

SHEET INDEX - 8 UNIT BLDG **DESCRIPTION SITE PLAN - BLDG 3 BLDG 3 1st FLR BLDG 3 2nd FLR DETAILS PAGE** 

FRONT VIEW

21/2" FIRE DEPARTMENT CONNECTION SHALL BE EQUIPPED WITH METAL/BRASS CAPS. ANY

FREE-STANDING FDC W/ CHECK

VALVE WITH DRUM DRIF

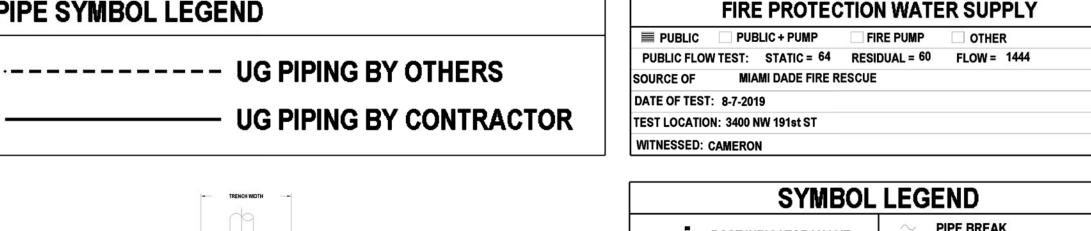
24" SQUARE BY 4" DEEF

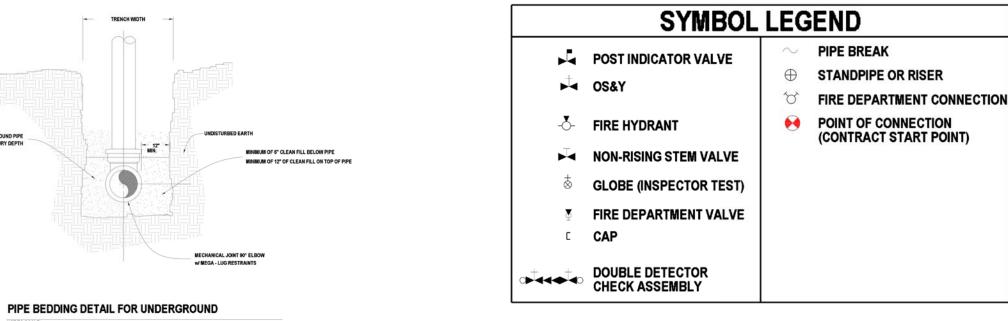
CONCRETE BASE.

4" CONTINUES TO TIE INTO

4" D.I. STUB-UP

SCH. 10 BLK.





## Notes For Underground and Owner

1A. Above Ground and Below Ground Items Shall be protected against Mechancial or Fire Damage as per NFPA 13 2007 Sec. 8.16.4 through 8.16.5 (By Owner) Note: 1: Pipe Bollards shall be provided (by owner) In order to protect the Fire Sprinkler System Componets from possible damage.

2A. Where Thrust block will not be used per NFPA 24 2013 Ed. 10.8.2 Then the following shall be observed: 10.8.3 Restrained Joint Systems: Fire mains utilizing restrained joint system Shall include the following:

(1) Locking mechanical or push-on joints (2) Mechanical joints utilizing setscrew retainer glands

(3) Bolted flange joints

(4) Heat-fused or welded joints

(5) Pipe clamps and tie rods

(6) Other approved methods or devices

**3A. NEW UNDERGROUND PIPING TO BE CPVC** 4A. NEW UNDERGROUND FITTINGS TO BE CPVC

5A. MINIMUM BURY DEPTH OF PIPE SHALL BE 36" TO THE TOP OF PIPE

PER NFPA-13 (13) SECTION A.8.16.1.1.1 A water supply connection should not extend into a building or through a building wall unless such connection is under the control of an outside listed indicating valve or an inside listed indicating valve located near the outside wall of the

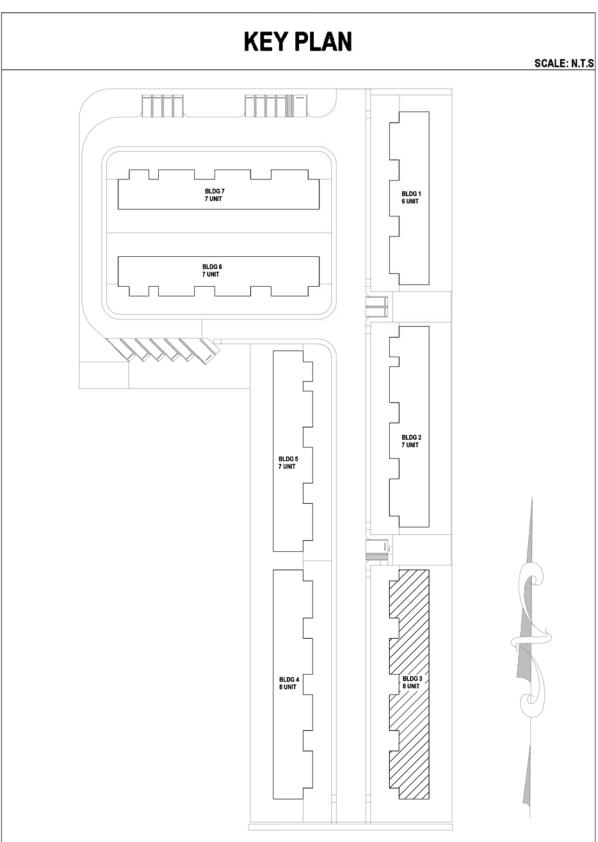
All valves controlling water supplies for sprinkler systems or portions thereof, including floor control valves, should be accessible to authorized persons during emergencies. Permanent ladders, clamped treads on risers, chain-operated hand wheels, or other accepted means should be provided where necessary.

Outside control valves are suggested in the following order of preference: (1) Listed indicating valves at each connection into the building at least 40 ft (12.2 m) from buildings if space permits

PER NFPA-13 (13) SECTION 24.2.5 Backflow Prevention Assemblies 24.2.5.1 The backflow prevention assembly shall be forward flow tested to ensure proper

24.2.5.2 The minimum flow rate shall be the system demand, including hose stream demand where applicable.

THE FORWARD FLOW TESTING OF THE DDCVA WILL BE PROVIDED THROUGH THE 11/2" F.H.V. AT THE RISER. THE SYSTEM DEMAND IS A MAX OF 100 GPM AND CAN BE PROVIDED THROUGH THE 11/2" VALVE.





Miami

OS&Y VALVES TO **HAVE TAMPER SWITCHES** (WIRING BY OTHERS) OR INSTALLED A MIN. OF 18" TO **BACKFLOW TO BE CHAINED** A MAX. OF 36" ABOVE GRADE AND LOCKED. 72" x 4" CONCRETE PAD 4" DUCTILE IRON STUB UP 4" DUCTILE IRON STUB UP 4" DR14 C900 TO SYSTEM 4" DR14 C900 TO CITY SECTION VIEW 4" AMES "3000 SS" DOUBLE CHECK DETECTOR ASSEMBLY REFER TO SITE PLAN FOR LOCATION

\*\*\*REVIEW AND APPROVAL BY THE AHJ SHALL NOT RELIEVE THE APPLICANT OF THE RESPONSIBILITY OF COMPLIANCE

AND PERMANENTLY POSTED. - ALL CONTROL VALVES AND BACKFLOWS SHALL BE CHAINED AND LOCKED. 6.8.1 UNLESS THE REQUIREMENTS OF 6.8.2 OR 6.8.3 ARE MET. THE FIRE DEPARTMENT CONNECTION(S) SHALL USE AN NH INTERNAL THREADED SWIVEL FITTING(S) WITH AN NH STANDARD THREAD(S), WHERE AT LEAST ONE OF THE CONNECTIONS

SHALL BE THE 2.5-7.5 NH STANDARD THREAD, AS SPECIFIED IN NFPA-1963, STANDARD FOR FIRE HOSE CONNECTIONS. 6.8.2 WHERE LOCAL FIRE DEPARTMENT CONNECTIONS DO NOT CONFORM TO NFPA-1963, STANDARD FOR FIRE HOSE CONNECTIONS. THE AUTHORITY HAVING JURISDICTION SHALL BE PERMITTED TO DESIGNATE THE CONNECTION TO BE USED. 6.8.3 THE USE OF THREADLESS COUPLINGS SHALL BE PERMITTED WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION

6.8.4 FIRE DEPARTMENT CONNECTIONS SHALL BE EQUIPPED WITH LISTED PLUGS OR CAPS, PROPERLY SECURED AND ARRANGED FOR EASY REMOVAL BY FIRE DEPARTMENTS. 6.8.5 FIRE DEPARTMENT CONNECTIONS SHALL BE OF AN APPROVED TYPE.

- FIRE DEPARTMENT CONNECTION TO BE YARD TYPE AND LOCATED 36" TO 48" ABOVE GRADE WITH METAL/BRASS CAP(S) IN PLACE. A TOTAL OF 1 - 6"x2½"x2½" SIAMESE FDC CONNECTIONS SHALL BE REQUIRED. REFER TO SITE PLAN FOR APPROXIMATE LOCATIONS. FINAL LOCATIONS SHALL BE APPROVED PRIOR TO INSTALLATION. REFER TO CIVIL UTILITY PLANS.

9.1.1\* GENERAL

FIRE SPRINKLER SPECIFICATIONS

(2017) AND THE LOCAL AUTHORITY HAVING JURISDICTION.

6.2.1 GENERAL. ONLY NEW SPRINKLERS SHALL BE INSTALLED.

CATWALKS/BREEZEWAYS, BALCONIES AND APARTMENT RESTROOMS.

INSPECTOR. INCLUDE A ROLL OF TEFLON TAPE INSIDE THE CABINET.

-GROOVED FITTINGS TO BE GRUVLOCK OR EQUIVALENT.

WITH 6.4.2 OR 6.4.3.

6.7 VALVES

6.7.1 GENERAL

-PIPING 1" - 1½" IN DIAMETER - BLACK STEEL THREADED PIPE TO BE SCH 40.

-SEE SPRINKLER PLAN FOR LOCATION AND SYMBOLS TO BE USED FOR SPRINKLERS

PROVIDED THAT A MEANS OF RETURNING THE SYSTEM TO SERVICE IS FURNISHED.

(1) FOR PROTECTED FACILITIES HAVING UNDER 300 SPRINKLERS - NO FEWER THAN SIX SPRINKLERS (2) FOR PROTECTED FACILITIES HAVING 300 TO 1000 SPRINKLERS - NO FEWER THAN 12 SPRINKLERS

(3) FOR PROTECTED FACILITIES HAVING OVER 1000 SPRINKLERS - NO FEWER THAN 24 SPRINKLERS

-BRANCH LINE PIPING 11/4" - 2" IN DIAMETER - BLACK STEEL ROLL GROOVED PIPE TO BE SCH 7.

-MAIN PIPING 2" - 6" IN DIAMETER - BLACK STEEL ROLL GROOVED PIPE TO BE SCH 10.

-THREADED FITTINGS TO BE 125 CAST IRON, DUCTILE IRON OR 150 MALLEABLE IRON.

-GALVANIZED FITTINGS SHALL BE USED ON EXTERIOR APPLICATION PIPING WHERE REQUIRED

341901571 CONTROLLING CONNECTIONS TO WATER SUPPLIES AND TO SUPPLY PIPES TO SPRINKLERS SHALL BE LISTED INDICATING

FP-SP BID 37.13.1 A JISTED HADERGROUND GATE VALVE EQUIPPED WITH A LISTED INDICATOR POST SHALL BE PERMITTED.
37.13.2 A LISTED WATER CONTROL VALVE ASSEMBLY WITH A RELIABLE POSITION INDICATION CONNECTED TO A REMOTE

6.7.3 DRAIN VALVES AND TEST VALVES, DRAIN VALVES AND TEST VALVES SHALL BE APPROVED.

INSTALLED IN A MANNER THAT DOES NOT INTERFERE WITH THE OPERATION OF ANY SYSTEM COMPONENTS.

A.6.2.9.1 A MINIMUM OF TWO SPRINKLERS OF EACH TYPE AND TEMPERATURE RATING SHOULD BE PROVIDED.

-ALL TABLES AND CODE REFERENCES BELOW ARE TAKEN FROM NFPA-13 (13).

-ALL MATERIALS, EQUIPMENT AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH NFPA 13R (13), 24 (13), 25 (14), FFPC 6th ED

-ALL MATERIALS, EQUIPMENT AND ACCESSORIES USED FOR THE FIRE SPRINKLER INSTALLATION SHALL HAVE A UL AND/OR FM

LISTING FOR THEIR INTENDED USE AND SHALL BE INSTALLED ACCORDING TO THEIR MANUFACTURER'S RECOMMENDATIONS AND

6.2.2.1 ALL SPRINKLERS SHALL BE PERMANENTLY MARKED WITH A ONE- OR TWO-CHARACTER MANUFACTURER SYMBOL,

-ALL 'EXTERIOR' SPRINKLER HEADS SHALL BE CORROSION RESISTANT INCLUDING ELECTRICAL ROOMS, RISER ROOMS,

THAT ANY SPRINKLERS THAT HAVE OPERATED OR BEEN DAMAGED IN ANY WAY CAN BE PROMPTLY REPLACED.

6.2.9.2 THE SPRINKLERS SHALL CORRESPOND TO THE TYPES AND TEMPERATURE RATINGS OF THE SPRINKLERS IN THE

ORIFICE SIZE OR SHAPE, DEFLECTOR CHARACTERISTIC, PRESSURE RATING, AND THERMAL SENSITIVITY.

FOLLOWED BY THREE OR FOUR NUMBERS, SO AS TO IDENTIFY A UNIQUE SPRINKLER IDENTIFICATION FOR EVERY CHANGE IN

6.2.9.1\* A SUPPLY OF AT LEAST SIX SPARE SPRINKLERS (NEVER FEWER THAN SIX) SHALL BE MAINTAINED ON THE PREMISES SO

6.2.9.3 THE SPRINKLERS SHALL BE KEPT IN A CABINET LOCATED WHERE THE TEMPERATURE TO WHICH THEY ARE SUBJECTED

6.2.9.4 WHERE DRY SPRINKLERS OF DIFFERENT LENGTHS ARE INSTALLED, SPARE DRY SPRINKLERS SHALL NOT BE REQUIRED,

6.2.9.5 THE STOCK OF SPARE SPRINKLERS SHALL INCLUDE ALL TYPES AND RATINGS INSTALLED AND SHALL BE AS FOLLOWS:

6.2.9.6 A SPECIAL SPRINKLER WRENCH SHALL BE PROVIDED AND KEPT IN THE CABINET TO BE USED IN THE REMOVAL AND

- HEAD BOX(ES) TO BE LOCATED IN THE FIRE PUMP ROOM OF THE FIRST FLOOR GARAGE OR WHERE REQUIRED BY FIELD

6.3 ABOVEGROUND PIPE AND TUBE - SHALL BE IN ACCORDANCE WITH NFPA-13 AND ASTM A 795 UNLESS NOTED OTHERWISE

6.3.1.1 PIPE OR TUBE SHALL MEET OR EXCEED ONE OF THE STANDARDS IN TABLE 6.3.1.1 OR BE IN ACCORDANCE WITH 6.3.6.

6.4.1 FITTINGS USED IN SPRINKLER SYSTEMS SHALL MEET OR EXCEED THE STANDARDS IN TABLE 6.4.1 OR BE IN ACCORDANCE

6.7.1.1 VALVE PRESSURE REQUIREMENTS. WHEN WATER PRESSURES EXCEED 175 PSI (12.1 BAR), VALVES SHALL BE USED IN

6.7.1.2 VALVE CLOSURE TIME. LISTED INDICATING VALVES SHALL NOT CLOSE IN LESS THAN 5 SECONDS WHEN OPERATED AT

SUPERVISORY STATION SHALL BE PERMITTED.
6.1.33 A RON-INDICATING VALVE SUCH AS AN UNDERGROUND GATE VALVE WITH APPROVED ROWN BOX. COMPLETE WITH

-GALVANIZED PIPE SHALL BE USED FOR EXTERIOR APPLICATIONS AND SHALL FOLLOW THE SCHEDULES ABOVE.

INSTALLATION OF SPRINKLERS. ONE SPRINKLER WRENCH SHALL BE PROVIDED FOR EACH TYPE OF SPRINKLER INSTALLED.

9.1.1.1 UNLESS THE REQUIREMENTS OF 9.1.1.2 ARE MET, TYPES OF HANGERS SHALL BE IN ACCORDANCE WITH THE

**REQUIREMENTS OF SECTION 9.1.** 

-HANGER SPACING TO BE PER NFPA-13 (13) (HANGER LEGEND SHOWN ON DRAWING). -HANGERS TO BE PER DETAILS SHOWN ON DRAWING.

-HANGER MATERIAL FOR GARAGE SHALL BE CORROSION RESISTANT, ZINC PLATED HANGER RINGS AND ALL THREAD ROD.

10 UNDERGROUND PIPING

10.1.1 \* LISTING. PIPING SHALL BE LISTED FOR FIRE PROTECTION SERVICE AND SHALL COMPLY WITH THE STANDARDS IN TABLE 10.1.2 STEEL PIPE. STEEL PIPING SHALL NOT BE USED FOR GENERAL UNDERGROUND SERVICE UNLESS SPECIFICALLY LISTED

10.1.3 STEEL PIPE USED WITH FIRE DEPARTMENT CONNECTIONS. WHERE EXTERNALLY COATED AND WRAPPED AND INTERNALLY GALVANIZED, STEEL PIPE SHALL BE PERMITTED TO BE USED BETWEEN THE CHECK VALVE AND THE OUTSIDE HOSE COUPLING

- INSTALLING CONTRACTOR MUST ADHERE TO NFPA-13 (13) CHAPTER 10 SETIONS 10.6.2 THROUGH 10.6.5 - ALL PIPE TO BE INSTALLED A MIN. OF 30" BELOW GRADE OR 36" BELOW DRIVEWAYS (GRADE TO BE VERIFIED IN FIELD) - ALL PIPING INSTALLATION TO MEET REQUIREMENTS OF NFPA-24 (13) & LOCAL CODES.

 ALL UNDERGROUND PIPE TO BE FLUSHED AND TESTED AT 200 PSI FOR 2 HOURS BEFORE CONNECTING TO THE BUILDING - ALL UNDERGROUND FIRE SERVICE PIPE TO BE INSTALLED BY A CERTIFIED CONTRACTOR.

 UNDERGROUND PIPING TO USE MECHANICAL JOINTS AND BE RESTRAINED WITH MEGA-LUGS. SPRINKLERMATIC'S POINT OF CONNECTION TO BE AT VALVE, LEFT BY OTHERS INSIDE PROPERTY LINE. - ALL UNDERGROUND FIRE UTILITIES PRIOR TO DEDICATED FIRE VALVES TO BE DONE BY OTHERS.

- MIC - THIS AREA IS NOT SPECIFICALLY KNOWN TO HAVE PROBLEMS WITH MICROBIAL INDUCED CORROSION. NO PREVENTATIVE MEASURES HAVE BEEN TAKEN. INTERNAL INSPECTIONS AS REQUIRED BY NFPA-25 (14) MUST BE CONDUCTED BY THE OWNER OR OWNER'S CONTRACTOR TO ENSURE THAT NO M.I.C. ACTIVITY IS PRESENT. SHOULD SUCH ACTIVITY BE FOUND AT A LATER DATE, REMEDIAL TREATMENT MAY BE REQUIRED.

FIRE SPRINKLER GENERAL NOTES -FIRE SPRINKLER POINT OF CONNECTION AT THE 4" GATE VALVE LEFT BY OTHERS IN THE PROPERTY LINE. SPRINKLERMATIC TO INSTALL A 4" DDCVA AND 4" FREE STANDING FDC AND ALL UNDERGROUND TO 1'-0 A.F.G. AND 1'-0 -ALL FIRE SPRINKLER WORK TO BE INSTALLED BY A CERTIFIED FIRE SPRINKLER CONTRACTOR IN THE STATE OF FLORIDA. -ALL WORK AND EQUIPMENT SELECTIONS SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO PURCHASING AND INSTALLATION MINITION DATE: MAXIMUM POSSIBLE SPEED FROM THE FULLY OPEN POSITION.

MAXIMUM POSSIBLE SPEED FROM THE FULLY OPEN POSITION.

A SIGNATURE DATE: MAXIMUM POSSIBLE SPEED FROM THE FULLY OPEN POSITION.

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A SIGNATURE DATE: MAXIMUM POSSIBLE SPEED FROM THE LOCAL AHJ, OWNERSHIP AND TAKE OVER AS ENGINEER OF RECORD (EOR). -THE AUTOMATIC FIRE SPRINKLER SYSTEM IS DESIGNED PER NFPA-13R (13), 24 (13), AND 25 (14), WHERE APPLICABLE, FLORIDA FIRE PREVENTION CODE, 2017 AND THE LOCAL AUTHORITY HAVING JURISDICTION FOR THE FOLLOWING ALL BLDGS TO BE DESIGNED IN ACCORDANCE WITH NFPA-13R (13) A .05 gpm/ft<sup>2</sup> OVER THE MOST 4 DEMANDING INSTALLATION - SHALL CONFORM TO NFPA-13 (13), 20 (13), 24 (13), 25 (14), THE 2017 FLORIDA FIRE PREVENTION CODE AND APPLICABLE REQUIREMENTS OF THE REFERENCED CODES.

PENETRATIONS: ALL PENETRATIONS THROUGH RATED WALLS/FLOORS SHALL BE FIRE STOPPED/WATERPROOFED TO SIGNAGE: INSTALL ALL SIGNAGE PER NFPA-13 (13) INCLUDING. BUT NOT LIMITED TO, ALL INSPECTORS TEST AND DRAINS. MAIN DRAINS, AND AUXILIARY DRAINS. WEATHER PROOF SIGNS OF CONTRASTING COLORS (WHITE BACKGROUND WITH RED LETTERING) SHALL BE PROVIDED OUTSIDE OF THE SPRINKLER RISER ROOM. THE SIGN SHALL STATE "SPRINKLER

PROVIDE SIGNAGE AT BACKFLOW AND FDC CLEARLY STATING THE ADDRESS OF THE BUILDING WHICH THAT DEVICE TESTING - FOR INTERIOR/PRESSURE TEST INSPECTION, THE CEILING WILL NOT BE INSTALLED TO ALLOW FOR PROPER INSPECTION: FOR SPRINKLER FINAL INSPECTION, ALL CEILING TILES AND/OR HARD CEILINGS WILL BE INSTALLED TO ALLOW FOR PROPER INSPECTION OF THE ESCUTCHEONS AND DEFLECTOR HEIGHT. -SPRINKLER SYSTEM TO BE INSPECTED BY LOCAL AHJ / FIRE MARSHAL'S OFFICE. SPRINKLER SYSTEM COVERAGE NOTES -7,785 SQFT - 66 PER BLDG 66 TTL SPRINKLERS

-ALL ELECTRICAL WIRING IS TO BE BY OTHERS. -ANY PAINTING OF PIPE OR DEVICES IS TO BE BY OTHERS. -FULL FORWARD TESTING OF THE BACKFLOW SHALL BE CONDUCTED THROUGH THE (1) FHV AT STUB-IN OF BUILDING. BUILDING IS CONSTRUCTED WITH POURED CONCRETE AND BLOCK WALLS. PARTITIONS ARE MADE OF METAL STUD AND DRYWALL OR CONCRETE BLOCK. 7 UNIT BLDG - B2, B5, B6, B7 - 9,050 SQFT - 77 PER BLDG 308 TTL SPRINKLERS 8 UNIT BLDG - B3, B4 - 10,328 SQFT - 88 PER BLDG 176 TTL SPRINKLERS TOTAL COVERAGE AREA: 64,641 SQ.FT.