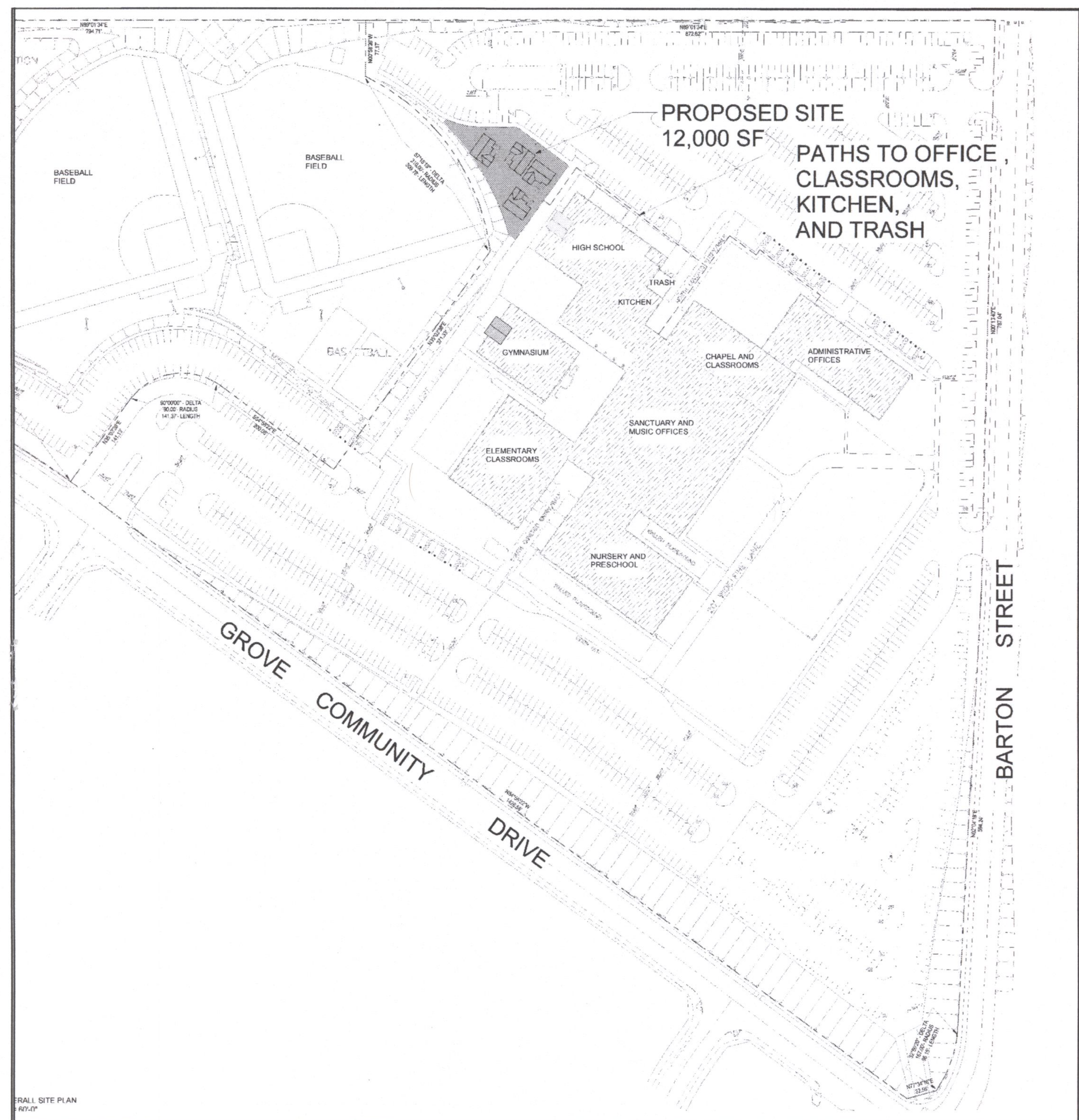
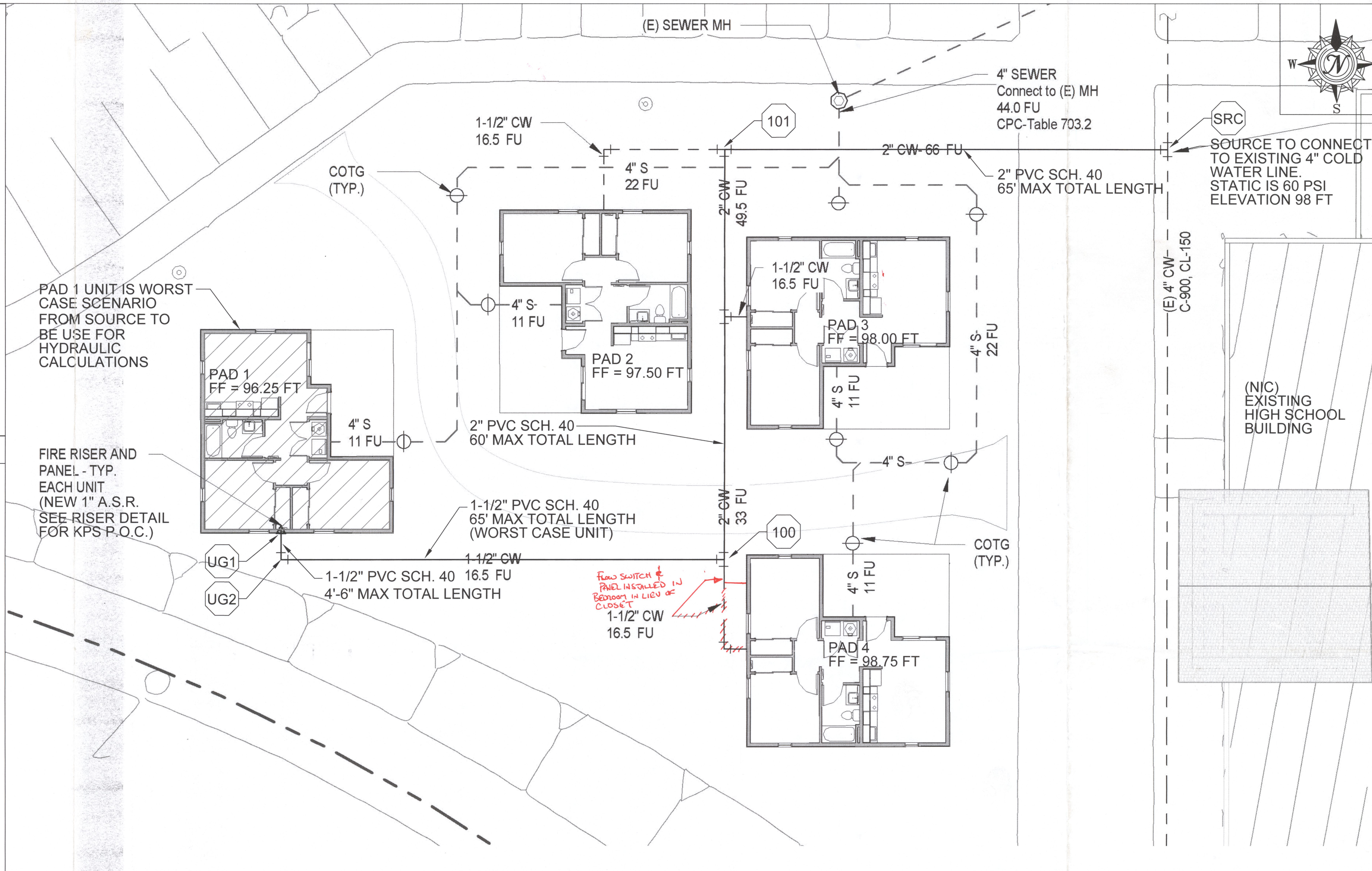


OVERALL SITE PLAN - SCALE = NTS

13D GENERAL NOTES

1. This residential sprinkler system shall be designed and installed in accordance with NFPA 13D 2016 Edition and the Authority Having Jurisdiction.
2. Only listed and approved devices or materials shall be installed in the system (except hangers, tanks and pumps).
3. Only new U.L. 1626 listed residential sprinklers shall be installed within the dwelling area.
4. Every residential sprinkler system shall be field tested and inspected at both the rough plumbing and final inspection, prior to occupancy being granted. The jurisdictional fire prevention office shall be notified a minimum of two working days in advance of the requested inspection.
5. All systems shall be tested for leakage at normal system operating water pressure (I.E., 200 psi when equipped with a fire department connection) for a period of not less than two hours.
6. All systems shall have an underground flush completed at the time of the hydrostatic test. Flushing shall be completed prior to connecting the underground piping to the overhead piping.
7. At least one spare sprinklers of each type, temperature rating and orifice size used in the system, shall be located at the main riser. A sprinkler wrench shall also be located at the main riser.
8. All valves shall have a permanently affixed sign indicating its function. Piping shall be supported from structural members using support methods comparable to those required by local plumbing codes. Exception: Listed piping shall be supported in accordance with any listing limitations.
9. The spacing and location of sprinklers shall conform with the manufacturer's requirements and those contained in NFPA #13D.



OVERALL SITE PLAN

ENLARGED WORST PAD LOT - SCALE 1/32" = 1'-0"

SCOPE OF WORK

1. INSTALL NEW FIRE PROTECTION SYSTEM IN (4) SINGLE-FAMILY RESIDENTIAL UNITS 600 S.F. EACH.
2. ALL PIPE TO BE NEW AND U.L. LISTED FOR USE IN FIRE PROTECTION SYSTEMS.
3. NO PENETRATIONS THROUGH RATED WALLS.
4. FITTING CLASS AND TYPE SHALL MEET OR EXCEED NFPA 13D (2016) AND CITY OF RIVERSIDE. APPROVAL AND LISTED FOR USE IN FIRE PROTECTION.

MATERIAL NOTES

1. ALL PIPE TO BE BLAZEMASTER CPVC PIPE AND CONCEALED.
2. HEADS IN RESIDENTIAL AREAS TO BE VIKING VK494 4.9K MODELS AND SPACED AT 16' X 16'. UNLESS OTHERWISE STATED.
3. RISER TO BE 1" BLAZEMASTER CPVC AND CONCEALED IN WALL WITH ACCESS PANEL.
4. ALL PIPE SUPPORTS ARE TO BE PER NFPA #13D, 2016 ED. REQUIREMENTS. HANGERS TO BE PLACED NO MORE THAN 5'-6" O.C.
5. ALL MATERIALS ARE TO BE UL LISTED. ALL WORK IS TO BE DONE IN ACCORDANCE WITH NFPA STANDARDS.
6. ALL HEAD DROPS TO BE 3/4"

SYSTEM ACCEPTANCE

THE SYSTEM SHALL HAVE A HYDROSTATIC TEST AT 200 PSI FOR A MINIMUM OF 15 MINUTES TO VISUALLY CHECK FOR LEAKAGE DURING THE PIPING INSPECTION. WHEN THE PIPING INSPECTION IS COMPLETE THE SYSTEM WILL BE DRAINED TO CHECK THAT THE GAUGE GOES BACK TO ZERO.

DURING THE HYDROSTATIC TEST, APPROVED PLUGS SHALL BE USED AND THE FIRE SPRINKLER HEADS SHALL NOT BE INSTALLED DURING THIS TIME. FOR THE FINAL INSPECTION HAVE ALL FIRE SPRINKLERS INSTALLED AND EXPOSED FOR VISUAL INSPECTION. 2016 NFPA 13D, SECTION 11.2

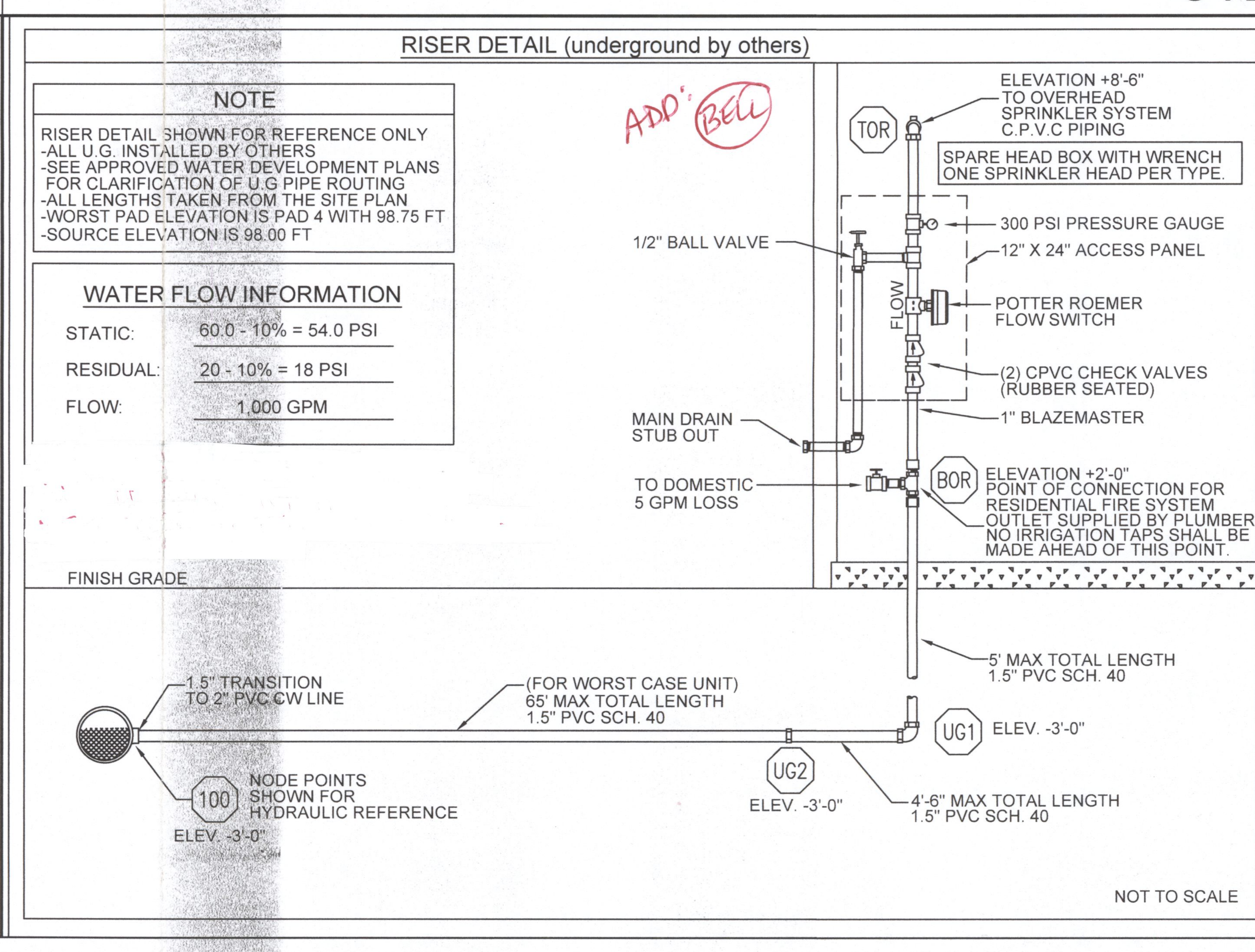
RISER DETAIL (underground by others)

NOTE

RISER DETAIL SHOWN FOR REFERENCE ONLY
-ALL U.G. INSTALLED BY OTHERS
-SEE APPROVED WATER DEVELOPMENT PLANS FOR CLARIFICATION OF U.G PIPE ROUTING
-ALL LENGTHS TAKEN FROM THE SITE PLAN
-WORST PAD ELEVATION IS PAD 4 WITH 98.75 FT
-SOURCE ELEVATION IS 98.00 FT

WATER FLOW INFORMATION

STATIC:	60.0 - 10% = 54.0 PSI
RESIDUAL:	20 - 10% = 18 PSI
FLOW:	1,000 GPM



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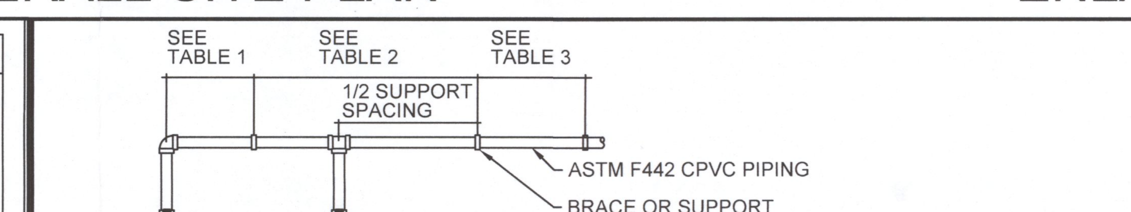


TABLE 1
MAXIMUM SUPPORT SPACING DISTANCE END LINE SPRINKLER HEAD DROP ELBOW

PIPE SIZE (INCHES)	SYTEM PRESSURE <100 PSI	SYTEM PRESSURE >100 PSI
3/4"	9"	6"
1"	12"	9"
1-1/4"	18"	12"
1-1/2" - 3"	24"	12"

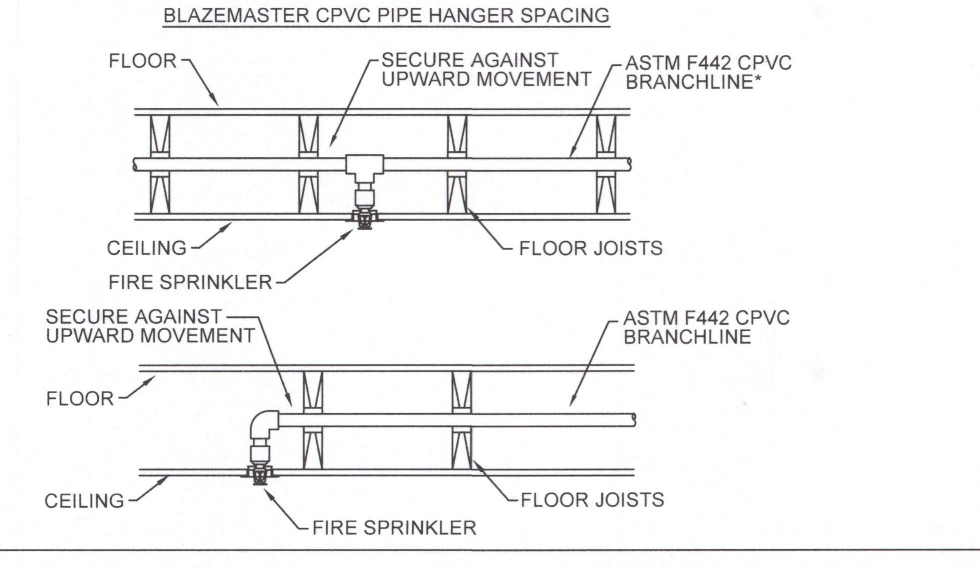
TABLE 2
MAXIMUM SUPPORT SPACING DISTANCE INLINE SPRINKLER HEAD DROP TEE

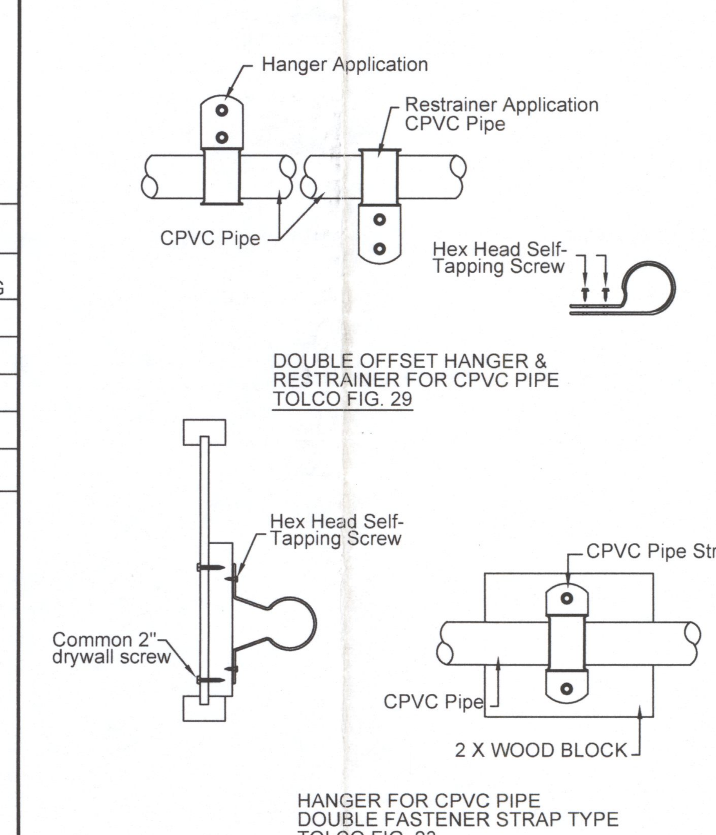
PIPE SIZE (INCHES)	SYTEM PRESSURE <100 PSI	SYTEM PRESSURE >100 PSI
3/4"	4'	3'
1"	5'	4'
1-1/4"	6'	5'
1-1/2" - 3"	7'	7'

TABLE 3
HANGER SPACING

PIPE SIZE (INCHES)	MAX. SPACING
3/4"	5.5'
1"	6'
1-1/4"	6.5'
1-1/2"	7'
2"	8.0'

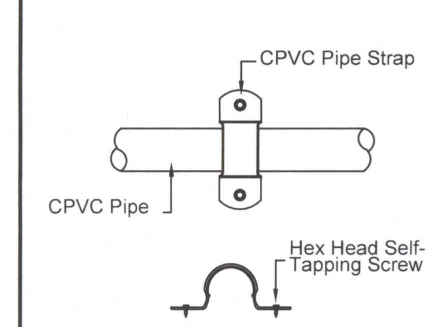
BLAZEMASTER CPVC PIPE HANGER SPACING





FASTENER NOTES FOR CVPC PIPE

CPVC PIPE SIZE	HEX. HEAD SELF TAPPING SCREW SIZE
3/4" - 1-1/2"	1-1/4" X # 10
2"	2" X # 10



HANGER NOTES FOR CVPC PIPE

Hanger Size	Max. Spacing Between Hgrs
3/4"	5'-6"
1"	6'-0"
1-1/4"	6'-6"
1-1/2"	7'-0"
2"	8'-0"
2-1/2"	9'-0"
3"	10'-0"

HANGER DETAILS
NOT TO SCALE

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BUILDING SUMMARY

THE GROVE VILLAGE
19900 GROVE COMMUNITY DRIVE, RIVERSIDE CA 92508
VILLAGE HOUSING
TILDEN-COIL CONSTRUCTORS
CITY OF RIVERSIDE FIRE AUTHORITY

OCCUPANCY:	R3 / U
CONSTRUCT. TYPE:	V - B
1ST FLOOR AREA:	600 SQ.FT.
2ND FLOOR AREA:	N/A SQ.FT.
TOTAL LIVING AREA:	600 SQ.FT.
GARAGE AREA:	N/A SQ.FT.

FIRE PROTECTION CONTRACTOR ★ KPS FIRE & SECURITY C-16 954532 ★ STATE OF CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

APPROVAL STAMP

CITY OF RIVERSIDE FIRE DEPT.
This is to certify that these plans have been approved by the fire official and no change or deviation therefrom shall be permitted. However, this approval does not authorize violation or cancellation of any law of the city nor does it prevent requiring correction of any error on the plans. This is not an approval of any work requiring a separate permit under the laws of the city.
Engineer MDouglas Date 10-26-18
★ APPROVED - AS NOTED

KPS Fire ✦ Security ✦ Connectivity
760 S. ROCHESTER AVE. STE B
ONTARIO, CA 91761
PH. 909-980-9222 C-16 LIC.# 954532 FAX 909-980-4477

TILDEN-COIL CONSTRUCTORS
THE GROVE VILLAGE
19900 GROVE COMMUNITY DRIVE
RIVERSIDE, CA 92508

PAGE NAME:	GENERAL NOTES
DATE	10/18/2018
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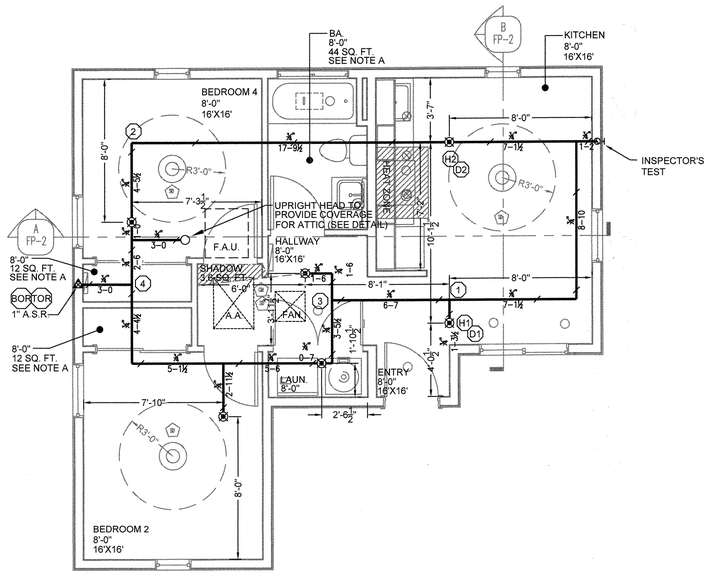

VILLAGE HOUSING - TYPICAL UNIT FLOOR PLAN

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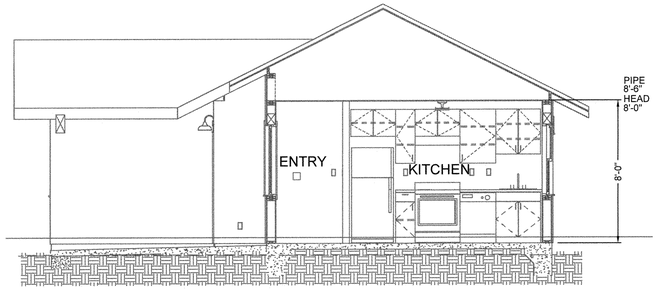

VILLAGE HOUSING - TYPICAL SECTION "B"

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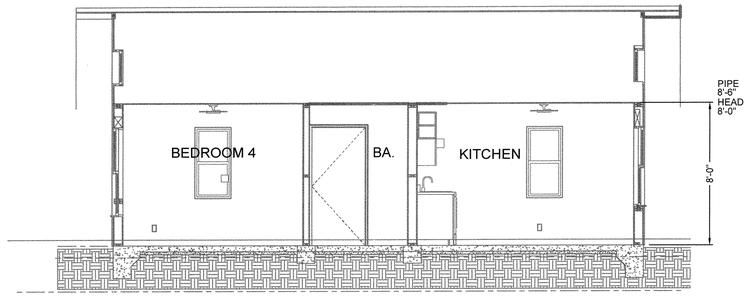

VILLAGE HOUSING - TYPICAL SECTION "A"

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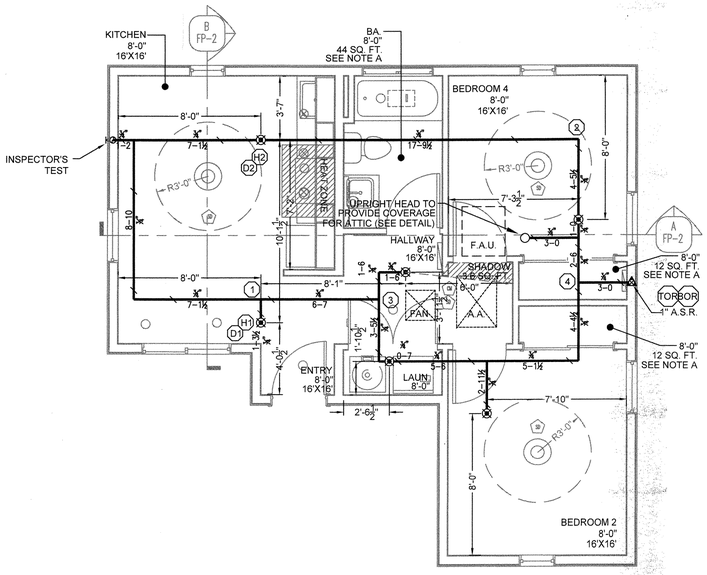

VILLAGE HOUSING - REVERSE TYPICAL UNIT FLOOR PLAN

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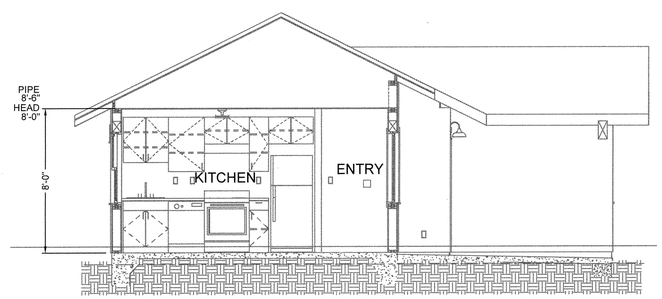

VILLAGE HOUSING - REVERSE TYPICAL SECTION "B"

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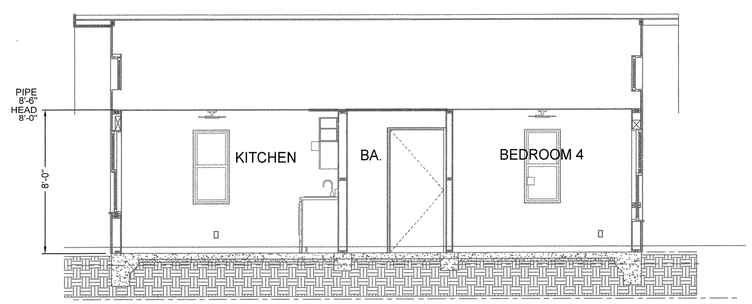

VILLAGE HOUSING - REVERSE TYPICAL SECTION "A"

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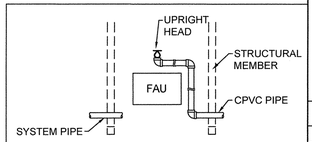

F.A.U. SPRINKLER DETAIL

SCALE: N.T.S.

NOTE A:
SOME AREAS FALL UNDER EXCEPTIONS FOR SPRINKLER HEAD REQUIREMENTS 2016 EDITION NFPA 13D SECTIONS 8.3.2 , 8.3.3, 8.3.4, 8.3.6, 8.3.7 AND 8.3.8. SEE PLAN FOR EXCEPTION AREAS.

NOTE B:
CLOSET AREAS FALL UNDER EXCEPTIONS FOR SPRINKLER HEAD REQUIREMENTS 2016 EDITION NFPA 13D SECTION 8.2.7 SEE PLAN FOR EXCEPTION AREAS.

NOTE C:
SPRINKLER HEAD PERMITTED TO HAVE A SHADOW AREA OF 15 SQUARE FEET PER 2016 EDITION NFPA 13D SECTION 8.2.5.6.

NOTE:
-ALL PIPING TO BE 3/4", UNLESS OTHERWISE SPECIFY.
-ALL ARMOVERS TO BE 3/4".
-ALL HEADS DROPS TO BE 3/4" U.N.O.

SPRINKLER HEAD NOTE: PER NFPA 13D EDITION 2016 SECTION 7.5.6.1 : Sprinklers installed where maximum ambient ceiling temperatures do not exceed 100 degrees shall be ordinary temperature–rated or intermediate–temperature rated sprinklers throughout unless modified
by the requirements of 7.5.6.3.

HYDRAULIC SYSTEM
THIS BUILDING IS PROTECTED BY A HYDRAULICALLY DESIGNED AUTOMATIC SPRINKLER SYSTEM PER NFPA 13D, 2016 EDITION

LOCATION	KITCHEN		
NO. OF SPRINKLERS	2	TYPE OF SPRINKLER(S)	VIKING
BASIS OF DESIGN		ORIFICE SIZE	7/16"
DENSITY:	.05 GPM/SQ.FT.	TEMPRATURE RATING	200°
DESIGNED AREA OF DISCHARGE:	2 HEAD CALC. SQ.FT.	ORIENTATION	CONCEALED
		K-FACTOR	4.9
PROTECTION AREA PER SPRINKLER	256 (16' X 16') SQ.FT.	SIN NUMBER	VK494
		RESPONSE TYPE	FAST RESPONSE
SYSTEM DEMAND AT THE BASE OF RISER			
GPM DISCHARGE	26.682 GPM		
RESIDUAL PRESSURE	24.829 PSI		
SYSTEM DEMAND AT SOURCE			
GPM DISCHARGE	31.682 GPM		
RESIDUAL PRESSURE	30.729 PSI	*SAFTEY FACTOR	23.210 PSI

*Table 7.5.6.3 Minimum Distances for Ordinary & Intermediate Temperature Residential Sprinklers

HEAT SOURCE	FROM EDGE OF SOURCE TO ORDINARY TEMPERATURE SPRINKLER IN	MM	FROM EDGE OF SOURCE TO INTERMEDIATE TEMPERATURE SPRINKLER IN	MM
SIDE OF OPEN OR RECESSED FIREPLACE	36	914	12	305
FRONT OF RECESSED FIREPLACE	60	1524	36	914
COAL– OR WOOD–BURNING STOVE	42	1067	12	305
KITCHEN RANGE	18	457	9	229
WALL OVEN	18	457	9	229
HOT AIR FLUES	18	457	9	229
UNINSULATED HEAT DUCTS	18	457	9	229
UNINSULATED HOT WATER PIPES	12	305	6	152
SIDE OF CEILING– OR WALL–MOUNTED HOT AIR DIFFUSERS	24	610	12	305
	36	914	18	457
FRONT OF WALL–MOUNTED HOT AIR DIFFUSERS	6	152	3	76
HOT WATER HEATER OR FURNACE				
LIGHT FIXTURE				
0 W–250 W	6	152	3	76
250 W–499 W	12	305	6	152

Sprinkler Head Schedule

Symbol	Count	Thread	K–Factor	Description	Note
○	1	1/2"	4.2	VIKING VK327 1/2" 200 BRASS QUICK RESPONSE UPRIGHT	ON SPRIG
⊗	6	1/2"	4.9	VIKING VK494 7/16" 200 BRASS FAST RESPONSE CONCEALED	ON DROP
7 = Total Number of Heads This Floor					

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KPS FIRE & SECURITY
C-16 954532
STATE OF CALIFORNIA

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KPS
Fire + Security + Connectivity
760 S. ROCHESTER AVE. STE B
ONTARIO, CA 91761
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