONNECTION UNION/FLANGE SHUTOFF VALVE NORMALLY OPEN SHUTOFF VALVE NORMALLY CLOSED

VENTILATION GENERAL NOTES:

- 1. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO A TERMINAL AIR BOX (TAB) SHALL MATCH THE INLET SIZE UNLESS THE BRANCH IS GREATER THAN 6FEET IN LENGTH. IN WHICH CASE THE BRANCH
- DUCT SHALL BE SIZED AT A PRESSURE DROP OF 0.07"W.C. PER 100' OF DUCTWORK. 2. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO AN AIR TERMINAL SHALL MATCH THE
- 3. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES WHEN IN CLOSE PROXIMITY TO EACH OTHER. 4. PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

- 1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING
- CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT. 2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS,
- INCLUDING THOSE OF OTHER TRADES. 3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES.
- BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS. 4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE
- ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS. 5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
- 6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
- 7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS. 8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS,
- AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
- 9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
- 10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH
- WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE. 11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND
- ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS. 12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP

EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE

- PERIMETER TO BE WATERTIGHT. 13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS.
- CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC. 14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
- 15. MAINTAIN MINIMUM 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
- 16. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6 " BEYOND ALL SIDES OF EQUIPMENT.
- 17. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

MECHANICAL DESIGN CONDITIONS:

BASED ON 2017 ASHREA WEATHER DATA FOR: HECTOR, ND **DESIGN CONDITIONS:** 87.0°F DRY BULB, 70.3°F WET BULB WINTER: -24.5°F DRY BULB

TYPICAL ROOM SETPOINTS:

SUMMER DESIGN: 75°F DRY BULB, 60% RELATIVE HUMIDITY (MAXIMUM) **WINTER DESIGN:** 70°F DRY BULB, NO HUMIDITY REQUIREMENT **SUMMER SETBACK:** 80°F DRY BULB, 60% RELATIVE HUMIDITY WINTER SETBACK: 65°F DRY BULB. NO HUMIDITY REQUIREMENT

REFER TO CONTROL DIAGRAMS FOR ROOM SPECIFICS.

VENTILATION SHEET INDEX		
И-001	MECHANICAL SYMBOLS, ABBREVIATIONS, GENERAL NOTES	
MD-101	MECHANICAL LOWER LEVEL - HVAC DEMO PLAN	
MD-102	MECHANICAL LOWER LEVEL - STEAM DEMO PLAN	
MH-101	MECHANICAL LOWER LEVEL - HVAC PLAN	
MH-102	MECHANICAL LOWER LEVEL - HVAC PRESSURE PLAN	
MH-103	MECHANICAL LOWER LEVEL - HVAC - SUROUNDING TAB	
MP-101	MECHANICAL PLAN - LOWER LEVEL STEAM PIPING	
M-301	MECHANICAL PIPING - STEAM FLOW DIAGRAM	
M-501	MECHANICAL DETAILS	
M-601	MECHANICAL SCHEDULES	
GRAND TOTAL: 1	0	

BID DOCUMENT SUBMISSION

Project Number Drawing Title **Project Title CONSULTANT** DESIGNER OF RECORD STAMP Office of 437-CSI-241 MECHANICAL SYMBOLS, PERFORM SITE PREP BID DOCUMENTS Construction **Building Number** ABBREVIATIONS, GENERAL NOTES FOR SPS EQUIPMENT ANDERSON hereby certify that this plan, specification, or and Facilities report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the Drawing Number Management 2882 106TH STREET FARGO, ND Print Name: **DES MOINES IA 50322** 13605 1st Ave. N. #100 Plymouth, MN 55441 Signature: Kiby Chamen **FULLY SPRINKLERED** Issue Date Checked Drawn M-001 **P** 763.412.4000 | **F** 763.412.4090 | **ae-mn**.com | U.S. Department of Veterans
Affairs Date 01/22/2025 License # 52555 Anderson Engineering of Minnesota, LLC | Proj # 17639 KAH SEF 01/22/2025 Date: Revisions: VA FORM 08 - 6231