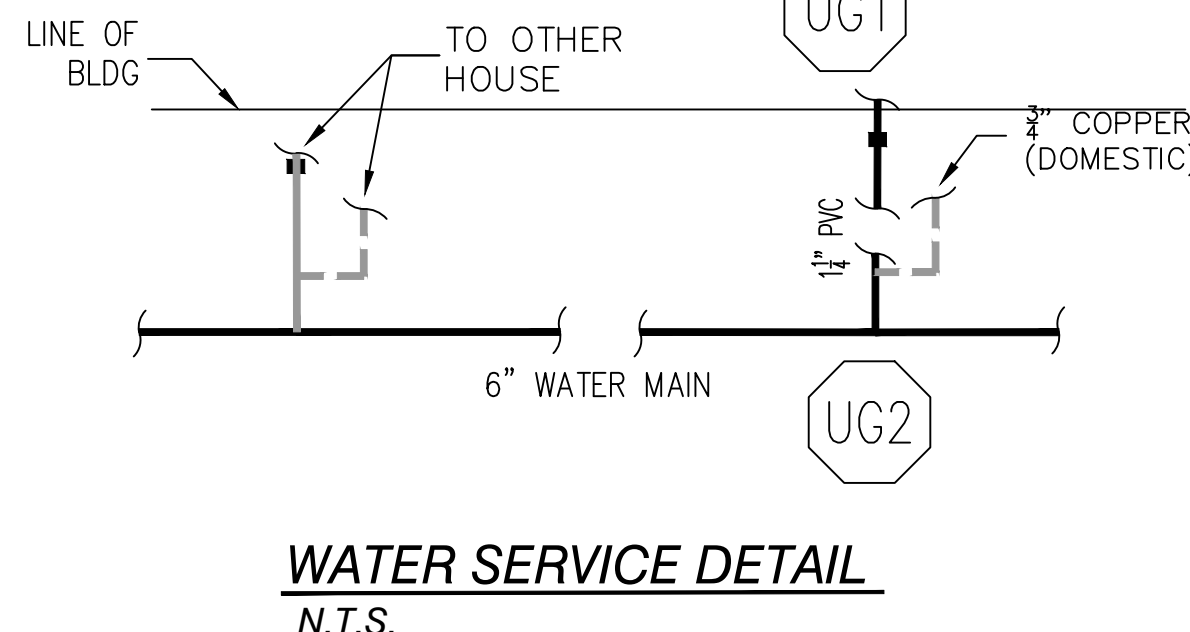
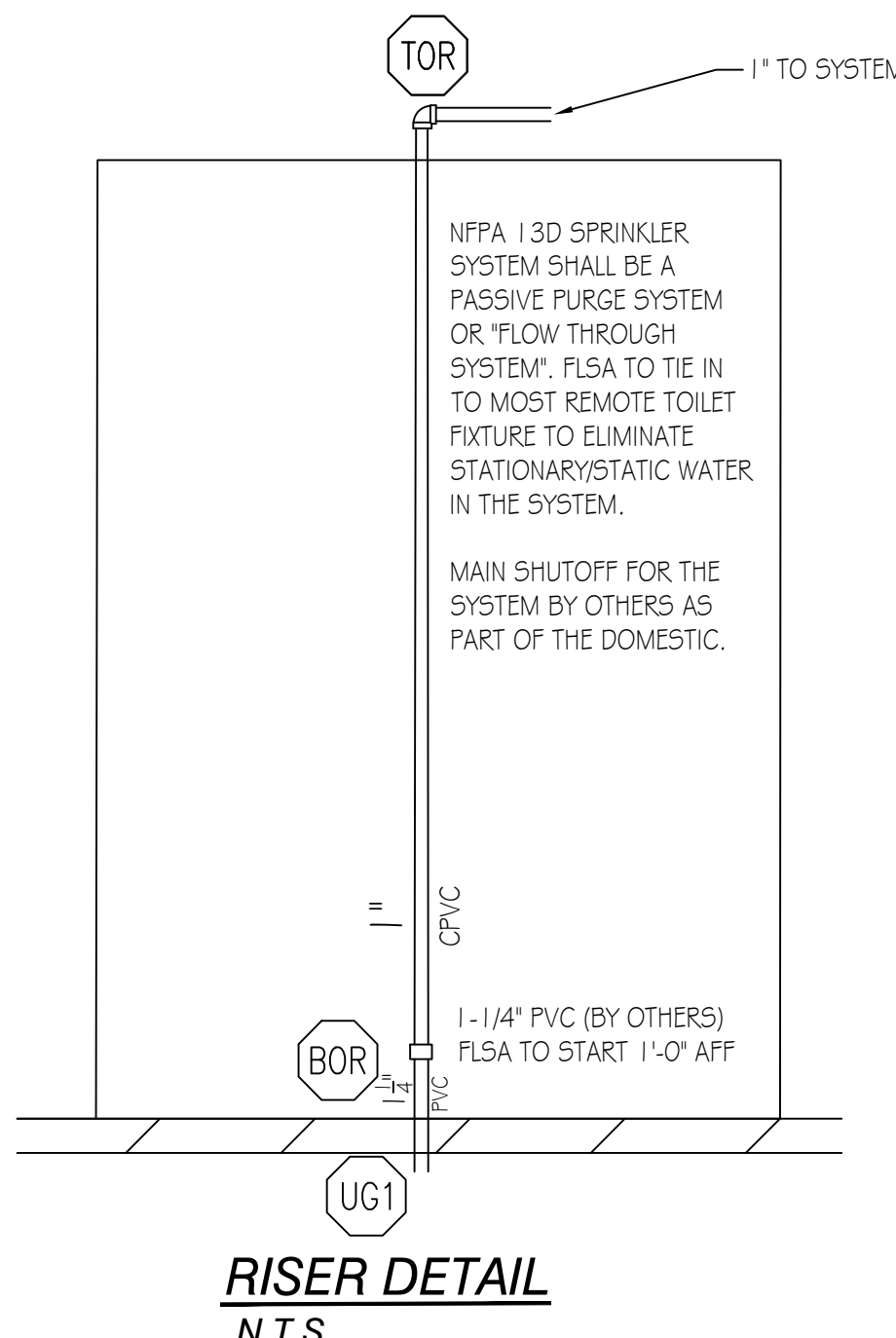
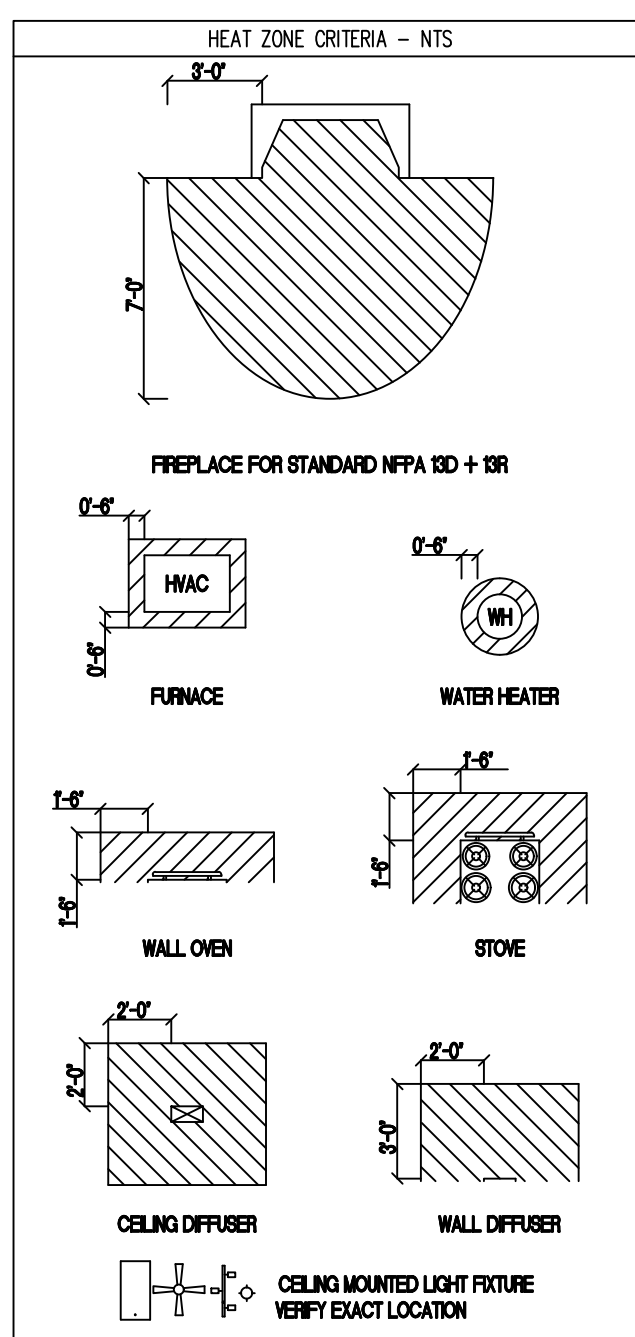
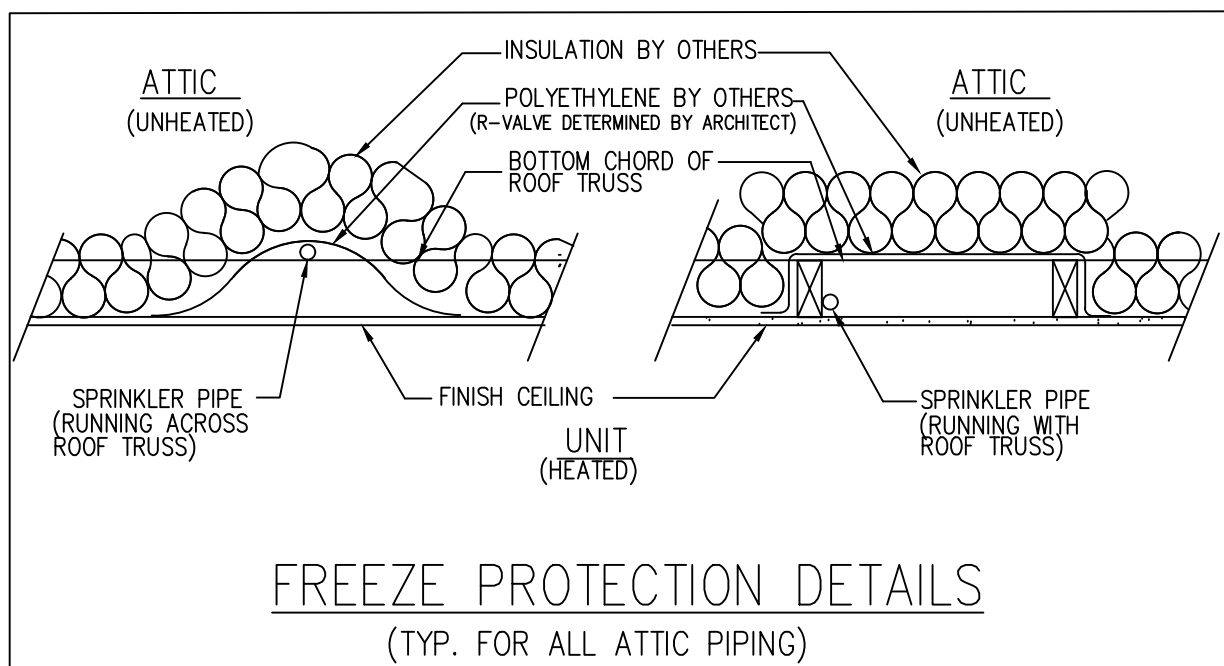
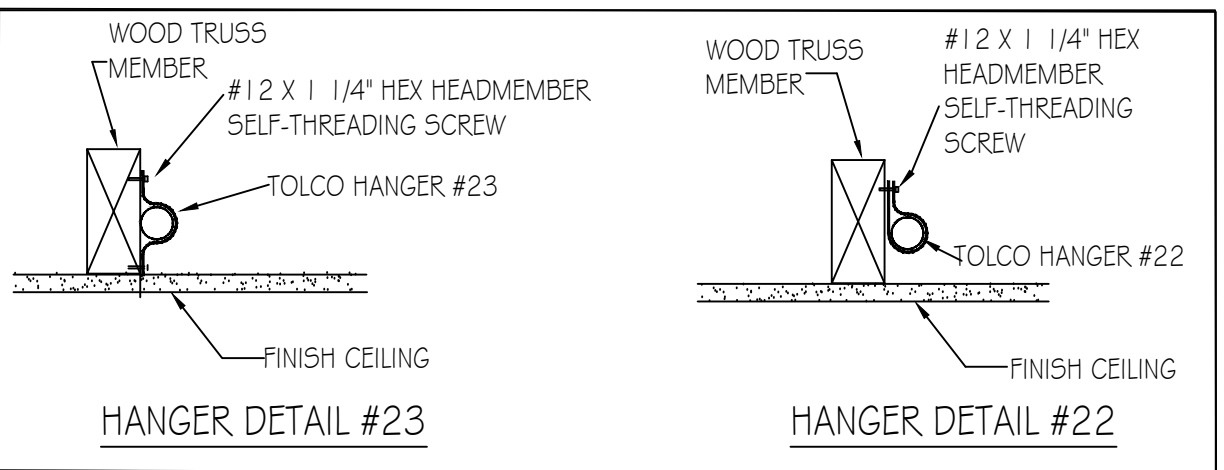


GENERAL NOTES

- 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.
- PENDENT SPRINKLERS ARE TO BE SPACED A MAXIMUM OF 18 FT. X 18 FT. AND A MINIMUM OF 8 FT. APART. PENDANTS MAY BE A MAXIMUM OF 9'-0" OFF OF ANY WALL.
- 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.



Sprinkler Design Data

| | |
|---|-----------------------|
| Project Name: OAKHAVEN LOT 01 | System: WET |
| Project Street Address: 160 OAKHAVEN DRIVE. | Sys. Sq. Ft.: VARIES |
| Suite: - | Floor#: 1 |
| Designed By: HALEY WEYANT | Phone: (919) 872-3250 |
| Occupancy: RESIDENTIAL | Hazard: RESIDENTIAL |
| | Ceiling Height: 9'-0" |
| | Total Bldg. Hgt.: - |

Design Summary

| Design Method | RA # 1 | RA # 2 | RA # | RA # | RA # |
|--------------------------|-----------------|-----------------|------|------|------|
| Design Method | CALCULATED | CALCULATED | - | - | - |
| Design Area # | REMOTE AREA #1 | REMOTE AREA #2 | - | - | - |
| Location | MASTER BEDROOM | KITCHEN/NOOK | - | - | - |
| Type of System | WET | WET | - | - | - |
| Hazard Class | RESIDENTIAL | RESIDENTIAL | - | - | - |
| Criteria Form | NFPA 13D (2013) | NFPA 13D (2013) | - | - | - |
| Design Area | 1 HEADS | 2 HEADS | - | - | - |
| Sprinkler Spacing | 20X20 (400 SF) | 16X16 (256 SF) | - | - | - |
| Density | .05 | .05 | - | - | - |
| K-factor | 4.9 | 4.9 | - | - | - |
| Domestic Flow | 3 GPM | 3 GPM | - | - | - |
| # Design Sprinklers | 1 | 2 | - | - | - |
| Special Application Spk. | - | - | - | - | - |
| Requirement # TEST | - | - | - | - | - |
| G.P.M. Req'd | 23.03 | 28.99 | - | - | - |
| P.S.I. Req'd | 29.52 | 23.86 | - | - | - |
| Safety Factor # TEST | 24.78 | 30.35 | - | - | - |
| Volume of Dry System | - | - | - | - | - |

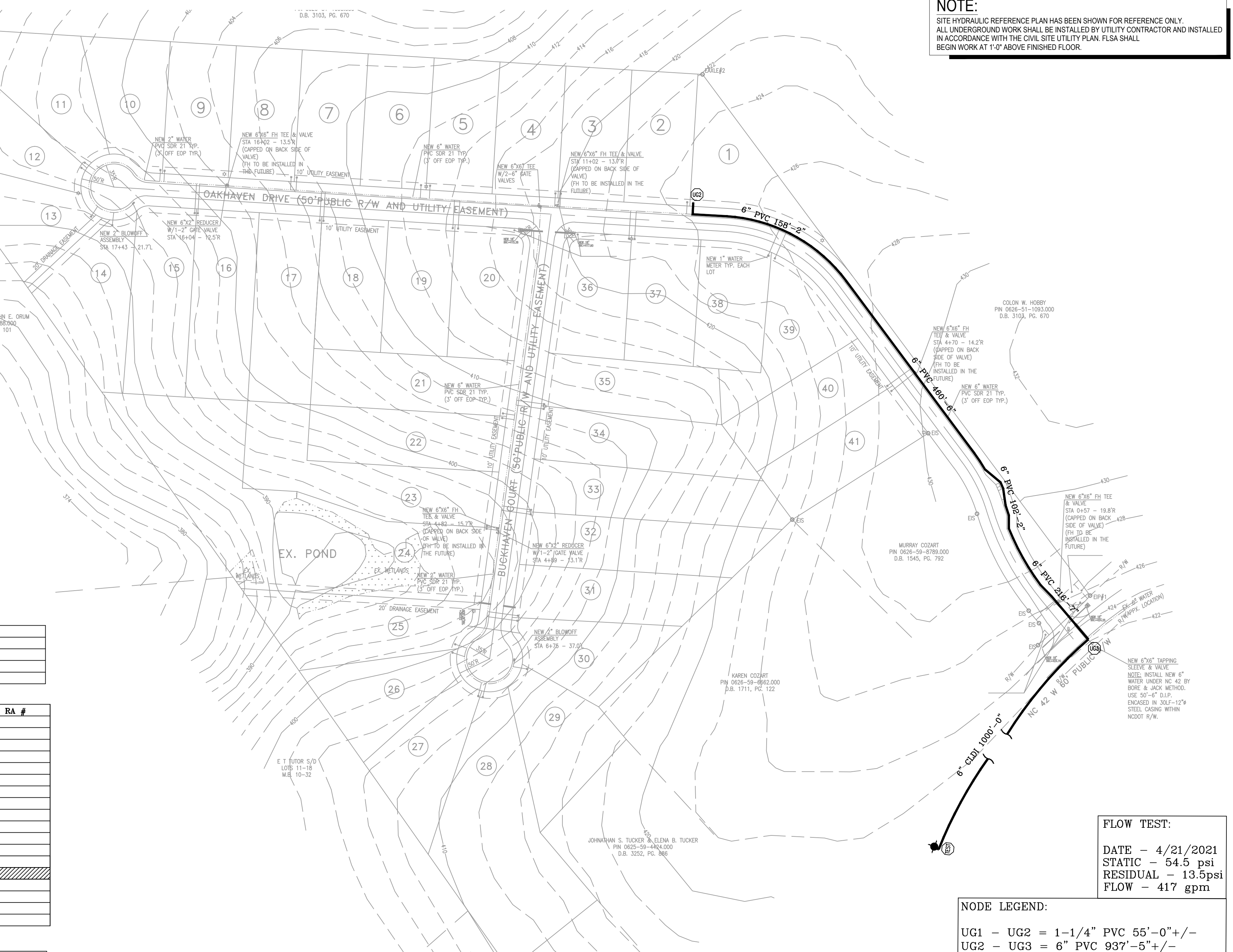
Water Supply Information

| | | | |
|----------------------|----------------------|-----------------|----------------------------|
| Tested by: - | Date/Time: 4/21/21 | 4000 psi | Pressure Hydrant: 43188037 |
| Hydrant Elevation: - | Flow Hydrant: - | Static | |
| Static (PSI): 54.5 | Residual (PSI): 13.5 | Flow (GPM): 417 | |

Copy of Water Test Data Included with Calculation is required

SITE PLAN - FOR HYDRAULIC REFERENCE ONLY

N.T.S.



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.

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

NODE LEGEND:
UG1 - UG2 = 1-1/4" PVC 55'-0"+/-
UG2 - UG3 = 6" PVC 937'-5"+/-
UG3 - TEST = 6" CLDI 1000'-0"+/-

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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- NORTH CAROLINA STATE LICENSE #29733
PERMIT NUMBER: SFD2010-0078

TABLE A - CPVC STANDARD SUPPORT SPACING

| NOMINAL SIZE, INCHES | MAX SUPPORT SPACING, FEET |
|----------------------|---------------------------|
| 3/4" | 5'-0" |
| 1" | 6'-0" |
| 1 1/4" | 6'-6" |
| 1 1/2" | 7'-0" |
| 2" | 8'-0" |
| 2 1/2" | 9'-0" |
| 3" | 10'-0" |

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

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

CEILING FAN DETAIL
DISTANCE FROM CENTER OF FAN MOTOR HOUSING TO CENTER OF FIRE SPRINKLER 36" MINIMUM
NOT TO SCALE

| | | | | | | | |
|--|---|---|---|--|--|--|--|
| | SYSTEM DESIGN CRITERIA TYPE SYSTEM: WET, DRY, DELUGE, PREACTION, ANTI-FREEZE OCCUPANCY: RESIDENTIAL, HAZARD: LIGHT MAXIMUM SPACING: VARIES, LOCAL HOSE THREADS: N.S.T., SLEEVES REQUIRED: NO SPRINKLERS ARE REQUIRED TO BE LOCATED IN THE CENTER OF THE CEILING TILES. | APPROVING AGENCIES APPROVING AUTHORITY: HARNETT COUNTY UNDERWRITER: N/A GENERAL CONTRACTOR: WATERMARK HOMES ADDRESS: 1303 FT BRAGG ROAD SUITE 201 CITY & STATE: FAYETTEVILLE NC, 28305 PHONE NO.: (910) 483-2229 FAX NO.: | GENERAL NOTES 1. 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. 2. M.I.C. Protection: The owner is responsible for all detection testing prevention. 3. 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. 4. Underground provider to ensure lead-in is plumbed, 2-hole, red, threaded, 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". 5. This drawing is property of Fire and Life Safety America and is not to be duplicated and/or distributed without written authorization from FLSA. 6. Hydrostatic testing will only be performed with water or air depending on adequate temperature. Any other form of testing is excluded. | LEGEND Symbol Description Hydraulic Reference Point 18" BITS Elev. Below Top of Steel 12'-0" AFF Elev. Above Finished Floor + TOS 12'-0" Elev. of Top of Steel (10'-0") Ceiling Height Denotes Hanger Location Denotes Setback Support Room name or use Sleeve Location FLSA Start Point | SPRINKLER SUMMARY TYPE FINISH TEMP ORIF "K" NPT MANUF SIN# ESCUTCHEON QTY. RES. PENDENT WHITE 200 1/2" 4.9 1/2" VIKING VK494 CONCEALED 0 * DATE 4/22/2021 DESCRIPTION SUBMITTAL TO AHJ BY HCW REVISIONS | RICHMOND, VA CHESEAPEAKE, VA ROANOKE, VA SPRINGFIELD, VA ORLANDO, FL HOUSTON, TX SAN ANTONIO, TX DALLAS, TX AUSTIN, FL CHARLOTTE, NC RALEIGH, NC BALTIMORE, MD ATLANTA, GA 1731 Round Rock Drive Raleigh, NC 27615 PHONE (919) 872-3250 FAX (919) 877-5776 JOB #: 21NC1513 DATE: 4/12/2021 DRAWN BY: H. WEYANT SCALE: AS NOTED | HYD. PLAN, GENERAL NOTES & DETAILS OAKHAVEN LOT 01 160 OAK HAVEN DRIVE HOLLY SPRINGS, NC 27540 DRAWING #: FP1 OF 2 |
| | PIPE TYPES AND FITTING TYPES LINE PIPING: CPVC LINE FITTINGS: CPVC MAIN PIPING: CPVC MAIN FITTINGS: CPVC | | | | | | |

NOTES:

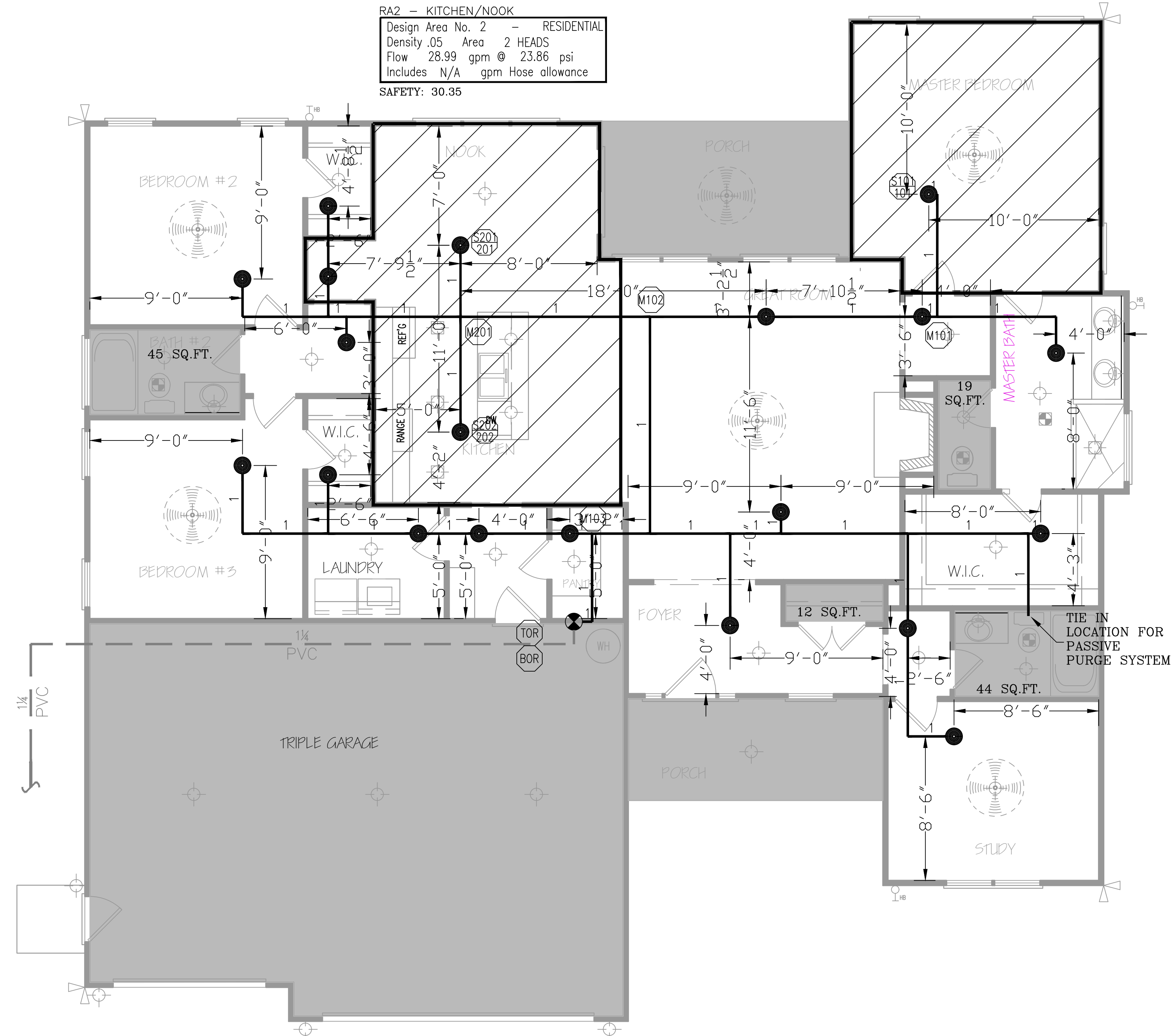
- PORCHES AND GARAGES ARE OMITTED PER NFPA 13D (2013) 8.3.4
- CLOSETS 24 SQ. FT. OR LESS IN AREA ARE UNSPRINKLERED PER NFPA 13D (2013) 8.3.3; WALLS AND CEILING TO BE SURFACED WITH NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIAL AS DEFINED BY NFPA 220
- BATHROOMS 55 SQ. FT. OR LESS IN AREA ARE UNSPRINKLERED PER NFPA 13D (2013) 8.3.2

SPRINKLER LEGEND

- NO HEADS REQUIRED
- REMOTE AREA

RA1 - MASTER BEDROOM
 Design Area No. 1 - RESIDENTIAL
 Density .05 Area 1 HEADS
 Flow 23.03 gpm @ 29.52 psi
 Includes N/A gpm Hose allowance
 SAFETY: 24.78

RA2 - KITCHEN/NOOK
 Design Area No. 2 - RESIDENTIAL
 Density .05 Area 2 HEADS
 Flow 28.99 gpm @ 23.86 psi
 Includes N/A gpm Hose allowance
 SAFETY: 30.35



SPRINKLER PLAN

1/8" = 1' - 0"

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JONATHAN STERBILA
 LEVEL III AUTOMATIC SPRINKLER SYSTEMS
 #111897

NORTH CAROLINA STATE LICENSE #29733

PERMIT NUMBER: SFD2010-0078

| SYSTEM DESIGN CRITERIA | | APPROVING AGENCIES | | GENERAL NOTES | | LEGEND | | SPRINKLER SUMMARY | | REVISIONS | | CONTACT INFORMATION | | | | | | | | | |
|---|---|---------------------------------------|-------------------------|--|-----------------------------------|---|------------------------------|-------------------|---------------------|-----------------------------------|---------------------|-----------------------------------|-------------------------------|-----------------------|-----------------|-------------------------------|----------------|---|-----------------|-----------------|--|
| TYPE SYSTEM: <input checked="" type="checkbox"/> WET <input type="checkbox"/> DRY <input type="checkbox"/> DELUGE <input type="checkbox"/> PREACTION <input type="checkbox"/> ANTI-FREEZE | NFPA STANDARD: <input type="checkbox"/> #13 <input checked="" type="checkbox"/> #13D <input type="checkbox"/> #13R <input type="checkbox"/> #14 <input type="checkbox"/> #20 <input type="checkbox"/> #22 <input type="checkbox"/> #24 <input type="checkbox"/> #231 <input type="checkbox"/> #231C <input type="checkbox"/> #15 <input type="checkbox"/> #16 <input type="checkbox"/> #409 | APPROVING AUTHORITY: HARNETT COUNTY | UNDERWRITER: N/A | 1. 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. | Symbol: Hydraulic Reference Point | TYPE: RES. PENDENT | FINISH: WHITE | TEMP: 200° | ORIF: 1/2" | "K": 4.9 | NPT: 1/2" | MANUF: VIKING | SIN#: VK494 | ESCUTCHEON: CONCEALED | QTY: 20 | RICHMOND, VA | CHESAPEAKE, VA | ROANOKE, VA | SPRINGFIELD, VA | ORLANDO, FL | |
| OCCUPANCY: RESIDENTIAL | HAZARD: LIGHT | PIPE ID REQUIRED: NO | MAXIMUM SPACING: VARIES | LOCAL HOSE THREADS: N.S.T. | SLEEVES REQUIRED: NO | SPRINKLERS ARE REQUIRED TO BE LOCATED IN THE CENTER OF THE CEILING TILES. | PIPE TYPES AND FITTING TYPES | LINE PIPING: CPVC | LINE FITTINGS: CPVC | MAIN PIPING: CPVC | MAIN FITTINGS: CPVC | DATE: 4/12/2021 | DESCRIPTION: SUBMITTAL TO AHJ | BY: HCW | DATE: 4/12/2021 | DESCRIPTION: SUBMITTAL TO AHJ | BY: HCW | 1731 Round Rock Drive Raleigh, NC 27615 PHONE (919) 872-3250 FAX (919) 877-5775 FLSA FIRE & LIFE SAFETY AMERICA PROTECTING AMERICA | | | |
| GENERAL CONTRACTOR: WATERMARK HOMES | | ADDRESS: 1303 FT BRAGG ROAD SUITE 201 | | CITY & STATE: FAYETTEVILLE NC, 28305 | | PHONE NO.: (910) 483-2229 | | FAX NO.: | | TOTAL SPRINKLERS THIS PROJECT: 20 | | TOTAL SPRINKLERS THIS DRAWING: 20 | | JOB #: 21NC1513 | | DATE: 4/12/2021 | | DRAWN BY: H. WEYANT | | SCALE: AS NOTED | |

SPRINKLER PLAN
OAK HAVEN LOT 01
 160 OAK HAVEN DRIVE
 HOLLY SPRINGS, NC 27540

DRAWING #:
FP 2
 OF 2