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GENERAL

FIRE PROTECTION PLANS ARE INTENDED TO INDICATE TOTAL COVERAGE AND MAY OR MAY NOT INDICATE ALL SPRINKLER HEADS. SPRINKLER HEADS INDICATED ON DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE NOT BE COUNTED FOR BID. THE CONTRACTOR SHALL PROVIDE A COMPLETE SPRINKLER SYSTEM WITH COMPLETE SPRINKLER COVERAGE, INDICATED OR NOT. ITEMS AND SERVICES NOT SHOWN ON DRAWINGS OR SPECIFICATIONS BUT REQUIRED TO RENDER THE WORK COMPLETE, IN ACCORDANCE WITH NFPA, INSURANCE COMPANY REQUIREMENTS AND OWNERS, READY FOR OPERATION, SHALL BE PROVIDED AND INSTALLED.

DRAWINGS ARE DIAGRAMMATIC AND INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUBCONTRACTOR DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE, OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR. GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED. THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES AND EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION. DO NOT SCALE DRAWINGS. CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.

WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT, AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITHIN NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO PROVIDE FOR FINISHED WORK, TESTED AND READY FOR OPERATION.

THE DESIGN OF ALL FIRE SUPPRESSION SYSTEMS WILL BE IN ACCORDANCE WITH NFPA 13, LOCAL, STATE AND THE OWNER'S INSURANCE COMPANY REQUIREMENTS. USE ONLY UL/FM APPROVED SPRINKLERS, MATERIALS AND DEVICES, UNLESS NOTED OTHERWISE.

CONTRACTORS ARE WELCOMED TO VISIT THE SITE AT THE TIME OF BID, TO EXAMINE CONDITIONS AND BECOME FAMILIAR WITH THE JOB, NOTING DEGREE OF DIFFICULTY IN GETTING EQUIPMENT (INCLUDING LIFTS AND SCAFFOLDS) IN AND OUT OF THE BUILDING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER IN WRITING PRIOR TO SUBMITTING A BID.

NOTIFY PROPER AUTHORITIES (INCLUDING BUT NOT LIMITED TO: THE LOCAL A.H.J., INSURANCE COMPANY, ETC.) OF ANY FIRE PROTECTION "SHUT DOWNS". SCHEDULE ALL WORK TO MINIMIZE THE LENGTH OF TIME THAT THE FIRE PROTECTION SYSTEM(S) WILL BE OUT OF SERVICE. RETURN THE SPRINKLER SYSTEM BACK IN SERVICE AT THE END OF EACH WORKING DAY. IF A FIRE WATCH IS REQUIRED BY THE LOCAL A.H.J. BUILDING MANAGER, ETC. IT SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. FIRE WATCH SCHEDULING AND PERSONNEL SHALL BE COORDINATED WITH THE LOCAL A.H.J., BUILDING MANAGER AND INSURANCE COMPANY.

ARRANGE PIPING TO FACILITATE FLUSHING. PROVIDE READILY ACCESSIBLE DRAIN AND FLUSHING CONNECTIONS AS REQUIRED BY NFPA 13. PROVIDE AND INSTALL AUXILIARY DRAINS WITH PROVISIONS FOR COMPLETE DRAINAGE. PIPE ALL DRAINS AS SHOWN IN BID DRAWINGS.

INSPECTOR'S TEST CONNECTIONS, DRAIN VALVES AND CONTROL VALVES SHALL BE READILY ACCESSIBLE AND INSTALLED NOT OVER +/-7'-0" ABOVE THE FINISHED FLOOR. PROVIDE ALL VALVES WITH IDENTIFICATION SIGNS. SUPERVISORY SWITCHES SHALL BE ON ALL CONTROL VALVES.

INSTALL A PRESSURE GAUGE WITH A BLEEDER MAINTENANCE VALVE AT THE TOP OF ALL RISERS. DO NOT SCALE DRAWINGS FOR DIMENSIONS NOT INDICATED. REFER TO ARCHITECT FOR RESOLUTION FOR

ANY DIMENSIONS NOT INDICATED. PROVIDE A HEAD GUARD ON SPRINKLERS IN AREAS SUBJECT TO MECHANICAL DAMAGE (I.E. SPRINKLERS IN: MECHANICAL ROOMS, ETC.)

THE CONTRACTOR SHALL COORDINATE SPRINKLER WORK WITH THE OWNER'S PHASING SCHEDULE PRIOR TO COMMENCEMENT OF ANY WORK. ALL PHASED SECTIONS OF WORK SHALL COMPLY WITH THE OWNERS SCHEDULE AND BE TESTED, INSPECTED, READY FOR OPERATION IN ACCORDANCE WITH NFPA, OWNERS INSURANCE COMPANY AND A.H.J. REQUIREMENTS.

THE CONTRACTOR SHALL PROVIDE COMPLETE SIGNED AND SEALED DRAWINGS INDICATING ALL PIPING AND SPRINKLER HEADS.

INSTALL SPRINKLERS BELOW DUCTS, AND/OR COMBINATIONS OF DUCTS/EQUIPMENT IN ACCORDANCE WITH THE OBSTRUCTION REQUIREMENTS OF NFPA 13.

PROVIDE SPRINKLER PROTECTION IN ORDER TO AVOID ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13, INCLUDING: LIGHTING, CEILING FIXTURES, STRUCTURAL MEMBERS, ETC. WITHIN ALL HAZARD OCCUPANCIES.

ALL DRAIN PIPING AND ANY PIPING SUBJECT TO ALTERNATE WETTING AND DRYING SHALL BE GALVANIZED. THE CONTRACTOR SHALL SEAL AROUND ALL NEW PENETRATIONS THROUGHOUT THE BUILDING WITH SEALANT OF FIRE AND/OR SMOKE RETARDANT TYPE EQUAL IN FIRE RATING TO THE STRUCTURE BEING PENETRATED. SEALANT SHALL BE A UL LISTED ASSEMBLY.

WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS SPECIFIED AND AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT GENERAL CONDITIONS AND WITH THE PROVISIONS OF ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND LAWS.

WORK SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIAL, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, FEES, LICENSES, AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE WORK SHOWN ON THE DRAWINGS, SPECIFIED HEREIN AND AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM..

STORE MATERIALS INSIDE AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE.

ALTERATION WORK AND DEMOLITION

EXISTING PIPING AND SPRINKLERS SHOWN DO NOT NECESSARILY REFLECT EXACT FIELD CONDITIONS. FIELD VERIFY EXTENT AND LOCATION OF WORK TO BE REMOVED. ALL EQUIPMENT, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO THE OWNER, OR

SALVAGED AS DIRECTED BY THE OWNER. EQUIPMENT, PIPING, DEVICES, ETC. SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT THE OWNER'S APPROVAL.

NO EXISTING PIPE MAY BE CUT OR DAMAGED WHEN ENCOUNTERED ALONG THE ROUTE DESIGNED FOR NEW SERVICE. ANY EXISTING PIPING SEVERED OR DAMAGED SHALL BE REPLACED INCLUDING DAMAGED AREAS.

UPON COMPLETION OF REMOVALS AND MODIFICATIONS, ALL PIPING TO REMAIN SHALL BE PROPERLY PLUGGED, VALVED, CAPPED AND/OR BY PASSED SUCH THAT UPON COMPLETION OF WORK ALL SYSTEMS TO REMAIN, REMAIN OPERATIONAL.

REMOVE & REPLACE ANY EXISTING SPRINKLER PIPING WHICH DOES NOT PASS THE REQUIRED HYDROSTATIC PRESSURE TESTS CONDUCT VISUAL INTERNAL INSPECTIONS ON AT LEAST 5% OF ANY EXISTING PIPING TO REMAIN.

NO DEAD ENDS SHALL BE LEFT ON ANY PIPING SYSTEMS UPON COMPLETION OF WORK. EXISTING EXPOSED PIPING SYSTEMS NOT TO BE REUSED, AND NOT SPECIFICALLY NOTED FOR REMOVAL SHALL BE COMPLETELY REMOVED.

CODES AND STANDARDS

2020 NEW YORK STATE BUILDING CODE

2020 NEW YORK STATE FIRE CODE

2016 NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS

ROTECTION NOTES

ALL SYSTEMS SHALL BE LEFT IN WORKING ORDER TO THE SATISFACTION OF THE OWNER UPON COMPLETION OF ALL NEW WORK.

ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO NEW WORK SHALL BE COMPLETELY REMOVED.

RE-ROUTE OR REMOVE ALL EXISTING PIPING AND SYSTEMS WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL, OR MASONRY WORK AS REQUIRED BY THE PROPOSED ALTERATIONS. COORDINATION DRAWINGS

DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED. SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER "REVIEWED" OR "FURNISH AS CORRECTED" PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS. AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVISED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE OTHERS TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:

PLUMBING CONTRACTOR ELECTRICAL WORK MECHANICAL PIPING SPRINKLER PIPING

PRIOR TO INCLUSION OF SPRINKLER PIPING AND EQUIPMENT, CONTRACTOR SHALL HAVE SUBMITTED SPRINKLER PLANS AND CALCULATIONS TO ENGINEER FOR REVIEW AND TO OWNERS INSURANCE COMPANY AND RATING BUREAU FOR REVIEW, AND HAVE ADDRESSES ALL COMMENTS.

AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWING AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF OMITTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.

THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.

SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW FOR ACCEPTABILITY OF INSTALLATIONS.

ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES SHALL BE REMOVED AND RE-INSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.

EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.

THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

AS BUILT DRAWINGS

PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSECUTIVE SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONCISE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED AND TURNED OVER IN BOTH HARD COPY AND ELECTRONIC (AUTO-CAD VERSION) VERSION TO THE MMA. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.

PROVIDE "AS-BUILT DRAWINGS" INDICATING IN A NEAT AND ACCURATE MANNER A COMPLETE RECORD OF ALL REVISIONS OF THE ORIGINAL DESIGN OF THE WORK. INDICATE THE FOLLOWING INSTALLED CONDITIONS: INCLUDE ALL CHANGES AND AN ACCURATE RECORD, ON REPRODUCTIONS OF THE CONTRACT DRAWINGS OR

APPROPRIATE SHOP DRAWINGS, OF ALL DEVIATIONS, BETWEEN THE WORK SHOWN AND WORK INSTALLED. MAINS AND BRANCHES OF PIPING SYSTEMS, WITH VALVES AND CONTROL DEVICES LOCATED AND NUMBERED, CONCEALED UNIONS LOCATED, AND WITH ITEMS REQUIRING MAINTENANCE LOCATED (I.E., TRAPS, STRAINERS, EXPANSION COMPENSATORS, TANKS, ETC.). VALVE LOCATION DIAGRAMS, COMPLETE WITH VALVE TAG CHART.

EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES. APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED. CONTRACT MODIFICATIONS, ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

SUBMIT FOR REVIEW BOUND SETS OF THE REQUIRED DRAWINGS, MANUALS AND OPERATING INSTRUCTIONS. SUBMIT A COMPLETE MAINTENANCE MANUAL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT. HOUSEKEEPING PADS

PROVIDE CONCRETE HOUSEKEEPING PADS FOR FLOOR-MOUNTED EQUIPMENT. COORDINATE EXACT LOCATIONS, DIMENSIONS, PIPING LOCATIONS, AND ANCHOR BOLT REQUIREMENTS. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT. PADS SHALL BE CONSTRUCTED OF 3,000 PSI CONCRETE. PADS SHALL BE 4 INCHES HIGH, AND 4 INCHES WIDER THAN THE EQUIPMENT IN BOTH DIRECTIONS.

HANGERS AND SUPPORT

PROVIDE RESTRAINT AND EXPANSION OF ALL FIRE PROTECTION EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS, OWNERS INSURANCE COMPANY, STATE, FEDERAL AND LOCAL BUILDING CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT INDICATING ALL NECESSARY COMPONENT CUTS, PLAN LOCATIONS AND CALCULATIONS FOR A COMPLETE SYSTEM.

PROVIDE ALL NECESSARY STRUCTURAL MEMBERS INCLUDING ADDITIONAL STRUCTURAL SUPPORT TO SUPPORT PIPING AND EQUIPMENT. HANGERS AND SUPPORTS SHALL BE OF AN APPROVED DESIGN NECESSARY TO SUPPORT PIPING, EQUIPMENT AND TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC., ARE SUPPORTED FROM CONCRETE CONSTRUCTION, DO NOT WEAKEN CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION, AS REQUIRED.

PROVIDE ADDITIONAL SUPPORT FOR PIPING AND EQUIPMENT WHEN DECK IS NOT CAPABLE OF SUPPORT. BEAM CLAMPS - HANGERS SUPPORTED FROM STEEL SHALL BE CENTER LOADING BEAM CLAMPS FOR HANGERS SUPPORTING PIPING 2 INCHES. FOR PIPING 2-1/2 INCHES AND LARGER, I BEAM CLAMPS SHALL BE FORGED STEEL. "C" CLAMPS ARE PERMITTED ONLY WHEN PROVIDED WITH RESTRAINING STRAP. BAR JOIST HANGERS SHOULD BE UTILIZED WHEN HANGING FROM BAR JOIST CONSTRUCTION. PROVIDE AND INSTALL EXPANSION COMPENSATION FOR ALL PIPING. SUBMIT PLANS, CALCULATIONS AND EQUIPMENT DATA.

DESIGN CRITERIA

- 1. ORDINARY 1 HAZARD OCCUPANCY STORAGES, MECHANICAL ROOMS, PANTRY, COPY ROOMS, CONFERENCE ROOMS, DENSITY 0.15 GPM PER SQ. FT OVER MOST HYDRAULICALLY REMOTE 1500 SQ. FT., MAXIMUM COVERAGE PER SPRINKLER HEAD 130 SQ. FT.
- LIGHT HAZARD OCCUPANCY OFFICE SPACE AND ALL OTHER AREAS: DENSITY 0.10 GPM PER SQ. FT. OVER MOST HYDRAULICALLY REMOTE 1500 SQ. FT., MAXIMUM COVERAGE PER SPRINKLER HEAD 225 SQ. FT.
- 3. CLOSELY SPACED SPRINKLER HEADS LOCATED 6'-0" O.C. AND LOT LINE SPRINKLERS SHALL DISCHARGE MINIMUM 3 GPM PER LINEAR FOOT OF PROTECTED LINE. NUMBER OF CLOSELY SPACED SPRINKLERS INCLUDED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA 13 PARAGRAPH 11.3.3.
- 4. MINIMUM PRESSURE AT SPRINKLER HEAD 7 PSI.
- WHENEVER ROLL GROOVED CONNECTIONS ARE USED, ALLOWANCE FOR ADDITIONAL PRESSURE LOSS AT GROOVES SHALL BE MADE AS FOLLOWS:
 5.1. FOR EACH COUPLING ON STRAIGHT RUN INCLUDING STRAIGHT FLOW THROUGH TEE OR CROSS: ADD 1 EQUIVALENT FOOT OF PIPE.
 5.2. FOR EACH COUPLING AT ELBOW, TEE OR CROSS WHERE DIRECTION OF FLOW CHANGES: ADD 2 EQUIVALENT FEET OF PIPE.
- EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA STANDARD NO. 13
 WHEREVER FITTINGS ARE USED IN CONJUNCTION WITH LIGHTWALL PIPE, EQUIVALENT FITTING LENGTHS INDICATED IN NFPA-13, SHALL BE INCREASED BY 30%
- 7. DISCHARGE FROM EACH SPRINKLER HEAD SHALL NOT BE LESS THAN REQUIRED FOR AREA COVERED BY THIS HEAD. AREA COVERAGE PER HEAD SHALL BE DETERMINED IN ACCORDANCE WITH NFPA NO.
- 8. HYDRAULIC CALCULATIONS SHALL BE BROUGHT BACK TO CONNECTION TO WATER SUPPLY FIRE STANDPIPE RISER.
- 9. PRELIMINARY WATER SUPPLY INFORMATION: AT EXISTING FLOOR CONTROL ASSEMBLY INDICATED ON THE RISER DIAGRAM.
- 10. SYSTEMS SHALL BE BALANCED TO MAINTAIN MINIMUM 30 MINUTES FIRE RESERVE FOR LIGHT HAZARD AND 60 MIN FOR ORDINARY.
- 11. EXPOSED UPRIGHT SPRINKLERS IN OCCUPIED AREAS TO BE CHROME FINISH
- CONCEALED SPRINKLER PLATE COLOR BY OWNER/ARCHITECT OR TO MATCH EXISTING CONDITION.
 CONTRACTOR SHALL INCLUDE REQUIRED ADDITIONAL SPRINKLERS AND ADDITIONAL BRANCH
- PIPING/FITTINGS TO COVER FURTHER COORDINATION. 14. CONTRACTOR TO PROVIDE ANY REQUIRED ACCESS DOOR REQUIRED FOR INSPECTION AND
- MAINTENANCE. 15. MAXIMUM WATER VELOCITY MUST NOT EXCEED 30 FT/SEC
- 16. PROVIDE REQUIRED SPRINKLER UNDER DUCTWORK OR OBSTRUCTIONS 48 INCH OR WIDER.
- 17. PROVIDE SPRINKLERS GUARDS IN ALL SPRINKLER INSTALLED AT 7 FT AFF OR LOWER.
- 18. ALL SPRINKLERS IN SPACES WITH FINISHED CEILINGS SHALL BE INSTALLED CENTER OF TILE OR ALIGNED WITH CEILING COMPONENTS WITH NO VISIBLE DEVIATION IN ACCORDANCE WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- 19. ALL PIPING SHALL BE ARRANGED TO DRAIN BACK TO CONTROL VALVE ASSEMBLY. WHERE PIPING CANNOT DRAIN BACK TO CONTROL VALVE ASSEMBLY PROVIDE ADDITIONAL DRAIN CONNECTIONS IN ACCORDANCE WITH NYC CODE AND NFPA 13 REQUIREMENTS.
- 20. MAINTAIN REQUIRED CLEARANCES FROM INCLUDING BUT NOT LIMITED TO STRUCTURAL MEMBERS AND CEILING MOUNTED EQUIPMENT IN ACCORDANCE WITH NYC CODE AND NFPA 13 REQUIREMENTS.
- 21. MINIMUM 18" CLEARANCE SHALL BE MAINTAINED BETWEEN SPRINKLER DEFLECTOR AND TOP OF STORAGE AND SHELVING.
- 22. PROVIDED ELEVATED TEMPERATURE RATED SPRINKLERS WHERE REQUIRED BY NYC CODE AND NFPA 13 OR WHERE AMBIENT TEMPERATURE MAY EXCEED SPRINKLER MAXIMUM AMBIENT TEMPERATURE RATING.
- 23. ALL PAINTED OR OTHERWISE DAMAGED SPRINKLERS OR COVER PLATES SHALL BE REPLACED WITH NEW.
- 24. FLOOR CONTROL VALVE ASSEMBLY SHALL BE INSTALLED AT NO MORE THAN 7 FT FROM FLOOR OR ACCESIBLE PER CODE.

FIRE SPRINKLER DRAWING LIST

DRAWING NUMBER	DRAWING DESCRIPTION
SP-001	SPRINKLER - GENERAL NOTES, SYMBOL LIST & DRAWING LIST
SP-200	SPRINKLER - LOWER LEVEL PLAN NEW WORK
SP-201	SPRINKLER - UPPER & LOWER LEVEL PART PLANS NEW WORK
SP-300	SPRINKLER - RISER DIAGRAM
SP-400	SPRINKLER - DETAILS & SCHEDULES

	2020 NEV YORK STATE Sprinkler notes														
	SERINKLER NUIES														
REFE	RENCES:	 * LATEST BUILDING CODE OF NEW YORK STATE (BC-NYS 2020), CHAPTER 9. * LATEST UNIFORM FIRE PREVENTION CODE OF NEW YORK STATE. * NFPA-13 "STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2016 EDITION. 													
1.	AUTOMATI	C SPRINKLER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH BC-NYS 903.3 AND NFPA 13													
2.	EXEMPT LO	CATIONS IN ACCORDANCE WITH BC-NYS 903.2 (EXCEPTIONS) AND 903.3.1.1.1.													

SPRINKLER SYSTEM MONITORING AND ALARMS SHALL COMPLY WITH BC-NYS 903.4.

4. ALARM, SUPERVISORY AND TROUBLE SIGNALS IN ACCORDANCE WITH BC-NYS 903.4.1.

5. ALARMS SHALL CONFORM WITH BC-NYS 903.4.2.

6. SPRINKLER SYSTEMS SHALL BE TESTED AND MAINTAINED IN ACCORDANCE WITH THE FIRE CODE OF NEW YORK STATE.

CLASSIFICATION OF OCCUPANCIES IN ACCORDANCE WITH NFPA 13 CHAPTER 5.
 SPRINKLER TEMPERATURE RATINGS SHALL COMPLY WITH NFPA 13 SECTION 8.3.2.

9. POSITION, LOCATION, SPACING, AND USE OF SPRINKLERS SHALL COMPLY WITH NFPA 13 SECTIONS 8.5, 8.6, 8.7, 8.8, 8.9, 8.10, 8.11, 8.12, AND 8.13.

10. HANGER AND SUPPORTS SHALL BE IN ACCORDANCE WITH NFPA 13 CHAPTER 9.

SPRINKLER SHOP DRAWING NOTE:

THE CONTRACTOR SHALL SUBMIT COORDINATED SHOP DRAWINGS OF THE SPRINKLER SYSTEM FOR REVIEW. THIS SHALL BE DONE BEFORE THE INSTALLATION OF ANY PIPING OR EQUIPMENT. THE SHOP DRAWING SHALL INCLUDE PIPE ROUTING, SIZES, ELEVATIONS, SLEEVES LOCATIONS AND SIZES. THE DRAWINGS SHALL CONTAIN ALL THE INFORMATION NECESSARY FOR THE PROPER INSTALLATION OF THE JOB. THE SHOP DRAWINGS SHALL BE COORDINATED WITH OTHER TRADES AND OR EXISTING PIPING OR EQUIPMENT THAT MIGHT AFFECT THE INSTALLATION. THE DRAWING SHALL BE SUBMITTED AT A MINIMUM 3/8" SCALE OR AT SCALE THAT IS EASILY LEGIBLE. THE DESIGN DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO BE USED AS A SHOP DRAWING THEREFORE A COPY OF THE DESIGN DRAWING IS NOT ACCEPTABLE AS A SHOP DRAWING.

OCCUPANT SAFETY NOTES:

1. CONSTRUCTION WORK WILL BE CONFINED TO THE ITEMS AS INDICATED IN THE DRAWING, AND WILL NOT CREATE DUST, DIRT OR OTHER SUCH INCONVENIENCE TO THE OTHER TENANTS WITHIN THE BUILDING.

 CONSTRUCTION OPERATION WILL NOT BLOCK HALLWAYS OR MEANS OF EGRESS FOR THE TENANTS OF THE BUILDING.
 CONSTRUCTION OPERATION WILL NOT INVOLVE INTERRUPTION OF HEATING, WATER, OR OTHER ELECTRICAL SERVICES TO OTHER TENANTS OF THE BUILDING.

4. THERE WILL BE NO ONE OCCUPYING THE WORK AREA DURING THE CONSTRUCTION WORK THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATIONS SHEET, ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED. AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICATION CODES.

5. NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE OCCUPANTS.

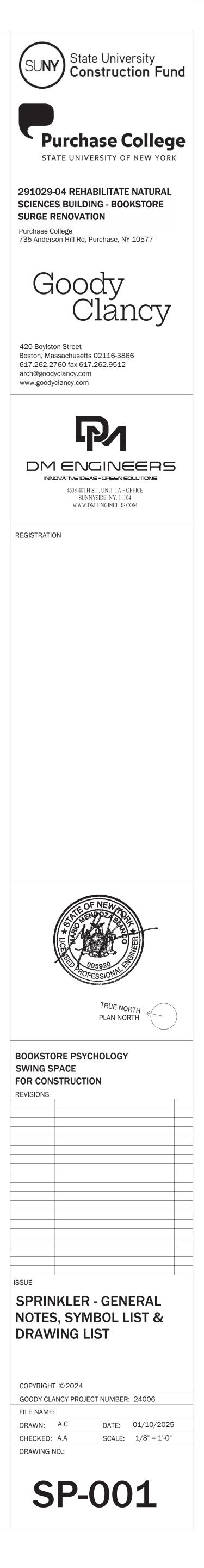
FIRE SPRINKLER LEGEND

6. CONSTRUCTION OPERATION SHALL COMPLY WITH APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS

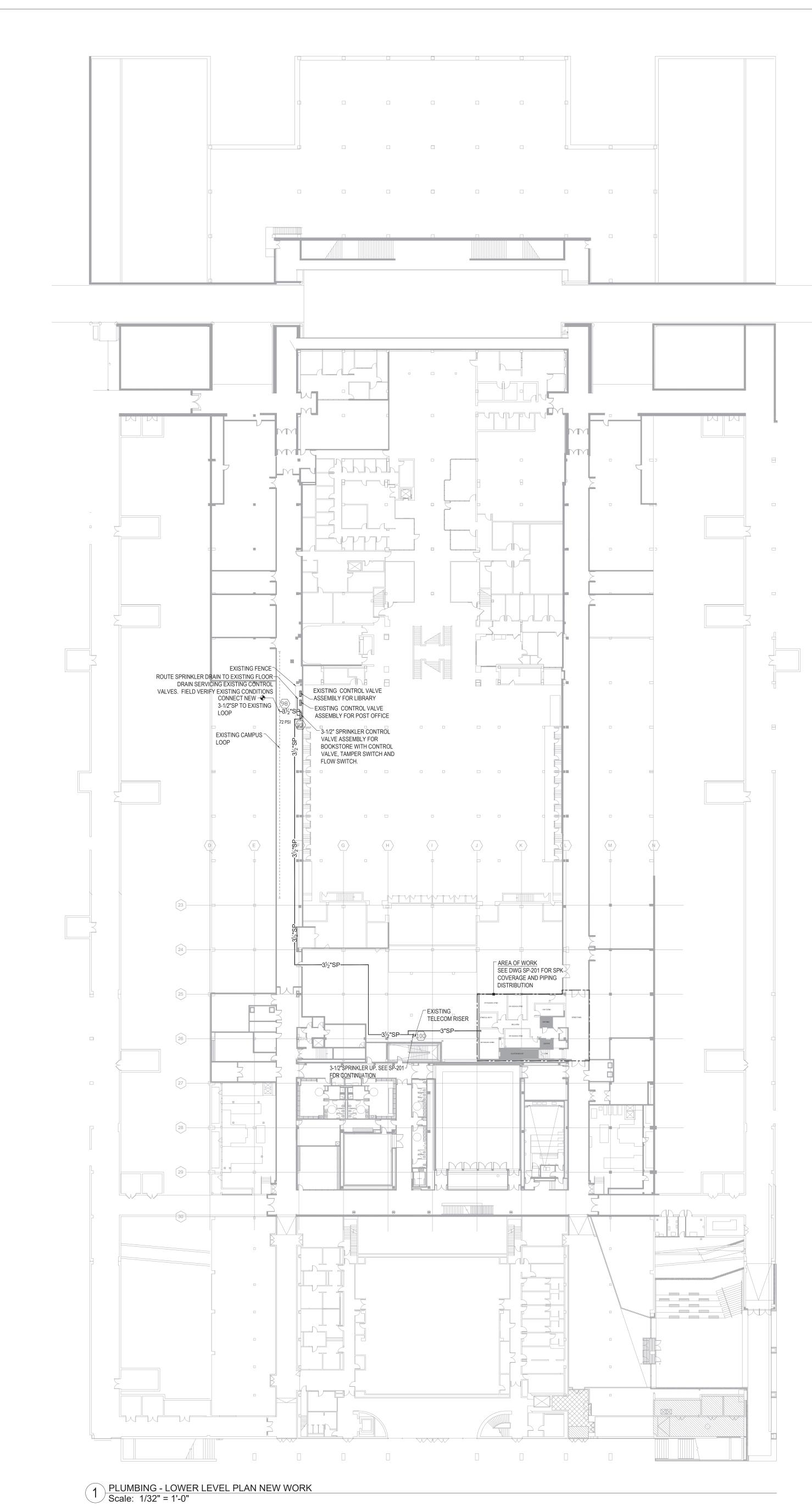
SYMBOL	DESCRIPTION												
	NEW CONCEALED PENDENT SPRINKLER HEAD												
•	NEW EXPOSED PENDENT SPRINKLER HEAD												
-0	V EXPOSED UPRIGHT SPRINKLER HEAD												
W	SIDEWALL SPRINKLER HEAD												
	NEW SPRINKLER PIPING												
	NEW GALVANIZED DRAIN PIPING												
	NEW UNDERGROUND SUPPLY PIPING												
C	ELBOW UP OR DOWN												
0	PIPING / RISER UP												
	BOTTOM TAP												
	ТОР ТАР												
	CONTROL VALVE WITH TAMPER SWITCH												
	CHECK VALVE												
	DIRECTIONAL WATERFLOW INDICATOR												
	WATER FLOW SWITCH												
-SPK	SPRINKLER PIPING												
annam DRahamanan	GALVANIZED DRAIN PIPING												
VIF	VERIFY IN FIELD												
TS	TAMPER SWITCH												
FS	FLOW SWITCH												
	CONNECT TO EXISTING												
	BACKFLOW PREVENTOR												
ீ ⋈ <u></u> –	EXPOSED SPRINKLER CONTROL ASSEMBLY												
-21	3" x 3" x 4" FLUSH FIRE DEPARTMENT CONNECTION												
NUMBER													

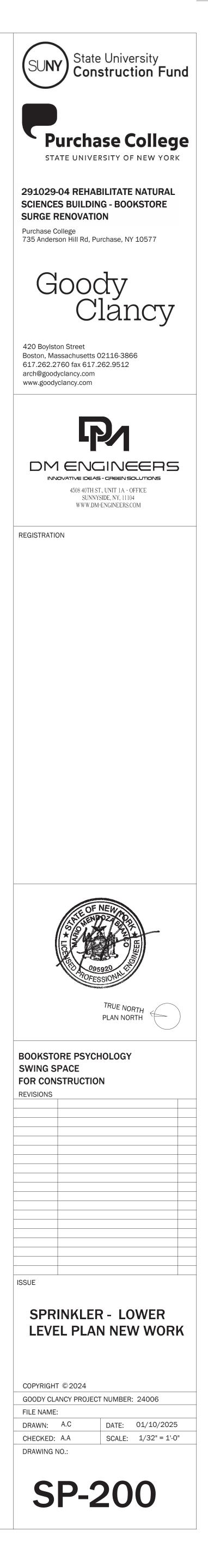
NUMBER SHEET

DETAIL DESIGNATION SYMBOL

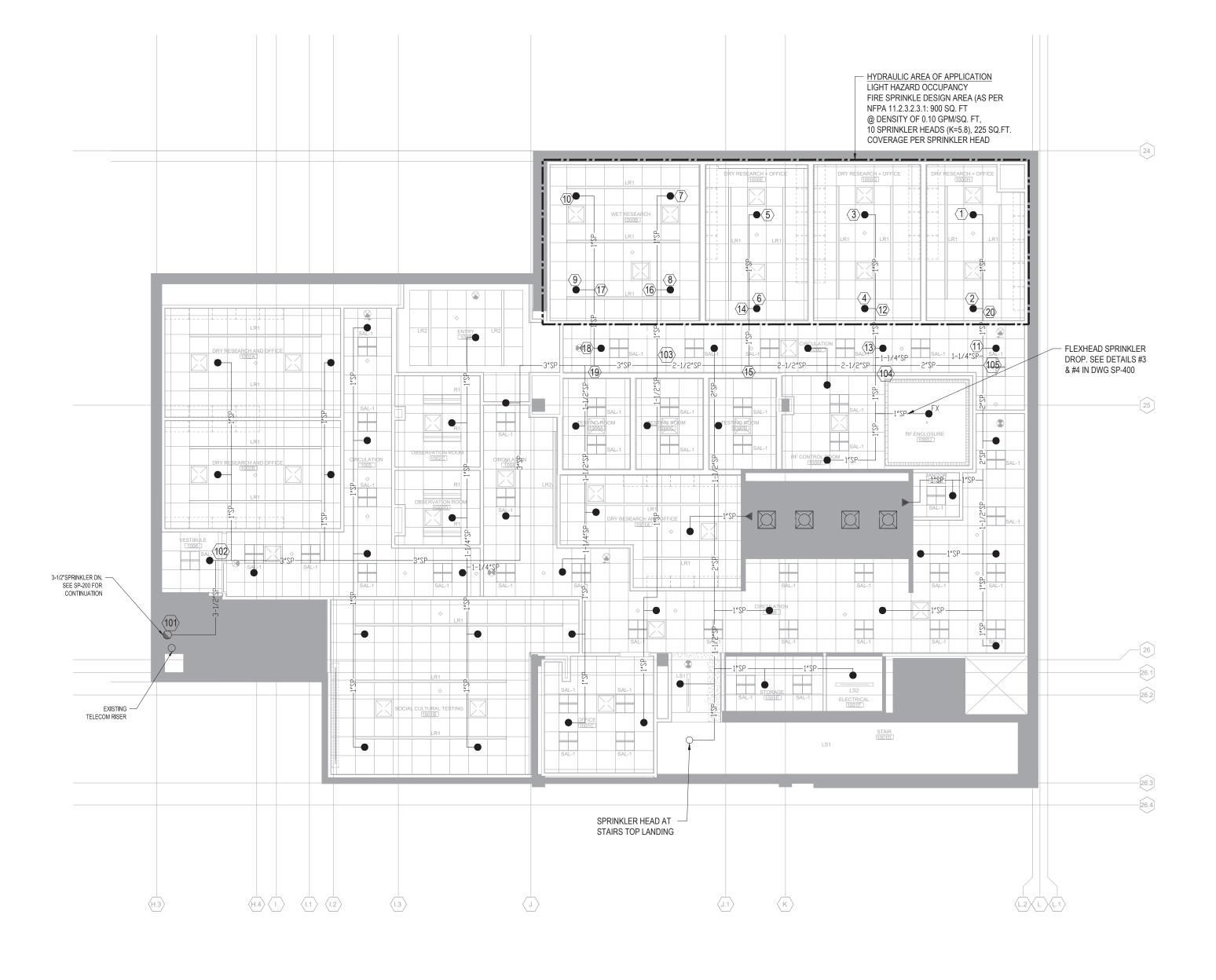


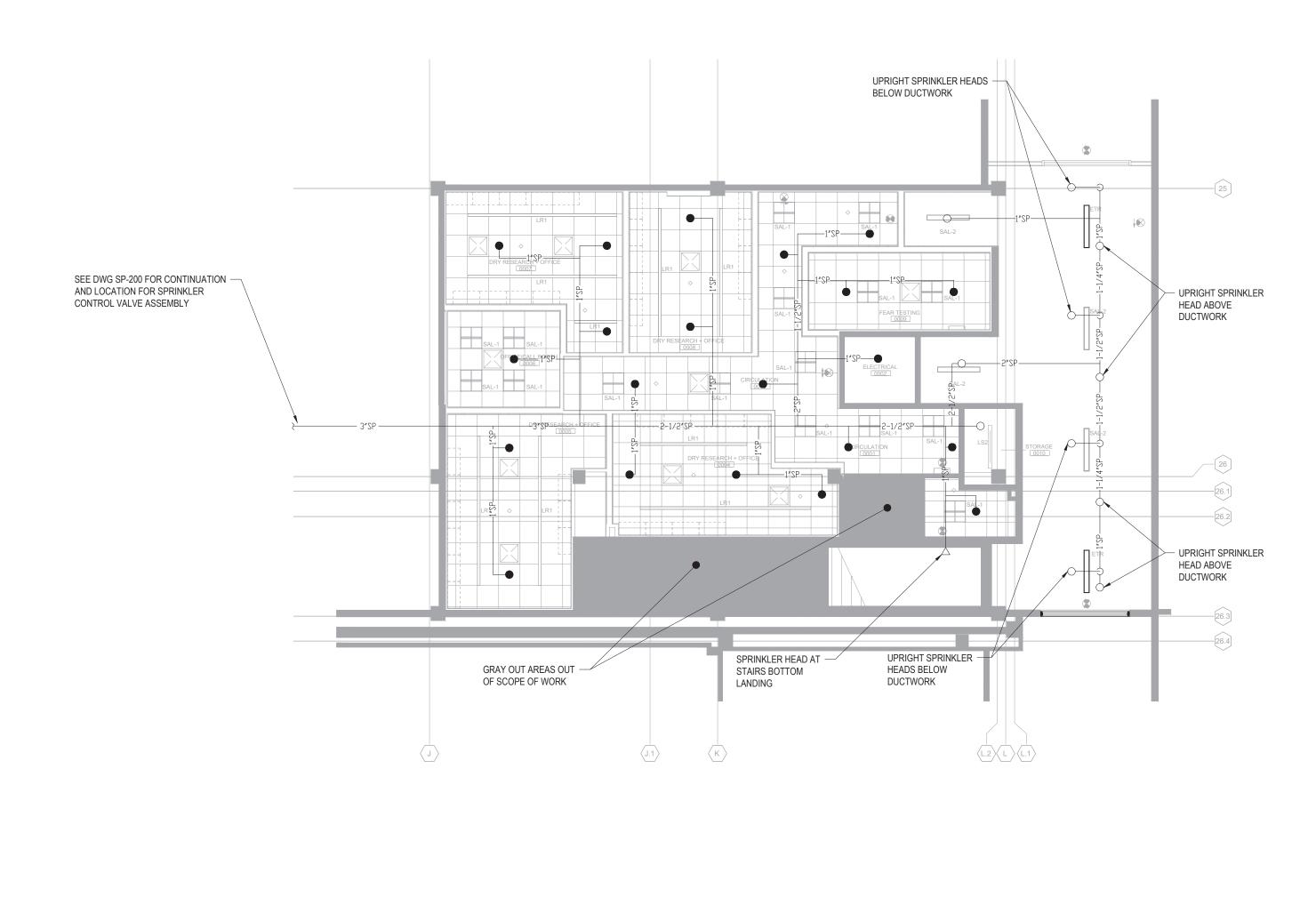




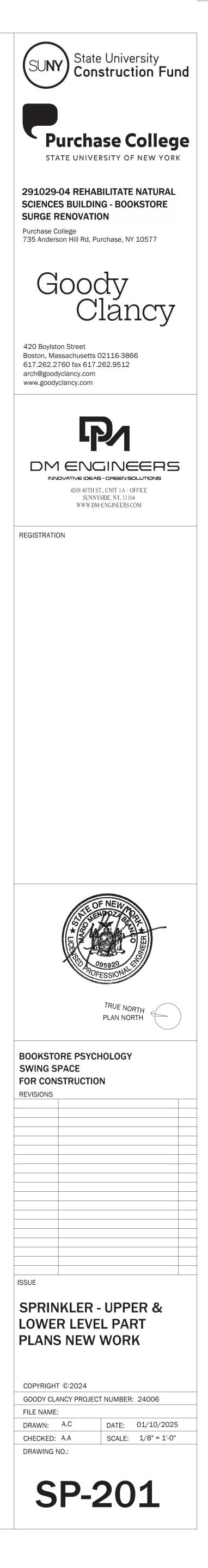




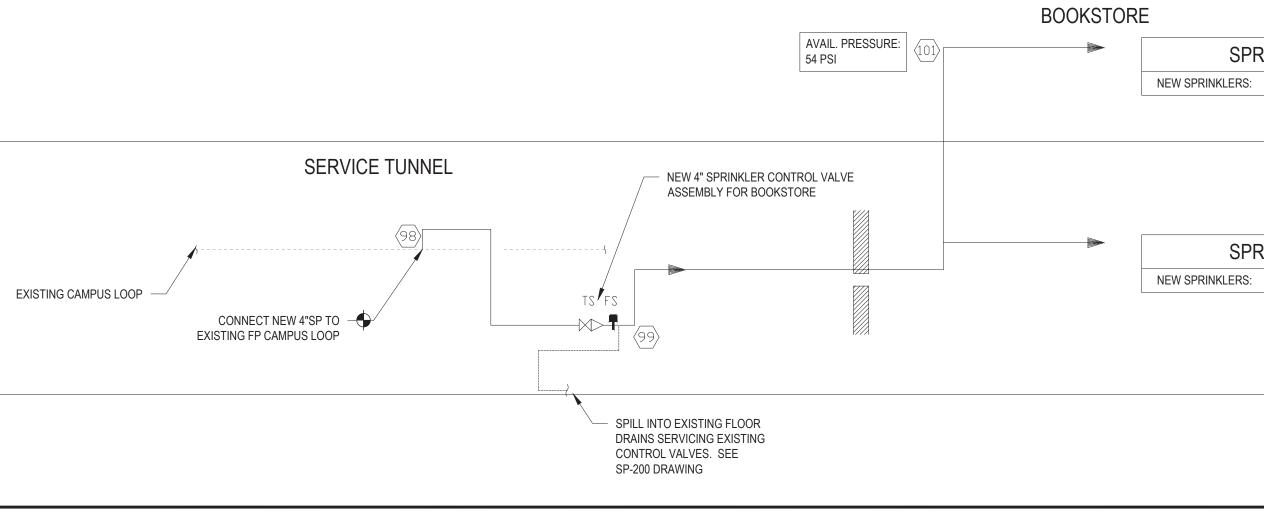




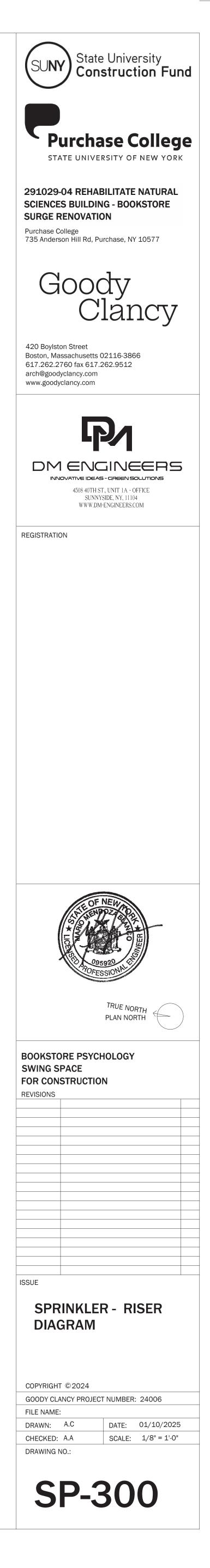
2 SPRINKLER - LOWER LEVEL PART PLAN NEW WORK Scale: 1/8" = 1'-0"

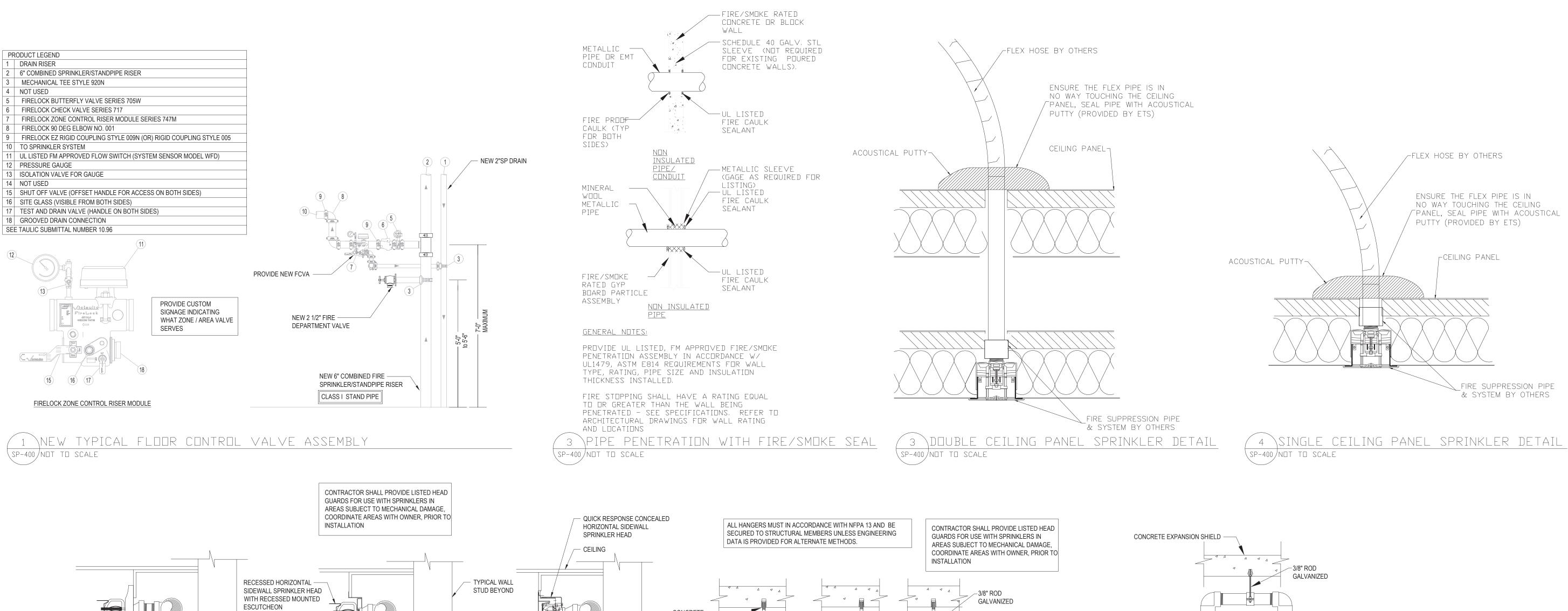


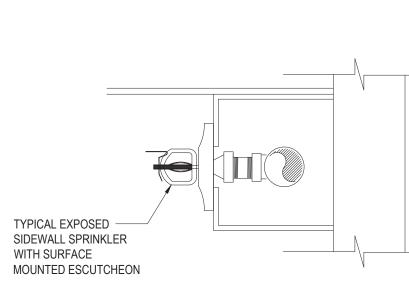
SPRINKLER RISER DIAGRAM not to scale

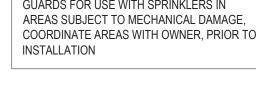


SPRINKLER COUNT 61 SPRINKLER COUNT 33









TYPICAL "SOFFI-STEEL" SYSTEM, COORDINATE LOCATION FINISH, ETC. WITH ARCHITECT (TYPICAL)

OPTION "A" OPTION "B" (5 TYPICAL SIDEWALL SPRINKLER HEAD IN SOFFIT ENCLOSURE SP-400 NOT TO SCALE

						SPRINKL	_ER HEA	D SCH	HEDULE	-							FLUSHING BAL	L VALVE SCHEDULE	NOTE : FLUSHING FULL-PORT BALL VALVES S
YMBOL TYPE	STYLE	RESPONSE	COVERAGE	COLOR	DISCHARGE COEFFICIENT (K)	ORIFICE	TEMPERATURE	MINIMUM OPERATING PRESSURE	MAXIMUM OPERATING PRESSURE	MAXIMUM SPACING:	MINIMUM SPACING:	MINIMUM FLOW:	MINIMUM FLOW DENSITY:	MANUF MODEL	ACTURER SIN	REMARKS	PIPE SIZE	BALL VALVE SIZE	PROVIDED ON UNDERGROUND MAINS BUILDING) AND ABOVE-GROUND MAIN CROSS-MAINS, BRANCH LINES AND R
PENDENT	CONCEALED	QUICK	STANDARD	WHITE	5.8 K	1/2"	165 F° (ORDINARY)	7.6 PSI	175 PSI	16'-0" X 16'-0"	6'-0" X 6'-0"	16 GPM	0.05 GPM/SQ FT	VI	KING VK474	QUICK RESPONSE TYPE CONCEALED	1" THRU 2-1/2"	LINE-SIZE FULL-PORT BALL VALVE	NEW SPRINKLER SYSTEMS (WET AN FACILITATE ANY FUTURE PERIODIC INSPECTIONS, OBSTRUCTION INVES
UPRIGHT	EXPOSED	QUICK	STANDARD	BRASS	5.6 K	1/2"	155 F° (ORDINARY)	7 PSI	175 PSI	15'-0" X 15'-0"	6'-0" X 6'-0"	23 GPM	0.1 GPM/SQ FT		KING VK300	QUICK RESPONSE TYPE UPRIGHT	3"	ONE (1) 2-1/2"	AS-NEEDED FLUSHING WORK.
PENDENT	CONCEALED	QUICK	STANDARD	WHITE	5.8 K	1/2"	165 F° (ORDINARY)	7.6 PSI	175 PSI	16'-0" X 16'-0"	6'-0" X 6'-0"	16 GPM	0.05 GPM/SQ FT	FLEXHEAD	AS-A504	QUICK RESPONSE TYPE CONCEALED FLEX PIPING	4"	TWO (2) 2-1/2".	
SIDEWALL	CONCEALED	QUICK	STANDARD	WHITE	4.0 K	1/2"	165 F° (ORDINARY)	10.6 PSI	175 PSI	14'-0" X 14'-0"	8'-0" X 8'-0"	13 GPM	0.05 GPM/SQ FT	VI	KING VK480	CONCEALED HORIZONTAL SIDEWALL SPRINKLER (RESIDENTIAL TYPE)	6"	THREE (3) 2-1/2"	
⊲ SIDEWALL	EXPOSED	QUICK	EXTENDED	WHITE	5.8 K	1/2"	165 F° (ORDINARY)	15.7 PSI	175 PSI	16-0" X 20'-0"	8'-0" X 8'-0"	23 GPM	0.05 GPM/SQ FT	VI	KING VK490	CONCEALED HORIZONTAL EXTENDED SIDEWALL SPRINKLER (RESIDENTIAL TYPE)	8"	FOUR (4) 2-1/2"	

FINAL COLOR SELECTION TO BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION

FIRE PROTECTION PIPE AND FITTING SCHEDULE									VALVE SCHEDULE								
												TYPE					ABBREVIATIONS
			PIPE	F	FITTING			DESCRIPTION	SIZE	OS&Y	BUTTER	LY CHEC	K BALL	CLASS	REMARKS	ABB.	DESCRIPTION
DESCRIPTION	SIZE	TYPE	SCHEDUL	E TYPE	RATING	REMARKS	ABBREV. DESCRIPTION									BEVG	BUTTERFLY VALVE GROOVED
			40	MIT	OTD		CI CAST IRON	WET SPRINKLER PIPING	2" AND BELOW	OS&YT	BFVT	CVT	BVT	175 PSI		BFVT	BUTTERFLY VALVE THREADED
WET SPRINKLER PIPING	2" AND BELOW	STL-BLK	40	MIT	STD		CLDI CEMENT-LINE	DUCTILE IRON		000000	DEVIC	CVG	BVG	175 PSI		BVG	BUTTERFLY VALVE GROOVED - FULL PORT
WET SPRINKLER PIPING	2-1/2" AND LARGER	STL-BLK	40	GRV	STD		FL FLANGE	WET SPRINKLER PIPING	2-1/2" AND LARGER	OS&YG	BFVG	CVG	BVG	1/5 PSI		BVT	BUTTERFLY VALVE THREADED -
NET SPRINKLER FIFING	2-1/2 AND LARGER	SIL-DLK	40	GRV	310		STL-BLK BLACK STEEL	EAMLESS DRAIN PIPING	AL 1				BVT	175 PSI			2 - PIECE, FULL PORT, 400PSI
DRAIN PIPING	A11	STL-BLK	40	MIT/GRV	STD		STD STANDARD	DRAIN PIPING	ALL				BVI	175 PSI		CVG	CHECK VALVE GROOVED
RAIN FIFING	ALL	SIL-DLK	40	WIT/GRV	510		GRV GROOVED JO	T SYSTEM FITTINGS/COUPLINGS		·		•	ł.	·	·	CVT	CHECK VALVE THREADED
							GALV GALVANIZED	IEEL IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII								OS&YG	OS&Y RISING STEM VALVE GROOVED
							MIT MALLEABLE IF	DN THREADED								OS&YT	OS&Y RISING STEM VALVE THREADED

