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 TRAPEZE 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 CONDITIONS.

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 1¼"DIA PIPE AND 60" FOR 1½" 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 (ie 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 "

Teeple Architects INC.

REVIEWED ( )
REVIEWED AS NOTED (X)
REVISE AND RESUBMIT ( )
NOT REVIEWED ( )
DATE: 2015-10-19
REVIEWED BY: TC

This review by Teeple Architects Inc. is for the sole purpose of ascertaining conformance with the general design concept for architectural features only, and does not in any way constitute review of the design of engineering elements which form part of the contract documents prepared by others. This review shall not mean that Teeple Architects Inc. approves the detailed design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of the responsibility for errors or omissions in the shop drawings or of the responsibility for meeting all requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation, and for coordination of the work of all trades.

FIRE PROTECTION SYSTEM PRESSURE SWITCH SCHEDULE		
	LOW PRESSURE MONITOR SWITCH	
PS–4	PRESSURE SWITCH FOR P–1 PARKING DRY SPR. SYSTEM	SPRINKLER ROOM
PS–5	PRESSURE SWITCH FOR P–2 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 COMBINATION FEED 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
FS–21	SPR. SYSTEM ON GROUND LEVEL	GARBAGE ROOM (170)
FS–22	SPR. SYSTEM IN GARBAGE ROOM	GARBAGE ROOM (170)
FS–23	SPR. RISER IN GARBAGE CHUTE.	GARBAGE ROOM (170)
FS–24	SPR. SYSTEM IN TOWNHOUSE AT NORTHEAST CORNER.	GARBAGE 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 G)
FS–28	SPR. SYSTEM ON 5TH LEVEL	5TH LEVEL (STAIR F)
FS–29	SPR. SYSTEM ON 6TH LEVEL	6TH LEVEL (STAIR G)
FS–30	SPR. SYSTEM ON 7TH LEVEL	7TH LEVEL (STAIR F)
FS–31	SPR. SYSTEM ON 8TH LEVEL	8TH LEVEL (STAIR G)
FS–32	SPR. SYSTEM ON 9TH LEVEL	9TH LEVEL (STAIR F)
FS–33	SPR. SYSTEM ON 10TH LEVEL	10TH LEVEL (STAIR G)
FS–34	SPR. SYSTEM ON 11TH LEVEL	11TH LEVEL (STAIR F)
FS–35	SPR. SYSTEM ON 12TH LEVEL	12TH LEVEL (STAIR G)
FS–36	SPR. SYSTEM ON 13TH LEVEL	13TH LEVEL (STAIR F)
FS–37	SPR. SYSTEM ON 14TH LEVEL	14TH LEVEL (STAIR G)
FS–38	SPR. SYSTEM ON MECH. PENHOUSE	PENTHOUSE
FS–39	SPR. SYSTEM IN MECH. P.H. ON 9TH FL.	MECH. RM ON 9TH FL.
FS–41	WIN. SPR.'S ON P1	STAFF ROOM ON P1
FS–42	WIN. SPR.'S ON P2	STAFF ROOM ON P1
FS–43	WIN. SPR.'S ON GR. FL.	CORRIDOR ON GR. FL.
FS–44	WIN. SPR.'S ON 2ND FL.	2ND FL. (STAIR J)
FS–45	WIN. SPR.'S ON 3RD FL.	3RD FL. (STAIR J)
FS–46	WIN. SPR.'S ON 4TH FL.	4TH FL. (STAIR J)

FIRE PROTECTION SYSTEM SUPERVISED VALVES SCHEDULE		
ZONE	DESCRIPTION	LOCATION
SV–1	INCOMING FIRE MAIN ISOLATION	SPRINKLER ROOM
SV–2	INCOMING FIRE MAIN ISOLATION	SPRINKLER ROOM
SV–3	DRY SPR. SYSTEM HEADER 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 BY–PASS	SPRINKLER ROOM
SV–8	FIRE PUMP SUCTION	SPRINKLER ROOM
SV–9	FIRE PUMP DISCHARGE	SPRINKLER ROOM
SV–10	FIRE PUMP TEST HEADER	SPRINKLER ROOM
SV–11	FIRE STANDPIPE RISER–P1	P–1 PARKING GARAGE
SV–12	FIRE STANDPIPE RISER–P2	P–1 PARKING GARAGE
SV–13	FIRE STANDPIPE RISER–4 & P3	P–1 PARKING GARAGE
SV–14	FIRE STANDPIPE RISER–1	P–1 PARKING GARAGE
SV–15	FSP & SPR. COMBINATION RISER (FSP–2)	P–1 PARKING GARAGE
SV–16	FIRE STANDPIPE RISER–3	P–1 PARKING GARAGE
SV–20	SPR. RISER ISOLATION	GARBAGE ROOM (170)
SV–21	SPR. SYSTEM ON GROUND LEVEL	GARBAGE ROOM (170)
SV–22	SPR. SYSTEM IN GARBAGE ROOM	GARBAGE ROOM (170)
SV–23	SPR. RISER IN GARBAGE CHUTE.	GARBAGE ROOM (170)
SV–24	SPR. SYSTEM IN TOWNHOUSE AT NORTHEAST CORNER.	GARBAGE ROOM (170)
SV–25	SPR. SYSTEM ON 2ND LEVEL	2ND LEVEL (STAIR G)
SV–26	SPR. SYSTEM ON 3RD LEVEL	3RD LEVEL (STAIR F)
SV–27	SPR. SYSTEM ON 4TH LEVEL	4TH LEVEL (STAIR G)
SV–28	SPR. SYSTEM ON 5TH LEVEL	5TH LEVEL (STAIR F)
SV–29	SPR. SYSTEM ON 6TH LEVEL	6TH LEVEL (STAIR G)
SV–30	SPR. SYSTEM ON 7TH LEVEL	7TH LEVEL (STAIR F)
SV–31	SPR. SYSTEM ON 8TH LEVEL	8TH LEVEL (STAIR G)
SV–32	SPR. SYSTEM ON 9TH LEVEL	9TH LEVEL (STAIR F)
SV–33	SPR. SYSTEM ON 10TH LEVEL	10TH LEVEL (STAIR G)
SV–34	SPR. SYSTEM ON 11TH LEVEL	11TH LEVEL (STAIR F)
SV–35	SPR. SYSTEM ON 12TH LEVEL	12TH LEVEL (STAIR G)
SV–36	SPR. SYSTEM ON 13TH LEVEL	13TH LEVEL (STAIR F)
SV–37	SPR. SYSTEM ON 14TH LEVEL	14TH LEVEL (STAIR G)
SV–38	SPR. SYSTEM ON MECH. PENHOUSE	PENTHOUSE
SV–39	SPR. SYSTEM IN MECH. P.H. ON 9TH FL.	MECH. RM ON 9TH FL.
SV–41	WIN. SPR.'S ON P1	STAFF ROOM ON P1
SV–42	WIN. SPR.'S ON P2	STAFF ROOM ON P1
SV–43	WIN. SPR.'S ON GR. FL.	CORRIDOR ON GR. FL.
SV–44	WIN. SPR.'S ON 2ND FL.	2ND FL. (STAIR J)
SV–45	WIN. SPR.'S ON 3RD FL.	3RD FL. (STAIR J)
SV–46	WIN. SPR.'S ON 4TH FL.	4TH FL. (STAIR J)

PUMPS SCHEDULE – FIRE PROTECTION						
PUMP NO.	GPM	HEAD	HP	V./~/A	RPM	MAKE
FIRE PUMP	500 GPM	96 PSI	60 HP	575/3/60	3560 RPM	ARMSTRONG OR SIMILAR
JOCKEY PUMP	10 GPM	100 PSI	1 HP	575/3/60	3600 RPM	ARMSTRONG OR SIMILAR

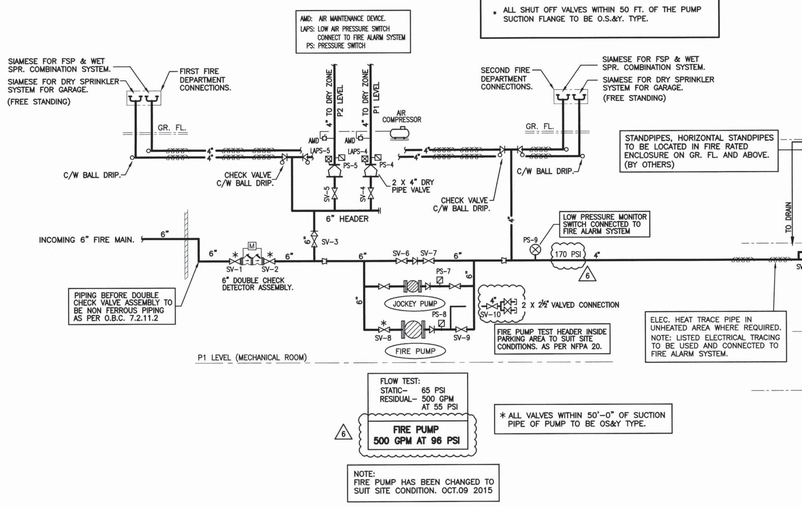
NOTE: ELECTRICAL SPECIFICATIONS FOR FIRE PUMP TO BE CONFIRMED BY ELECTRICAL CONSULTANT.

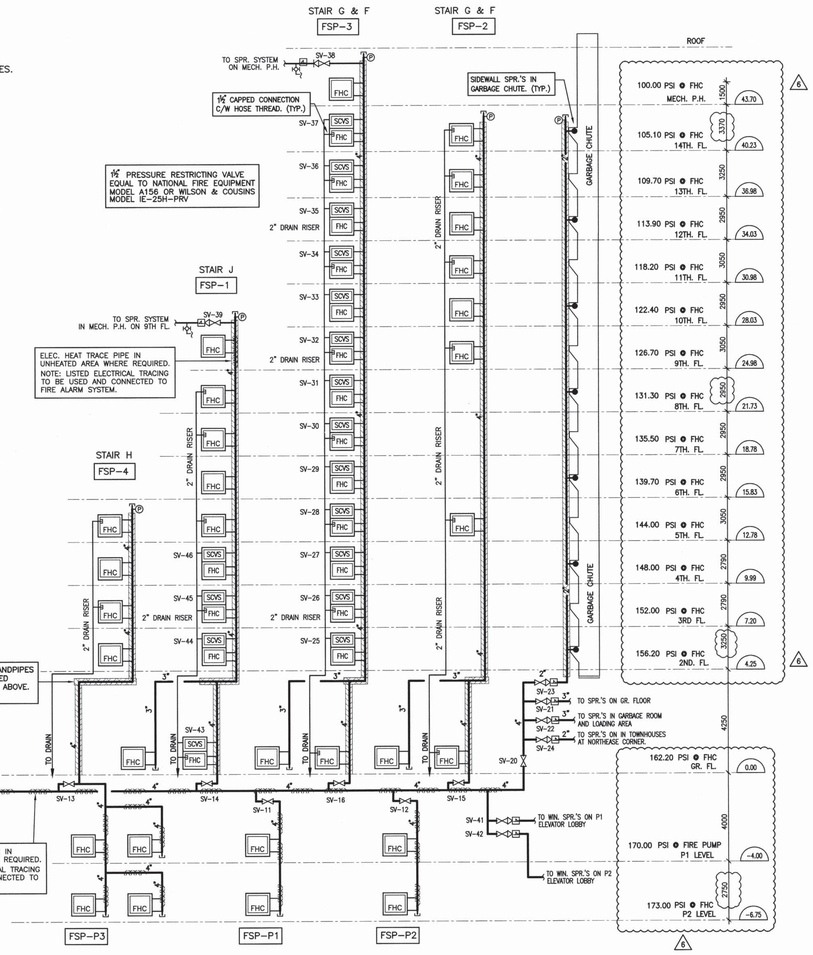
ALL CHECK VALVES, BACKFLOW PREVENTERS, DOUBLE CHECK VALVE ASSEMBLIES AND ELBOWS AND TEES WITH CENTERLINE PLANE PARALLEL TO PUMP SHAFT SHALL BE INSTALLED AT A MINIMUM DISTANCE OF 10 TIMES THE SUCTION PIPE DIAMETER BETWEEN THE FLANGE OF THE PUMP SUCTION INTAKE AND THE FLANGE OF THE DEVICE, ELBOW OR TEE.

ELBOWS WITH A CENTERLINE PLANE PERPENDICULAR TO THE PUMP SHAFT SHALL BE PERMITTED AT ANY LOCATION IN THE PUMP SUCTION INTAKE.

WHERE THE SUCTION PIPE AND PUMP SUCTION FLANGE ARE NOT THE SAME SIZE, THEY SHALL BE CONNECTED WITH AN ECCENTRIC TAPERED REDUCER OR INCREASER INSTALLED IN SUCH A WAY TO AVOID AIR POCKETS.

* ALL SHUT OFF VALVES WITHIN 50 FT. OF THE PUMP SUCTION FLANGE TO BE O.S.&Y. TYPE.





FIRE PROTECTION SYSTEM SCHEMATIC
N.T.S.

REVISIONS

1.	ISSUED FOR REVIEW & PERMIT.	JULY 30 2014
2.	RE–ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2015
6.	REVISED FIRE PUMP SIZE TO SUIT SITE CONDITION.	OCT. 06 2015

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.
-- DIMENSIONS TAKE PRECEDENT OVER SCALE.
-- THE ENTIRE SYSTEM IS TO BE INSTALLED AS PER N.F.P.A. STANDARD # 13 AND O.B.C. STANDARDS. (IF APPLICABLE)
-- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS WHERE REQUIRED.
-- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
-- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS.
-- ALL SPRINKLERS
-- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
-- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
-- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE)
-- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)
DENOTES DISTANCE, IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
-- RN DENOTES RISER NIPPLE.
DN DENOTES DOWN.
-- ALL SUPERVISED VALVES/FLOW (PRESSURE) SWITCHES AND LOW PRESSURE MONITORING SWITCHES TO BE CONNECTED TO FIRE ALARM SYSTEM. (IF F.A.S. IS INSTALLED)
-- CONTRACTOR TO CO–ORDINATE WITH ENGINEER EXACT LOCATION AND ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED 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.

DESIGN CRITERIA

NORTH

STAMP: R.A.SEVERINI — LICENSED PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO

DISA DESIGN
7181 WOODBINE AVENUE SUITE 224 MARKHAM, ONTARIO L3R 1A3
T 905–477–4474
F 905–477–6388
E clayton@disacapitaldev.ca

TRIDEL
4800 DUFFERIN STREET
TORONTO ONTARIO

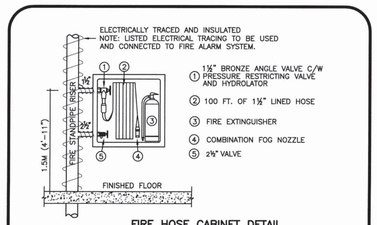
PROJECT: SQ ALEXANDRA PARK BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE: SPECIFICIITIONS SCHEMATIC & DETAILS SPRINKLER & STANDPIPE SYSTEM

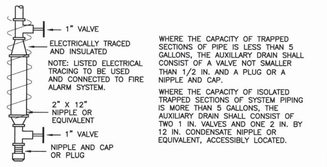
DATE: JULY 2014
SCALE:
DWN BY: H.W.
ISSUED FOR REVISION NO. 6

PROJECT NO. 14–10224
DWG NO. SP–1
OF 16

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



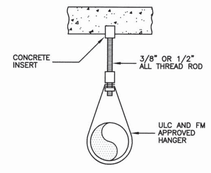
FIRE HOSE CABINET DETAIL
(FOR UNHEATED AREA) N.T.S.



WHERE THE CAPACITY OF TRAPPED SECTIONS OF PIPE IS LESS THAN 5 GALLONS, THE AUXILLARY DRAIN SHALL CONSIST OF A VALVE NOT SMALLER THAN 1/2 IN. AND A PLUG OR A NIPPLE AND CAP.

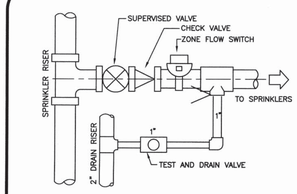
WHERE THE CAPACITY OF ISOLATED TRAPPED SECTIONS OF SYSTEM PIPING IS MORE THAN 5 GALLONS, THE AUXILIARY DRAIN SHALL CONSIST OF TWO 1 IN. VALVES AND ONE 2 IN. BY 12 IN. CONDENSATE NIPPLE OR EQUIVALENT, ACCESSIBLY LOCATED.

DRUM DRIP DETAIL
N.T.S.



AS PER N.F.P.A.13

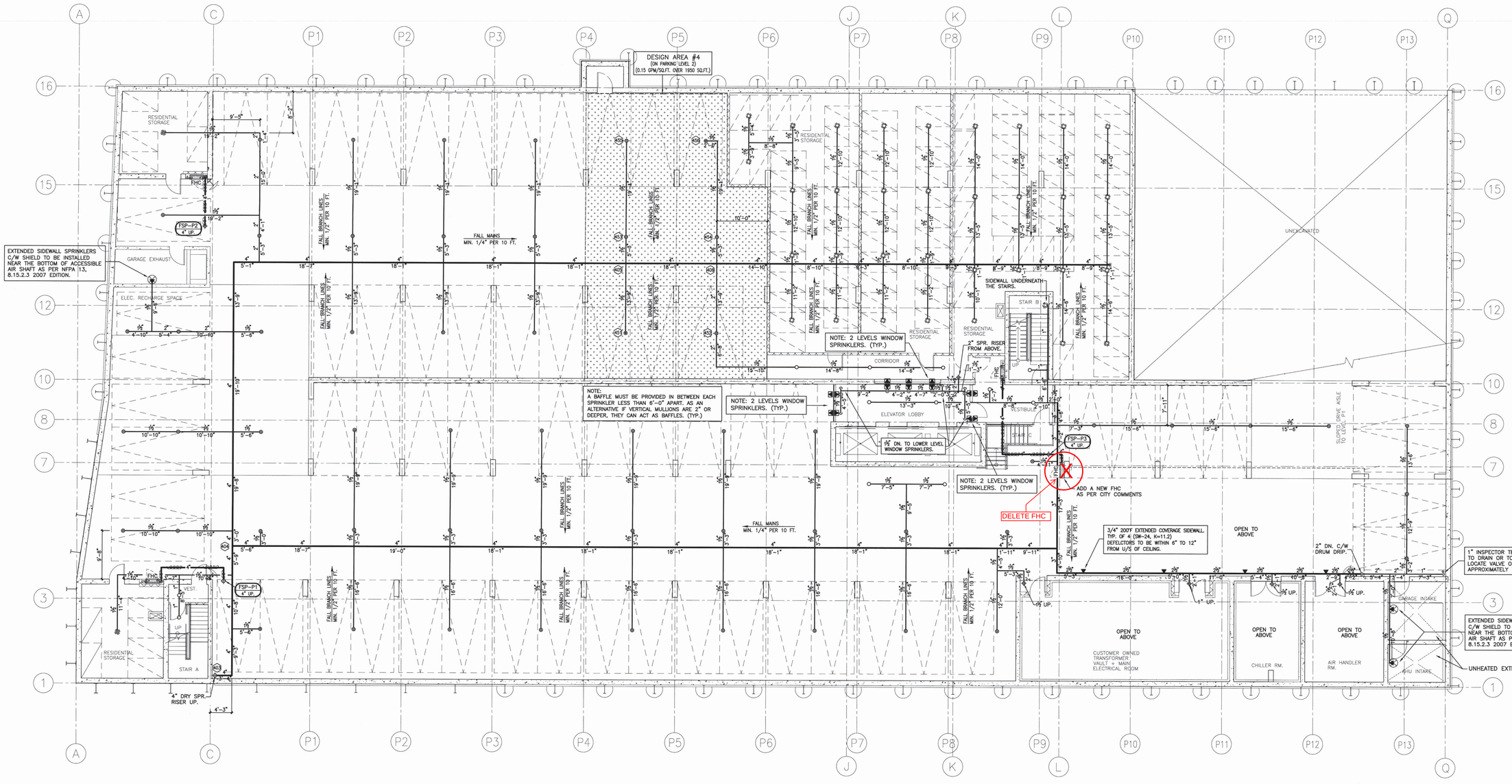
HANGER DETAIL
N.T.S.



TYPICAL FLOOR CONTROL VALVE
N.T.S.

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

2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2014
4.	ISSUED FOR CONSTRUCTION	JUN. 23 2015

NOTES

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--- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS AS REQUIRED.
--- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
--- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
--- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
--- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
--- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE)
--- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)

(O) DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.

--- PN DENOTES RISER NIPPLE.
--- DN DENOTES DROP.
--- ALL SUPERVISED VALVES/FLOW (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 ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED 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 GUARD

◎	3/4" 155°F EXTENDED COVERAGE UPRIGHT (K=14) S/R	60
○	1/2" 155°F STANDARD COVERAGE UPRIGHT (K=5.6) S/R	45
◀	3/4" 175°F SW-20 EXTENDED COVERAGE SIDEWALL (K=11.2) S/R	7
◁	1/2" 155°F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	1
▶	WINDOW SPRINKLER (K=5.6)	28
FHC	FIRE HOSE CABINET – 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	4

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.

NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
R.A.SEVERINI
PROVINCE OF ONTARIO

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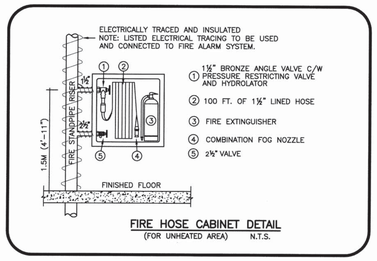
TORONTO ONTARIO

PROJECT
SQ ALEXANDRA PARK
BLOCK 11
38 CAMERON ST. TORONTO

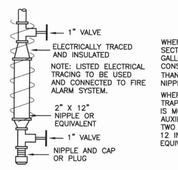
DWG TITLE
PARKING LEVEL 2
SPRINKLER & STANDPIPE SYSTEM

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

PROJECT NO. 14-10224
DWG NO. SP-2
OF 16



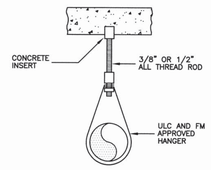
FIRE HOSE CABINET DETAIL
(FOR UNHEATED AREA) N.T.S.



WHERE THE CAPACITY OF TRAPPED SECTIONS OF PIPE IS LESS THAN 5 GALLONS, THE AUXILLARY DRAIN SHALL CONSIST OF A VALVE NOT SMALLER THAN 1/2 IN. AND A PLUG OR A NIPPLE AND CAP.

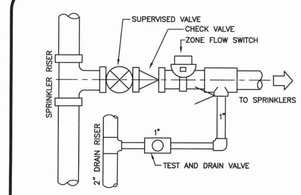
WHERE THE CAPACITY OF ISOLATED TRAPPED SECTIONS OF SYSTEM PIPING IS MORE THAN 5 GALLONS, THE AUXILIARY DRAIN SHALL CONSIST OF TWO 1 IN. VALVES AND ONE 2 IN. BY 1/2 IN. CONDENSATE NIPPLE OR EQUIVALENT, ACCESSIBLY LOCATED.

DRUM DRIP DETAIL
N.T.S.



AS PER N.F.P.A.13

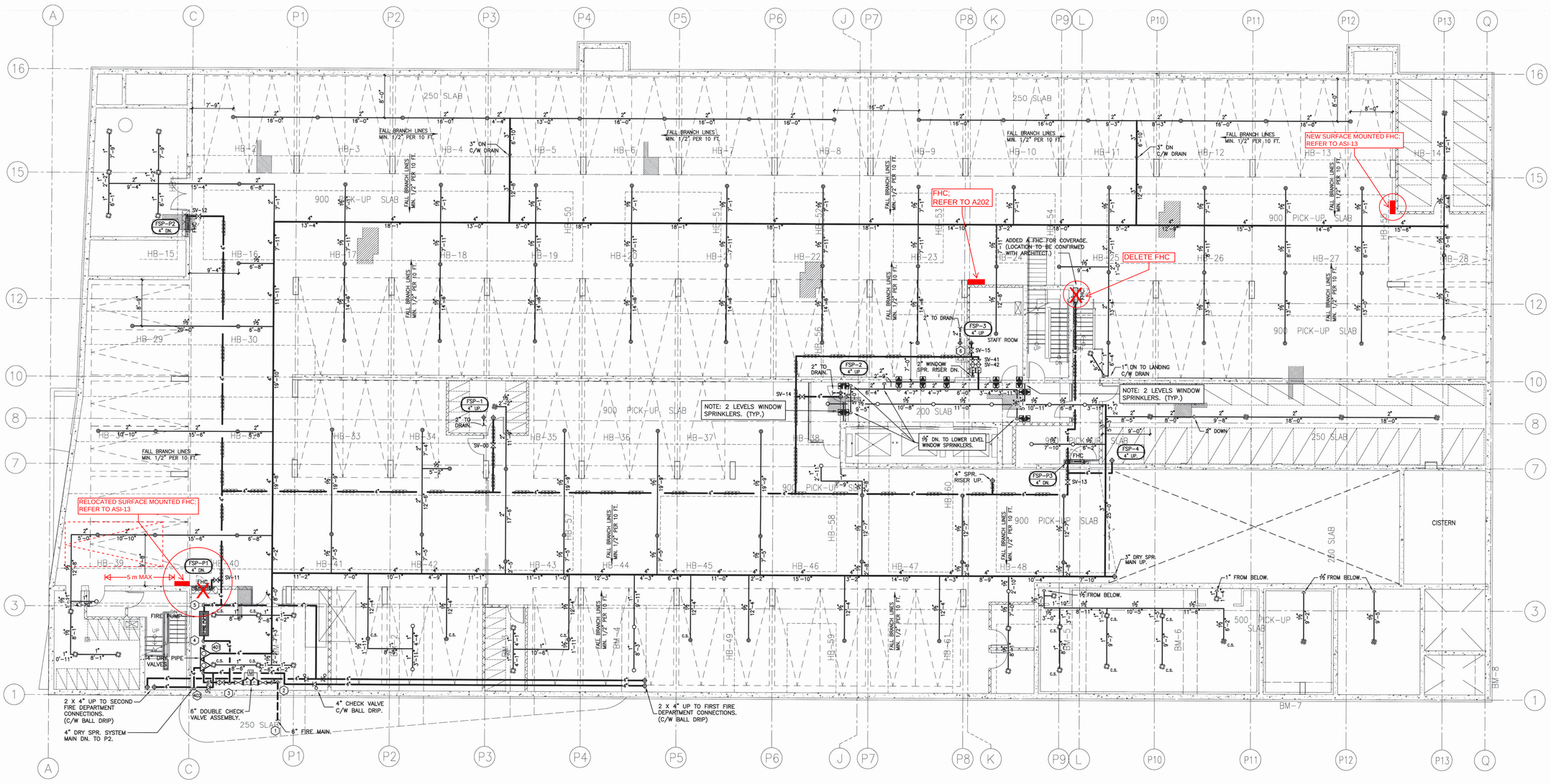
HANGER DETAIL
N.T.S.



TYPICAL FLOOR CONTROL VALVE
N.T.S.

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

2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2014
4.	ISSUED FOR CONSTRUCTION	JUL. 03 2015

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.
-- DIMENSIONS SHALL BE FREQUENTLY OVER SCALE.
-- THE SPRINKLER SYSTEM TO BE INSTALLED AS PER N.F.P.A. STANDARD # 13 AND O.B.C. STANDARDS. (IF APPLICABLE)
-- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS WHERE REQUIRED.
-- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
-- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO MUNICIPAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
-- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
-- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
-- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE)
-- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)
DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
-- RN DENOTES RISER NIPPLE.
DN DENOTES DOWN.
-- ALL SUPERVISED VALVES,FLOW (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 CONDITIONS PRIOR TO START OF WORK. ANY CONFLICTS ON DRAWINGS AND 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 GUARD
C.S. CANDLE STICK

◎	3/4" 155°F EXTENDED COVERAGE UPRIGHT (K=14) S/R	99
○	1/2" 155°F STANDARD COVERAGE UPRIGHT (K=5.6) S/R	43
◀	3/4" 175°F SW-20 EXTENDED COVERAGE SIDEWALL (K=11.2) S/R	–
▶	WINDOW SPRINKLER (K=5.6)	18
FHC	FIRE HOSE CABINET – 100 FT OF ½" LINED HOSE C/W COMBINATION FOG NOZZLE	4

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.

NORTH

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PROJECT
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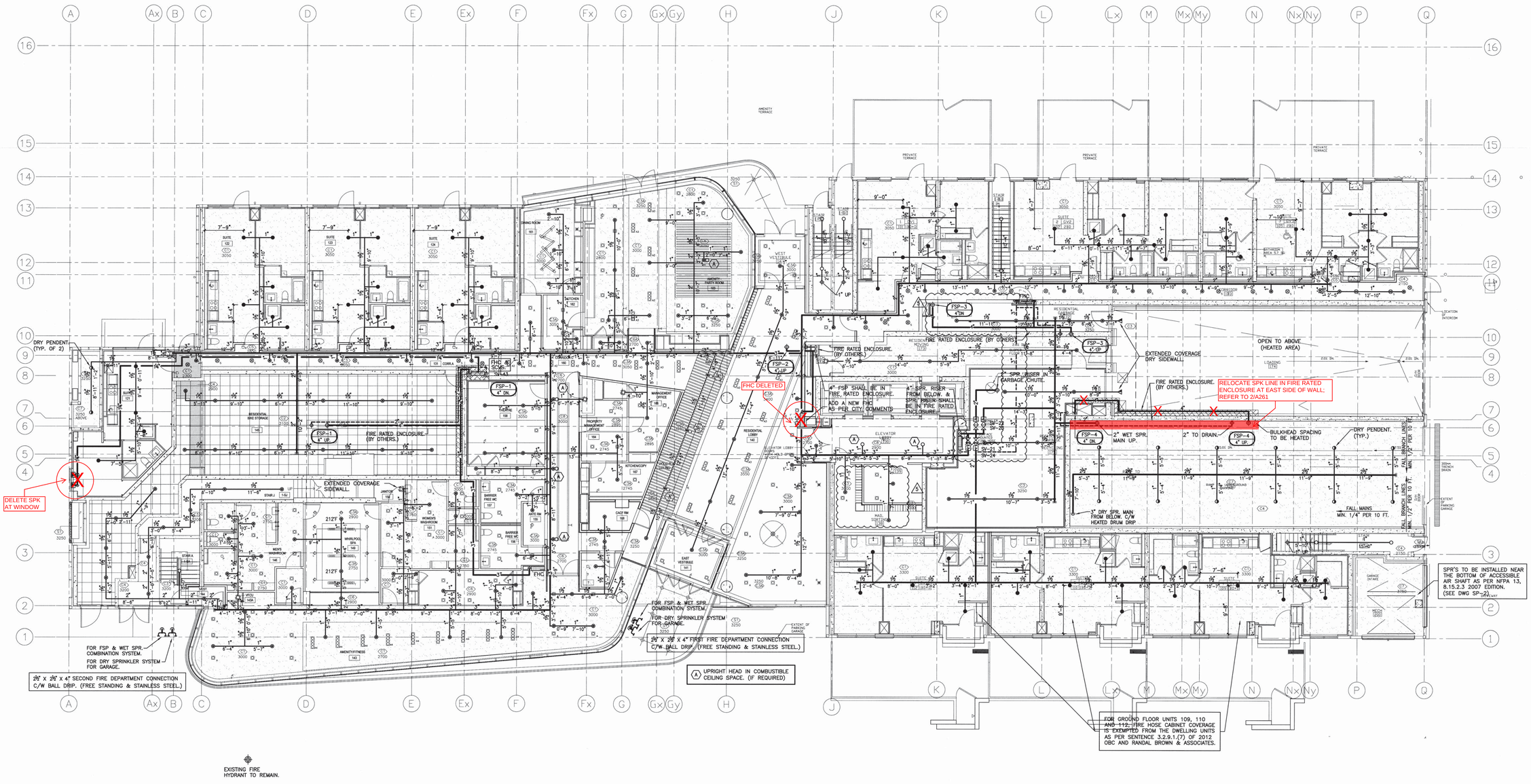
BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE
PARKING LEVEL 1
SPRINKLER & STANDPIPE SYSTEM

DATE: JULY 2014
SCALE: 1:100
DWN BY: H.W.
ISSUED FOR REVISION NO.:
PROJECT NO.: 14-10224
DWG NO.: SP-3
OF 16



REVISIONS		
2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN APR.23, 2015	APR. 23 2015
4.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2015
5.	ADDED NEW FHC & REVISED SPRINKLER LAYOUT AS PER NEW ARCH. A204 DATED: 2015-07-08.	JUL. 20 2015
6.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

NOTES

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--- COMPLETE TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS WHERE REQUIRED.
--- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
--- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
--- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
--- ALL FALLING LINES BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
--- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE)
--- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)
DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
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--- CONTRACTOR TO VISIT SITE TO DETERMINE EXACT LOCATION AND ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED 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 GUARD

212°F ⊙	1/2" 212°F STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R	00
⊙	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=4.9)	00
◀	STANDARD COVERAGE DRY SIDEWALL (K=5.6) Q/R	00
◐	STANDARD COVERAGE DRY PENDENT (K=5.6) Q/R	00
▶	WINDOW SPRINKLER (K=5.6)	00
FHC	FIRE HOSE RACK - 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	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.

NORTH

STAMP: LICENSED PROFESSIONAL ENGINEER R.A.SEVERINI PROVINCE OF ONTARIO

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PROJECT: SQ ALEXANDRA PARK BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE: GROUND FLOOR SPRINKLER & STANDPIPE SYSTEM

DATE: JULY 2014
SCALE: 1:100
DWN BY: H.W.
ISSUED FOR REVISION NO.: 6 D.Z

PROJECT NO.: 14-10224
DWG NO.: SP-4
OF 16

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 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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH

(i) STEEL SUSPENSION GRID, AND
(ii) LAY–IN PANELS OR TILES 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 ULC/ORD–C199P–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 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.)

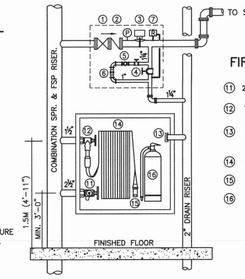
CONTRACTOR SHALL COORDINATE WITH LIGHTING, DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION OF SPRINKLER SYSTEM.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

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. (SET AT 175 PSI) WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

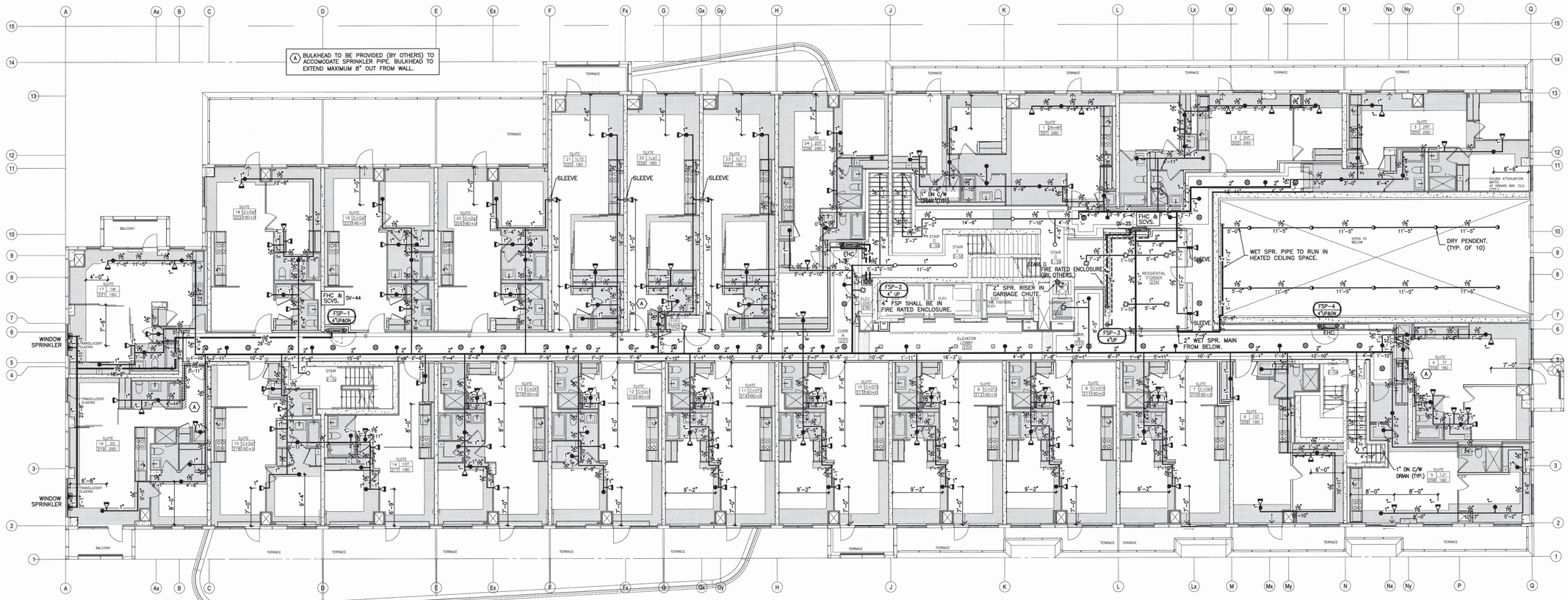
FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUPERVISED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

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



REVISIONS		
2.	RE–ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2015
4.	REVISED SPRINKLER LAYOUT SUIT TO NEW BULKHEAD. REVISIONS AS PER ARCH.	SEP. 08 2015
5.	ISSUED FOR CONSTRUCTION.	SEP. 24 2015

NOTES

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--- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
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--- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE)
--- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)
◎ DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
--- BN DENOTES RISER NIPPLE.
DN DENOTES DOWN.
--- ALL SUPERVISED VALVES,FLOW (PRESSURE) SWITCHES AND LOW PRESSURE MONITORING SWITCHES TO BE CONNECTED TO FIRE ALARM SYSTEM. (IF F.A.S. IS INSTALLED)
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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 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	18
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	122
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	107
◀	1/2" 155°F RESIDENTIAL SEMI–RECESSED SIDEWALL (K=5.8)	00
▶	WINDOW SPRINKLER (K=5.6)	4
◐	STANDARD COVERAGE DRY PENDENT (K=5.6) Q/R	10
FHC	FIRE HOSE RACK – 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	4

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.

NORTH

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LICENSED PROFESSIONAL ENGINEER
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PROJECT
SQ ALEXANDRA PARK
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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.	5 D.Z
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 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 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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH

(i) STEEL SUSPENSION GRID, AND
(ii) LAY-IN PANELS OR TILES 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 COMBUTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199P-M, "COMBUSTIBLE PIPING FOR SPRINKLER SYSTEMS", AND HAS BEEN SHOWN TO MEET THE REQUIREMENTS IN THAT DOCUMENT WITHOUT ADDITIONAL PROTECTION.

GENERAL NOTES

NOTE 1:
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AS PER NFPA-13 (2007) CLAUSE 21.20.19.2.1

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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.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

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. (SET AT 175 PSI) WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

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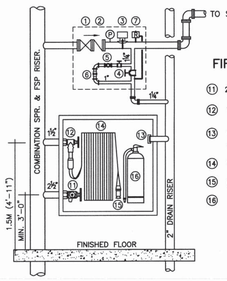

FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
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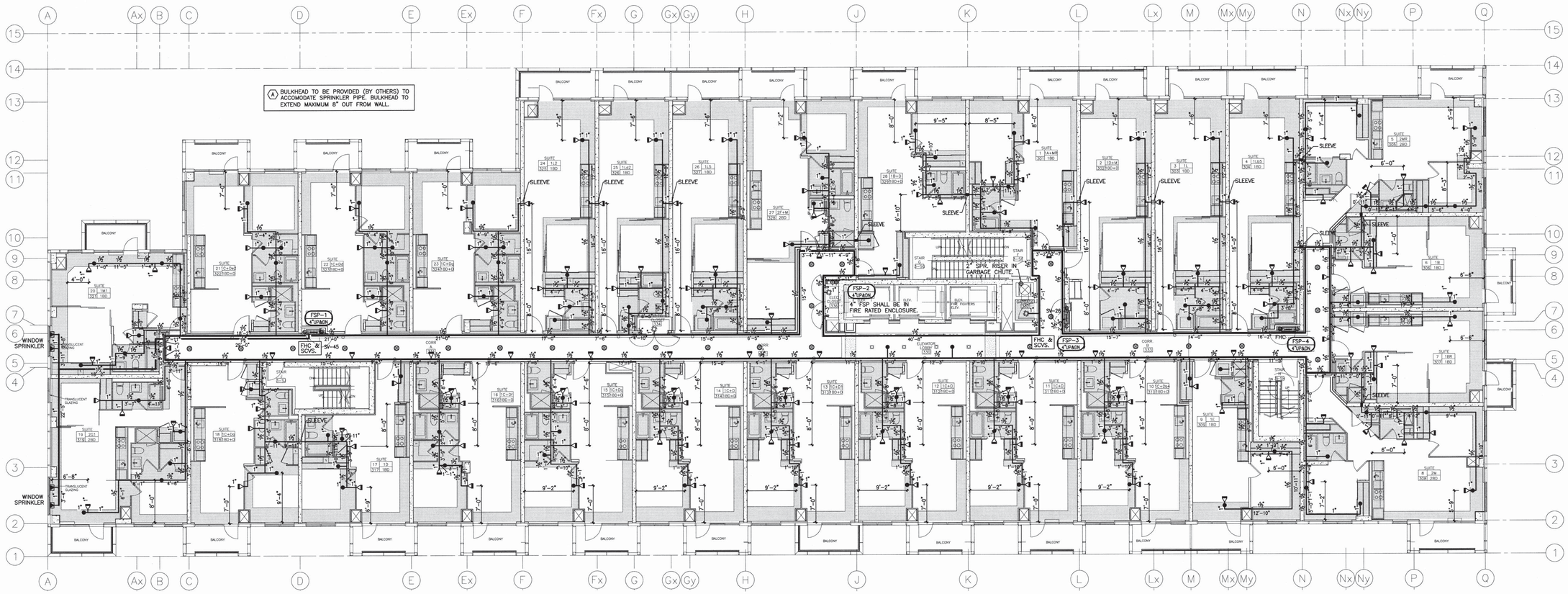
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

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



REVISIONS

2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
4.	REVISED SPRINKLER LAYOUT SUIT TO NEW BULKHEAD. REVISIONS AS PER ARCH.	SEP. 08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

NOTES

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--- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
--- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
--- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
--- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
--- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTERS LINE (SCH.40 PIPE)
--- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)
◎ DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
--- RN DENOTES RISER NIPPLE.
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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 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	3
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	122
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	142
◀	1/2" 155°F RESIDENTIAL SEMI-RECESSED SIDEWALL (K=5.8)	00
▶	WINDOW SPRINKLER (K=5.6)	4
FHC	FIRE HOSE RACK - 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	4

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

LICENSED PROFESSIONAL ENGINEER
R.A.SEVERINI
10/02/15
PROVINCE OF ONTARIO

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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.	5 D.Z
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 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 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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH

(i) STEEL SUSPENSION GRID, AND
(ii) LAY-IN PANELS OR TILES 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 WAVED WHERE COMBUTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199P-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.
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NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH.

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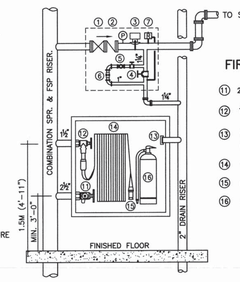

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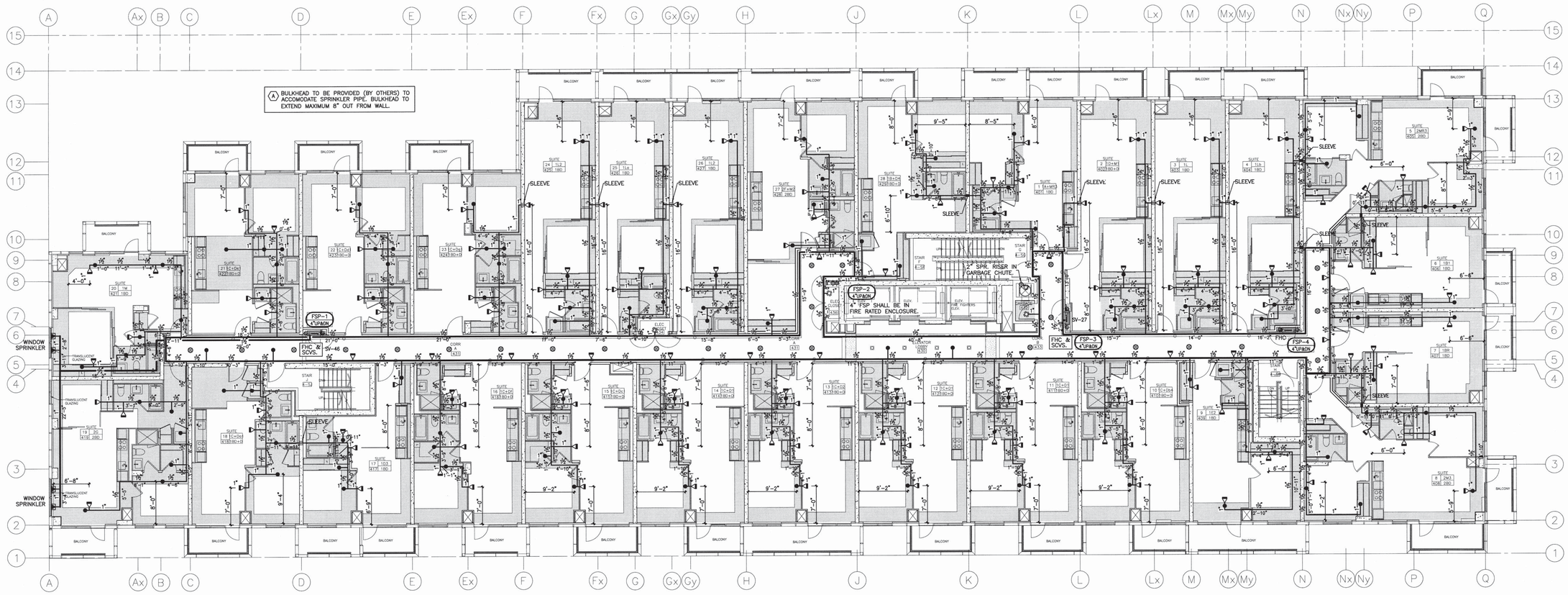
N.T.S.



REVISIONS		
2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
4.	REVISED SPRINKLER LAYOUT SUIT TO NEW BULKHEAD. REVISIONS AS PER ARCH.	SEP. 08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

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○	1/2" 155°F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	3
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	128
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	139
◀	1/2" 155°F RESIDENTIAL SEMI-RECESSED SIDEWALL (K=5.8)	00
▶	WINDOW SPRINKLER (K=5.6)	4
◁	1/2" 165°F STANDARD COVERAGE SIDEWALL (K=5.6) Q/R	1
FHC	FIRE HOSE RACK – 100 FT OF ½" LINED HOSE C/W COMBINATION FOG NOZZLE	4

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LICENSED PROFESSIONAL ENGINEER
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100257
PROVINCE OF ONTARIO

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TRIDEL
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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.	5 D.Z
PROJECT NO.	14-10224
DWG NO.	SP-7
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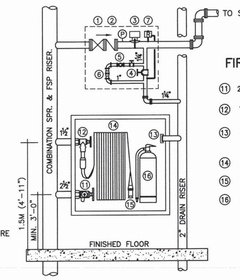

FIRE HOSE CABINET

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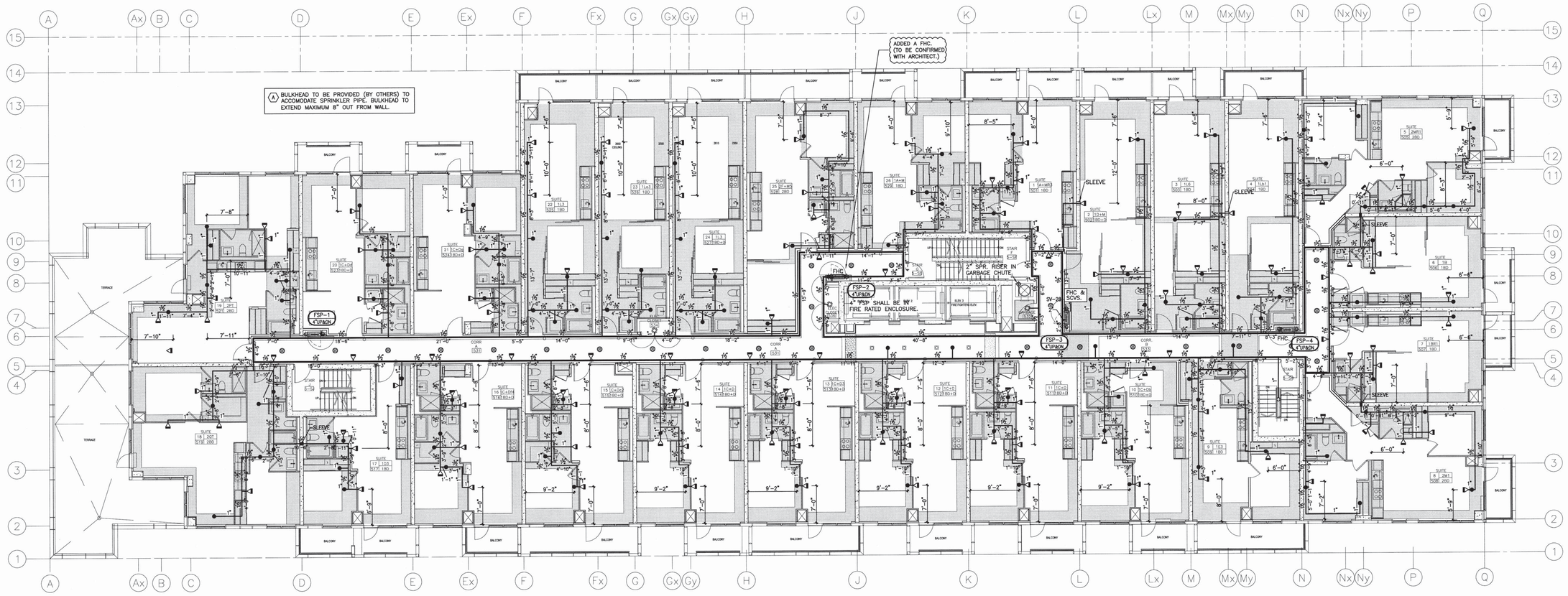

REVISIONS		
2.	RE–ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS DATED IN JUN.08, 2015	JUN. 08 2015
4.	REVISED SPRINKLER LAYOUT SUIT TO NEW BULKHEAD. REVISIONS AS PER ARCH.	SEP. 08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

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--- THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER N.F.P.A. STANDARD 13 AND O.B.C. STANDARDS. OF APPLICABLE.
--- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS WHERE REQUIRED.
--- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
--- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS.
--- ALL APPLICABLE INSTALLATION TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
--- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
--- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE).
--- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)
DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
--- RN DENOTES RISER NIPPLE.
DN DENOTES DOWN.
--- ALL SUPERVISED VALVES/FLOW (PRESSURE) SWITCHES AND LOW PRESSURE MONITORING SWITCHES TO BE CONNECTED TO FIRE ALARM SYSTEM. (BY ELECTRICAL INSTALLED)
--- CONTRACTOR TO VISIT SITE TO DETERMINE EXACT LOCATION AND ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED 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 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	4
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	127
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	125
◀	1/2" 155°F RESIDENTIAL SEMI–RECESSED SIDEWALL (K=5.8)	00
FHC	FIRE HOSE RACK – 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	4

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

LICENSED PROFESSIONAL ENGINEER
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TRIDEL
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PROJECT
SQ ALEXANDRA PARK
BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE
5TH FLOOR
SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
SCALE	1:100
DWN BY	H.W.
ISSUED FOR REVISION NO.	5 D.Z
PROJECT NO.	14–10224
DWG NO.	SP–8
	OF 16

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 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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH

(i) STEEL SUSPENSION GRID, AND
(ii) LAY-IN PANELS OR TILES 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 WAVED WHERE COMBUTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199P-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 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.)

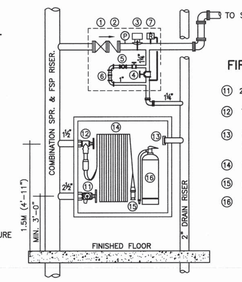
CONTRACTOR SHALL COORDINATE WITH LIGHTING, DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION OF SPRINKLER SYSTEM.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

1. STANDARD SHUT OFF VALVE
2. 2" CHECK VALVE
3. FLOW SWITCH
4. ¾" 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 INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

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

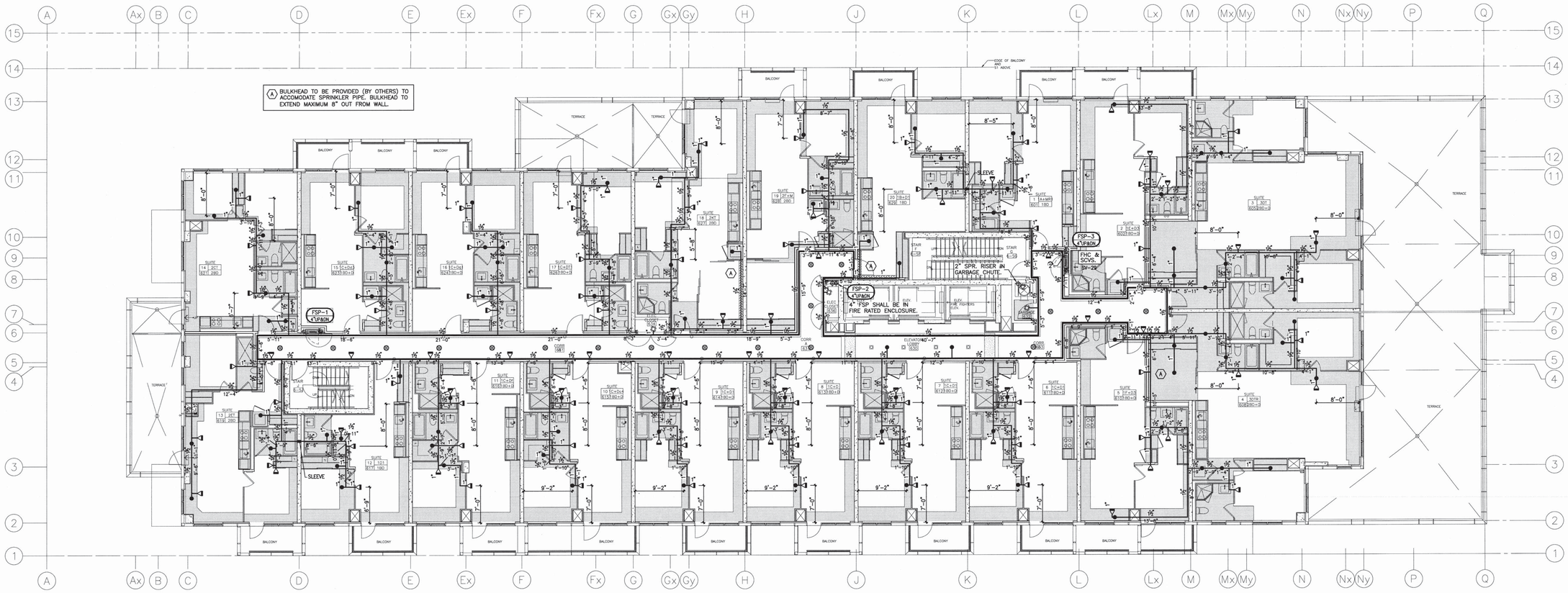


FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

FIRE HOSE CABINET AND SPRINKLER CONTROL VALVE STATION DETAIL

N.T.S.



REVISIONS

2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

NOTES

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--- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
--- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
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--- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)

DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.

--- RN DENOTES RISER NIPPLE. ON DENOTES DOWN.
--- ALL SUPERVISED VALVES/FLOW (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 ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED ON DRAWINGS. ANY MAJOR DISCREPANCIES TO BE REPORTED TO THE DESIGNER PRIOR TO FABRICATION AND INSTALLATION.

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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 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	3
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	95
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	105
◁	1/2" 165°F STANDARD COVERAGE SIDEWALL (K=5.6) Q/R	1
FHC	FIRE HOSE RACK – 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	2

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

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PROJECT
SQ ALEXANDRA PARK
BLOCK 11
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DWG TITLE
6TH FLOOR
SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
SCALE	1:100
DWN BY	H.W.
ISSUED FOR REVISION NO.	5 D.Z
PROJECT NO.	14-10224
DWG NO.	SP-9
OF	16

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

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(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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH

(i) STEEL SUSPENSION GRID, AND
(ii) LAY-IN PANELS OR TILES 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 ULC/ORD-C199P-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.
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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:
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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.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

1. STANDARD SHUT OFF VALVE
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4. ¾" DRAIN GLOBE VALVE
5. 1" INSPECTOR TEST VALVE SIGHT GLASS
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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.

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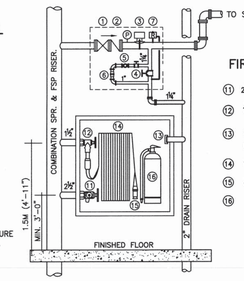
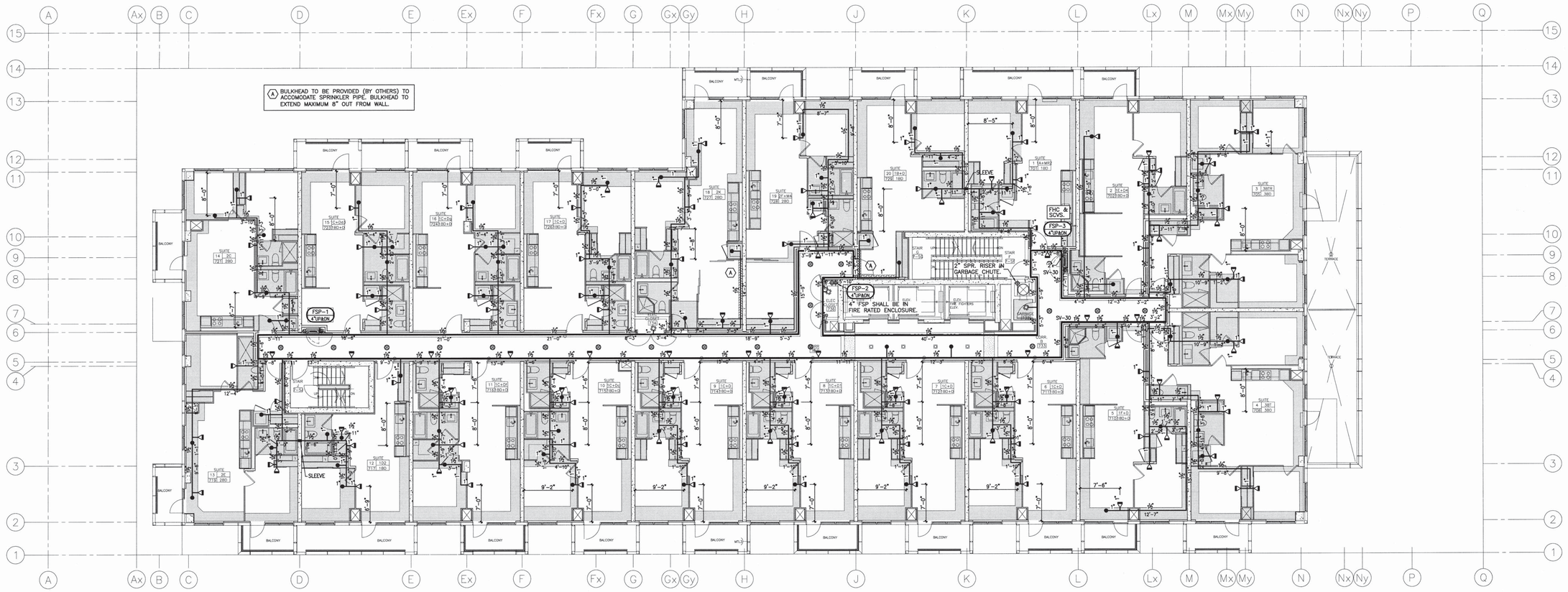


FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

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



REVISIONS		
2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
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S/R=STANDARD RESPONSE Q/R=QUICK RESPONSE ◌ C/W GUARD

⊙	1/2" 155°F STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R	00
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●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	83
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	113
FHC	FIRE HOSE RACK - 100 FT OF ¾" LINED HOSE C/W COMBINATION FOG NOZZLE	2

DESIGN CRITERIA

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DWG TITLE
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SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
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ISSUED FOR REVISION NO.	5 D.Z
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(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH

(i) STEEL SUSPENSION GRID, AND
(ii) LAY-IN PANELS OR TILES 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 COMBUTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199P-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, ACCOUSTIC 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.)

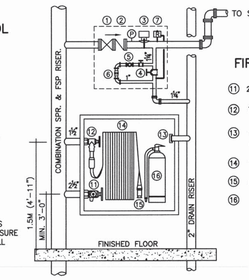
CONTRACTOR SHALL COORDINATE WITH LIGHTING, DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION OF SPRINKLER SYSTEM.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

1. STANDARD SHUT OFF VALVE
2. 2" CHECK VALVE
3. FLOW SWITCH
4. ¾" 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 INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

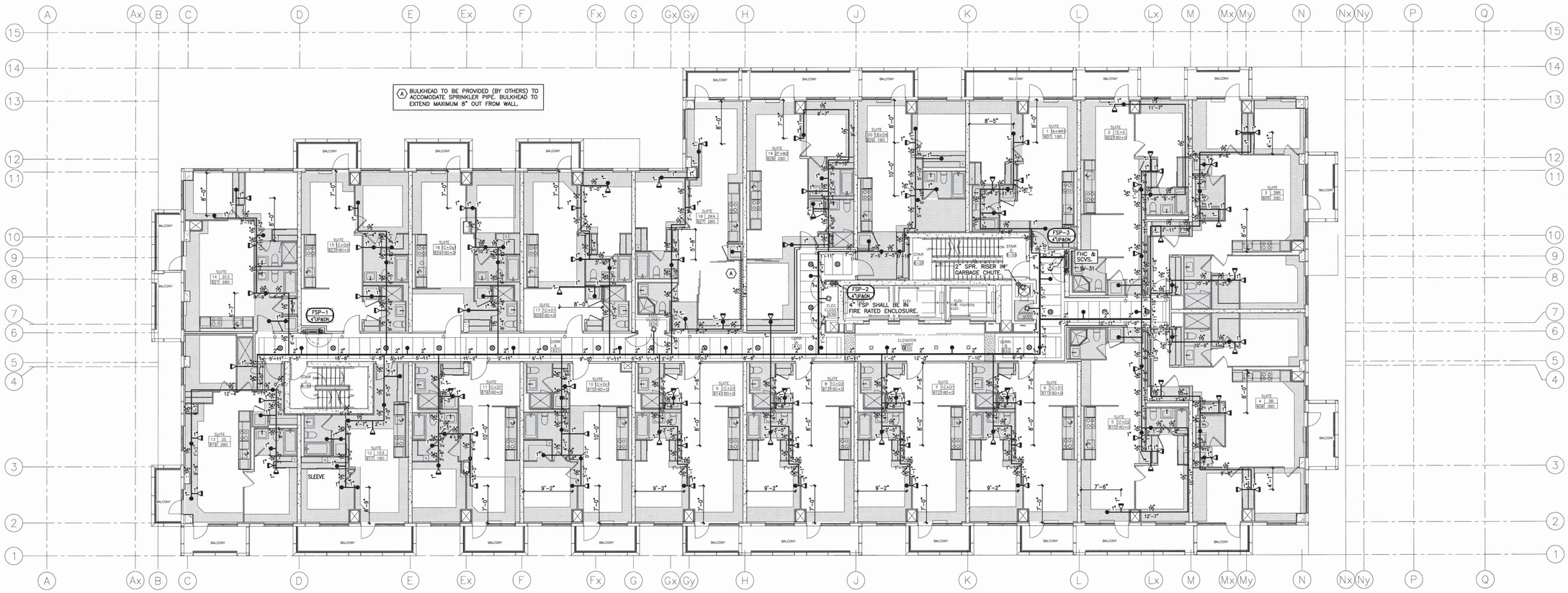
FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUPERVISED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

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



REVISIONS

2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

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.
-- DIMENSIONS TAKE PRECEDENT OVER SCALE.
-- THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER N.F.P.A. STANDARD # 13 AND O.B.C. STANDARDS. (IF APPLICABLE)
-- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS WHERE REQUIRED.
-- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
-- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
-- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
-- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
-- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.40 PIPE)
-- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)
◎ DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
-- RN DENOTES RISER NIPPLE. DN DENOTES DOWN.
-- ALL SUPERVISED VALVES,FLOW (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 ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED 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 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	3
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	110
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	91
◁	1/2" 165°F STANDARD COVERAGE SIDEWALL (K=5.6) Q/R	1
FHC	FIRE HOSE RACK - 100 FT OF ¾" LINED HOSE C/W COMBINATION FOG NOZZLE	2

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

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TRIDEL
4800 DUFFERIN STREET
TORONTO ONTARIO

PROJECT
SQ ALEXANDRA PARK
BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE
8TH FLOOR
SPRINKLER & STANDPIPE SYSTEM

DATE: JULY 2014
SCALE: 1:100
DWN BY: H.W.
ISSUED FOR REVISION NO. 5 D.Z.

PROJECT NO. 14-10224
DWG NO. SP-11
OF 16

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 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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH
  (i) STEEL SUSPENSION GRID, AND
  (ii) LAY–IN PANELS OR TILES 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 WAVED WHERE COMBUTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD–C199P–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.
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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.
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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.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

1. STANDARD SHUT OFF VALVE
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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 INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

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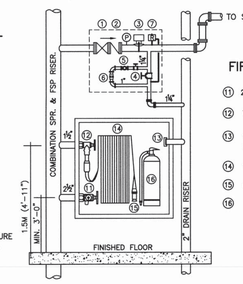
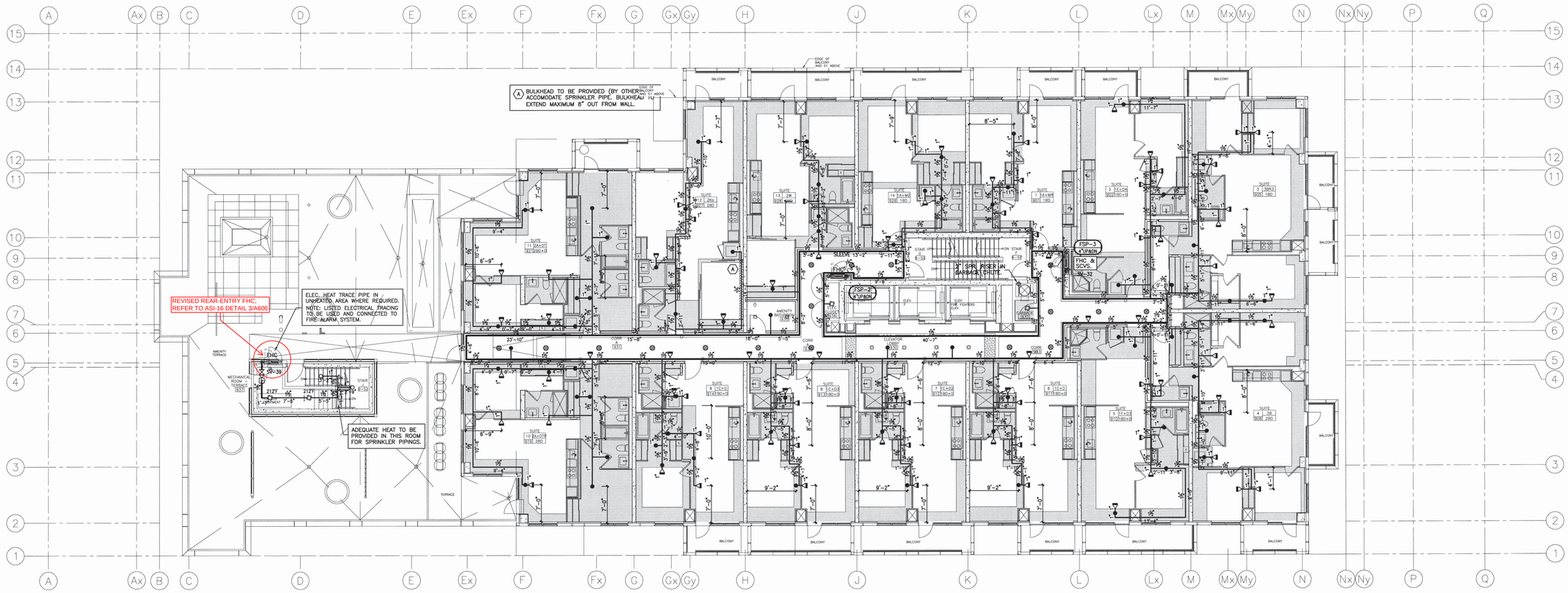


FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

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



REVISIONS

2.	RE–ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

NOTES

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–– THE SPRINKLER SYSTEM PROVIDED WORK OR UPON REQUEST.
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DN DENOTES DOWN.
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S/R=STANDARD RESPONSE Q/R=QUICK RESPONSE ◌ 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	4
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	73
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	84
212°F ○	1/2" 212°F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	2
FHC	FIRE HOSE RACK – 100 FT OF ¾" LINED HOSE C/W COMBINATION FOG NOZZLE	3

DESIGN CRITERIA

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

NORTH

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TRIDEL
4800 DUFFERIN STREET
TORONTO ONTARIO

PROJECT
SQ ALEXANDRA PARK
BLOCK 11
38 CAMERON ST. TORONTO

DWG TITLE
9TH FLOOR
SPRINKLER & STANDPIPE SYSTEM

DATE	JULY 2014
SCALE	1:100
DWN BY	H.W.
ISSUED FOR REVISION NO.	5 D.Z
PROJECT NO.	14–10224
DWG NO.	SP–12
OF	16

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

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GENERAL NOTES

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NOTE 3:
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NOTE 5:
IF CPVC PIPE IS USED, CONTRACTOR TO PROVIDE "EXPANSION OFFSET LOOP" ON STRAIGHT RUNS EXCEEDING 100 FT IN LENGTH.

NOTE 6:
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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.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

1. STANDARD SHUT OFF VALVE
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3. FLOW SWITCH
4. ¾" DRAIN GLOBE VALVE
5. 1" INSPECTOR TEST VALVE SIGHT GLASS
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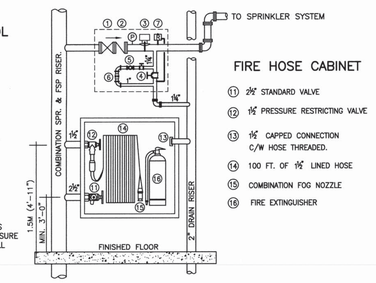
FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUPERVISED AND CONNECTED TO FIRE ALARM SYSTEM.

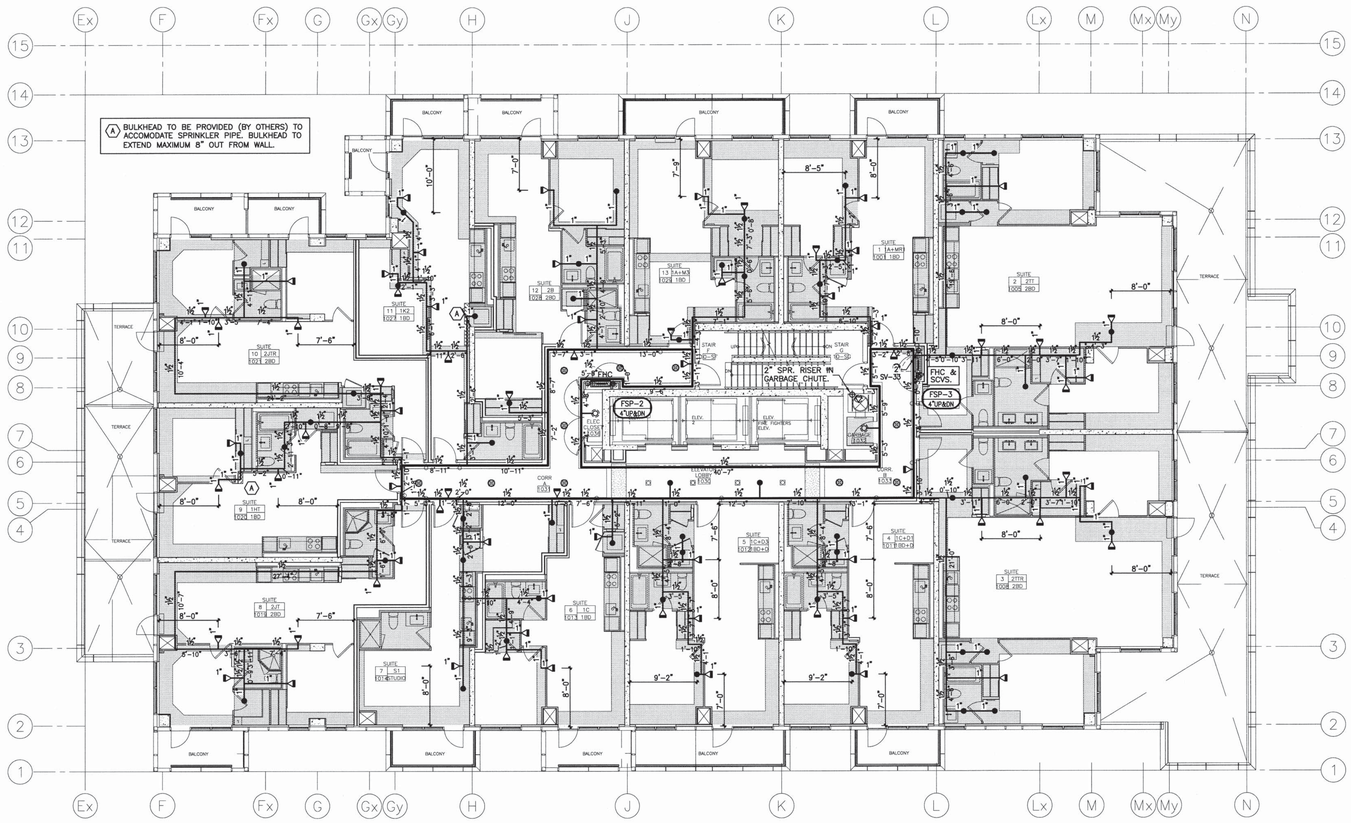


FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

FIRE HOSE CABINET AND SPRINKLER CONTROL VALVE STATION DETAIL

N.T.S.



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 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	2
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	53
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	70
◁	1/2" 165°F STANDARD COVERAGE SIDEWALL (K=5.6) Q/R	1
FHC	FIRE HOSE RACK - 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	2

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

LICENSED PROFESSIONAL ENGINEER
R.A.SEVERINI
PROVINCE OF ONTARIO

REVISIONS

2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN.08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

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 SHALL BE DESIGNED TO
-- THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER N.F.P.A. STANDARD # 13 AND O.B.C. STANDARDS. (IF APPLICABLE)
-- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS WHERE REQUIRED.
-- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
-- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO MUNICIPAL SPECIFICATIONS AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
-- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
-- ALL INTERIOR GRD BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
-- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE)
-- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)

◎ DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.

-- RN DENOTES RISER NIPPLE.
DN DENOTES DOWN.
-- ALL SUPERVISED VALVES,FLOW (PRESSURE) SWITCHES AND LOW PRESSURE MONITORING SWITCHES TO BE CONNECTED TO FIRE ALARM SYSTEM. (F.A.S.) IS INSTALLED.
-- CONTRACTOR TO VISIT SITE TO DETERMINE EXACT LOCATION AND ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED ON DRAWINGS. ANY MAJOR DISCREPANCIES TO BE REPORTED TO THE DESIGNER PRIOR TO FABRICATION AND INSTALLATION.

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TRIDEL
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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.	2 (D.Z)
PROJECT NO.	14-10224
DWG NO.	SP-13
OF	16

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 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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH
  (i) STEEL SUSPENSION GRID, AND
  (ii) LAY–IN PANELS OR TILES 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 COMBUTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD–C199P–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 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.)

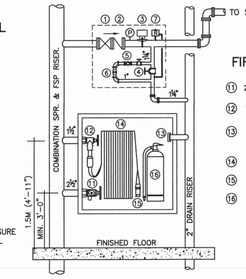
CONTRACTOR SHALL COORDINATE WITH LIGHTING, DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION OF SPRINKLER SYSTEM.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

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. (SET AT 175 PSI) WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

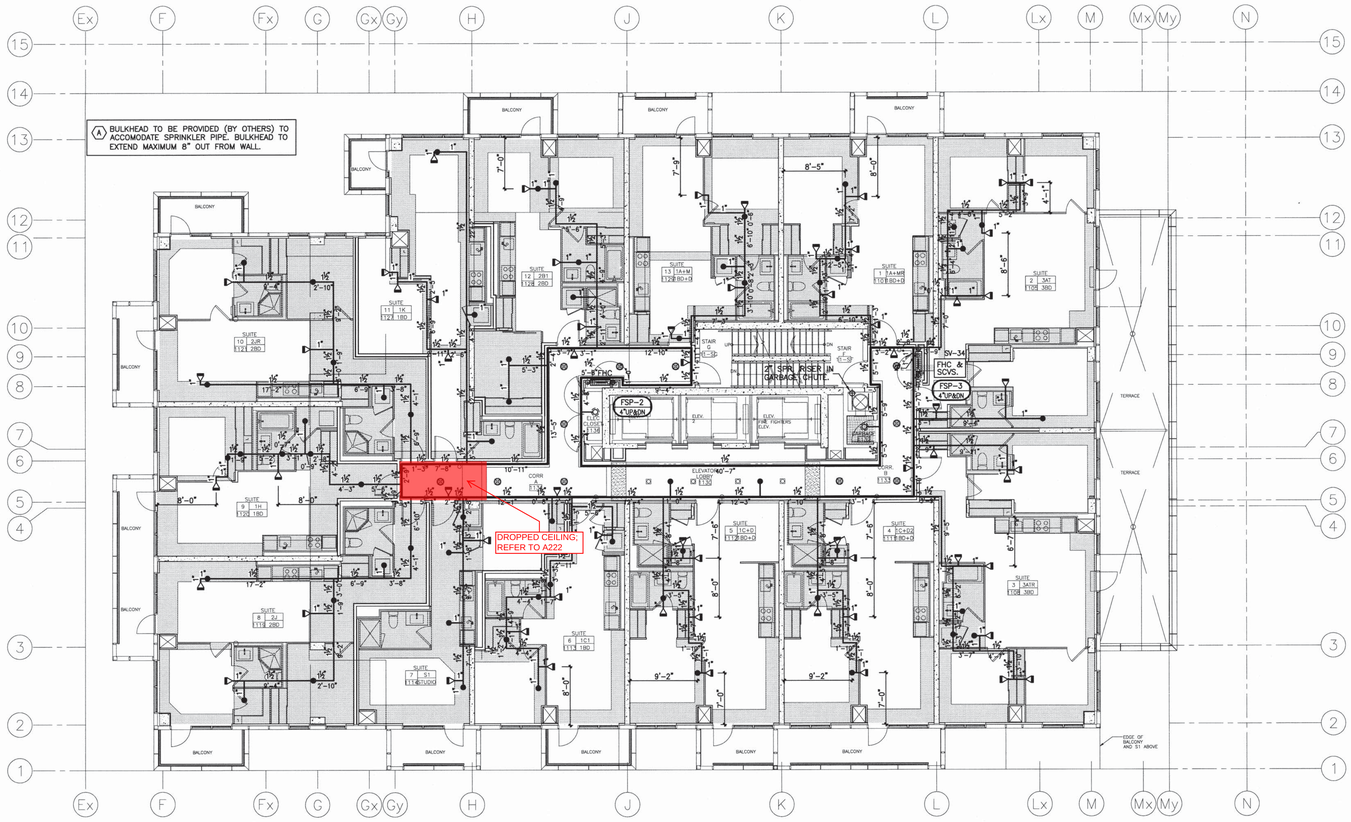
FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUPERVISED AND CONNECTED TO FIRE ALARM SYSTEM.



FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

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



REVISIONS

2.	RE–ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.08, 2015	JUN. 08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

NOTES

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–– DIMENSIONS TAKE PRECEDENT OVER SCALE.
–– THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER N.F.P.A. STANDARD # 13 AND O.B.C. STANDARDS. (IF APPLICABLE)
–– CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS AS WHERE REQUIRED.
–– ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
–– UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
–– INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
–– ALL INTERIOR 1 GRD BRANCH LINE MEASUREMENTS ARE GIVEN ON A CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
–– ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE)
–– ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)

◯ DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.

–– RN DENOTES RISER NIPPLE.
DN DENOTES DOWN.
–– ALL SUPERVISED VALVES/FLOW (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 ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED 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 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	2
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	59
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	62
FHC	FIRE HOSE RACK – 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	2

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

LICENSED PROFESSIONAL ENGINEER
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TRIDEL
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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 REVISION NO.	5 D.Z
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 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 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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH

(i) STEEL SUSPENSION GRID, AND
(ii) LAY-IN PANELS OR TILES 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 COMBUTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199P-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 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.)

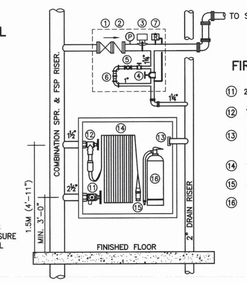
CONTRACTOR SHALL COORDINATE WITH LIGHTING, DIFFUSER & INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION OF SPRINKLER SYSTEM.

THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

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. (SET AT 175 PSI)
   WHERE AUXILIARY AIR RESERVOIRS ARE INSTALLED TO ABSORB PRESSURE INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

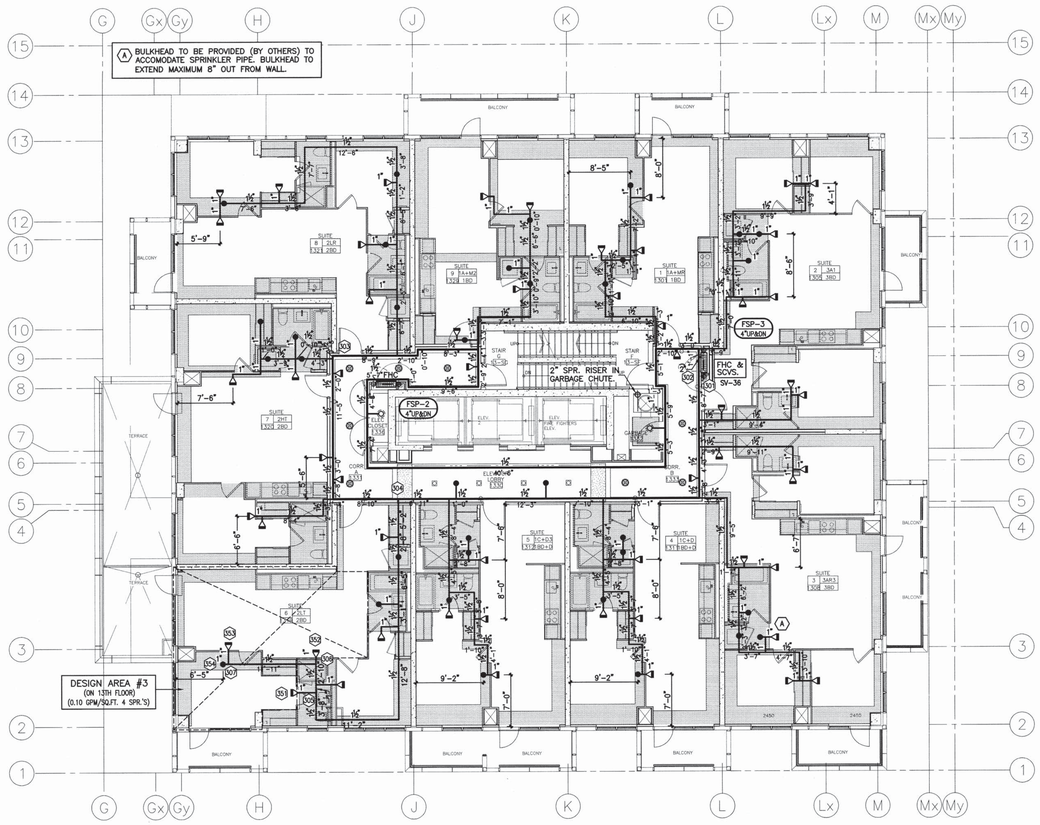
FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUPERVISED AND CONNECTED TO FIRE ALARM SYSTEM.



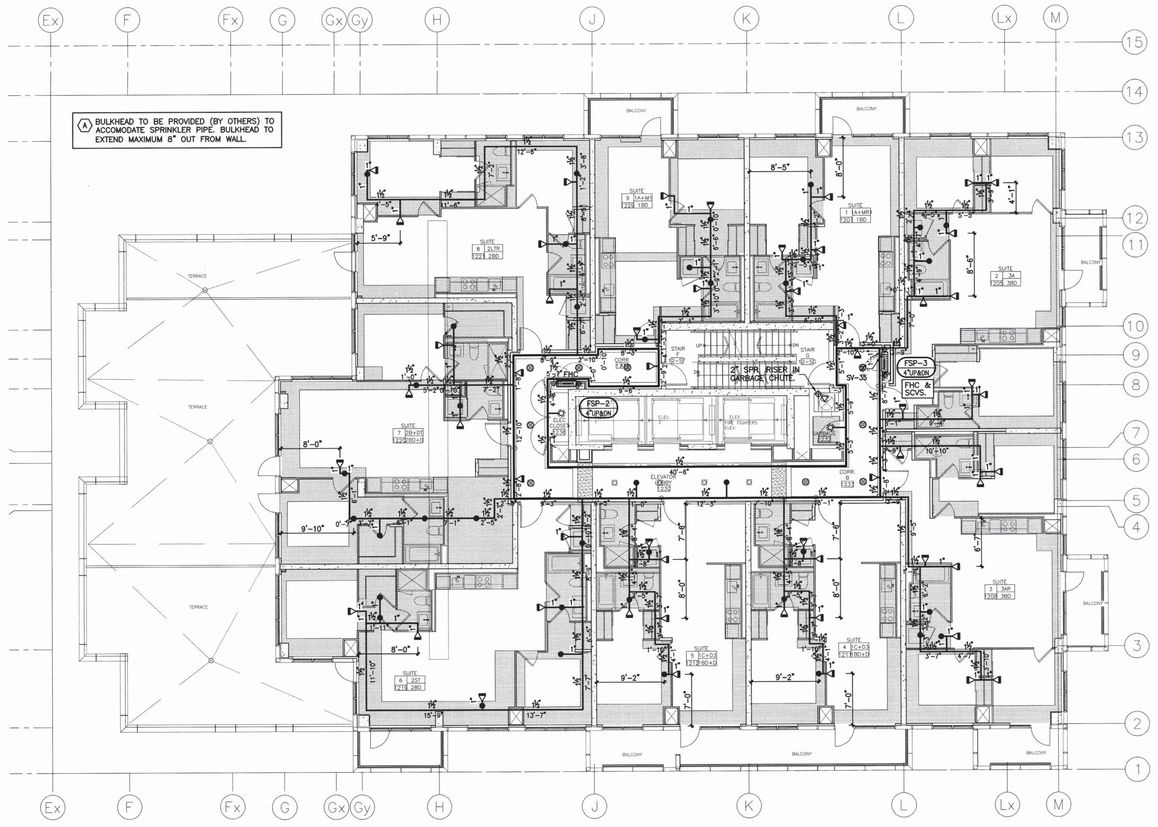
FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

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



13TH FLOOR
1:100



12TH FLOOR
1:100

REVISIONS

2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
3.	REVISED LAYOUT AS PER TEEPLE ARCHITECTS COMMENTS DATED IN JUN.06, 2015	JUN. 08 2015
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

NOTES

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-- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS WHERE REQUIRED.
-- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
-- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE)
-- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
-- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
-- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE).
-- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)

DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.

-- RN DENOTES RISER NIPPLE. DN DENOTES DOWN.
-- ALL SUPERVISED VALVES (FLOW (PRESSURE) SWITCHES AND LOW AIR PRESSURE SWITCHES) TO BE CONNECTED TO FIRE ALARM SYSTEM. (IF P.A.S. IS INSTALLED)
-- CONTRACTOR TO VISIT SITE TO DETERMINE EXACT LOCATION AND ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED 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 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	4
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	73
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	109
◁	1/2" 165°F STANDARD COVERAGE SIDEWALL (K=5.6) Q/R	1
FHC	FIRE HOSE RACK - 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	4

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

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

DATE JULY 2014
SCALE 1:100
DWN BY H.W.
ISSUED FOR REVISION NO. 5 D.Z

PROJECT NO. 14-10224
DWG NO. SP-15
OF 16

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

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 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 FIRE COMPARTMENT BY CEILINGS, WALLS, OR SOFFITS CONSISTING AS A MINIMUM,

(A) LATH AND PLASTER,
(B) GYPSUM BOARD NOT LESS THAN 9.5 MM (3/8 IN) THICK
(C) PLYWOOD NOT LESS THAT 13 MM (1/2 IN) THICK OR
(D) A SUSPENDED MEMBRANE CEILING WITH

(i) STEEL SUSPENSION GRID, AND
(ii) LAY-IN PANELS OR TILES 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 WAVED WHERE COMBUTIBLE SPRINKLER PIPING HAS BEEN TESTED IN CONFORMANCE WITH ULC/ORD-C199P-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 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.

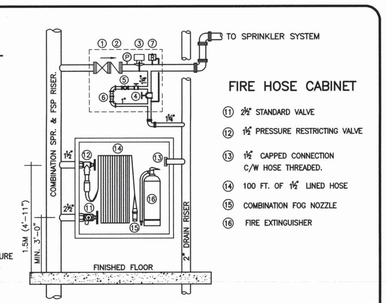
THE HEIGHT OF THE BULKHEAD NOT TO EXCEED 12" AS PER ARCHITECTURAL DRAWING.

SPRINKLER CONTROL VALVE STATION

1. STANDARD SHUT OFF VALVE
2. 2" CHECK VALVE
3. FLOW SWITCH
4. ¾" 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 INCREASES, A RELIEF VALVE SHALL BE NOT REQUIRED.

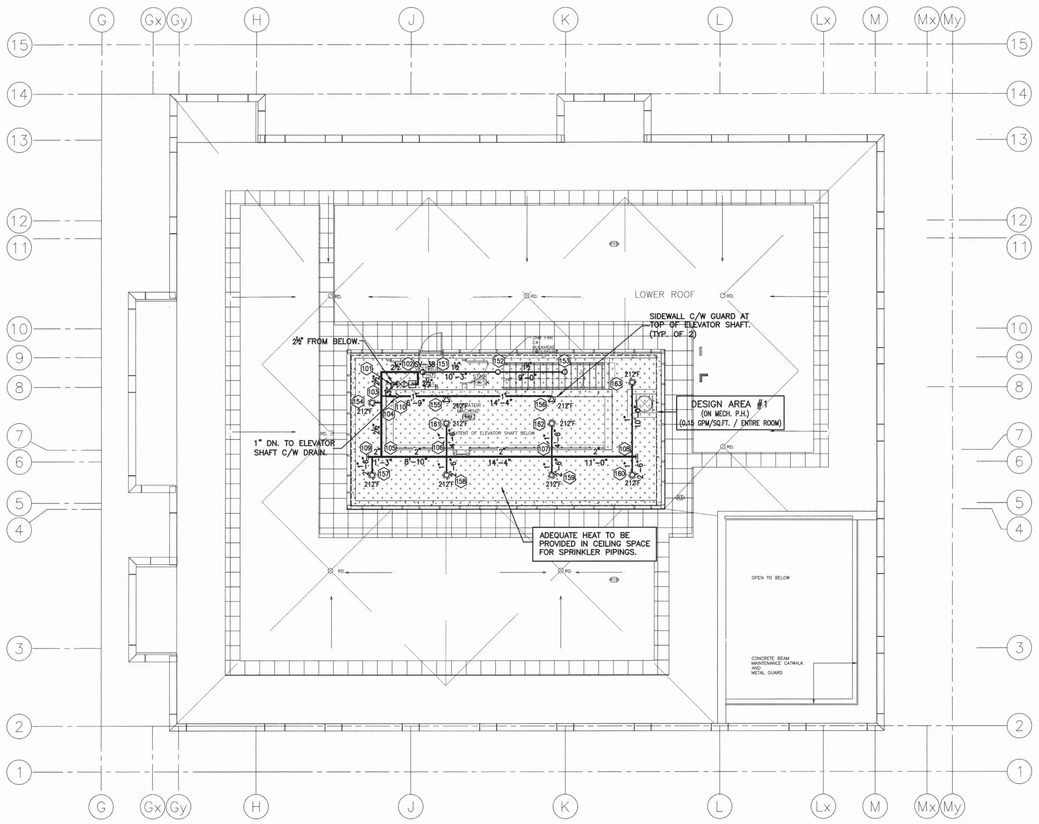
FLOW SWITCH & SHUT OFF VALVE OR PRV TO BE SUPERVISED AND CONNECTED TO FIRE ALARM SYSTEM.



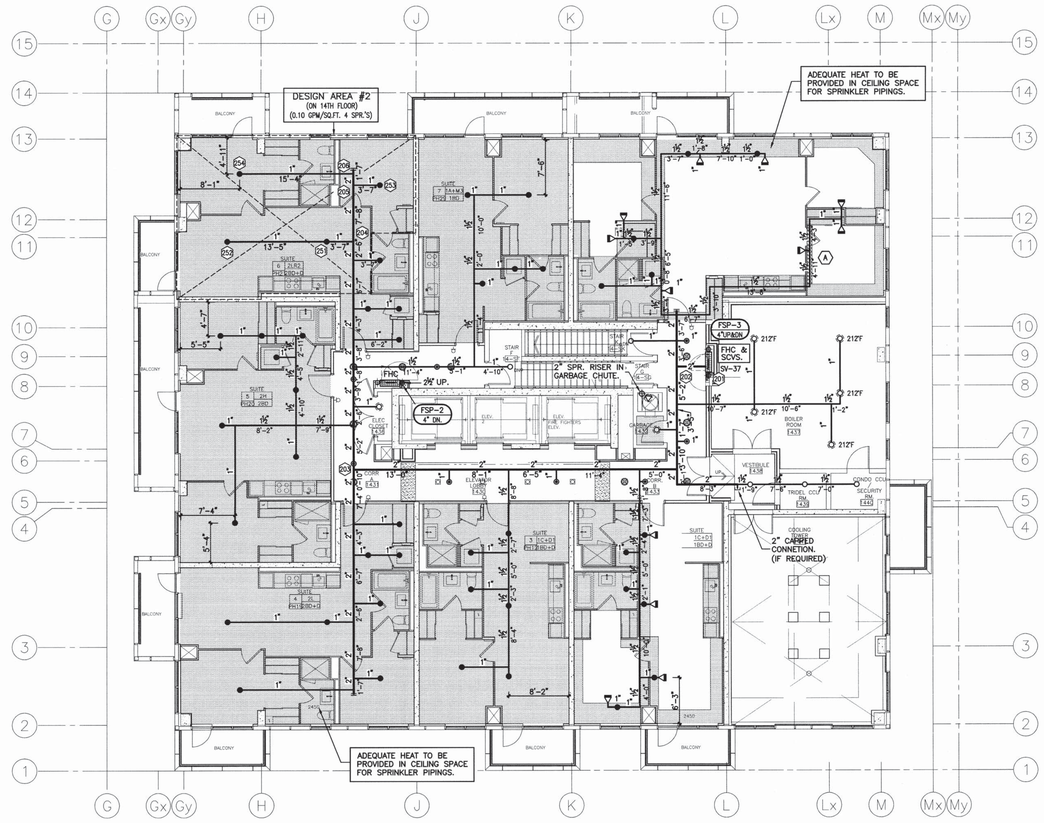
FIRE HOSE CABINET

11. 2½" STANDARD VALVE
12. 1½" PRESSURE RESTRICTING VALVE
13. 1½" CAPPED CONNECTION C/W HOSE THREADED.
14. 100 FT. OF 1½" LINED HOSE
15. COMBINATION FOG NOZZLE
16. FIRE EXTINGUISHER

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



MECH. PENTHOUSE
1:100



14TH FLOOR
1:100

REVISIONS

2.	RE-ISSUED FOR PERMIT.	AUG. 15 2014
5.	ISSUED FOR CONSTRUCTION.	OCT. 2 2015

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.
- DIMENSIONS TAKE PRECEDENT OVER SCALE.
- THE SPRINKLER SYSTEM IS TO BE INSTALLED AS PER N.F.P.A. STANDARD # 13 AND O.B.C. STANDARDS. (IF APPLICABLE).
- CONTRACTOR TO INCLUDE FOR OFFSETS IN BRANCH LINES AND MAINS WHERE REQUIRED.
- ALL MATERIALS TO BE U.L.C. LISTED AND APPROVED BY LOCAL AUTHORITIES.
- UNDERGROUND WATERMAIN TO BE INSTALLED ACCORDING TO LOCAL AUTHORITIES AND INSURANCE CO. STANDARDS. (IF APPLICABLE).
- INSTALL HIGH TEMPERATURE HEADS WHERE REQUIRED AS PER N.F.P.A. STANDARD # 13.
- ALL INTERIOR GRID BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (SCH.10 PIPE)
- ALL OTHER BRANCH LINE MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE (SCH.40 PIPE)
- ALL MAIN MEASUREMENTS ARE GIVEN AS CENTER LINE TO CENTER LINE DIMENSIONS. (THIN WALL PIPE)
- ◎ DENOTES DISTANCE IN INCHES FROM CENTER LINE OF PIPE TO UNDERSIDE OF CEILING.
- RN DENOTES RISER NIPPLE. DN DENOTES DOWN.
- ALL SUPERVISED VALVES,FLOW (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 ELEVATION OF MAINS (TO BE INSTALLED) AS INDICATED 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 GUARD

212°F ◯	1/2" 212°F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	8
◯	1/2" 155°F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	15
◉	1/2" 155°F STANDARD COVERAGE CONCEALED PENDENT (K=5.6) Q/R	8
212°F ◁	1/2" 212°F STANDARD COVERAGE UPRIGHT (K=5.6) Q/R	2
●	1/2" 155°F RESIDENTIAL CONCEALED PENDENT (K=4.9)	46
◁	1/2" 155°F RESIDENTIAL CONCEALED SIDEWALL (K=4.0)	12
◁	1/2" 165°F STANDARD COVERAGE SIDEWALL (K=5.6) Q/R	1
FHC	FIRE HOSE RACK - 100 FT OF 1½" LINED HOSE C/W COMBINATION FOG NOZZLE	2

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.

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DWG TITLE
14TH FL. & MECH. PENTHOUSE
SPRINKLER & STANDPIPE SYSTEM

DATE: JULY 2014
SCALE: 1:100
DWN BY: H.W.
ISSUED FOR REVISION NO. REV.-5

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

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