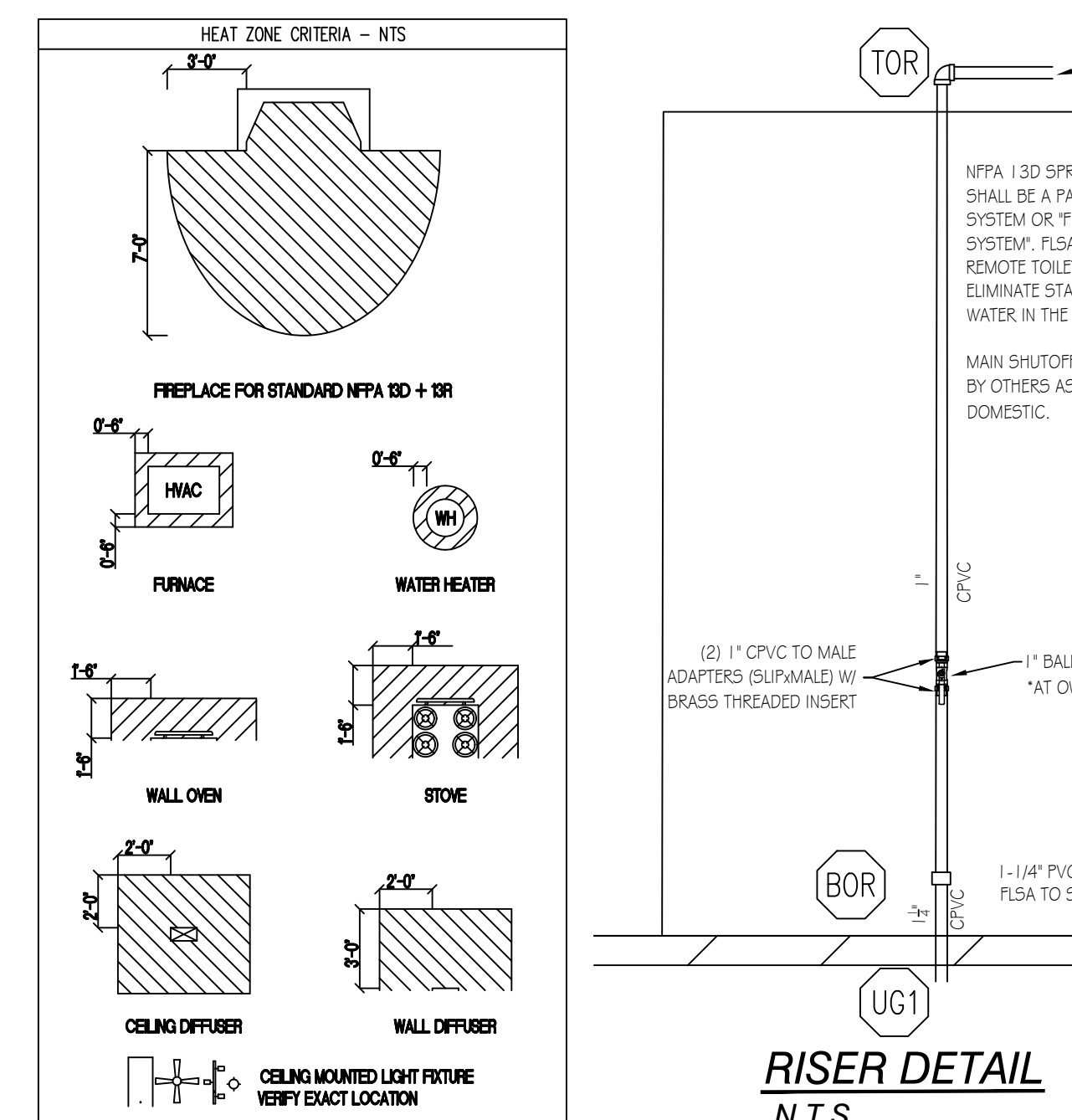
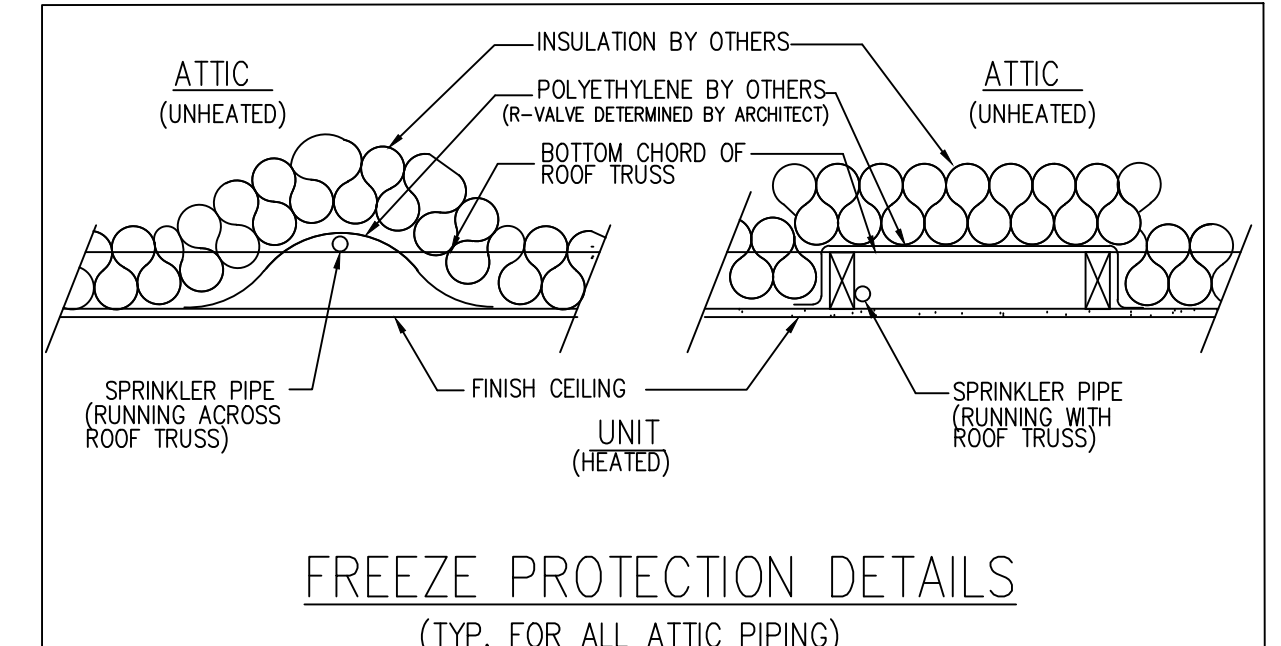
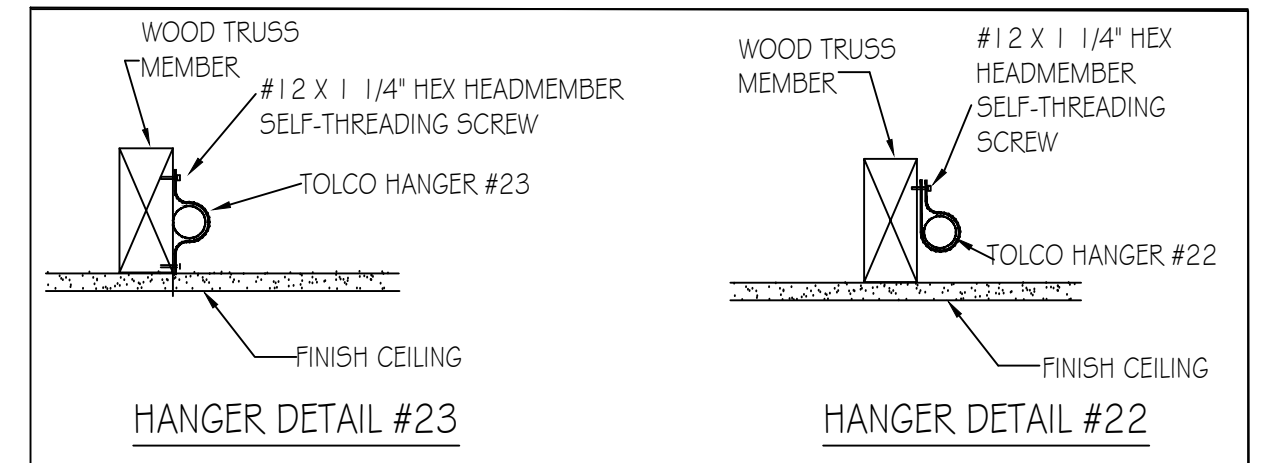
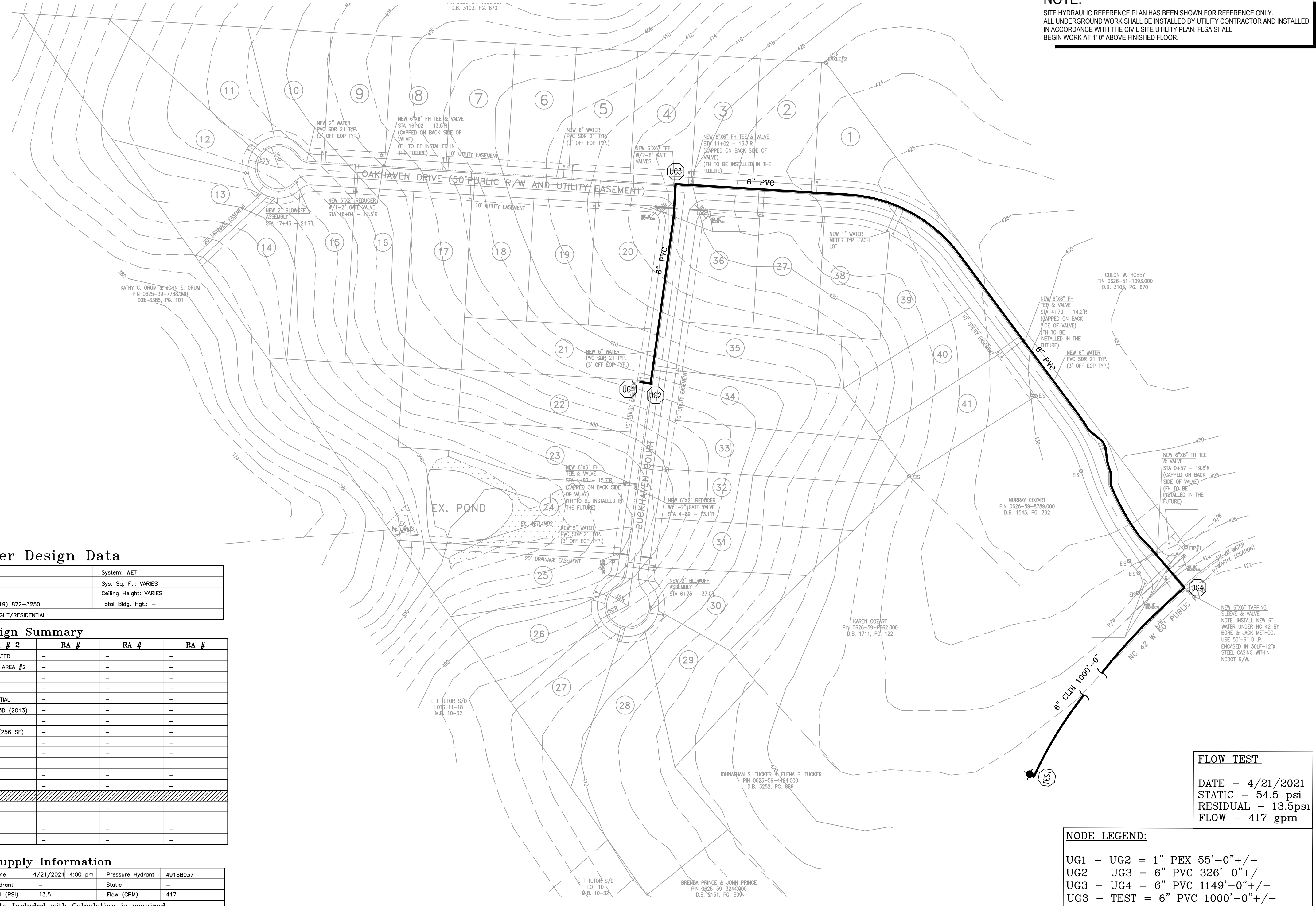


# GENERAL NOTES

- THIS WET PIPE FIRE SPRINKLER SYSTEM IS DESIGNED AS LIGHT HAZARD/RESIDENTIAL OCCUPANCY WITH A DESIGN DENSITY OF .05 GPM/2 SPRINKLERS MAX IN ACCORDANCE WITH 13D (2013 EDITION) AND NFPA 13-11.3.1.1.
- HYDRAULIC CALCULATIONS ARE BASED UPON FLOW DATA PERFORMED BY FLSA ON 04/21/2021 AT 4:00PM. HYDRAULIC CALCULATIONS TO BE BASED ON NFPA 13D (2013 EDITION).
- FIRE SPRINKLER OVERHEAD PIPE AND FITTINGS ARE TO BE CPVC PIPE LISTED FOR FIRE PROTECTION USED UNLESS NOTED OTHERWISE.
- ALL HANGERS TO BE U.L. LISTED FOR FIRE PROTECTION SERVICES. HANGERS SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTING. SPACING AND LOCATION TO COMPLY WITH NFPA 13.
- ALL EQUIPMENT TO BE U.L. LISTED FOR FIRE PROTECTION SERVICES AND LISTED IN ACCORDANCE WITH ITS LISTING.
- IN AREAS WHERE WET-TYPE SPRINKLER SYSTEM PIPING HAS BEEN INSTALLED, IT IS THE OWNERS' RESPONSIBILITY TO PROVIDE ADEQUATE HEAT. (AMBIENT TEMPERATURE OF A MINIMUM 40°F)
- ALL DRAINAGE TO COMPLY WITH NFPA 13D AND CONTRACT DOCUMENTS.
- [X'-X'] DENOTES CENTERLINE OF PIPE AFF.
- ALL SPRINKLER HEADS SHALL BE LISTED RESIDENTIAL SPRINKLER HEADS IN ACCORDANCE WITH 7.5.1 OF NFPA 13D.
- FLSA POINT OF CONNECTION IS AT 1'-0" AFF.
- UNDERGROUND PIPING TO BE FLUSHED PRIOR TO SPRINKLER PIPE CONNECTION. FLUSHING IS TO BE COMPLETED BY OTHERS.
- PIPING TO SPRINKLER HEADS 1" CPVC UNLESS OTHERWISE NOTED.

**NOTE:**  
SITE HYDRAULIC REFERENCE PLAN HAS BEEN SHOWN FOR REFERENCE ONLY. ALL UNDERGROUND WORK SHALL BE INSTALLED BY UTILITY CONTRACTOR AND INSTALLED IN ACCORDANCE WITH THE CIVIL SITE UTILITY PLAN. FLSA SHALL BEGIN WORK AT 1'-0" ABOVE FINISHED FLOOR.



**Sprinkler Design Data**

Project Name:	OAKHAVEN LOT 22	System:	WET
Project Street Address:	70 BUCKHAVEN DRIVE	Sys. Sq. Ft.:	VARIES
Suite:	-	Floor#:	2
Designed By:	HAILEY WEYANT	Phone:	(919) 872-3250
Occupancy:	RESIDENTIAL	Hazard:	LIGHT/RESIDENTIAL

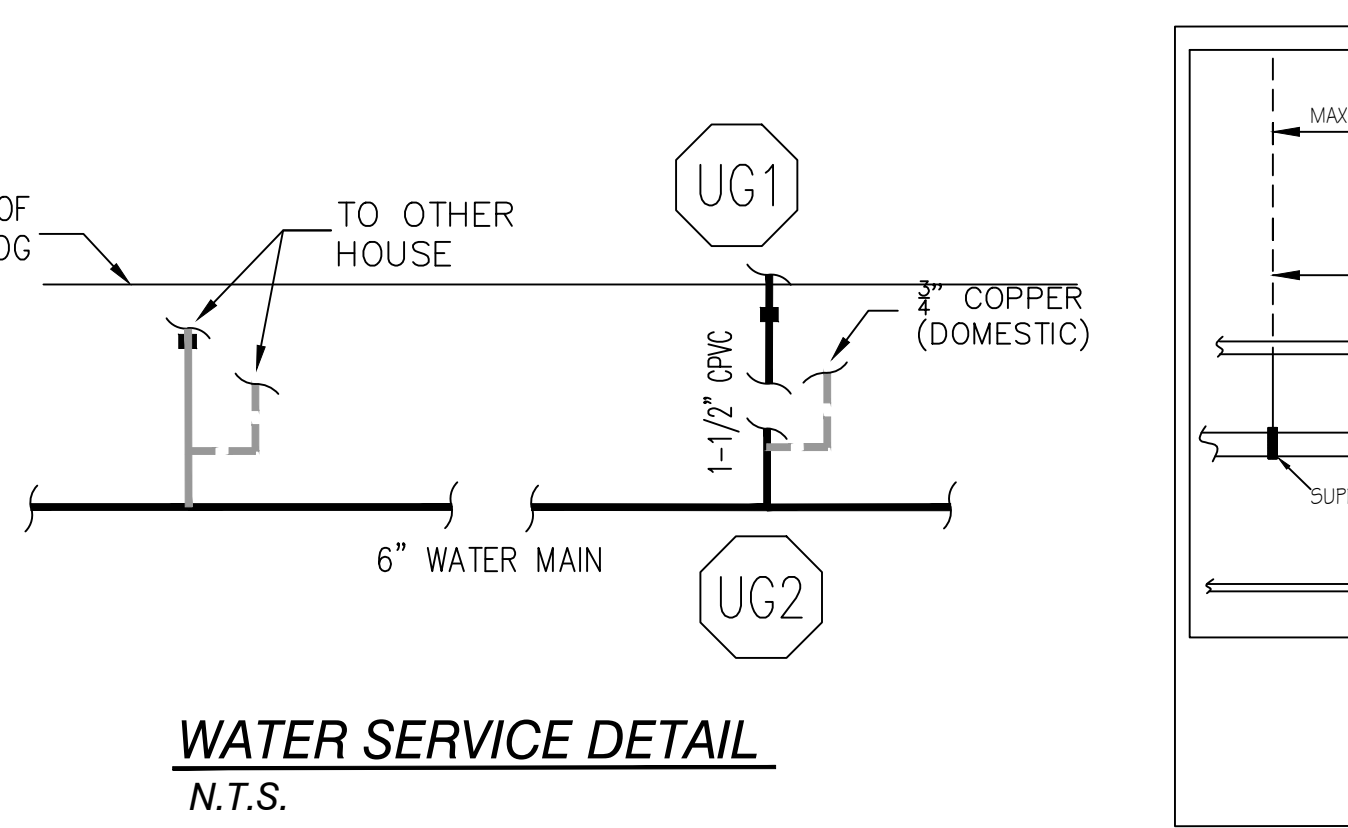
**Design Summary**

Design Method	RA # 1	RA # 2	RA #	RA #	RA #
Design Area #	REMOTE AREA #1	REMOTE AREA #2	-	-	-
Location	MASTER BEDROOM	KITCHEN	-	-	-
Type of System	WET	WET	-	-	-
Hazard Class	RESIDENTIAL	RESIDENTIAL	-	-	-
Criteria Form	NFPA 13D (2013)	NFPA 13D (2013)	-	-	-
Design Area	1 HEADS	2 HEAD	-	-	-
Sprinkler Spacing	20X20 (400 SF)	16X16 (256 SF)	-	-	-
Density	.05	.05	-	-	-
K-factor	4.9	4.9	-	-	-
Domestic Flow	3 GPM	2 GPM	-	-	-
# Design Sprinklers	1	2	-	-	-
Special Application Spk.	-	-	-	-	-
Requirement @ TEST	23.024	29.050	-	-	-
G.P.M. Req'd	29.276	25.882	-	-	-
P.S.I. Req'd	25.03	28.32	-	-	-
Safety Factor @ TEST	-	-	-	-	-
Volume of Dry System	-	-	-	-	-

**Water Supply Information**

Tested by:	-	Date/Time	4/21/2021	4:00 pm	Pressure Hydrant	49180037
Hydrant Elevation	-	Flow Hydrant	-	-	Static	-
Static (PS)	54.5	Residual (PS)	13.5	Flow (GPM)	417	-

Copy of Water Test Data Included with Calculation is required



**TABLE A - CPVC STANDARD SUPPORT SPACING**

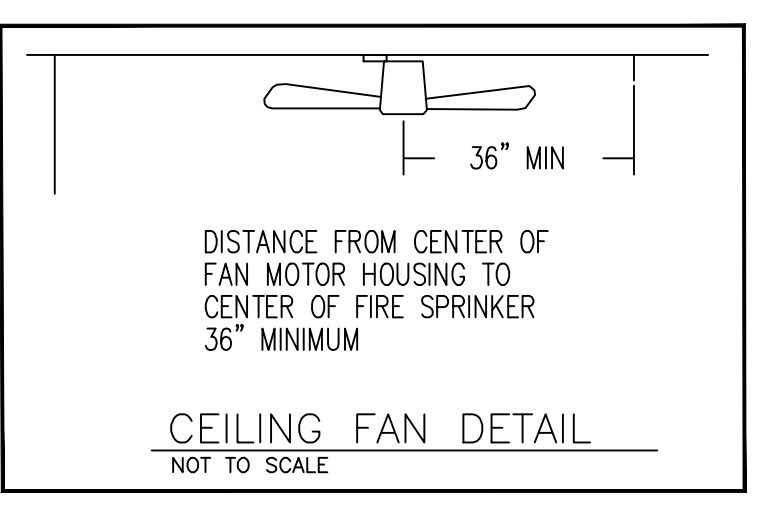
NOMINAL SIZE, INCHES	MAX SUPPORT SPACING, FEET
3/4"	5'-0"
1"	6'-0"
1 1/2"	6'-0"
2"	7'-0"
2 1/2"	8'-0"
3"	10'-0"

**TABLE B - MAX SUPPORT SPACING DISTANCE IN LINE SPRINKLER HEAD DROP TEE**

NOMINAL PIPE SIZE	LESS THAN 100 PSI	MORE THAN 100 PSI
3/4"	4'-0"	3'-0"
1"	5'-0"	4'-0"
1 1/2"	6'-0"	5'-0"
1 1/2" - 3"	7'-0"	7'-0"

**TABLE C - MAX SUPPORT SPACING DISTANCE END SPRINKLER HEAD DROP ELBOW**

NOMINAL PIPE SIZE	LESS THAN 100 PSI	MORE THAN 100 PSI
3/4"	4'-0"	3'-0"
1"	5'-0"	4'-0"
1 1/2"	6'-0"	5'-0"
1 1/2" - 3"	7'-0"	7'-0"



**FLOW TEST:**  
DATE - 4/21/2021  
STATIC - 54.5 psi  
RESIDUAL - 13.5psi  
FLOW - 417 gpm

**NODE LEGEND:**  
UG1 - UG2 = 1" PEX 55'-0"+/-  
UG2 - UG3 = 6" PVC 326'-0"+/-  
UG3 - UG4 = 6" PVC 1149'-0"+/-  
UG3 - TEST = 6" PVC 1000'-0"+/-

## SITE PLAN - FOR HYDRAULIC REFERENCE ONLY

### SCOPE OF WORK

- FLSA TO BEGIN WORK AT 1'-0" AFF
  - FLSA TO INSTALL AUTOMATIC SPRINKLER SYSTEM UNDER NFPA 13D (2013) TO PROTECT NEW RESIDENTIAL HOME
  - FLSA TO TIE THE NEW SPRINKLER SYSTEM INTO PLUMBING FOR A PASSIVE PURGE SYSTEM.
  - ALL PIPING TO BE CPVC.
  - ALL UNDERGROUND AND RUN-IN BY OTHERS
- THIS FIRE SPRINKLER PLANNING AND DESIGN DRAWING HAS BEEN PREPARED BY FIRE & LIFE SAFETY AMERICA, INC. AS A LICENSED FIRE SPRINKLER CONTRACTOR UNDER ARTICLE 2 OF CHAPTER 87 OR THE GENERAL STATUTES FOR THE STATE OF NORTH CAROLINA.
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- JONATHAN STELLA  
LEVEL III AUTOMATIC SPRINKLER SYSTEMS  
#111897  
NORTH CAROLINA STATE LICENSE #29733

<p><b>SYSTEM DESIGN CRITERIA</b></p> <p>TYPE SYSTEM: <input checked="" type="checkbox"/> WET <input type="checkbox"/> DRY <input type="checkbox"/> DELUGE <input type="checkbox"/> NFPA STANDARD: <input type="checkbox"/> #13D <input type="checkbox"/> #13R <input type="checkbox"/> #14 <input type="checkbox"/> #20 <input type="checkbox"/> #22 <input type="checkbox"/> PREACTION <input type="checkbox"/> ANTI-FREEZE</p> <p>HAZARD: <input checked="" type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HIGH <input type="checkbox"/> PIPES REQUIRED: <input type="checkbox"/> NO <input type="checkbox"/> SLEEVES REQUIRED: <input type="checkbox"/> NO</p> <p>LOCAL HOSE THREADS: <input checked="" type="checkbox"/> N.S.T. <input type="checkbox"/> OTHER</p> <p>SPRINKLERS ARE REQUIRED TO BE LOCATED IN THE CENTER OF THE CEILING TILES.</p>		<p><b>APPROVING AGENCIES</b></p> <p>APPROVING AUTHORITY: HARNETT COUNTY</p> <p>UNDERWRITER: N/A</p> <p>GENERAL CONTRACTOR: WATERMARK HOMES ADDRESS: 1303 FT BRAGG ROAD SUITE 201 CITY &amp; STATE: FAYETTEVILLE, NC 28305 PHONE NO.: (910) 483-2229 FAX NO.:</p>		<p><b>GENERAL NOTES</b></p> <ol style="list-style-type: none"> <li>Freeze Protection: The owner is responsible for maintaining a min. of 40°F temperature for all wet systems and portions of other systems containing water.</li> <li>M.I.C. Protection: The owner is responsible for all detection testing/prevention.</li> <li>Design is subject to minor deviations arising from field conditions and/or trade coordination. Such deviations shall not affect code compliance or scope of work and shall not require resubmittal except in "as-built" if required by contract documents.</li> <li>Underground piping to ensure lead-in is plumbed, 2-holed, rodless, flushed, thrust blocked and a fully executed underground test certificate required per NFPA to be provided to FLSA prior to connection. FLSA is not responsible for damage to its system or components due to debris entering the system from underground water lines provided by others.</li> <li>This drawing is property of Fire and Life Safety America and is not to be duplicated and/or distributed without written authorization from FLSA.</li> <li>Hydrostatic testing will only be performed with water or air depending on adequate temperature. Any other form of testing is excluded.</li> </ol>		<p><b>LEGEND</b></p> <table border="1"> <tr> <th>Symbol</th> <th>Description</th> </tr> <tr> <td>●</td> <td>Hydraulic Reference Point</td> </tr> <tr> <td>○</td> <td>Elev. Below Top of Steel</td> </tr> <tr> <td>○</td> <td>Elev. Above Finished Floor</td> </tr> <tr> <td>+</td> <td>Top of Top of Steel</td> </tr> <tr> <td>○</td> <td>Ceiling Height</td> </tr> <tr> <td>○</td> <td>Denotes Hanger Location</td> </tr> <tr> <td>○</td> <td>Denotes Seismic Support</td> </tr> <tr> <td>○</td> <td>Room name or use</td> </tr> <tr> <td>○</td> <td>Sleeve Location</td> </tr> <tr> <td>○</td> <td>FLSA Start Point</td> </tr> </table>		Symbol	Description	●	Hydraulic Reference Point	○	Elev. Below Top of Steel	○	Elev. Above Finished Floor	+	Top of Top of Steel	○	Ceiling Height	○	Denotes Hanger Location	○	Denotes Seismic Support	○	Room name or use	○	Sleeve Location	○	FLSA Start Point	<p><b>SPRINKLER SUMMARY</b></p> <table border="1"> <thead> <tr> <th>SYM</th> <th>TYPE</th> <th>FINISH</th> <th>TEMP</th> <th>ORIE.</th> <th>"K"</th> <th>NPT</th> <th>MANUF.</th> <th>SIN#</th> <th>ESCUTCHEON</th> <th>QTY</th> </tr> </thead> <tbody> <tr> <td>●</td> <td>RES. PENDENT</td> <td>WHITE</td> <td>200°</td> <td>1/2"</td> <td>4.9</td> <td>1/2"</td> <td>VIKING</td> <td>VK494</td> <td>CONCEALED</td> <td>0</td> </tr> </tbody> </table> <p>TOTAL SPRINKLERS THIS PROJECT: 17</p> <p>TOTAL SPRINKLERS THIS DRAWING: 0</p>		SYM	TYPE	FINISH	TEMP	ORIE.	"K"	NPT	MANUF.	SIN#	ESCUTCHEON	QTY	●	RES. PENDENT	WHITE	200°	1/2"	4.9	1/2"	VIKING	VK494	CONCEALED	0	<p><b>REVISIONS</b></p> <table border="1"> <thead> <tr> <th>#</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12/21/2021</td> <td>SUBMITTAL TO AHJ</td> <td>RCC</td> </tr> </tbody> </table>		#	DATE	DESCRIPTION	BY	1	12/21/2021	SUBMITTAL TO AHJ	RCC	<p><b>GRAPHIC SCALE: 1/8" = 1'-0"</b></p> <p>1721 Round Rock Drive Raleigh, NC 27715 PHONE (919) 872-3250 FAX (919) 877-8776</p> <p>FLSA PROTECTING AMERICA</p> <p>JOB #: 22NC1553 DATE: 12/20/2021 DRAWN BY: R. COLLINS SCALE: AS NOTED</p> <p>HYD. SITE PLAN, GENERAL NOTES &amp; DETAILS OAKHAVEN LOT 22 70 BUCKHAVEN DR. HOLLY SPRINGS, NC 27540</p> <p>DRAWING #: FP1 OF 2</p>	
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