

Burn Building

CONTRACTOR QUALIFICATION DATA SHEET

1. General:

In order to be considered for selection, Bidders shall submit the following information as part of your response to this solicitation. Failure to complete and provide this data sheet and the requested information may result in a non-responsive bid.

1.1 Proprietary Information

All source code, executables, user data, materials, meeting minutes, progress reports and documentation shall be submitted to the City and shall belong exclusively to the City, and shall be subject to public inspection in accordance with the Virginia Freedom of Information Act. Trade secrets or proprietary information submitted by a Bidder shall not be subject to public disclosure under the Virginia Freedom of Information Act provided the Bidder invokes the protections of Section 2.2-4342F of the Virginia Public Procurement Act, which provides that:

“Trade secrets or proprietary information submitted by a Bidder, or subsequently the Contractor, in connection with a procurement transaction, shall not be subject to public disclosure under the Virginia Freedom of Information Act. However, the Bidder or Contractor must invoke the protection of this Section prior to, or upon submission of the data or other materials. The Contractor must identify the data or other materials to be protected and justify in writing the explicit reasons that such protection is necessary. Failure to mark the data or other materials as proprietary or otherwise classified, will result in the data or other materials being released to Bidders or to the public as provided in the Virginia Freedom of Information Act.”

The classification of the entire proposal document and total bid price as proprietary or trade secrets is not acceptable.

1.2 Incurred Cost

The Bidder is responsible for all costs of proposal preparation. The City of Winchester is not liable for any costs incurred in response to the ITB.

1.3 Contractor Qualifications:

Proposals should be as thorough and detailed as possible so that City may properly evaluate your capabilities to provide the required services. Bidders shall submit responses for the following items within your Bid response.

1.3.1 General

1.3.1.1 How many years has your organization been in business as a General Contractor?

1.3.1.2 How many years has your organization been in business under its present name?

1.3.1.3 What is your organization's Virginia Contractors Registration Number?

1.3.1.4 List the states and categories of construction in which your organization is legally qualified to do business?

1.3.1.5 *Qualifications:* Provide a description of the organizational structure and history. Identify key personnel to be assigned to this project and their relevant experience in work similar to this project.

BID FORM
Revised 9/16/16
Burn Building
ITB# 201448

This Bid is submitted to:

City of Winchester, Virginia
Finance Department - Purchasing Division
Rouss City Hall, 1st Floor
15 North Cameron Street
Winchester, Virginia 22601

In submitting this Bid, bidder acknowledges that the bidder has examined copies of the following Contract Documents:

BIDDING DOCUMENTS

- Invitation to Bid
- Instructions to Bidders
- Bid Form
- Contractor Qualification Data Sheet
- Bid Bond
- Non-Collusion Affidavit
- Contract
- Performance Bond
- Labor and Material Payment Bond
- Notice of Award
- Notice to Proceed
- City of Winchester Required General Terms and Conditions
- General Conditions
- Supplement to General Conditions
- Special Terms and Conditions

TECHNICAL SPECIFICATIONS

- Scope of Work – Sequence of Construction
- Demolition
- Disposal of Materials
- Erosion and Sediment Control
- Measurement and Payment

DRAWINGS

ADDENDA:

| <u>NUMBER</u> | <u>DESCRIPTION</u> | <u>DATE</u> |
|---------------|--------------------|-------------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Receipt of all of above is hereby acknowledged.

CONTRACTOR: _____

BY (SIGNATURE): _____

NAME AND TITLE: _____

DATE: _____

BID ITEMS

- (a) The Contractor shall provide all unit prices or lump sum prices for all bid items on the Bid Form herein. **If a unit price or lump sum price is omitted or left blank the bid and bidder shall be non-responsive.** All bid prices are for Furnish and Install work, complete and in place.
- (b) The quantities shown for unit bid items are based upon the best information available at time of preparation of these bid documents, and are established for the purpose of obtaining a bid price. No adjustments to the bid prices based on changes to quantities will be considered. All bid prices will be held throughout the duration of the contract regardless of any increase or decrease in bid quantity.
- (c) Emergency work shall be negotiated with a maximum allowable amount of 50% over the bid price by item. This excludes all lump sum bid items.
- (d) All other bid items not listed or described in the Contract Documents will be negotiated between the City and the Contractor before the time of need. Once a negotiated price is established, it will be used for the remainder of the contract.

The undersigned Bidder proposes to complete all work in accordance with the Contract Documents for the following lump sum prices:

**City of Winchester
Burn Building
BID TABLE**

| ITEM NO. | DESCRIPTION | ESTIMATED QUANTITY | UNIT | UNIT COST | TOTAL COST |
|----------------------------|--|--------------------|------|-----------|------------|
| BASE BID ITEMS | | | | | |
| 1 | Mobilization | 1 | LS | | |
| 2 | Demolition of Existing Structure | 1 | LS | | |
| 3 | Demolition of Existing Concrete, Asphalt, etc. | 1 | LS | | |
| 4 | Erosion and Sediment Control | 1 | LS | | |
| 5 | Burn Building Prototype | 1 | LS | | |
| 6 | Electrical Supply to Building | 1 | LS | | |
| 7 | Building Civil Site Work | 1 | LS | | |
| ALTERNATE BID ITEMS | | | | | |
| 8 | Flood Lighting | 1 | LS | | |
| 9 | Additional Burn Room – 104a | 1 | LS | | |
| 10 | Additional Burn Room – 204a | 1 | LS | | |
| 11 | Additional Staircase – 1a | 1 | LS | | |
| 12 | Additional Staircase – 2a | 1 | LS | | |
| 13 | Aggregate Base Course | 440 | TON | | |
| 14 | Asphalt Concrete Base, BM-25.0 | 137 | TON | | |
| 15 | Asphalt Concrete Surface, SM-9.5A | 120 | TON | | |
| 16 | Water Storage System | 1 | LS | | |
| 17 | Exterior Civil Site Work | 1 | LS | | |
| 18 | Standpipe and 1.5” Sprinkler pipe | 1 | LS | | |
| 19 | Additional Scuppers | 4 | EA | | |
| 20 | Additional Window | 1 | LS | | |
| 21 | Roof gates | 1 | LS | | |

| | | | | |
|---------------------------|--------------|---|----|--|
| 22 | Pitched Roof | 1 | LS | |
| TOTAL FOR ALL WORK | | | | |

IN WORDS: _____

CONTRACTOR: _____

BY: (SIGNATURE) _____

NAME AND TITLE: _____

DATE: _____

ADDRESS: _____

TELEPHONE: _____

TAX IDENTIFICATION NUMBER _____

CURRENT VIRGINIA CONTRACTOR REGISTRATION

NUMBER: _____ **NOTE: REQUIRED BID GUARANTEE MUST BE**

ENCLOSED WITH THIS BID PROPOSAL.

Burn Building

SPECIAL CONDITIONS

1. **SPECIFICATIONS**

Unless otherwise described in the Contract Documents, the following specifications and standards apply to this work:

1. 2007 VDOT Road and Bridge Specifications
2. City of Winchester – Public Services Standards Manual

2. **INSURANCE REQUIREMENTS – CITY OF WINCHESTER**

2.01 Before any work at the site is started, Contractor shall deliver to Owner, with a Copy to Engineer, an executed Certificate of Insurance. The Certificate shall indicate that the required insurance is in force and state that the policies will not be materially changed or canceled without a thirty (30) day advance notice by registered mail to Owner and Engineer. The representative signing the Certificate shall furnish evidence that he is authorized to so sign as well as his address and the name and address of the agency or agencies through which the insurance was obtained. Contractor shall take out and maintain the following insurance:

2.02 Contractor's Comprehensive General Liability (bodily injury and property damage) shall be provided for the following limits:

- A. Combined single limit 5,000,000 dollars each occurrence
- B. Combined single limit: 5,000,000 dollars annual aggregate
- C. The general liability insurance shall include the following coverage:

1. Comprehensive Form
2. Premises - Operation
3. Explosion and Collapse Hazard
4. Underground Hazards
5. Products/Completed - Operations Hazards
6. Contractual Liability Insurance
7. Broad Form Comprehensive General Liability, Property Damage, including Completed Operations
8. Independent Contractors (Contractor's Protective Liability)
9. Personal Injury (all insuring agreements), Deleting the Employee Exclusion
10. If protection is under an umbrella policy, it shall not exclude any of the above items under the basic policy.

D. City of Winchester shall be named by endorsement as Additional Insured.

2.03 Contractor's Automobile Liability (bodily injury and property damage) shall be provided for the following limits:

- A. Combined single limit: 1,000,000 dollars each occurrence
- B. The Automobile Liability Insurance shall include the following coverage:

1. Comprehensive Form
2. Owned
3. Hired
4. Non-Owner

2.04 Contractor's Workers Compensation Insurance as required by Federal, State, and Municipal Laws for the protection of all Contractor's employees working on or in connection with the Project, including broad form, all state and voluntary compensation coverage, and employer's liability coverage with the following limits:

- | | |
|------------------------------|-------------------------------------|
| A. Bodily injury by accident | 1,000,000 Dollars each accident |
| B. Bodily injury by disease | 1,000,000 Dollars policy limit |
| C. Bodily injury by disease | 1,000,000 Dollars for each employee |

2.05 All insurers shall be licensed to conduct business in the Commonwealth of Virginia and all insurance companies are required to have an A.M. Best Company financial rating of A- or better.

2.06 Contractor shall require his insurance agent to certify on the insurance certificate that the insurance coverage specified by these specifications is fully in effect, both in scope and amount. If insurance coverage is effected with more than one company, the individual certificates shall identify the items of insurance which the individual companies cover. The insurance certificates shall contain a provision that the coverage afforded under the policies will not be canceled or materially changed unless at least a thirty (30) days prior written notice has been given to the Owner.

2.07 Left Intentionally Blank

2.08 Notification and Handling of an Insurance Claim:

The general contractor on any City construction project shall be responsible for ensuring that all matters concerning the completion of an assigned project, including but not limited to handling of insurance claims by third parties arising as a result of the acts and omissions of the general contractor or his subcontractors, are handled in a professional manner. To this end, the City expects the general contractor to act responsibly with regard to prompt payment of valid insurance claims and upon notice of a claim, the general contractor shall immediately notify the Owner's project manager, investigate and document the claim, and make a liability determination within ten (10) business days. Pending subrogation between the general contractor and/or sub-contractor and/or any insurance carrier will not be a cause for delay in payment of a valid claim. Default of this provision may result in retainage payments being withheld and jeopardize the general contractor's future bid opportunities with the City of Winchester.

3. **WORKING HOURS - HOLIDAYS**

Work under the Contract shall not be prosecuted on Sundays, or on legal holidays. Work hours (Monday – Saturday) shall be from 7:00 a.m. until 6:00 p.m. If the Contractor wishes to prosecute any portion of the Work outside of the established work hours or on

Sundays or legal holidays, he shall first obtain written permission from the Engineer. Such requests shall be submitted at least 48 hours in advance of the period proposed for such overtime work. For the purpose of this Contract, the legal holidays are identified as:

- Labor Day (September 5, 2016)
- Veteran's Day (November 11, 2016)
- Thanksgiving (November 24, 2016)
- Day after Thanksgiving (November 25, 2016)
- Christmas Eve Observed (December 23, 2016)
- Christmas Day Observed (December 26, 2016)
- New Year's Day Observed (January 2, 2017)
- Martin Luther King Day (January 16, 2017)
- Memorial Day (May 29, 2017)
- Independence Day (July 4, 2017)

4. **PROGRESS PAYMENTS**

- 4.01 The basis for payments shall be the actual quantity of work completed, as determined in field by the Engineer.
- 4.02 An amount equal to five percent (5%) of each progress payment shall be held from each payment as retainage.

5. **MISCELLANEOUS OTHER CONDITIONS**

- 5.01 It shall be the responsibility of the Contractor to locate utilities in the field. Contractor shall give all utility companies that may have subsurface or surface utilities in the area adequate notice at least 48 hours in advance that the Contractor is to perform work in this area.
- 5.02 The attention of the Contractor is drawn to the fact that the possibility exists of the Contractor encountering various water, chemical, electrical, or other lines. Contractor shall exercise extreme care before and during construction to locate and flag these items so as to avoid damage to existing lines. Should damage occur to an existing line, the Contractor shall repair the line at no cost to the Owner. Temporary support, adequate protection and maintenance of all underground and surface utility installations and structures, drains, and other obstructions encountered in the progress of the work shall be provided by the Contractor at his own expense.
- 5.03 Contractor shall be responsible for the temporary removal and re-installation of structures including, but not limited, to piping, conduits, drains, that may interfere with the work. The cost of such work shall be included in the Bid for the project and shall not result in any additional cost to the Owner. It shall be the Contractor's responsibility to contact and obtain permission from various authorities having jurisdiction over such structures, prior to start of the work.
- 5.04 Local drainage is not to be blocked. Shoulders, ditches, and drainage facilities shall be

kept clear at all times and in condition satisfactory to the Engineer.

- 5.05 Adequate barricades, construction signs, red lanterns and guards as required shall be placed and maintained during the course of the work, and until it is safe for the pedestrian and vehicular traffic to use the area. The rules and regulations of the Local and State and Federal authorities respecting safety provisions shall be observed.
- 5.06 All acceptance and payment of work is subject to inspection by the City of Winchester.
- 5.07 The Contractor shall be responsible to establish and maintain communications with the residents and business owners of the area affected by the construction. The purpose of this communication is to notify the residents and business owners of construction activities which affect them, and to coordinate accommodations for them during construction. The Contractor shall also be required to assist businesses and residents as necessary with access into or out of their property during the construction.
- 5.08 Contractor and all sub-contractors shall obtain a City of Winchester Business License before beginning work.
- 5.09 Contractor is responsible for correcting any damages caused to private property as a result of construction, at their own expense. Contractor shall be responsible for completing a video recording (DVD) of the entire project area within the City's right-of-way before construction begins and providing a copy of the DVD to the City. This recording must be completed before the mobilization fee is paid to the contractor. This recording will be the basis for help in determining any damages to private property that may occur during construction that the contractor may be responsible for.
- 5.10 The Contractor shall be solely responsible for adhering to all OSHA requirements at all times during the construction of the project.
- 5.11 The Contractor shall be solely responsible for protecting the newly poured sidewalks from vandalism (i.e. children writing names or words in the wet concrete) and shall be required to replace any concrete that is vandalized as directed by the City at the Contractor's expense.
- 5.12 The Contractor shall be responsible to construct the new facilities and/or modify existing facilities to ensure positive drainage at all locations.
- 5.13 High-early strength concrete shall be used on all driveway entrances.
- 5.14 The Contractor shall be solely responsible for ensuring that all new sidewalks and ramps constructed meet all current ADA (American's with Disabilities Act) requirements.
- 5.15 The Contractor shall coordinate with the Winchester Fire & Rescue Department to allow access for training at the Modular Training Facility and associated areas onsite.

*****END SPECIAL CONDITIONS*****

CITY OF WINCHESTER
TECHNICAL SPECIFICATION
DISPOSAL OF MATERIALS

Page 1 of 1
May 24, 2016

I. Description.

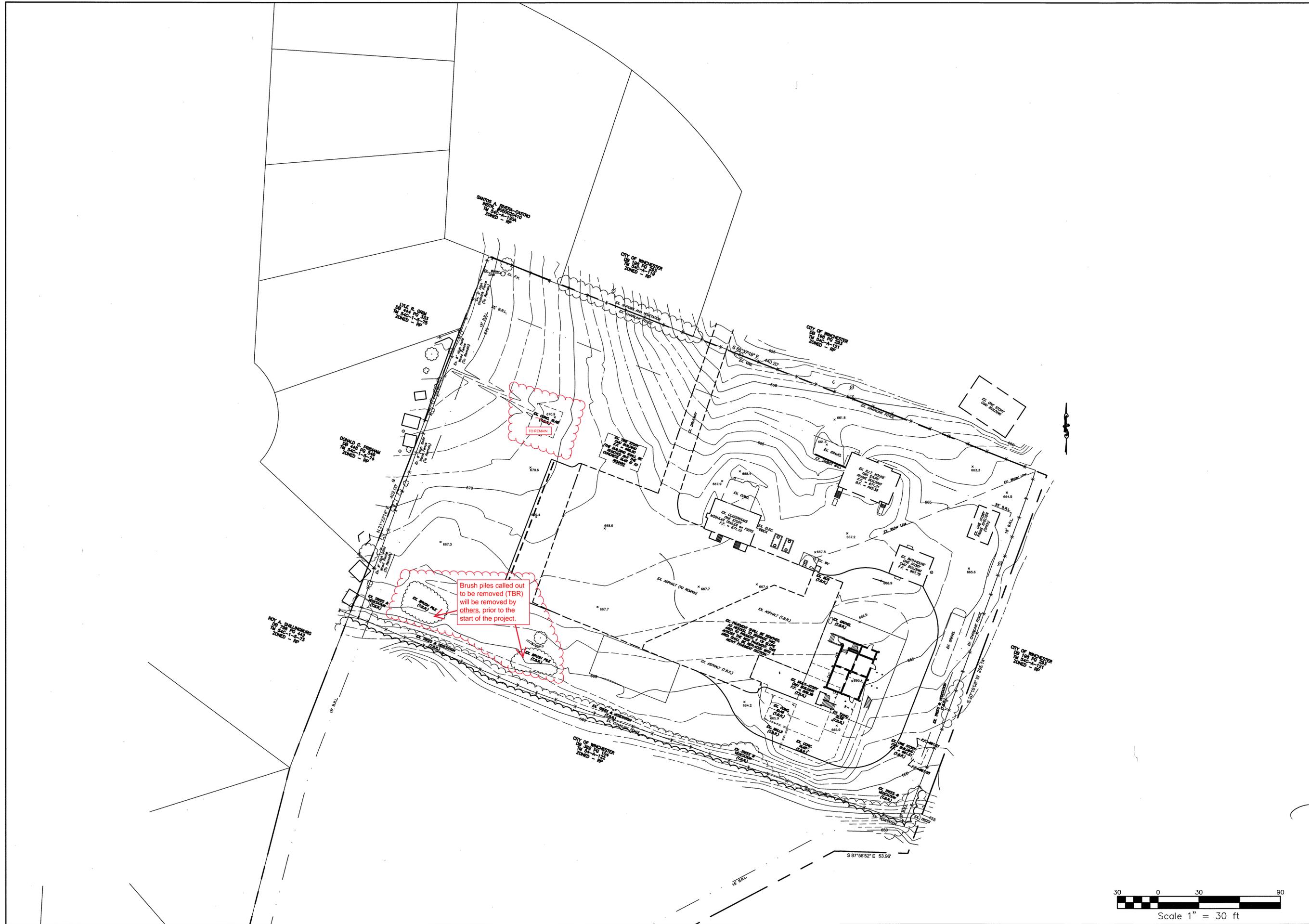
This work shall consist of properly disposing of all excess and unsuitable materials from the project including, but not limited to: concrete, asphalt, bricks, soil/gravel, rock, existing pipes, existing manholes, signs, posts, etc.

II. Procedures

- A. Disposal of all materials shall comply with all applicable federal, state, and local regulations and compliance shall be the sole responsibility of the Contractor.
- B. Prior to commencing work, the Contractor shall submit to the City for approval, a written plan detailing how and where all materials shall be disposed of from the project.
- C. The Contractor shall provide the City with copies of written agreements from private landowners and/or written approval from landfill operators accepting disposal of the materials from the project.
- D. For disposal of materials on private property, the written disposal plan shall include the following:
 - (1) the location and approximate boundaries of the disposal area;
 - (2) procedures to minimize erosion and siltation;
 - (3) provision of environmentally compatible screening;
 - (4) restoration plan;
 - (5) cover vegetation;
 - (6) other use of the disposal site;
 - (7) the drainage pattern on and away from the area of land affected, including the directional flow of water and a certification with appropriate calculations that verify all receiving channels are in compliance with Minimum Standard 19 of the Virginia Erosion and Sediment Control Regulations;
 - (8) location of haul roads and stabilized construction entrances if construction equipment will enter a paved roadway;
 - (9) constructed or natural waterways used for discharge;
 - (10) a sequence and schedule to achieve the approved plan and;
 - (11) the total drainage area for temporary sediment traps and basins shall be shown. Sediment traps are required if the runoff from a watershed area of less than three acres flows across a disturbed area. Sediment basins are required if the runoff from a watershed area of three acres or more flows across a disturbed area. The Contractor shall certify that the sediment trap or basin design is in compliance with VDOT Standards and Specifications, all local, state, and federal laws. Once a sediment trap or basin is constructed, the dam and all outfall areas shall be immediately stabilized.
- E. Upon completion of the use of private property as an approved disposal area, the Contractor shall furnish the City a release signed by the property owner indicating that the property has been satisfactorily restored.
- F. The City desires to retain ownership of two single swing steel doors and corresponding hinges, as well as the four steel rooftop chimney covers. Contractor shall coordinate with the Fire Department for storage location for these items.

III. Measurement and Payment.

There shall be no separate payment for this work and the costs associated with this work shall be included in other pay items.



| NO. | DATE | AGENCY COMMENTS | TGP | BY |
|-----|----------|-----------------|-----|----|
| 1 | 05-16-16 | | | |

TITLE:
EXISTING CONDITIONS and DEMOLITION PLAN

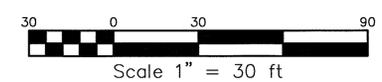
PROJECT:
**CITY OF WINCHESTER
 DEPARTMENT OF FIRE PROGRAMS
 BURN BUILDING PROTOTYPE I
 1716 WOODSTOCK LANE
 WINCHESTER, VIRGINIA 22602**

PAINTER-LEWIS, P.L.C.
 817 CEDAR CREEK GRADE, SUITE 120
 WINCHESTER, VIRGINIA 22601
 Telephone: (540) 662-5792
 Facsimile: (540) 662-5793
 Email: office@painterlewis.com



COMMONWEALTH OF VIRGINIA
Timothy G. Painter
 TIMOTHY G. PAINTER
 Lic. No. 018260
 05/18/16
 PROFESSIONAL ENGINEER

SURVEY: C.I.:
 PL-PLC 2'
 DRAWN BY: JOB NO.:
 TGP 1511018
 SCALE: DATE:
 1"=30.0' 01/25/16
 SHEET: **2/7**



GENERAL NOTES (CONTINUED):

WOOD: (FOR CHOP-OUT OPENING)

- WOOD FRAMING IS BASED ON DESIGN VALUES NOTED IN THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 2012 EDITION.
- RAFTERS FOR CHOP-OUT OPENING SHALL BE CONSTRUCTED WITH NO. 2 SPRUCE-PINE-FIR (SPF) WITH MINIMUM Fb=875 PSI AND E=1,400,000 PSI ALLOWABLE STRESSES.
- ALL PLYWOOD SHALL BE MANUFACTURED AND GRADED IN ACCORDANCE WITH U.S. DEPARTMENT OF COMMERCE (DOC) PRODUCT STANDARD PS1-95 FOR PLYWOOD CONSTRUCTION FROM GROUP 1 SPECIES. EACH PLYWOOD SHEET SHALL BEAR THE "APA" GRADE TRADEMARK.
- PLYWOOD ROOF SHEATHING SHALL CONFORM TO APA C-D RATED EXTERIOR 3/8" MINIMUM THICKNESS PLYWOOD SHEATHING UNLESS NOTED OTHERWISE.
- THE FACE GRAIN ON THE PLYWOOD SHALL BE LAID AT RIGHT ANGLES TO THE RAFTERS.
- FASTENERS SHALL BE PLACED 3/8" MINIMUM FROM THE EDGE OF THE PLYWOOD SHEETS.
- ALL WOOD USED FOR CHOP OUT FRAMING SHALL NOT BE PRESERVATIVE OR FIRE RETARDANT TREATED.

ANCHORS (GENERAL):

- ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.
- HOLES FOR ANCHORS TO BE INSTALLED IN MASONRY SHALL BE DRILLED WITH A ROTARY DRILL ONLY, NOT A ROTARY-HAMMER DRILL.

EXPANSION ANCHORS:

- EXPANSION ANCHORS SHALL BE WEDGE TYPE WITH A SINGLE PIECE THREE SECTION WEDGE. THE ANCHORS SHALL MEET THE DESCRIPTION IN FEDERAL SPECIFICATIONS FF-9-325, GROUP II, TYPE 4, CLASS I FOR CONCRETE EXPANSION ANCHORS. ANCHORS SHALL BE HILTI KWIK BOLT III, MANUFACTURED BY HILTI FASTENING SYSTEMS, OR EQUIVALENT.
- ALL EXPANSION ANCHORS SHALL BE ZINC PLATED IN ACCORDANCE WITH ASTM B633, SERVICE CONDITION SC1, TYPE III UNLESS INDICATED IN THE DRAWINGS AS STAINLESS STEEL.
- UNLESS OTHERWISE NOTED, THE FOLLOWING MINIMUM REQUIREMENTS SHALL BE MET FOR EXPANSION ANCHORS:

| EXPANSION ANCHOR DIAMETER | EMBEDMENT DEPTH | ALLOWABLE LOADS IN CONCRETE (4000 PSI) | |
|---------------------------|-----------------|--|----------------|
| | | TENSION (POUNDS) | SHEAR (POUNDS) |
| 3/8" | 2 1/2" | 1,570 | 1,070 |
| 1/2" | 3 1/2" | 2,510 | 3,580 |

SLEEVE ANCHORS:

- SLEEVE ANCHORS SHALL MEET THE FEDERAL SPECIFICATION FF-9-325, GROUP II, TYPE 3, CLASS 3 FOR EXPANSION SHIELD ANCHORS. ANCHORS SHALL BE HILTI SLEEVE ANCHORS, MANUFACTURED BY HILTI FASTENING SYSTEMS, OR EQUIVALENT.
- ALL SLEEVE ANCHORS SHALL BE ZINC PLATED IN ACCORDANCE WITH ASTM B633, SERVICE CONDITION SC1, TYPE III UNLESS INDICATED IN THE DRAWINGS AS STAINLESS STEEL.
- UNLESS OTHERWISE NOTED, THE FOLLOWING MINIMUM REQUIREMENTS SHALL BE MET FOR SLEEVE ANCHORS:

| SLEEVE ANCHOR DIAMETER | EMBEDMENT DEPTH | ALLOWABLE LOADS IN HOLLOW CMU | |
|------------------------|-----------------|-------------------------------|----------------|
| | | TENSION (POUNDS) | SHEAR (POUNDS) |
| 3/8" | 1 1/2" | 435 | 800 |

DROP-IN ANCHORS:

- ANCHORS SHALL BE DOUBLE SHIELD DROP-IN ANCHORS MANUFACTURED BY POWERS FASTENERS OR EQUIVALENT.
- ALL DROP-IN ANCHORS SHALL BE STAINLESS STEEL.
- UNLESS NOTED OTHERWISE, THE FOLLOWING MINIMUM REQUIREMENTS SHALL BE MET FOR DROP-IN ANCHORS:

| DROP IN ANCHOR DIAMETER | EMBEDMENT DEPTH | ALLOWABLE LOADS IN HOLLOW CMU | |
|-------------------------|-----------------|-------------------------------|----------------|
| | | TENSION (POUNDS) | SHEAR (POUNDS) |
| 3/8" | 1 1/2" | 540 | 625 |

- CONTRACTOR SHALL SUBMIT PRODUCT DATA FOR ALL POST-INSTALL CONCRETE AND MASONRY ANCHORS FOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.

SEALANTS & EXPANSION JOINT FILLER:

- SUBMIT DATA INDICATING SEALANT CHEMICAL CHARACTERISTICS, PERFORMANCE CRITERIA, SUBSTRATE PREPARATION, LIMITATIONS, AND COLOR AVAILABILITY.
- PRODUCTS:
 - EXTERIOR EXPANSION JOINT SEALANT: W.R. MEADOWS POURATHANE NS OR APPROVED EQUAL MEETING ASTM C920-11, TYPE 5, GRADE NS, CLASS 35, USE T1, T2, NT, O, M, C.
 - EXPANSION JOINTS: W.R. MEADOWS CESAMAR FLEXIBLE FOAM EXPANSION JOINT FILLER OR APPROVED EQUAL MEETING ASTM D 5294, TYPE 2, ASTM D 7174-05.
 - EXTERIOR METAL LAP JOINT SEALANT: BUTYL OR POLYISOBUTYLENE, NON-DRYING, NON-SKINNING, NON-CURING TO BE USED FOR CONCEALED SHEET METAL WORK AND SIDING OVERLAPS.
 - SILICONE SEALANT MEETING ASTM C920, GRADE NS, CLASS 25, USES NT, A. HARDNESS RATING RANGE 15 TO 35.
- INSTALL PER MANUFACTURERS RECOMMENDATIONS.

FIRE-SUPPRESSION STANDPIPES

- REFERENCES SHALL BE FROM THE FOLLOWING:
 - FM APPROVAL GUIDE, A GUIDE TO EQUIPMENT, MATERIALS & SERVICES APPROVED BY FACTORY MUTUAL RESEARCH FOR PROPERTY CONSERVATION.
 - NFPA 14-STANDARD FOR THE INSTALLATION OF STANDPIPE, PRIVATE HYDRANTS AND HOSE SYSTEMS ALL PART #5 FROM AMERICAN FIRE HOSE AND CABINET.
- PROVIDE SUBMITTALS TO INCLUDE SHOP DRAWINGS WITH SUPPORT INDICATION, COMPONENTS, ACCESSORIES AND SIZES. PRODUCT DATA, FIELD TEST REPORTS, AND MANUFACTURERS INSTALLATION INSTRUCTIONS.
- PERFORM WORK IN ACCORDANCE WITH NFPA 14.
- WARRANTY: PROVIDE FIVE YEAR MANUFACTURER WARRANTY FOR STANDPIPE AND HOSES.
- MATERIALS:
 - DRY HYDRANT CONNECTION (COMING FROM PUMPER STEAMER):
 - 6" LONG HANDLE F SWIVEL NST WITH PLUG & CHAIN x 6" PVC 90° ELBOW #DHFG90
 - 6" DRY HYDRANT LOW LEVEL PVC STRAINER #DH1L60
 - BACK FLOW PIPE (COMING FROM PUMPER DISCHARGE):
 - 2 1/2" F NST SWIVEL x 2 1/2" F NPT ALUMINUM FEMALE SWIVEL x FEMALE RIGID ADAPTER #ASF250F
 - 2 1/2" NST ALUMINUM PLUG & CHAIN #AFP250F
 - FILL PIPE (COMING FROM HYDRANT 2 1/2" SPUD):
 - 2 1/2" F NST SWIVEL x 2 1/2" M NST HYDRANT GATE VALVE, ALUMINUM #AHGV250F-1
 - 2 1/2" F NST SWIVEL x 2 1/2" F NPT ALUMINUM FEMALE SWIVEL x FEMALE RIGID ADAPTER # ASF250F
 - 2 1/2" NST ALUMINUM PLUG & CHAIN # AFP250F
 - FDC CONNECTION (COMING FROM PUMPER 4" STORZ DISCHARGE):
 - 4" STORZ x 4" F NPT (INCLUDES CAP & CHAIN), SILVER POWDER COATED, 90° ELBOW #AF0344
 - STANDPIPE RISER:
 - 2 1/2" F NPT x 2 1/2" M NST ROUGH BRASS ANGLE HOSE VALVE (IMPORTED) #AV250-1
 - 2 1/2" F NST x 1 1/2" M NPT ALUMINUM FEMALE x MALE ADAPTERS #AH42515T
 - 2 1/2" NST CAP & CHAIN, ROUGH BRASS #FC250F
 - SPRINKLER SIMULATOR:
 - 1" QUARTER TURN VALVE
 - 1 1/2" 200 DEGREE BRASS PENDENT SPRINKLER HEAD #GL5651
 - 1/2" SPRINKLER HEAD WRENCH #325390
 - 1.2 SPRINKLER HEAD BOX #02-400-00
 - FIRE HOSE:
 - 2 1/2" x 50' (RED) DOUBLE JACKET FIRE HOSE WITH ALUMINUM NST M x F (1 1/2") COUPLING #175D8-50R
 - FOG NOZZLES
 - ACCESSORIES:
 - THE FIRE STORE: WRENCH HOLDER SET, INCLUDES BRACKET & 2 SPANNERS #WH76201A
- TEST ENTIRE SYSTEM IN ACCORDANCE WITH NFPA 14
- FLUSH ENTIRE SYSTEM OF FOREIGN MATTER.

MISCELLANEOUS PLUMBING

- SUBMIT SHOP DRAWINGS FOR PIPING AND EQUIPMENT IDENTIFICATION LIST OF WORDING, SYMBOLS, LETTER SIZE, AND COLOR CODING FOR PIPE IDENTIFICATION AND VALVE CHART AND SCHEDULE INCLUDING VALVE TAG NUMBER, LOCATION, FUNCTION, AND VALVE MANUFACTURER NAME AND MODEL NUMBER. SUBMIT MECHANICAL IDENTIFICATION MANUFACTURERS CATALOG LITERATURE FOR EACH PRODUCT.
- PRODUCTS:
 - PLASTIC NAMEPLATES: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED BLACK LETTERS ON LIGHT BACKGROUND COLOR.
 - PLASTIC TAGS: LAMINATED THREE-LAYER WITH ENGRAVED BLACK LETTERS ON LIGHT BACKGROUND COLOR, MINIMUM 1/2" DIAMETER.
 - PLASTIC PIPE MARKERS: FACTORY FABRICATED, FLEXIBLE, SEMI-RIGID PLASTIC, PERFORMED TO FIT AROUND PIPE OR PIPE COVERING. LARGER SIZES MAY HAVE MAXIMUM SHEET SIZE WITH SPRING FASTENER. COLOR AND LETTERING: CONFORM TO ASME A13.1.
 - PLASTIC TAPE PIPE MARKERS: FLEXIBLE, VINYL FILM TAPE WITH PRESSURE SENSITIVE ADHESIVE BACKING AND PRINTED MARKINGS, COLOR AND LETTERING. CONFORM TO ASME A13.1.
 - PLASTIC UNDERGROUND PIPE MARKERS: BRIGHT COLORED CONTINUOUSLY PRINTED PLASTIC RIBBON TAPE, MINIMUM 6" WIDE BY 4 MIL THICK, MANUFACTURED FOR DIRECT BURIAL SERVICE.
 - SLEEVES FOR PIPES THROUGH NON-FIRE RATED FLOORS AND BEAMS: 1 1/8" GAGE THICK GALVANIZED STEEL.
 - FORMED STEEL CHANNEL: 12 GAGE GALVANIZED STEEL WITH HOLES 1 1/2" ON CENTER.
- INSTALLATION:
 - PLASTIC NAME PLATES WITH ADHESIVE AND PLASTIC TAGS WITH CORROSION RESISTANT METAL CHAIN.
 - SLEEVES SET IN FORMS WITH REINFORCING AROUND SLEEVE, ALLOW FOR MOVEMENT DUE TO EXPANSION AND CONTRACTION. EXTEND SLEEVES THROUGH FLOORS 1" ABOVE FINISHED FLOOR AND CAULK.
 - WHERE PIPING OR DUCTWORK PENETRATES FLOOR, CEILING, OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND ADJACENT WORK WITH STUFFING INSULATION AND CAULK AIRTIGHT. PROVIDE CLOSE FITTING METAL COLLAR OR CHROME ESCUTCHEON COVERS AT BOTH SIDE OF PENETRATION.

THERMAL LINING:

- THE THERMAL LINING SYSTEM SHALL BE SYSTEM 203 ADVANCED THERMAL LINING SYSTEM BY HIGH TEMPERATURE LININGS OR APPROVED EQUAL.
- SUBMIT PRODUCT DATA AND TESTING, MATERIAL SAMPLES AND SHOP DRAWINGS.
- MATERIALS:
 - THERMAL LINING PANELS - 12" X 24"
 - INSULATION - 1" THICK CALCIUM SILICATE (20 P.C.F.)
 - FASTENERS - 3/8" Ø STAINLESS STEEL 304 GRADE WITH WASHER AND NUT
 - FIRE PAVES - 3/4" X 2 1/2" THICK
 - FLASHING - GRADE 304 STAINLESS STEEL
 - FIRE CLAY
- INSTALL PER MANUFACTURER RECOMMENDATIONS
- PROVIDE ONE YEAR WARRANTY FOR THE THERMAL LINING SYSTEM STARTING FROM DATE OF OWNERS ACCEPTANCE OF WORK. DEFECTIVE MATERIAL WILL BE REPLACED AT NO ADDITIONAL CHARGE TO OWNER.

TEMPERATURE MONITORING SYSTEM:

- PROVIDE SUBMITTALS FOR PRODUCT DATA FOR CENTRAL RECORDER, THERMOCOUPLES, WIRING, AND NEMA ENCLOSURES. WARRANTIES, MAINTENANCE AND OPERATIONS MANUALS.
- SYSTEM EQUIPMENT PERFORMANCE: SHALL BE SPECIFICALLY MANUFACTURED FOR AND CAPABLE OF REGISTERING AND DISPLAYING TEMPERATURES IN THE TRAINING STRUCTURE DURING LIVE FIRE TRAIN. OPERATING CONDITIONS AT THE CENTRAL RECORDER: 40°F TO 120°F. OPERATING CONDITIONS AT THERMOCOUPLE: 32°F TO 2,300°F. CENTRAL RECORDER SHALL BE CAPABLE OF SCANNING AND RECORDING TEMPERATURE READING FROM A MINIMUM OF SIX (6) THERMOCOUPLES.
- EQUIPMENT: SYSTEM SHALL INCLUDE BUT NOT LIMITED TO CENTRAL RECORDER, THERMOCOUPLES, PROPS, EXTENSION WIRE CONNECTION THERMOCOUPLES TO CENTRAL RECORDER ENCLOSURE WITH HEATER AND ALARMS.
- MANUFACTURE: FIRE WATCHMAN TEMPERATURE MONITORING SYSTEM AS PROVIDED BY FIRE FACILITIES, INC. OR APPROVED EQUAL.
- PERFORMANCE AND TESTING: CALIBRATE AND TEST SYSTEM IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS. SYSTEM SHALL BE TAILORED TO THE REQUIREMENTS OF THE OWNERS TRAINING PROGRAM. PROVIDE ONE QUALIFIED PERSON FOR A MINIMUM OF ONE FULL DAY TO DEMONSTRATE THE SYSTEM AND TRAIN OWNERS PERSONNEL IN USE AND MAINTENANCE OF SYSTEM.

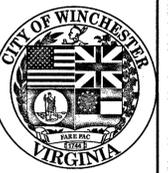
PANELBOARDS:

- PRODUCT DATA FOR EACH TYPE OF PANELBOARD, OVER CURRENT PROTECTIVE DEVICE, ACCESSORY, AND COMPONENT INDICATED. INCLUDE DIMENSIONS AND MANUFACTURERS TECHNICAL DATA ON FEATURES, PERFORMANCE, ELECTRICAL CHARACTERISTICS, RATINGS, AND FINISHES.
- SHOP DRAWINGS TO INCLUDE DIMENSIONED PLANS, ELEVATIONS, SECTIONS AND DETAILS. SHOW TABULATIONS OF INSTALLED DEVICES, EQUIPMENT FEATURES, AND RATINGS. INCLUDE BUS CONFIGURATIONS, CURRENT AND VOLTAGE RATINGS.
- MANUFACTURE: SQUARE D OR APPROVED EQUAL MEETING THE FOLLOWING DESCRIPTION: SURFACE MOUNTED CABINET MEETING NEMA PB 1, TYPE 1. FRONT SECURED TO BOX WITH CONCEALED TRIM CLAMPS. STANDARD HINGED FRONT COVER. STANDARD MANUFACTURERS FINISH. HARD-DRAWN COPPER BUS, 98 PERCENT CONDUCTIVITY. UL LABELED SERVICE EQUIPMENT.
- INSTALL PANELBOARD ACCESSORIES ACCORDING TO NEMA PB1.1. MOUNTING HEIGHT 74" ABOVE FINISHED FLOOR. U.N.O. MOUNT PLUMB AND RIGID WITHOUT DISTORTION OF BOX. CREATE CIRCUIT DIRECTORY TO INDICATE INSTALLED CIRCUIT LOADS AFTER BALANCING PANELBOARD LOADS. OBTAIN APPROVAL BEFORE INSTALLING. USE COMPUTER OR TYPEWRITER TO CREATE DIRECTORY. INSTALL FILLER PLATES IN UNUSED SPACES.
- TEST PANELBOARDS AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED. PERFORM VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST INDICATED IN NETA ATS, SECTION 7.5 FOR SWITCHES AND SECTION 7.6 FOR MOLDED CASE CIRCUIT BREAKERS. BALANCE LOADS AFTER SUBSTANTIAL COMPLETION, BUT NOT MORE THAN 60 DAYS AFTER FINAL ACCEPTANCE. TOLERANCE BETWEEN LOAD BALANCE CHECKS SHALL NOT BE MORE THAN 20%. REBALANCE AS NECESSARY TO MEET THIS MINIMUM REQUIREMENT.

ELECTRICAL:

(SEE SHEET E3.0 FOR ADDITIONAL NOTES)

- PROVIDE ALL NECESSARY LABOR, EQUIPMENT, ETC. FOR ALL WORK INDICATED AND REQUIRED FOR A COMPLETE INSTALLATION TO COMPLY WITH THE 2011 EDITION OF THE INTERNATIONAL ELECTRICAL CONSERVATION CODE, (2011 IECC).
- ELECTRICAL SUB CONTRACTOR TO PROVIDE SYSTEM DESIGN AND PLAN LAYOUT FOR REVIEW AND APPROVAL.
- THE ELECTRICAL CONTRACTOR SHALL KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL AND RUBBISH DAILY AND AT THE COMPLETION OF WORK, CONTRACTOR SHALL REMOVE FROM THE PREMISES ALL RUBBISH, IMPLEMENTS, AND SURPLUS MATERIALS AND LEAVE THE BUILDING "BROOM CLEAN".
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY STATING THAT ALL MATERIALS AND WORKMANSHIP AREA FREE FROM DEFECTS FOR A PERIOD OF 12 MONTHS FROM DATE OF FINAL ACCEPTANCE.
- MATERIALS:
 - WIRE AND CABLE SHALL BE COPPER WITH THIN THWN INSULATION AND BE SIZED AS PER 2011 NEC.
 - ALL WIRING SHALL BE CONCEALED WHERE POSSIBLE. WHERE APPROVED BY THE DESIGNER, EXPOSED WIRING SHALL BE RUN PARALLEL AND PERPENDICULAR TO THE BUILDING CONSTRUCTION.
 - DISCONNECT SWITCHES SHALL BE SQUARE-D GENERAL DUTY FUSIBLE WITH CLASS "R" FUSE CLIPS OR EQUAL.
 - FUSES SHALL BE TIME-DELAY DUAL ELEMENT TYPE AND SHALL BE SIZED AS REQUIRED.
 - LIGHTING FIXTURE AND OTHER EQUIPMENT SPECIFIED DENOTES STYLE AND QUANTITY.
 - ALL SWITCHES AND RECEPTACLES SHALL BE SPECIFICATION GRADE AND COLOR AS CHOSEN BY OWNER.
- THE ELECTRICAL CONTRACTOR MUST INSPECT JOB SITE PRIOR TO BIDDING JOB AND WILL INCLUDE COMPLETE RESPONSIBILITY FOR ALL LABOR AND MATERIALS AS SPECIFIED ON PLANS.
- ELECTRICAL CONTRACTOR SHALL VERIFY THE AIC BEFORE PURCHASE OF SERVICE ENTRANCE EQUIPMENT.
- ELECTRICAL CONTRACTOR SHALL VERIFY EQUIPMENT CAPACITY BEFORE ROUGH-IN.
- ALL WIRING SHALL BE IN CONDUIT AND BE 12 AWG UNLESS OTHERWISE SPECIFIED. CONDUIT SHALL BE EMT OR RMC.
- CONDUIT UNDER SLAB SHALL BE SCHEDULE 40 PVC AND SHALL BE BELOW THE FROST LINE.

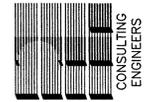


GENERAL NOTES

TITLE:

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| REVISIONS | |
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| NO. | DATE |
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DATE:
08-15-2016
SCALE:
AS NOTED
SHEET:
A0.3

DRAWN BY: RJD JOB NO.: 1511018