FIRE PROTECTION SPECIFICATION

1. GENERAL

- A. PERFORM ALL WORK IN ACCORDANCE WITH THE 2020 NYS BUILDING CODE, 05HA, PERTINENT NFPA CODES AND THE RULES AND REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION. SPRINKLER SYSTEM MUST BE INSTALLED IN ACCORDANCE WITH FACTORY MUTUAL STANDARDS. PROVIDE OWNER WITH CERTIFICATES OF INSPECTION. COMPLY WITH BASE BUILDING RULES AND REGULATIONS.
- B. DO ALL NECESSARY CUTTING AND ROUGH PATCHING.
 THE FOLLOWING WORK WILL BE DONE BY OTHERS:
 FINISH PAINTING AND PATCHING.
- C. THESE DRAWINGS INDICATE THE SIZE AND GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. ANY DIMENSIONS NOT SHOWN SHALL BE OBTAINED FROM THE EXISTING ARCHITECTURAL DRAWINGS. FOR EXACT LOCATIONS, HEIGHT, DOOR SWINGS, MOUNTING HEIGHTS, ETC., REFER TO ARCHITECTURAL DRAWINGS AND DETAILS.
- D. COORDINATE WORK WITH OTHER TRADES. CONFER WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION, AND ARRANGE ALL PARTS OF THIS WORK AND EQUIPMENT IN PROPER SEQUENCE AND RELATION TO THE WORK AND EQUIPMENT OF OTHERS, WITH THE BUILDING CONSTRUCTION AND WITH ARCHITECTURAL FINISH SO THAT IT WILL HARMONIZE IN SERVICE AND APPEARANCE.
- E. FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING AS
- REQUIRED BY THE OWNER'S REPRESENTATIVE.

 F. SUBMIT SIGNED AND SEALED DRAWINGS TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND COMMENT BEFORE FABRICATION OF PIPING AND EQUIPMENT IS STARTED.
- G. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL
 ARRANGEMENT OF SYSTEM AND WORK, PIPE ROUTING IS SHOWN
 DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS
 AND RISER OF RUNS, THE CONTRACTOR SHALL ALLOW IN HIS PRICE
 ROUTING OF PIPE TO AYOID OBSTRUCTIONS, COORDINATION WITH
 THE EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES IS
 REQUIRED, MAINTAIN HEADROOM AND SPACE CONDITIONS.
- H. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVE THROUGH ALL AREAS.
- I. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS. BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
- J. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP THE WORK PROPOSAL.
- K. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.
- L. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
- M. THE LOCATIONS OF THE EXISTING SERVICES ARE BELIEVED TO BE AS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THESE SERVICES AND NOTIFY THE OF ANY DISCREPANCIES PRIOR TO COMMENCING ANY WORK.
- N. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED 4 SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- O. ALL TIE-INS TO BUILDING RISERS AND SYSTEMS SHALL BE
- PERFORMED BY LANDLORD AND REIMBURSED BY TENANT.

 P. WHEN INSTALLATION OF NEW WORK REQUIRES THE SHUT-DOWN OR TIE-IN TO OF AN OPERATING SYSTEM, THE CONNECTION OF THE NEW WORK SHALL BE PERFORMED ONLY AFTER GIVING AT LEAST 48 HOURS (2 WORKING DAYS) NOTICE AND OBTAINING THE WRITTEN AUTHORIZATION OF THE OWNER.

2. SCOPE OF WORK

THE WORK UNDER THIS SECTION SHALL CONSIST OF FURNISHING ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY AND REQUIRED TO COMPLETE ALL FIRE PROTECTION WORK AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS, INCLUDING, BUT NOT NECESSARILY LIMITED TO:

- A. WET AUTOMATIC SPRINKLER SYSTEMS AS INDICATED ON THE DRAWINGS.
- B. THE INSTALLATION OF ALL SPRINKLERS, PIPING, & EQUIPMENT.
 C. PIPE HANGERS AND SUPPORTS.
- D. PERFORMANCE OF ALL TESTS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- E. PREPARATION OF HYDRAULIC CALCULATIONS
 F. CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE ALL
 DRAWINGS & SPECIFICATIONS WITH THE DEPARTMENT HAVING
 JURISDICTION, OBTAIN ALL PERMITS OR LICENSES NECESSARY
 TO CARRY OUT THIS WORK & PAY ALL FEES THERE FORE. THE
 CONTRACTOR SHALL ARRANGE FOR INSPECTION & TEST OF ANY
- TO THE OWNER BEFORE FINALLY BILLING ALL WORK INSTALLED WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.

 G. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY SPECIAL INSPECTIONS INCLUDING SPRINKLER (BC 1704.21) CONTRACTOR MUST PROVIDE NAME OF COMPANY AND CONTACT INFORMATION PRIOR TO PERMITTING.

BUILDING DEPARTMENT & PAY ALL OF THE COST FOR & FURNISH

3. SHOP DRAWINGS

- A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT PROVIDE COMPLETE SET OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT. INDICATING CAPACITY DIMENSIONS AND AND SEQUENCE OF OPERATION
- FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

 B. INDICATE ON EACH SHOP DRAWING SUBMITTED
- 1. PROJECT NAME
- 2. NAME OF ARCHITECT AND ENGINEER
 3. ITEM IDENTIFICATION.
- 4. APPROVAL STAMP OF PRIME CONTRACTOR
- C. SUBMISSIONS:

 1. CATALOG CUTS: CONTRACTOR SHALL SUBMIT VIA ARCHITECT 4 SETS
- I. CATALOG CUTS: CONTRACTOR SHALL SUBMIT VIA ARCHITECT 4 SE OF CATALOG CUTS. FOR REVIEW & APPROVAL.
- 2. DRAWINGS: CONTRACTOR SHALL SUBMIT VIA THE ARCHITECT
 (1) REPRODUCIBLE \$ (3) PRINTS FOR REVIEW \$ APPROVAL.
- 3. FAILURE TO SUBMIT THE REQUIRED NUMBER OF CUTS AND DRAWINGS FOR REVIEW AND APPROVAL WILL RESULT IN AN AUTOMATIC
- 4. SUBMISSIONS VIA FAX ARE NOT ACCEPTABLE.
- D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:
- PIPE AND FITTINGS.
 SPRINKLERS AND ACCESSORIES.
- 2. SPRINKLERS AND ACCESSORIES.
 3. PIPING LAYOUTS.
- 4. HYDRAULIC CALCULATIONS.
 5. SUPPORTS, HANGERS AND GUIDES.

4. AS-BUILTS DRAWINGS AND OPERATING AND SERVICE MANUALS

- A. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL DEVELOP AS BUILT DRAWINGS ACCURATELY REFLECTING THE INSTALLATION OF THE COMPLETE SYSTEM, RECORDING ALL CHANGES FROM THE ORIGINAL DESIGN THAT OCCURRED DURING THE CONSTRUCTION PROCESS.
- B. AFTER COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL FULLY INSTRUCT THE APPROPRIATE OWNERS PERSONAL ON THE OPERATIONS OF ALL SYSTEMS INSTALLED.
- C. AS PART OF FINAL ACCEPTANCE OF INSTALLATION, THE CONTRACTOR SHALL SUPPLY THE OWNERS WITH TWO COPIES (2) OF CONTRACT CLOSE OUT DOCUMENTS INCLUDING SHOP DRAWINGS, AS BUILT DRAWINGS, OPERATION AND MAINTENANCE MANUALS, AND FINAL HYDRAULIC CALCULATIONS REPORT. THIS SHALL BE PROVIDED IN A DIGITAL IN ADDITION TO A BINDER WITH LAMINATED SHEETS. IN ADDITION, PROVIDE A DIGITAL COPY TO THE ENGINEER, ARCHITECT, AND OWNER FOR THEIR RECORDS.

5. FINAL ACCEPTANCE, GUARANTEES, AND WARRANTIES

- A. AS PART OF THE CONTRACT, THE CONTRACTOR SHALL GUARANTEE AND SERVICE THE FINAL INSTALLATION FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION (DEFINED BELOW).
- B. UP UNTIL FINAL ACCEPTANCE AND THE ONE YEAR GUARANTEE FOLLOWING, THE CONTRACTOR SHALL REPLACE OR REPAIR ANY EQUIPMENT OR MATERIAL FOUND TO BE DEFECTIVE AT THE CONTRACTORS EXPENSE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE SURROUNDING AREAS RELATED TO THE ISSUE. IF A PRODUCT UNDER WARRANTEE REQUIRES A REPAIR DURING THIS PERIOD, THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING THE MANUFACTURER'S REMEDIATION WORK TO THE EQUIPMENT.
- C. FINAL ACCEPTANCE OF INSTALLATION SHALL BE CONFIRMED AFTER THE CONTRACTOR HAS INSTALLED ALL SYSTEMS TO THE OWNERS/ENGINEERS APPROVAL, SUBMITTED AS BUILTS, AND HAS OBTAINED ALL REQUIRED CERTIFICATES OF INSPECTIONS AND APPROVALS.

6. CONNECTIONS TO EXISTING WORK, REMOVAL AND RELOCATION

- A. PLAN INSTALLATION OF ALL NEW WORK INCLUDING CONNECTIONS TO EXISTING WORK TO ENSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING BUILDING FACILITIES. ALL REQUIRED SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH THE BUILDING. THERE SHALL BE NO ADDITIONAL CHARGE FOR DOING SHUTDOWNS TO THE SYSTEM DURING NORMAL BUSINESS HOURS OR AFTER HOURS
- B. CONNECT NEW WORK TO EXISTING WORK IN A NEAT AND APPROVED MANNER. RESTORE EXISTING WORK WHICH WAS DISTURBED WHILE INSTALLING NEW WORK TO A CONDITION ACCEPTABLE TO THE OWNER.
- C. REMOVAL AND RELOCATION OF SOME EXISTING MATERIAL, EQUIPMENT, OR PIPING WILL BE NECESSARY FOR THE PROPER INSTALLATION OF NEW WORK. ALL EXISTING CONDITIONS HAVE NOT BEEN COMPLETELY DETAILED ON THE DRAWINGS.

7. CUTTING AND PATCHING

- A. ALL NECESSARY CUTTING AND CORE DRILLING AND PATCHING FOR THE INSTALLATION OF THE WORK SHALL BE PERFORMED BY THIS CONTRACTOR.
- B. FIRE-STOPPING SHALL BE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. ALL EXISTING AND NEW PENETRATIONS MUST BE PROPERLY FIRE-STOPPED WITH APPROVED FIRE-STOPPING

8. HANGERS

- A. SUPPORT ALL PIPING WITH ACCEPTABLE HANGERS, ANCHORS, FRICTION HANGERS, AND SUPPORTS AS INDICATED OR SPECIFIED. HANGERS SHALL BE OF HEAVY IRON OR STEEL CONSTRUCTION. NO CAST STEEL OR CAST IRON SHALL BE USED. HANGERS SHALL HAVE NUT ABOVE AND USED. HANGERS SHALL HAVE NUT ABOVE AND BELOW HANGER UPPER NUT SHALL BE LOCKED AGAINST HANGER TO PREVENT LOOSENING BY VIBRATION.
- B. SUPPORT HORIZONTAL PIPING AS FOLLOWS:

 (1) PIPING 1" SIZE AND SMALLER: ADJUSTABLE RING
- HANGER NOT MORE THAN 8'-0" APART.
- (2) PIPING 1-1/4" AND LARGER: CLEVIS HANGER NOT MORE THAN 10'-0" APART.
- (3) PIPING SUPPORTED FROM WALL SHALL BE PROVIDED WITH WELDED ANGLE IRON BRACKETS.
- C. PROVIDE HANGERS ON EVERY BRANCH OVER 3'-0" LONG.
 D. NO CHAIN, METAL STRAP OR WIRE WILL BE PERMITTED
 FOR THE SUPPORT OF ANY PIPING.

9. MATERIALS AND INSTALLATION

- A. SYSTEM AND COMPONENT PARTS SHALL BE THE PRODUCTS OF A MANUFACTURER EQUIPPED AND EXPERIENCED IN THE MANUFACTURING OF STANDPIPE/SPRINKLER SYSTEMS. DEVICES SHALL BE UNDERWRITERS LABORATORIES AND/OR FACTORY MUTUAL APPROVED AND SHALL HAVE A CURRENT LISTING IN THEIR RESPECTIVE "APPROVED EQUIPMENT" LISTS. COMPONENTS AND PARTS SHALL BE SUBJECT TO THE ACCEPTANCE OF THE ARCHITECT.
- B. ALL SPRINKLER AND FIRE STANDPIPE PIPING ABOVE GRADE.
 STANDARD WEIGHT BLACK STEEL PIPE, SCHEDULE 40, WELDED OR
 SEAMLESS, WITH MANUFACTURER'S NAME ROLLED INTO LENGTH.
- C. THREADS SHALL BE FULL AND CLEAN CUT & BURRS FORMED IN CUTTING SHALL BE REAMED. IN ASSEMBLING PIPING, CARE SHALL BE TAKEN THAT THE PIPE DOES NOT EXTEND INTO THE FITTING OBSTRUCTING THE WATERWAY. JOINT COMPOUND SHALL BE APPLIED TO THE THREADS OF THE PIPE AND NOT TO THE FITTINGS OR SPRINKLERS. PIPES SHALL BE STRAIGHTENED BEFORE INSTALLATION TO PREVENT POCKETS. PIPES SHALL PITCH NOT LESS THAN 1/4" IN 10 FEET.
- D. FITTINGS, UNLESS OTHERWISE SPECIFIED, SHALL BE BLACK MALLEABLE IRON STANDARD SPRINKLER FITTINGS.
- E. SCREWED FITTINGS SHALL BE 175* CAST IRON, ANSI B16.4.
 F. FLANGED FITTINGS SHALL BE 175* CAST IRON ANSI B16.1.
- G. COUPLINGS SHALL NOT BE USED EXCEPT WHERE PIPE IS MORE THAN 20
- FEET IN LENGTH BETWEEN FITTINGS.

 H. A ONE-PIECE REDUCING FITTING SHALL BE USED WHEREVER A CHANGE IS MADE IN THE SIZE. THE USE OF BUSHINGS OR REDUCING FLANGES WILL NOT BE PERMITTED.
- I. UNIONS SHALL BE OF THE HEAVY GROUND TYPE AND SHALL BE USED ONLY ON PIPES 2" AND SMALLER.
- J. VICTAULIC GROOVED TYPE COUPLINGS WITH GROOVED FITTINGS MAY BE USED THROUGHOUT OR IN PART.
- K. INSTALL SPRINKLER HEADS IN ALL AREAS ON TRUE AXIS LINE IN BOTH DIRECTIONS WITH A MAXIMUM DEVIATION OF 1/2" FROM THE AXIS LINE ESTABLISHED BY THE ARCHITECT FOR THE USE OF ALL TRADES, AT THE COMPLETION OF THE INSTALLATION, REMOVE AND REINSTALL ANY SPRINKLER HEADS FOUND TO EXCEED THE ABOVE-MENTIONED TOLERANCE.

10. SPRINKLERS

- A. SPRINKLERS SHALL BE NEW, CURRENT ISSUE, SPRAY TYPE, WITH 1/2"
 NOMINAL DISCHARGE ORIFICE AS INDICATED ON DRAWINGS. SPRINKLERS
 SHALL BE AS FOLLOWS:
- 1. <u>CONCEALED SPRINKLER:</u> VIKING MIRAGE QR AUTOMATIC SPRINKLER HEAD MODEL VK462. 1/2" STANDARD ORIFICE WITH 1/2" NPT THREAD. K-FACTOR = 56. ORDINARY TEMPERATURE RATING 155°F. COVER PLATE SHALL BE WHITE UNLESS NOTED.
- 2. <u>UPRIGHT SPRINKLER:</u> YIKING MICROFAST QR AUTOMATIC SPRINKLER HEAD MODEL VK300. 1/2" STANDARD ORIFICE WITH 1/2" NPT THREAD. K-FACTOR = 5.6. ORDINARY TEMPERATURE RATING 155°F. BRASS CASTING FOR MATERIALS.
- 3. <u>PENDANT SPRINKLER:</u> VIKING MICROFAST QR AUTOMATIC SPRINKLER HEAD MODEL VK302. 1/2" STANDARD ORIFICE WITH 1/2" NPT THREAD. K-FACTOR = 5.6. ORDINARY TEMPERATURE RATING 155°F. BRASS CASTING FOR MATERIALS.
- B. CONTRACTOR SHALL COORDINATE SPRINKLER LOCATIONS WITH THE CEILING GRID, LIGHT FIXTURES, DIFFUSERS, AUDIO EQUIPMENT, SMOKE DETECTORS, AND ALL OTHER COMPENSATES OF THE REFLECTED SPRINKLER PLAN.
- C. CONTRACTOR SHALL PROVIDE METAL SPRINKLER GUARDS FOR UPRIGHT HEADS INSTALLED IN STORAGE ROOMS, MECHANICAL ROOMS, OR WHERE HEAD ROOM IS LOW.

II. DRAINS

- A. ARRANGE THE PERMANENT INSTALLATION OF PIPING SUCH THAT ALL OR
 ANY PART OF THE WORK MAY BE COMPLETELY DRAINED. PIPING SHALL
 PITCHED SO AS TO DRAIN TO THE MAIN DRAIN OR TO AUXILIARY DRAINS
- PITCHED SO AS TO DRAIN TO THE MAIN DRAIN OR TO AUXILIARY DRAINS.

 B. DRAIN CONNECTIONS FOR SYSTEM SUPPLY RISERS & MAINS SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF NFPA.
- C. DRAINS SHALL DISCHARGE OUTSIDE OR TO A DRAIN CONNECTION CAPABLE OF ACCEPTING FULL FLOW OR TO ANOTHER LOCATION WHERE WATER DAMAGE WILL NOT OCCUR.

12. EMERGENCY CABINET

- A. THE CABINET SHALL BE LOCATED WHERE THE TEMPERATURE TO WHICH
- THEY ARE SUBJECT WILL AT NO TIME EXCEED 100°. B. A SPECIAL SPRINKLER WRENCH SHALL ALSO BE PROVIDED AND KEPT
- IN THE CABINET.

 C. THE STOCK OF SPARE SPRINKLER SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13.

13. TESTS

- A. THE SPRINKLER SYSTEM SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF 200 PSI FOR TWO HOURS AND ANY DEFECTS OR LEAKS SHALL BE REMEDIED. CAULKING OF THREADS SHALL NOT BE PERMITTED. THIS TEST MUST BE DONE IN THE PRESENCE OF A BUILDING ENGINEER.
- B. DEFECTS DISCLOSED BY THE TEXTS SHALL BE REPAIRED OR REPLACED. TEST SHALL BE REPEATED AS DIRECTED UNTIL ALL WORK IS PROVEN SATISFACTORY.
- C. APPROVAL OF AUTHORITIES HAVING JURISDICTION SHALL BE OBTAINED IN WRITING BEFORE FINAL ACCEPTANCE OF THIS WORK.
- D. AT THE COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL TURN OVER TO THE OWNER FOR RECORD PURPOSES ONE SET OF REPRODUCIBLE APPROVED, AS-BUILT SHOP DRAWINGS.
- E. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE BUILDING & ITS CONTENTS AS A RESULT OF ALL TEST. CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR AT NO COST TO THE OWNER, ARCHITECT, OR ENGINEER. ANY DAMAGE CAUSED BY SUCH TEST.
- F. ARRANGE & COORDINATE TEST WITH OWNER 48 HOURS IN ADVANCE, NOTIFY AUTHORITY HAVING JURISDICTION & ENGINEER OF TEST DATE & TIME.
- G. CONTRACTOR SHALL COMPLETE & SIGN ALL APPROPRIATE CONTRACTOR MATERIAL & TEST CERTIFICATES.

14. ACCESS DOORS

CONTRACTOR TO PROVIDE AND INSTALL ACCESS DOORS FOR MAINTENANCE ON ALL EQUIPMENT ABOVE HARD CEILING OR BEHIND HARD WALLS. THIS INCLUDES BUT IS NOT LIMITED TO CONTROL VALVES, DRAIN, TEST VALVES. COORDINATE SIZE AND LOCATION OF ALL ACCESS DOORS WITH BUILDING PERSONNEL.

15. INSTALLATION

DEBRIS, ETC.

- A. DURING CONSTRUCTION, PROPERLY CAP ALL LINES AND EQUIPMENT NOZZLES SO AS TO PREVENT THE ENTRANCE OF DIRT,
- B. EACH SYSTEM OF PIPING SHALL BE FLUSHED (FOR ALL PURPOSE OF MOVING DIRT DEBRIS, ETC. FROM PIPING) FOR AS LONG A TIME AS IS REQUIRED TO THOROUGHLY CLEAN THE SYSTEM. CLEANING OF SYSTEM SHALL HAPPEN PRIOR TO CONNECTION TO BASE BUILDING SYSTEM. CLEANING OF THE SYSTEM IS TO BE PERFORMED BY BASE BUILDING APPROVED VENDOR IN THE PRESENCE OF
- BUILDING PERSONNEL PRIOR TO SYSTEM ACTIVATION.

 C. BUILDING DEPARTMENT INSPECTION AND SIGN-OFF SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR. THE WORK SHALL NOT BE CONSIDERED COMPLETE UNTIL THE ORIGINAL OF THE BUILDING DEPARTMENT 505 CARD IS PRODUCED.

16. FIRE DEPARTMENT SIAMESE CONNECTION

A. BRASS, FLUSH WALL TYPE PAD MOUNTED, EXTERIOR FIRE DEPARTMENT CONNECTION WITH BRASS ESCUTCHEON PLATE, WITH A SILL COCK, AND A MINIMUM OF TWO 2 1/2 IN. CONNECTIONS THREADED TO MATCH THOSE ON THE LOCAL FIRE PROTECTION SERVICE, WITH POLISHED BRASS CAPS AND CHAINS. PROVIDE ESCUTCHEON WITH INTEGRAL RAISED LETTERS "STANDPIPE AND AUTOMATIC SPRINKLER". PROVIDE CONNECTION WITH A SWING CHECK VALVE. INSTALL AN AUTOMATIC BALL DRIP BETWEEN FIRE DEPARTMENT CONNECTION AND CHECK VALVE TO DISCHARGE OVER AN INDIRECT DRAIN CONNECTION OR TO THE OUTSIDE. WHEN ADDITIONAL ALARM VALVE IS INSTALLED, ADDITIONAL CHECK VALVE IS NOT REQUIRED. CHECK VALVES MUST BE INSTALLED IN ACCORDANCE WITH THEIR VERTICAL OR HORIZONTAL LISTING.

IT. YALYES

- A. LISTED INDICATING VALVES:
 - 1. GATE: 054Y, 350 PSI WATER WORKING PRESSURE (WWP).
 2. BUTTERFLY: GEAR OPERATED, INDICATING TYPE, 350 PSI WATER WORKING PRESSURE. BUTTERFLY VALVES ARE TO BE INSTALLED IN A MANNER THAT DOES NOT INTERFERE WITH THE
 - 3. BALL (INSPECTORS TEST AND DRAIN ONLY): IRON BODY, STAINLESS STEEL TRIM, FOR 300 PSI SERVICE, INDICATING TYPE
 - 4. BALL AND BUTTERFLY VALVES SHALL NOT BE USED ON INCOMING WATER SERVICE, AND ON THE SUCTION SIDE OF EITHER THE FIRE PUMP OR JOCKEY PUMP.

OPERATION OF ANY SYSTEM COMPONENT.

- B. CHECK VALVES: SWING TYPE, RUBBER FACED OR WAFER TYPE SPRING LOADED BUTTERFLY CHECK VALVE, 350 LB. WATER WORKING PRESSURE (WWP).
- C. ALARM CHECK: IRON BODY, BRONZE MOUNTED, VARIABLE PRESSURE TYPE WITH RETARDING CHAMBER. PROVIDE BASIC TRIMMINGS FOR ALARM TEST BY PASS, GAGES, DRAIN CONNECTIONS, MOUNTING SUPPORTS FOR RETARDING CHAMBER, AND DRIP FUNNEL. PROVIDE PRESSURE SENSITIVE ALARM SWITCH TO ACTUATE THE FIRE ALARM SYSTEM.
- D. DRAIN VALVES: THREADED BRONZE ANGLE, GLOBE, BALL OR BUTTERFLY, 600 PSI, WATER OR GAS (WOG) EQUIPPED WITH REDUCER AND HOSE CONNECTION WITH CAP OR CONNECTED TO A DRAIN LINE.
- E. SELF-CONTAINED TEST AND DRAIN VALVE:

1. DUCTILE IRON BODY WITH

- BRONZE "DRAIN" AND "TEST" BONNETS. ACRYLIC SIGHT GLASS FOR VIEWING TEST FLOW. VARIOUS SIZED ORIFICE INSERTS TO SIMULATE FLOW THROUGH DIAMETER SPRINKLERS, ONE-QUARTER TURN LOCKING LUG OUTLETS FOR PLAIN END PIPE IN ACCORDANCE WITH MANUFACTURER'S
- RECOMMENDATION.

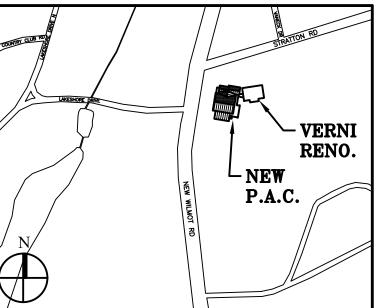
 2. BRONZE BODY, WITH CHROME PLATED BRONZE BALL, BRASS STEM, STEEL HANDLE, TEFLON SEAT AND SIGHT GLASSES. PROVIDE VALVE WITH THREE POSITION INDICATOR PLATE (OFF, TEST, AND DRAIN), TAPPING FOR PRESSURE GAGE AND VARIOUS OTHER ORIFICE INSERTS TO SIMULATE FLOW THROUGH (1/2 IN.) DIAMETER SPRINKLERS.
- F. DRY PIPE VALVE: FLANGED, IRON BODY. PROVIDE BASIC TRIMMINGS FOR ALARM TEST BYPASS, WATER FLOW ALARM, HIGH AND LOW PRESSURE SWITCHES, GAGES, DRAIN CONNECTIONS, DRIP FUNNEL, ACCELERATOR AND NECESSARY PIPE, FITTINGS AND ACCESSORIES REQUIRED TO PROVIDE A COMPLETE INSTALLATION.
- G. STANDPIPE HOSE VALVE: 2 1/2 IN. SCREWED, BRASS HOSE ANGLE VALVE, 350 PSI WATER WORKING PRESSURE, WWP, MALE HOSE THREADS SAME AS LOCAL FIRE DEPARTMENT SERVICE, 2 1/2 IN. X 11/2 IN. REDUCER, AND WITH PERMANENTLY ATTACHED POLISHED BRASS CAP AND CHAIN: PROVIDE FOR VALVES INSTALLED IN A CABINET A 2 1/2 IN. ATTACHED CAP AND CHAIN AND A 2 1/2 IN. X 11/2 IN. REDUCER PLACED IN CABINET.

H. STANDPIPE HOSE VALVE CABINETS: CABINETS SHALL BE WHITE

APPROVED, ASSE APPROVED AND UL LISTED.

GLOSSY POLYESTER COATED 20 GAGE STEEL WITH CONTINUOUS STEEL HINGE WITH BRASS PIN, RECESSED TYPE 24 × 24 × 10 IN.

I. DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY: PROVIDE TWO INDEPENDENT CHECK VALVES WITH OS&Y SHUT OFF VALVES, BALL TYPE TEST COCKS. MAXIMUM FRICTION LOSS THROUGH ASSEMBLY SHALL NOT EXCEED 5 PSI AT DESIGN FLOW. UNIT SHALL BE FUNCTIONAL IN VERTICAL OR HORIZONTAL POSITION, RATED FOR 175 PSI WORKING PRESSURE. CHECK VALVE ASSEMBLY SHALL BE IN ACCORDANCE WITH AWWA CLASS D. DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY SHALL BE FM



Key Plan (not to scale

7. 6/01/2021 ISSUED FOR BID
6. 5/07/2021 RE-ISSUED FOR BUILDING PERMIT REVIEW
5. 2/01/2021 ISSUED FOR BUILDING PERMIT REVIEW
4. 10/14/2020 ISSUED FOR PLANNING BOARD REVIEW
3. 9/23/2020 RESUBMITTED FOR ZONING REVIEW

1. 1/10/2020 ISSUED FOR DD ESTIMATE

No. Date Revision/Submission

STRUCTURAL & SITE CIVIL ENGINEER

DOMINICK R PILLA
ASSOCIATES, P.C.

143 MAIN STREET NYACK, NY 10960

Decision MAI

IONA PREPARATORY SCHOOL ADDITION AND ALTERATION TO THE PAUL VERNI FINE ARTS CENTER

Project Address

IONA PREPARATORY SCHOOL 255 Wilmot Road New Rochelle, NY 10804

Drawing Title

SPRINKLER SPECIFICATIONS I

Drawing No.

SP-10

 Scale
 Job No.
 Date

 NTS
 1618
 04/03/2019

 Drawn
 04/03/2019

er Gisolfi Associates
chitects Landscape Architects, LLP

PETER GISOLFI ASSOCIATE

SYMBOL LIST					
	NEW SPRINKLER PIPING	3	SEE DRAWING NOTE 3		
● _N	NEW CONCEALED SPRINKLER HEAD (NEW TO SYSTEM)	s—T	CHECK YALVE		
• _N	NEW UPRIGHT SPRINKLER HEAD (NEW TO SYSTEM)	ф	OS&Y VALVE		
•	NEW PENDANT SPRINKLER HEAD (NEW TO SYSTEM)	- 1"	I" DIAMETER SPRINKLER PIPE		
BOP: BOF:	BOTTOM OF PIPE BOTTOM OF FITTING	 :	CAPPED SPRINKLER PIPE		
TS	NEW TAMPER SWITCH	•	CONNECT TO EXISTING PIPE		
FS	NEW FLOW SWITCH	1	HYDRAULIC NODE POINT #		
TYP.	TYPICAL	N	NEW		
46	BUTTERFLY YALVE		HYAC EQUIPMENT TO BE AVOIDED		
:	PIPE CONTINUATION	©	LIGHTING FIXTURES		
—⊃ 1	HOSE VALVE CONNECTION	•••	TEST TEE		

DESCRIPTION OF HAZARD =	LIGHT HAZARD
OCCUPANCY =	A-1
DESIGN AREA OF WATER APPLICATION=	1080 SQ-FT
SPRINKLER COVERAGE =	225 SQ-FT
PIPE MATERIAL =	SCHED 40 WET STEEL
SPRINKLER TYPE UTILITY AREA:	UPRIGHT
SPRINKLER TYPE CEILING AREA=	CONCEALED
SPRINKLER TYPE BELOW OBSTRUCTIONS =	PENDANT
K-FACTOR=	5.6
ORIFICE =	1/2"
HMD MINIMUM RESIDUAL PRESSURE:	7 PSI
MINIMUM DESIRED DENSITY	Ø.1 GPM/FT2
HYDRAULICALLY MOST DEMANDING	7.91 PS I,
SPRINKLER NODE (14):	15.75 GPM
DESIGN CRITERIA REQUIREMENTS BASED ON:	
* NYS 2020 BUILDING CODE	
* NFPA-13	
SPRINKLER SYSTEM IS HYDRAULICALLY DESIG	NED
STANDPIPE PORTION OF SYSTEM IS DESIGNED	

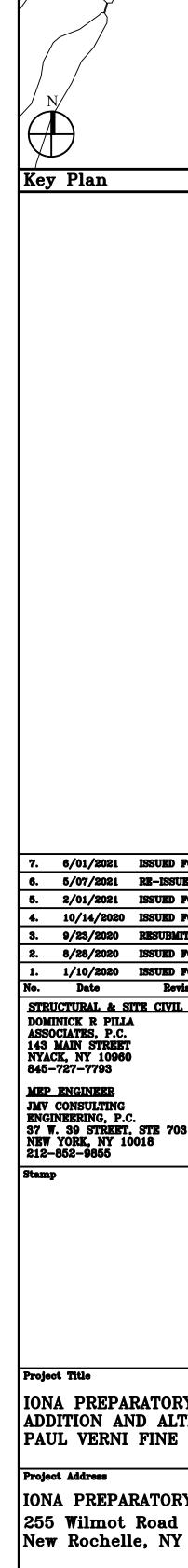
	SPRINKLER HEAD SCHEDULE							
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL	MAX COVERAGE (WIDTH x THROW)	MIN. OPERATING PRESSURE (PSI)	MAX. OPERATING PRESSURE (PSI)	TEMPERATURE RATING	REMARKS
⊙ _N	QUICK RESPONSE UPRIGHT SPRINKLER HEAD	VIKING	VK3 <i>00</i>	STANDARD COVERAGE 15'x15'	٦	175	ORDINARY 155 °F	-
N [®]	QUICK RESPONSE PENDENT CONCEALED SPRINKLER HEAD	YIKING	VK462	STANDARD COVERAGE 15'x15'	٦	175	ORDINARY 155 °F	-
• _N	QUICK RESPONSE PENDANT SPRINKLER HEAD	VIKING:	VK3Ø2	STANDARD COVERAGE 15'x15'	٦	175	ORDINARY 155 °F	-

HANGER SPACING				
<u>PIPING SIZE</u>	MAX. SPACING			
INCHES	<u>FEET</u>			
1" AND UNDER (THREADED)	8 FEET			
1-1/4" AND 1-1/2" (THREADED)	9 FEET			
2" THREADED	IØ FEET			

SPRINKLER HEAD SPACING NOTES:

- MINIMUM DISTANCE BETWEEN HEADS - 6'-0" - MAXIMUM DISTANCE BETWEEN HEADS - 15'-0" - MAXIMUM DISTANCE FROM WALLS - 1'-6" (UNLESS SMALL ROOM RULE APPLIES) - MINIMUM DISTANCE FROM WALLS - 0'-4"

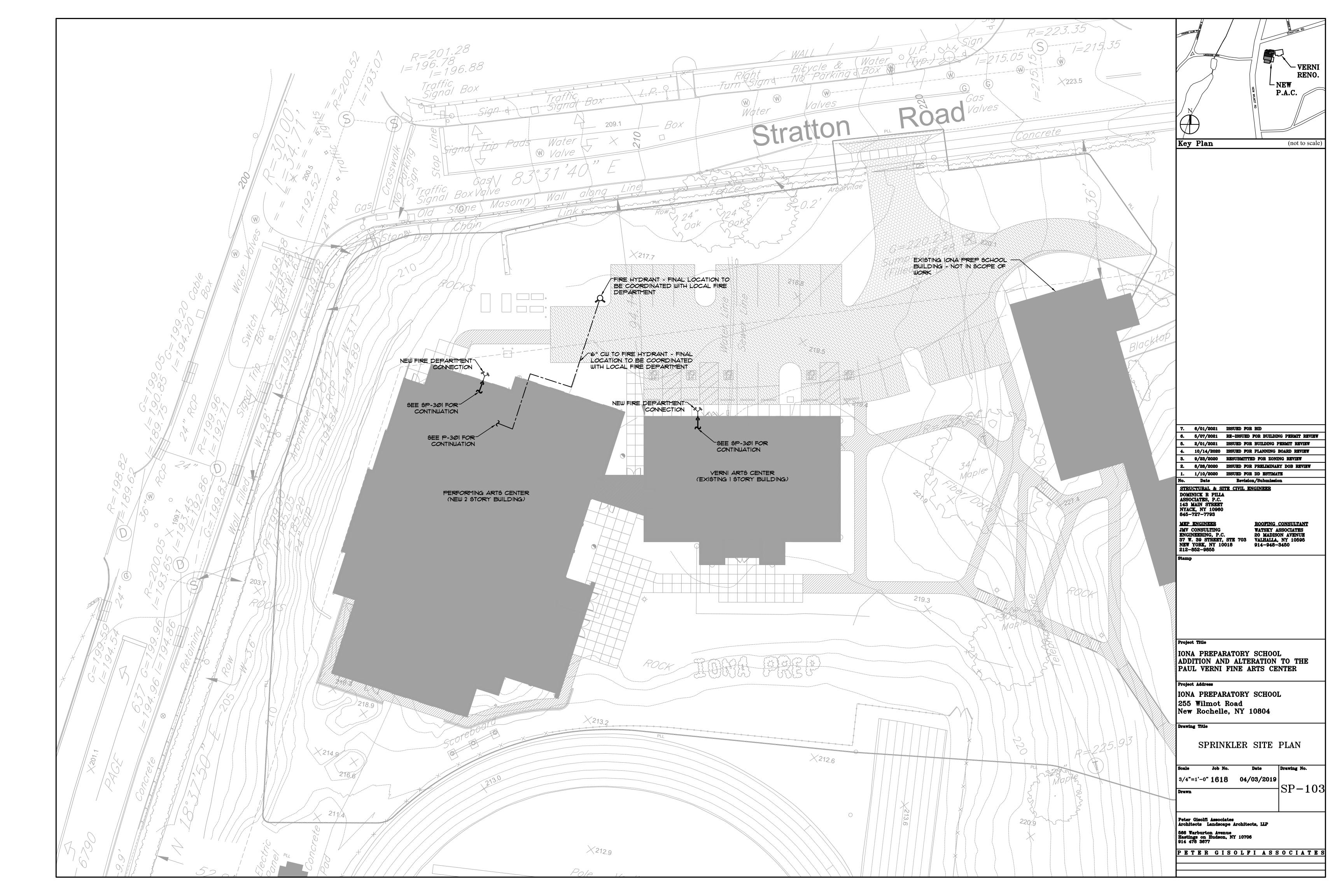
HANGER SCHEDULE <u>PIPING SIZE</u> ROD SIZE 2-1/2" AND 3" 4" AND 5" 5/8" 3/4"

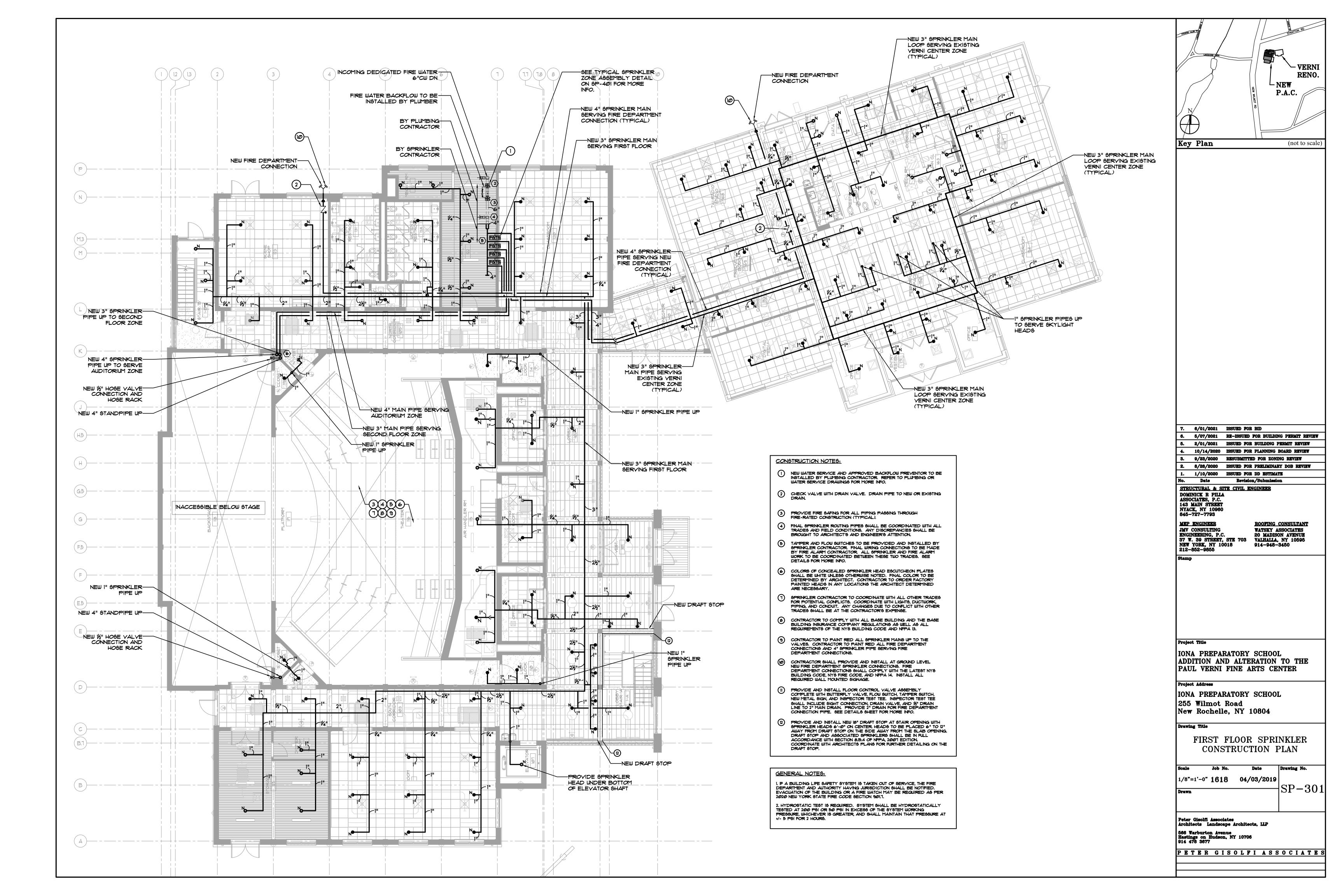


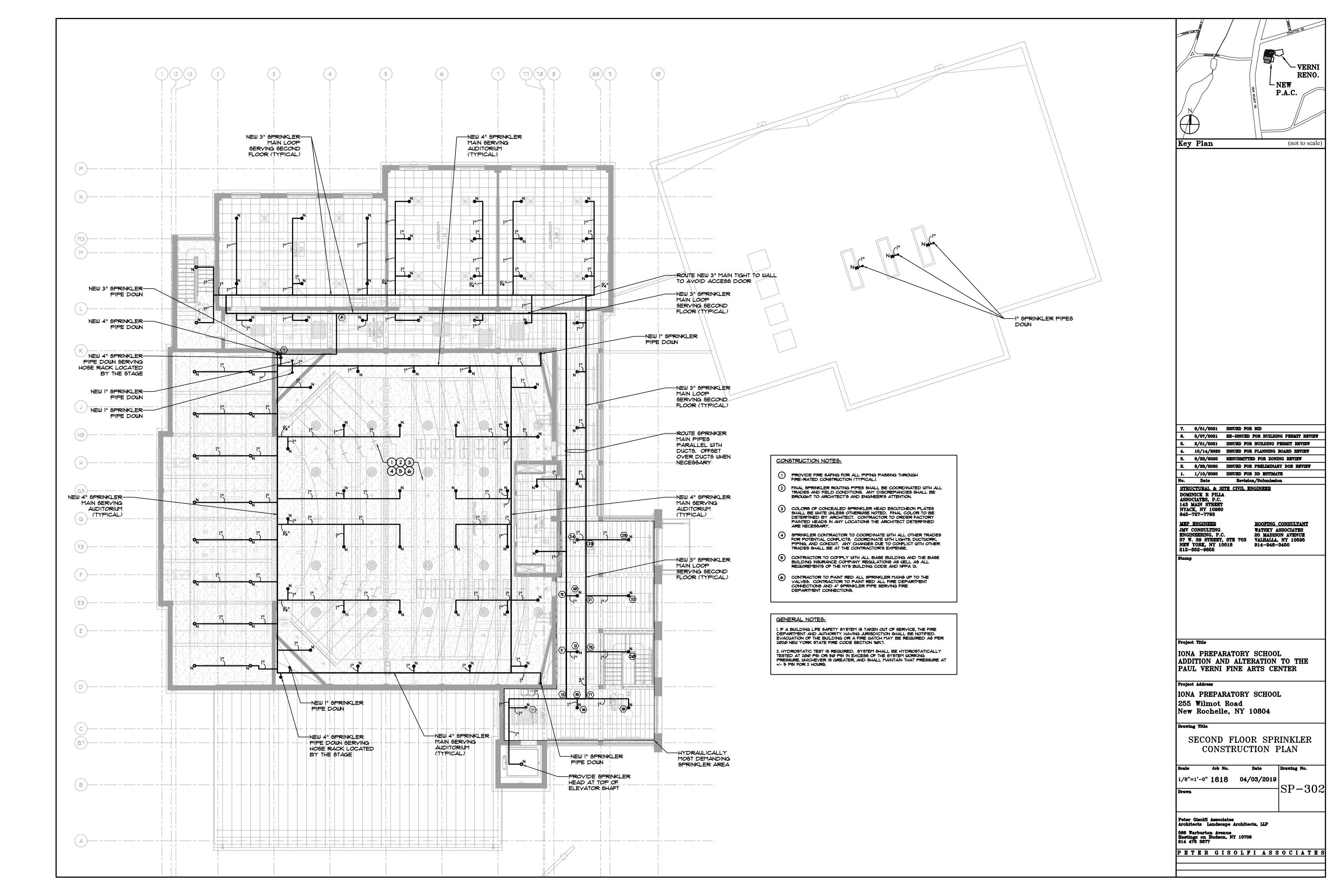
(not to scale) 7. 6/01/2021 ISSUED FOR BID 6. 5/07/2021 RE-ISSUED FOR BUILDING PERMIT REVIEW 5. 2/01/2021 ISSUED FOR BUILDING PERMIT REVIEW 4. 10/14/2020 ISSUED FOR PLANNING BOARD REVIEW 3. 9/23/2020 RESUBMITTED FOR ZONING REVIEW 1. 1/10/2020 ISSUED FOR DD ESTIMATE No. Date Revision/Submission STRUCTURAL & SITE CIVIL ENGINEER
DOMINICK R PILLA
ASSOCIATES, P.C.
143 MAIN STREET
NYACK, NY 10960
845-727-7793 MEP ENGINEER

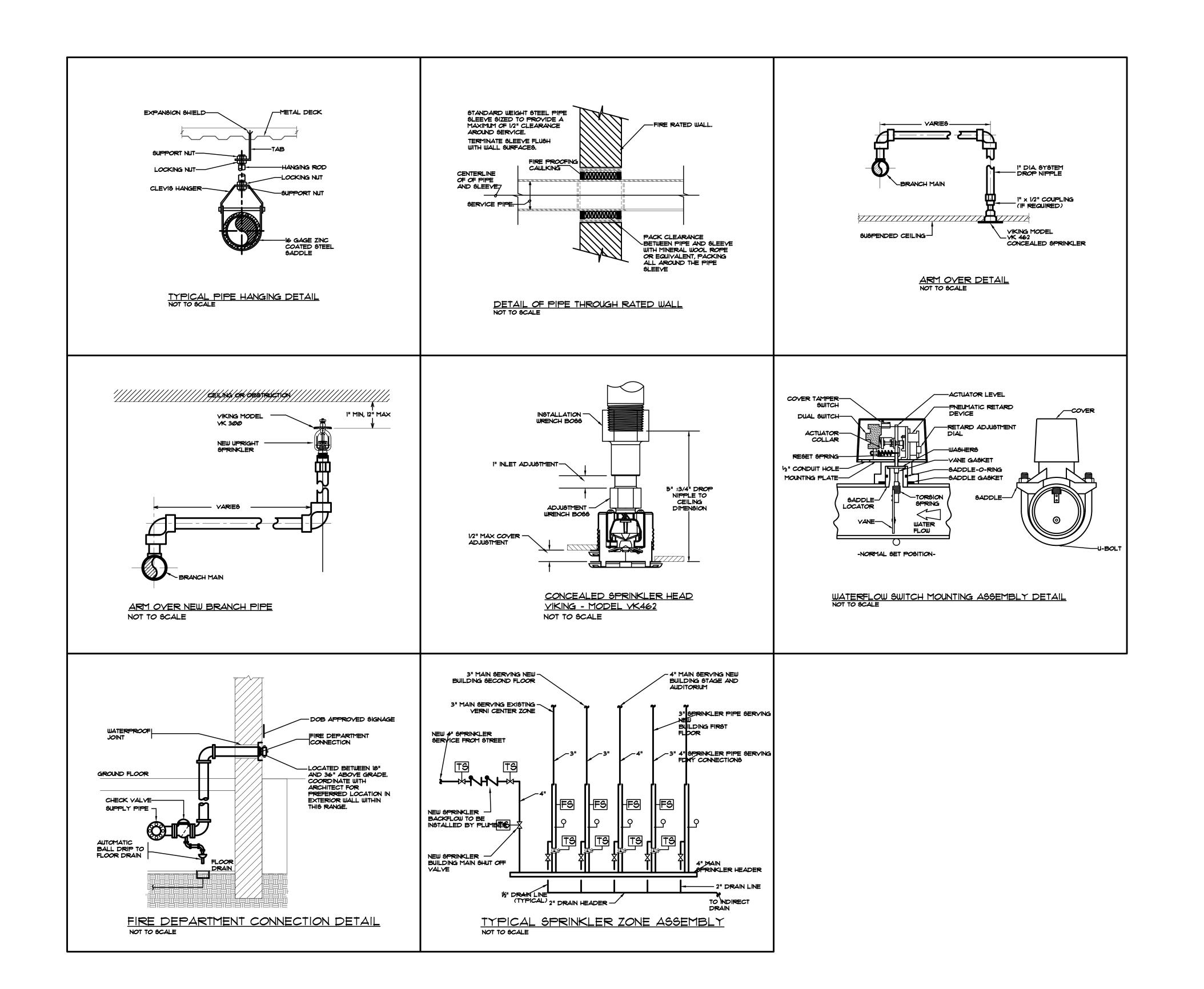
JMV CONSULTING
ENGINEERING, P.C.
37 W. 39 STREET, STE 703
NEW YORK, NY 10018
212-852-9855

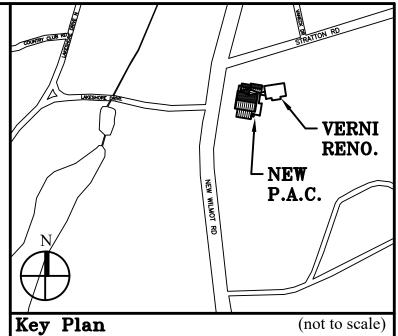
REPROBLEM ROOFING CONSULTANT
WATSKY ASSOCIATES
20 MADISON AVENUE
VALHALLA, NY 10595
914-948-3450 IONA PREPARATORY SCHOOL ADDITION AND ALTERATION TO THE PAUL VERNI FINE ARTS CENTER IONA PREPARATORY SCHOOL 255 Wilmot Road New Rochelle, NY 10804 SPRINKLER SPECIFICATIONS II Drawing No. Job No. 1618 04/03/2019 SP-102PETER GISOLFI ASSOCIATES











7.	6/01/2021	ISSUED FOR BID
6.	5/07/2021	RE-ISSUED FOR BUILDING PERMIT REVIEW
5.	2/01/2021	ISSUED FOR BUILDING PERMIT REVIEW
4.	10/14/2020	ISSUED FOR PLANNING BOARD REVIEW
3.	9/23/2020	RESUBMITTED FOR ZONING REVIEW
2.	8/28/2020	ISSUED FOR PRELIMINARY DOB REVIEW
1.	1/10/2020	ISSUED FOR DD ESTIMATE

Revision/Submission

STRUCTURAL & SITE CIVIL ENGINEER DOMINICK R PILLA ASSOCIATES, P.C. 143 MAIN STREET NYACK, NY 10960 845-727-7793

MEP ENGINEER ROOFING CONSULTANT WATSKY ASSOCIATES 20 MADISON AVENUE VALHALLA, NY 10595 914-948-3450 JMV CONSULTING ENGINEERING, P.C. 37 W. 39 STREET, STE 703 NEW YORK, NY 10018 212-852-9855

IONA PREPARATORY SCHOOL ADDITION AND ALTERATION TO THE PAUL VERNI FINE ARTS CENTER

Project Address

IONA PREPARATORY SCHOOL 255 Wilmot Road New Rochelle, NY 10804

SPRINKLER DETAILS

Scale	Job No.	Date	Drawing No.
NTS	1618	04/03/2019	
Drawn			SP-401

PETER GISOLFI ASSOCIATES

