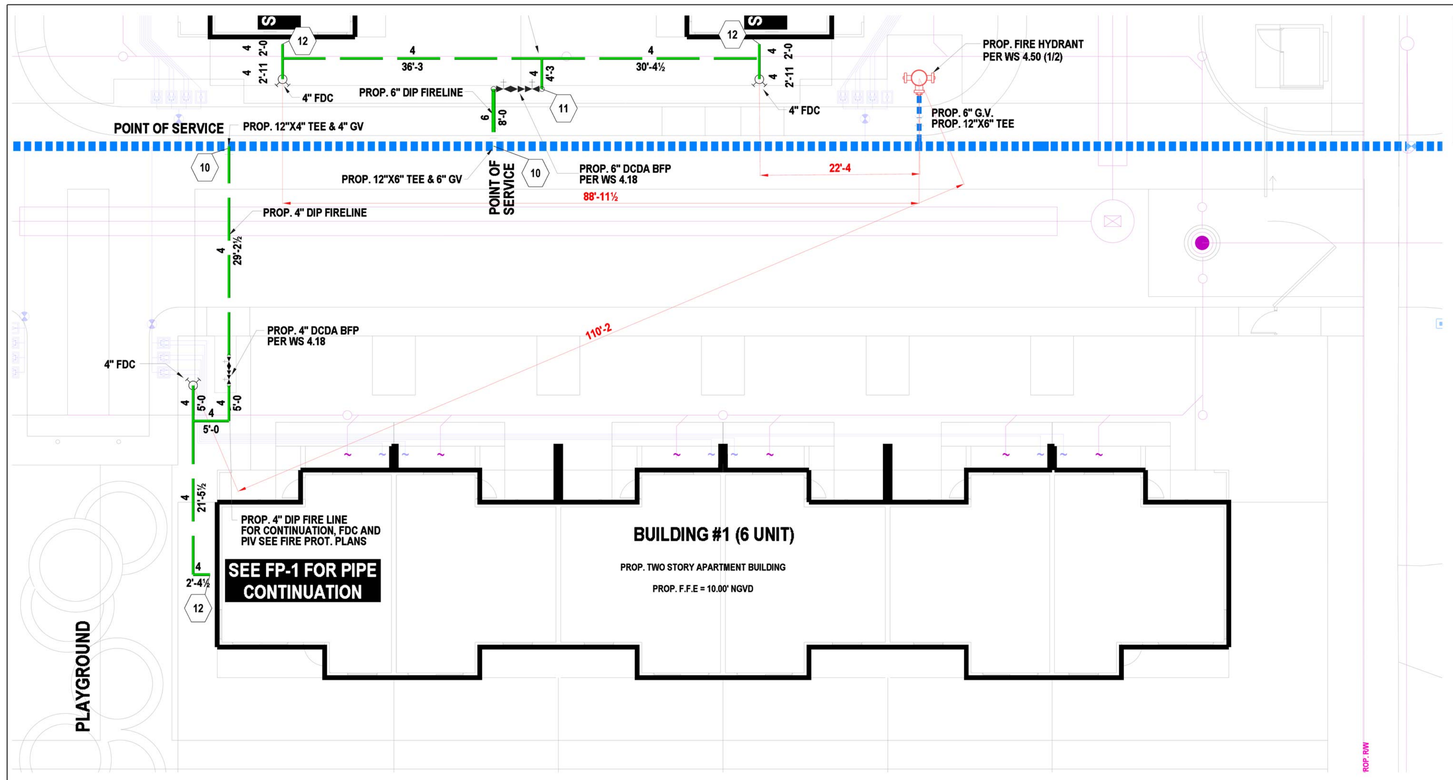


FIRE SPRINKLER SITE PLAN - BLDG 1 - 6 UNIT

SCALE: 1" = 10'-0

FOR HYDRAULIC REFERENCE ONLY

PIPE SYMBOL LEGEND

- - - - - - - - - - - - UG PIPING BY OTHERS

———————— UG PIPING BY CONTRACTOR

FIRE PROTECTION WATER SUPPLY

PUBLIC | PUBLIC + PUMP | FIRE PUMP | OTHER

PUBLIC FLOW TEST: STATIC = 64 RESIDUAL = 60 FLOW = 1444

SOURCE OF MIAMI DADE FIRE RESCUE

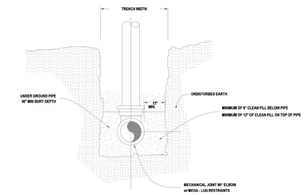
DATE OF TEST: 8-7-2019

TEST LOCATION: 3400 NW 191st ST

WITNESSED: CAMERON

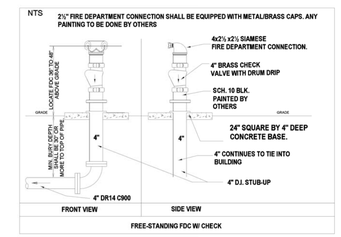
SYMBOL LEGEND

- POST INDICATOR VALVE
- OS&Y
- FIRE HYDRANT
- NON-RISING STEM VALVE
- GLOBE (INSPECTOR TEST)
- FIRE DEPARTMENT VALVE
- CAP
- DOUBLE DETECTOR CHECK ASSEMBLY
- PIPE BREAK
- STANDPIPE OR RISER
- FIRE DEPARTMENT CONNECTION
- POINT OF CONNECTION (CONTRACT START POINT)



PIPE BEDDING DETAIL FOR UNDERGROUND

NOT TO SCALE



FREE-STANDING FDC W/ CHECK

SHEET INDEX - 6 UNIT BLDG

#	DESCRIPTION
FP-1	SITE PLAN - BLDG 1
FP-2	BLDG 1 1st & 2nd FLR
FP-3	DETAILS PAGE

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 building.
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 operation.
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 1½" F.H.V. AT THE RISER. THE SYSTEM DEMAND IS A MAX OF 100 GPM AND CAN BE PROVIDED THROUGH THE 1½" VALVE.

FIRE SPRINKLER SPECIFICATIONS

-ALL MATERIALS, EQUIPMENT AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH NFPA 13R (13), 24 (13), 25 (14), FFPC 6th ED (2017) AND THE LOCAL AUTHORITY HAVING JURISDICTION.
-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 LISTING.
-ALL TABLES AND CODE REFERENCES BELOW ARE TAKEN FROM NFPA-13 (13).

6.2 SPRINKLERS
6.2.1 GENERAL. ONLY NEW SPRINKLERS SHALL BE INSTALLED.
6.52.2* SPRINKLER IDENTIFICATION
6.2.2.1 ALL SPRINKLERS SHALL BE PERMANENTLY MARKED WITH A ONE- OR TWO-CHARACTER MANUFACTURER SYMBOL, FOLLOWED BY THREE OR FOUR NUMBERS, SO AS TO IDENTIFY A UNIQUE SPRINKLER IDENTIFICATION FOR EVERY CHANGE IN ORIFICE SIZE OR SHAPE, DEFLECTOR CHARACTERISTIC, PRESSURE RATING, AND THERMAL SENSITIVITY.
-ALL "EXTERIOR" SPRINKLER HEADS SHALL BE CORROSION RESISTANT INCLUDING ELECTRICAL ROOMS, RISER ROOMS, CATWALKS/BREEZEWAYS, BALCONIES AND APARTMENT RESTROOMS.
-SEE SPRINKLER PLAN FOR LOCATION AND SYMBOLS TO BE USED FOR SPRINKLERS.

6.2.9 STOCK OF SPARE SPRINKLERS
6.2.9.1* A SUPPLY OF AT LEAST SIX SPARE SPRINKLERS (NEVER FEWER THAN SIX) SHALL BE MAINTAINED ON THE PREMISES SO 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 PROPERTY.
6.2.9.3 THE SPRINKLERS SHALL BE KEPT IN A CABINET LOCATED WHERE THE TEMPERATURE TO WHICH THEY ARE SUBJECTED WILL AT NO TIME EXCEED 100°F (38°C).
6.2.9.4 WHERE DRY SPRINKLERS OF DIFFERENT LENGTHS ARE INSTALLED, SPARE DRY SPRINKLERS SHALL NOT BE REQUIRED, PROVIDED THAT A MEANS OF RETURNING THE SYSTEM TO SERVICE IS FURNISHED.
6.2.9.5 THE STOCK OF SPARE SPRINKLERS SHALL INCLUDE ALL TYPES AND RATINGS INSTALLED AND SHALL BE AS FOLLOWS:
(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
6.2.9.6 A SPECIAL SPRINKLER WRENCH SHALL BE PROVIDED AND KEPT IN THE CABINET TO BE USED IN THE REMOVAL AND INSTALLATION OF SPRINKLERS. ONE SPRINKLER WRENCH SHALL BE PROVIDED FOR EACH TYPE OF SPRINKLER INSTALLED.
A.6.2.9.1 A MINIMUM OF TWO SPRINKLERS OF EACH TYPE AND TEMPERATURE RATING SHOULD BE PROVIDED.
- HEAD BOX(ES) TO BE LOCATED IN THE FIRE PUMP ROOM OF THE FIRST FLOOR GARAGE OR WHERE REQUIRED BY FIELD INSPECTOR. INCLUDE A ROLL OF TEFLON TAPE INSIDE THE CABINET.

6.3 ABOVEGROUND PIPE AND TUBE - SHALL BE IN ACCORDANCE WITH NFPA-13 AND ASTM A 795 UNLESS NOTED OTHERWISE.
6.3.1 GENERAL.
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.
-PIPING 1" - 1½" IN DIAMETER - BLACK STEEL THREADED PIPE TO BE SCH 40.
-BRANCH LINE PIPING 1¼" - 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.
-GALVANIZED PIPE SHALL BE USED FOR EXTERIOR APPLICATIONS AND SHALL FOLLOW THE SCHEDULES ABOVE.

6.4 FITTINGS
6.4.1 FITTINGS USED IN SPRINKLER SYSTEMS SHALL MEET OR EXCEED THE STANDARDS IN TABLE 6.4.1 OR BE IN ACCORDANCE WITH 6.4.2 OR 6.4.3.
-THREADED FITTINGS TO BE 125 CAST IRON, DUCTILE IRON OR 150 MALLEABLE IRON.
-GROOVED FITTINGS TO BE GRUVLOCK OR EQUIVALENT.
-GALVANIZED FITTINGS SHALL BE USED ON EXTERIOR APPLICATION PIPING WHERE REQUIRED.

6.7 VALVES
6.7.1 GENERAL.
6.7.1.1 VALVE PRESSURE REQUIREMENTS. WHEN WATER PRESSURES EXCEED 175 PSI (12.1 BAR), VALVES SHALL BE USED IN ACCORDANCE WITH THEIR PRESSURE RATINGS.
6.7.1.2 VALVE CLOSURE TIME. LISTED INDICATING VALVES SHALL NOT CLOSE IN LESS THAN 5 SECONDS WHEN OPERATED AT MAXIMUM POSSIBLE SPEED FROM THE FULLY OPEN POSITION.
6.7.1.3 LISTED INDICATING VALVES. UNLESS THE REQUIREMENTS OF 6.7.1.3.1 OR 6.7.1.3.2 ON SUPPLEMENT AND VALVE CONTROLLING CONNECTIONS TO WATER SUPPLIES AND TO SUPPLY PIPES TO SPRINKLERS SHALL BE LISTED INDICATING VALVES.
6.7.1.3.1 A LISTED UNDERGROUND GATE VALVE EQUIPPED WITH A LISTED INDICATOR POST SHALL BE PERMITTED.
6.7.1.3.2 A LISTED WATER CONTROL VALVE ASSEMBLY WITH A RELIABLE POSITION INDICATION CONNECTED TO A REMOTE SUPERVISORY STATION SHALL BE PERMITTED.
6.7.1.3.3 A NON-INDICATING VALVE, SUCH AS AN UNDERGROUND GATE VALVE WITH APPROVED ROADWAY BOX, COMPLETE WITH T-WRENCH, AND WHERE ACCEPTED BY THE AUTHORITY HAVING JURISDICTION, SHALL BE PERMITTED.
6.7.2 WAFER-TYPE VALVES. WAFER-TYPE VALVES WITH COMPONENTS THAT EXTEND BEYOND THE VALVE BODY SHALL BE INSTALLED IN A MANNER THAT DOES NOT INTERFERE WITH THE OPERATION OF ANY SYSTEM COMPONENTS.
6.7.3 DRAIN VALVES AND TEST VALVES. DRAIN VALVES AND TEST VALVES SHALL BE APPROVED.
6.7.4 ALL SPRINKLER VALVES SHALL BE PROVIDED WITH IDENTIFICATION SIGNS. SIGNS SHALL BE DURABLE, WEATHER PROOF AND PERMANENTLY POSTED.
- ALL CONTROL VALVES AND BACKFLOWS SHALL BE CHAINED AND LOCKED.

6.8 FIRE DEPARTMENT CONNECTIONS
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 AND WHERE LISTED FOR SUCH USE.
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 HANGERS
9.1.1* GENERAL.
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.

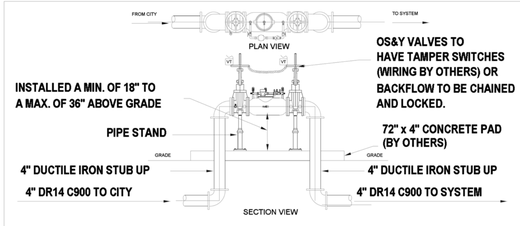
10 UNDERGROUND PIPING
10.1 * PIPING MATERIALS.
10.1.1 * LISTING. PIPING SHALL BE LISTED FOR FIRE PROTECTION SERVICE AND SHALL COMPLY WITH THE STANDARDS IN TABLE 10.1.1.
10.1.2 STEEL PIPE. STEEL PIPING SHALL NOT BE USED FOR GENERAL UNDERGROUND SERVICE UNLESS SPECIFICALLY LISTED FOR SUCH SERVICE.
10.1.3 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 FOR THE FIRE DEPARTMENT CONNECTION.
- 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 SYSTEM.
- 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 OUTSIDE THE BUILDING.
-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.
-SPRINKLERMATIC SHALL OBTAIN SHOP DRAWING APPROVAL 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 OCCUPANCIES:

ALL BLDGS TO BE DESIGNED IN ACCORDANCE WITH NFPA-13R (13) A .05 gpm/ft² OVER THE MOST 4 DEMANDING SPRINKLERS IN A COMPARTMENT

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.



4" AMES "3000 SS" DOUBLE CHECK DETECTOR ASSEMBLY
REFER TO SITE PLAN FOR LOCATION

PENETRATIONS: ALL PENETRATIONS THROUGH RATED WALLS/FLOORS SHALL BE FIRE STOPPED/WATERPROOFED TO MATCH THE RATING OF THE WALL/FLOOR.

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 RISER INSIDE".
PROVIDE SIGNAGE AT BACKFLOW AND FDC CLEARLY STATING THE ADDRESS OF THE BUILDING WHICH THAT DEVICE CONTROLS.

TESTING - FOR INTERIOR/PRESSURE TEST INSPECTION, THE CEILING WILL NOT BE INSTALLED TO ALLOW FOR PROPER INSPECTION OF HANGERS.

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.

-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.
-SPRINKLER SYSTEM TO BE INSPECTED BY LOCAL AHJ / FIRE MARSHAL'S OFFICE.

BUILDING CONSTRUCTION NOTES
BUILDING IS CONSTRUCTED WITH POURED CONCRETE AND BLOCK WALLS.
PARTITIONS ARE MADE OF METAL STUD AND DRYWALL OR CONCRETE BLOCK.

SPRINKLER SYSTEM COVERAGE NOTES

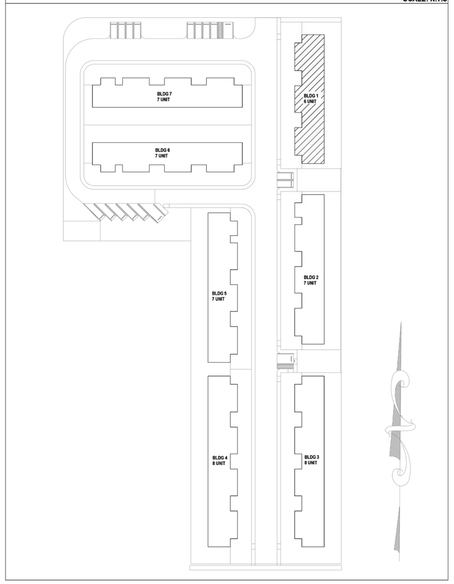
6 UNIT BLDG - B1	- 7,785	SQFT - 66 PER BLDG 66 TTL SPRINKLERS
7 UNIT BLDG - B2, B5, B6, B7	- 9,050	SQFT - 77 PER BLDG 308 TTL SPRINKLERS
8 UNIT BLDG - B3, B4	- 10,328	SQFT - 88 PER BLDG 176 TTL SPRINKLERS

TOTAL COVERAGE AREA: 64,641 SQ.FT.
TOTAL SPRINKLERS: 550

***REVIEW AND APPROVAL BY THE AHJ SHALL NOT RELIEVE THE APPLICANT OF THE RESPONSIBILITY OF COMPLIANCE WITH THIS CODE PER NFPA 1 - 1.14.1

KEY PLAN

SCALE: N.T.S



NO	DATE	ENGINEER SIGN & SEAL

ENGINEER SIGN & SEAL

R.K. Bucher Engineering, Inc.
EB# 8221
Company Name

6800 SW 64th Ave.
Suite 103
Davie, FL 33314
Address

954-327-3686
Phone

Robert Bucher
serialNumber=wwvrtg0Ab mwj8b6qyfzchj9pn8T, c=US, st=Florida, l=Davie, o=Robert K. Bucher, P.E., cn=Robert Bucher
This item has been digitally signed and sealed by Robert K. Bucher, P.E. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.
2015.10.18 10:53:55 -04'00'

STATE OF FLORIDA
LICENSED
No. 26019
PROFESSIONAL ENGINEER

SPRINKLERMATIC
FIRE PROTECTION SYSTEMS, INC.
4740 DAVIE ROAD
DAVIE, FLORIDA 33314
CC # 5607230001206S
PHONE (954) 327-3686
FAX (954) 327-3688
EF # 20000922
www.sprinklermatic.net

Villages at Miami Gardens

3400 NW 191st St

Miami Gardens, FL 33056

BLDG 1
SITE PLAN

PERMIT NO.	
CONTRACT NO.	3161
APPROVAL	MDP/Miami Gardens
C.D.T.	Scott Sawing, SET
SCALE	AS NOTED
DATE	8-18-19
REV DATE	

FP-SP

FILE NAME: Site Plan - GC.cad

PLOT DATE: 10/16/19

Miami Dade County Regulatory And Economic Resources - Job Copy
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Examiner
Ron Bennett
Plan Trade Stamp Name
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