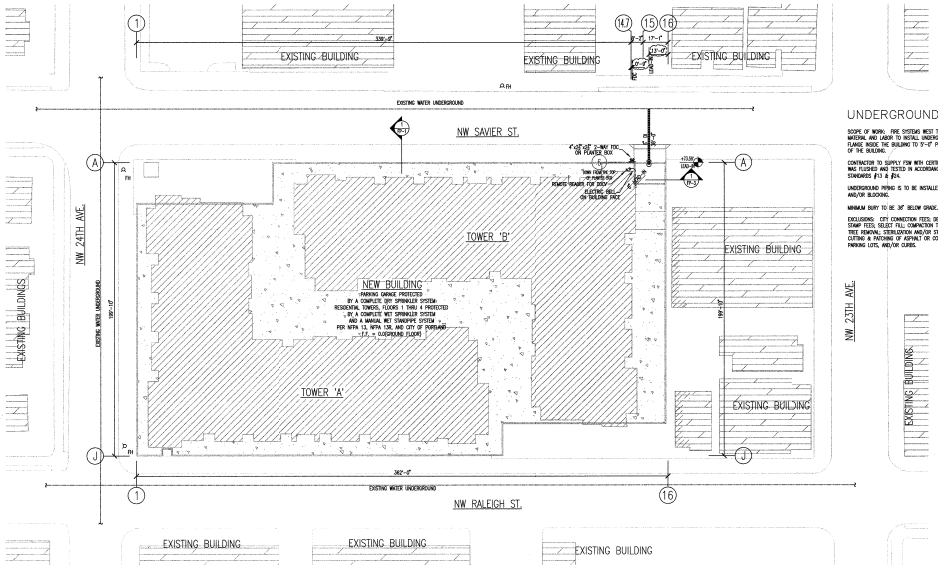


SITE PLAN

1"=30'-0"

UNDERGROUND NOTES:

SCOPE OF WORK: FIRE SYSTEMS WEST TO PROVIDE NECESSARY MATERIAL AND LABOR TO INSTALL UNDERGROUND PIPING FROM A FLANGE INSIDE THE BUILDING TO 5'-0" PAST THE OUTSIDE FACE OF THE BUILDING.

CONTRACTOR TO SUPPLY FSW WITH CERTIFICATE SHOWING PIPING WAS FLUSHED AND TESTED IN ACCORDANCE WITH NFPA STANDARDS #13 & #24.

UNDERGROUND PIPING IS TO BE INSTALLED WITH BEDDING AND/OR BLOCKING.

MINIMUM BURY TO BE 36" BELOW GRADE.

EXCLUSIONS: CITY CONNECTION FEES; DEVELOPMENT FEES; PE STAMP FEES; SELECT FILL COMPACTION TESTING; LANDSCAPING; TREE REMOVAL; STERILIZATION AND/OR STERILIZATION PERMITS; CUTTING & PATCHING OF ASPHALT OR CONCRETE SIDEWALKS, PARKING LOTS, AND/OR CURBS.

WATER FLOW DATA:

STATIC:	58 PSI (80% OF MAX STATIC)
RESIDUAL:	55 PSI (80% OF MAX STATIC MINUS DROP)
GPM FLOWING:	2029 GPM
DATE:	7/25/2002
LOCATION:	NW 23RD AVE SSL VAUGHN ST PORTLAND, OREGON
INFO FROM:	PORTLAND WATER BUREAU

GENERAL NOTES:

ALL MATERIAL AND EQUIPMENT TO BE NEW AND UNDERWRITERS APPROVED.

EARTHQUAKE BRACING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA PAMPHLET #13.

PIPE HANGERS AND METHOD OF HANGING TO BE IN ACCORDANCE WITH NFPA PAMPHLET #13.

PIPING SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET #13.

JOINING OF PIPE AND FITTINGS, THREADED AND WELDED, SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET #13.

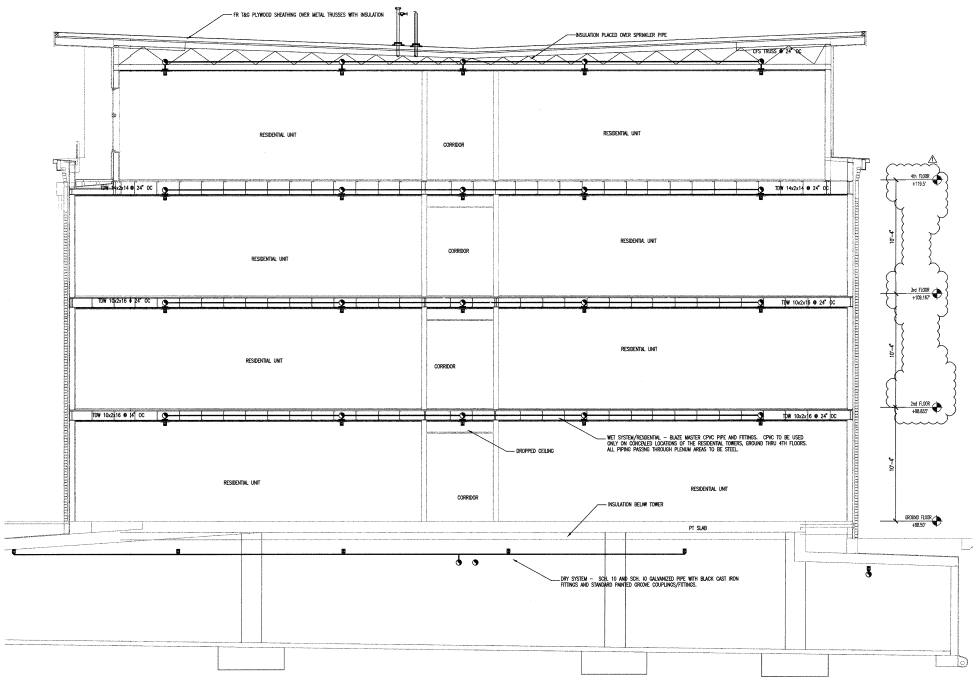
OWNER TO PROVIDE ADEQUATE HEAT TO PREVENT WATER IN PIPES FROM FREEZING IN AREAS PROTECTED BY A WET PIPE SPRINKLER SYSTEM. ALL RISER ROOMS WILL NEED TO BE HEATED THOROUGHLY.

STRUCTURAL ADEQUACY OF THE BUILDING TO SUPPORT THE SPRINKLER PIPING IS THE RESPONSIBILITY OF THE OWNER AND/OR HIS STRUCTURAL REPRESENTATIVE.

ALL WIRING BY OTHERS.

ALL SPRINKLER LINE PENETRATION THROUGH ANY STRUCTURAL MEMBER IS SHOWN AS FOLLOWS:

ALL PAINTING OF PIPE OR HANGERS BY OTHERS.



SECTION

1/4"=1'-0"

Fire Systems West

600 SE Maritime Avenue, suite 300
Vancouver, WA 98661
(360) 693-9906 fax: (503) 289-2

WA CONTR LIC: FIRE-SW-140-81 • OR CONTR LIC: 49732 • FED TAX ID: 91-1395969

SPRINKLER SYMBOL DESCRIPTION								
SYMBOL	TYPE	MFG	MODEL	SIZE	TEMP	FINISH	CANOPY	TOTAL
TOTAL SPRINKLERS SHOWN ON THIS SHEET								

HANGER LEGEND			
A	"J" HOOK	L	"C" ROD
B	SHARP SUPER SCREW	M	MACHINE THREADED ROD
C	"C" CLAMP	N	TOGGLE NUT
D	TOP BEAM CLAMP	P	POWER DRIVEN STUD
E	SIDE BRACER	R	REDSE ANCHOR
F	FLUSH SHELL	T	
G	CEILING FLANGE	U	
H	SIDE BEAM BRACKET	W	
J	"J" BOLT	X	
K	SHORT CLIP	Y	

APPROVALS REQUIRED	DISTRIBUTION	
OWNER/ARCHITECT	OWNER/ARCHITECT	3
CITY OF PORTLAND	CITY OF PORTLAND	2
		1
	FSW	1
	TOTAL	6

GENERAL NOTES

1. ALL MATERIAL AND EQUIPMENT TO BE NEW AND UNDERWRITERS APPROVED.
2. PIPING OVERHEADS ARE COVER TO COVER EXCEPT WHERE A DIMENSIONED SHOWS THRUST (1-45) WHICH ARE END TO END.
3. EARTHQUAKE BRACING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
4. PIPE HANGERS AND METHOD OF HANGING TO BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
5. PIPING SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
6. JOINING OF PIPE AND FITTINGS, THREADED AND WELDED SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
7. OWNER TO PROVIDE ADEQUATE HEAT TO PREVENT WATER IN PIPES FROM FREEZING IN AREAS PROTECTED BY A WET PIPE SPRINKLER SYSTEM.
8. STRUCTURAL ADEQUACY OF THE BUILDING TO SUPPORT THE SPRINKLER PIPING IS THE RESPONSIBILITY OF THE OWNER AND/OR HIS STRUCTURAL REPRESENTATIVE.

DESIGN CRITERIA AND NOTES

1. BUILDING AREA-RESIDENTIAL UNITS.
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD.
   B. DENSITY: .05 GPM PER SQ.FT. AND/OR MINIMUM FLOW RATE PER INDIVIDUAL SPRINKLER HEAD LISTING SHALL INCLUDE ALL SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF FOUR SPRINKLERS, THAT REQUIRES THE GREATEST HYDRAULIC DEMAND.
   C. AREA PER SPRINKLER: PER HEAD LISTING.
   D. INSIDE HOSE ALLOWANCE: 100 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.
   F. SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS WHERE THE AREA DOES NOT EXCEED 55 SQ.FT.
   G. SPRINKLERS SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITHIN THE DWELLING UNITS WHERE THE SPACES DOES NOT EXCEED 24 SQ.FT. WITH THE LEAST DIMENSION NOT EXCEEDING 3 FEET.
2. BUILDING AREA-COMMON AREAS.
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD.
   B. DENSITY: .20 GPM PER SQ.FT. OVER A 1500 SQ.FT. HYDRAULICALLY MOST REMOTE DESIGN AREA OR 5 HEADS IF THE AREA IS A CORRIDOR PER NFPA #13, 11.2.3.3.7.
   C. AREA PER SPRINKLER: 225 SQ.FT. MAXIMUM, OR PER HEAD LISTING.
   D. INSIDE HOSE ALLOWANCE: 100 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.
3. BUILDING AREA-PARKING GARAGES, MECHANICAL AND ELECTRICAL ROOMS.
   A. OCCUPANCY CLASSIFICATION: ORDINARY GROUP I.
   B. DENSITY: .20 GPM PER SQ.FT. OVER 1500 SQ.FT. HYDRAULICALLY MOST REMOTE DESIGN AREA PER NFPA 13. REMOTE AREA TO BE INCREASED BY 30% TO 1950 SQ.FT. FOR AREAS COVERED BY DRY TYPE SYSTEM.
   C. AREA PER SPRINKLER: 130 SQ.FT. MAXIMUM UNLESS EXTENDED COVERAGE HEADS ARE USED.
   D. INSIDE HOSE ALLOWANCE: 250 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.
4. BUILDING AREA-MANUAL WET STANDPIPE SYSTEM
   A. DESIGNED TO DELIVER 500 GPM @ 100 PSI AT ROOF OF REMOTE STANDPIPE AND AN ADDITIONAL 250 GPM AT THE CONNECTION OF THE SECOND STANDPIPE.
   B. FIRE DEPARTMENT CONNECTION TO PROVIDE REQUIRED FLOW & PRESSURE.

NOTES:

1. DRY MAINS AND LINES SHALL BE PITCHED PER NFPA 13 REQUIREMENTS AS FOLLOWS: BRANCH LINES SHALL PITCH AT LEAST 1/2 INCH PER 10 FT. MAINS SHALL PITCH AT LEAST 1/4 INCH PER 10 FT.
2. PIPE AND FITTING TYPES ARE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE PLAN.
   A. DRY SYSTEM - SCH. 10 AND SCH. 40 GALVANIZED PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVE COUPLINGS/FITTINGS.
   B. STANDPIPE - SCH. 10, AND DRYA FLOW BLACK STEEL PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVED COUPLINGS/FITTINGS. STEEL PIPE TO BE USED IN ALL EXPOSED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOORS.
   C. WET SYSTEM/RESIDENTIAL - BLAZE MASTER CPVC PIPE AND FITTINGS. CPVC TO BE USED ONLY ON CONCEALED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOORS.
   D. ALL PIPING PASSING THROUGH PLENUM AREAS TO BE STEEL.
3. PER MMC BELL (DE MARSHAL FOR PORTLAND) THE PARKING GARAGE SHALL BE DESIGNED PER NFPA 13. THE RESIDENTIAL LEVELS SHALL BE DESIGNED PER NFPA 13R.

REVISIONS

NO.	DESCRIPTION	DATE
1	PER ARCHITECT REVIEW COMMENTS	10-14-05
	AS BUILT	

CONTRACT NAME:

THE VAUX
1600 N.W. 24th AVENUE
PORTLAND, OREGON 97210
Site Superintendent: BRET BANNAN
Job Site Phone: (503) 246-4004
Job Site Fax: (503) 243-6116

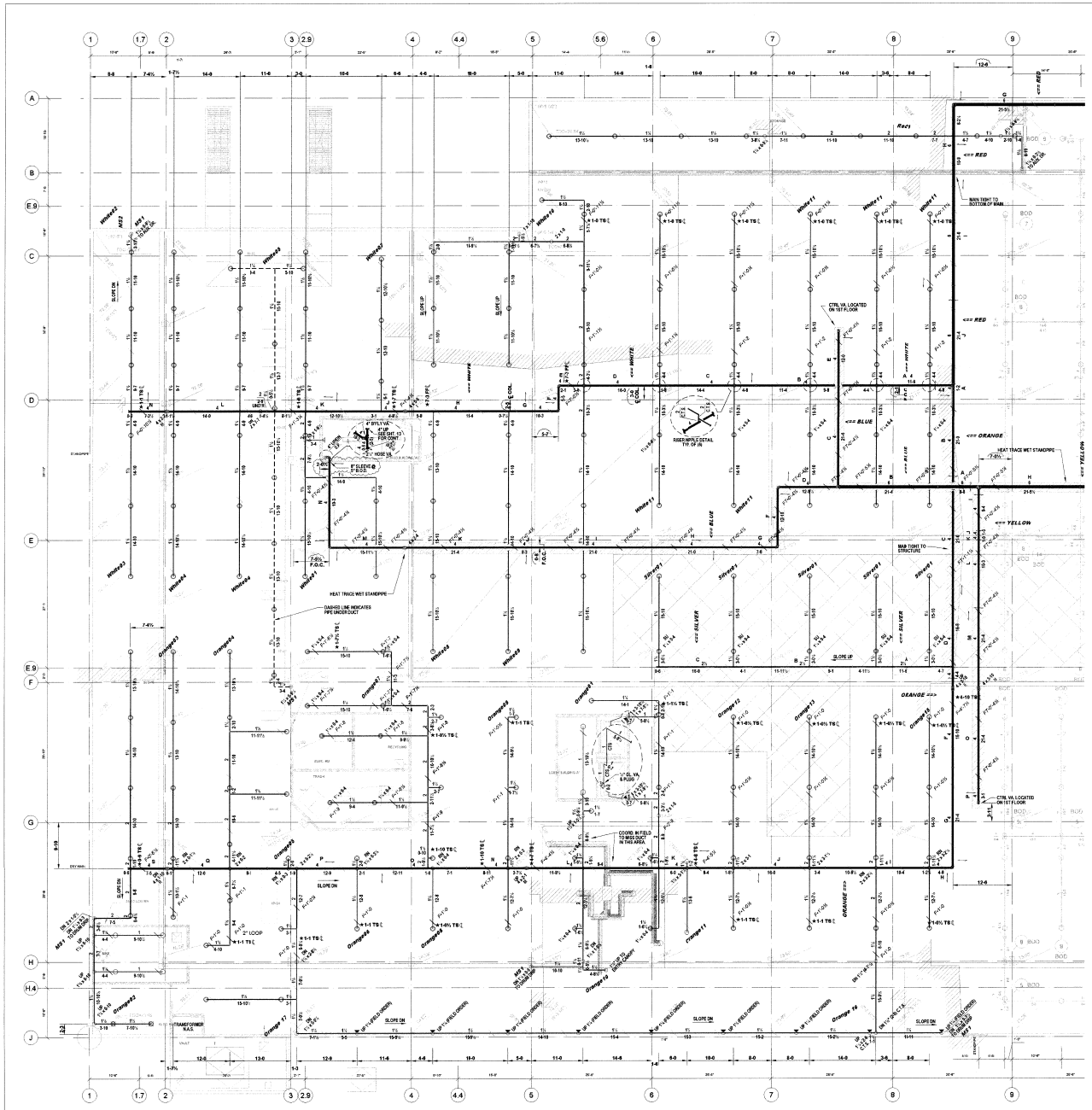
CONTRACT WITH:

TRAMMELL CROW RESIDENTIAL
630 NW 10TH AVE.
PORTLAND, OR 97209
Project Manager: DAVID HERR
Phone: 503-241-0337
Fax: 503-241-3462

DWG. TITLE:

SITE PLAN
SECTION

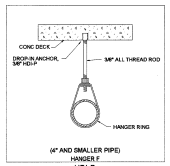
DESIGNER	DATE	JOB NO.	SHEET
JEFF HALSTEAD	8/16/05	1-16-2038	FP-1 OF 13



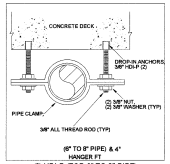
WEST BASEMENT FLOOR PLAN

N

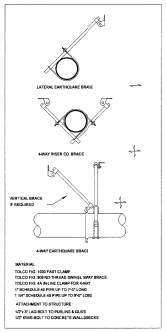
F.F. = VARIES ACTUAL = VARIES 1/8"=1'-0"



(4" AND SMALLER PIPE)
HANGER F
HDI-P

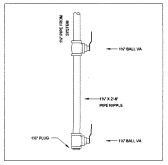


(6" TO 8" PIPE) & 4"
HANGER FT
(2) HDI-P (FOR 6" TO 8" PIPE)

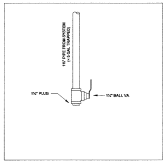


MATERIAL
TOLCO NO. 1000 FAST CLAMP
TOLCO NO. 800/801 HANGER SERVICE, 1MAY BRACE
TOLCO NO. 4A 1IN.ONE CLAMP FOR 4WAY
TOLCO NO. 1000 FAST CLAMP FOR 2WAY
1 1/8" MODULAR 4 HOPER UP TO 8"0" LONG
KIT ATTACHMENT TO STRUCTURE
10TH 0F LAG BOLT TO PURLINS & BLKS
10" BORN BOLT TO CONCRETE WALL,SEECAD

EARTHQUAKE BRACING



DRUM DRIP ASSEMBLY



AUXILLARY DRAIN

LISTING NOTES:

-INDICATES A SPECIFICALLY LISTED HANGER OF TYPE AND PRE-CUT BLACK HANGER ROD AS INDICATED

-INDICATES A RANDOM HANGER. PLATED HANGER ROD TO BE CUT TO SUIT.

-ALL PIPE LENGTHS SHOWN ON THIS SHEET INDICATE CUT LENGTHS OF PIPE.

Fire Systems West
600 SE Maritime Avenue, suite 300
Vancouver, WA 98661
(360) 693-9906 fax: (503) 289-2208

WA CCB#: LIC: FIRE 0004 14B-97 | FIRE FIRE ID: B-12189B

SPRINKLER SYMBOL DESCRIPTION

SYMBOL	TYPE	MFG	MODEL	SIZE	TEMP	FINISH	LENGTH	TOTAL
	ES SSU	TYCO	EC-1	1 / 1.25	155°	BRASS	NA	272
	EC SSU	TYCO	EC-1	1 / 1.25	286°	BRASS	NA	2
	DR SSU	TYCO	TY-FRS	1 / 5.6K	155°	BRASS	NA	8
	SR-NSW	TYCO	TY-FRS	1 / 5.6K	155°	BRASS	NA	1
	SR-NSW	TYCO	TY-FRS	1 / 5.6K	286°	BRASS	NA	2
	SCW-SW	TYCO	SW-25	1 / 1.25	155°	BRASS	NA	11
TOTAL SPRINKLERS SHOWN ON THIS SHEET								292

HANGER LEGEND

A	1" FASCIA	L	1" ROD
B	SAMPT SUPER SCREW	M	MACHINE THREADED ROD
C	1/2" U CLAMP	N	TOGGLE BAR
D	1/2" BEAM CLAMP	P	POWER DRIVEN STUD
E	SIDE WINDER	Q	HDI-P
F	PLUSH SHELL	R	RIVER BOLT
G	CEILING FLANGE	U	
H	SIDE BEAM BRACKET	W	
J	1/2" BOLT	X	
K	SHEAR CLIP	Y	

APPROVALS REQUIRED	DISTRIBUTION	
OWNER/ARCHITECT	OWNER/ARCHITECT	3
CITY OF PORTLAND	CITY OF PORTLAND	3
	FSW	1
	TOTAL	6

GENERAL NOTES

1. ALL MATERIAL AND EQUIPMENT TO BE NEW AND UNDERWITERS APPROVED
2. ALL SPRINKLER HEADS ARE CENTERED TO CENTER EVERY TILE OR EVERY OTHER TILE IF THE TILE IS 24 IN OR TO SUIT
3. EARTHQUAKE BRACING SHALL BE PRECISE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
4. PIPE HANGERS AND METHOD OF HANGING TO BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
5. PIPING SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
6. ALL PIPE SUPPORTS, HANGERS, THREADED RODS, ETC. SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
7. DAMPER TO PROVIDE ADEQUATE HEAT TO PREVENT WATER FREEZING FROM FREEZING IN AREAS PROTECTED BY A WET PIPE SPRINKLER SYSTEM
8. STRUCTURAL ADEQUACY OF THE BUILDING TO SUPPORT THE SPRINKLER PIPING IS THE RESPONSIBILITY OF THE OWNER AND/OR ITS STRUCTURAL REPRESENTATIVE.

DESIGN CRITERIA AND NOTES

1. BUILDING AREA RESIDENTIAL UNITS
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD
   B. DENSITY: 30 GPM PER SQ.FT. OVER A 1500 SQ.FT. HYDRAULICALLY MOST REMOTE DESIGN AREA OR 0.14GDS/ SF THE AREA (0.4 CDR REQ'D PER NFPA 13, 11.2.3.3.7
   C. AREA PER SPRINKLER: 225 SQ.FT. MAXIMUM, OR PER HEAD LISTING
   D. INSIDE HOSE ALLOWANCE: 100 GPM
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM
   F. SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS WHERE THE AREA DOES NOT EXCEED 55 SQ.FT.
   G. SPRINKLERS SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITH THE ENCLOSING WALLS WHERE THE SPACES DOES NOT EXCEED 24 SQ.FT. WITH THE LEAST DIMENSION NOT EXCEEDING 3 FEET
2. BUILDING AREA COMMON AREAS
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD
   B. DENSITY: 15 GPM PER SQ.FT. OVER A 1500 SQ.FT. HYDRAULICALLY MOST REMOTE DESIGN AREA OR 0.14GDS/ SF THE AREA (0.4 CDR REQ'D PER NFPA 13, 11.2.3.3.7
   C. AREA PER SPRINKLER: 130 SQ.FT. MAXIMUM UNLESS EXTENDED COVERAGE HEADS ARE USED
   D. INSIDE HOSE ALLOWANCE: 250 GPM
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM
3. BUILDING AREA MAIN, INC. WET STANDPIPE SYSTEM
   A. DESIGNED TO DELIVER 500 GPM @ 100 PSI AT ROOF OF REMOTE STANDPIPE AND AN INLET FLOW OF 100 GPM AT THE CONNECTION OF THE SECOND STANDPIPE
   B. FIRE DEPARTMENT CONNECTION TO PROVIDE REQUIRED FLOW & PRESSURE.

NOTES:

1. DRY MAINS AND LINES SHALL BE PITCHED PER NFPA 13 REQUIREMENTS AS FOLLOWS
   BRANCH LINES SHALL PITCH 1/4" LEAST 120 INCH PER 12 FT.
   MAINS SHALL PITCH AT LEAST 1IN INCH PER 12 FT.
2. PIPE AND FITTING TYPES ARE AS FOLLOWS UNLESS NOTED OTHERWISE ON THIS PLAN
   A. DRY SYSTEM - SCH. 10 AND SCH. 40 GALVANIZED PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVE COUPLINGS/FITTINGS
   B. STANDPIPE - SCH. XL AND CPVM FLOW BLACK STEEL PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVED COUPLINGS/FITTINGS. STEEL PIPE TO BE USED IN ALL EXPOSED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOOR
   C. WET SYSTEM RESIDENTIAL - BLAZE MASTER CPVC PIPE AND FITTINGS. CPVC TO BE USED ONLY ON CONCEALED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOOR
   D. ALL PIPING PASSING THROUGH FLOOR AREAS TO BE STEEL.
3. PER MING BELL FIRE MARSHAL FOR PORTLAND THE PARKING GARAGE SHALL BE DESIGNED PER NFPA 13. THE RESIDENTIAL LEVELS SHALL BE DESIGNED PER NFPA 13R

8'-0" CLEARANCE MINIMUM ALL OTHER AREAS TO MINIMUM 4'-7-0" CLEARANCE

REVISIONS

1	AS PER SURVEY AND LISTING	11-14-06

AS BUILT

NO.	DESCRIPTION	DATE

CONTRACT NAME

THE VAUX
1600 N.W. 24th AVENUE
PORTLAND, OREGON 97210
Site Superintendent: BRET BANKAN
Job Site Phone: (503) 248-4004
Job Site Fax: (503) 243-6116

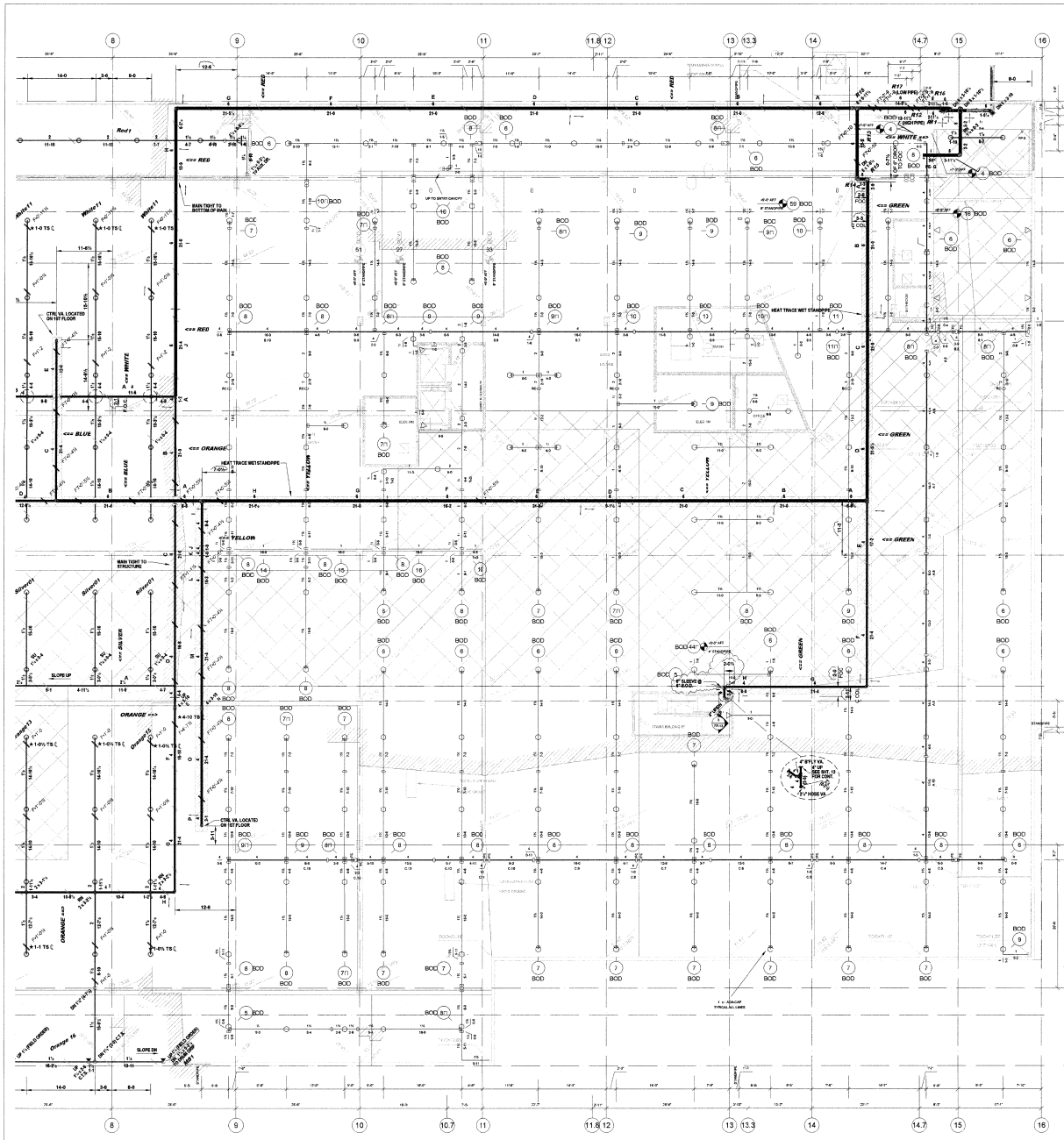
CONTRACT DATA

TRAMMELL CROW RESIDENTIAL
630 NW 10TH AVE.
PORTLAND, OR 97209
Project Manager: DAVID HERR
Phone: 503-241-0937
Fax: 503-241-0492

DWG. TITLE

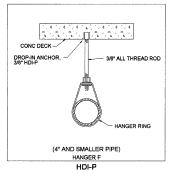
WEST BASEMENT FLOOR PLAN

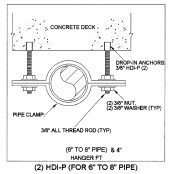
DESIGNER	DATE	JOB NO.	SHEET
JEFF WILSTEAD	9/19/06	1-15-2006	FP-2 OF 15



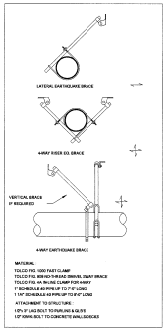
EAST BASEMENT FLOOR PLAN

F.F. = VARIES ACTUAL = VARIES 1/8"=1'-0"





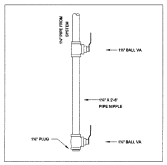
(2) HDI-P (FOR 6" TO 8" PIPE)



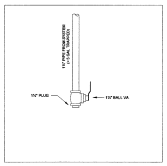
MATERIAL
TOLCO PIG. 1000 FAST CLAMP
TOLCO PIG. 88 NO-9 AISC BRACE, 2WAY BRACE
TOLCO PIG. 4-WAY BRACE, 4WAY FOR 4-WAY
1 1/4" SCHEDULE 40 PIPE UP TO 8" LONG
1 1/4" SCHEDULE 40 PIPE UP TO 8" LONG

ATTACHMENT TO STRUCTURE:
1/2"x 3" LAG BOLT TO PURLINS & 6X TIT
1/2" SWIN BOLT TO CONCRETE WALL/SIDECAD

EARTHQUAKE BRACING



DRUM DRIP ASSEMBLY



AUXILLARY DRAIN

LISTING NOTES:

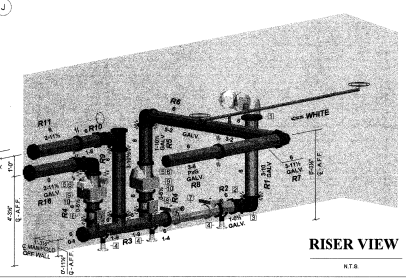
-INDICATES A SPECIFICALLY LISTED HANGER OF TYPE AND PRE-CUT BLACK HANGER ROD AS INDICATED

-INDICATES A RANDOM HANGER, PLATED HANGER ROD TO BE CUT TO SUIT.

-ALL PIPE LENGTHS SHOWN ON THIS SHEET INDICATE CUT LENGTHS OF PIPE

RISER LEGEND

Quantity	Size	Description	Manufacturer	Item #
1	8 x 6	Grooved Reducer Coupling	Generic	1
1	6	FireLock(TM) 45° Elbow - Galvanized	Generic	2
1	6	FireLock(TM) 90° Elbow - Galvanized	Generic	3
3	2	Pipe Stand	Generic	4
2	½	Potter PS-40-2 High / Low Pressure Alarm Switch	Potter Electric	5
2	½	Potter PS-10-2 Pressure Alarm Switch	Potter Electric	6
1	6	Model 350ADASCFMBOVC w/ BFY Valves and Built in Tamper Switches	Wilkins / Zurn	7
2	6	0100 Butterfly Valve w/ Internal Tamper Switch	Kennedy Valves	8
2	6	DPV-1 , F-G Dry Pipe Valve w/ Galv. Trim	Generic	9
2	6	Firelock Grooved Flange Adapter #744	Victaulic	10



RISER VIEW

N.T.S.

Fire Systems West
800 SE Maritime Avenue, suite 300
Vancouver, WA 98661
(360) 693-9906 fax: (503) 289-2208

WA CONTR LIC: FIRESWM*940JP

L FIS TAX ID #: 91-0988

SPRINKLER SYMBOL DESCRIPTION

SYMBOL	TYPE	MFG	MODEL	SIZE	TEMP	FINISH	CANOPY	TOTAL
	EC SSL	TYCO	SS-11	11-1/2"	155°	BRASS	WA	151
	EC SSL	TYCO	SS-11	11-1/2"	286°	BRASS	WA	2
	SR SSU	TYCO	TY-FRB	1 5/8"	155°	BRASS	WA	6
	SR UPR	TYCO	TY-FRB	1 5/8"	155°	BRASS	WA	1
	SR UPR	TYCO	TY-FRB	1 5/8"	286°	BRASS	WA	2
	EC SN Sm	TYCO	DN-70	11-1/2"	155°	BRASS	WA	4
TOTAL SPRINKLERS SHOWN ON THIS SHEET								365

HANGER LEGEND

A	"U" HOOK	L	"T" ROD
B	SHARP SUPER SERGA	M	MACHINE THREADED ROD
C	"T" CLAMP	N	TOGGLE BOLT
D	TOP BEAM CLAMP	P	POWER DRIVEN PIN
E	SIDE WINDER	Q	U-BOLT
F	FLUSH SHIELD	R	PWR BOLT
G	SIDE MNT FLANGE	U	
H	SIDE BEAM BRACKET	W	
J	"J" BOLT	X	
K	SHORT U-CLIP	Y	

APPROVALS REQUIRED	DISTRIBUTION	
SHAREDIMARKETCO	SHAREDIMARKETCO	3
CITY OF PORTLAND	CITY OF PORTLAND	3
	FSW	1
	TOTAL	6

GENERAL NOTES

1. ALL MATERIAL AND EQUIPMENT TO BE NEW AND UNDAMAGED AND APPROVED.
2. ALL PIPE SHALL BE NEW STEEL PIPE, SCHEDULE 40 EXCEPT WHERE EMBOSSED WALL THICKNESS AS SHOWN ARE REQ'D TO BE.
3. EARTHQUAKE BRACING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
4. PIPE HANGERS AND METHOD OF HANGING TO BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
5. PIPING SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
6. JOINING OF PIPE AND FITTINGS, THREADED AND AND SED SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
7. OWNER TO PROVIDE ADEQUATE HEAT TO PREVENT WATER IN FROZEN PIPE. FREEZING IS AND RESTRICTED BY A WET FIRE SPRINKLER SYSTEM.
8. STRUCTURAL ADEQUACY OF THE BUILDING TO SUPPORT THE SPRINKLER SYSTEM IS THE RESPONSIBILITY OF THE OWNER AND/OR ITS REPLACTIVAL REPRESENTATIVE

DESIGN CRITERIA AND NOTES

1. BUILDING AREA RESIDENTIAL UNITS
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD
   B. DENSITY: .09 GPM PER SQ FT. AREOR MINIMUM FLOOR RATE PER INDIVIDUAL SPRINKLER HEAD LISTING SHALL INCLUDE ALL SPRINKLERS WITHIN A COMPARTMENT UP TO A MAXIMUM OF 1500 SPRINKLERS THAT REQUIRES THE GREATEST HYDRAULIC DEMAND
   C. AREA PER SPRINKLER: PER HEAD LISTING
   D. INSIDE HOSE ALLOWANCE: 100 GPM
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM
   F. UNOBSTRUCTED SHALL NOT BE REQUIRED IN BATHROOMS WHERE THE AREA DOES NOT EXCEED 55 SQ FT.
   G. SPRINKLERS SHALL NOT BE REQUIRED IN CLOSETS LINEN CLOSETS, AND PANTRIES WITHIN THE DWELLING UNITS WHERE THE SPACES DOES NOT EXCEED 24 SQ FT. WITH THE LEAST DIMENSION NOT EXCEEDING 3 FEET
2. BUILDING AREA-COMMON AREAS
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD
   B. DENSITY: .15 GPM PER SQ FT. OVER A 1500 SQ FT. HYDRAULICALLY MOST REMOTE DESIGN AREA OR 5 HEADS IF THE AREA IS A CORRIDOR PER NFPA NO. 11 2.3.3.1
   C. AREA PER SPRINKLER: 225 SQ FT. MAXIMUM, OR PER HEAD LISTING
   D. INSIDE HOSE ALLOWANCE: 100 GPM
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM
3. BUILDING AREA-PARKING GARAGES, MECHANICAL AND ELECTRICAL ROOMS
   A. OCCUPANCY CLASSIFICATION: ORDINARY GROUP I
   B. DENSITY: .15 GPM PER SQ FT. OVER A 1500 SQ FT. HYDRAULICALLY MOST REMOTE DESIGN AREA PER NFPA 13, ASMETIL AREA TO BE INCREASED BY 30% TO 1950 SQ FT. FOR AREAS COVERED BY DRY TYPE SYSTEM
   C. AREA PER SPRINKLER: 130 SQ FT. MAXIMUM, UNLESS EXTENDED COVERAGE HEADS ARE USED
   D. INSIDE HOSE ALLOWANCE: 250 GPM
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM
4. BUILDING AREA-MANUAL WET STANDPIPE SYSTEM
   A. DESIGNED TO DELIVER 500 GPM @ 65 PSI AT ROOF OF REMOTE STANDPIPE AND AN ADDITIONAL 250 GPM AT THE CONNECTION OF THE SECOND STANDPIPE
   B. FIRE DEPARTMENT CONNECTION TO PROVIDE REQUIRED FLOW & PRESSURE

NOTES:

1. DRY PIPING AND LINES SHALL BE PITCHED PER NFPA 13 REQUIREMENTS AS FOLLOWS
   BRANCH LINES SHALL PITCH AT LEAST 1/2 INCH PER 10 FT
   MAINS SHALL PITCH AT LEAST 1/4 INCH PER 10 FT
2. PIPE AND FITTING TYPES ARE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE PLAN
   A. DRY SYSTEM - SCH. 10 AND SCH 40 GALVANIZED PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVE COUPLINGS/FITTINGS
   B. STANDPIPE - SCH. 10, AND DRY PIPE FLOW BLACK STEEL PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVED COUPLINGS/FITTINGS. STEEL PIPE TO BE USED IN ALL EXPOSED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOORS
   C. WET SYSTEM RESIDENTIAL - BLACK WATER CPVC PIPE AND FITTINGS. CPVC TOBE USED ONLY ON CONCEALED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOORS
   D. ALL PIPING EXPOSED TO FROST IN CLIMAX AREA TO BE STEEL
3. PER WAC 351, FIRE MARSHAL FOR PORTLAND THE PARKING GARAGE SHALL BE DESIGNED PER NFPA 13. THE RESIDENTIAL LEVELS SHALL BE DESIGNED PER NFPA 13R.

REVISIONS

AS BUILT

NO.	DESCRIPTION	DATE
3	PER RISER & VERTICAL STANDPIPE LISTING	12-0-99
2	AS PER SURVEY AND LISTING	11-14-98
1	PER SURVEY AND FAB	9-29-98

CONTACT NAME

THE VAUX
1600 N.W. 24th AVENUE
PORTLAND, OREGON 97210
Site Superintendent: BRET SARRAN
Job Site Phone: (503) 248-4064
Job Site Fax: (503) 243-9118

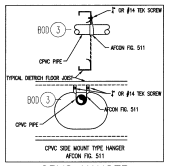
CONTACT NAME

TRAMMELL CROW RESIDENTIAL
630 NW 10TH AVE.
PORTLAND, OR 97209
Project Manager: DAVID HERR
Phone: 503-241-5337
Fax: 503-241-3482

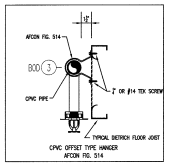
DWG. TITLE

WEST BASEMENT FLOOR PLAN

DESIGNER	DATE	JOB NO.	SHEET
JEFF VALSTEAD	3/10/98	1-10-3298	FP-4 OF 13



CPVC HANGER



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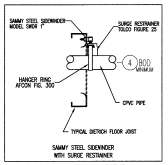

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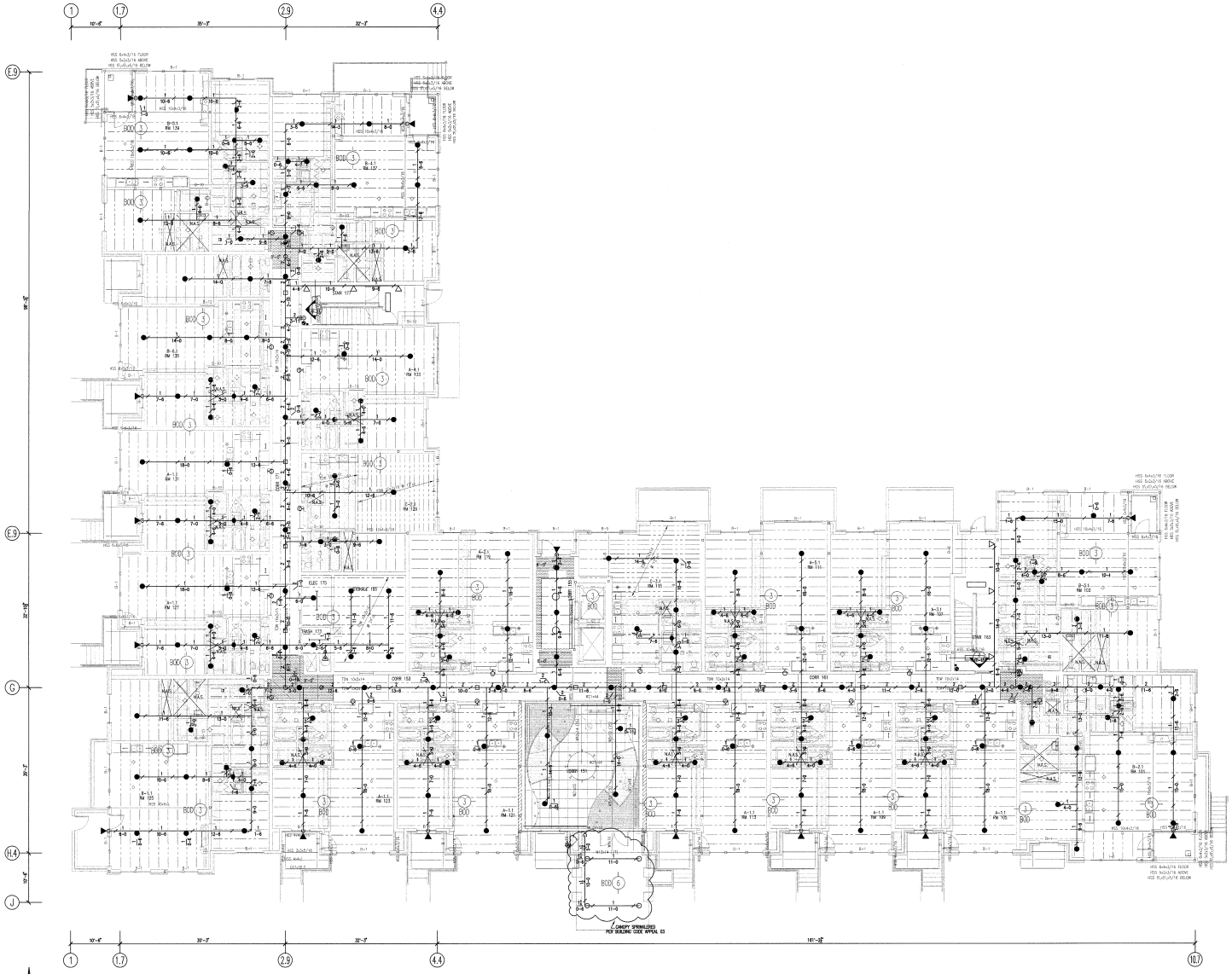


Fire Systems West

600 SE Maritime Avenue, suite 300
Vancouver, WA 98661
(360) 693-9906 fax: (503) 289-2208

WA CONTR LIC: FRC-SW-140-01 • OR CONTR LIC: 40732 • FED TAX ID: 91-1318809

SPRINKLER SYMBOL DESCRIPTION								
SYMBOL	TYPE	MFG	MODEL	SIZE	TEMP	FINISH	CANOPY	TOTAL
	RES. SSP	TYCO	LFII	1/4-8K	155F	WHITE	WHITE	174
	RES. SSP	TYCO	LFII	1/4-8K	175F	WHITE	WHITE	19
	RES. HDM	TYCO	LFII	1/5-8K	155F	WHITE	WHITE	6
	DRY HDM	TYCO	DS-1	1/5-8K	155F	BRASS	CHROME	14
	HOAD SP OTHERS							1
	QR SSU	TYCO	TY-FRB	1/5-8K	155F	BRASS	N/A	4
TOTAL SPRINKLERS SHOWN ON THIS SHEET								218

HANGER LEGEND			
A	"J" HOOK	L	"C" ROD
B	SAMMY SUPER SCREW	M	MACHINE THREADED ROD
C	"J" CLAMP	N	TOGGLE BOLT
D	TOP BEAM CLAMP	P	POWER DRIVEN STUD
E	SIDE WINGER	R	RIGIDE ANCHOR
F	FLUSH SHELL	T	
G	CEILING FLANGE	S	
H	SIDE BEAM BRACKET	W	
J	"J" BOLT	X	
K	SHORT SLIP	Y	

APPROVALS REQUIRED	DISTRIBUTION	
OWNER/ARCHITECT	OWNER/ARCHITECT	3
CITY OF PORTLAND	CITY OF PORTLAND	2
	FSW	1
	TOTAL	6

GENERAL NOTES

1. ALL MATERIAL AND EQUIPMENT TO BE NEW AND UNCONTAMINATED APPROVED.
2. PIPING DIMENSIONS ARE CENTER TO CENTER EXCEPT RISER & DIMENSIONS SHOWN TWOLS (1-4) WHICH ARE END TO END.
3. EARTHQUAKE BRACING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
4. PIPE HANGERS AND METHOD OF HANGING TO BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
5. PIPING SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
6. JOINING OF PIPE AND FITTINGS, THREADED AND WELDED SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
7. OWNER TO PROVIDE NECESSARY HEAT TO PROVIDE WATER IN PIPES FROM FREEZING IN AREAS PROTECTED BY A WET PIPE SPRINKLER SYSTEM.
8. STRUCTURAL ADEQUACY OF THE BUILDING TO SUPPORT THE SPRINKLER PIPING IS THE RESPONSIBILITY OF THE OWNER AND/OR HIS STRUCTURAL REPRESENTATIVE.

DESIGN CRITERIA AND NOTES

1. BUILDING AREA–RESIDENTIAL UNITS:
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD.
   B. DENSITY: .05 GPM PER SQ.FT. AND/OR MINIMUM FLOW RATE PER INDIVIDUAL SPRINKLER HEAD LISTING SHALL INCLUDE ALL SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF FOUR SPRINKLERS, THAT REQUIRES THE GREATEST WATER FLOW.
   C. AREA PER SPRINKLER: PER HEAD LISTING.
   D. INSIDE HOSE ALLOWANCE: 100 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.
   F. SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS WHERE THE AREA DOES NOT EXCEED 55 SQ.FT.
   G. SPRINKLERS SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITHIN THE DWELLING UNITS WHERE THE SPACES DOES NOT EXCEED 24 SQ.FT. WITH THE LONG DIMENSION NOT EXCEEDING 1 FEET.

2. BUILDING AREA–COMMON AREAS:
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD.
   B. DENSITY: .10 GPM PER SQ.FT. OVER A 1500 SQ.FT. HYDRAULICALLY MOST REMOTE DESIGN AREA OR 5 HEADS IF THE AREA IS A CORRIDOR PER NFPA #13, 11.2.3.3.7.
   C. AREA PER SPRINKLER: 225 SQ.FT. MAXIMUM, OR PER HEAD LISTING.
   D. INSIDE HOSE ALLOWANCE: 100 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.

3. BUILDING AREA–PARKING GARAGES, MECHANICAL AND ELECTRICAL ROOMS:
   A. OCCUPANCY CLASSIFICATION: ORDINARY GROUP I.
   B. DENSITY: .15 GPM PER SQ.FT. OVER A 1500 SQ.FT. HYDRAULICALLY MOST REMOTE DESIGN AREA PER NFPA 13. REMOTE AREA TO BE INCREASED BY 50% TO 1950 SQ.F FOR AREAS COVERED BY DRY TYPE SYSTEM.
   C. AREA PER SPRINKLER: 130 SQ.FT. MAXIMUM UNLESS EXTENDED ECHERAGE HEADS ARE USED.
   D. INSIDE HOSE ALLOWANCE: 250 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.

4. BUILDING AREA–MANUAL WET STANDPIPE SYSTEM
   A. DESIGNED TO DELIVER 500 GPM @ 125 PSI AT ROOF OF REMOTE STANDPIPE AND AN ADDITIONAL 250 GPM AT THE CONNECTION OF THE SECOND STANDPIPE.
   B. FIRE DEPARTMENT CONNECTION TO PROVIDE REQUIRED FLOW & PRESSURE.

NOTES

1. DRY MAINS AND LINES SHALL BE PITCHED PER NFPA 13 REQUIREMENTS AS FOLLOWS: BRANCH LINES SHALL PITCH AT LEAST 1/2 INCH PER 10 FT. MAINS SHALL PITCH AT LEAST 1/4 INCH PER 10 FT.
2. PIPE AND FITTING TYPES ARE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE PLAN.
   A. DRY SYSTEM – SCH. 10 AND SCH. 40 GALVANIZED PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVE COUPLINGS/FITTINGS.
   B. STANDPIPE – SCH. 10, AND ERW FLOW BLACK STEEL PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVED COUPLINGS/FITTINGS. STEEL PIPE TO BE USED IN ALL EXPOSED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOORS.
   C. WET SYSTEM/RESIDENTIAL – BLACK WATER CPVC PIPE AND FITTINGS. CPVC TO BE USED ONLY ON CONCEALED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOOR
   D. ALL PIPING PASSING THROUGH PLENUM AREAS TO BE STEEL.
3. PER MIKE BELL FIRE MARSHAL FOR PORTLAND THE PARKING GARAGE SHALL BE DESIGNED PER NFPA 13. THE RESIDENTIAL LEVELS SHALL BE DESIGNED PER NFPA 13R.

REVISIONS

AS BUILT

NO.	DESCRIPTION	DATE

CONTRACT NAME:

THE VAUX
1600 N.W. 24th AVENUE
PORTLAND, OREGON 97210
Site Superintendent BRET BAHMAN
Job Site Phone (503) 248-4004
Job Site Fax (503) 243-6156

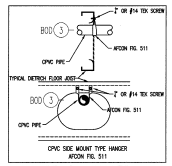
CONTRACT WITH:

TRAMMIELL CROW RESIDENTIAL
620 NW 10TH AVE.
PORTLAND, OR 97209
Project Manager DAVID HERR
Phone 503-241-0327
Fax 503-241-0462

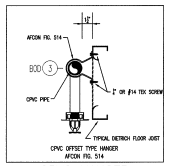
DWG. TITLE:

GROUND FLOOR PLAN BUILDING 'A'

DESIGNER	DATE	JOB NO.	SHEET
JEFF HALSTEAD	8/15/05	1-18-2038	FP-4 OF 13



CPVC HANGER



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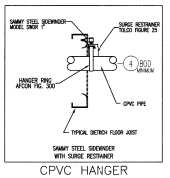

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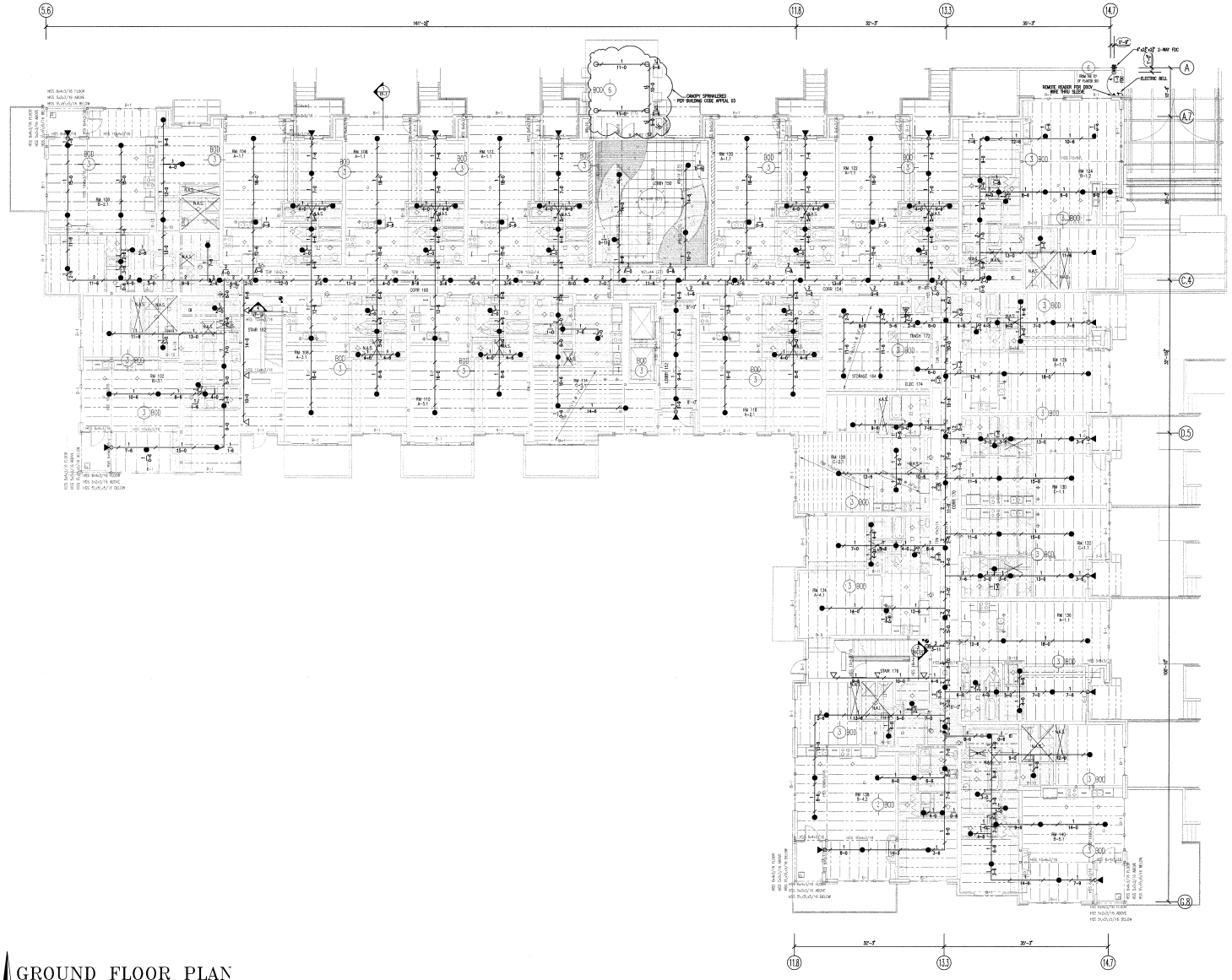
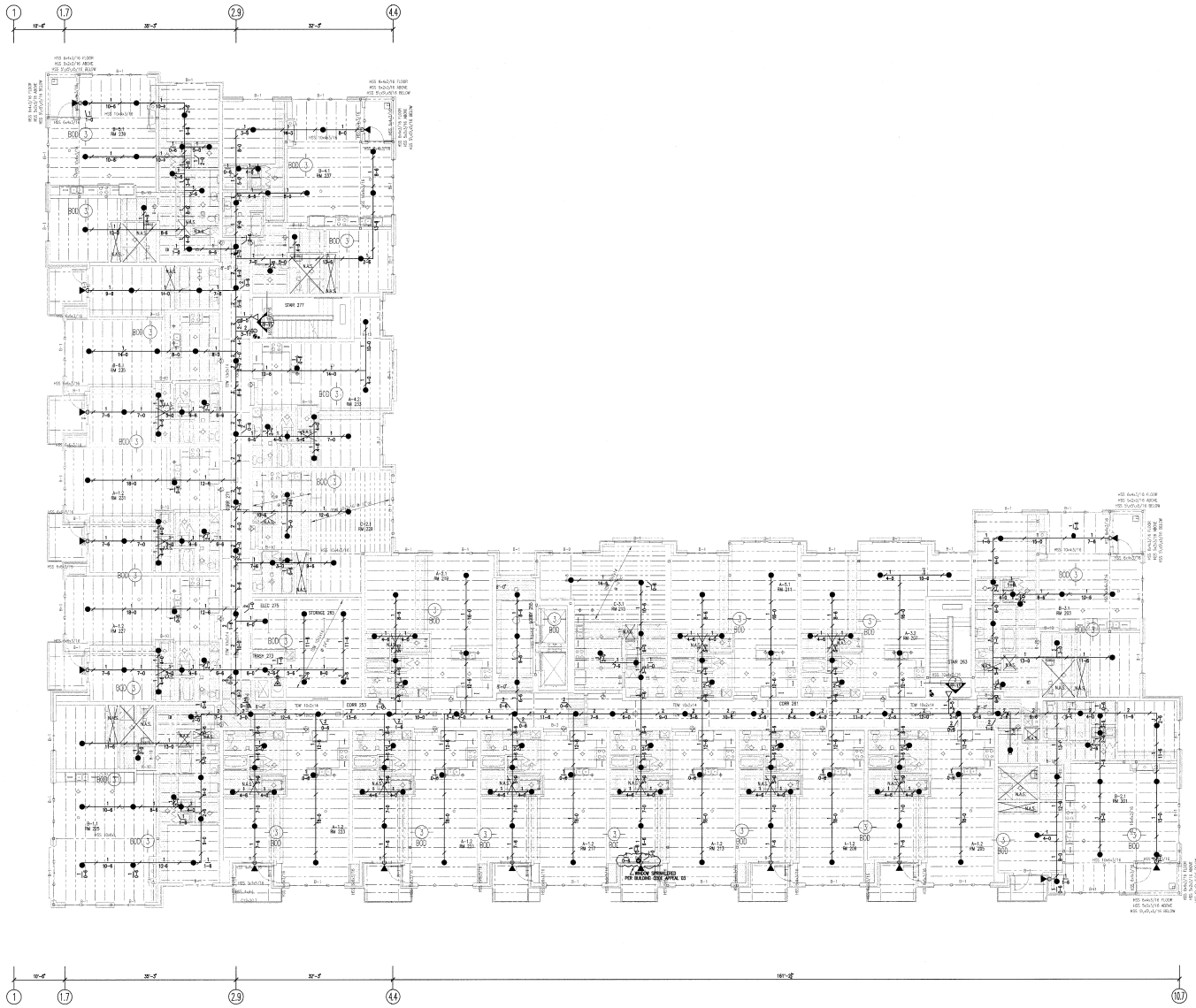
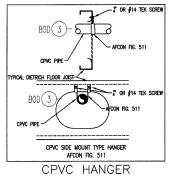




2ND FLOOR PLAN BUILDING 'A'

1/8"=1'-0"



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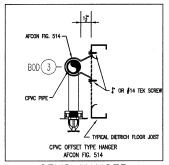

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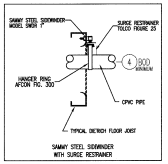

CPVC HANGER

Fire Systems West

600 SE Maritime Avenue, suite 300
Vancouver, WA 98661
(360) 693-9906 fax: (503) 289-2208

WA CONTR LIC. FIRE-SWI-140-81 • OR CONTR LIC. 48732 • FED TAX ID: 91-1318569

SPRINKLER SYMBOL DESCRIPTION

SYMBOL	TYPE	MFG	MODEL	SIZE	TEMP	FINISH	CANOPY	TOTAL
●	RES. SSP	TYCO	LFII	3/4,5K	155F	WHITE	WHITE	178
◆	RES. SSP	TYCO	LFII	3/4,5K	172F	WHITE	WHITE	20
◁	RES. HSW	TYCO	LFII	3/4,5K	155F	WHITE	WHITE	2
◀	DRY HSW	TYCO	DS-1	3/4,5K	155F	BRASS	CHROME	15
◁	HEAD BY OTHERS							1
TOTAL SPRINKLERS SHOWN ON THIS SHEET								216

HANGER LEGEND

A	"A" HOOK	L	"L" ROD
B	SAMMY SUPER SCREW	M	MACHINE THREADED ROD
C	"C" CLAMP	N	TRIDLE NUT
D	TOP BEAM CLAMP	P	POWER DRIVEN STUD
E	SIDE WINDER	R	WEDGE ANCHOR
F	FLUSH SHIELD	T	
G	CEILING FLANGE	U	
H	SIDE BEAM BRACKET	W	
J	"J" BOLT	X	
K	SHORT CLIP	Y	

APPROVALS REQUIRED	DISTRIBUTION	
OWNER/ARCHITECT	OWNER/ARCHITECT	3
CITY OF PORTLAND	CITY OF PORTLAND	2
	FSW	1
	TOTAL	6

GENERAL NOTES

1. ALL MATERIAL AND EQUIPMENT TO BE NEW AND UNDERWRITERS APPROVED.
2. PIPING DIMENSIONS ARE CENTER TO CENTER EXCEPT RISER & DIMENSIONS SHOWN TWICE (1-45) MINOR ARE END TO END.
3. EARTHQUAKE BRACING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
4. PIPE HANGERS AND METHOD OF HANGING TO BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
5. PIPING SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
6. JOINING OF PIPE AND FITTINGS, THREADED AND WELDED SHALL BE IN ACCORDANCE WITH NFPA PAMPHLET NO. 13.
   INSIDE HOSE STATIONS ARE USED TO PROVIDE WATER IN PIPES FROM FREEZING IN AREAS PROTECTED BY A WET PIPE SPRINKLER SYSTEM.
6. STRUCTURAL ADEQUACY OF THE BUILDING TO SUPPORT THE SPRINKLER PIPING IS THE RESPONSIBILITY OF THE OWNER AND/OR HIS STRUCTURAL REPRESENTATIVE.

DESIGN CRITERIA AND NOTES

1. BUILDING AREA-RESIDENTIAL UNITS.
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD.
   B. DENSITY: .05 GPM PER SQ.FT. AND/OR MINIMUM FLOW RATE PER INDIVIDUAL SPRINKLER HEAD LISTING SHALL INCLUDE ALL SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF FOUR SPRINKLERS, THAT REQUIRES THE GREATEST HYDRAULIC DEMAND.
   C. AREA PER SPRINKLER: PER HEAD LISTING.
   D. INSIDE HOSE ALLOWANCE: 100 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.
   F. SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS WHERE THE AREA DOES NOT EXCEED 55 SQ.FT.
   G. SPRINKLERS SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITHIN THE DWELLING UNITS WHERE THE SPACES DOES NOT EXCEED 24 SQ.FT. WITH THE LEAST DIMENSION NOT EXCEEDING 3 FEET.
2. BUILDING AREA-COMMON AREAS.
   A. OCCUPANCY CLASSIFICATION: LIGHT HAZARD.
   B. DENSITY: .10 GPM PER SQ.FT. OVER A 1500 SQ.FT. HYDRAULICALLY MOST REMOTE DESIGN AREA OR 15 HEADS IF THE AREA IS A CORRIDOR PER NFPA #13, 11.2.3.3.7.
   C. AREA PER SPRINKLER: 225 SQ.FT. MAXIMUM, OR PER HEAD LISTING.
   D. INSIDE HOSE ALLOWANCE: 100 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.
3. BUILDING AREA-PARKING GARAGES, MECHANICAL AND ELECTRICAL ROOMS.
   A. OCCUPANCY CLASSIFICATION: ORDINARY HAZARD.
   B. DENSITY: .15 GPM PER SQ.FT. OVER A 1500 SQ.FT. HYDRAULICALLY MOST REMOTE DESIGN AREA PER NFPA 13. REMOTE AREA TO BE INCREASED BY 30% TO 1950 SQ.FT. FOR AREAS COVERED BY DRY TYPE SYSTEM.
   C. AREA PER SPRINKLER: 130 SQ.FT. MAXIMUM UNLESS EXTENDED COVERAGE HEADS ARE USED.
   D. INSIDE HOSE ALLOWANCE: 250 GPM.
   E. OUTSIDE HOSE ALLOWANCE: 0 GPM.
4. BUILDING AREA-MANUAL WET STANDPIPE SYSTEM
   A. DESIGNED TO DELIVER 100 GPM @ 125 PSI AT ROOF OF REMOTE STANDPIPE AND AN ADDITIONAL 250 GPM AT THE CONNECTION OF THE SECOND STANDPIPE.
   B. FIRE DEPARTMENT CONNECTION TO PROVIDE REQUIRED FLOW & PRESSURE.

NOTES:

1. DRY MAINS AND LINES SHALL BE PITCHED PER NFPA 13 REQUIREMENTS AS FOLLOWS:
   BRANCH LINES SHALL PITCH AT LEAST 1/2 INCH PER 12 FT.
   MAINS SHALL PITCH AT LEAST 1/4 INCH PER 10 FT.
2. PIPE AND FITTING TYPES ARE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE PLAN.
   A. DRY SYSTEM – SCH. 10 AND SCH. 40 GALVANIZED PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROOVE COUPLINGS/FITTINGS.
   B. STANDPIPE – SCH. 10, AND DYNA FLOW BLACK STEEL PIPE WITH BLACK CAST IRON FITTINGS AND STANDARD PAINTED GROVVED COUPLINGS/FITTINGS. STEEL PIPE TO BE USED IN ALL EXPOSED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOORS.
   C. WET SYSTEM/RESIDENTIAL – BLAZE MASTER CPVC PIPE AND FITTINGS. CPVC TO BE USE ONLY ON CONCEALED LOCATIONS OF THE RESIDENTIAL TOWERS, GROUND THRU 4TH FLOOR
   D. ALL PIPING PASSING THROUGH PLENUM AREAS TO BE STEEL.
3. PER MIKE BELL FIRE MARSHAL FOR PORTLAND THE PARKING GARAGE SHALL BE DESIGNED PER NFPA 13. THE RESIDENTIAL LEVELS SHALL BE DESIGNED PER NFPA 13R.

REVISIONS

AS BUILT

NO.	DESCRIPTION	DATE

CONTRACT NAME:

THE VAUX
1600 N.W. 24th AVENUE
PORTLAND, OREGON 97210
Site Superintendent BRETT BANNAN
Job Site Phone (503) 249-4004
Job Site Fax (503) 243-6116

CONTRACT WITH:

TRAMMIELL CROW RESIDENTIAL
630 NW 10TH AVE.
PORTLAND, OR 97209
Project Manager DAVID HERR
Phone 503-241-0857
Fax 503-241-0462

DWG. TITLE:

2ND FLOOR PLAN BUILDING 'A'

DESIGNER	DATE	JOB NO.	SHEET
JEFF HALSTEAD	8/15/05	1-16-2208	FP-6 OF 13