

MAY 1, 2015

GENERAL SPECIFICATIONS

- 1.0 THESE DRAWINGS ARE FOR PERMIT, AND FOR PRICING, AND MUST BE ADHERED TO FOR INSTALLATION. IF CONTRACTOR WISHES TO ALTER DRAWINGS, THEN HE IS RESPONSIBLE FOR OBTAINING RE-APPROVALS.
- 2.0 CONTRACTOR TO SUPPLY AND INSTALL A COMPLETE AND FULLY OPERATIONAL AUTOMATIC SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS AND AS INDICATED IN THE SPECIFICATIONS AND CONFORMING TO N.F.P.A. REQUIREMENTS, O.B.C. REQUIREMENTS AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES.
- 3.0 UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL TEST THE SYSTEM AND SUBMIT TO THE ENGINEER COMPLETED CONTRACTORS TEST CERTIFICATES STATING THAT THE SYSTEMS HAVE BEEN INSTALLED, TESTED AND APPROVED BY THE AUTHORITIES HAVING JURISDICTION IN ACCORDANCE WITH N.F.P.A. #13, LATEST OR APPLICABLE EDITION.
- 4.0 ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL CODES, STANDARDS BY-LAWS AND AUTHORITIES HAVING JURISDICTION.
- 5.0 SYSTEMS TO BE INSTALLED AS PER N.F.P.A. STANDARDS, AND LOCAL AUTHORITIES.
- 6.0 SPRINKLER CONTRACTOR TO CO-ORDINATE INSTALLATION WITH EXISTING SITE CONDITIONS AND ACCEPT RESPONSIBILITY FOR AND COST OF MAKING ADJUSTMENTS TO PIPING TO AVOID INTERFERENCE WITH MECHANICAL, ELECTRICAL AND OTHER BUILDING COMPONENTS.
- 7.0 SPRINKLER CONTRACTOR TO INCLUDE FOR OFFSETS IN SPRINKLER PIPING AND MUST SUPPLY AND INSTALL TRAPPIED HANGERS WHERE REQUIRED. HANGERS FOR MAINS TO BE INSTALLED AT PANEL POINTS OF JOISTS.
- * 8.0 ALL SPRINKLER VALVES TO BE SUPERVISED, AND U.L.C. LISTED.
- * 9.0 SPRINKLER CONTRACTOR TO ALLOW FOR ADDITIONAL PRESSURE SWITCHES WHERE REQUIRED FOR ALARM SYSTEM.
- 10.0 CONTRACTOR TO ALLOW IN PRICE FOR SUFFICIENT PIPE AND FITTINGS TO INSTALL PENDENT SPRINKLERS WITHIN A 5 FT. RADIUS OF THE LOCATION SHOWN ON DRAWINGS.
- 11.0 ALL MATERIALS USED IN THE INSTALLATION OF THE SPRINKLER SYSTEM SHALL BE CANADIAN MADE, UNLESS SPECIFICALLY APPROVED IN WRITING PRIOR TO INSTALLATION BY THE ARCHITECTS AND/OR ENGINEERS RESPONSIBLE FOR THE SYSTEM DESIGN.
- 12.0 ALL SPRINKLER EQUIPMENT SHALL BE OF ONE MANUFACTURER FROM THE FOLLOWING: GRINNELL, VIKING, CENTRAL, RELIABLE OR APPROVED EQUAL. ALL SHALL BE U.L.C. LISTED FOR THEIR SPECIFIC APPLICATION.
- 13.0 DRAWINGS ARE NOT TO BE SCALED.
- 14.0 THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEERS AND SHALL NOT BE ALTERED WITHOUT APPROVAL. DRAWINGS SHALL BE RETURNED UPON REQUEST.
- 15.0 SPRINKLER HEADS SHALL BE U.L.C. LISTED AND SHALL BE THE TYPE AND TEMPERATURE RATING SPECIFIED ON THE DRAWINGS.
- 16.0 PROVIDE SPARE SPRINKLER HEADS AND WRENCH IN A METAL CABINET MOUNTED ON THE WALL NEAR THE MAIN SPRINKLER VALVE HEADER, AMOUNT AS PER N.F.P.A. STANDARD # 13 LATEST OR APPLICABLE EDITION.
- 17.0 SPRINKLERS OF SUITABLE TEMPERATURE RATING SHALL BE INSTALLED NEAR HEATING EQUIPMENT AS SPECIFIED IN N.F.P.A. STANDARD # 13 LATEST OR APPLICABLE EDITION.
- 18.0 PROVIDE ALL NECESSARY TRIM REQUIRED FOR ALARM CHECK VALVES TO COMPLY WITH APPLICABLE CODES AND REQUIREMENTS.
- 19.0 PENDENT SPRINKLERS INSTALLED WHERE SUSPENDED CEILING TILES OR DRYWALL OCCUR ARE TO BE EQUIPPED WITH TWO PIECE ESCUTCHEONS. (WHERE APPLICABLE)
- 20.0 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE FIRE PROTECTION SYSTEMS AND FOR CO-ORDINATION WITH ALL SITE CONDITIONS. BEFORE COMMENCING WORK, EXAMINE THE SITE AND THE EXISTING CONDITIONS AND REPORT IMMEDIATELY TO THE ENGINEER ANY DEFECT OR INTERFERENCE AFFECTING THE COMPLETION OF THE WORK OR THE GUARANTEE OF THIS CONTRACTOR.
- 21.0 CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- * 22.0 PROVIDE FLOW ALARM DEVICES, SUPERVISORY SWITCHES AND PRESSURE SWITCHES WHERE SHOWN ON DRAWINGS. WIRING TO ANNUNCIATOR SHALL BE BY ELECTRICAL CONTRACTOR. PROVIDE NECESSARY SIGNS WHERE REQUIRED BY THE LOCAL FIRE AUTHORITIES.
- 23.0 PROVIDE SHOP DRAWINGS FOR THE FOLLOWING:
 - A) - SPRINKLER HEADS
 - B) - ALARM VALVE AND TRIM
 - C) - SUPERVISORY DEVICES
 - D) - HANGERS
 - E) - FLOW SWITCHES
- 24.0 A COPY OF N.F.P.A. STANDARD # 25 IS TO BE PROVIDED AND LEFT IN A VISIBLE LOCATION IN THE SPRINKLER ROOM.
- 25.0 DIMENSIONS AND/OR MEASUREMENTS INDICATED ON THE DRAWINGS ARE TO BE VERIFIED AT SITE AND ANY MAJOR DISCREPANCIES TO BE REPORTED PRIOR TO FABRICATION AND INSTALLATION. (IF APPLICABLE)
- 26.0 EXACT LOCATION AND ELEVATION OF MAINS TO BE DETERMINED BY CONTRACTOR TO SUIT SITE.
- 27.0 CONTRACTOR TO CO-ORDINATE LOCATION OF SPRINKLERS WITH RESPECT TO SURFACE MOUNTED LIGHT FIXTURES AND MAINTAIN MINIMUM CLEARANCE AS REQUIRED BY NFPA 13 TO AVOID ANY OBSTRUCTION TO SPRAY PATTERN OF SPRINKLERS.
- 28.0 CONTRACTOR TO PROVIDE NECESSARY HANGERS AND ASSEMBLY TO COMPLY WITH THE FOLLOWING:
 - A) UNSUPPORTED LENGTH BETWEEN END SPRINKLER AND LAST HANGER SHALL NOT EXCEED 36 INCHES FOR 1" DIA. PIPE, 48" FOR 1 1/4" DIA. PIPE AND 60" FOR 1 1/2" DIA. PIPE OR LARGER.
 - NOTE: WHEN PRESSURE EXCEEDS 100 PSI, REFER TO NFPA STANDARD # 13
 - B) THE LENGTH OF AN UNSUPPORTED ARM-OVER TO A SPRINKLER SHALL NOT EXCEED 24".
 - NOTE: WHEN PRESSURE EXCEEDS 100 PSI, REFER TO NFPA STANDARD # 13
- 29.0 MINIMUM WALL THICKNESS OF SPRINKLER PIPING TO BE EQUIVALENT TO SCHEDULE 10S.
- 30.0 CONTRACTOR TO INCLUDE FOR AN ADDITIONAL 20 SPRINKLERS FOR BELOW OBSTRUCTIONS ETC.
- 31.0 SPRINKLERS IN LIGHT HAZARD OCCUPANCIES (i.e. OFFICES, SCHOOLS ETC.) TO BE QUICK RESPONSE TYPE.
- * 32.0 SPRINKLER SYSTEM TO BE SEISMICALLY RESTRAINED TO ONTARIO BUILDING CODE AND NFPA #13 REQUIREMENTS.
- 33.0 CONTRACTOR TO PROVIDE ADEQUATE DRAINS AS REQUIRED BY N.F.P.A.13 AND DISCHARGE TO A LOCATION TO SUIT SITE CONDITIONS.
- 34.0 ELECTRIC FIRE PUMP AND JOCKEY PUMP TO BE INSTALLED IN ACCORDANCE WITH NFPA STANDARD #20 AND O.B.C. AND BE IN COMPLIANCE WITH THE REQUIREMENT OF LOCAL AUTHORITIES.
- * DENOTES * IF APPLICABLE *

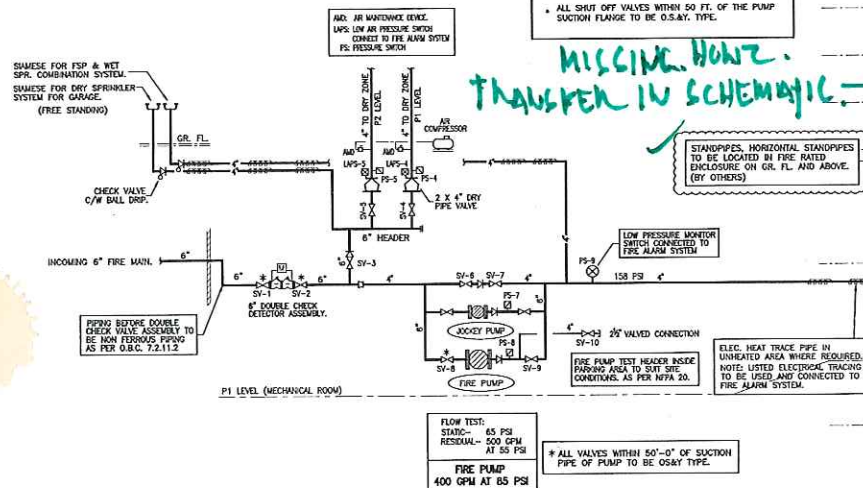
FIRE PROTECTION SYSTEM PRESSURE SWITCH SCHEDULE			
PS	DESCRIPTION	LOCATION	LOCATION
PS-4	LOW PRESSURE MONITOR SWITCH	SPRINKLER ROOM	
PS-5	PRESSURE SWITCH FOR P-1 PARKING DRY SPR. SYSTEM	SPRINKLER ROOM	
PS-7	PRESSURE SWITCH FOR JOCKEY PUMP	SPRINKLER ROOM	
PS-8	PRESSURE SWITCH FOR FIRE PUMP	SPRINKLER ROOM	
PS-9	PRESSURE SWITCH FOR CONDOMINIUM FLOOD MAIN	SPRINKLER ROOM	
LAPS-1	LOW AIR PRESSURE SWITCH	SPRINKLER ROOM	
LAPS-2	LOW AIR PRESSURE SWITCH	SPRINKLER ROOM	

FIRE PROTECTION SYSTEM FLOW SWITCHES SCHEDULE			
ZONE	DESCRIPTION	LOCATION	LOCATION
FS-21	SPR. SYSTEM ON GROUND LEVEL	GARAGE ROOM (170)	
FS-22	SPR. SYSTEM IN GARAGE ROOM	GARAGE ROOM (170)	
FS-23	SPR. RESER IN GARAGE CHUTE	GARAGE ROOM (170)	
FS-24	SPR. SYSTEM IN TOWNHOUSE AT NORTHEAST CORNER	GARAGE ROOM (170)	
FS-25	SPR. SYSTEM ON 2ND LEVEL	2ND LEVEL (STAIR G)	
FS-26	SPR. SYSTEM ON 3RD LEVEL	3RD LEVEL (STAIR F)	
FS-27	SPR. SYSTEM ON 4TH LEVEL	4TH LEVEL (STAIR E)	
FS-28	SPR. SYSTEM ON 5TH LEVEL	5TH LEVEL (STAIR D)	
FS-29	SPR. SYSTEM ON 6TH LEVEL	6TH LEVEL (STAIR C)	
FS-30	SPR. SYSTEM ON 7TH LEVEL	7TH LEVEL (STAIR B)	
FS-31	SPR. SYSTEM ON 8TH LEVEL	8TH LEVEL (STAIR A)	
FS-32	SPR. SYSTEM ON 9TH LEVEL	9TH LEVEL (STAIR A)	
FS-33	SPR. SYSTEM ON 10TH LEVEL	10TH LEVEL (STAIR A)	
FS-34	SPR. SYSTEM ON 11TH LEVEL	11TH LEVEL (STAIR A)	
FS-35	SPR. SYSTEM ON 12TH LEVEL	12TH LEVEL (STAIR A)	
FS-36	SPR. SYSTEM ON 13TH LEVEL	13TH LEVEL (STAIR A)	
FS-37	SPR. SYSTEM ON 14TH LEVEL	14TH LEVEL (STAIR A)	
FS-38	SPR. SYSTEM ON MED. PENHOUSE	PENHOUSE	
FS-39	SPR. SYSTEM IN MED. P.H. ON 8TH FL.	MED. P.H. ON 8TH FL.	
FS-41	WHL. SPR'S ON P1	STAIR ROOM ON P1	
FS-42	WHL. SPR'S ON P2	STAIR ROOM ON P2	
FS-43	WHL. SPR'S ON CR FL.	CORRIDOR ON CR FL.	
FS-44	WHL. SPR'S ON 2ND FL.	2ND FL. (STAIR J)	
FS-45	WHL. SPR'S ON 3RD FL.	3RD FL. (STAIR J)	
FS-46	WHL. SPR'S ON 4TH FL.	4TH FL. (STAIR J)	

FIRE PROTECTION SYSTEM SUPERVISED VALVES SCHEDULE			
ZONE	DESCRIPTION	LOCATION	LOCATION
SV-1	INCOMING FIRE MAIN ISOLATION	SPRINKLER ROOM	
SV-2	INCOMING FIRE MAIN ISOLATION	SPRINKLER ROOM	
SV-3	DRY SPR. SYSTEM MAIN ISOLATION	SPRINKLER ROOM	
SV-4	P-1 PARKING DRY SPR. SYSTEM	SPRINKLER ROOM	
SV-5	P-2 PARKING DRY SPR. SYSTEM	SPRINKLER ROOM	
SV-6	FIRE PUMP BY-PASS	SPRINKLER ROOM	
SV-7	FIRE PUMP SECTION	SPRINKLER ROOM	
SV-8	FIRE PUMP DISCHARGE	SPRINKLER ROOM	
SV-9	FIRE PUMP TEST HEAD	SPRINKLER ROOM	
SV-10	FIRE STANDPIPE RESER-P1	P-1 PARKING GARAGE	
SV-11	FIRE STANDPIPE RESER-P2	P-1 PARKING GARAGE	
SV-12	FIRE STANDPIPE RESER-P3	P-1 PARKING GARAGE	
SV-13	FIRE STANDPIPE RESER-4 & P3	P-1 PARKING GARAGE	
SV-14	FIRE STANDPIPE RESER-1	P-1 PARKING GARAGE	
SV-15	FSP & SPR. CONDOMINIUM RESER (PSP-2)	P-1 PARKING GARAGE	
SV-16	FIRE STANDPIPE RESER-3	P-1 PARKING GARAGE	
SV-20	SPR. RESER ISOLATION	GARAGE ROOM (170)	
SV-21	SPR. SYSTEM ON GROUND LEVEL	GARAGE ROOM (170)	
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PUMPS SCHEDULE - FIRE PROTECTION						
PUMP NO.	GPM	HEAD	HP	V./-/A	RPM	WAVE
FIRE PUMP	400 GPM	65 PSI	40 HP	575/3/60	3500 RPM	ASTM/ASTM OR SIMILAR
JOCKEY PUMP	10 GPM	90 PSI	1 HP	575/3/60	3600 RPM	ASTM/ASTM OR SIMILAR

NOTE: ELECTRICAL SPECIFICATIONS FOR FIRE PUMP TO BE CONFIRMED BY ELECTRICAL CONSULTANT.



FIRE PROTECTION SYSTEM SCHEMATIC
N.T.S.

REVISIONS

NO.	DESCRIPTION	DATE
1.	ISSUED FOR REVIEW & PERMIT.	JULY 30, 2014
2.	RE-ISSUED FOR PERMIT.	AUG. 15, 2014

NOTES

1. THIS DRAWING ASSUMES CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MUST BE RETURNED AT THE COMPLETION OF THE PROJECT OR UPON REQUEST.
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3. CONTRACTOR TO PROVIDE NECESSARY HANGERS AND ASSEMBLY TO COMPLY WITH THE FOLLOWING:
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 - NOTE: WHEN PRESSURE EXCEEDS 100 PSI, REFER TO NFPA STANDARD # 13
 - B) THE LENGTH OF AN UNSUPPORTED ARM-OVER TO A SPRINKLER SHALL NOT EXCEED 24".
 - NOTE: WHEN PRESSURE EXCEEDS 100 PSI, REFER TO NFPA STANDARD # 13
4. MINIMUM WALL THICKNESS OF SPRINKLER PIPING TO BE EQUIVALENT TO SCHEDULE 10S.
5. CONTRACTOR TO INCLUDE FOR AN ADDITIONAL 20 SPRINKLERS FOR BELOW OBSTRUCTIONS ETC.
6. SPRINKLERS IN LIGHT HAZARD OCCUPANCIES (i.e. OFFICES, SCHOOLS ETC.) TO BE QUICK RESPONSE TYPE.
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9. ELECTRIC FIRE PUMP AND JOCKEY PUMP TO BE INSTALLED IN ACCORDANCE WITH NFPA STANDARD #20 AND O.B.C. AND BE IN COMPLIANCE WITH THE REQUIREMENT OF LOCAL AUTHORITIES.
10. * DENOTES * IF APPLICABLE *

OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREEZING AND TO BE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

ALL GLASS BULB TYPE SPRINKLERS TO BE OF RECENT ISSUE, MANUFACTURE DATE OF AT LEAST YEAR 2013.

DESIGN CRITERIA

NORTH

STAMP



PROJECT
SQ ALEXANDRA PARK
BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE
SPECIFICATIONS
SCHEMATIC & DETAILS
SPRINKLER & STANDPIPE SYSTEM

DATE
JULY 2014

SCALE

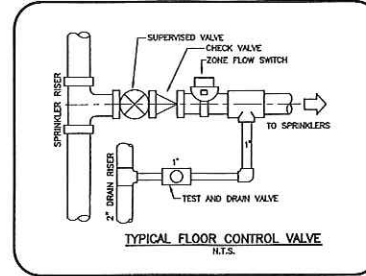
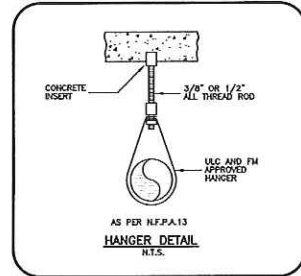
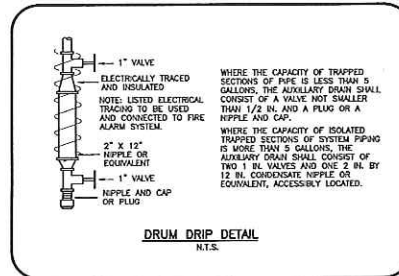
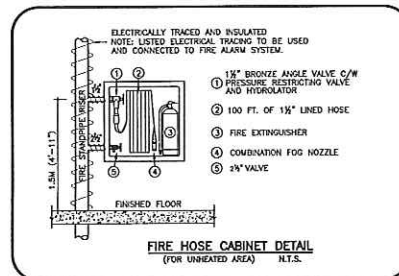
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ISSUED FOR
REVISION NO. REV-2

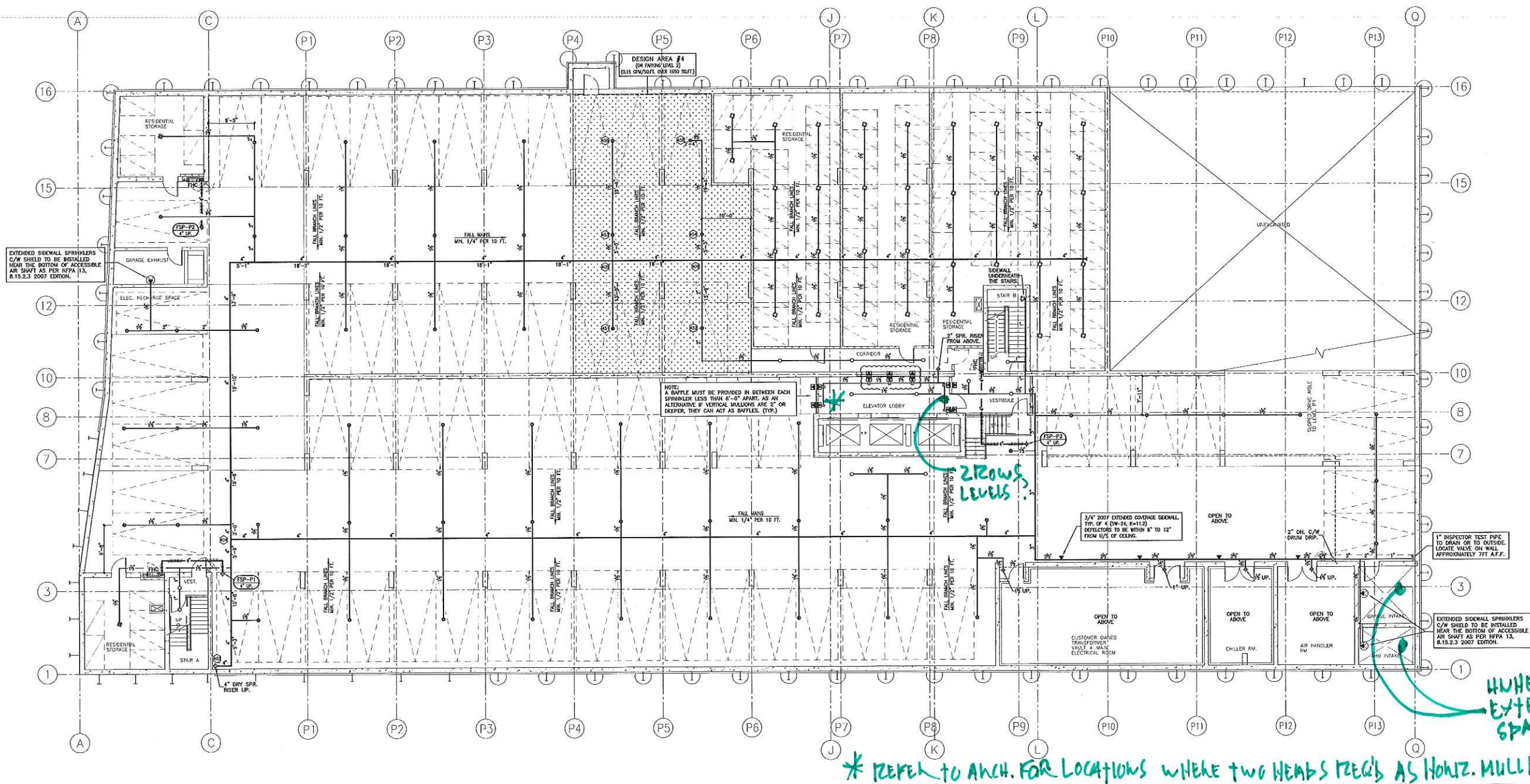
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DWG NO.
SP-1

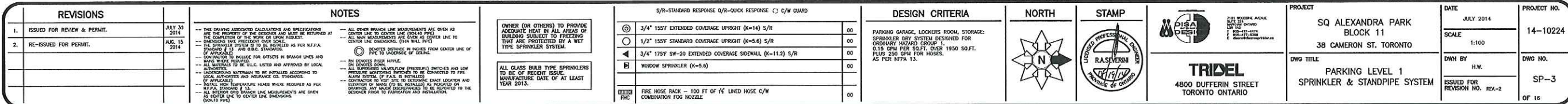
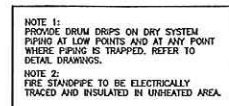
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NOTE 1: PROVIDE DRUM DRIPS ON DRY SYSTEM PIPING AT LOW POINTS AND AT ANY POINT WHERE PIPING IS TRAPPED. REFER TO DETAIL DRAWINGS.
NOTE 2: FIRE STANDPIPE TO BE ELECTRICALLY TRACED AND INSULATED IN UNHEATED AREA.



REVISIONS		NOTES		OWNER (OR OTHERS) TO PROVIDE		S/R-STANDARD RESPONSE Q/R-QUICK RESPONSE C/W GUARD		DESIGN CRITERIA		NORTH		STAMP		PROJECT		DATE		PROJECT NO.	
1.	ISSUED FOR REVIEW & PERMIT.	JULY 30 2014	NO SHADING ASSOCIATED CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MUST BE RETURNED AT THE COMPLETION OF THE WORK OR UPON REQUEST.	ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (C/C) UNLESS OTHERWISE NOTED.	ACCURATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREEZING THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.	3/4" 155F EXTENDED COVERAGE UPRIGHT (K=14) S/R	00	PARKING GARAGE, LOCKERS ROOM, STORAGE: SPRINKLER DRY PIPE SYSTEM DESIGNED FOR PROTECTANT WATERSIDE ABOUT 0.15 GPM PER SQ.FT. OVER 90 SQ.FT. PLUS 2.5 GPM FOR HOSES. AS PER NFPA 13.	3/4" 155F STANDARD COVERAGE UPRIGHT (K=5.6) S/R	00									



O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- (1) COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD AREAS. (SEE 904.2.1.1)
- (2) COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF UL/ORD-199P-W, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- (3) COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER FIRE PROTECTION BY COUPLING, VALVES, OR JOINTS CONSISTING AS A MINIMUM,
 - (A) LATH AND PLASTER,
 - (B) GYPSUM BOARD NOT LESS THAN 0.5 INCH (5/8 IN) THICK OR
 - (C) GYPSUM BOARD NOT LESS THAN 13 MM (1/2 IN) THICK OR
 - (D) A SUSPENDED MEMBRANE CEILING WITH
 - (i) STEEL SUSPENSION GRID, AND
 - (ii) PLASTER PANELS OR EQUIVALENT MASS NOT LESS THAN 1.7 KG/SQUARE METRE (3.5 LB/SQUARE FOOT)
- (4) IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED BY A SPRINKLER SHALL BE PROVIDED TO MAINTAIN CONTACT WITH THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 CM (11 3/4').
- (5) THE PROTECTION REQUIRED BY SENTENCES (3) AND (4) IS PERMITTED TO BE OMITTED WHERE THE COMBUSTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH UL/ORD-199P-W, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND THE TEST REPORT PROVIDES THE NECESSARY REQUIREMENTS THAT DOCUMENT THAT ADDITIONAL PROTECTION

NOTE 1:

IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ.FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE.

AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1

NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ. FT. IN AREA, AND THAT HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED- COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.
AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1

NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING
MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER
THE SOFFIT (BULKHEAD).

NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE
INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER
CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE
SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT
HORIZONTALLY MORE THAN 12" FROM THE WALL.

NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION
OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH

NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN
THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER
PIPING IS TO BE COMPATIBLE WITH CPVC PIPING

NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL
SURFACE MOUNTED LIGHT FIXTURE.

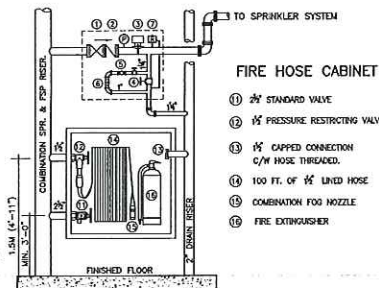
SPRINKLER LAYOUT BASED ON BULKHEADS BEING MAXIMUM 12" DEEP. ADDITIONAL SIDEWALL SPRINKLERS MAY BE REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

PROTECTION AREA PER RESIDENTIAL
CONCEALED PENDENT SPRINKLER SHALL NOT
EXCEED 300 SQ.FT. MAX. SPACING IS 20 FT.
PROTECTION AREA PER RESIDENTIAL CONCEALED
SIDEWALL SPRINKLER SHALL NOT EXCEED
256 SQ.FT. (16 FT. X 16 FT.)

CONTRACTOR SHALL COORDINATE WITH LIGHTING
DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM.

① STANDARD SHUT OFF VALVE

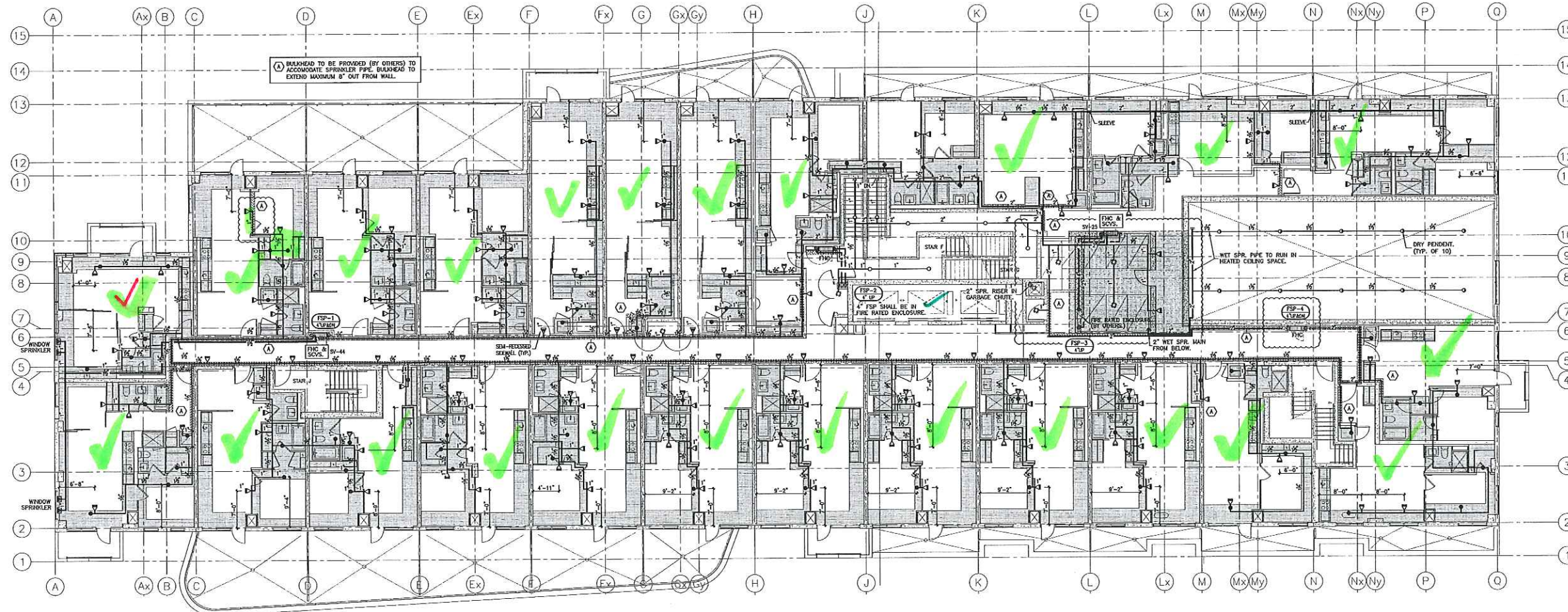
- ① STANDARD SHUT OFF VALVE
 - ② 2" CHECK VALVE
 - ③ FLOW SWITCH
 - ④ 1/4" DRAIN GLOBE VALVE
 - ⑤ 1" INSPECTOR TEST VALVE: SIGHT GLASS
 - ⑥ UNION WITH CORROSION RESISTANT ORFICE GIVING FLOW EQUIVALENT TO SMALLEST SPRINKLER ORFICE IN SYSTEM.
 - ⑦ 1/2" RELIEF VALVE. (SET AT 175 PSI)
WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.
- FLOW SWITCH & SHUT OFF VALVE OR PRY TO BE SUPPLIED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET

- ⑪ 3/4" STANDARD VALVE
- ⑫ 1/2" PRESSURE RESTRICTING VALVE
- ⑬ 1/2" CAPPED CONNECTION
C/W HOSE THREADED.
- ⑭ 100 FT. OF 1/2" LINED HOSE
- ⑮ COMBINATION FOG NOZZLE
- ⑯ FIRE EXTINGUISHER

FIRE HOSE CABINET AND
SPRINKLER CONTROL VALVE STATION DETAIL
N.T.S.



REVISIONS	
1.	ISSUED FOR REVIEW & PERMIT.
2.	RE-ISSUED FOR PERMIT.

NOTES

[illegible]

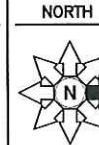
OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREEZING THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

ALL GLASS BULB TYPE SPRINKLERS TO BE OF RECENT ISSUE, MANUFACTURE DATE OF AT LEAST YEAR 2013.

	S/N-STANDARD RESPONSE Q/R-QUICK RESPONSE C/ N CHARGED	
☐ 1	1/2" 155T STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R	00
☐ 2	1/2" 155T STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	00
☒ 3	1/2" 155T RESIDENTIAL CONCEALED PENDENT (K=1.5)	00
☐ 4	1/2" 155T RESIDENTIAL CONCEALED SIDEWALL (K=1.0)	00
☐ 5	1/2" 155T RESIDENTIAL SEM-RECESSED SIDEWALL (K=5.6)	00
☐ 6	WINDOW SPRINKLER (K=5.6)	00
☐ 7	FIRE HOSE RACK - 100 FT OF 1 1/2" LINED HOSE C/W	00

DESIGN CRITERIA

PARKING GARAGE, LOCKERS ROOM, STORAGE
SPRINKLER DRY SYSTEM DESIGNED FOR
ORDINARY HAZARD GROUP 1.
0.15 GPM PER SQ.FT. OVER 1950 SQ.FT.
PLUS 250 GPM FOR HOSES.
AS PER NFPA 13.



DISA
DESIGN
DESIGN

2181 WOODBINE AVENUE
SUITE 224
SCARBOROUGH, ONTARIO
M1S 5S2
T: 416-477-4474
F: 416-477-4368
E: disa@disa.ca

TRIDEL
4800 DUFFERIN STREET
TORONTO ONTARIO

PROJECT	SQ ALEXANDRA PARK BLOCK 11 38 CAMERON ST. TORONTO
DWG TITLE	2ND FLOOR SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
SCALE	1:100
DWN BY	H.W.
ISSUED FOR REVISION NO.	REV.-2

PROJECT NO.	14-10224
DWG NO.	SP-5
OF 16	

IF SPRINKLER CONTRACTOR USES PLASTIC PIPING THEN THE FOLLOWING IS APPLICABLE.
NOTE: CONTRACTOR TO INSTALL PLASTIC PIPING AS PER MANUFACTURER'S SPECIFICATIONS INCLUDING EXPANSION LOOP.

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD OCCUPANCIES. (SEE APPENDIX A.)
- COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF UL/ORD-1997-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER FIRE COMPARTMENT BY CEILING, WALLS, OR SOFFITS CONSISTING AS A MINIMUM:
 - LATH AND PLASTER.
 - GYPSUM BOARD NOT LESS THAN 5/8 IN. (15.9 MM) THICK.
 - PLYWOOD NOT LESS THAN 1/2 IN. (12.7 MM) THICK OR
 - A SUSPENDED NONCOMBUSTIBLE CEILING WITH:
 - STEEL SUSPENSION GRID, AND
 - LAY-IN PANELS OR TILES HAVING A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT).
- IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED IN CONFORMANCE WITH SENTENCE (3) SHALL BE LOCATED SO THAT THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (11 3/4").
- THE PROTECTION REQUIRED BY SENTENCES (3) AND (4) IS PERMITTED TO BE WAIVED WHERE COMBUSTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH UL/ORD-1997-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE REQUIREMENTS IN THAT DOCUMENT WITHOUT ADDITIONAL PROTECTION.

GENERAL NOTES

- NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ. FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE.
AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1
- NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 45 SQ. FT. IN AREA, AND THAT HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.
AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1
- NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER THE SOFFIT (BULKHEAD).

- NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT HORIZONTALLY MORE THAN 12" FROM THE WALL.
- NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH.
- NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER PIPING IS TO BE COMPATIBLE WITH CPVC PIPING.
- NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL SURFACE MOUNTED LIGHT FIXTURE.

SPRINKLER LAYOUT BASED ON BULKHEADS BEING MAXIMUM 12" DEEP. ADDITIONAL SIDEWALL SPRINKLERS MAY BE REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

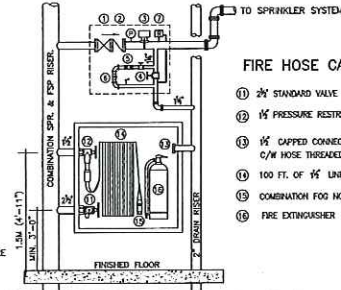
PROTECTION AREA PER RESIDENTIAL CONCEALED PENDENT SPRINKLER SHALL NOT EXCEED 300 SQ. FT. MAX. SPACING IS 20 FT. PROTECTION AREA PER RESIDENTIAL CONCEALED SIDEWALL SPRINKLER SHALL NOT EXCEED 250 SQ. FT. (16 FT. X 16 FT.)

CONTRACTOR SHALL COORDINATE WITH LIGHTING, DUCTWORK & INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION OF SPRINKLER SYSTEM.

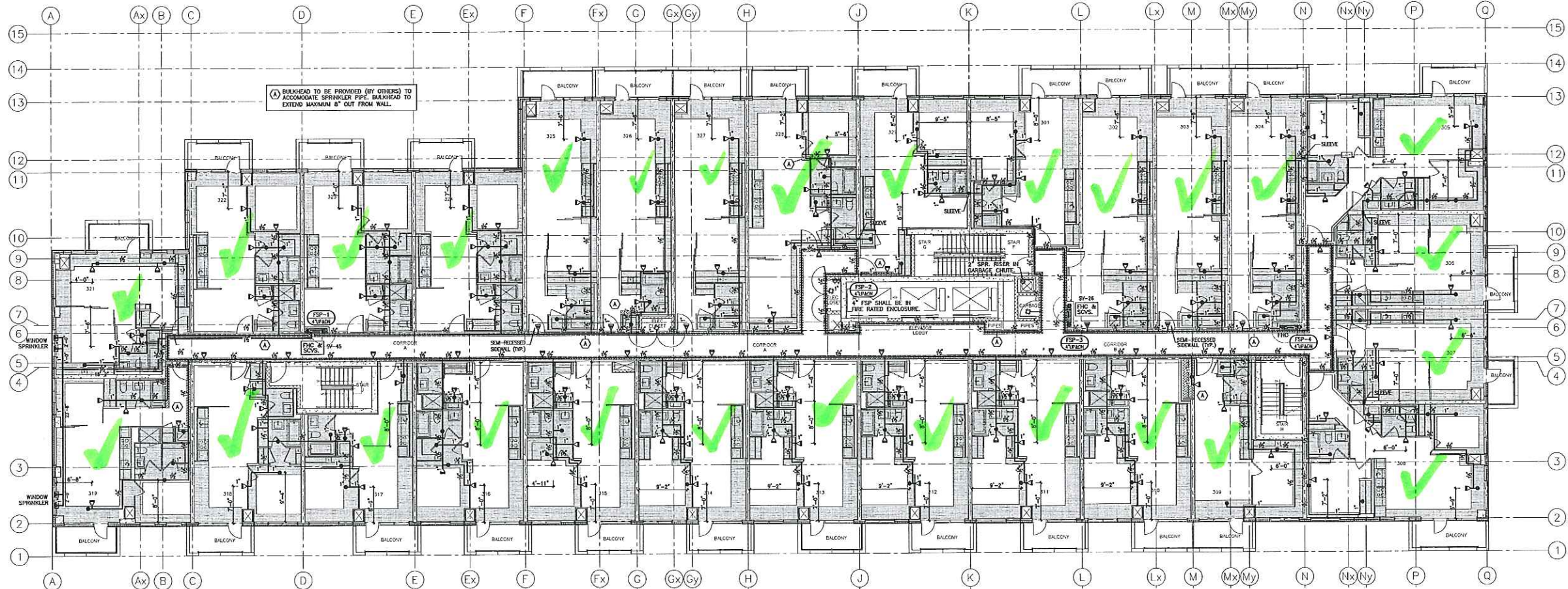
SPRINKLER CONTROL VALVE STATION

- STANDARD SHUT OFF VALVE
- 2" CHECK VALVE
- FLOW SWITCH
- 4" DRAIN GLOBE VALVE
- 1" INSPECTOR TEST VALVE SIGHT GLASS
- UNION WITH CORROSION RESISTANT ORFEE GIVING FLOW EQUIVALENT TO SMALLEST SPRINKLER ORFEE IN SYSTEM.
- 1/2" RELIEF VALVE (SET AT 175 PSI) WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

FLOW SWITCH & SHUT OFF VALVE OR FV TO BE SUPPLIED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET AND SPRINKLER CONTROL VALVE STATION DETAIL
N.T.S.



REVISIONS

1.	ISSUED FOR REVIEW & PERMIT.	JULY 30 2014
2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014

NOTES

- THIS DRAWING ASSOCIATED CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MUST BE RETURNED AT THE COMPLETION OF THE PROJECT OR UPON REQUEST.
- THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER NFPA, (IF APPLICABLE) AND UL/ORD-1997-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- CONTRACTOR TO INSURE FOR OBJECTS IN BRANCH LINES AND MAINS WHERE REQUIRED.
- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AGENCY.
- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL BYLAWS AND INSURANCE CO. STANDARDS.
- ALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1.
- ALL EXTERIOR GRS BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS (C/C TO C/C).
- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS (C/C TO C/C).
- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS (C/C TO C/C).
- PIPE TO UNDERGO OF COATING.
- IN LOCATIONS WHERE THE SPRINKLER SYSTEM IS NOT REQUIRED, THE CONTRACTOR SHALL PROVIDE A PERMANENT WARNING SIGN TO BE CONNECTED TO THE FIRE ALARM SYSTEM.
- CONTRACTOR TO NOTIFY THE DESIGNER OF ANY CHANGES TO THE DESIGN PRIOR TO FABRICATION AND INSTALLATION.

OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREEZING THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

ALL GLASS BALL TYPE SPRINKLERS TO BE OF RECENT ISSUE. MANUFACTURE DATE OF AT LEAST YEAR 2013.

S/R=STANDARD RESPONSE Q/R=QUICK RESPONSE C/R= GUARD	
1/2" 155F STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R	00
1/2" 155F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	00
1/2" 155F RESIDENTIAL CONCEALED PENDENT (K=4.8)	00
1/2" 155F RESIDENTIAL CONCEALED SIDEWALL (K=4.8)	00
1/2" 155F RESIDENTIAL SEM-RECESSED SIDEWALL (K=5.8)	00
WINDOW SPRINKLER (K=5.6)	00
FIRE HOSE RACK - 100 FT OF 1/2" LINED HOSE C/W COMBINATION FOG NOZZLE	00

DESIGN CRITERIA

DESIGNED FOR RESIDENTIAL SPRINKLERS AS PER NFPA 13 SECTION 11.3.1 (2010 ED.).
DESIGN AREA TO INCLUDE THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND.
THE REQUIRED DISCHARGE FROM EACH SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING:
(1) MIN. FLOW RATES INDICATED IN SPR. LISTING.
(2) MIN. 0.10 GPM/SQ. FT. OVER DESIGN AREA.

NORTH



STAMP



TRIDEL

4800 DUFFERIN STREET
TORONTO ONTARIO

PROJECT
SQ ALEXANDRA PARK
BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE
3RD FLOOR
SPRINKLER & STANDPIPE SYSTEM

DATE
JULY 2014

SCALE
1:100

DWN BY
H.W.

ISSUED FOR
REVISION NO. REV-2

PROJECT NO.
14-10224

DWG NO.
SP-6

OF 16

IF SPRINKLER CONTRACTOR USES PLASTIC PIPING THEN THE FOLLOWING IS APPLICABLE:
NOTE: CONTRACTOR TO INSTALL PLASTIC PIPING AS PER MANUFACTURER'S SPECIFICATIONS INCLUDING EXPANSION LOOP.

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD OCCUPANCIES. (SEE APPENDIX A.)
- COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF ULC/ORD-199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM:
 - LATH AND PLASTER.
 - GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK.
 - PLYWOOD NOT LESS THAN 13 MM (1/2 IN) THICK OR
 - A SUSPENDED MEMBRANE CEILING WITH:
 - STEEL SUSPENSION GRID, AND
 - LATH-OR FIBERGLASS OR TILES HAVING A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT).
- IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED IN CONFORMANCE WITH SENTENCE (3) SHALL BE LOCATED SO THAT THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (11 3/4").
- THE PROTECTION REQUIRED BY SENTENCES (3) AND (4) IS PERMITTED TO BE WAIVED WHERE COMBUSTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C189P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE REQUIREMENTS IN THAT DOCUMENT WITHOUT ADDITIONAL PROTECTION.

GENERAL NOTES

- NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ. FT. IN AREA IN RESIDENTIAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE.
AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1
- NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 45 SQ. FT. IN AREA, AND THAT HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING INCLUDING THE WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.
AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1
- NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER THE SOFFIT (BULKHEAD).
- NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT HORIZONTALLY MORE THAN 12" FROM THE WALL.
- NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH.
- NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER PIPING IS TO BE COMPATIBLE WITH CPVC PIPING.
- NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL SURFACE MOUNTED LIGHT FIXTURE.

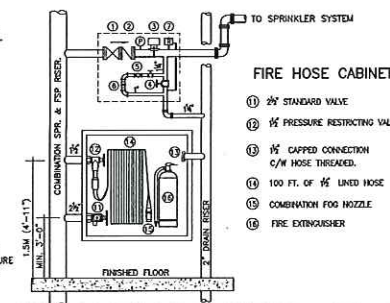
SPRINKLER LAYOUT BASED ON BULKHEADS BEING MAXIMUM 12" DEEP. ADDITIONAL SIDEWALL SPRINKLERS MAY BE REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

PROTECTION AREA PER RESIDENTIAL CONCEALED PENDENT SPRINKLER SHALL NOT EXCEED 300 SQ. FT. MAX. SPACING IS 20 FT.
PROTECTION AREA PER RESIDENTIAL CONCEALED SIDEWALL SPRINKLER SHALL NOT EXCEED 256 SQ. FT. (16 FT. X 16 FT.)

CONTRACTOR SHALL COORDINATE WITH LIGHTING, DETECTOR & INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION OF SPRINKLER SYSTEM.

SPRINKLER CONTROL VALVE STATION

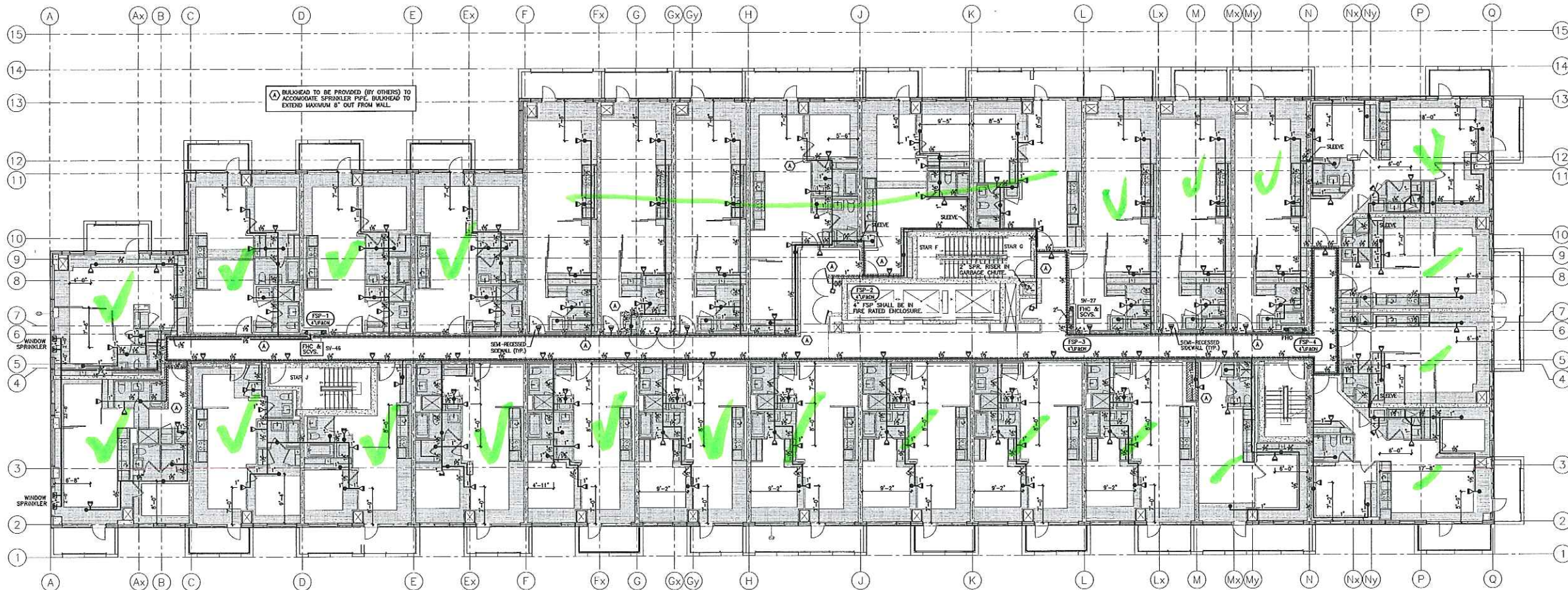
- STANDARD SHUT OFF VALVE
 - 2" CHECK VALVE
 - FLOW SWITCH
 - 4" DRAIN GLOBE VALVE
 - 1" INSPECTOR TEST VALVE SIGHT GLASS
 - UNION WITH CORROSION RESISTANT ORICE GIVING FLOW EQUIVALENT TO SMALLEST SPRINKLER ORICE IN SYSTEM
 - 1/2" RELIEF VALVE (SEE AT 1.75 PSI)
- WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.
- FLOW SWITCH & SHUT OFF VALVE OR PIV TO BE SUPPLEMENTED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET

- 3/4" STANDARD VALVE
- 1/2" PRESSURE RESTRICTING VALVE
- 1/2" CAPED CONNECTION C/W HOSE THREADED
- 100 FT. OF 1/2" UNED HOSE
- COMBINATION FOG NOZZLE
- FIRE EXTINGUISHER

FIRE HOSE CABINET AND SPRINKLER CONTROL VALVE STATION DETAIL
N.T.S.



REVISIONS

NO.	DESCRIPTION	DATE
1.	ISSUED FOR REVIEW & PERMIT.	JULY 30 2014
2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014

NOTES

- THIS DRAWING ASSOCIATED CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MUST BE RETURNED AT THE COMPLETION OF THE WORK OR UPON REQUEST.
- CONTRACTOR TO PROVIDE OVER SIZES AS PER NFPA STANDARD 13 AND O.B.C. STANDARDS.
- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAIN LINES TO BE SILENT LISTED AND APPROVED BY LOCAL AUTHORITIES.
- UNDERGROUND MAINS ARE TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS.
- ALL SPRINKLER HEADS ARE TO BE INSTALLED AS REQUIRED BY NFPA STANDARD 13.
- ALL VERTICAL AND HORIZONTAL LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (DOUBLE PIPING)
- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (DOUBLE PIPING)
- SPACINGS DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
- IN CASES WHERE NEARBY.
- ALL SUPERHEATED UNIFORM FLOW (PRESSURE) SWITCHES AND LOW PRESSURE UNIFORM FLOW (PRESSURE) SWITCHES TO BE CONNECTED TO THE ALARM SYSTEM (IF P.A.S. IS INSTALLED).
- CONTRACTOR TO NOT FAIL TO DETERMINE EXACT LOCATION AND ELEVATION OF WALLS TO BE INSTALLED AS REQUIRED BY NFPA STANDARD 13.
- CONTRACTOR TO NOT FAIL TO DETERMINE EXACT LOCATION AND ELEVATION OF WALLS TO BE INSTALLED AS REQUIRED BY NFPA STANDARD 13.
- CONTRACTOR TO NOT FAIL TO DETERMINE EXACT LOCATION AND ELEVATION OF WALLS TO BE INSTALLED AS REQUIRED BY NFPA STANDARD 13.

OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREELAND THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

ALL GLASS BULB TYPE SPRINKLERS TO BE OF RECENT ISSUE. MANUFACTURE DATE OF AT LEAST YEAR 2013.

S/R-STANDARD RESPONSE Q/R-QUICK RESPONSE C/C/W GUARD		
1/2" 155°F STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R	00	
1/2" 155°F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	00	
1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=1.9)	00	
1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	00	
1/2" 155°F RESIDENTIAL SEMI-RECESSED SIDEWALL (K=5.4)	00	
1/2" 155°F RESIDENTIAL SEMI-RECESSED SIDEWALL (K=5.4)	00	
FIRE HOSE RACK - 100 FT OF 1/2" UNED HOSE C/W COMBINATION FOG NOZZLE	00	

DESIGN CRITERIA

DESIGNED FOR RESIDENTIAL SPRINKLERS AS PER NFPA 13 SECTION 11.3.1 (2010 EDITION).
DESIGN AREA TO INCLUDE THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND.
THE REQUIRED DISCHARGE FROM EACH SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING:
(1) MIN. FLOW RATES INDICATED IN SPR. LISTING.
(2) MIN. 0.10 GPM/SQ. FT. OVER DESIGN AREA.

NORTH



STAMP



TRIDEL
4800 DUFFERIN STREET
TORONTO ONTARIO

PROJECT	SQ ALEXANDRA PARK BLOCK 11 38 CAMERON ST. TORONTO
DWG TITLE	4TH FLOOR SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
SCALE	1:100
DWN BY	H.W.
ISSUED FOR REVISION NO.	REV.-2

PROJECT NO.	14-10224
DWG NO.	SP-7
OF 16	

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- (1) COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD AREAS.
- (2) COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF ULC/ORD-99P-M "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- (3) COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER PIPE PENETRATING BY CEILINGS, FLOORS OR SOFFITS CONSISTING AS A MINIMUM,
 - (A) LATH AND PLASTER,
 - (B) GYPSUM BOARD NOT LESS THAN 0.6 IN THICK OR 5/8 IN PLYWOOD NOT LESS THAN 1 1/2 IN THICK OR (C) ON TOP OF A SUSPENDED MECHANICAL CEILING
 - (1) STEEL SUSPENSION GRID WITH 1" x 6" PANELS OR TILES SPACING AT LEAST 12" WITH A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT)
- (4) IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED BY GLASS OR GLASS BLOCK SHALL BE PROVIDED SUCH THAT THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (11 3/4").
- (5) THE PROTECTION REQUIRED BY SENTENCES (1) AND (3) IS PERMITTED TO BE OMITTED WHERE:
 - (A) COMBUSTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199-P-M "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS"; AND HAS BEEN SHOWN TO MEET THE PROTECTION

NOTE 1:

IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ.FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE.

NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ.FT. IN AREA, AND THAT HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED- COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.

NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING
MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER
THE SOFFIT (BULKHEAD).

NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE
INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER
CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE
SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT
HORIZONTALLY MORE THAN 12" FROM THE WALL.

NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION
OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH

NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN
THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER
PIPING IS TO BE COMPATIBLE WITH CPVC PIPING

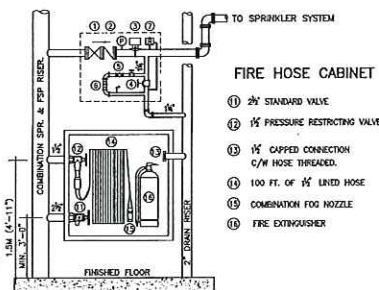
NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL
SURFACE MOUNTED LIGHT FIXTURE.

SPRINKLER LAYOUT BASED ON BULKHEADS
BEING MAXIMUM 12" DEEP.
ADDITIONAL SIDEWALL SPRINKLERS MAY BE
REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

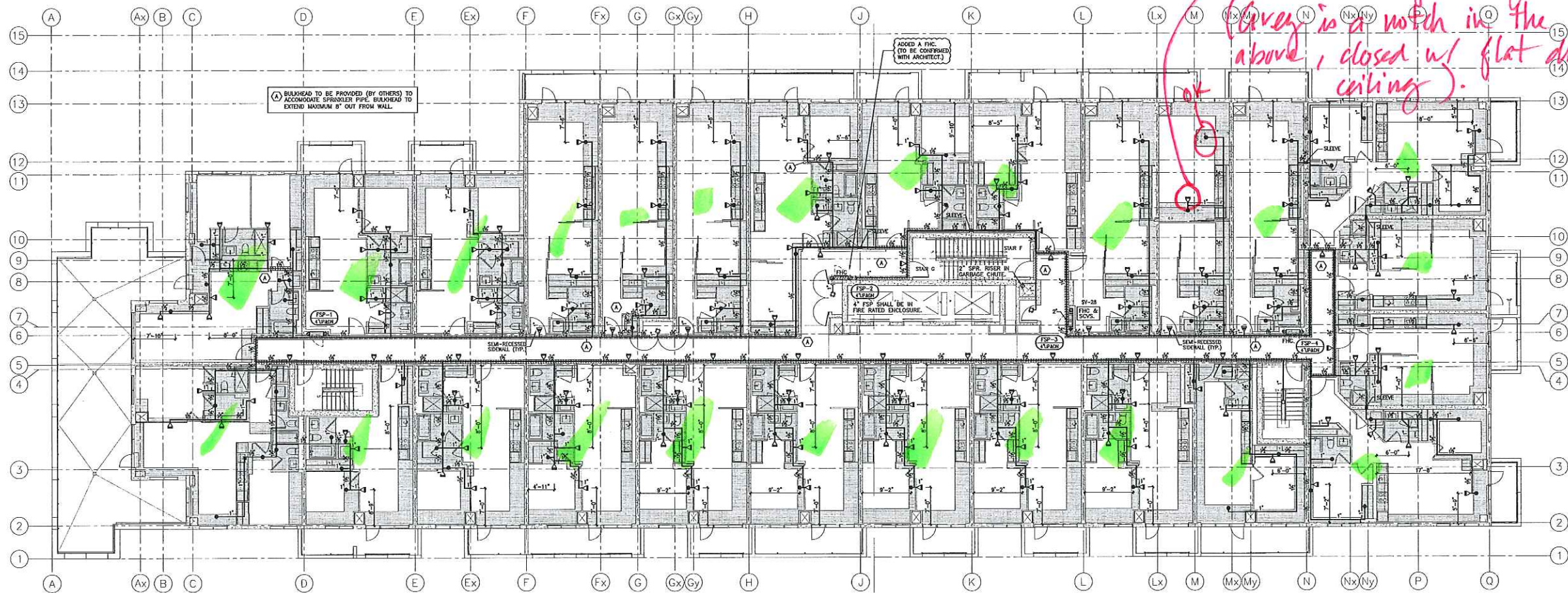
PROTECTION AREA PER RESIDENTIAL
CONCEALED PENDENT SPRINKLER SHALL NOT
EXCEED 300 SQ.FT. MAX. SPACING IS 20 FT.
PROTECTION AREA PER RESIDENTIAL CONCEALED
SIDEWALL SPRINKLER SHALL NOT EXCEED
255 SQ.FT. (16 FT. X 16 FT.)

CONTRACTOR SHALL COORDINATE WITH LIGHTING
DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM.

- ① STANDARD SHUT OFF VALVE
- ② 2" CHECK VALVE
- ③ FLOW SWITCH
- ④ ¼" DRAIN GLOBE VALVE
- ⑤ 1" INSPECTOR TEST VALVE SIGHT GLASS
- ⑥ UNION WITH CORROSION RESISTANT ORIFICE GIVING FLOW EQUIVALENT TO SMALLEST SPRINKLER ORIFICE IN SYSTEM.
- ⑦ 1/2" RELIEF VALVE.



FIRE HOSE CABINET AND
SPRINKLER CONTROL VALVE STATION DETAIL
N.T.S.



can not have a sidewall here. Ceiling is flat. floor is a notch in the slab above, closed w/ flat drywall ceiling).

REVISIONS		NOTES		OWNER (OR OTHERS) TO PROMOTE ACCURATE LINE MEASUREMENTS BY PROVIDING ACCESS TO AREAS OF BUILDING SUBJECT TO FREEZING AND/OR PROTECTED BY A WET TYPE SPRINKLER SYSTEM.		DESIGN CRITERIA		NORTH		STAMP		PROJECT		DATE		PROJECT NO.	
1.	ISSUED FOR REVIEW & PERMIT.	JULY 30, 2014	THIS DRAWING ASSIGNED CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF T.E. DESIGN AND SHALL BE RETURNED AT THE COMPLETION OF THE PROJECT.	ALL GLASS BRUSH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS.	OWNER (OR OTHERS) TO PROMOTE ACCURATE LINE MEASUREMENTS BY PROVIDING ACCESS TO AREAS OF BUILDING SUBJECT TO FREEZING AND/OR PROTECTED BY A WET TYPE SPRINKLER SYSTEM.	1/2" STANDARD CONCEALED PENDENT (K=5.6)	00	DESIGNED FOR RESIDENTIAL SPRINKLERS AS PER NFPA 13 SECTION 11.3.1 (2010 EDITION).			SQ ALEXANDRA PARK BLOCK 11 38 CAMERON ST. TORONTO	JULY 2014	14-10224				
2.	RE-ISSUED FOR PERMIT.	AUG. 15, 2014	THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER NFPA 13, 2010, AND ALL GLASS HEADS TO BE IN ACCORDANCE WITH NFPA 13, 2010.	CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAIN LINES.	ALL GLASS BRUSH TYPE SPRINKLERS TO BE OF RECENT ISSUE. MANUFACTURE DATE AT LATEST YEAR 2013.	1/2" STANDARD CONCEALED UPRIGHT (K=5.6)	00	DESIGN AREA TO INCLUDE THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND.						SCALE 1:100	DWG TITLE	OWN BY	DWG NO.
			CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAIN LINES.	ALL WIRING TO BE ULCE LISTED AND APPROVED BY LOCAL AUTHORITY. WIRING SHALL BE INSTALLED ACCORDING TO LOCAL ELECTRICAL AND INSURANCE CO. STANDARDS.	INSTALLATION OF SPRINKLER HEADS SHOULD BE AS PER NFPA 13, 2010, AND ALL GLASS HEADS TO BE IN ACCORDANCE WITH NFPA 13, 2010.	1/2" STANDARD CONCEALED PENDENT (K=5.6)	00	THE REQUIRED DISCHARGE FROM EACH SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING:			5TH FLOOR SPRINKLER & STANDPIPE SYSTEM	HLW.	SP-8				
			ALL GLASS HEAD TYPE SPRINKLERS TO BE OF RECENT ISSUE. MANUFACTURE DATE AT LATEST YEAR 2013.	CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAIN LINES.	ALL GLASS HEAD LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS.	1/2" STANDARD CONCEALED UPRIGHT (K=5.6)	00	(1) MIN. FLOW RATES INDICATED IN S.P. LISTING.				ISSUED FOR REVISION NO. REV-2	OF 16				
			CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAIN LINES.	ALL WIRING TO BE ULCE LISTED AND APPROVED BY LOCAL AUTHORITY. WIRING SHALL BE INSTALLED ACCORDING TO LOCAL ELECTRICAL AND INSURANCE CO. STANDARDS.	INSTALLATION OF SPRINKLER HEADS SHOULD BE AS PER NFPA 13, 2010, AND ALL GLASS HEADS TO BE IN ACCORDANCE WITH NFPA 13, 2010.	1/2" STANDARD CONCEALED SIDEWALL (K=5.6)	00	(2) MIN. 0.10 GPM/20 FT. OVER DESIGN AREA.			TRIDEL 4800 DUFFERIN STREET TORONTO ONTARIO						

IF SPRINKLER CONTRACTOR USES PLASTIC PIPING THEN THE FOLLOWING IS APPLICABLE.
NOTE: CONTRACTOR TO INSTALL PLASTIC PIPING AS PER MANUFACTURE'S SPECIFICATIONS INCLUDING EXPANSION LOOP.

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

(1) COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD OCCUPANCIES. (SEE APPENDIX A.)

(2) COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF UL/ORD-199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".

(3) COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM:

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 5/8 IN. (3/8 IN) THICK,
(C) PLYWOOD NOT LESS THAN 1/2 IN. (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH:

(1) STEEL SUSPENSION GRID, AND
(2) LATH-OR PANELS OR TRELS HAVING A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT)

(4) IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED IN CONFORMANCE WITH SENTENCE (3) SHALL BE LOCATED SO THAT THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (11 3/4").

(5) THE PROTECTION REQUIRED BY SENTENCES (3) AND (4) IS PERMITTED TO BE WAIVED WHERE COMBUSTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH UL/ORD-199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE REQUIREMENTS IN THAT DOCUMENT WITHOUT ADDITIONAL PROTECTION.

GENERAL NOTES

NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ.FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE.
AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1

NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ.FT. IN AREA, AND THAT HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED- COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.
AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1

NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER THE SOFFIT (BULKHEAD).

NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT HORIZONTALLY MORE THAN 12" FROM THE WALL.

NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH.

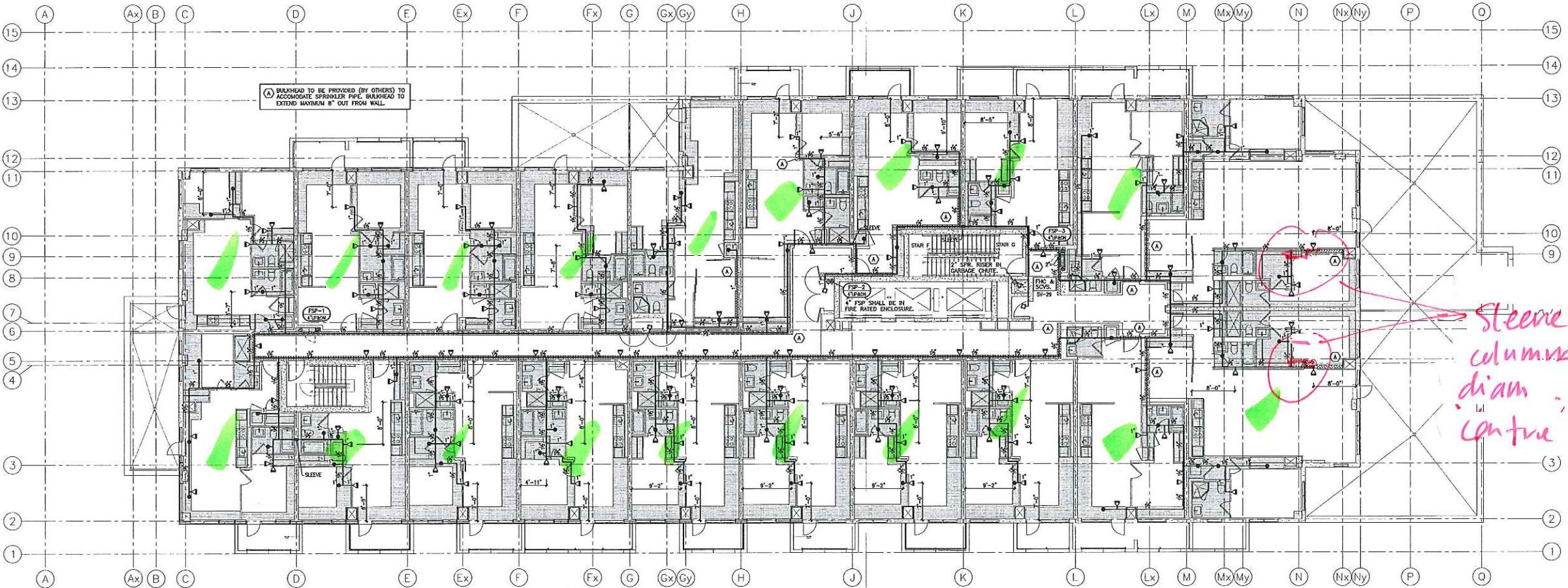
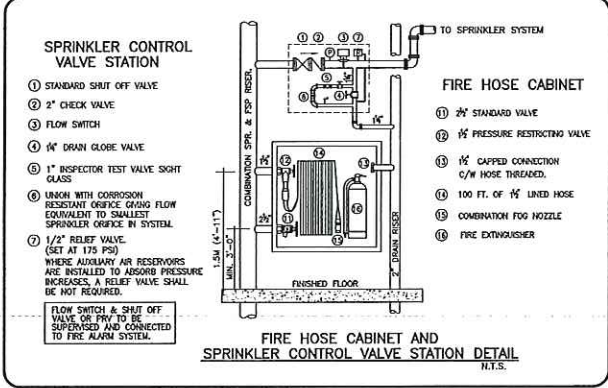
NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER PIPING IS TO BE COMPATIBLE WITH CPVC PIPING.

NOTE 7:
SPRINKLERS TO BE A MINIMUM 3"-0" FROM EDGE OF ALL SURFACE MOUNTED LIGHT FIXTURE.

SPRINKLER LAYOUT BASED ON BULKHEADS
USING MAXIMUM 12" DEEP
ADDITIONAL SIDEWALL SPRINKLERS MAY BE REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

PROTECTION AREA PER RESIDENTIAL
CONCEALED PENDENT SPRINKLER SHALL NOT
EXCEED 300 SQ.FT. MAX. SPACING IS 20 FT.
PROTECTION AREA PER RESIDENTIAL CONCEALED
SIDEWALL SPRINKLER SHALL NOT EXCEED
256 SQ.FT. (16 FT. X 16 FT.)

CONTRACTOR SHALL COORDINATE WITH LIGHTING,
DUCTWORK & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM.



Sleeve through columns. 2" max. diam. through centre of column.

REVISIONS		NOTES		OWNER (OR OTHERS) TO PROVIDE		DESIGN CRITERIA		NORTH		STAMP		PROJECT		DATE		PROJECT NO.			
1.	ISSUED FOR REVIEW & PERMIT.	JULY 30 2014	THE DRAWING ASSOCIATED CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MUST BE RETURNED AT THE COMPLETION OF THE PROJECT OR BY THE DESIGNER. THE SPRINKLER SYSTEM SHALL BE INSTALLED AS PER NFPA STANDARD 13 AND O.B.C. STANDARDS. CONTRACTOR TO PROVIDE FOR OFFSETS IN BRANCH LINES AND MAINS WHEN REQUIRED. ALL MATERIALS SHALL BE APPROVED BY LOCAL AUTHORITIES. UNDERGROUND MAINS SHALL BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND RESISTANCE CO. STANDARDS. BE RE-APPROVED. UNDERGROUND MAINS SHALL BE INSTALLED AS PER NFPA STANDARD 13. ALL INTERIOR BRANCH LINE MEASUREMENTS ARE GIVEN AL CENTER LINE TO CENTER LINE DIMENSIONS.	ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS (DIM. WALL PIPE). ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS (DIM. WALL PIPE). DIMENSIONS IN INCHES FROM CENTER LINE OF PIPE TO UNIFORMITY OF CEILING.		S/R-STANDARD RESPONSE Q/R-QUICK RESPONSE Q/W-DWARD ① 1/2" 155F STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R 00 ② 1/2" 155F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R 00 ③ 1/2" 155F RESIDENTIAL CONCEALED PENDENT (K=4.9) 00 ④ 1/2" 155F RESIDENTIAL CONCEALED SIDEWALL (K=4.0) 00		DESIGNED FOR RESIDENTIAL SPRINKLERS AS PER NFPA 13 SECTION 11.3.1.1 (2010 ED.). DESIGN AREA TO INCLUDE THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND. THE REQUIRED DISCHARGE FROM EACH SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING: (1) MIN. FLOW RATES INDICATED IN SPR. LISTING. (2) MIN. 0.10 GPM/SQ.FT. OVER DESIGN AREA.		N		TRIDEL 4800 DUFFERIN STREET TORONTO ONTARIO		SQ ALEXANDRA PARK BLOCK 11 38 CAMERON ST. TORONTO		JULY 2014		14-10224	
2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014		ALL GLASS BUILD TYPE SPRINKLERS TO BE OF RECENT ISSUE. MANUFACTURE DATE OF AT LEAST YEAR 2013.		FIRE HOSE RACK - 100 FT OF 1 1/2" LINED HOSE C/W COMBINATION FOG NOZZLE 00				RASEVERN PROVINCE OF ONTARIO		DWG TITLE 6TH FLOOR SPRINKLER & STANDPIPE SYSTEM		SCALE 1:100		DWG NO. SP-9			

SERVER/AUTOCAD/TRIDEL/ALEXANDRA PARK/10224-SP.DWG

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- (1) COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD OCCUPANCIES. (SEE APPENDIX A.)
- (2) COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF UL/ORD-199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- (3) COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER FIRE PROTECTION BY CEILING, WALLS, OR PARTS CONSISTING AS A MINIMUM,
 - (A) LATH AND PLASTER,
 - (B) GYPSUM BOARD NOT LESS THAN 1/2 IN. (5/8 IN) THICK PLACED NOT LESS THAN 3 IN. (1/2 IN) AWAY FROM,
 - (C) A SUSPENDED MEMBRANE CEILING AND
 - (D) 1-1/2 IN. PANELS OR 1-1/2 IN. Gypsum Board OR A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT)
- (4) IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, THE OPENING THROUGH THE CEILING THAT IS NOT PROTECTED BY SPRINKLER WITH SEPARATE DETECTION SHALL BE LOCATED SO THAT THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (11 3/4").
- (5) THE PROTECTION REQUIRED BY SENTENCES (3) AND (4) IS PERMITTED TO BE OMITTED WHERE COMBUSTIBLE PIPING HAS BEEN TESTED IN CONFORMANCE WITH UL/ORD-199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE REQUIREMENTS IN THAT STANDARD FOR THE REQUIRED PROTECTION.

NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ.FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE.
AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1

NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED
WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ.FT. IN AREA, AND THAT
HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED- COMBUSTIBLE
MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE
WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.
AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1

NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING
MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER
THE SOFFIT (BULKHEAD).

NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE
INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER
CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE
SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT
HORIZONTALLY MORE THAN 12" FROM THE WALL.

NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION
OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH.

NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN
THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER
PIPING IS TO BE COMPATIBLE WITH CPVC PIPING

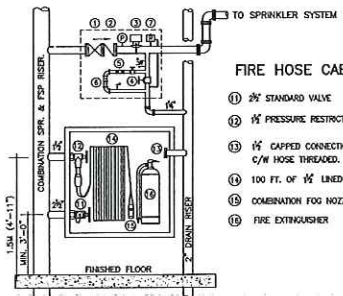
NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL
SURFACE MOUNTED LIGHT FIXTURE.

SPRINKLER LAYOUT BASED ON BULKHEADS BEING MAXIMUM 12" DEEP. ADDITIONAL SIDEWALL SPRINKLERS MAY BE REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

PROTECTION AREA PER RESIDENTIAL
CONCEALED PENDENT SPRINKLER SHALL NOT
EXCEED 300 SQ.FT. MAX. SPACING IS 20 FT.
PROTECTION AREA PER RESIDENTIAL CONCEALED
SIDEWALL SPRINKLER SHALL NOT EXCEED
256 SQ.FT. (16 FT. X 16 FT.)

CONTRACTOR SHALL COORDINATE WITH LIGHTING
DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM.

- ① STANDARD SHUT OFF VALVE
- ② 2" CHECK VALVE
- ③ FLOW SWITCH
- ④ 1/2" DRAIN GLOBE VALVE
- ⑤ 1" INSPECTOR TEST VALVE SIGHT GLASS
- ⑥ UNION WITH CORROSION RESISTANT ORIFICE GIVING FLOW EQUIVALENT TO SMALLEST SPRINKLER ORIFICE IN SYSTEM
- ⑦ 1/2" RELIEF VALVE (SET AT 175 PSI)



FIRE HOSE CABINET AND
SPRINKLER CONTROL VALVE STATION DETAIL

FIRE HOSE CABINET

- ⑪ 2½" STANDARD VALVE
- ⑫ ½" PRESSURE RESTRICTING VALVE
- ⑬ ½" CAPPED CONNECTION C/W HOSE THREADED.
- ⑭ 100 FT. OF ½" LINED HOSE
- ⑮ COMBINATION FOG NOZZLE
- ⑯ DRY EXTINGUISHER

No head in this area?



REVISIONS

- | | |
|----|-----------------------------|
| 1. | ISSUED FOR REVIEW & PERMIT. |
| 2. | RE-ISSUED FOR PERMIT. |

NOTES

- THIS DRAWING ASSOCIATED CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MUST BE RETURNED AT THE COMPLETION OF THE WORK OR UPON REQUEST.
- DESIGNER HAS FREEDOM TO MAKE ANY SIZE CHANGES.
- THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER NFPA STANDARD # 13 AND O.B.C. STANDARDS.
(IF APPLICABLE)
- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAKE ALL NECESSARY REPAIRS.
- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
- UNDEVELOPED WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS.
(IF APPLICABLE)
- NOTED: MIN. TEMPERATURE HEADS W/ASIDE REQUIRED AS PER NFPA STANDARD # 13.
- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS.
(SCHEDULE 40)

- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (30x40 PIPE)
- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (24" WALL PIPE)


 DIMOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERCUT OF CEILING.

- PN DIMOTES RISER NIPPLE
- ON DIMOTES DOWN
- ALL SUPERHEATED VALVE/LOW PRESSURE SWITCHES AND LOW PRESSURE MONITORING SWITCHES TO BE CONNECTED TO FIRE ALARM SYSTEM. (IF F.A.S. IS INSTALLED)
- CONTRACTOR TO VISIT SITE TO DETERMINE EXACT LOCATION AND LENGTH OF MAIN TO BE INSTALLED AS SHOWN ON DRAWINGS, ANY MAJOR DISCREPANCIES TO BE REPORTED TO THE DESIGNER PRIOR TO FABRICATION AND INSTALLATION.

OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREEZING THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

ALL GLASS BULB TYPE SPRINKLERS
TO BE OF RECENT ISSUE.
MANUFACTURE DATE OF AT LEAST
YEAR 2013.

S/R=STANDARD RESPONSE Q/R=QUICK RESPONSE () C/W CLARE

- | | | |
|--|---|----|
| ② | 1/2" 155F STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R | 00 |
| ● | 1/2" 155F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R | 00 |
| ● | 1/2" 155F RESIDENTIAL CONCEALED PENDENT (K=4.9) | 00 |
| <1 | 1/2" 155F RESIDENTIAL CONCEALED SIDEWALL (K=4.0) | 00 |
| | | |
| | | |
| | | |
| | | |
| FIRE HOSE BACK - 100 FT OF 1/2" LINED HOSE C/W
COMBINATION FOG NOZZLE | | 00 |

DESIGN CRITERIA

DESIGNED FOR RESIDENTIAL SPRINKLERS AS PER NFPA 13 SECTION 11.3.1 (2010 ED.).

DESIGN AREA TO INCLUDE THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND.

THE REQUIRED DISCHARGE FROM EACH SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING:

- (1) MIN. FLOW RATES INDICATED IN SPR. LISTING.
- (2) MIN. 0.50 GPM/50 SQ. FT. OVER DESIGN AREA.

NORTH



STAMP



DISA DESI
7181 WOODBINE AVENUE
SUITE 214
WOODBINE ONTARIO
L 4M 1A3
T 905-477-6674
F 905-477-6368
E desi@disa-desi.com

TRIDEL
4800 DUFFERIN STREET
TORONTO, ONTARIO

PROJECT
SQ ALEXANDRA PARK
BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE

7TH FLOOR
SPRINKLER & STANDPIPE SYSTEM

DATE JULY 2014

SCALE
1:100

ISSUED FOR
REASON NO. _____

PROJECT NO.

14-10224

TABLE 1

SP-10

OF 16

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- (1) COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZ OCCUPANCIES. (SEE APPENDIX A)
- (2) COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF UL-600-1999 "M", "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- (3) COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER AREA PENETRATED BY CEILING, WALLS, OR DOORS CONSISTING AS A MINIMUM,
 - (A) LATH AND PLASTER,
 - (B) GYPSUM BOARD NOT LESS THAN 5/8 IN. (3/8 IN.) THICK
 - (C) WOOD NOT LESS THAN 1 1/2 IN. (3/4 IN.) THICK OR
 - (D) A SUSPENDED MECHANICAL CEILING WITH
 - (1) STEEL SUSPENSION GRID,
 - (2) 1/2 IN. PANELS,
 - (3) AND HAVING A MIST NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT).
- (4) IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED BY A FLOOR WITH A MINIMUM 1 1/2 IN. (3/4 IN.) THICK DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (1 3/4").
- (5) THE PROTECTION REQUIRED BY SENTENCES (3) AND (4) IS PERMITTED TO BE OMITTED IF THE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH UL-600-1999 "M", "COMBUSTIBLE PIPING SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE REQUIREMENTS IN THAT STANDARD FOR THE PROTECTION REQUIRED.

GENERAL NOTES

NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ.FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE.
AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1

NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED
WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ.FT. IN AREA, AND THAT
HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED- COMBUSTIBLE
MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE
WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.
AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1

NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING
MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER
THE SOFFIT (BULKHEAD).

NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE
INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER
CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE
SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT
HORIZONTALLY MORE THAN 12" FROM THE WALL.

NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION
OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH.

NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN
THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER
PIPING IS TO BE COMPATIBLE WITH CPVC PIPING.

NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL
SURFACE MOUNTED LIGHT FIXTURE.

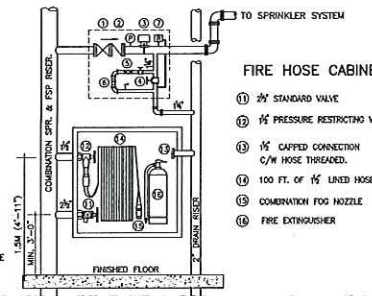
SPRINKLER LAYOUT BASED ON BULKHEADS
BEING MAXIMUM 12" DEEP.
ADDITIONAL SIDEWALL SPRINKLERS MAY BE
REQUIRED IF BULKHEAD DEPTH EXCEEDS 12"

PROTECTION AREA PER RESIDENTIAL
CONCEALED PENDENT SPRINKLER SHALL NOT
EXCEED 300 SQ.FT. MAX. SPACING IS 20 FT.
PROTECTION AREA PER RESIDENTIAL CONCEALED
SIDEWALL SPRINKLER SHALL NOT EXCEED
256 SQ.FT. (16 FT. X 16 FT.)

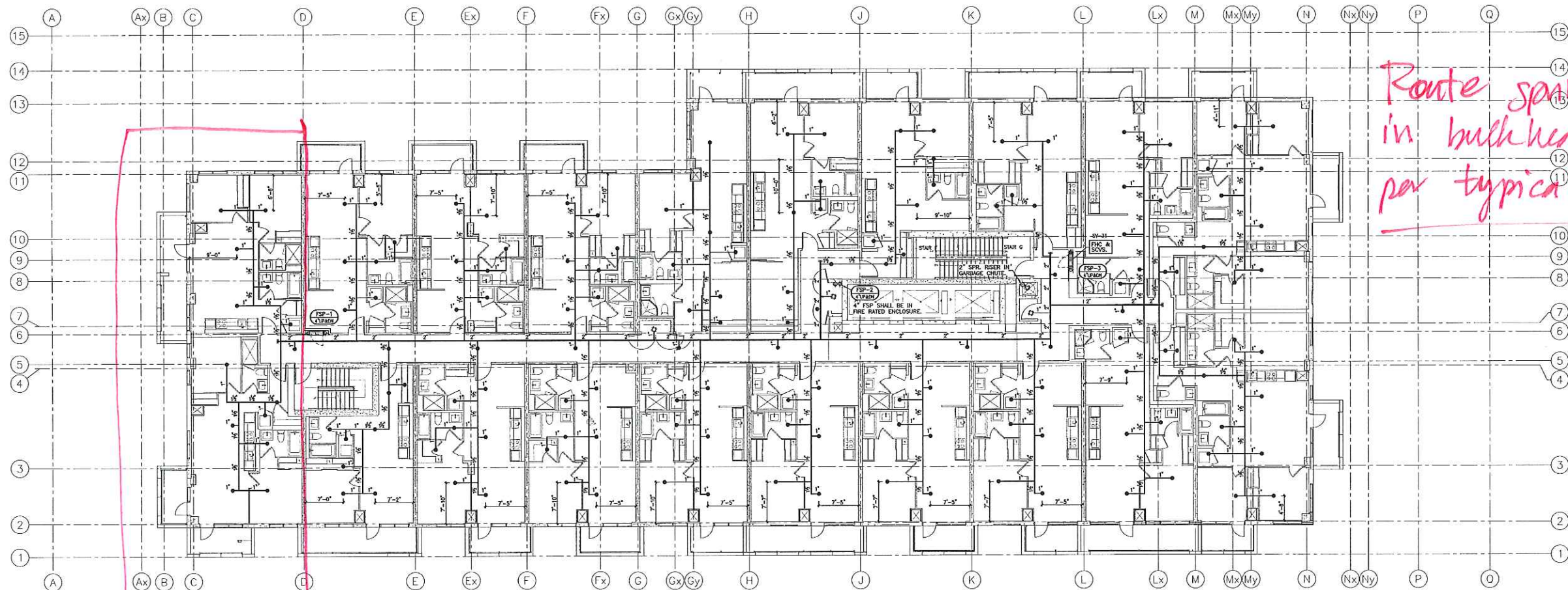
CONTRACTOR SHALL COORDINATE WITH LIGHTING
DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM

SPRINKLER CONTROL
VALVE STATION

- ① STANDARD SHUT OFF VALVE
 - ② 2" CHECK VALVE
 - ③ FLOW SWITCH
 - ④ 1/4" DRAIN GLOBE VALVE
 - ⑤ 1" INSPECTOR TEST VALVE SIGHT GLASS
 - ⑥ UNION WITH CORROSION RESISTANT ORICE GARG FLOW EQUIVALENT TO SMALLEST SPRINKLER ORICE IN SYSTEM.
 - ⑦ 1/2" RELIEF VALVE (SET AT 175 PSI)
- WHERE AUXILIARY AIR RESERVOIR ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.
- FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUBSTITUTED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET AND
SPRINKLER CONTROL VALVE STATION DETAIL
M.T.S.



Route sprinklers
in bulkheads as
per typical floors.

OK. Suites 819 & 821 only
have ceilings. All others in bulkheads.

[illegible]

(5) THE PROTECTION REQUIRED BY SENTENCES (3) AND (4) IS PERMITTED TO BE WAIVED WHERE COMBUSTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199P-M, "COMBUSTIBLE PIPING SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE REQUIREMENTS IN THAT DOCUMENT WITHOUT ADDITIONAL PROTECTION.

NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL
SURFACE MOUNTED LIGHT FIXTURE.

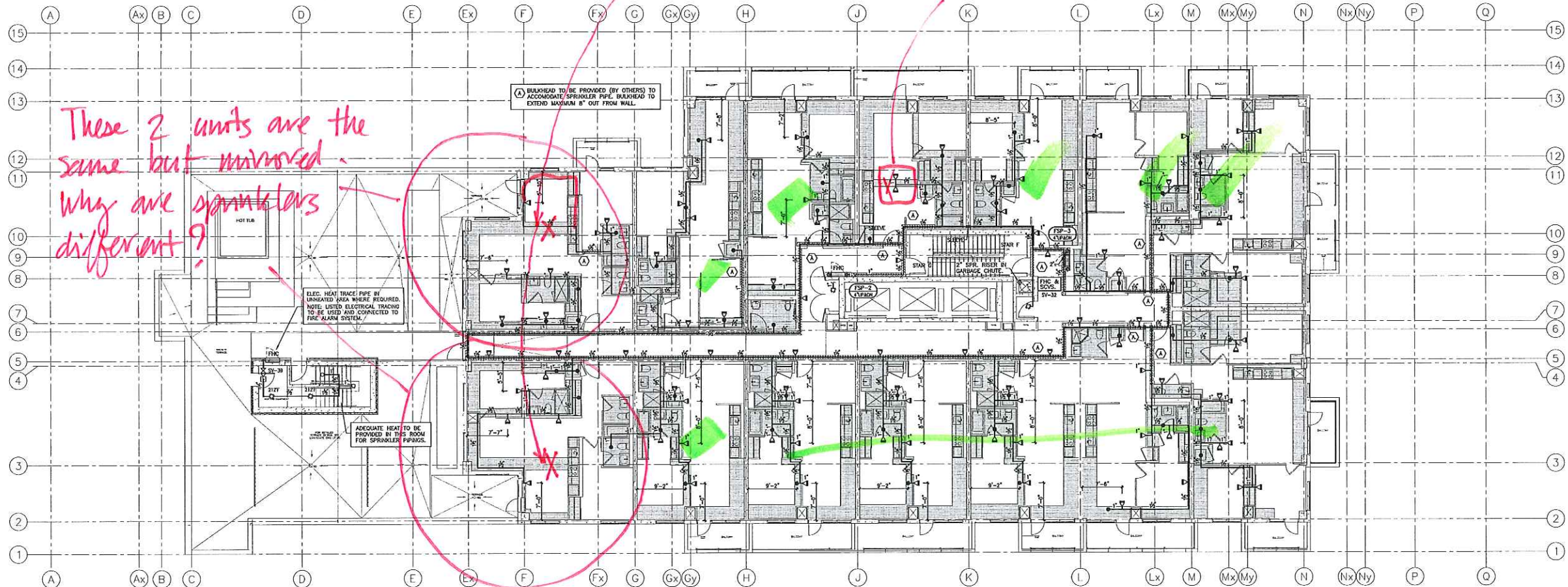
CONTRACTOR SHALL COORDINATE WITH LIGHTING
DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM.

FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUPERVISED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET AND
SPRINKLER CONTROL VALVE STATION DETAIL
N.T.S.

We want to delete this
bulkhead. Please revise.



PROJECT NO.
14-10224

DWG NO.
SP-12

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- (1) COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR NET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD OCCUPANCIES. (SEE ADDENDUM A FOR FURTHER DETAILS)
- (2) COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF ULC/ORD-199P-M "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- (3) COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER PIPING WITHOUT BY COLUMNS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,
 - (A) LATH AND PLASTER,
 - (B) OPTIMUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK,
 - (C) Gypsum board NOT LESS THAN 12.5 MM (1/2 IN) THICK OR
 - (D) A SUSPENDED MEMBRANE CEILING AND
 - (1) STEEL SUSPENSION GRID,
 - (2) U-G-N PANELS OR JOISTS HAVING A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT)
- (4) IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE THE CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED BY A GLASS OR GLASS-FIBRE REINFORCED PLASTIC PANEL SHALL BE PROVIDED WITH A COVER THAT IS NOT LESS THAN 1.5 METRES (5 FEET) FROM THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (12 IN).
- (5) THE PROTECTION REQUIRED BY SUBS (1) AND (4) IS PERMITTED TO BE OBTAINED BY THE USE OF SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199P-M "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE PROTECTION REQUIRED BY SUBS (1) AND (4).

GENERAL NOTES

NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS
THAN 12 SQ.FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE
REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS
WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED
REGARDLESS OF SIZE.
AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1

NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ.FT. IN AREA, AND THAT HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED- COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.
AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1

NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING
MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER
THE SOFFIT (BULKHEAD).

NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE
INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER
CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE
SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT
HORIZONTALLY MORE THAN 12" FROM THE WALL.

NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION
OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH

NOTE 5:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN
THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER
PIPING IS TO BE COMPATIBLE WITH CPVC PIPING

NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL
SURFACE MOUNTED LIGHT FIXTURE.

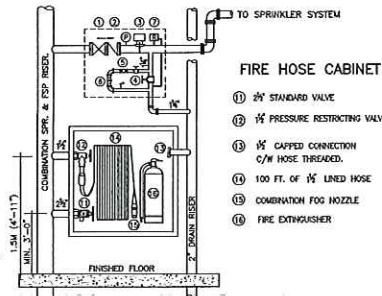
SPRINKLER LAYOUT BASED ON BULKHEADS
BEING MAXIMUM 12" DEEP.
ADDITIONAL SIDEWALL SPRINKLERS MAY BE
REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

PROTECTION AREA PER RESIDENTIAL CONCEALED PENDENT SPRINKLER SHALL NOT EXCEED 300 SQ.FT. MAX. SPACING IS 20 FT.
PROTECTION AREA PER RESIDENTIAL CONCEALED SIDEWALL SPRINKLER SHALL NOT EXCEED 256 SQ.FT. (16 FT. X 16 FT.)

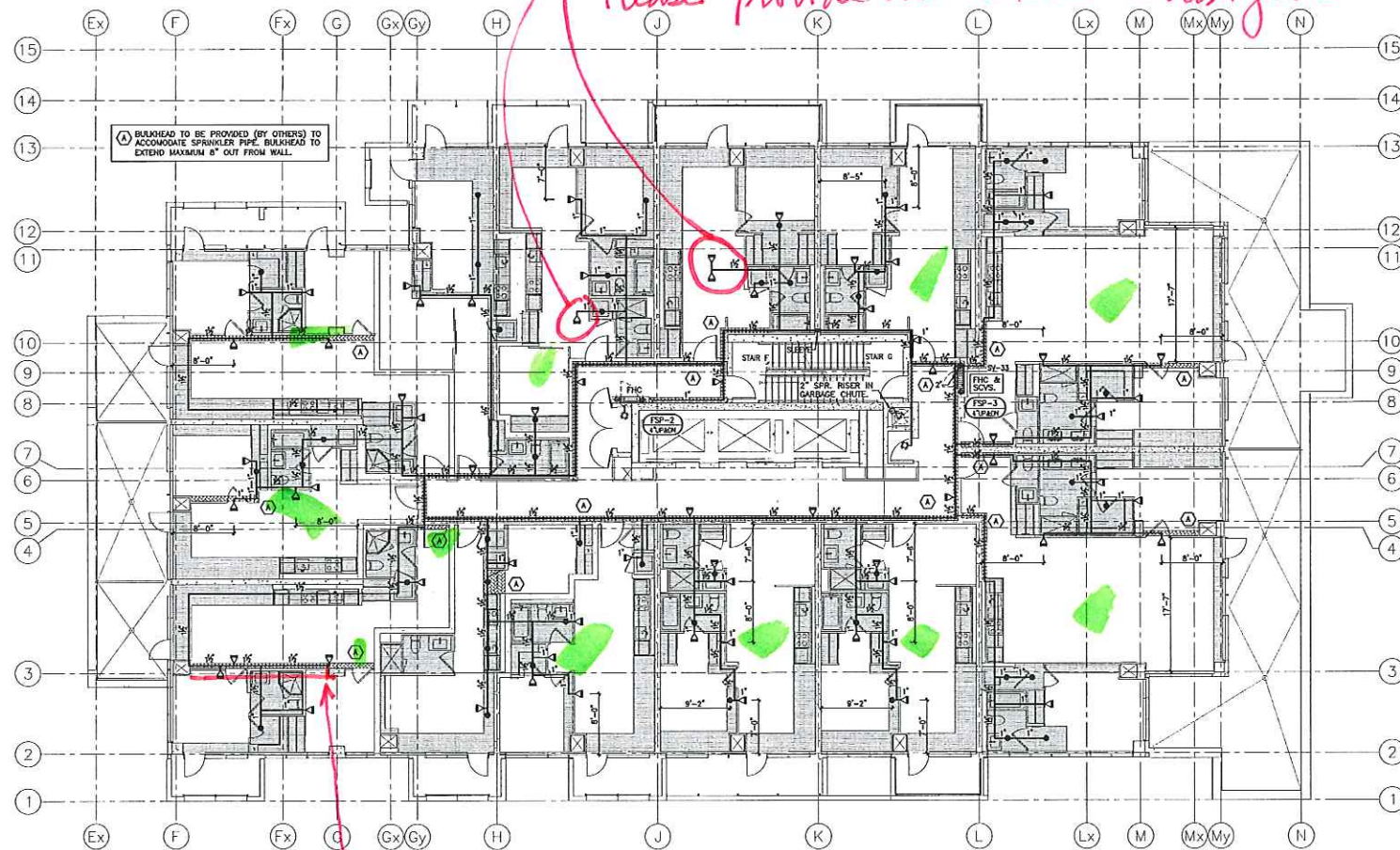
CONTRACTOR SHALL COORDINATE WITH LIGHTING
DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM.

SPRINKLER CONTROL
VALVE STATION

- ① STANDARD SHUT OFF VALVE
 - ② 2" CHECK VALVE
 - ③ FLOW SWITCH
 - ④ 1/4" DRAIN GLOBE VALVE
 - ⑤ 1" INSPECTOR TEST VALVE SIGHT GLASS
 - ⑥ UNION WITH CORROSION RESISTANT GROMMET CAVING FLOW EQUIVALENT TO SMALLEST SPRINKLER ORifice IN SYSTEM
 - ⑦ 1/2" RELIEF VALVE (SET AT 175 PS)
- WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ADOPT PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.
- FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE OVERSIZED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET AND
SPRINKLER CONTROL VALVE STATION DETAIL
NTS



There is no bullhead here.
Please provide an alternate design.

Bulkhead on bedroom side
to column.

REVISIONS	
1.	ISSUED FOR REVIEW & PERMIT.
2.	RE-ISSUED FOR PERMIT.

NOTES

[illegible]

OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREEZING THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

ALL GLASS BULB TYPE SPRINKLERS
TO BE OF RECENT ISSUE.
MANUFACTURE DATE OF AT LEAST
YEAR 2013.

	S/I=STANDARD RESPONSE Q/R=QUICK RESPONSE C/C/M GUARD	
(O)	1/2" 155T STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R	A
(O)	1/2" 155T STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	B
(●)	1/2" 155T RESIDENTIAL CONCEALED PENDENT (K=4.9)	C
(◄)	1/2" 155T RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	D
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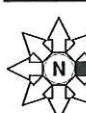
DESIGN CRITERIA

DESIGNED FOR RESIDENTIAL SPRINKLERS AS PER NFPA 13 SECTION 11.3.1 (2010 ED.).

DESIGN AREA TO INCLUDE THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND.

THE REQUIRED DISCHARGE FROM EACH SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING:

- (1) MIN. FLOW RATES INDICATED IN SPR. LISTING.
- (2) MIN. 0.10 GPM/SQ.FT. OVER DESIGN AREA.



STAMP



TRIDEL
4800 DUFFERIN STREET
TORONTO, ONTARIO

PROJECT	SQ ALEXANDRA PARK BLOCK 11 38 CAMERON ST. TORONTO
DWG TITLE	10TH FLOOR SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
SCALE	1:100
DWN BY	H.W.
ISSUED FOR REVISION NO.	REV.-2

PROJECT NO.	14-10224
DWO NO.	SP-13
OF 16	

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- (1) COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD OCCUPANCIES.
- (2) COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF UL/CRP-199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- (3) COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM ALL OTHER SPRINKLER SYSTEMS FROM ANY OTHER FIRE COMPARTMENT BY CEILING, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,
 - (A) LATH AND PLASTER,
 - (B) 1/2" MIN. THICK CONCRETE OR 3/8" MIN. THICK CPLYWOOD NOT LESS THAN 13 U/L (9.5 MM) THICK OR
 - (C) A STRENGTH MEMBRANE CEILING, AND
 - (D) SUSPENDED SUSPENSION GRID, AND
 - (E) IN SINGLE-PARTICLE PIPING SHALL HAVE A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT)
- (4) IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED WITH SEALS (3.3) SHALL BE LOCATED SO THAT IT DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (11 3/4").
- (5) THE PROTECTION REQUIRED BY SENTENCES (1) (3) (4) IS PERMITTED TO BE OMITTED IF THE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH UL/CRP-2199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND THE TEST RESULTS MEET THE REQUIREMENTS IN THAT DOCUMENT WITHOUT ADDITIONAL PROTECTION.

NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS
THAN 12 SQ.FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE
REQUIRED TO BE SPRINKLERED, CLOSETS THAT CONTAIN EQUIPMENT SUCH AS
WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED
REGARDLESS OF SIZE.
AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1

NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ.FT. IN AREA, AND THAT HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.
AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1

NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING
MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER
THE SOFFIT (BULKHEAD).

NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE
INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER
CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE
SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT
HORIZONTALLY MORE THAN 12" FROM THE WALL.

NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION

NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN
THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER
PIPING IS TO BE COMPATIBLE WITH CPVC PIPING

NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL
SURFACE MOUNTED LIGHT FIXTURE.

SPRINKLER LAYOUT BASED ON BULKHEADS
BEING MAXIMUM 12" DEEP.
ADDITIONAL SIDEWALL SPRINKLERS MAY BE
REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

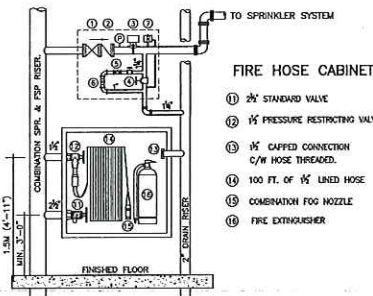
PROTECTION AREA PER RESIDENTIAL
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EXCEED 300 SQ.FT. MAX. SPACING IS 20 FT.

PROTECTION AREA PER RESIDENTIAL CONCEALED
SIDEWALL SPRINKLER SHALL NOT EXCEED
256 SQ.FT. (16 FT. X 16 FT.)

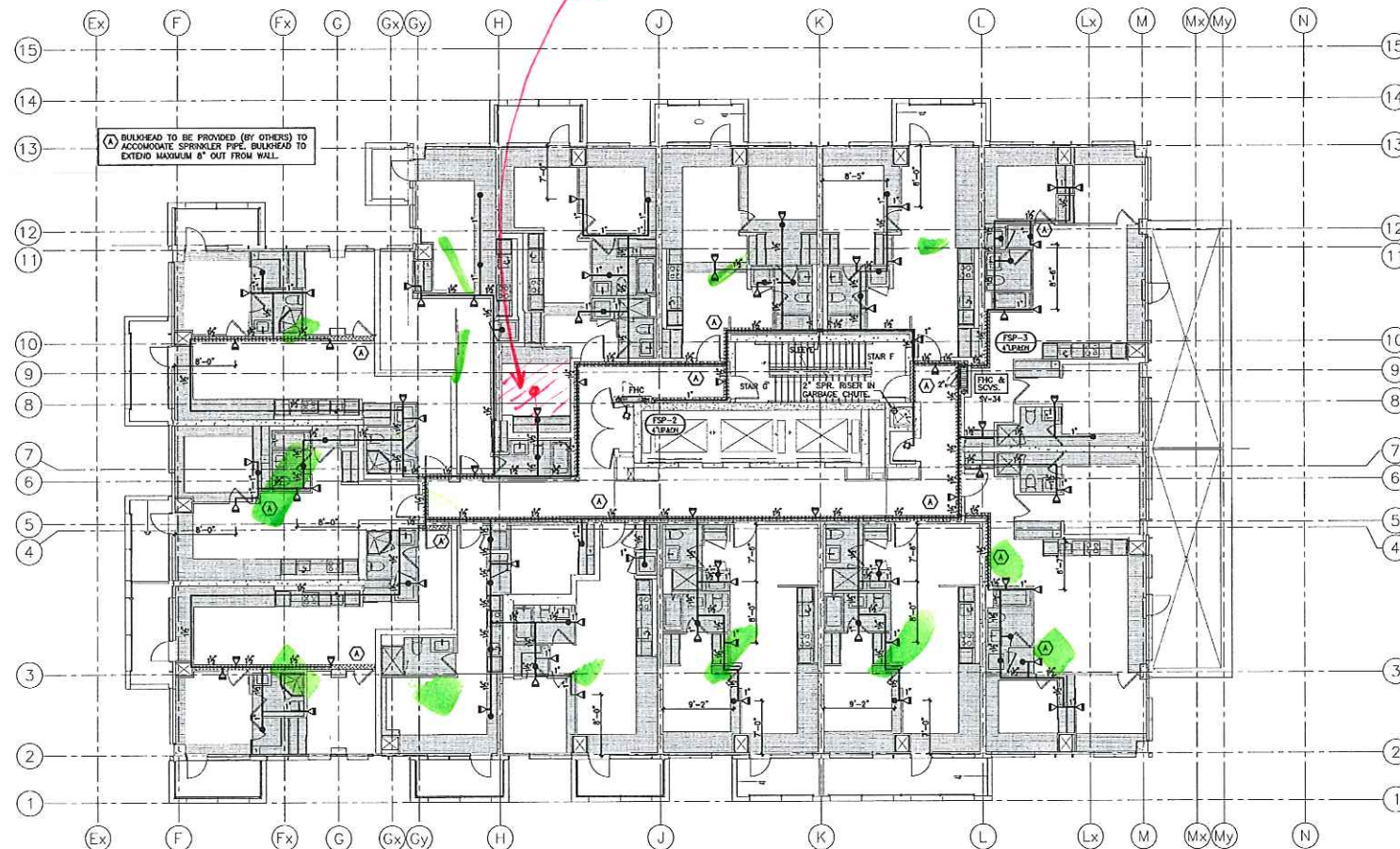
CONTRACTOR SHALL COORDINATE WITH LIGHTING
DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM.

SPRINKLER CONTROL
VALVE STATION

- ① STANDARD SHUT OFF VALVE
 - ② 2" CHECK VALVE
 - ③ FLOW SWITCH
 - ④ 1/4" DRAIN GLOBE VALVE
 - ⑤ 1" INSPECTOR TEST VALVE SIGHT GLASS
 - ⑥ UNION WITH CORROSION RESISTANT ORIFICE GIVING FLOW EQUIVALENT TO SMALLEST SPRINKLER ORIFICE IN SYSTEM.
 - ⑦ 1/2" RELIEF VALVE (SET AT 175 PSI)
WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE SURGES, A RELIEF VALVE SHALL BE NOT REQUIRED.
- FLOW SWITCH & SHUT OFF VALVE TO BE WY-PRY TO SUPERVISED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET AND
SPRINKLER CONTROL VALVE STATION DETAIL
N.T.S.



REVISIONS	
1.	ISSUED FOR REVIEW & PERMIT.
2.	RE-ISSUED FOR PERMIT.

[illegible]

OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREEZING THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

ALL GLASS BULB TYPE SPRINKLERS
TO BE OF RECENT ISSUE.
MANUFACTURE DATE OF AT LEAST
YEAR 2013.

S/R=STANDARD RESPONSE Q/R=QUICK RESPONSE () C/W GUAR

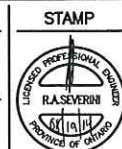
☒	1/2" 155F STANDARD COVERAGE CONCEALED PENDENT (K=5.8) Q/R	00
☒	1/2" 155F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	00
☒	1/2" 155F RESIDENTIAL CONCEALED PENDENT (K=4.9)	00
☒	1/2" 155F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	00
	FIRE HOSE BACK - 100 FT OF 1/2" LINED HOSE C/W COMBINATION FOR WET-PIPE	00

DESIGNED FOR RESIDENTIAL SPRINKLERS AS PER NFPA 13 SECTION 11.3.1 (2010 ED.).

DESIGN AREA TO INCLUDE THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND.

THE REQUIRED DISCHARGE FROM EACH SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING:

- (1) MIN. FLOW RATES INDICATED IN SPR. LISTING.
- (2) MIN. 0.10 GPM/SQ.FT. OVER DESIGN AREA.



W **DISA**
DESIGN
DESIGN

7181 WOODBINE AVE.
SUITE 224
MONTICLO OHTO20
L3N 5G2
T 905-477-4474
F 905-477-5368
E designdisa@sympatico.ca

TRIDEL

4800 DUFFERIN STREET
TORONTO ONTARIO

PROJECT	SQ ALEXANDRA PARK BLOCK 11 38 CAMERON ST. TORONTO
DWG TITLE	11TH FLOOR SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
SCALE	1:100
DWN BY	H.W.
ISSUED FOR	

PROJECT NO.
14-10224

DWG NO.
SP-14

OF 16

IF SPRINKLER CONTRACTOR USES PLASTIC PIPING THEN THE FOLLOWING IS APPLICABLE.
NOTE: CONTRACTOR TO INSTALL PLASTIC PIPING AS PER MANUFACTURER'S SPECIFICATIONS INCLUDING EXPANSION LOOP.

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD OCCUPANCIES. (SEE APPENDIX A)
- COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF UL/ORD-199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS".
- COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER FIRE COMPARTMENT BY CEILING, WALLS, OR SOFFITS CONSISTING AS A MINIMUM:
 - LATH AND PLASTER,
 - GYPSUM BOARD NOT LESS THAN 0.5 MM (3/8 IN) THICK
 - PLYWOOD NOT LESS THAN 13 MM (1/2 IN) THICK OR
 - A SUSPENDED MOISTURE CEILING WITH
 - STEEL SUSPENSION GRID, AND
 - LAY-IN PANELS OR TILES HAVING A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT)
- IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED IN CONFORMANCE WITH SENTENCE (3) SHALL BE LOCATED SO THAT THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (11 3/4").
- THE PROTECTION REQUIRED BY SENTENCES (3) AND (4) IS PERMITTED TO BE WAIVED WHERE COMBUSTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH UL/ORD-199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE REQUIREMENTS IN THAT DOCUMENT WITHOUT ADDITIONAL PROTECTION.

GENERAL NOTES

- NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ. FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1
- NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ. FT. IN AREA, AND THAT HAVE WALLS AND CEILING OF NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE WALLS AND CEILING BEHIND ANY SHOWER ENCLOSURE OR TUB AS PER NFPA-13 (2007) CLAUSE 8.15.8.1.1
- NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER THE SOFFIT (BULKHEAD).
- NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT HORIZONTALLY MORE THAN 12" FROM THE WALL.
- NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH.
- NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER PIPING IS TO BE COMPATIBLE WITH CPVC PIPING.
- NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL SURFACE MOUNTED LIGHT FIXTURE.

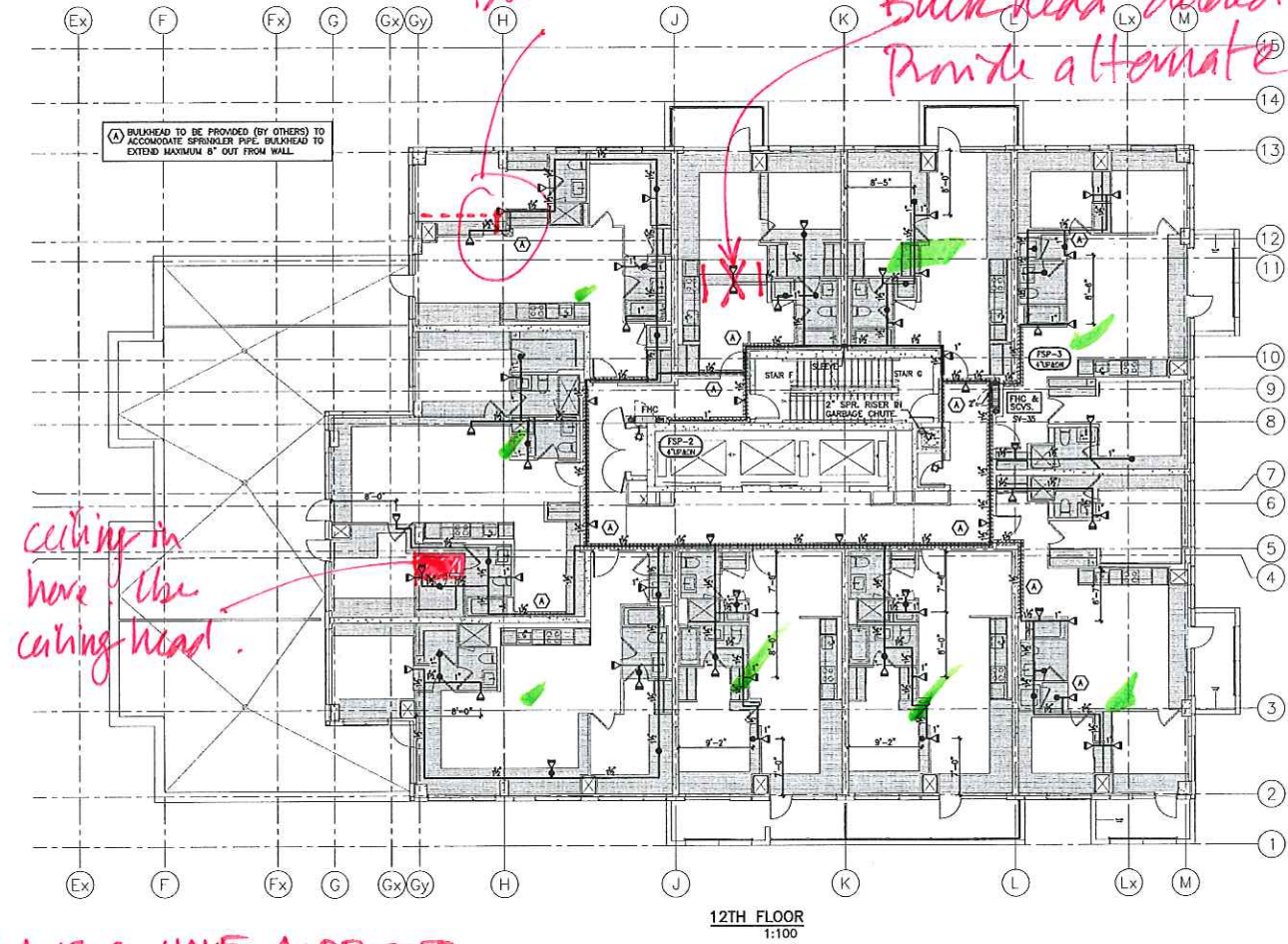
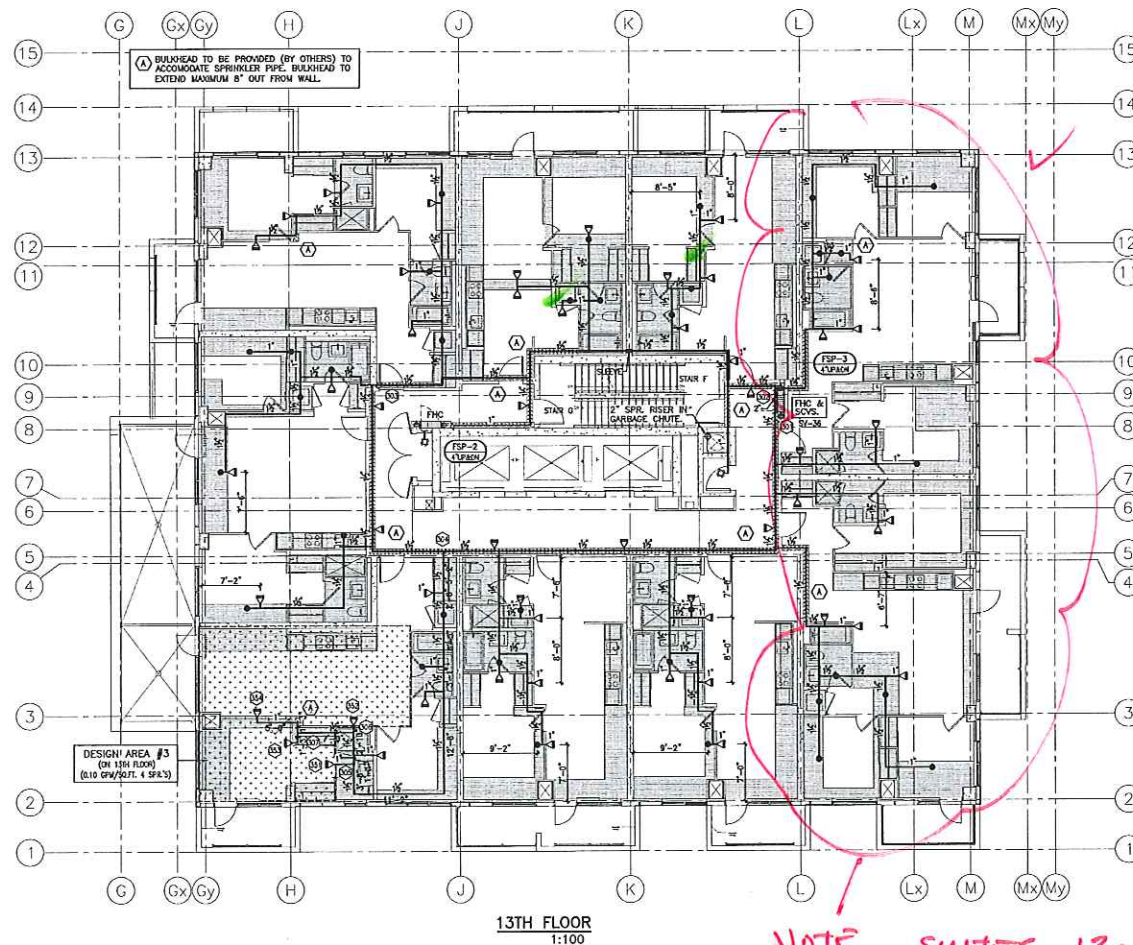
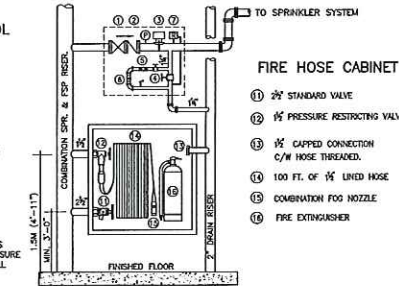
SPRINKLER LAYOUT BASED ON BULKHEADS
BEND MAXIMUM 12" DEEP
ADDITIONAL SIDEWALL SPRINKLERS MAY BE REQUIRED IF BULKHEAD DEPTH EXCEEDS 12".

PROTECTION AREA PER RESIDENTIAL CONCEALED PENDENT SPRINKLER SHALL NOT EXCEED 300 SQ. FT. MAX. SPACING IS 20 FT.
PROTECTION AREA PER RESIDENTIAL CONCEALED SIDEWALL SPRINKLER SHALL NOT EXCEED 256 SQ. FT. (16 FT. X 16 FT.)

CONTRACTOR SHALL COORDINATE WITH LIGHTING, DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION OF SPRINKLER SYSTEM.

SPRINKLER CONTROL VALVE STATION

- STANDARD SHUT OFF VALVE
 - 2" CHECK VALVE
 - FLOW SWITCH
 - 4" DRAIN GLOBE VALVE
 - 1" INSPECTOR TEST VALVE SIGHT GLASS
 - DRINK WITH CORROSION RESISTANT ORFICE GIVING FLOW EQUIVALENT TO SMALLEST SPRINKLER ORFICE IN SYSTEM
 - 1/2" RELIEF VALVE (SET AT 175 PS) WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.
- FLOW SWITCH & SHUT OFF VALVE OR FRY TO BE SUPERVISOR AND CONNECTED TO FIRE ALARM SYSTEM.



NOTE. SUITES 1305 & 1308 HAVE A DROPPED CEILING PLUS BULKHEADS. ROUTE SPRINKLERS THROUGH BULKHEADS, BELOW CEILING AS SHOWN HERE.

REVISIONS

NO.	DESCRIPTION	DATE
1.	ISSUED FOR REVIEW & PERMIT.	JULY 30 2014
2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014

NOTES

- THIS DRAWING ASSOCIATED CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MUST BE RETURNED AT THE COMPLETION OF THE WORK OR UPON REQUEST.
- THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER NFPA STANDARDS (13) AND O.B.C. STANDARDS.
- CONTRACTOR TO INCLUDE FOR OTHERS IN BRANCH LINES AND ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL, AUTOMATIC AND INSURANCE CO. STANDARDS.
- INSTALL FOG TEMPERATURE HEADS WHERE REQUIRED AS PER NFPA STANDARDS.
- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE, INCLUDING

OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT BY ALL HEAT RADIATING SURFACES TO PREVENT BUILDING SUBJECT TO FREEZING THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

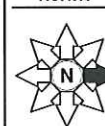
ALL GLASS BULB TYPE SPRINKLERS TO BE OF RECENT ISSUE. MANUFACTURE DATE OF AT LEAST YEAR 2013.

SYMBOL	DESCRIPTION	QUANTITY
1/2" 155°F STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R	00	00
1/2" 155°F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	00	00
1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	00	00
1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	00	00
FIRE HOSE RACK - 100 FT OF 1/2" LINED HOSE C/W COMBINATION FOG NOZZLE	00	00

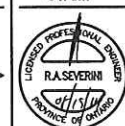
DESIGN CRITERIA

DESIGNED FOR RESIDENTIAL SPRINKLERS AS PER NFPA 13 SECTION 11.3.1 (2010 ED.).
DESIGN AREA TO INCLUDE THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND.
THE REQUIRED DISCHARGE FROM EACH SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING:
(1) MIN. FLOW RATES INDICATED IN SPR. LISTING.
(2) MIN. 0.10 GPM/SQ. FT. OVER DESIGN AREA.

NORTH



STAMP



TRIDEL
4800 DUFFERIN STREET
TORONTO ONTARIO

PROJECT
SQ ALEXANDRA PARK
BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE
12TH & 13TH FLOOR
SPRINKLER & STANDPIPE SYSTEM

DATE
JULY 2014

SCALE
1:100

DWN BY
H.W.

ISSUED FOR REVISION NO. REV-2

PROJECT NO.
14-10224

DWG NO.
SP-15

OF 15

O.B.C. SECTION 3.2.5.14 COMBUSTIBLE SPRINKLER PIPING

- (1) COMBUSTIBLE SPRINKLER PIPING SHALL BE USED ONLY FOR WET SYSTEMS IN RESIDENTIAL OCCUPANCIES AND OTHER LIGHT HAZARD OCCUPANCIES. (SEE ADDENDUM 1.1)
- (2) COMBUSTIBLE SPRINKLER PIPING SHALL MEET THE FIRE RESISTANCE OF UL/ORD-109P-M, COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS.
- (3) COMBUSTIBLE SPRINKLER PIPING SHALL BE SEPARATED FROM THE AREA SERVED BY THE SPRINKLER SYSTEM AND FROM ANY OTHER FIRE RESISTANCE BY CEILING, WALLS, OR FLOORS CONSISTING AS A MINIMUM,
 - (A) LAATH AND PLASTER,
 - (B) GYPSUM BOARD NOT LESS THAN 3/8 IN. (12.5 MM) THICK
 - (C) GYPSUM BOARD NOT LESS THAN 1/2 IN. (12.5 MM) THICK OR
 - (D) A SUSPENDED MEMBRANE CEILING AND,
 - (1) STEEL SUSPENSION GRIDS,
 - (2) W-16 IN. PANELS OR EQUIVALENT (HAVING A MASS NOT LESS THAN 1.7 KG/SQUARE METRE (0.35 LB/SQUARE FOOT))
- (4) IF COMBUSTIBLE SPRINKLER PIPING IS LOCATED ABOVE A CEILING, AN OPENING THROUGH THE CEILING THAT IS NOT PROTECTED BY A FIRE RESISTANT PENETRATION SHALL BE PROVIDED SO THAT THE DISTANCE BETWEEN THE EDGE OF THE OPENING AND THE NEAREST SPRINKLER IS NOT MORE THAN 300 MM (11 3/4").
- (5) THE PROTECTION REQUIRED BY SENTENCES (1) & (4) IS PERMITTED TO BE OMITTED WHERE THE COMBUSTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH UL/ORD-109P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS," AND HAS BEEN SHOWN TO MEET THE PROTECTION REQUIRED BY SENTENCES (1) & (4).

NOTE 1:
IN BUILDINGS SPRINKLERED IN ACCORDANCE WITH NFPA 13, CLOSETS LESS THAN 12 SQ.FT. IN AREA IN INDIVIDUAL DWELLING UNITS SHALL NOT BE REQUIRED TO BE SPRINKLERED. CLOSETS THAT CONTAIN EQUIPMENT SUCH AS WASHERS, DRYERS, FURNACES, OR WATER HEATERS SHALL BE SPRINKLERED REGARDLESS OF SIZE.
AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1

NOTE 2:
SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LOCATED WITHIN DWELLING UNITS, THAT DO NOT EXCEED 55 SQ.FT. IN AREA, AND THAT HAVE WALLS AND CEILINGS OF NONCOMBUSTIBLE OR LIMITED- COMBUSTIBLE MATERIALS WITH A 15-MINUTE THERMAL BARRIER RATING, INCLUDING THE WALLS AND CEILINGS BEHIND ANY SHOWER ENCLOSURE OR TUB.

NOTE 3:
WHERE SIDEWALL SPRINKLER IS INSTALLED AT SOFFIT (BULKHEAD) EXCEEDING
MORE THAN 8" IN WIDTH, PENDENT SPRINKLERS SHALL BE INSTALLED UNDER
THE SOFFIT (BULKHEAD).

NOTE 4:
RESIDENTIAL SIDEWALL SPRINKLERS SHALL BE PERMITTED TO BE
INSTALLED IN THE FACE OF A SOFFIT LOCATED DIRECTLY OVER
CABINETS WITHOUT REQUIRING ADDITIONAL SPRINKLERS BELOW THE
SOFFIT OR CABINETS WHERE THE SOFFIT DOES NOT PROJECT
HORIZONTALLY MORE THAN 12" FROM THE WALL.

NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION
OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH

NOTE 6:
ANY FIRE STOPPING, ACOUSTIC SEALANT AND MATERIALS USED IN
THIS PROJECT WHICH COME IN CONTACT WITH CPVC SPRINKLER

NOTE 7:
SPRINKLERS TO BE A MINIMUM 3'-0" FROM EDGE OF ALL
SURFACE MOUNTED LIGHT FIXTURE.

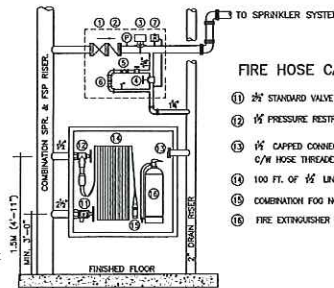
SPRINKLER LAYOUT BASED ON BULKHEADS
BEING MAXIMUM 12" DEEP.
ADDITIONAL SIDEWALL SPRINKLERS MAY BE
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CONTRACTOR SHALL COORDINATE WITH LIGHTING
DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR
TO INSTALLATION OF SPRINKLER SYSTEM.



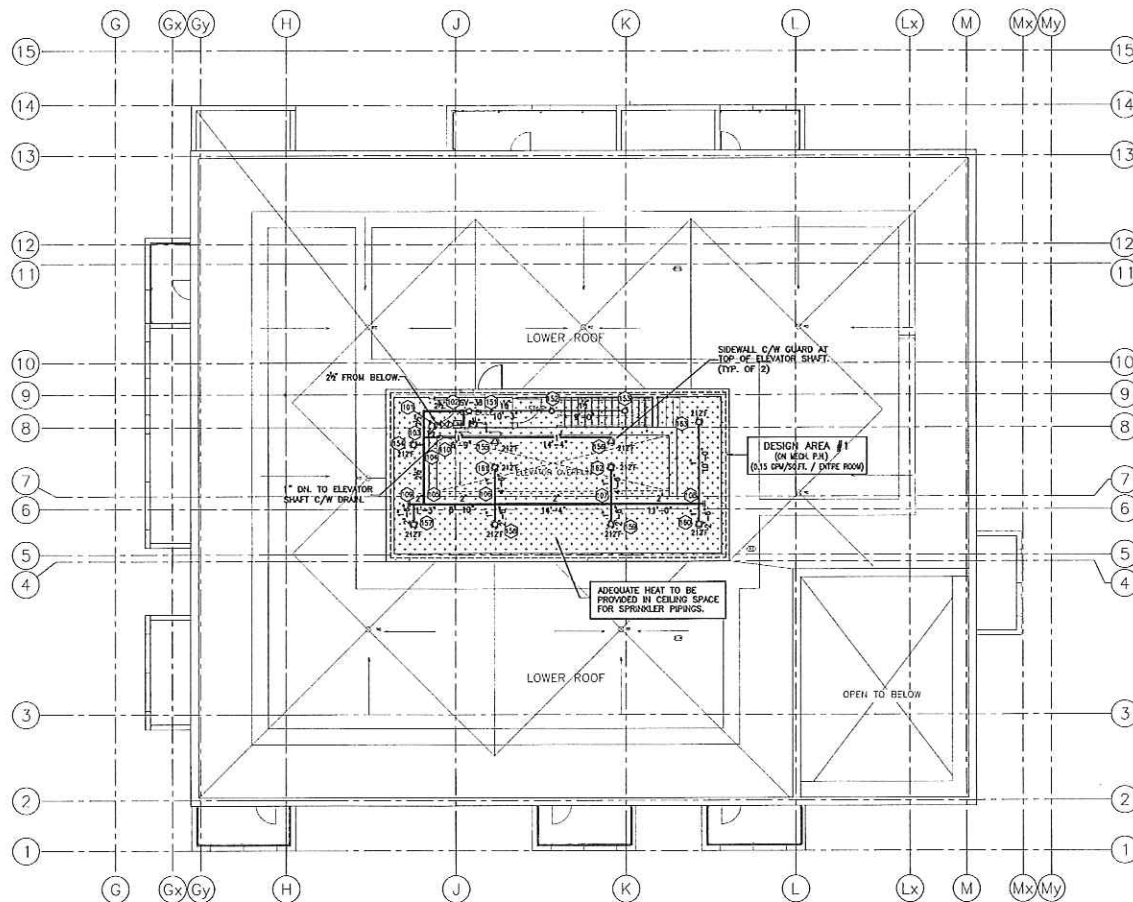
- ① STANDARD SHUT OFF VALVE
 - ② 2" CHECK VALVE
 - ③ FLOW SWITCH
 - ④ 1/4" INCH GLOBE VALVE
 - ⑤ 1" INSPECTOR TEST VALVE SIGHT GLASS
 - ⑥ URCON WITH CORROSION RESISTANT ORIFICE GANG FLOW EQUIVALENT TO SMALLEST SPRINKLER ORIFICE IN SYSTEM.
 - ⑦ 1/2" RELIEF VALVE, (SET AT 175 PSI)
- WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.
- FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUBMERGED AND CONNECTED TO FIRE ALARM SYSTEM.



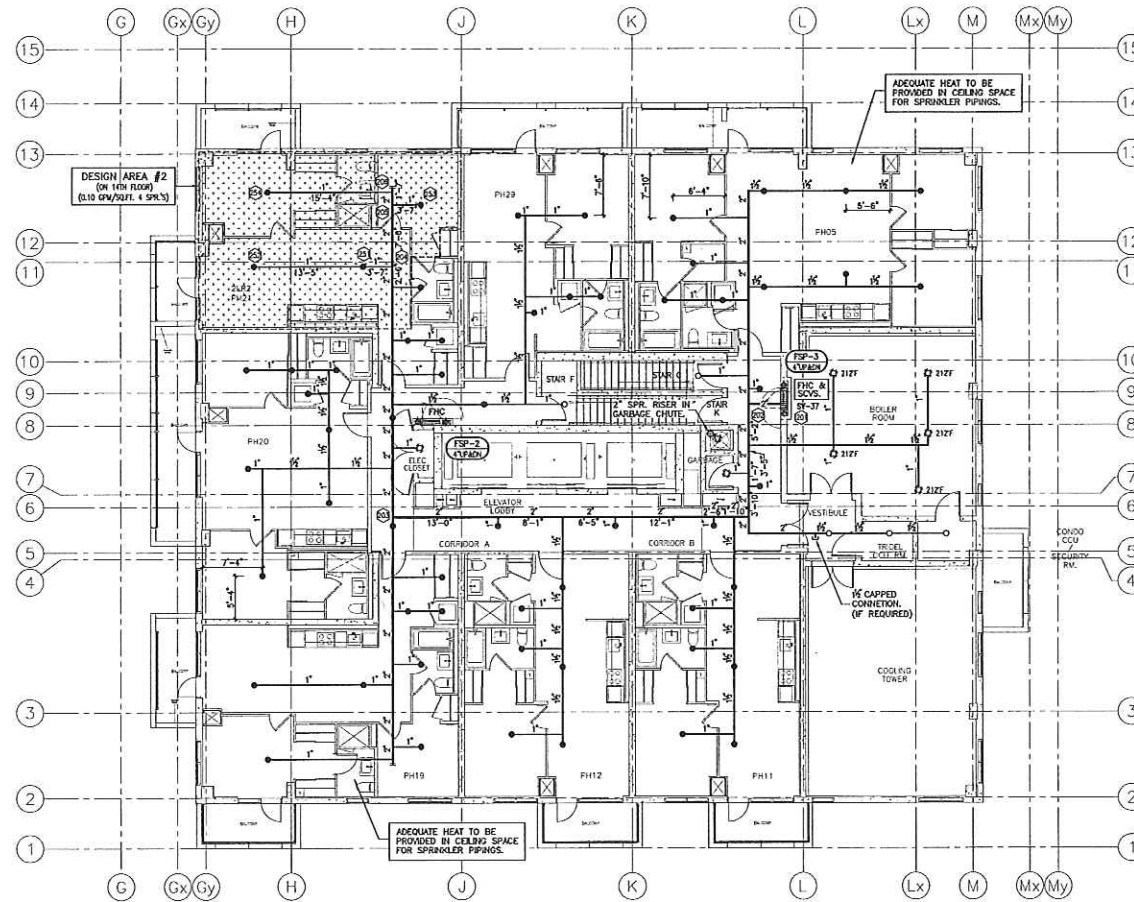
FIRE HOSE CABINET

- (11) 2½" STANDARD VALVE
- (12) ½" PRESSURE RESTRICTING VALVE
- (13) ½" CAPPED CONNECTION
C/W HOSE THREADED.
- (14) 100 FT. OF ½" LINED HOSE
- (15) COMBINATION FOG NOZZLE
- (16) FIRE EXTINGUISHER

FIRE HOSE CABINET AND
SPRINKLER CONTROL VALVE STATION DETAIL
NTS



MECH. PENTHOUSE
1:100



14TH FLOOR
1:100

REVISIONS	
1.	ISSUED FOR REVIEW & PERMIT.
2.	RE-ISSUED FOR PERMIT.

MAY 30 2014	--- THIS DRAWING ASSOCIATED CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF THE GEORANT AND MUST BE RETURNED AT THE END OF THE PROJECT TO THE PROJECT MANAGER.	--- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE UNLESS OTHERWISE NOTED.
MAY 15 2014	--- THE STRAPPED SYSTEM IS TO BE INSTALLED AS PER N.E.P.A. PARAGRAPH 10.0.1.1. (SEE ATTACHED)	--- SPACED DISTANCE IN INCHES FROM CENTER LINE OF ROAD TO UNDERCUT OF CRATING.
MAY 15 2014	--- THE DRAWING IS TO BE USED FOR OFFSETS IN BRANCH LINES AND ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITY.	--- DO NOT DISPOSE OF EXHAUSTED PIPES AND LINES IN OPEN DITCHES.
MAY 15 2014	--- UNDERGROUND MATERIALS TO BE INSTALLED ACCORDING TO LOCAL AUTHORITY AND PERFORMANCE CO. STANDARDS.	--- PREPARE AND SUBMIT ALL EXHAUSTED PIPES AND LINES TO THE LOCAL AUTHORITY (L.A.S.) IF POSSIBLE.
MAY 15 2014	--- WITHIN 8" HIGH BRANCH LINE HEADS MUST BE COVERED AS PER STANDARD 8.12.	--- EXHAUSTED PIPES AND LINES MUST BE INSTALLED IN THE DESIGNATION OF WARE TO BE INSTALLED AS NOTICED ON THE DRAWING.
MAY 15 2014	--- ALL PERSONS GIVE BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE UNLESS OTHERWISE NOTED.	--- EXHAUSTED PIPES AND LINES MUST BE INSTALLED IN THE DESIGNATION OF WARE TO BE INSTALLED AS NOTICED ON THE DRAWING.

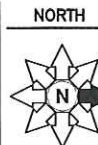
OWNER (OR OTHERS) TO PROVIDE ADEQUATE HEAT IN ALL AREAS OF BUILDING SUBJECT TO FREEZING THAT ARE PROTECTED BY A WET TYPE SPRINKLER SYSTEM.

ALL GLASS BULB TYPE SPRINKLERS TO BE OF RECENT ISSUE. MANUFACTURE DATE OF AT LEAST YEAR 2013.

S/N STANDARD RESPONSE O/R-QUICK RESPONSE			C/N DURO
7177	☐	1/2" 2127 STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	00
	☐	1/2" 1557 STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	00
	☒	1/2" 1557 STANDARD COVERAGE CONCEALED (K=5.6) Q/R	00
7177	☐	1/2" 2127 STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	00
	☒	1/2" 1557 RESIDENTIAL CONCEALED (K=4.3)	00
FIRE HOSE RACK - 100 FT OF 1/2" UNED HOSE C/W			00

DESIGN CRITERIA

MECH. PENTHOUSE:
SPRINKLER WET SYSTEM DESIGNED FOR
ORDINARY HAZARD GROUP 1.
0.15 GPM PER SQ.FT. OVER 1500 SQ.FT.
PLUS 250 GPM FOR HOSES.
AS PER NFPA 13.



TRIDEL
4800 DUFFERIN STREET
TORONTO, ONTARIO

PROJECT	SQ ALEXANDRA PARK BLOCK 11 38 CAMERON ST. TORONTO
DWG TITLE	14TH FL. & MECH. PENTHOUSE SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
SCALE	1:100
DWN BY	H.W.
ISSUED FOR	PROVISIONAL J10

PROJECT NO.	14-10224
DWG NO.	SP-16