BID PROPOSAL AND CONTRACT DOCUMENTS

MONTGOMERY HALL PARK
TENNIS COURT IMPROVEMENTS

BID# C00122

Staunton City Schools

MARCH 17, 2022

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ADVERTISEMENT FOR BIDS

PROJECT:	**MONTGOMERY HALL PARK TENNIS COURT IMPROVEMENTS**
	City of Staunton, Virginia
DATE DUE:	April 14, 2022 2:00 P.M.
BID #	C00122

Staunton City Schools, (hereinafter called the "**Owner**", or "**Public Body**") will receive sealed Bids for the furnishing of all labor, materials, supervision, and equipment necessary to complete above titled project at the Schools' Purchasing Agent's Office, located at 116 W. Beverley Street, City Hall, Third Floor, until **2:00 pm local time on April 14, 2022,** at which time the Bids will be publicly opened and read aloud.

A mandatory in-person pre-bid meeting will be held **March 29, 2022 at 10:00 a.m.** at the Rotary Club Pavilion at Montgomery Hall Park Hall, located at 1000 Montgomery Avenue, Staunton, VA 24401.

BIDS RECEIVED AFTER THE DATE AND TIME SPECIFIED WILL BE REJECTED.

BIDS MUST BE SEALED, MARKED, AND DELIVERED TO:

Mail to:	**Overnight To:**
Staunton City Schools	**Staunton City Schools**
Chad Horvat	**Chad Horvat**
Finance Business Manager	**Finance Business Manager**
P.O. Box 58	**116 W. Beverley St., 3rd Floor**
Staunton, VA 24402-0058	**Staunton, VA 24401-0058**
Phone: (540) 332-3819	**Phone: (540) 332-3819**

The work for which bids are to be submitted consists of the renovation of three (3) existing tennis courts and site improvements, including new fencing, additional sidewalks, lighting, and a watering station. A more complete description of the work and full information for contract bidders is given in the Specifications and Plans.

Bidder must agree to **fully complete the work within 150 calendar days**.

If any person contemplating submitting a bid for construction of the Work is in doubt as to the true meaning of any part of the proposed Contract Documents, or finds discrepancies on or omissions from any part of the proposed Contract Documents, he shall submit a written request. Every request for such interpretation should be emailed to HarttLM@ci.staunton.va.us. All questions must be received no later than **April 1, 2022 by 1:00 P.M.**

Questions will be answered in Addendum format and posted at the City of Staunton website https://www.ci.staunton.va.us/departments/finance/procurement and at the Virginia State Procurement site (eVA) https://mvendor.cgieva.com/Vendor/public/AllOpportunities. It is the responsibility of all bidders to ensure that they have received all addenda and to include signed copies of any and all addenda with their bid submission. Any and all such interpretations and any supplemental instructions will be posted on the City website not later than **April 4, 2022 by 1:00 P.M.**

Bid Security in the amount of five percent (5%) of the Bid shall be submitted with each Bid. Bid Bond must be in the form of a cashier's check or certified check payable to Staunton City Schools.

Contractor registration in accordance with Title 2.2 Chapter 43, Code of Virginia is required.

The envelopes containing the Bids must be sealed, addressed to **Staunton City Schools, Attn: Chad Horvat, 116 W. Beverley Street, 3rd Floor, Staunton, Virginia 24401**, and marked as Bid for the **MONTGOMERY HALL PARK TENNIS COURT IMPROVEMENTS.**

The bidder shall include in its Bid the following notation:

"Licensed Virginia Contractor No. _____" (issued to contractor by DPOR)

"State Corporation Commission Registration No. _____" (issued to contractor by the SCC)

The Bid shall remain subject to acceptance for sixty (60) days.

The Owner reserves the right to reject any and all Bids and to waive any minor non-substantive errors in the Bid.

Withdrawal of Bids due to error shall be subject to and in accordance with Section 2.2-4330 of the Code of Virginia and the Contract Documents.

Staunton City Schools do not discriminate in the solicitation or awarding of contracts on the basis of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state or federal law.

BID DEADLINES

Invitation to Bid Posted	March 17, 2022
Mandatory In-Person Pre-Bid Meeting	March 29, 2022 10:00 A.M. at Rotary Club Pavilion at Montgomery Hall Park
Questions Submission Deadline	April 1, 2022 by 1:00 PM
Addenda and Questions & Answers Posted	April 4, 2022 by 1:00 PM
Bid Submission Deadline	April 14, 2022 by 2:00 PM

END OF ADVERTISEMENT FOR BIDS

INFORMATION FOR BIDDERS

1. SECURING DOCUMENTS

1.1. Staunton City Schools, (hereinafter called the "**OWNER**", or "**Public Body**") invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner in the City Purchasing Agent's office, as specified in the Advertisement for Bid.

1.2. Bid documents are available for viewing and downloading from at the City of Staunton website https://www.ci.staunton.va.us/departments/finance/procurement and at the Virginia State Procurement site (eVA) https://mvendor.cgieva.com/Vendor/public/AllOpportunities.

1.3. The envelopes containing the bids must be sealed, addressed to **Staunton City Schools, Attn: Chad Horvat, 116 W. Beverley Street, 3rd Floor, Staunton, Virginia 24401** and designated as bid for: **Montgomery Hall Park Tennis Court Improvements.**

1.4. The owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof.

2. PREPARATION OF BID AND SUBMISSION

Each bid must be submitted on the prescribed form in accordance with the following:

2.1. Each bid must be properly signed and with all blank spaces filled out, in ink or typewritten. The foregoing certification must be fully completed and executed when submitted. Do not make any modifications, erasures, deletions, additions or changes to the bid form. Unauthorized conditions, limitations, or provisions attached to the bid may be cause for rejections of the bid. Submit only the original signed copy of the bid.

2.2. Address bids to the Owner, and deliver to the address specified in the Advertisement for Bid. Bid on or before the day and hour set for opening the bids. Enclose each bid in an opaque, sealed envelope or box bearing on the outside the following:

2.2.1. Project Title
2.2.2. Name of the Bidder
2.2.3. Bidder's address
2.2.4. Registered contractor's Virginia Certification Number
2.2.5. Date and hour of the bid opening.

2.3. The sealed envelope containing the bid must be enclosed in another envelope and mailed to the address as specified in the **Advertisement for Bids**. Staunton City Schools are not responsible for delays in the delivery of the mail by the U.S. Postal Service, private couriers, or the inter-office mail system. It is the sole responsibility of the bidder to see that his bid is received on time. No faxed or emailed bid will be considered. No bids received after the time fixed for receiving them will be considered. Late or incomplete bids may be returned to the bidder. All expenses for making bids to Staunton City Schools shall be borne by the bidder.

2.4. Indicate receipt of issued addenda on the Bid Form. All Bidders are advised to check the City of Staunton's website https://www.ci.staunton.va.us/departments/finance/procurement or the eVA website https://mvendor.cgieva.com/Vendor/public/AllOpportunities to assure that all Addenda have been received and that the cost consequences thereof have been included in the Bid.

2.5. Any bid may be withdrawn prior to the above scheduled time for the opening of Bids or authorized postponement thereof.

2.6. Any bid received after the time and date specified shall not be considered.

2.7. Bid shall remain subject to acceptance for sixty (60) days.

2.8. The following documents fully completed and signed where appropriate are required for a responsive Bid:

2.8.1. Signed Bid Form which includes acknowledgement of Addenda
2.8.2. Bid Bond
2.8.3. State Corporation Commission Registration
2.8.4. Non-Collusion Affidavit
2.8.5. Reference List

3. SUBCONTRACTS

3.1. The bidder is specifically advised that any person, firm, or other party to whom is proposed to award a subcontract under this contract must be acceptable to the Owner. The bidder must name the subcontractor(s), and the Staunton City Schools reserve the right to determine whether any named subcontractor is fit and capable to perform the required work.

4. METHOD OF BIDDING

4.1. This is a unit price bid for the **MONTGOMERY HALL PARK TENNIS COURT IMPROVEMENTS.** (See Bid Schedule.)

4.2. Although the bid is based upon unit prices, many items are to be priced under lump sum designations. It is the bidder's responsibility to verify the exact scope of work for all items in order to establish the bid price.

5. QUALIFICATIONS OF BIDDER

5.1. The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder indicates that the bidder is not properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

5.2. Bids will only be accepted from Contractors who are experienced in and actively engaged in the type of construction of the item(s) called for in the bid. No bid will be accepted from or contract awarded to any person, firm, or corporation that is in arrears or is in default to the Staunton City Schools upon any debt or contract, or that is a defaulter, as surety or otherwise, upon any obligation to said Staunton City Schools or had failed to perform faithfully any previous contract with the Staunton City Schools.

5.3. Bidders must certify in the bid form that they are not currently barred from bidding on contracts by any agency of the Commonwealth of Virginia or any federal agency.

5.4. Pursuant to Code of Virginia, §2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized.

6. BID SECURITY

6.1. Each bid must be accompanied by a Bid Bond in the amount of five percent (5%) of the bid submitted, or a certified check of the Bidder in an amount not less than five percent (5%) of the amount of the bid, payable to the order of Staunton City Schools. Such bid bonds or checks will be returned to all, except the three bidders submitting the most favorable bids, within three (3) days after the formal opening of the bids. The remaining Bid Bonds or checks will be returned to the three most favorable bidders within forty-eight (48) hours after the Owner and the accepted Bidder have executed the Contract, or if no contract has been so executed, within sixty (60) days after the date of the opening of the bids.

7. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

7.1. The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within 10 days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

8. TIME AND COMPLETION AND LIQUIDATED DAMAGES

8.1. Bidder must agree to commence work on or before a date to be specified on a written "Notice to Proceed" from the OWNER.

8.2. Bidder must agree to **fully complete the work AS INDICATED IN THE ADVERTISEMENT FOR BID.**

8.3. OWNER and CONTRACTOR stipulate that **TIME IS OF THE ESSENCE** and delay by the CONTRACTOR in completion would have significant adverse consequences for the PROJECT; that, however, the actual damages to OWNER from such delay are uncertain and would be impossible and not susceptible to reasonable determination; and that liquidated damages of such failure by CONTRACTOR to perform in a timely manner are a reasonable way and not a penalty to address such adverse consequences. CONTRACTOR also stipulates that it shall not challenge, either directly or indirectly, this liquidated damages provision. OWNER, therefore, may require CONTRACTOR to pay liquidated damages of **$1,000** per day for the CONTRACTOR's failure to perform timely in strict accordance with the CONTRACT. OWNER may deduct any liquidated damages from amounts due to CONTRACTOR and, otherwise OWNER shall be entitled to receive interest at the rate of 5% until deducted or paid. Liquidated damages shall be, other than for delay, in addition to any other entitlement by OWNER to damages and other remedies for any other damage, loss, or injury for which CONTRACTOR may be responsible.

9. EXAMINATION OF DOCUMENTS AND SITE OF WORK

9.1. Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of this obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible, the contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

9.2. Before submitting a bid, each bidder shall carefully examine and read the Bid Documents, Construction Plans, Project Manual, and all other proposed Contract Documents (including all addenda), and shall visit the site of the work. Each bidder shall fully inform himself prior to bidding as to existing conditions and limitations under which the work is to be performed, and shall include in his bid a sum to cover the cost of items necessary to perform the Work as set forth in the proposed contract documents. No allowance will be made to a bidder because of lack of such examination and knowledge. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination.

9.3. Attention is particularly called to those parts of the Contract Documents and Specifications, which deal with the following:

9.3.1. Insurance requirements (Section 2-Insurance of General Conditions)

9.4. The failure or omission of any bidder to examine any form instrument or document shall in no way relieve any bidder from any obligation in respect of his bid.

10. ADDENDA AND INTERPRETATIONS OF CONTRACT DOCUMENTS PRIOR TO BIDDING

10.1. No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

10.2. If any person contemplating submitting a bid for construction of the Work is in doubt as to the true meaning of any part of the proposed Contract Documents, or finds discrepancies on or omissions from any part of the proposed Contract Documents, he shall submit a written request. Every request for such interpretation should be emailed to Lyle Hartt, City Engineer, at HarttLM@ci.staunton.va.us or mailed to the address in the Advertisement for Bid. All questions must be received no later than **1:00 p.m. on April 1, 2022.**

10.3. Questions will be answered in Addendum format and posted as outlined in the invitation to bid, at the City of Staunton website https://www.ci.staunton.va.us/departments/finance/procurement and at the eVA website https://mvendor.cgieva.com/Vendor/public/AllOpportunities It is the responsibility of all bidders to ensure that they have received all addenda and to include signed copies of any and all addenda with their bid submission. Any and all such interpretations and any supplemental instructions will be posted on the City website not later than **1:00 p.m. on April 4, 2022**.

10.4. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under this bid as submitted. All addenda so issued shall become part of the contract documents.

11. SECURITY AND FAITHFUL PERFORMANCE

11.1. Simultaneously with his delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under the contract and furnishing materials in connection with this contract.

11.2. Both payment bond and performance bond shall be in the amount of 100% of the contract price and shall list the Owner, Staunton City Schools, as beneficiary.

11.3. All bonds shall be on forms provided in the Contract Documents and written by companies LICENSED TO DO BUSINESS IN VIRGINIA and shall be administered through agent(s) registered in Virginia.

12. POWER OF ATTORNEY

12.1. Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

13. LAWS AND REGULATIONS

13.1. The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the contract will be deemed to be included in the contract as though herein written out in full.

13.2. Contractor shall comply with Federal and State Requirements.

14. METHOD OF AWARD – LOWEST QUALIFIED BIDDER

14.1. The contract will be awarded on the basis of the sum of the Base Bid and the accepted Alternates.

14.2. The award will be made to the lowest responsible bidder whose bid conforms to the Advertisement, these Instructions and whose qualifications indicate the award will be most advantageous to the Staunton City Schools.

14.3. The Staunton City Schools reserve the right to reject any or all offers and to waive informalities and minor irregularities in offers received.

14.4. The Staunton City Schools will notify all bidders of the award and return Bid Sureties to all but the successful bidder.

15. EXECUTION OF CONTRACT

15.1. The form of the Contract, which the successful bidder will be required to execute, is included in the Bid Documentation.

15.2. After notice from the Staunton City Schools, the successful bidder has fourteen (14) business days to enter into a Contract or forfeit as liquidated damages the security deposit. By executing the Contract, the Contractor certifies that he has reviewed the Contract Documents and the project area and accepts the conditions of each.

15.3. At or prior to delivery of the signed Contract, the bidder to whom the Contract is awarded shall deliver to the Owner the following documents, as required by the Owner and the Contract Documents:

15.3.1. Certificates of Insurance and Endorsement
15.3.2. Labor and Materials Payment Bonds

15.3.3. Performance Bond
15.3.4. City Business License
15.3.5. Virginia State Contractor's License Number

15.4. Bonds and Certificates of Insurance shall be approved by the Owner before the successful bidder may proceed with the Work. Failure or refusal to provide Bonds or Certificates of Insurance and Endorsement in a form satisfactory to the Owner shall subject the successful bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

16. OBLIGATION OF BIDDER

16.1. At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda).

16.2. The failure or omission of any bidder to examine any form instrument or document shall in no way relieve any bidder from any obligation in respect of his bid.

16.3. Under Section 2.2-4330, Procedure (A(i)) of the Code of Virginia, a bidder for a contract with the State or any department, institution or agency thereof, or with any county, city, town, school board, or any agency thereof for the construction, demolition, alteration, repair or improvement may withdraw his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor, or material made directly in the compilation of a bid, evidenced by the inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. The bidder must give notice in writing of his claim of right to withdraw his bid within two (2) business days after the conclusion of the bid opening procedure.

17. ADJUSTMENT OF CONTRACT

17.1. The Owner reserves the right to expand this contract to include work of the type defined in the project specifications, to other areas of the City. This expansion would be contingent upon the Contractor agreeing to perform the additional work at the same contract prices found in the proposal for the original contract.

17.2. The owner reserves the right to make, at any time during the progress of the work, such increases or decreases in quantities as deemed in the best interest of the Owner. Adjustments of contract unit prices will not be considered for overruns or underruns of the original bid quantities. Unit price adjustments will not be made in the event of the elimination of any other associated bid item.

18. PRE-BID MEETING

18.1. A **mandatory** pre-bid meeting will be held on **March 29, 2022 at 10:00 a.m.** (See **Advertisement for Bid** for details.)

19. CITY BUSINESS LICENSE

19.1. A City of Staunton Business License is required for successful award of this project. At or prior to delivery of the signed Contract, the bidder to whom the Contract is awarded shall deliver to

the Owner a copy of their City Business License. The bidder shall ensure that the Business License indicates a basis amount equal to or greater than the awarded Contract value. For information on City Business Licenses contact the Staunton Commissioner of Revenue office at 540- 332-3829.

20. STANDARDS AND SPECIFICATIONS

20.1. Applicable work in this project shall conform to the project documents, current Virginia Department of Transportation (VDOT) Road and Bridge specifications, the current VDOT Road and Bridge Standards, the current Virginia Erosion and Sediment Control handbook, the current Virginia Erosion and Sediment Control regulations and the current City of Staunton Design and Construction Standards Manual.

21. CONSIDERATION OF PROJECT COMPLEXITIES

21.1. In preparing this bid, Contractor shall understand and account in their costs for the complexities involved in administering the construction required by this Contract. Contractor shall be aware that the project area receives regular traffic during the work day. Contractor shall accommodate such traffic through and around the work area in a safe and well-marked manner.

21.2. Submission of a bid shall be an affirmation that the Contractor understands these complexities and difficulties associated with this project, that he has included in his bid a sufficient dollar amount to compensate for the additional time and effort these complexities and difficulties will require on his part, and that he understands that the Owner will not accept any claim for time extension or additional costs associated with them.

22. INSURANCE REQUIREMENTS

22.1. By signing and submitting a bid or proposal the contractor certifies that if awarded the contract, they will have the insurance coverages as outlined in **Section 2 – Insurance Requirements** of the General Conditions at the time the contract is awarded. If any subcontractors are involved, the subcontractor will have the same insurance. The contractor further certifies that they or any subcontractor will maintain these coverages during the entire term of the contract.

BIDDER STATEMENT

We understand the Insurance Requirements of these specifications and will comply in full if awarded this contract.

Signature:_____ Date:_____

Name:_____ Title:_____

Name of Firm:_____

This document must be completed & returned with bid submission.

END OF INFORMATION FOR BIDDERS

BID FORMS

To: Staunton City Schools
Chad Horvat
Third Floor, City Hall
P.O. Box 58
Staunton, Virginia 24402

Gentlemen:

The undersigned, as Bidder, does hereby declare that the only person, persons, company or parties interested in this Bid are named herein; that this Bid is made and that the Contract will be executed without collusion with any other person or persons presenting any Bid for the same work, labor and materials; that this Bid is in all respects fair and just and that no person prohibited therefrom by law is directly or indirectly interested in this Bid, nor in the labor and materials to which it relates, nor in any portion of the profits thereof.

The undersigned does further declare that he has personally examined the site of the proposed work and made such investigation as is necessary to determine the general and local conditions and the character of the work to be encountered; that he has carefully examined each and every item of the annexed Contract Documents and the Plans and Specifications pertaining hereto, and that he fully understands the same, and will make no claim, other than as stated therein, because of any misunderstanding or misconception concerning the nature, character or amount of work to be done.

The undersigned does hereby offer and agree to execute and perform the Contract attached hereto, and of which this Bid forms a part; and to furnish all of the labor, materials, tools, equipment, transportation and superintendence for the construction; in strict conformity with the drawings and specifications. The bidder understands that the quantities shown in the Bid Schedule are approximate only; and are subject to either increase or decrease based on the work shown on the Drawings and for changes in the work as directed by the Owner and that should the quantities of any of the items of work be increased, the undersigned proposes to do the additional work at the unit price set out herein, and should the quantities be decreased, he also understands that payment will be made on the actual quantities installed at the unit prices, and will make no claim for the anticipated profits for any decrease in the quantities. Actual quantities will be determined upon completion of the work. Lump sum bid items will not be adjusted.

This document must be completed & returned with bid submission.

BID WORKSHEET

Montgomery Hall Park Tennis Court Improvements

This document must be completed & returned with bid submission.

**All items are to be quoted per Technical Specifications.

Item #	Description	Qty	Unit	Unit Price	Total Price
A1	Mobilization	1	LS		$
A2	Erosion and Sediment Control	1	LS		$
B1	Demolition of Existing Tennis Hard Court	2483	SY		$
B2	Removal and Disposal of Existing Chain Link Fence	1335	LF		$
B3	Demolition of Existing Asphalt Path and Swale	438	SY		$
B4	Demolition of Existing Concrete Stairs/Handrails	42	SY		$
C1	Site Grading	1	LS		$
C2	Concrete Sidewalk	196	SY		$
C3	Concrete Stairs, including Landing Pads with Sidewalls	70	SY		$
C4	Stairway Handrail	140	LF		$
C5	Low Rail at Viewing Area	62	LF		$
C6	Bollard	1	EA		$
C7	Heavy Duty Concrete Pad	16	SY		$
C8	Parking/Street Asphalt and Base	201	SY		$
C9	Curb Stop	1	EA		$
C10	ADA Parking Sign and Post	2	EA		$
C11	Parking Lot Striping	1	LS		$
D1	Tennis Court Base & Repaving	2473	SY		$
D2	Tennis Court Surface Painting/Treatment	3	LS		$
D3	10' Chain-link Fence	1335	LF		$
D4	Tennis Court Gate	8	EA		$
D5	Tennis Net and Post Assembly	3	EA		$
D6	Tennis Backboard	2	EA		$
E1	Electric Service and Meter Base Assembly	1	LS		$
E2	Lighting Control Panel Assembly	1	LS		$
E3	Site Underground Conduit and Wiring	1	LS		$
E4	Light Pole Base w/Conduit Penetrations	16	EA		$
E5	Light Pole with Internal Wiring	16	EA		$
E6	Luminaire	32	EA		$
F1	Connect to City Water Main w/ 3/4" Corp Stop	1	EA		$
F2	3/4" Water Service Line	129	LF		$
F3	Water Meter Assembly	1	EA		$

F4	Watering Station Including Sump Pit	1	LS		$
				TOTAL =	

TOTAL BASE BID:

_____

WORDS

_____

FIGURES

AMOUNTS ARE TO BE SHOWN IN BOTH WORDS AND FIGURES.
IN CASE OF DISCREPANCY, THE AMOUNT SHOWN IN WORDS WILL GOVERN.

The undersigned agrees to complete the work enumerated herein **in accordance with Paragraph 8 of Instructions to Bidders.** It is expressly understood and agreed that the time of beginning, rate of progress, and the date of completion are essential conditions, and that in the event of failure to complete the work within the above specified time, the Contractor will be liable for the payment of liquidated damages as provided in **Paragraph 8 of Instruction to Bidders**. Extensions may be granted, upon written request, for inclement weather and for any other cause not the fault of the Contractor. The Staunton City Schools reserves the right to shut the project down for extended periods due to inclement weather. Deadline extensions will be made to equally compensate for periods of shut down.

The undersigned likewise agrees that he will execute and deliver the Contract hereto attached within fourteen (14) business days, and City of Staunton holidays excepted, after notification of the acceptance of this Bid and award of the Contract; and will furnish a performance and a payment bond for the total amount of the accepted Bid on the forms provided in the Contract Documents, satisfactory to the Owner as surety for the faithful performance and completion of the Contract and the payment of all subcontractors, material dealers and labor.

The undersigned certifies that he understands that it is the intent of the drawings, and the Contract Documents, that the work be completed in every respect and that no additional compensation will be allowed for minor tasks necessary to completely perform the work.

The undersigned acknowledges Addenda:

Addenda No. _____ Addenda _____

The undersigned has checked carefully all the above figures and understands that the Owner will not be responsible for any errors or omissions in making up this Bid.

_____

Contractor

_____

Registered Virginia Contractor's License No.

_____

Classification Expiration

_____

SCC Number

_____

Contractor's IRS Number

Dates this _____day of ___2022_____

By: _____

Printed Name: _____

Title: _____

Address: _____

_____

Telephone: _____

This document must be completed & returned with bid submission.

END OF BID FORMS & WORKSHEETS

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____as Principal, and _____as Surety, are hereby held and firmly bound unto _____as Owner in the penal sum of _____ _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed, this _____day of _____, 20___

The condition of the above obligation is such that whereas the Principal has submitted to _____ a certain bid attached hereto and hereby made a part of hereof to enter into a contract in writing, for the_____ _____ _____

NOW THEREFORE,

(a) If said Bid shall be rejected, or in the alternate

(b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid.

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The surety for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____ (L.S.)
Principal

_____
Surety

By: _____

Seal

This document must be completed & returned with bid submission.

END OF BID BOND

STATE CORPORATION COMMISSION FORM

Virginia State Corporation Commission ("SCC") registration information:

The undersigned Offeror:

- ☐ is a corporation or other business entity with the following SCC identification number: _____ -OR-
- ☐ is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust -OR-
- ☐ is an out-of-state business entity that does not regularly and continuously maintain as part of its ordinary and customary business any employees, agents, offices, facilities, or inventories in Virginia (not counting any employees or agents in Virginia who merely solicit orders that require acceptance outside Virginia before they become contracts, and not counting any incidental presence of the Offeror in Virginia that is needed in order to assemble, maintain, and repair goods in accordance with the contracts by which such goods were sold and shipped into Virginia from bidder's out-of-state location) -OR-
- ☐ is an out-of-state business entity that is including with this bid an opinion of legal counsel which accurately and completely discloses the undersigned Offeror's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia. Attach opinion of legal counsel to this form.

NOTE >> Check the following box if you have not completed any of the foregoing options but currently have pending before the SCC an application for authority to transact business in the Commonwealth of Virginia and wish to be considered for a waiver to allow you to submit the SCC identification number after the due date for proposals (the Commonwealth reserves the right to determine in its sole discretion whether to allow such waiver): ☐

Signature: _____ Date: _____

Name: _____

Print

Title: _____

Name of Firm: _____

This document must be completed & returned with bid submission.

END OF STATE CORPORATION COMMISSION FORM

CERTIFICATION REGARDING CONTACT WITH CHILDREN

Contractor acknowledges that, to the extent the implementation of this contract requires Contractor, Contractor's employees or other persons within Contractor's control to have direct contact with Staunton Public Schools' students, the Contractor hereby certifies, and is deemed to be continuously certifying, that neither Contractor, Contractor's employees nor any person who will have direct contact with students on school property during regular school hours or during school-sponsored activities have not been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child.

Contractor understands that, pursuant to Code of Virginia §22.1-296.1, making a materially false statement regarding offenses which are required to be included in the certification referenced above is a Class 1 misdemeanor and, upon conviction, the fact of such conviction shall be grounds for the revocation of the contract to provide such services and, when relevant, the revocation of any license required to provide such services. Staunton Public Schools shall not be liable for materially false statements regarding the certifications required under this Contract.

It is certified, now and on a continuous basis, that none of our employees, or any person on our behalf who will have direct contact with students under this contract, has been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child.

Contractor: _____

By: _____

Name: _____

Title: _____

Date: _____

This document must be completed & returned with bid submission.

END OF CERTIFICATION REGARDING CONTACT WITH CHILDREN

NON-COLLUSION AFFIDAVIT

Under oath, I hereby affirm under penalty of perjury:

(1) That I am the bidder or a partner of the bidder, or an officer or employee of the bidding corporation with authority to sign on its behalf;

(2) That the attached bid or bids have been arrived at by the bidder and have been arrived at and submitted without collusion or any design to limit bidding or competition;

(3) That the contents of the bid or bids have not been communicated to any person not an employee or agent of the bidder on any bid furnished with the bid or bids, and will not be communicated to any such person prior to the official opening of the bid or bids; and

(4) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed_____

Title_____

Firm Name _____

CITY / COUNTY OF _____

STATE OF _____, to wit:

I, _____, a Notary Public, do certify that

_____whose name is signed to the foregoing

has this date acknowledged the same before me in my City foresaid.

Given under my hand this _____ day of _____, 20___.

My Commission expired _____.

_____

Notary Public

This document must be completed & returned with bid submission.

END OF NON-COLLUSION AFFIDAVIT

REFERENCE LIST

Indicate below a listing of at least three (3) current or recent client references, either commercial or governmental, that your company is servicing, has serviced, or has provided similar goods or services.

Reference #1

Company: _____ Contact Person: _____

Phone #: _____ Email: _____

Project: _____ Dates of Service: _____

Reference #2

Company: _____ Contact Person: _____

Phone #: _____ Email: _____

Project: _____ Dates of Service: _____

Reference #3

Company: _____ Contact Person: _____

Phone #: _____ Email: _____

Project: _____ Dates of Service: _____

Indicate below a listing of at least one (1) current or recent client/account that has terminated your company's services within the last two (2) years. Account(s) are preferred to be government accounts of a similar size and nature.

Terminated Reference *(if Applicable)*

Reference #1

Company: _____ Contact Person: _____

Phone #: _____ Email: _____

Project: _____ Dates of Service: _____

Company Background *(Attach additional sheets if necessary.)*

Number of Years in Business: _____

Overview of Work History, Experience & Background of Company:

_____

_____

_____

This document must be completed & returned with bid submission.

END OF REFERENCE LIST

CONTRACT

THIS CONTRACT, dated this _____ day of _____**, 2022**, for identification, is made by and between **STAUNTON CITY SCHOOLS** (the "OWNER"), a municipal corporation of the Commonwealth of Virginia acting by and through its School Board, and _____ (the "CONTRACTOR"), a _____ Corporation licensed and registered to do business in the Commonwealth of Virginia, (SCC #_____).

WITNESSETH: That for and in consideration of the payments and contract hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

PROJECT: MONTGOMERY HALL PARK TENNIS COURT IMPROVEMENTS

Hereafter called the **PROJECT**, for a sum not to exceed

_____ under the terms of the contract documents.

For said price, the CONTRACTOR is to furnish all materials, labor, superintendence, equipment, tools, machinery, and other accessories and services necessary to complete the said PROJECT.

The Contract Documents, which comprise the entire CONTRACT between OWNER and CONTRACTOR, consist of the following:

1. **This Contract**
2. **Instructions for Bidders**
3. **Bid and Addenda**
4. **Performance and Payment Bonds**
5. **General Conditions**
6. **Special & Supplemental Conditions**
7. **Technical Specifications**
8. **Plan Designs**

Said documents are those prepared by the City Engineering Office or its assigned representative for the specific PROJECT.

The OWNER agrees to make payment to the CONTRACTOR in accordance with the General Conditions and for the price specified in the bid for work completed as stated above as the sum to be paid.

OWNER and CONTRACTOR stipulate that **TIME IS OF THE ESSENCE** and that delay by the CONTRACTOR in completion would have significant adverse consequences for the PROJECT; that, however, the actual damages to OWNER from such delay are uncertain and would be impossible and not susceptible to reasonable determination; and that liquidated damages of such failure by CONTRACTOR to perform in a timely manner are a reasonable way and not a penalty to address such adverse

consequences. CONTRACTOR also stipulates that it shall not challenge, either directly or indirectly, this liquidated damages provision. OWNER, therefore, may require CONTRACTOR to pay liquidated damages of **$1,000** per day for the CONTRACTOR's failure to perform timely in strict accordance with the CONTRACT.

OWNER may deduct any liquidated damages from amounts due to CONTRACTOR and, otherwise OWNER shall be entitled to receive interest at the rate of 5% until deducted or paid. Liquidated damages shall be, other than for delay, in addition to any other entitlement by OWNER to damages and other remedies for any other damage, loss, or injury for which CONTRACTOR may be responsible.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions as provided in the Proposal and to make payments on account thereof as provided in the General Conditions and the Special and Supplemental Conditions.

IN WITNESS WHEREOF, the parties to these presents have executed this contract, in the year and day first above mentioned.

_____
City Engineer Initials

_____
Director of Finance Initials

Approved as to Legality and Form:

_____
City Attorney

_____
Secretary

_____
Witness

_____
City Manager or Authorized Representative

_____ (Seal)
Contractor

By: _____

_____
Title

_____

_____
Address

Note: Secretary of the OWNER should attest. If CONTRACTOR is a corporation.

This document must be completed & returned with bid submission.

END OF CONTRACT

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That

_____

_____

_____

(Insert full name or legal title and address of Contractor)

as Principal, hereinafter called Contractor, and

_____

_____

_____

(Insert full name or legal title and address of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

_____

_____

_____

(Insert name and address of Owner)

As Obligee in the amount of _____ dollars ($_____)
(Insert sum equal to contract price in both words and figures)

For the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated _____, 20___entered into a Contract with the Owner for:

MONTGOMERY HALL PARK TENNIS COURT IMPROVEMENTS
Staunton, Virginia

In accordance with Technical Specifications and Plan Designs prepared by:

The Timmons Group and **City of Staunton Engineering Office**
for:
Staunton City Schools
116 W. Beverley Street
Staunton, Virginia 24401

Which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, in strict conformity with the Drawings, Specifications and

Contract Documents, then this obligation shall be null and void. Otherwise, it shall remain in full force and effect for one (1) year after completion of all work:

a) The Surety hereby waives notice of any alternation or extension of time made by the Owner.

b) Any suit under this bond must be instituted, (1) before the expiration of one (1) year after completion of the Contract including the expiration of all warranties and guarantees, or (2) before the expiration of one (1) year after a defect or breach of warranty is discovered, if the action be for such.

c) No right of action shall accrue on this bond to or for the use of any Person or corporation other than the Owner named herein or the successors or assigns of Owner and every action brought hereon shall be filed and maintained solely in the General District Court or the Circuit Court of the City of Staunton, Virginia.

SIGNED AND SEALED THIS _____ day of _____, 20____

In the presence of :

_____WITNESS

_____WITNESS

Surety:

(Attach power of attorney)

_____(SEAL)

PRINCIPAL

_____BY TITLE

_____SURETY

_____BY TITLE

CONTRACTOR'S PERFORMANCE BOND

Project: _____

This document must be completed & returned with bid submission.

END OF PERFORMANCE BOND

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That

_____

_____

_____

(Insert full name or legal title and address of Contractor)

as Principal, hereinafter called Contractor, and

_____

_____

_____

(Insert full name or legal title and address of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

_____

_____

_____

(Insert name and address of Owner)

As Obligee for the use and benefit of claimants as herein below defined in the amount of _____ dollars ($_____)

(Insert sum equal to contract price in both words and figures)

For the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated _____, 20___entered into a Contract with the Owner for:

MONTGOMERY HALL PARK TENNIS COURT IMPROVEMENTS
Staunton, Virginia

In accordance with Technical Specifications and Plan Designs prepared by:

The Timmons Group and **City of Staunton Engineering Office**

for:

Staunton City Schools
116 W. Beverley Street
Staunton, Virginia 24401

Which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly make payment to all claimants as herein defined, for all labor and materials used or reasonably required for use in the performance of the Contract, then this obligation shall be void. Otherwise it shall remain in full force and effect, subject, however, to the following conditions:

d) A claimant is defined as one having a direct contract with the Contractor for labor, material, or both, used or reasonably required for use in performance of the Contract, labor and material be construed to include the part of water, gas, power, light, heat, oil. gasoline, telephone service, or rental of equipment directly applicable to the Contract.

e) The above named Contractor and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work of labor was done or performed, or materials were furnished by such claimant, may sue on this bond, prosecute the suit to final judgment for such sum or sums as may be justly due claimant and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

f) Any suit or action hereunder by any claimant:

   1. Shall not be commenced after the expiration of one (1) year following the date on which the claimant last performed labor or last supplied materials.
   2. Shall be filed and maintained solely in the General District Court or the Circuit Court of the City of Staunton, Virginia.

SIGNED AND SEALED THIS _____ day of _____, 20____

In the presence of:

_____WITNESS

_____WITNESS

Surety:

(Attach power of attorney)

_____(SEAL)

PRINCIPAL

_____BY TITLE

_____SURETY

_____BY TITLE

CONTRACTOR'S LABOR AND MATERIAL PAYMENT BOND

Project: _____

This document must be completed & returned with bid submission.

END OF PAYMENT BOND

GENERAL CONDITIONS

1. INTENT

1.1. The Contract Documents comprise the entire Contract between the Staunton City Schools and Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

1.2. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be furnished and performed whether or not specifically called for. When words or phrases which have a well-known technical or construction industry or trade meaning are used to describe Work, materials or equipment, such words or phrases shall be interpreted in accordance with that meaning.

1.3. Plans and Specifications – All Work that may be called for in the Specifications and not shown on the Plans, or shown on the Plans and not called for in the Specifications, shall be executed and furnished by the Contractor as if described in both these ways; and should any work or materials be required which are not detailed in the Specifications or Plans, either directly or indirectly, but which are nevertheless necessary for the proper carrying out of the intent thereof, the Contractor is to understand the same to be implied and required, and shall perform all such work and furnish any such materials as fully as if they were particularly delineated and described. The Contractor shall keep one copy of all Plans and Specifications on the project at all times.

1.4. This procurement is being conducted on behalf of other public bodies, in accordance with § 2.2-4304 (A) of the Code of Virginia. If authorized by the bidder, the resultant contract may be extended to any public body in the Commonwealth of Virginia in accordance with contract terms.

2. INSURANCE REQUIREMENTS

2.1. During the term of this Contract, the Contractor shall procure and maintain insurance coverages with insurance companies rated by A. M. Best Company as A – VIII or better. The company(ies) shall be authorized to do business under the laws of the Commonwealth of Virginia and be acceptable to Staunton City Schools and shall provide the following minimum types of insurance:

a) Commercial General Liability Insurance – This will cover claims for Bodily Injury, Property Damage, Personal and Advertising Injury, Products and Completed Operations, which may arise from operations under the Contract, whether such operations be performed by the Contractor or by any Subcontractor or Independent Contractor, or by anyone directly or indirectly employed by any of them. Such insurance shall include coverages "X", "C" and "U" for explosion, collapse of other structures and underground utilities, as well as Contractual Liability Insurance covering the requirements outlined in the General Conditions.

This insurance shall name the Staunton City Schools, the School Board and its employees as additional insured by endorsement to the Commercial General Liability policy. Such

policy shall not have a restriction on the limits of coverage provided to Staunton City Schools as an additional insured. Staunton City Schools shall be entitled to protection up to the full limits of the Contractor's policy regardless of the minimum requirements specified in this contract. If endorsements to the Commercial General Liability insurance policies cannot be made, then separate policies providing such protection shall be purchased by the Contractor.

The Policy shall have the following minimum limits:

- $1,000,000 Each Occurrence Limit
- $1,000,000 General Aggregate Limit
- $1,000,000 Personal and Advertising Injury Limit
- $1,000,000 Products and Completed Operations Aggregate Limit
- $5,000 Medical Expense Limit

This insurance shall include the following provisions and /or endorsements:

The General Aggregate limit shall apply on a "per project" and on a "per location" basis;

i. Coverage shall apply to all liability arising from all premises and operations conducted by the Contractor, subcontractors and independent contractors;

ii. The Contractor agrees that liability arising from Products and Completed Operations will be covered. Such liability coverage will be maintained for two years after completion of the Work.

iii. The Contractor shall require each of his Subcontractors to procure and maintain Commercial General Liability Insurance of the type specified in this document in the minimum amounts required by the Staunton City Schools and the Contractor, during the term of this subcontract.

b) Worker's compensation and Employer's Liability Insurance -- Worker's Compensation and Employer's Liability Insurance for the Contractor's employees engaged in the Work under this Contract, in accordance with the statutory requirements of the Commonwealth of Virginia. The Contractor shall require each of his Subcontractors to provide Worker's Compensation and Employer's Liability Insurance for all of the Subcontractor's employees engaged on such subcontracts. If any class of employees engaged on work under the Contract is not protected under the Worker's Compensation statute, the Contractor shall provide similar protection for these employees in amounts not less than the legal requirements. The amount of Employer's Liability Insurance for the Contractor and each of his Subcontractors shall be not less than:

- $100,000 per employee for Bodily Injury.
- $100,000 per employee for disease
- $500,000 per policy for disease

The Worker's Compensation and Employer's Liability Insurance policy shall include an "all states" or "other states" endorsement.

c) Commercial Automobile Liability Insurance -- Commercial Automobile Liability Insurance, including coverage for owned, hired, non-owned and borrowed vehicles used in the work with minimum limits of $1,000,000 Combined Single Limit per occurrence. This insurance shall name the Staunton City Schools, the School Board and its employees

as additional insureds by endorsement to the Commercial Automobile Liability policy. Such policy shall not have a restriction on the limits of coverage provided to Staunton City Schools as an additional insured. Staunton City Schools shall be entitled to protection up to the full limits of the Contractor's policy regardless of the minimum requirements specified in this contract.

d) Umbrella or Excess Liability -- Umbrella Liability or Excess Liability Insurance with the following minimum limits of:

- $5,000,000 Each Occurrence
- $5,000,000 Annual Aggregate

The following policies shall be scheduled as underlying policies:

- Commercial General Liability
- Commercial Automobile Liability
- Employers Liability

This insurance shall name Staunton City Schools, the School Board and its employees as additional insured by endorsement to the Umbrella or Excess Liability policy. Such policy shall not have a restriction on the limits of coverage provided to Staunton City Schools as an additional insured. Staunton City Schools shall be entitled to protection up to the full limits of the Contractor's policy regardless of the minimum requirements specified in this contract.

2.2. Proof of insurance for each type of coverage listed herein shall be provided within 10 Days after issuance of the Award Letter for the Contract, and no Work shall proceed unless all such insurance is in effect. The Contractor shall not allow any Subcontractor to commence work on his subcontract until all such insurance of the Subcontractor has been so obtained and approved by the Contractor and found to be in accordance with the requirements set forth herein. The Contractor certifies by commencement of the Work that his insurance and that of Subcontractors is in effect and meets the requirements set forth herein.

2.3. The Contractor shall purchase and maintain required liability and all other insurance as is appropriate for the Work being performed and furnished. The insurance shall provide protection from claims which may arise out of or result from Contractor's performance and furnishing of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed or furnished by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

a) claims under Worker's Compensation, Employers Liability, disability benefits, and other similar employee benefit acts;

b) claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

c) claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

d) claims for damages insured by personal injury liability coverage which are sustained: (1) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor; or (2) by any other person for any other reason;

e) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

f) claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.

2.4. The insurance required to be purchased and maintained by the Contractor shall:

a) include completed operations insurance;

b) with respect to any other insurance coverage written on a claims-made basis, remain in effect for at least 2 years after final payment (and Contractor shall furnish the Staunton City Schools and Engineer evidence satisfactory to the Staunton City Schools of continuation of such insurance at final payment and 1 year thereafter);

c) contain a cross liability or severability of interest clause or endorsement. Insurance covering the specified additional insured shall be primary insurance, and all other insurance carried by the additional insured shall be excess insurance.

2.5. All of the aforesaid insurance policies must be endorsed to provide that the insurance company shall give 30 days' written notice to the Staunton City Schools if the policies are to be terminated or if any changes are made during the Contract period which will affect in any way the insurance requirements required in this contract. Before starting the Work, the Contractor shall provide the Staunton City Schools with a copy of each policy which he and each of his Subcontractors shall carry in accordance herewith, together with receipted bills evidencing proof of premium payment. These policies shall contain endorsements to the policies naming Staunton City Schools as an additional insured as required.

2.6. Nothing contained herein shall effect, or shall be deemed to affect, a waiver of the Staunton City Schools' sovereign immunity under law.

3. AVAILABILITY OF LANDS

3.1. Staunton City Schools shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of Contractor. Upon reasonable written request, Staunton City Schools shall furnish Contractor with a correct statement of record legal title and legal description of the lands upon which the Work is to be performed and Staunton City Schools' interest therein as necessary for giving notice of or filing a mechanic's lien against such lands in accordance with applicable Laws and Regulations. Staunton City Schools shall identify any encumbrances or restrictions not of general application but specifically related to use of lands so furnished with which Contractor will have to comply in performing the Work. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by Staunton City Schools, unless otherwise provided in the Contract Documents. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

3.2. Construction in Public Rights-of-Way - The Contractor shall perform all his operations in a manner that will cause the minimal possible disruption to the normal vehicular and pedestrian

traffic. The Contractor shall not block streets or highway to traffic without the prior consent of the Staunton City Schools. Flagmen, lights, barricades, and construction signs shall be provided as directed by Staunton City Schools. All barricades, signs, cones, etc. must conform to the guidelines established by the Manual of Uniform Traffic Control Devices (M.U.T.C.D.) and the Virginia Work Area Protection Manual. All flagmen must be Virginia Department of Transportation certified. Pavement, shoulders, ditches, drainage structures and all other facilities disturbed during the construction shall be restored to their original condition, at the Contractor's expense except for work specifically itemized in the proposal. The Performance Bond shall cover all work on the Staunton City Schools' rights-of-way and easements and the Contractor shall be responsible for the repair and maintenance of all areas disturbed within said rights-of-way and easements. No open ditches shall be permitted overnight in public rights-of-way.

3.3. Construction on Private and Public Property - The area of the construction shall be left in the same condition as it was found. All private and public utilities pipes, wires, lines, fences, walls, walks, pavements, curb and gutter, graveled areas, driveways, drainage structures, trees, shrubs, mailboxes, guy wires, septic systems, etc., encountered during the work whether shown on the Plans or not, shall be protected from damage by the Contractor. Should any facilities be damaged, the Contractor shall repair, replace, or pay damages for same. The surface of the construction area shall be graded, stoned, paved, seeded, etc.; to fit original conditions encountered. Payment for this work shall be included in the Proposal price of the item under construction.

4. EXISTING UTILITIES

4.1. The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to the Staunton City Schools or by the owners of such Underground Facilities or by others, unless otherwise expressly provided in the Special and Supplemental Conditions.

4.2. Staunton City Schools shall not be responsible for the accuracy or completeness of any such information or data; and

4.3. The cost of all of the following will be included in the Contract Price and Contractor shall have full responsibility for:

4.3.1. reviewing and checking all such information and data;

4.3.2. locating all Underground Utilities shown or indicated in the Contract Documents

4.3.3. coordination of the Work with the owners of such Underground Facilities during construction;

4.3.4. the safety and protection of all Underground Facilities and repairing any damage thereto resulting from the Work.

4.4. Existing Utility Lines - The Contractor shall not disturb or damage any existing utility lines found above or below ground whether shown on the Plans or not. If during the course of the work any disturbance, or breakage should occur, the Contractor shall replace, at his own expense, the affected utility lines to the satisfaction of the Staunton City Schools and the proper utility company. The Contractor shall bear full responsibility for any damage to life and/or property incurred as a result of such disturbance or damage to existing utility lines. Special attention should be paid to the Code of Virginia, Sections 59.1-406 - 59.1-414 - "Overhead High Voltage Line Safety Act".

5. SCHEDULE

5.1. Schedule of Construction - Commencement of construction shall begin by the date determined by the Staunton City Schools. Prior to initiation of construction, the Contractor shall have submitted a detailed work schedule to the Staunton City Schools and have received approval of same. The Contractor must proceed according to the approved schedule unless the changes are approved by the Staunton City Schools.

5.2. Contractor shall submit to Staunton City Schools for acceptance proposed adjustments in the progress schedule that will not change the Contract Times. Such adjustments will conform generally to the progress schedule.

6. SHOP DRAWING, MATERIAL DATA SHEETS

6.1. Contractor shall submit Shop Drawings to Engineer for review and approval. All submittals will be identified as Staunton City Schools may require and in the number of copies specified. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show Staunton City Schools the materials and equipment Contractor proposes to provide and to enable Staunton City Schools to review the information.

6.2. Contractor shall also submit material Data Sheets to Staunton City Schools for review and approval. Each submittal will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended and otherwise as Staunton City Schools may require to enable Staunton City Schools to review the submittal.

6.3. Before submitting each Shop Drawing or Material Data Sheet, Contractor shall have determined and verified:

6.3.1. All field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto;

6.3.2. All materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work; and

6.3.3. All information relative to Contractor's sole responsibilities in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.

6.4. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be accepted by Staunton City Schools under the following circumstances:

6.4.1. "***Or-Equal***": If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's

sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items.

6.4.2. ***Substitute Items****:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" it will be considered a proposed substitute item. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall first make written application to Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice Contractor's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contact Documents to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other Contractors affected by the resulting change, all of which will be considered by Engineer in evaluating the proposed substitute. Engineer may require Contractor to furnish additional data about the proposed substitute.

7. CONTRACTOR'S RESPONSIBILITIES

7.1. It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and locations of the work, the conformation of the ground to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions and all other matters which in any way effect the work under this Contract. No verbal agreement or conversation with any officer, agent or employee of the Staunton City Schools either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

7.2. The Contractor shall keep on the work during its progress, a competent superintendent, satisfactory to the Staunton City Schools and any directions given to such superintendent shall be as binding as if given to the Contractor. If the Contractor, in the course of the work, finds any discrepancy between the drawings and the physical conditions of the locality or any errors or omissions in drawings or in the layout as given by Points and Instructions, it shall be his duty to immediately inform the Staunton City Schools in writing, and the Staunton City Schools shall promptly verify the same. Any work done after such discovery, until authorized, will be done at the Contractor's risk.

7.2.1. The contractor shall provide a superintendent and work force that is cooperative and friendly with the business community and general public. Abusive language and actions are prohibited.

7.3. Contractor shall supervise, inspect and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.

7.4. Unless otherwise specified in the Contract Documents, Contractor shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

7.5. All materials and equipment shall be good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of the Staunton City Schools. If required Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

7.6. Throughout the course of the construction, the Contractor shall maintain the project free from any conditions, which may result in danger or nuisance to the public, including but not limited to dust and street disrepair.

7.6.1. The Contractor shall take steps necessary to provide the safety necessary to protect the general public in the area.

7.7. The Contractor shall be responsible for the condition of all excavations made by him. All slides and cave-ins shall be removed without extra compensation, at whatever time and under whatever circumstances they may occur. The neglect, failure, or refusal of the Staunton City Schools to order the use of bracing or sheeting, or a better quality, grade, or section, or larger sizes of steel or timber, or to order sheeting, bracing, struts, or shoring to be left in place, or the giving or failing to give orders or directions as to the manner or methods of placing or driving sheeting, bracing, jacks, wales, rangers, etc., shall not in any way or to any extent relieve the Contractor of any responsibility concerning the condition of excavation or any of his obligations under the Contract; nor shall any delay, whether caused by any action or want of action on the part of the Contractor, or any acts of the Staunton City Schools, or his agents, or employees, resulting in the keeping of an excavation open longer than would otherwise have been necessary, relieve the Contractor from the necessity of properly and adequately protecting the excavation from caving or slipping, nor from any of his obligations under the Contract relating to injury of persons or property, nor entitle him to any claim for extra compensation. <u>IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN PROPER AND SUFFICIENT SHEETING, SHORING AND BRACING TO PROTECT ALL PERSONS CONNECTED WITH THE WORK FROM INJURY.</u>

7.8. Adequate sanitary conveniences for the use of persons employed on the work, properly secluded from public observation, shall be constructed and maintained by the Contractor in such a manner and at such points as shall be approved by the Staunton City Schools. These conveniences shall be maintained at all times without nuisance and their use shall be strictly enforced; upon completion of the work they shall be removed leaving the area clean and free from nuisance.

7.9. The Contractor will be required to comply with the City's Erosion and Sediment Control Ordinance. Special care shall be taken to prevent siltation of existing sewer, streets, drainage ditches, and private property.

7.10. Contractor shall obtain and pay for all construction permits and licenses. Staunton City Schools shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening Bids, or, if there are no Bids, on the Effective Date of the Contract.

7.11. The Contractor shall provide all field engineering services necessary for laying out the Project. All such services shall be performed by a Professional Surveyor registered with the State of Virginia. Control points shall be established and maintained during the execution of the Project. All documentation and control points shall be made available to the Staunton City Schools throughout the execution of the Project.

7.12. The Contractor shall provide at their cost an independent testing service, approved by the Engineer, to perform all testing required by the Contract Documents. Written reports shall be provided to the Staunton City Schools.

7.13. If required by the Contract Documents, the Contractor shall provide “as built” plans within 30 days of project completion and shall show such items as final elevations, grades, structure locations, etc.

7.14. Representatives of the Staunton City Schools, as well as representatives of Local, State and Federal agencies and parties having an interest in the project shall have access to the work wherever it is in preparation or progress and the Contractor shall provide proper facilities for such access and review.

7.15. During the performance of this contract, the Contractor agrees to

7.15.1. provide a drug-free workplace for the Contractor’s employees

7.15.2. post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor’s workplace and specifying the actions that will be taken against employees for violations and such prohibition

7.15.3. state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug free workplace; and

7.15.4. include the provisions of the foregoing clauses in every subcontract or purchase order of over $10,000.00, so that such provisions will be binding upon each Subcontractor or vendor.

7.16. Contractor certifies that it does not and will not during the performance of this Contract violate:

7.16.1. The provisions of the Federal Immigration Reform and Control Act of 1986, as amended and §40.1-11.1, Code of Virginia, which prohibits the employment of illegal aliens.

7.16.2. The provisions of Federal and State employment and wage hour laws. The Contractor shall include and enforce the language in the last sentence in every subcontract issued under this Contract and shall require the subcontractor to do the same.

8. SUBCONTRACTS

8.1. Contractor shall not employ any Subcontractor, Supplier or other person or organization whether initially or as a substitute, against whom Staunton City Schools may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom Contractor has reasonable objection.

8.2. Contractor shall be fully responsible to Staunton City Schools for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier or other person or organization any contractual relationship between Staunton City Schools and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the Staunton City Schools to pay or to see the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

8.3. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor. Contractor shall require all Subcontractors, Suppliers and such other persons and organizations performing or furnishing any of the Work to communicate with the Staunton City Schools through Contractor.

8.4. The Contractor shall, as directed by the Owner, remove from all public and private property, at his own expense, all temporary structures, rubbish and waste materials, resulting from his operations; and shall leave the site in a neat, orderly condition.

9. OWNER'S RESPONSIBILITY

9.1. The Owner through his designated representatives shall have general supervision and direction of the work. He has the authority to stop the work whenever such stoppage may be necessary to ensure the proper execution of the Contract. He shall also have authority to reject all work and materials which do not conform to the Contract, to direct the application of forces to any portion of the work as in his judgment is required, to order the force increased or diminished and to decide questions which arise in the execution of the work.

9.2. Wherever work being done by the City's forces or by other Contractors is contiguous to work covered by this Contract the respective rights of the various interests involved shall be established by the Staunton City Schools to secure the completion of the various portions of the work in general harmony.

9.3. If the Contractor should neglect to execute the work properly or fail to perform any provision of this Contract, the Staunton City Schools after three days' written notice to the Contractor, may without prejudice to any other remedy make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

9.4. Staunton City Schools shall promptly furnish the data required under the Contract Documents and shall make payments to Contractor promptly when they are due.

9.5. Staunton City Schools shall provide inspection of the Contractors Work.

9.6. The Staunton City Schools shall have the right at any time, for reasons which appear good to them, to annul this Contract upon giving written notice to the Contractor, in which event the Contractor shall be entitled to the full amount of the estimate for the work done by him under this Contract up to the time of such annulment, including the retained percentage. The Contractor shall be reimbursed by the Staunton City Schools for such expenditures that are not otherwise compensated for, and as are required in preparing for and moving to and from the work; the intent being that an equitable settlement shall be made with the Contractor.

10. CHANGES IN WORK

10.1. Without invalidating the Contract and without notice to any surety, Staunton City Schools may, at any time or from time to time, order additions, deletions or revisions in the work. Any additions, deletions or revisions will be authorized by a Change Order. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents.

10.2. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented.

10.3. Staunton City Schools and Contractor shall execute appropriate Change Orders covering:

10.3.1. Changes in the Work which are ordered by Staunton City Schools;

10.3.2. Changes in the Contract Price or Contract Times which are agreed to by the parties; and

10.3.3. Changes in the Contract Price or Contract Times, which embody the substance of any written decision, rendered by the Staunton City Schools.

11. CHANGES IN CONTRACT PRICE

11.1. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change in Contract Price.

11.2. The Contract Price may only be changed by a Change Order. Any claim for an adjustment in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to Staunton City Schools promptly after the start of the occurrence or event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within 20 days after the start of such occurrence or event and shall be accompanied by claimant's written statement that the adjustment claimed covers all known amounts to which the claimant is entitled as a result of said occurrence or event. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph 11.2.

11.3. The value of any Work covered by a Change Order or of any claim for an adjustment in the Contract Price will be determined as follows:

11.3.1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved.

11.3.2. Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum.

12. CHANGES IN CONTRACT TIMES

12.1. The Contract Times may only be changed by a Change Order except for inclement weather days as determined by the Staunton City Schools. Such inclement weather days shall be maintained by the Staunton City Schools and added to the number of days permitted for completion of the Project. Any claim for an adjustment of the Contract Times shall be based on written notice delivered by the party making the claim to the other party and to Staunton City Schools promptly after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within 20 days after such occurrence and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Times shall be determined by Staunton City Schools. No claim for an adjustment in the Contract Times will be valid if not submitted in accordance with the requirements of this paragraph 12.1.

12.2. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a claim is made therefor as provided in paragraph 12.1. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Staunton City Schools, acts or neglect of utility owners, fires, floods, epidemics, abnormal weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within control of Contractor.

12.3. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of both Staunton City Schools and Contractor, an extension of the Contract Times in an amount equal to the time lost due to such delay shall be Contractor's sole and exclusive remedy for such delay. In no event shall Staunton City Schools be liable to Contractor, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

12.3.1. delays caused by or within the control of Contractor, or

12.3.2. delays beyond the control of both parties including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God or acts or neglect by utility owners.

13. INDEMNIFICATION

13.1. The Contractor agrees to indemnify, defend and hold harmless the Staunton City Schools, its members of Council, officers, directors, agent and employees, against any and all claims, liabilities, losses, damages, costs and expenses (including reasonable attorney fees) arising out of, or resulting from any and all injuries to persons or damage to property arising out of services performed hereunder or by reason of the intentional or negligence acts or omissions of the Contractor, its employees, agents or sub-consultants, including any independent contractors.

14. SEPARATE CONTRACTS

14.1. The Staunton City Schools reserves the right to let other contracts in connection with this work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

15. PAYMENT

15.1. 5% of the dollar amount of the estimate of work completed shall be withheld until the final acceptance of the project. Payment shall be made based on estimates of work completed in the preceding month submitted on, or before the 5th day of the month for the duration of the contract. Application for partial payments shall be submitted on Standard Staunton City Schools form.

15.2. Material stored on site shall be paid for based on supplier invoice only.

15.3. Failure by the Staunton City Schools to make payments at the time provided by this Contract shall give the Contractor the right to suspend work until payment is made, or, at his option, after thirty days written notice, should the Staunton City Schools continue to default; to terminate this Contract and recover the price of all work done and materials provided and all damages sustained; and such failure to make payment at the time provided shall be a bar to any claim by the Staunton City Schools against the Contractor for delay in completion of the work, due to such suspension or failure to pay.

15.4. Payments to Subcontractors: The Contractor shall take one of two actions within seven days after receipt of payment by the Staunton City Schools:

15.4.1. Pay the Subcontractor for the proportionate share of the total payment received from the Staunton City Schools attributable to the work performed by the Subcontractor under that contract; or

15.4.2. Notify the Staunton City Schools and Subcontractor, in writing, of his intention to withhold all or part of the Subcontractor's payment with the reason for nonpayment.

The Contractor shall pay interest to any Subcontractor on all amounts owed by the Contractor that remain unpaid after seven days following receipt by the Contractor of payment by the Staunton City Schools for work performed by the Subcontractor. Interest shall accrue at the rate of 1 percent per month.

15.5. Upon the completion of the work and its final acceptance by the Staunton City Schools, the Contractor shall submit his final estimate over his signature, covering work provided for in this Contract, completed and accepted by the Staunton City Schools under the terms and condition hereof, whereupon the balance found to be due the Contractor, including the retained percentage, shall be paid to the Contractor within 30 days of receipt of the final estimate by the Staunton City Schools, provided that, before the payment of said final estimate the Contractor shall submit evidence satisfactory to the Staunton City Schools that all payrolls, material bills and outstanding indebtedness in connection with the work have been paid. The payment of the final estimate due under this Contract and any and all alterations of same, shall release the Staunton City Schools and the officers and agents thereof, from any and all claims or liabilities on account of the work performed and materials furnished under this Contract or any alterations thereof.

15.6. The General Contractor shall have the option to use an escrow account procedure for utilization of the Staunton City Schools' retainage funds, when contracting directly with the Staunton City Schools for contracts involving $200,000 or more of public funds, where portions of the contract price are to be retained, where such contracts are for: construction of highways, roads, streets, bridges, parking lots, demolition, clearing, grading, excavating, paving, pile driving, drainage structures and the installation of water, gas, sewer lines and pumping stations. In the event a Contractor elects to utilize the escrow account procedure, then any sub such public project which provides for progress payments shall be subject to the same escrow account procedures.

15.6.1. The Contractor shall indicate its election to use the escrow account procedure, by completing the escrow agreement form and contract included in the Bid Documents for this Project. The form and contract shall be submitted to the Staunton City Schools within fifteen (15) calendar days after the Contractor is notified of the award of the contract. If the escrow agreement form and contract are not submitted within the 15 day period, then the Contractor shall forfeit its right to the use of the escrow account procedure.

15.6.2. In order to have retained funds paid to an escrow agent, the Contractor, the escrow agent, and the surety shall execute an escrow agreement form. The Contractor's escrow account shall be a trust company, bank or savings institution with its principal office located in the Commonwealth of Virginia.

15.6.3. This escrow account procedure shall not apply to public contracts for construction of railroads, public transit systems, runways, dams, foundations, installation or maintenance of power systems for the generation and primary and secondary distribution of electric current ahead of the customer's meter, the installation or maintenance of telephone, telegraph or signal systems for public utilities or the construction or maintenance of solid waste or recycling facilities and treatment plants.

16. DISCRIMINATION

16.1. During the performance of this contract, the Contractor agrees as follows:

16.1.1. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

16.1.2. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.

16.1.3. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The Contractor will include the provisions of the foregoing paragraphs 16.1.1, 16.1.2, and 16.1.3 in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each Subcontractor or vender.

17. CLAIM PROCESS

17.1. The OWNER and CONTRACTOR each hereby waive all right to trial by jury in any matter arising out of or in any way connected with this CONTRACT or their relationship, whether contractual or extra-contractual. They agree that prior to the assertion of any claim against the other, they will endeavor to resolve the claim through discussion, including the optional use of non-binding mediation. Absent agreed resolution, the process to assert a claim against Staunton City Schools is to present it in writing to the Superintendent of Schools; and absent acceptance

of the decision of the Superintendent of Schools, then appeal in turn to the School Board, with each such appeal to be submitted in writing within 10 calendar days of prior decision, identifying in writing on what specific basis, with citation to controlling and supporting documentation and legal authority, the appeal is sought and challenge made to the prior decision and the resolution or remedy which would be acceptable. With any claim that reaches School Board, the School board shall decide the claim within 60 days of when it was submitted to the School Board or designee.

END OF GENERAL CONDITIONS

SPECIAL AND SUPPLEMENTAL CONDITIONS

These Special and Supplemental Conditions amend or supplement the General Conditions and Specifications and other provisions of the Contract Documents as indicated. All provisions which are not so amended or supplemented remain in full force and effect.

1) Project Description

The work for which bids are to be submitted consists of the renovation of three (3) existing tennis courts and site improvements, including new fencing, additional sidewalks, lighting, and a watering station.

2) Work Requirements and Other Notes

a) Prior to construction, the Contractor shall make a detailed survey of all proposed work areas to document existing conditions. The Contractor is required to document the existing conditions by video and/or photographs prior to construction. The Contractor shall provide a copy of the existing conditions media to the City Engineer.

b) A construction field office is not required for this project.

c) Normal working hours are not to exceed 7:00 a.m. to 7:00 p.m. during daylight on weekdays (Monday through Friday). No work is to be performed on City holidays. Prior approval from the City Engineer is required to perform construction work outside of these hours.

d) Work shall be performed per Work Area Protection Manual, where applicable.

e) Throughout construction, the Contractor shall ensure that the existing pickleball court is not damaged. Protective measures shall be installed as needed, at no additional expense to the Owner. Contractor shall submit plan describing protective measures to City Engineer for approval, prior to implementing work in the area. Any damage caused to the pickleball court as a result of project work shall be repaired by the Contractor, at no additional expense to the Owner, per the requirements of the Plans and the Tennis Court Surfacing section of the Technical Specifications. Any paint or line repair work needed shall match the existing pickleball court configuration.

f) The pickleball court may be inaccessible for public use due to construction activity NO MORE THAN 20 DAYS, cumulative, throughout the duration of the project. The lower parking lot may only be restricted to the public during these 20 days.

g) A spare pull string shall be installed in all conduits (for future use).

h) The water service line shall have a minimum of 30” of cover.

i) All trash receptacles and bleachers shown on the plans will be provided by others.

j) The cost for all electrical work required in the Contract Documents is to be included in the Bid Items as listed in the Contract Documents. Contractor shall coordinate with Dominion Energy. The meter and service equipment station and equipment control panel station shall be at the locations shown on the Plans.

k) For bid purposes, the cost for any tenons and/or adapters needed to install the luminaires to the light poles shall be included in the bid unit price for the light poles.

3) Project Closeout

a) Warranty – The Contractor shall provide a minimum general one-year warranty of the construction, effective as of the date of Final Completion; additional warranties shall be in effect for the applicable individual items, workmanship, and materials as specified in the Contract Documents. All construction under these specifications and Contract Documents shall be free from defects in material or workmanship, and the Contractor shall repair or replace at his expense any such defective items during the warranty period. The Contractor shall be responsible for repair or replacement of any equipment or materials which fail to meet the design requirements as specified which are revealed during the start-up or testing. Repair or replacement of any such items shall be completed within 30 days at the expense of the Contractor. Some individual mechanical items may have longer manufacturer warranties if specified.

b) Record Drawings – Upon Final Completion, Contractor shall provide Staunton City Schools with a complete set of accurate “red-line" as-built Record Drawings. Record drawings will indicate/confirm any and all changes in layout that deviate from the original plans. A field survey will not be required for record drawings for this project.

ESCROW ACCOUNT ELECTION FORM

ELECTION OF ESCROW ACCOUNT PROCEDURE FOR RETAINAGE

If determined to be the successful low bidder(s), the below signed elects to use the Escrow Account Procedure for retainage.

_____

Write "Yes" or "No" on above line

If the successful bidder elects ("Yes") to use the Escrow Account Procedure for Retainage, the following "Escrow Agreement" form provided below shall be executed and submitted to the Staunton City Schools within fifteen (15) calendar days after notification. If the "Escrow Agreement" form is not submitted within the fifteen (15) day period, the Contractor shall forfeit his rights to the use of the Escrow Account Procedure.

Company: _____

Authorized Signature: _____

SIGNATURE PAGE TO FOLLOW

ESCROW AGREEMENT

STAUNTON CITY SCHOOLS

THIS AGREEMENT ("Agreement"), made and entered into this_____ day of _____, 2022 by, between and among Staunton City Schools ("Schools" or Owner"),

_____("Contractor"),

_____(Name of Escrow Agent)

_____(Address of Escrow Agent)

a trust company, bank, or savings and loan institution (hereinafter referred to collectively as "Escrow Agent") with its principal office located in the Commonwealth of Virginia ("Commonwealth") and _____("Surety") provides:

I.

The Schools and the Contractor have entered into a contract dated

_____

with respect to Staunton City Schools ITB No. _____,
for_____

_____("Contract"). This Agreement is pursuant to, but in no way amends or modifies, the Contract. Payments made hereunder or the release of funds from escrow shall not be deemed approval or acceptance of performance by the Contractor. Payments should be made to _____ and mailed to

_____(Name and Address of Escrow Agent).

II.

In order to assure full and satisfactory performance by the Contractor of its obligations under the Contract, the Staunton City Schools are required thereby to retain certain amounts otherwise due the Contractor. The Contractor has, with the approval of the Staunton City Schools, elected to have these retained amounts held in escrow by the Escrow Agent. This agreement sets forth the terms of the escrow. The Escrow Agent shall not be deemed a party to, bound by, or required to inquire into the terms of the Contract or any other instrument or agreement between the Staunton City Schools and the Contractor.

III.

The Staunton City Schools shall from time to time pursuant to the Contract pay to the Escrow Agent amounts retained by it under the Contract. Except as to amounts actually withdrawn from escrow by the Staunton City Schools, the Contractor shall look solely to the Escrow Agent for the payment of funds retained under the Contract and paid by the Staunton City Schools to the Escrow Agent.

The risk of loss by diminution of the principal of any funds invested under the terms of the Contract shall be solely upon the Contractor.

Funds and securities held by the Escrow Agent pursuant to this Escrow Agreement shall not be subject to levy, garnishment, attachment, lien, or other process whatsoever. Contractor agrees not to assign, pledge,

discount, sell or otherwise transfer or dispose of his interest in the escrow account or any part thereof, except to the Surety.

IV.

Upon receipt of checks drawn by the Staunton City Schools and made payable to the Escrow Agent under this agreement, the Escrow Agent shall promptly notify the Contractor, negotiate the same and deposit or invest and reinvest the proceeds in approved securities in accordance with the written instructions of the Contractor. In no event shall the Escrow Agent invest the escrowed funds in any security not approved, as set forth in Section V. below.

V.

The following securities, and none other, are approved securities for all purposes of this Agreement:

(1) United States Treasury Bonds, United States Treasury Notes, United States Treasury Certificates of Indebtedness or United States Treasury Bills,

(2) Bonds, notes and other evidences of indebtedness unconditionally guaranteed as to the payment of principal and interest by the United States,

(3) Bonds or notes of the Commonwealth of Virginia,

(4) Bonds of any political subdivision of the Commonwealth of Virginia, if such bonds carried, at the time of purchase by the Escrow Agent or deposit by the Contractor, a Standard and Poor's or Moody's Investor Service rating of at least "A", and

(5) Certificates of deposit issued by commercial Banks located within the Commonwealth of Virginia, including, but not limited to, those insured by the Escrow Agent and its affiliates.

(6) Any bonds, notes, or other evidences of indebtedness listed in Sections (1) through (3) may be purchased pursuant to a repurchase agreement with a bank, within or without the Commonwealth of Virginia having a combined capital, surplus and undivided profit of not less than $25,000,000, provided the obligation of the bank to repurchase is within the time limitations established for investments as set forth herein. The repurchase agreement shall be considered a purchase of such securities even if title, and/or possession of such securities is not transferred to the Escrow Agent, so long as the repurchase obligation of the bank is collateralized by the securities themselves, and the securities have on the date of the repurchase agreement a fair market value equal to at least 100% of the amount of the repurchase obligation of the bank, and the securities are held by a third party, and segregated from other securities owned by the bank.

(7) No security is approved hereunder which matures more than five (5) years after the date of its purchase by the Escrow Agent or deposit by the Contractor.

VI.

The Contractor may from time to time withdraw the whole or any portion of the escrowed funds by depositing with the Escrow Agent approved securities as set forth in Section V. above in an amount equal to, or in excess of, the amount so withdrawn. Any securities so deposited or withdrawn shall be valued at such time of deposit or withdrawal at the lower of par or market value, the latter as determined by the Escrow Agent. Any securities so deposited shall thereupon become a part of the escrowed fund.

Upon receipt of a direction signed by the City of Staunton, Director of Finance or designee, the Escrow

Agent shall pay the principal of the fund, or any specified amount thereof, to the Staunton City Schools or the Contractor as the Staunton City Schools may direct. If payment is to be made to the Staunton City Treasurer, it shall be made in cash or cash equivalent. However, if payment has been authorized to be made to the Contractor, the Contractor may specify to the Escrow Agent if payment is to be made in cash or in kind. Any such payment and delivery required hereunder shall be made as soon as is practicable after receipt of the direction.

VII.

For its services hereunder, the Escrow Agent shall be entitled to a reasonable fee in accordance with its published schedule of fees or as may be agreed upon by the Escrow Agent and the Contractor. Such fee and any other costs of administration of this Agreement shall be paid from the income earned upon the escrowed fund and, if such income is not sufficient to pay the same, by the Contractor.

VIII.

The net income earned and received upon the principal of the escrowed fund shall be paid over to the Contractor in quarterly or more frequent installments. Until so paid or applied to pay the Escrow Agent's fee or any other costs of administration, such income shall be deemed a part of the principal of the fund.

IX.

The Surety undertakes no obligation hereby but joins in this Agreement for the sole purpose of acknowledging that its obligations as surety for the Contractor's performance of the contract are not affected hereby.

X.

This Escrow Agreement shall be governed by, and construed in accordance with, the laws of the Commonwealth of Virginia, without application of Virginia’s conflict of law provisions. Venue and any actions for any litigation, suits, and claims arising from or connected with this Escrow Agreement and/or Contract referred to herein shall only be proper in the City of Staunton Circuit Court, or in the Staunton General District Court if the amount in controversy is within the jurisdictional limit of such court, and all parties to this Escrow Agreement and/or such Contract voluntarily submit themselves to the jurisdiction and venue of such courts, regardless of the actual location of such parties.

IN WITNESS WHEREOF, the parties hereto have signed this Escrow Agreement by their authorized representatives.

Attest: (if corporation)

Witness: (if individual)

Typed Name of Contractor

President/Vice-President

Partner or Owner (Seal)

Attest:

Typed Name of Escrow Agent

Bank Officer

Vice President

Witness:

Typed Name of Surety Company

By:

Attorney-In-Fact

Attest:

Staunton City Schools

City Clerk

Staunton City Schools Superintendent

Approved as to form:

School Board Attorney

Approved as to execution:

School Board Attorney

PROCUREMENT GUIDELINES

1. SUBMISSION AND RECEIPT OF BIDS:

1.1. Bids, to receive consideration, must be received prior to the specified time and date of opening as designated in the invitation. E-mail and facsimile submittals are not acceptable.

1.2. Unless otherwise specified, bidders must use the bid form furnished by the Staunton City Schools. Failure to do so may cause bid to be rejected. Removal of any part of the bid form may invalidate the bid.

2. BID SPECIFICATIONS

2.1. Bidders must indicate any variances from our specification and/or conditions, NO MATTER HOW SLIGHT. If variations are not stated in the bid, it will be assumed that the product or service fully complies with our specifications. The Purchasing Department is not responsible for locating or securing any information which is not included in the bid. Accordingly, to insure that sufficient information is available, the bidder must furnish as part of his bid all descriptive material, (i.e., Catalog Cuts, illustrations, drawings, specifications, or other information) necessary for the Purchasing Department to determine whether the goods or services offered meet the salient characteristic requirements of the bid.

3. BRAND NAMES

3.1. Unless otherwise provided in the invitation for bid, the name of a certain brand, make, or manufacturer does not restrict bidders to the specific brand, make, or manufacture mentioned; it conveys the general style, type, character, and quality of the equipment desired. The Staunton City Schools shall determine in its sole discretion equipment bid to be equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted.

4. DELIVERY POINT:

4.1. All items shall be delivered F.O.B. destination, and delivery costs and charges included in the bid price. Failure to do so may be cause for rejection of bid. The bidder shall assume all liability and responsibility for the delivery of merchandise in good condition to the specified delivery location(s).

5. CASH DISCOUNTS:

5.1. Cash discounts will be considered in determining the award.

6. LATEST MODEL/QUALITY

6.1. Bidder shall bid on the latest model, design, etc. of this type of equipment by the manufacturer of which he represents. Equipment shall be new and unused.

7. NOTICE OF AWARD

7.1. Notice of award will be posted at http://www.staunton.va.us/solicitation-results

8. CHARGES AND PAYMENTS

8.1. To Prime Contractor:

8.1.1. Invoices for items ordered, delivered and accepted shall be submitted by the contractor directly to the payment address shown on the purchase order/contract. All invoices shall show the purchase order number.

8.1.2. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after satisfactory invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.

8.1.3. All goods or services provided under the contract, which are to be paid for with public funds, shall be billed by the contractor at the contract price, regardless of which public agency is being billed.

8.1.4. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.

8.1.5. Unreasonable Charges. Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, Staunton City Schools shall promptly notify the contractor, in writing, as to those charges which it considers unreasonable and the basis for the determination. A contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification. The provisions of this section do not relieve Staunton City Schools of its prompt payment obligations with respect to those charges which are not in dispute (Code of Virginia, § 2.2-4363).

8.2. Payment to Subcontractors:

8.2.1. An offeror awarded a contract under this solicitation is hereby obligated:

8.2.1.1. To pay the subcontractor(s) within thirty (30) days of the offeror's receipt of payment from Staunton City Schools for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or

8.2.1.2. To notify the agency and the subcontractor(s), in writing, of the offeror's intention to withhold payment and the reason.

8.2.2. The offeror is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the offeror that remain unpaid thirty (30) days following receipt of payment from Staunton City Schools, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U.S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. An offeror's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of Staunton City Schools.

9. TESTING AND INSPECTION

9.1. Staunton City Schools reserve the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.

10. ASSIGNMENT OF CONTRACT

10.1. A contract shall not be assignable by the offeror in whole or in part without the written consent of Staunton City Schools.

11. DEFAULT

11.1. In case of failure to deliver goods or services in accordance with the contract terms and conditions, Staunton City Schools, after due oral or written notice, may procure them from other sources and hold the offeror responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which Staunton City Schools may have.

12. TAXES

12.1. Sales to Staunton City Schools are exempt from State sales tax. State sales and use tax certificates of exemption, Form ST-12, will be issued upon request, as Staunton City Schools determines appropriate. Any deliveries under this contract shall be free of Federal excise and transportation taxes.

13. INDEMNIFICATION

13.1. The Offeror agrees to indemnify, defend, and hold harmless Staunton City Schools and it's Board members, officers, directors, agents and employees against any and all claims, liabilities, losses, damages, costs and expenses (including reasonable attorney fees) arising out of, or resulting from any and all injuries to persons or damage to property or intellectual infringement claim arising out of services performed hereunder or by reason of the intentional or negligent acts or omissions of the Offeror, its employees, agents or sub-contractors, including any independent contractors. The provisions of this section of shall survive the completion, terminations or expiration of the contract.

14. LIABILITY AND LITIGATION

14.1. The Staunton City Schools shall not indemnify or hold harmless any contractor or other third party. The Staunton City Schools does not waive any right or release any party from liability, whether on its own behalf or on behalf of any boards, employees or agents. The Staunton City Schools does not waive the right to trial by jury for any cause of action arising from the Contract and shall not submit any Contract claim to binding arbitration or mediation. The Staunton City Schools shall not be liable to contractor for any special, punitive or exemplary damages arising from the performance of the contract, including, but not limited to, incidental damages, and lost profit and lost wages, even if such special damages are reasonably foreseeable. Any provision(s) in the Contract contrary to these statements is/are hereby deleted and rendered void.

15. COPYRIGHTS

15.1. The Offeror hired pursuant to this contract is prohibited from copyrighting any papers, interim reports, forms, or other materials resulting from performance under this agreement, without the written permission of the Purchasing Agency. Data and their analysis, forms, and images gathered or developed during fulfillment of this contract may be used by the Offeror in subsequent copyrighted publications, provided the copyrights do not in any way restrict or limit the Purchasing Agency's ownership, use, or distribution of said information, forms, or images.

16. AWARDING THE CONTRACT

16.1. The award of a contract shall be determined in the sole discretion of the Staunton City Schools based upon evaluation of all information as the Staunton City Schools may request. The Staunton City Schools reserves the right to waive any informality in bids submitted in response to this Invitation to Bid when such waiver is in the best interest of the Staunton City Schools.

16.2. Staunton City Schools shall endeavor to award the contract within thirty (30) days from receipt of bids. Notice of award will be posted on the City Web Site at http://www.staunton.va.us/solicitation-results

17. PUBLIC INSPECTION OF PROCUREMENT RECORDS

17.1. Bids submitted shall be subject to public inspection only in accordance with Section 2.2-4342 of the Code of Virginia, which reads, in essence, as follows:

17.2. Public inspection of certain records:

17.2.1. Except as provided in this section, all proceedings, records, contracts, and other public records relating to procurement transactions shall be open to the inspection of any citizen, or any interested person, firm or corporation, in accordance with the Virginia Freedom of Information Act.

17.2.2. Cost estimates relating to a proposed procurement transaction prepared by or for a public body shall not be open to public inspection.

17.2.3. Any competitive negotiation offeror, upon request, shall be afforded the opportunity to inspect bid records within a reasonable time after the evaluation and negotiations of bids are completed but prior to award, except in the event that the Staunton City Schools decides not to accept any of the bids and to reopen the contract. Otherwise, bid records shall be open to public inspection only after award of the contract.

17.2.4. Any inspection of procurement transaction records under this section shall be subject to reasonable restrictions to ensure the security and integrity of the records.

17.2.5. Trade secrets or proprietary information submitted by a bidder, offeror or contractor in connection with a procurement transaction shall not be subject to the Virginia Freedom of Information Act; however, the bidder, offeror or contractor shall

17.2.5.1. invoke the protections of this section prior to or upon submission of the data or other materials,

17.2.5.2. identify the data or other materials to be protected, and

17.2.5.3. state the reasons why protection is necessary.

17.2.5.4. Bidder may not invoke this protection on the entire bid – only on those sections or data which are considered trade secrets or proprietary.

18. ETHICS IN PUBLIC CONTRACTING

18.1. By submitting their bid, all offerors certify that their bid is made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or sub-contractor in connection with their bid, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised unless consideration of substantially equal or greater value was exchanged.

19. FORUM SELECTION

19.1. This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia, without reference to conflict of laws principles or rules of construction. Any action, proceeding, or claim in any way related to this agreement or the relationship between the parties shall be filed and maintained solely in the General District Court or the Circuit Court of the City of Staunton, Virginia.

20. PROMPT PAYMENT ACT

20.1. Any contract awarded as a result of this Invitation to Bid shall incorporate the terms and conditions of Article 4 of the Virginia Public Procurement Act with respect to Prompt Payment.

21. REJECTION OF BIDS

21.1. The Staunton City Schools reserves the right, at any time prior to award of the contract, to reject any and all bids, or any part thereof, to make no award, and/or to issue a new Invitation to Bid, or make modifications, corrections of additions to the information contained herein.

21.2. Offerors are cautioned this is an Invitation to Bid, NOT a request to contract.

22. COSTS FOR BID PREPARATION

22.1. Any costs incurred by offerors in preparing or submitting bids are the offeror's sole responsibility; the Staunton City Schools will not reimburse any offeror for any costs incurred as a result of the preparation of this Invitation to Bid.

23. APPROPRIATIONS

23.1. The obligations of Staunton City Schools are subject to and contingent upon annual appropriation by School Board of sufficient funds for the purposes of this contract. In the absence of such annual appropriation, either Staunton City Schools or offeror may terminate the contract by giving not less than ten (10) days prior notice to the other, specifying this reason for the termination, and upon effective termination pursuant to this provision, any compensation due shall be equitably adjusted by mutual agreement.

24. ADDITIONAL FEDERAL GRANT PROVISIONS

24.1. The following provisions apply to a contract made under a federal grant: Appendix II to Part 200 – Contract Provisions for Non-Federal Entity Contracts Under Federal Awards.

25. STATE CORPORATION COMMISSION IDENTIFICATION NUMBER

25.1. Pursuant to Code of Virginia, §2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC).

25.2. Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized. Link to the Virginia State Corporation Commission site: http://www.scc.virginia.gov/.

26. ANTITRUST

26.1. By entering into a contract, the contractor conveys, sells, assigns, and transfers to the Staunton City Schools all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the Staunton City Schools under said contract.

27. QUALIFICATIONS OF (BIDDERS/OFFERORS)

27.1. The Staunton City Schools may make such reasonable investigations as deemed proper and necessary to determine the ability of the (bidder/offeror) to perform the services/furnish the goods and the (bidder/offeror) shall furnish to the Staunton City Schools all such information and data for this purpose as may be requested. The Staunton City Schools reserves the right to inspect (bidder's/offeror's) physical facilities prior to award to satisfy questions regarding the (bidder's/offeror's) capabilities.

27.2. The Staunton City Schools further reserves the right to reject any (bid/ proposal) if the evidence submitted by, or investigations of, such (bidder/offeror) fails to satisfy the Staunton City Schools that such (bidder/offeror) is properly qualified to carry out the obligations of the contract and to provide the services and/or furnish the goods contemplated therein.

28. CANCELLATION OF THE CONTRACT

28.1. The Staunton City Schools may terminate any agreement resulting from this solicitation at any time, for any reason or for no reason, upon thirty days advance written notice to the contractor. In the event of such termination the contractor shall be compensated for services and work performed prior to termination.

29. AVAILABILITY OF FUNDS

29.1. Agreements are made subject to the appropriation of funds by the School Board and are null and void in the event of non-appropriation by the School Board. Non-appropriation of funds shall not be deemed a cancellation and shall terminate this agreement without recourse and with no liability on the part of the Staunton City Schools.

30. SELECTION PROCESS/AWARD

30.1. Upon the award or the announcement of the decision to award a contract as a result of this solicitation, the department will publicly post such notice for a minimum of ten (10) days, or will notify all responsive bidders/offerors.

31. SAFETY AND OSHA STANDARDS

31.1. All parties performing services for the Staunton City Schools shall comply with all Occupational Safety and Health Administration (OSHA), State Occupational Health Standards, and any other applicable rules and regulations. All parties shall be held responsible for the training, supervision, and safety of their employees. Any unsafe acts or hazardous conditions that may cause injury or damage to any persons or property within and around the work site areas under this contract shall be remedied per the regulatory agency's guidelines.

32. MODIFICATION & WITHDRAWAL OF BID

32.1. An offeror may modify or withdraw his bid, either personally or by written request, at any time prior to the scheduled time for opening of bids. After bid opening, Code of Virginia 2.2-4330 B. 1. shall apply: "The bidder shall give notice in writing of his claim of right to withdraw his bid within two business days after the conclusion of the bid opening procedure and shall submit original work papers with such notice."

33. CONTRACT TERM

33.1. The Offeror whose Bid is found to be the most advantageous to the Staunton City Schools will be offered the opportunity to enter into an Agreement with the Staunton City Schools. The

scope, terms, and conditions of that Agreement shall be in substantial conformance with the terms, conditions, and specifications described in this Invitation to Bid.

33.2. If, through any cause, the contractor shall fail to fulfill in a timely and proper manner the obligations agreed to, the Schools shall have the right to terminate the contract by specifying the date of termination in a written notice to the contractor at least thirty (30) days prior to the termination date. Staunton City Schools may terminate this contract without cause in the event funds are not appropriated by the Staunton City Schools.

33.3. Part of the consideration will be the capability of the Offeror to immediately begin work and meet the proposed timetable above.

33.4. The Schools reserve the right to negotiate the Agreement, to include any portion or portions of the services covered by this Invitation to Bid, and to reject any and all bids in total or by components.

33.5. The contractor shall not assign or transfer any interest in the contract without prior written consent of the Schools.

34. COMPENSATION AND RECORD KEEPING

34.1. The Offeror selected will be paid on a percentage of progress completed basis, as provided for in the contract or lump sum at completion or project. The contract will be written on a "unit price" basis. Records are to be kept by the Offeror in such detail as to properly reflect all direct or indirect costs of labor and material for which payment will be claimed.

35. PAYMENT

35.1. Appropriate personnel will make payment for all completed work only after final approval and acceptability of the work completed.

36. BID BOND

36.1. When specified, each bid shall be accompanied by a bid bond with surety satisfactory to the Schools or a cashier's or certified check, made payable to the Treasurer, City of Staunton, in an amount equal to 5 percent of the total bid price. In the event of default by the bidder the 5 percent deposit shall represent liquidated damages to the Schools.

37. PERFORMANCE AND PAYMENT BONDS

37.1. Successful contractor agrees to provide a performance bond and a payment bond for any contract signed which exceeds $50,000.

38. BID ADDENDA

38.1. Prior to submitting their bid, it is the bidder's responsibility to check the City web-site for any addenda associated with this Invitation for Bid.

39. INSURANCE REQUIREMENTS

39.1. Insurance shall be in amounts not less than $2,000,000, $1,000,000, and $1,000,000 respectively or such other insurance as is satisfactory and may be approved by the Schools. Insurance shall be written by companies licensed to do business in the Commonwealth of Virginia and shall list Staunton City Schools as an additional insured.

40. CONTRACT TERMINATION

40.1. This contract will not be awarded to any vendor who has had a previous contract with the Staunton City Schools terminated for substantial non-compliance within the last three (3) years.

41. DEBARMENT STATUS

41.1. By submitting their bids/proposals, all bidders or offerors certify that they are not currently debarred from submitting bids or proposals on contracts by any public body of the Commonwealth of Virginia, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any public body of the Commonwealth of Virginia.

42. CONTRACTOR UNDERSTANDING

42.1. It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and locations of the work, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions and all other mattes which in any way effect the work under this contract. No verbal agreement or conversation with any officer, agent or employee of the Schools either before or after the execution of this contract, shall affect or modify any of the terms or obligations herein contained.

43. DRUG-FREE WORKPLACE

43.1. During the performance of this contract, the contractor agrees to:

43.1.1. provide a drug-free workplace for the contractor's employees;

43.1.2. post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

43.1.3. state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and

43.1.4. include the provisions of the foregoing clauses in every subcontract or purchase order of over $10,000.00, so that the provisions will be binding upon each subcontractor or vendor.

44. NON-DISCRIMINATION

44.1. During the performance of this contract, the contractor agrees as follows:

44.1.1. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and the applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

44.1.2. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.

44.1.3. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

44.1.4. The contractor will include the provisions of the foregoing paragraphs 44.1.1, 44.1.2, 44.1.3 in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

45. PERMITS AND LICENSES

45.1. Any required City permits must be obtained by the contractor at the contractor's sole expense. The successful contractor must obtain at his/her own expense, the required business license from the City of Staunton, Commissioner of Revenue's Office prior to beginning work. All equipment and/or installation must meet all applicable local, State, and Federal codes.

46. NEGOTIATION WITH SUCCESSFUL BIDDER

46.1. Should the lowest bid for Base Bid exceed the Schools' budget, the Schools may proceed with negotiations with the lowest bidder for the Base Bid in accordance with section 2.2-4318 of the Code of Virginia to obtain a contract price within the funds available to the Schools. For the purpose of determining when such negotiations may take place, the term "available funds" shall mean those funds which were budgeted by the Schools for this contract (including all grant funding) prior to issuance of the written Invitation for Bids. Negotiations with the low bidder may include both modifications of the bid price and Scope of Work/Specifications to be performed. The Schools shall initiate such negotiations by written notice to the lowest responsive, responsible bidder that its bid exceeds the available funds and that the Schools wishes to negotiate a lower contract price. The times, places, and manner of negotiations shall be agreed to by the Schools and the lowest responsive bidder

46.2. The Schools reserve the right to negotiate contract terms with the successful offeror for items/services other than those specifically stated in this IFB in the best interest of the Schools and agreed to by the contractor, in accordance with § 2.2-4318 of the Code of Virginia. Additional work of reasonable scale shall be priced consistent with bid to allow for additions and future expansions.

47. COOPERATIVE PROCUREMENT

47.1. This procurement is being conducted on behalf of other public bodies, in accordance with § 2.2-4304 (A) of the Code of Virginia. If authorized by the bidder, the resultant contract may be extended to any public body in the Commonwealth of Virginia in accordance with contract terms.

48. IMMIGRATION REFORM AND CONTROL ACT OF 1986

48.1. During the performance of this contract, contractor agrees that they will not, and shall not knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986. (per 2.2-4311.1)

49. CERTIFICATION OF INTEREST & RELATIONSHIPS

49.1. The extent that either Contractor or any of Contractor's officers, directors, or executive employees, maintains a financial or familial relationship with any person acting for, or employed by, the City of Staunton, Staunton City Council, School Board or Staunton Public Schools, Contractor shall reveal such relationships. In accordance with this paragraph, Contractor shall execute the certification attached hereto and submit the certification contemporaneously with the executed Contract.

END OF PROCUREMENT GUIDELINES

TECHNICAL SPECIFICATIONS, PLANS & ADDITIONAL INFORMATION

Follow This Page

TECHNICAL SPECIFICATIONS – STAUNTON CITY SCHOOLS

Section 101 – Mobilization

Section 102 – Traffic Control

Section 103 – Site Clearing

Section 104 – Trenching and Backfilling

Section 105 – Rock Excavation

Section 106 – Seeding

Section 110 – Curb & Gutter, Sidewalk, Miscellaneous Concrete

Section 111 – Street Construction Repair

Section 112 – Earthwork

TECHNICAL SPECIFICATIONS & PLANS – TIMMONS GROUP

Section 010200 FL – General sitework Requirements

Section 024113 FL – Selective Site Demolition

Section 321700 FL – Pavement Markings, Signs, and Specialties

Section 321823.53 – Tennis Court Surface

Section 321900 – Exterior Athletic Equipment

Section 323113.19 FL – Chain Link Fences and Gates (PVC Clad)

Section 331000 FL – Exterior Water System

Construction Plans

SECTION 101
MOBILIZATION

101.1 GENERAL

Work shall consist of performing preparatory operations, moving personnel and equipment to the job site, paying bonds and insurance premiums and establishing a Contractors field office as required.

101.2 MEASUREMENT & PAYMENT

When listed as a separate pay item, mobilization will be paid for at the rate of 50% with the first month's request for payment and 50% with the second month's request for payment. The mobilization bid shall not exceed 10% on projects with a value less than $200,000 and 7.5% on projects over $200,000. If mobilization is not listed as a separate pay item, it will be considered incidental to all other work and the cost distributed accordingly.

END OF MOBILIZATION

SECTION 102
TRAFFIC CONTROL

102.1 GENERAL

All traffic control devices and traffic patterns shall conform to the standards in the Manual of Uniform Traffic Control Devices (MUTCD) and the Virginia Work Area Protection Manual unless shown otherwise on the plans.

102.1.1 Referenced Specifications are referred to by abbreviation as follows:

A. Manual of Uniform Traffic Control Devices (MUTCD)

B. Virginia Department of Transportation (VDOT)

C. Virginia Work Area Protection Manual (VWAPM)

102.1.2 The contractor is responsible for providing the required signage and cones.

102.1.3 No rerouting of traffic or street closings will be done without prior approval from the City. All signage and traffic control shall be subject to the City's approval.

102.1.4 All traffic cones are to be 36" tall and clean.

102.1.5 When left unattended, any work zone adjacent to a City street shall have lighted barricades every 30'. No open excavations will be permitted overnight in a City right-of-way.

102.1.6 Rerouting of traffic shall be delineated with traffic cones.

102.1.7 Flagmen must be used when stopping traffic and for equipment entering and exiting a work zone, unless prior approval from the City is granted to use an Automated Flagger Assistance Devices, when used in accordance with the MUTCD and the VDOT Work Area Protection Manual.

102.1.8 All flagmen shall be certified by VDOT and be in possession of a valid flagging card.

102.2 MEASUREMENT AND PAYMENT

When listed as a separate bid item, Traffic Control will be paid for as a lump sum item. Payment will be made as a percentage of the associated items that are completed. When there is not a separate bid item for Traffic Control, it will be considered incidental to all other work and the cost distributed accordingly.

END OF TRAFFIC CONTROL

SECTION 103
SITE CLEARING

103.1 GENERAL

This section provides for general site clearing operations, including trees and vegetation removal, protection of existing trees to be left standing, and clearing and grubbing.

103.1.1 Related requirements specified in other Sections of the Specifications.

A. Section 104 - Trenching & Backfilling

B. Section 106 - Seeding

103.1.2 Provide barricades, coverings, or other types of protection necessary to prevent damage to existing improvements not indicated to be removed, and improvements on adjoining properties.

103.1.3 Protect existing trees and other vegetation indicated to remain in place against cutting, breaking, or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line. Provide temporary fences, barricades or guards as required to protect trees and vegetation to be left standing.

103.1.4 Burning where allowed by local ordinances will be allowed by permit only.

103.2 EXECUTION

103.2.1 Clearing

A. Remove from the site trees, brush, shrubs, down timber, rotten wood, rubbish, other vegetation, including stumps, as well as fences, and incidental structures necessary to allow for new construction.

B. Clearing work shall be restricted to area within rights-of-way or easements or within "Construction Limits" indicated on Drawings.

103.2.2 Existing Trees and Shrubs

A. Trees and shrubs that are to remain within "Construction Limits" shall be marked by the owner prior to clearing operations.

B. Ownership of Trees: Unless otherwise noted, felled trees within the "Construction Limits" shall become the property of the Contractor and shall be removed from the site.

C. Use only hand methods for grubbing inside the drip lines of trees which are to remain.

103.2.3 Clean up debris resulting from site clearing operations continuously with the progress of the work.

103.2.4 Remove all waste material from site.

103.2.5 Remove debris from site in such a manner as to prevent spillage. Keep pavement and area adjacent to site clean and free from mud, dirt and debris at all times.

103.3 MEASUREMENT and PAYMENT

When listed as a separate bid item, Site Clearing shall be paid for as a lump sum. When not listed as a separate bid item, Site Clearing shall be considered incidental to associated work items.

END OF SITE CLEARING

SECTION 104
TRENCHING & BACKFILLING FOR UTILITY LINES

104.1 GENERAL

Work included in this Section includes trenching and backfilling for underground pipelines and related structures only.

104.1.1 Related requirements specified in other Sections of the Specifications.

A. Section 102 - Traffic Control

B. Section 103 - Site Clearing

C. Section 105 - Rock Excavation

D. Section 106 - Seeding

E. Section 107 - Sanitary Sewer System

F. Section 108 – Storm Drainage System

G. Section 109 - Water Distribution System

104.1.2 Reference Specifications are referred to by abbreviation as follows:

A. American Society for Testing and Materials – ASTM

B. American Association. of State Highway and Transportation Officials – AASHTO

C. Virginia Department of Transportation – VDOT

104.1.3 The contractor shall provide compaction testing as deemed necessary by the City.

104.1.4 Locate existing utilities, culverts and structures, above and/or below ground, before any excavation starts. Coordinate work with utility companies. Protect, maintain in service, and prevent damage to utilities not designated to be removed. When utilities are encountered and are not shown on Drawings or when locations differ from those shown on Drawings, notify Engineer for instructions before proceeding.

104.2 PRODUCTS

104.2.1 Pipe Bedding Fill

A. Granular fill shall meet requirements for VDOT #68 or #57 aggregate.

104.2.2 Select Backfill

A. Aggregate fill shall be VDOT #21A.

B. Clean earth fill shall be approved material free of debris, roots, frozen materials, organic matter, rock or gravel larger than 2 inches in any dimension or other harmful matter.

C. Flowable Fill shall conform to VDOT Road and Bridge Standards and VDOT Special Provision for Flowable Fill.

104.2.3 Concrete for bedding, backfill or encasement shall have at least 2,000 psi compressive strength.

104.2.4 Rip rap, where shown on the Drawings, shall conform to VDOT Road and Bridge Specifications.

104.3 EXECUTION

104.3.1 Strip existing topsoil, leaf mold and organic materials, meeting topsoil requirements of Section 106 - "Seeding." Deposit in storage piles separate from other excavated material.

104.3.2 Unauthorized excavation consists of the removal of material beyond indicated subgrade elevations or side dimensions without specific approval of the City Engineer. Where unauthorized excavations occur, restore these areas to the elevations and dimensions shown on the Drawings with granular fill.

104.3.3 Where removal of unsatisfactory material is required due to fault or negligence of the Contractor, by inadequate shoring or bracing, dewatering, material storage or other failure to meet specified requirements, any work deemed necessary by the City Engineer to correct the faulty condition shall be performed at no additional cost.

104.3.4 Excavation and Bedding

A. Open trenches are limited to 100' in length.

B. The width of the trench at and below the top of the pipe shall be the outside diameter of the pipe plus 24 inches.

C. The trench width shall be of adequate width to allow for a mechanical compactor between the pipe and the trench wall.

D. Pressure lines shall be installed with bedding as indicated in the Standard Drawings.

E. Gravity sewer lines in good material shall be installed with a modified class B bedding as shown on standard drawing S-8.

F. Dewater excavation as necessary to provide proper protection. If deemed necessary, the Engineer may require continuous dewatering 24 hours per day by adequate pumping or well-points until backfilling is completed.

The method, and equipment used for dewatering shall be subject to the approval of the Engineer.

G. Where unsuitable soil is encountered, excavate to depth determined by the City Engineer and replace with suitable material approved by the City Engineer.

H. Where underground streams or springs are found, provide temporary drainage and notify City Engineer.

I. Remove from the project site and dispose of trash, material unsatisfactory for backfill, and all excess material continuously with the progress of the work.

J. Remove shoring and all form materials, unless otherwise directed.

K. Where rock is encountered which will serve as a foundation for a manhole, vault, or other structure, it shall not be removed. Where only a part of the foundation would bear on rock, excavate to an even depth of 8 inches below the entire structure and backfill with aggregate fill and thoroughly compact. Provide a minimum of 8 inches between rock excavation and sides of structures.

L. Compact pipe bedding by mechanical tamping to prevent settlement.

104.3.5 Sheeting

A. Maintain trench walls in a safe condition at all times. The City Engineer reserves the right to require the use of sheeting and/or shoring at any time the Engineer deems it necessary.

B. Sheeting and shoring left in place shall be cut off to a depth of not less than 18 inches below finish grade.

104.3.6 Compaction

A. Percentage of maximum density requirements: Compact each layer of fill or backfill to not less than the following percentages of the maximum density at optimum moisture content as determined by ASTM D 698 (AASHTO T-99):

1. 100 percent beneath and within 25 feet of buildings and structures, including those shown for future construction.

2. 95 percent beneath pavements, walks, and road shoulders, including those shown for future construction.

3. 90 percent in other unpaved areas.

104.3.7 Backfill

A. Backfill trench to a compacted depth of 1 foot over the pipe with approved earth fill. Backfill shall be properly placed uniformly on each side of the pipe and compacted as required. Do not backfill on muddy or frozen soil, or with muddy or frozen soil.

B. Backfill over any plastic or PVC pipe to 1' over the top of the pipe with VDOT #68 or #58 aggregate. In areas not subject to vehicular traffic, other select backfill may be used with the permission of the Engineer, unless otherwise noted.

C. Backfill trench from 1 foot above the pipe to grade with clean earth fill free of stones larger than 6 inches or 1/2 the layer thickness, whichever is smaller. Layers shall not exceed 12 inches, except that under road shoulders and under existing or future paved areas, layers shall not exceed 8 inches. Backfill shall be compacted to the density specified for the areas in which it is located except that minimum compaction in any area shall be to the density of the adjacent soil. Compaction shall be achieved by vibratory mechanical tamping.

D. When specified the trench shall be backfilled full depth with VDOT 21A aggregate.

E. When specified the trench shall be backfilled from 6” above the pipe to the bottom of the pavement repair detail with VDOT Flowable Fill.

F. Excavation depressions caused by removal of stumps or other clearing operations to firm subgrade shall be filled with clean earth fill and compacted as specified.

G. Place backfill materials adjacent to structures evenly. Take care to prevent wedging action of the backfill against structures by carrying the material uniformly around the structure to approximately the same elevation in each lift.

H. Compact backfill materials using equipment suitable for the materials being compacted and the work area locations. Use power-driven hand tampers for compacting materials adjacent to structures.

I. Compact aggregate fill placed under manholes or other structures to required density.

J. Full stone backfill will be used only at the discretion of the City Engineer where native backfill is deemed unsuitable.

104.3.8 Grading

A. Uniformly grade all areas within the limits designated on the Drawings, including adjacent transition areas.

B. Finish all surfaces to be free from irregular changes.

C. Finish subgrade areas to receive topsoil to within 0.10 foot of required subgrade elevations.

D. Shape subgrade under walks to line, grade, and cross-section to within 0.10 foot of required subgrade elevations.

E. Shape subgrade under pavement to line, grade, and cross-section to required subgrade elevations.

F. Protect newly graded areas from traffic and erosion. Repair and reestablish grade in settled, eroded, or rutted areas to the specified tolerances.

G. Where compacted areas are disturbed by subsequent construction or adverse weather scarify the surface, reshape and compact to the required density. Use hand tamper for re-compaction over underground utilities.

104.3.9 Utilities to be Abandoned or Removed

A. When underground utilities are to be abandoned in place, plug, cap or seal with concrete at the "construction limits" or at the locations indicated.

B. Remove underground utilities indicated on the Drawings to be removed and backfill resulting excavation with suitable material compacted as specified. Plug, cap or seal utilities with concrete, at the construction limits or at points shown.

104.3.10 Clean Up

A. Keep areas of work cleaned up at all times, and promptly remove all materials and debris not intended for incorporation in the work. Broom clean the surfaces of all paved areas immediately after backfilling operations.

B. Maintain backfilled trenches from the nuisance of dust, mud or settling during the entire length of the Contract and for a period of one-year following Final Acceptance of the Work.

C. In the event the Contractor fails to satisfy these requirements to the satisfaction of the City, or otherwise prosecute the Work in a reasonable or proper manner, and after a reasonable period of time has elapsed after notification by the City of unsatisfactory conditions, the City reserves the right to employ outside services to take such corrective action as deemed necessary by the City Engineer. The cost incurred in taking corrective

actions will be deducted from any monies due the Contractor by the City or such other means of collection as may be available to the City.

104.3.11 Preparation for Final Inspection

A. Locate and adjust all manholes, valve boxes, etc. to final grade and flush out all gravity pipelines as necessary prior to final inspection by the City Engineer.

104.4 MEASUREMENT AND PAYMENT

104.4.1. Excavation – Excavation for utility work is incidental to all other work. No separate payment is made.

104.4.2. Rip Rap - When specified as a separate bid item, rip rap will be paid for by the ton or square yard for the Class specified.

104.4.3. Backfill - When there is not enough suitable backfill material on site, VDOT 21A Aggregate shall be used and paid for by the ton when specified as a separate line item. Otherwise there is no separate payment for backfill.

END OF TRENCHING & BACKFILLING FOR UTILITIES

SECTION 105
ROCK EXCAVATION

105.1 DESCRIPTION OF WORK

105.1.1 Furnish all labor, material and equipment to excavate rock and dispose of rock as specified herein.

105.2 REQUIREMENTS OF REGULATORY AGENCIES

105.2.1 Observe all municipal ordinances and State and Federal laws relating to the transportation, storage, handling and use of explosives.

105.2.2 Blasters shall be duly licensed and shall have their license on the work site at all time during blasting activities.

105.3 DEFINITION

105.3.1 The word "rock," wherever used as the name of an excavated material or material to be excavated, shall mean solid ledge rock which, in the opinion of the City Engineer, requires, for its removal, drilling and blasting or mechanical hammer.

105.3.2 No soft or disintegrated ledge rock, no loose, shattered, or broken stone, regardless of size, in rock fills or elsewhere; no frozen earth or existing paving; and no rock exterior to the maximum limits of measurement allowed, which may fall into the excavation, will be measured or allowed for payment as rock excavation.

105.4 EXECUTION

105.4.1 Excavate rock to the lines and grades indicated on the drawings and as specified in 105.6 - Measurement and Payment. Dispose of excavated material not suitable for backfill in a location approved by the Owner.

105.4.2 Excavate rock in trenches to 6-inches below the bottom of the pipe to be installed.

105.4.3 Excavate rock in structure excavations to 6" below the bottom of the foundation.

105.4.4 Conduct operations involving explosives by experienced personnel only, with all possible care to avoid injury to persons and damage to property.

105.4.5 Blast only with such quantities and strengths of explosives and in such manner as to break the rock approximately to the intended lines and grades.

105.4.6 Care shall be taken to avoid excessive cracking of the rock upon or against which any pipe or structure will be built, and to prevent damage to existing pipes or other structures and property above or below ground.

105.4.7 Cover rock with blasting mats where required.

105.4.8 Give sufficient warning to all persons in the vicinity of the work before a charge is detonated. Employ flagmen to stop or direct traffic as required.

105.4.9 When required by the City, the contractor shall have a seismograph on site to monitor vibration.

105.5 EXCESS ROCK EXCAVATION

105.5.1 If rock is excavated beyond the limits of excavation indicated on the drawing, specifications, or not authorized in writing by the Engineer, the excess excavation, whether resulting from over breakage or other causes, shall be backfilled, by and at the expense of the Contractor, as specified below.

105.5.2 In pipe trenches, excess excavation below 6" from the bottom of the pipe shall be filled with material of the same type, placement and compaction as specified for the bedding.

105.5.3 In excavations for structures, excess excavation in the rock beneath foundations shall be filled with 3,000 psi concrete. Other excess excavation shall be filled with earth.

105.5.4 If rock below normal depth is shattered due to drilling or blasting operations and such shattered rock is unfit for foundations, the shattered rock shall be removed and the excavation shall be backfilled as described in "EXCESS ROCK EXCAVATION." All such removal and backfilling shall be classified as excess rock excavation.

105.5.5 Keep and submit to the Engineer an accurate record of each blast. The record shall show the general location of the blast, the depth and number of drill holes, the kind and quantity of explosive used, and other data required for a complete record.

When there is not enough suitable backfill material on site, VDOT 21A Aggregate shall be used and paid for by the ton when specified as a separate line item.

105.6 MEASUREMENT AND PAYMENT

105.6.1 When specified as a separate line item, solid rock excavation will be paid as described below; otherwise there is no separate payment and solid rock excavation will be incidental to all other work.

105.6.2 The contractor shall notify the owner when rock measurements can be performed. If backfill commences before measurement is made, the contractor will not be paid for that portion of the rock removed. Maximum measurement for rock excavation in pipe trenches shall be to six (6) inches below bottom of pipe with the width of trench at 2'-0" plus the interior diameter of pipe, regardless of the excess width excavated. Maximum measurement for precast

and cast-in-place structures shall be structure width plus four (4) feet; structure length plus four (4) feet; and base of structure. Payment shall be the price bid per cubic yard and is to include aggregate fill to bring the ditch bottom to plan grade.

END OF ROCK EXCAVATION

SECTION 106
SEEDING

106.1 GENERAL

106.1.1 Related requirements specified in other Sections of the Specifications:

Section 104 - Trenching & Backfilling

106.1.2 Reference Specifications are referred to by abbreviation as follows:

American Society for Testing and Materials – ASTM

Virginia Department of Transportation – VDOT

106.1.3 Submit two copies of the following:

A. Seed Test Report

B. Fertilizer Analysis

106.1.4 Materials shall be delivered in unbroken containers, clearly marked by the manufacturer as to contents. Seed, lime, and fertilizer shall be labeled as to proportions, analysis and quality. Store all materials in a manner affording protection from damage by weather or vandalism.

106.1.5 Seed only when wind velocity is less than 15 miles per hour.

106.2 PRODUCTS

106.2.1 Topsoil shall be the top 4 inches or original soil from the site, unless otherwise noted on the Drawings. Topsoil obtained off-site shall be fertile, friable loam or silt, containing not less than 2 pct., by weight, of finely divided, decomposed vegetable matter. Topsoil shall be free of subsoil, clay lumps, brush, weeds, roots larger than ½ inch diameter, stones larger than ½ inch diameter and other material toxic or harmful to growth.

106.2.2 Fertilizer shall be 5-10-5 applied at 1000 pounds per acre.

106.2.3 Seed mixture shall be 40% lawn fescue, 40% lawn bluegrass, 10% annual rye grass and 10% white Dutch clover applied at 5 pounds per 1000 square feet unless otherwise specified.

106.2.4 Lime shall be ground agricultural grade lime containing not less than 85 pct. calcium and magnesium carbonates. Fineness shall be such that 100 pct. will pass a No. 20 sieve, not less than 50 pct. will pass a No. 100 sieve. Burnt lime or hydrated lime may be substituted in equivalent carbonates, if requested.

106.2.5 Mulch shall be clean, seed free, loose, unweathered, unchopped small grain straw. Spray mulch of an approved wood cellulose fiber material that is in

accordance with the Virginia Department of Transportation (VDOT) specifications shall be accepted.

106.2.6 Sod shall be composed of at least 70 pct. of Kentucky 31 tall fescue and be cut to provide a minimum thickness of 2 inches. Vegetation more than 5 inches in height shall be cut to 3 inches or less before sod is lifted.

106.3 EXECUTION

106.3.1 Prepare soil for permanent seeding by tilling of topsoil in place to loosen thoroughly and break up all clods to a depth of 6 inches. Remove all stumps and roots, coarse vegetation, stones larger than 1-1/2 inches and all construction debris. Soil shall be worked by suitable agricultural equipment to a depth of not less than 4 inches. Rake to a uniform, smooth and drainable surface.

Apply lime and fertilizer uniformly and mix well into top 4 inches of seed bed. Apply lime at the rate of 100 lbs. per 1000 sq. ft. Apply fertilizer at the rate of 50 lbs. of 5-10-5 per 1000 sq. ft.

106.3.2 Sow permanent grass seed between dates of March 15 and May 31 or August 15 and October 31st unless otherwise approved. Temporary seeding and/or mulching is required at all other times.

106.3.3 Sow seed by mechanical seeder as follows:

A. Mix seed thoroughly with clean dry sawdust and broadcast at rate of 5 lbs. of seed per 1000 sq. ft. in cross directions to ensure uniform distribution. Rake surface lightly and roll with appropriate type of lawn roller weighing maximum of 150 lbs. per foot of width.

B. Protect the complete seeded area against erosion by mulching with straw at a rate of one (1) bale per 1000 square feet or by spray mulching with a wood cellulose fiber material applied by hydro-jet method at a rate of 35 pounds (dry weight) per 1000 square feet, in accordance with the VDOT Standard method.

C. Anchor mulch by the following methods.

(1) In residential areas, apply synthetic mulch binder at rate recommended by manufacturer.

(2) On slopes steeper than 4 horizontals to 1 vertical, fasten heavy jute mesh to wooden stakes.

106.3.4 Remove all soiling or staining of finished walks, drives and parking area resulting from seeding work. Maintain paved areas in clean condition.

106.3.5 Turf grass Maintenance

A. Water as required to keep soil moist during germination period.

B. Mowing

(1) When grass reaches height of 3-1/2 to 4 inches, mow to height to 2-1/2 inches.

(2) Maintain grass height between 2-1/2 and 4 inches.

(3) Do not remove more than 33 pct. of total height of grass in one mowing.

C. Reseed and mulch spots larger than 1 square foot without uniform stand of grass.

D. Mow and maintain all seeded areas until uniform stand of grass is acceptable to Engineer.

E. In the event that growth is not established by final project inspection, continue the specified attention until stand is accepted by Engineer.

F. Correct or repair all undue settling as evidence by complaints received within one year after final inspection.

106.4 HYDROSEEDING

106.4.1 The Contractor may elect the use of approved hydraulic seeder (s) for the application of seed and mulch.

106.4.2 Hydraulic applications shall not begin until the topsoil preparation and the lime application has been completed, as specified herein. The method shall be in accordance with VDOT specifications.

106.4.3 Hydraulic Seeder(s) shall be equipped with an agitation system capable of maintaining all mixture solids in complete suspension and shall be equipped with spray nozzles that produce an even distribution.

106.4.4 Wood Fiber Mulch shall consist of specially prepared wood cellulose fibers. Mulch shall not contain growth or germination inhibiting factors. Mulch shall be dyed an appropriate color to facilitate visual detection during application.

106.4.5 Slurry mix for hydro seeding shall supply the following rates per acre:

Kentucky 31 Tall Fescue (100%) or,	32 pounds
Kentucky 31 Tall Fescue (67%) and,	21.5 pounds
Red Creeping Fescue (33%)	10.5 pounds
Fertilizer 10-20-10	1,000 pounds
Wood Fiber Mulch, or	1,500 pounds
Straw tacked with,	3,000 pounds
Wood Fiber	750 pounds

106.5 INSPECTION AND ACCEPTANCE

106.5.1 At the beginning of the next planting season after that in which the permanent grass crop is sown, the seeded areas will be inspected. Any section not showing dense, vigorous growth at that time shall be promptly reseeded by the Contractor at his own expense. The lawns shall be watered, weeded, cut and otherwise maintained until the end of that planting season, when they will be accepted.

106.6 MEASUREMENT AND PAYMENT

106.6.1 Topsoil and Seeding. Measurement and payment shall be per acre or lump sum as listed on the Bid Schedule. When there is no topsoil and seeding bid item the work is considered incidental to other associated work items.

106.6.2 Sod – when specified sod shall be paid for by square foot.

106.6.3 Maintenance – There shall be no separate payment for maintenance of seeded or sodded areas.

END OF SEEDING

SECTION 110
CURB & GUTTER, SIDEWALK, MISCELLANEOUS CONCRETE

110.1 GENERAL

Work included in this Section consists of all new and/or replacement/repair of curb and gutter, curb, sidewalk and other miscellaneous concrete work.

110.1.1 Referenced Specification by Abbreviation:

Virginia Department of Transportation-(VDOT)

110.1.2 All materials and workmanship associated with this Section will be accordance with VDOT's Road and Bridge Standards and Specifications unless otherwise noted.

110.2 PRODUCTS

110.2.1 Submit shop drawings of all products as by the City.

110.2.2 Provide Certified test results and/or mix designs.

110.2.3 Concrete shall be VDOT A-3 unless otherwise noted.

110.2.4 Base aggregate shall be VDOT 21A or 21B unless otherwise noted.

110.3 EXECUTION

110.3.1 Regular excavation shall include removal and disposal of all existing concrete and asphalt, existing steps as required, as well as earth and all other materials associated with normal excavation to a depth to allow for the installation of the proposed project. All bituminous concrete paved surface immediately adjacent to the excavated areas must be saw cut in a straight line so that when excavation procedures are performed, existing paved surfaces will not be damaged. All concrete surfaces adjacent to the proposed project shall be saw cut in a neat straight line.

All areas beneath the proposed construction shall be excavated and/or graded to a smooth uniform surface and compacted prior to installation procedures. All excavation shall be disposed of off the project site by the Contractor. All excavation shall be considered incidental to the contract.

All fill material required for concrete work on this project shall be VDOT 21A or 21B, compacted to 95% modified proctor density.

110.3.2 Formwork shall be in accordance with VDOT Road and Bridge Specifications.

110.3.3 Protection and Curing shall be in accordance with VDOT Road and Bridge Specifications. Curing compound shall be white.

110.3.4 Sidewalks shall be as shown on the detail drawings.

110.3.5 All sidewalk slabs shall receive a steel trowel float and broom finish and all curbs shall receive a broom finish.

110.3.6 All concrete sidewalks shall receive a score line in finished surface every five feet (5'). Depth of the score line shall be a minimum of 5/8".

110.3.7 Expansion material shall be installed every 40' in sidewalks and between all existing and proposed concrete surfaces. Along areas where the new walk abuts against an existing uneven retaining wall expansion material shall be installed 4.5' behind and parallel to the face of curb or as directed by the Owner. Concrete shall then be poured behind the expansion material to fill the void area between the face of the walls and expansion. This is done to allow the expansion material to be installed in a smooth straight line. Expansion material shall be of a type equal to the asphalt impregnated fiberboard conforming to ASTM c 175 for exterior work. Expansion material shall extend full depth of slab, less 1/2" at top of slab.

110.3.8 After front forms have been removed along the edge of pavement, the contractor shall rub the face of newly installed curb to fill any voids and remove rough spots from the face of curb. In addition, the contractor shall place 21-A aggregate in the void area between the face of curb and the edge of pavement to an elevation which will match the grade of the existing pavement.

110.3.9 Expansion material shall be installed every 100' in curb and gutter. Expansion material shall be of a type equal to the asphalt impregnated fiberboard conforming to ASTM C 175 for exterior work. Expansion material shall extend full depth of curb and gutter, less 1/2" at top of concrete.

110.3.10 All yard areas immediately behind newly installed sidewalks shall be topsoiled and seeded so as to provide a smooth tie in with the existing yard and back of the walk.

110.3.11 Detectable warning surface shall be constructed at each street intersection and/or as directed by the City. They shall be VDOT standard CG-12.

110.4 MEASUREMENT AND PAYMENT

110.4.1 Sidewalk - Measurement shall be the horizontal surface area (including curb on monolithic curb and sidewalk) of sidewalk. Work is to include excavation, backfill, stone base, labor, and materials, etc. The area of Concrete Stairs, including the landing areas that have sidewalls, as well as the Heavy Duty Concrete Pad, are not to be included in Payment for Sidewalk, as these are separate pay items. Payment shall be at the bid price per square yard.

110.4.2 Concrete Stairs, including Landing Pads with Sidewalls - Measurement shall be the horizontal surface area of stairs and sidewalls. Work is to include excavation, backfill, stone base, labor, and materials, etc. The area of Sidewalk

is not to be included in Payment for Concrete Stairs, as this is a separate pay item. Payment shall be at the bid price per square yard.

110.4.3 Handrail - Measurement shall be in linear feet along the top rail of handrail installed. Work is to include all installation, materials, and finishing. Payment shall be the bid price per linear foot.

110.4.4 Sidewalk Access Ramp w/ CG-12 - Measurement shall be the horizontal area (including curb on monolithic curb and sidewalk) of ramp, landing, and side flare areas. Work is to include all excavation, backfill, stone base, labor, and materials, including detectable warning surface. When identified as a separate pay item, payment shall be the bid price per Ramp; otherwise payment shall be incidental to other bid items as applicable.

110.4.5 Detectable Warning Surface - CG-12 Detectable Warning surface shall be incidental to the Sidewalk Access Ramp requiring the CG-12. No separate payment will be made, unless otherwise indicated.

110.4.6 Steps - Measurement shall be per each 5' in width. Steps created by increasing the height of the sidewalk are not a pay item. Work is to include excavation, backfill, labor, and all associated work for concrete steps. When identified as a separate pay item, payment shall be the bid price per Step; otherwise payment shall be incidental to other bid items as applicable.

110.4.7 Miscellaneous Concrete - Measurement shall be the horizontal surface area of concrete adjacent to the street sidewalk (private, walks, driveways, etc.) Work includes all excavation backfill, work and materials required. Payment shall be the bid price per square yard of miscellaneous concrete installed when identified as a separate pay item. All other Miscellaneous Concrete work and payment shall be incidental to other bid items as applicable.

110.4.8 Stone Base - Measurement shall be by the ton of base stone placed under sidewalk, curb and gutter, gutter, entrances, ramps, miscellaneous concrete and street patch. Work is to include all excavation and incidental work. Payment of stone base is incidental to other concrete pay items; no separate payment will be made, unless otherwise indicated.

110.4.9 Saw Cut - Measurement shall be parallel to the saw cut. Payment is for concrete saw cuts only as directed by the City and when identified as a separate pay item. All other Saw Cut work and payment shall be incidental to other bid items as applicable. Payment will be the bid price per linear foot.

110.4.10 Remove/Dispose Existing Concrete – Measurement and payment shall be per horizontal square yard of existing concrete sidewalk, entrances, pads, curb, gutter, ramps, stairs, handrails that are part of concrete to be removed, and other concrete items requiring removal for project work and as indicated on the Plans, including subbase as needed.

110.4.11 Remove/Dispose Existing Asphalt – Measurement and payment shall be per horizontal square yard of existing asphalt, including subbase as needed, for asphalt items requiring removal for project work and as indicated on the Plans.

110.4.12 Remove/Dispose Existing Fence – Measurement and payment shall be per linear foot of existing fence to be removed, including anchorage as needed, for fence requiring removal for project work and as indicated on the Plans.

END OF CURB & GUTTER, SIDEWALK, MISCELLANEOUS CONCRETE

SECTION 111
STREET CONSTRUCTION and REPAIR

111.1 GENERAL

Work covered by this section includes all work associated with construction of a new street and the repair or patching of an existing street.

111.1.1 Referenced Specifications by Abbreviation:

Virginia Department of Transportation - (VDOT)

111.1.2 All materials and workmanship associated with this Section shall be in accordance with VDOT's Road and Bridge Standards and Specifications unless otherwise noted.

111.2 PRODUCTS

111.2.1 Submit shop drawings of all products as by the City.

111.2.2 Provide Certified test results and/or mix designs.

111.2.3 All materials shall meet the specifications of VDOT's Road and Bridge Specifications.

111.3 EXECUTION

111.3.1 All excavation, backfill, base stone, and plant mix for new streets shall be constructed in accordance with VDOT's Road and Bridge Specifications.

111.3.2 The typical street section shall be as shown on the plans.

111.3.3 The street shall be graded to the right-of-way line before beginning cut and fill slopes. Protection and Curing shall be in accordance with VDOT Road and Bridge Specifications.

111.3.4 Street repair/patching shall be in accordance with the Standard Drawing or Plans.

111.3.5 Make a neat saw cut on all sides of a street repair/patch. Square up all patches.

111.3.6 Maintain all street excavations to a smooth transition until final street repair/patch is complete.

111.3.7 A temporary repair/patch of prime and double seal is permitted when plant mix is not available.

111.3.8 The street shall be milled to the finished elevations less the allowance for the final overlay. All manholes, water valve boxes, etc. shall be adjusted to final elevations immediately after milling.

111.4 MEASUREMENT AND PAYMENT

111.4.1 Excavation and Fill for new streets shall be in accordance with VDOT Standards.

111.4.2 Base Stone for new streets shall be in accordance with VDOT Standards.

111.4.3 Bituminous Concrete for new streets shall be in accordance with VDOT Standards.

111.4.4 Street Repair/Patch - Measurement shall be for the horizontal area of pavement not exceeding the pay limits. Work is to include all excavation, saw cut, stone base, and bituminous concrete required to complete the repair/patch. Payment shall be the bid price per square yard. There are no separate payments for stone, bituminous concrete or saw cut.

END OF STREET CONSTRUCTION and REPAIR

SECTION 112
EARTHWORK

112.1 GENERAL

Work included in this section includes all work associated with earth moving operations and grading.

112.1.1 Related requirements specified in other sections of the Specifications:

A. Section 103 - Site Clearing

B. Section 106 - Seeding

C. Section 110 - Curb and Gutter, Sidewalk, Misc. Concrete

D. Section 111 - Street Construction & Repairing/Patching

112.2 EXECUTION

112.2.1 The work includes demolition, clearing and grubbing the site, dewatering, stripping and storing of topsoil, excavation, filling and backfilling, rough and finish grading over the areas indicated, erosion control, distribution of topsoil, and utility earthwork. Any water that accumulates in the excavations shall be promptly removed.

112.2.2 Any existing structures shall be carefully demolished and removed from the site. The demolition work shall be done carefully so as to not disrupt the Owner's operations, and so as to not endanger or harm adjacent property, structures or the public.

112.2.3 The entire area within the limit of work shall be cleared and grubbed and shall be cleaned of all debris. Topsoil shall be stripped from all areas to be graded, paved and built upon to the depth encountered and stored for reuse later in the work. Under the structures, paved, and fill areas, stumps, roots, logs, matted roots and other debris not suitable for foundation purposes shall be removed to a minimum depth of eighteen (18) inches below any subgrade. The resulting hole shall be backfilled with suitable material and compacted as specified hereinafter for backfill. Cleared material shall be completely removed from the site, and disposed of by the Contractor, at his expense. All areas to receive fill shall be stripped of root mat five feet beyond toe of anticipated fills. Topsoil, all vegetation, such as roots, brush, heavy sods, heavy growth of grass, and all decayed vegetable matter, rubbish and other debris within the area upon which fill is to be placed, shall be stripped or otherwise removed before the fill is started. In no case will such objectionable material be allowed to remain in or under the fill area. Sloped ground surfaces steeper than one vertical to four horizontals on which fill is to be placed shall be plowed, stepped, benched, or broken up in such manner that fill material will bond with the existing surface,

as directed. Before starting the fill or before placing structures or pavement, the area shall be proof rolled with a rubber tired vehicle, typically a loaded dump truck. Any soft, pumping, or rutting spots that are discovered shall have the soft material excavated and the void filled with suitable material, compacted as hereinafter specified.

112.2.4 Topsoil shall be carefully stripped to its full depth from all areas indicated to be graded, or to be built upon. Stripped topsoil shall be stored and protected for reuse later.

112.2.5 The Contractor shall store and use explosives in accordance with the Occupational Safety and Health Act and with other Federal, State and Local ordinances and regulations. The Contractor shall hold the Owner harmless for any injuries and for all damage caused by the explosives and shall satisfactorily correct and pay for all injuries and damage resulting from his use of explosives. Prior to firing blasts, the Contractor shall have a competent man, carrying a red flag, stationed at a reasonable distance from the blast at each avenue of approach to give warning of the blast. Blasting in the vicinity of any existing utilities shall be done carefully and with the knowledge and approval of the owner of the utility. The Contractor shall conduct pre-blasting inspection of nearby facilities and structures, and vibration monitoring during blasting.

112.3 EXCAVATIONS

112.3.1 All excavations shall be performed to the grades, slopes, and elevations indicated. All excavated materials which are not considered suitable for fill and any surplus of excavated material which is not required for fill shall be disposed of by the Contractor. Excavations shall extend a sufficient distance away from the walls to permit erection and removal of forms and installation of drains and other permanent work. Excavations shall be carefully made to the depths indicated, with the bottoms level, free of loose material, and free of all loam, organic material and other unsuitable material as hereinafter specified. All excavations shall be approved by the Engineer prior to the placing of any concrete. Sloping rock shall be stepped, as directed. Excavations carried below the required depth, other than that specified for occasional rock outcropping, shall be backfilled with trench stabilization material, except general rock areas where the backfill shall be concrete.

112.3.2 The Contractor shall clear and grub all vegetation, debris and any other material encountered within the limits of grading and as required for trenches and ditches indicated to be worked on, but where grading contours are not shown. All material from the demolition, the clearing and grubbing and debris removal shall be disposed of off the site by the Contractor at his expense.

112.3.3 Filling, Backfilling, and Compaction

A. Suitable material for fill, backfill and subgrade preparation shall be GW, GP, GM, GC, SW, SP, SM, ML, CL, or SC as classified in the Unified Soil Classification System in accordance with ASTM D 2487-69 (R1975). The suitability of material to be used as fill shall be determined by the classification method specified and by the moisture density tests in accordance with ASTM D698. Testing shall be by an independent soils laboratory, at the Owner's expense, and the results shall be approved by the Engineer prior to the soil's use. Suitable material removed from the excavation shall be used in forming the necessary fill. Material shall be free of debris, roots and organic matter. Frozen material shall not be used as fill or backfill. Any additional material necessary for establishing the indicated grades shall be excavated from the approved borrow sites as shown on the plans by the Contractor and approved by the Engineer as part of this contract. The maximum particle size shall be six inches largest dimension, except in the uppermost lift, where the maximum particle size shall be two inches largest dimension. Fill material shall be placed in successive horizontal layers not to exceed eight (8) inches of loose material, and then thoroughly compacted as hereinafter specified.

B. Fill or backfill adjacent to the foundation and retaining walls shall be placed in eight (8) inch horizontal layers, each layer being moistened or dried and compacted as hereinafter specified. Special care shall be taken to prevent wedging action as the backfill proceeds.

C. Embankment slopes shall be constructed by filling one (1) foot beyond the proposed finished slope surface for each lift. Compaction equipment shall work to the edge of each lift. After the entire fill is placed and compacted, the outside foot of the slope shall be trimmed to the design slope with a dozer. No slopes shall be steeper than 3 horizontals to 1 vertical.

D. Unsuitable materials shall be those materials not meeting the requirements specified hereinbefore for suitable materials.

112.3.4 Compaction and Testing

A. Compaction shall be performed by hand compaction equipment adjacent to the structures. General area compaction equipment shall be the Contractor's option, subject to the approval of the Engineer. The compaction in grassed areas shall be 90 percent of maximum density obtained in the procedure in ASTM D698. The compaction under pavement areas shall be 98 percent of maximum density in ASTM D698. The materials shall be aerated or moistened, as required to provide a moisture content that falls within 3 percentage points of either side of optimum, unless otherwise approved by the Engineer. Moisture

determinations shall be made. Field density tests and moisture tests shall be performed at the Contractor's expense by an independent soils testing laboratory, approved by the Engineer, on each lift at locations selected by the Engineer to assure that the correct compaction has been performed. If any test fails, additional testing at the Contractor's expense shall be performed to determine the extent of the improperly compacted material. The improperly compacted material shall then be removed, replaced and re-compacted, and the area shall then be retested to insure proper compaction.

112.3.5 Finish Grading

A. Finish grading shall be done as required to establish the slopes indicated. The grades shall be formed to easy contours sloping toward inlets and ditches. The grading shall eliminate low spots and pockets that do not drain. Ditches shall be excavated to the sections and elevations shown and shall be excavated on smooth slopes to avoid low spots and pockets that do not drain.

B. The surface of all excavations and fill and all disturbed areas shall be finished to a smooth surface, with the grades sloping away from the buildings. Swales and ditches shall be finished so that effective drainage results. Proper allowance shall be made for topsoil and for pavement thickness. Any settling or washing prior to acceptance of the work shall be repaired at no additional expense to the Owner. Topsoil and seeding of all disturbed areas shall be performed in accordance with the Section "Seeding."

112.4 MEASUREMENT AND PAYMENT

112.4.1 Measurement shall be either lump sum and per cubic yard, whichever is indicated on the Bid Schedule. Unless otherwise indicated all excavation is unclassified.

112.4.2 Payment will be made as a percentage of lump sum excavation complete or if bid by the cubic yard, actual quantity excavated.

END OF EARTHWORK

SECTION 010200 – GENERAL SITEWORK REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The provisions of the Contract Documents apply to the work of this Section.

1.2 SITEWORK LAYOUT

A. Monuments and Benchmarks

1. Maintain all monuments, property corners, benchmarks and other reference points.
2. If these are disturbed or destroyed during construction operations, have them replaced by a surveyor licensed in the Commonwealth of Virginia. This replacement shall be at no additional expense to the Contract.

B. Laying out the Work.

1. Locate all existing benchmarks and other reference points.
2. Protect these points throughout construction.
3. Layout work utilizing these reference points.

C. Record Drawings

1. Maintain a record of the horizontal and vertical locations of all underground utilities and piping, both newly installed and existing encountered.
2. Maintain a record of any variations of the work.
3. Record Drawings shall be certified by a Land Surveyor registered in the Commonwealth of Virginia.
4. Maintain record drawings throughout construction, recording information as work is performed. Record Drawings shall be available for periodic inspection during the course of the project.
5. Submit final, complete record drawings at Substantial Completion.

1.3 CORRELATION OF CONSTRUCTION DOCUMENTS

A. Review construction documents thoroughly prior to the start of construction.

B. Report any conflict or discrepancy discovered in the Construction Documents to the Architect prior to the start of construction.

C. Report any conflict or discrepancy discovered between the Construction Documents and state and local governmental regulations to the Architect prior to the start of construction.

1.4 PROJECT CONDITIONS

A. The conditions existing at the time of inspection for bidding purposes will be maintained by the Owner to the extent practical. However, minor variations may occur due to natural occurrences prior to the start of clearing work.

B. The location of existing underground utilities indicated is approximate only. Field locate all existing underground utilities in the area of work, regardless of whether or not they are indicated. Call "Miss Utility" prior to the start of demolition work for assistance in the location of existing underground utilities.

C. Should charted, uncharted or incorrectly charted utilities be encountered during demolition, contact the Architect immediately for instructions. Cooperate with Owner and utility companies to keep services and facilities in operation.

1.5 SCHEDULING

A. See Final Site Plan for scheduling of site related items.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 PROJECT CLEAN UP

A. Clean site as construction progresses. Do not allow trash or other waste materials to accumulate.

B. Prior to requesting the punch-list inspection, clean the site to the following requirements:

1. Power wash all walks and pavements.
2. The remainder of the site shall be broom clean.
3. Remove all trash and debris.

3.2 EXISTING FACILITIES

A. Preserve existing signs, markers, guardrails, fences and other amenities in their original condition unless written permission is obtained for their removal and replacement.

B. Replace damaged items at no additional cost to the Contract.

END OF SECTION 010200

SECTION 024113 - SELECTIVE SITE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The provisions of the Contract Documents apply to the work of this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Demolition and removal of existing asphalt and/or concrete pavement, concrete and/or asphalt walks, curbs and gutters, and other exterior site items indicated or not indicated which interfere with the Work.
2. Removal and replacement of fencing.

1.3 DEFINITIONS

A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property.

B. Remove and Salvage: Items indicated to be removed and salvaged remain the Owner's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and deliver to Owner's designated storage area.

C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations or in locations indicated.

D. Existing to Remain: Protect items indicated to remain against damage and soiling. When permitted by the Architect, items may be removed to a suitable, protected storage location and then cleaned and reinstalled in their original locations.

1.4 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, remove demolished materials from the site with further disposition at the Contractor's option.

B. Storage or sale of removed items or materials on-site will not be permitted.

C. Historical items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to the Owner, which may be encountered, remain the Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to the Owner.

1.5 SUBMITTALS

A. Photographs or videotape, sufficiently detailed, of existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by the Work.

B. Record drawings at Project closeout.

1. Identify and accurately locate capped utilities and other subsurface structural, electrical, or mechanical conditions.

C. Proposed dust-control measures.

D. Schedule of selective demolition activities indicating the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
2. Interruption of utility services.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Detailed sequence of selective demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.
5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
6. Locations of temporary partitions and means of egress.

E. Inventory of items to be removed and salvaged or turned over to Owner.

F. Landfill records indicating receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

A. Regulatory Requirements: All work shall comply with Federal, State and Local laws and regulations concerning hauling and disposal of demolition debris.

B. Notify the proper agencies prior to the start of work and obtain all necessary permits for this work.

1.7 PROJECT CONDITIONS

A. Owner assumes no responsibility for actual condition of items or structures to be demolished. Conditions existing at the time of inspection for bidding purposes will be maintained by the Owner to the extent practical. However, minor variations may occur due to Owner's removal and salvage operations prior to the start of demolition work.

B. The location of existing underground utilities indicated is approximate only. Field locate all existing underground utilities in the area of work, regardless of whether or not they are indicated. Call "Miss Utility" prior to the start of demolition work for assistance in the location of existing underground utilities.

C. Should charted, uncharted or incorrectly charted utilities be encountered during demolition, contact the Architect immediately for instructions. Cooperate with Owner and utility companies to keep services and facilities in operation.

D. Do not interrupt existing utilities serving facilities occupied and used by the Owner and others, except when permitted in writing by the Owner. Provide acceptable temporary utility service as required to maintain Owner's operations.

1.8 SCHEDULING

A. Owner will occupy portions of the building immediately adjacent to the Work. Conduct selective demolition so that the Owner's operations will not be disrupted. Provide not less than 72 hours notice to Owner of activities that will affect Owner's operations.

B. Arrange selective demolition schedule so as not to interfere with Owner's on-site operations.

C. Notify and coordinate any required relocation and/or removal of existing underground utilities, poles, meters or other above ground appurtenances with the appropriate utility company (i.e. power, telephone, cable and natural gas/propane) prior to the start of selective demolition work.

1.9 PAYMENT FOR UTILITY REMOVAL / RELOCATIONS

N/A

1.10 USE OF EXPLOSIVES

A. Do not use explosives to perform selective site demolition work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Call “Miss Utility” prior to the start of demolition work for assistance in the location of existing underground utilities. Field locate all existing underground utilities in the area of work, regardless of whether or not they are indicated.

B. Should uncharted or incorrectly charted existing utilities be identified, contact the Architect immediately for instructions. Provide a scale drawing with the location of the uncharted or incorrectly charted utilities for use by the Architect in preparing additional direction.

C. Verify that utilities indicated as removed, abandoned and/or relocated have been disconnected and capped.

D. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

E. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged and turned over to the Owner.

3.2 PROTECTION OF PERSONS AND PROPERTY

A. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with selective demolition operations.

B. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.

1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
2. Protect existing site improvements, appurtenances, and landscaping to remain.

D. Barricade areas of demolition occurring as part of this work, and post with warning lights as required by authorities having jurisdiction.

E. Protect structures, buildings, utilities, walks, pavements, existing vegetation and other facilities to remain from damage caused by settlement, lateral movement, undermining, washout and other hazards created by demolition operations.

3.3 POLLUTION CONTROLS

A. Perform all work in accordance with the requirements of the latest edition of the Virginia Erosion and Sediment Control Handbook and those of the local Erosion Control official.

B. Clean adjacent structures and improvements of dust, dirt, and debris caused by the Work. Return adjacent areas to condition existing before start of selective demolition.

3.4 DEMOLITION OF EXISTING FACILITIES

A. Asphalt Pavement

1. Remove asphalt concrete pavement by sawcutting to the full depth of the pavement. Provide neat sawcuts at the limits of pavement removal indicated.

B. Concrete Pavement, Walks and Curbs

1. Remove concrete pavement and walks to the nearest joint. Sawcut concrete if joints are not present adjacent to the area of demolition.
2. Sawcut concrete along straight lines to a depth of not less than 2 inches. Break out remainder of concrete, provided that the broken area is concealed in the finished work, and the remaining concrete is sound. At locations where the broken face cannot be concealed, grind smooth or sawcut entirely through concrete.

C. Fencing

1. Remove existing chain-link fencing as indicated on the drawings.
2. Turn fencing materials removed over to the Owner.

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3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

B. Do not burn demolished materials or debris.

C. Transport and legally dispose of demolished materials off of Owner's property.

3.6 CLEANUP AND REPAIR

A. Upon completion of demolition work remove all tools, equipment and demolition materials from site. Remove demolition work area protection and leave areas clean.

B. Repair any demolition performed in excess of that required. Return elements of construction and surfaces to remain to the condition existing prior to the start of construction. Repair adjacent construction or surfaces soiled or damaged by demolition work.

END OF SECTION 024113

SECTION 321700 - PAVEMENT MARKINGS, SIGNS AND SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The provisions of the Contract Documents apply to the work of this Section.

1.2 SUMMARY

A. This Section includes, but is not limited to, the following:

1. Establishing the location of pavement markings and applying pavement markings for parking space lines, traffic control, fire lane and accessible spaces.

2. Installation of signs for traffic control and accessible spaces.

3. Installation of wheel stops at parking spaces.

1.3 QUALITY ASSURANCE

A. All work and materials shall conform to the requirements of the latest edition of the Virginia Department of Transportation (VDOT) Road and Bridge Specifications and Road and Bridge Standards.

B. All materials for signs shall conform to the requirements of the latest edition of the Virginia Department of Transportation (VDOT) Road and Bridge Specifications and Road and Bridge Standards and to the requirements of the latest edition of the Manual of Uniform Traffic Control Devices for traffic signs.

C. Installer Qualifications: Engage an experienced installer, who has successfully completed striping and signage projects similar in size and complexity to this project. The installer's primary business (defined as a minimum of 60% of total billings) shall be striping and signage.

1.4 SUBMITTALS

A. Product Data and written confirmation that the following materials are included on VDOT's list of approved construction materials:

1. Pavement marking paint

PART 2 - PRODUCTS

2.1 PAVEMENT MARKING PAINT

A. Paint shall be Type A, water emulsion base, traffic paint conforming to the requirements of Section 704 of the VDOT Road and Bridge Specifications and Federal Specification TT-P-1952. Color shall be white unless otherwise indicated.

B. Curb painting color along fire lanes shall be yellow, unless otherwise indicated.

C. Type B thermoplastic lane markings are required within VDOT rights-of-way.

2.2 PAINT APPLICATOR

A. Provide hand-operated push-type applicator machine of a type commonly used for application of paint to pavement surfaces. Paint applicator machine shall be acceptable for marking small street and parking areas. Applicator machine shall be equipped with the necessary paint tanks and spraying nozzles and shall be capable of applying paint uniformly at coverage specified.

2.3 CONCRETE

A. Concrete shall be Class A3, General concrete, conforming to the requirements of Section 217 of the VDOT Road and Bridge Specifications.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION FOR PAVEMENT MARKING

A. Apply pavement markings only when the ambient temperatures is above 50°F and less than 95°F, unless otherwise approved.

B. Allow pavement to cure for a period of not less than 7 days before applying pavement marking.

C. Clean surfaces thoroughly before application of paint. Remove, dust, dirt and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods as required.

D. Remove existing pavement markings, residual curing compounds and other coating adhering to the pavement with scrapers, wire brushes, waterblasting, sandblasting or mechanical abrasion as required. Areas of existing pavement affected by oil or grease shall be scrubbed with an approved chemical and rinsed thoroughly. Seal oil-soaked areas with shellac or primer after cleaning.

E. Pavement surfaces shall be dry and clean prior to painting. Pavement markings shall not be applied within 24 hours following rain or other inclement weather or when rain is imminent.

F. Apply seal coat across the existing pavement to provide a uniform surface appearance.

3.2 APPLICATION OF PAVEMENT MARKING

A. Apply paint in accordance with the requirements of Section 704 of the VDOT Road and Bridge Specifications.

B. Lay out lines and markings to the width and length as indicated. All parking space lines shall be 4 inches wide.

C. Apply paint with an approved paint applicator.

D. Apply paint at manufacturer recommended rates to provide a minimum 15 mil wet thickness (depending on manufacturer, may require 2 applications).

END OF SECTION 321700

SECTION 32 1823.53 – TENNIS COURT SURFACE

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and sections of Division 1, General Requirements, apply to the work in this Section.

1.2 DESCRIPTION OF WORK

A. Work under this section consists of providing for three tennis courts. Prepare subgrade/subbase as indicated and required.

1.3 SUBMITTALS

A. Product data in the form of manufacturer's technical data, specifications and installation instructions.

B. Shop drawings showing locations of fencing, posts, nets, net strap anchors and line striping (with dimensions).

C. Samples: Submit manufacturer's standard color chart for surfacing and lines. Submit samples no less than 4" square of actual surface demonstrating available textures. The Architect and Owner will select the texture to be provided.

1.4 QUALITY ASSURANCE

A. The materials manufacturer shall be represented by their own technician who shall furnish technical services and quality control at the mix plant and during actual installation.

B. Installer shall examine the subgrade/subbase for the tennis courts and shall not apply the surface course until he has determined that the substrate is acceptable.

1.5 GUARANTEE

A. Guarantee all materials and workmanship for a period of TWO YEARS following the final acceptance of the Surface Course. Repair or replace all defective work occurring within this time period at no cost to the Owner.

PART 2 – PRODUCTS

2.1 BASIS OF DESIGN

A. To establish a standard of quality, this product is based on "Latex-ite Acrylic Color Sealer" as manufactured by American Tennis Courts, Inc., 4051 North Point Road, Baltimore, Maryland 21222. Comparable surfacing systems of other manufacturers will be considered for approval when submitted to the Architect no later than fourteen (14) calendar days prior to the bid date. Full data, samples and technical information will be required. No substitutions will be allowed after receipt of bids.

PART 3 – EXECUTION

3.1 CONSTRUCTION AND APPLICATION GUIDELINES

A. General: Surface to receive the System shall be of sound construction and shall meet the standards set forth by the United States Tennis Court and Track Builders Association. Type VI Hot Plant Mix; Type VII Emulsified Asphalt Mix; Type VIII Combination Hot Plant and Emulsified Asphalt Mix; Type V Reinforced Concrete.

B. Court Preparation: Install all net post sleeves, center strap anchors, and fencing prior to the application of the surfacing materials. Asphalt shall be allowed to cure for at least ten days.

C. Surface Preparation, Asphalt Surfaces: Thoroughly clean substrate surface, removing all loose dirt, dust, oil, grease, leaves and other debris. Check substrate surface with a ten-foot straight-edge and flood with water to locate low areas which are more than 1/8” deep. Level minor depressions (1/8" to ¼" deep) by troweling or screeding a layer of patch mix, approved by the surfacing system manufacturer, over the low area. Suitable leveling materials include Latex-ite Acrylic Patch Binder, Latex-ite Acrylic Resurfaces, and Latex-ite Filler Coat which has not been diluted with water. Deeper depressions may require multiple layers of patch mix. Patch excessively deep depressions (1/2" or deeper) with asphaltic concrete. Level all rough paving joints and roller marks prior to application of the system.

3.2 SYSTEM SPECIFICATIONS

A. Materials: Latex-ite Acrylic Color Sealer and Latex-ite Line Paint.

B. Surface Composition: One application of Latex-ite asphalt surfacer, two filler coats of Latex-ite Acrylic Color Sealer, one finish coat of Latex-ite Acrylic Color Sealer and game lines installed in strict accordance with manufacturer’s material mixing and application specifications.

C. Latex-ite Line Paint:

1. Description and Usage: Provide highly pigmented, 100% Acrylic paint for marking game lines on exterior tennis courts.
2. Mixing: No mixing is necessary except when applying with a sprayer.
3. Color: White
4. Application: Game lines shall be taped and handpainted.
5. Limitations and precautions: Apply only to a properly cured surface. Do not apply when rain is imminent or when temperature is below 50° F. Keep from freezing. Do not store in direct sunlight.

3.3 MATERIALS

A. Latex-ite Acrylic Color Sealer:

1. Description and Usage: Provide a non-facing, weatherproof, 100% acrylic color sealer, consisting of acrylic resins, mineral fillers, and color-fast pigments, for use on asphalt, asphalt emulsion leveling courses, and suitable concrete. Product shall provide a uniform texture to protect the underlying surface from weather and climatic conditions and shall be resistant to fuels, oils, alkalis, and solvents.
2. Color: Two colors (not including lines) will be required.
   a. Courts: Owner to select
   b. Perimeter: Owner to select

3. Mix Design: The Latex-ite Acrylic Color Sealer shall be mixed at the project site with dry 80-100 mesh silica sand and water to obtain the consistency which will result in the desired texture. Materials shall be thoroughly mixed to insure a uniform consistency. The table below gives the minimum and maximum amounts of sand and water that can be added to the Latex-ite Acrylic Color Sealer.

	Filler Coats		Finish Coat	
Latex-ite	55 gal.	55 gal.	55 gal.	55 gal.
80-100 Mesh Sand	400 lbs.	500 lbs.	0 lbs.	300 lbs.
Water	24 gal.	30 gal.	30 gal.	40 gal.

B. Application Methods: Apply in accordance with manufacturer's written instructions. Generally, install the Latex-ite Acrylic Color Sealer in three separate applications, using a 24"- to 48"-wide flexible rubber squeegee of good quality. The first two coats shall be filler coats, mixed as above. Each application shall thoroughly dehydrate before application of the succeeding coat. Check the entire surface for ridges between applications. Scrape smooth all imperfections and clean the court surface of all loose debris. Whenever feasible, apply the first coat parallel with the playing net. Insure a smooth and uniform texture free from ridges and tool marks. Do not scrape the final coat.

C. Do not apply Latex-ite when ambient temperature is below 50^{o} F or when surface temperature is above 140^{o} F. Do not apply when rain is imminent. Do not store in direct sunlight. Keep from freezing.

END OF SECTION 32 1823.53

SECTION 32 1900 — EXTERIOR ATHLETIC EQUIPMENT

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. The provisions of the Contract Documents apply to this Section.

1.2 SUBMITTALS

A. Materials and Equipment Lists: Submit a complete list of materials and equipment required. List shall include catalog numbers, catalog cuts, data sheets and such other descriptive information necessary to show that materials and equipment meet the requirements. No consideration will be given to partial lists submitted from time to time.

B. Shop Drawings and Product Data: Submit drawings and product data as follows:

C. Athletic equipment layout plan drawings showing each item in its exact location by dimensions, prepared to a minimum eighth-inch scale. Number equipment items to identify the equipment.

D. Shop drawings and Product Data: Provide shop drawings (if not detailed in product data) and product data of each item showing materials and methods of construction.

E. Sample warranties using manufacturer's standard forms for items cited.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Package materials for delivery in manufacturer's standard protective coverings. Cover and protect material in transit and at site. Material not properly protected and stored, and which is damaged or defaced during construction shall be rejected.

B. Do not deliver components or materials for interior athletic equipment installations to the project site until building is completely enclosed and weather tight. Do not deliver components or materials for exterior athletic equipment installations to the project site until related site preparation work is complete and related site locations are ready for installation of exterior athletic equipment. Store materials and components in secure spaces. Store materials and components neatly, properly stacked and covered with plastic.

1.4 WARRANTIES

A. Provide warranties for the following items:

1. Tennis Court Nets, Posts, Straps and Anchors: Provide manufacturer's minimum five (5) year warranty against defects in manufacture and materials covering full material replacement cost.

PART 2 – PRODUCTS

2.1 GENERAL

A. Athletic equipment shall be standard production devices or systems of manufacturers successfully engaged in the manufacture of items (similar to those indicated) for a period of not less than five (5) years. Each equipment item type shall be a complete assembly and the product of a single manufacturer. Specific manufacturers' equipment models are referenced

as a standard of design and quality. Complying products of other manufacturers may be considered in accordance with Contract Documents.

2.2 TENNIS COURT NETS, POSTS AND NET STRAPS/ANCHORS

A. General: Provide nominal 3 1/2" O.D. galvanized end and reel posts with post caps; eyebolts for bottom net attachment; cable, pulley and 400 lb-capacity ratchet reel with removable handle (provide two handles). Provide Porter 00865-000/100, or approved equivalent.

B. Provide concrete set posts, with post ground sleeve + plug for removable posts (Porter 00840-900, or approved equivalent).

C. Provide one set of nets for each court (Porter 02237-000, or approved equivalent).

D. Provide center net anchor and net strap at each court (Porter 02238-000, or approved equivalent).

E. All nets, posts, straps and anchors shall meet USTA requirements.

PART 3 – EXECUTION

3.1 PREPARATION

A. Coordinate and furnish anchorage devices with templates, diagrams and instructions for their installations, for athletic equipment indicated to be attached to (or cast in) concrete, masonry, and steel constructions. Coordinate delivery of these items to project site so as not to delay other work.

B. Cover and protect all materials from damage and take proper precautions to protect all finished surfaces over which or against which athletic equipment must be installed. Repair or replace any damaged finished surfaces of the athletic equipment.

3.2 INSTALLATION

A. General: Comply with manufacturer's detailed instructions in installing athletic equipment.

B. Build in conduit for all electrical work, including power, cables, receptacles, motors, control wiring, key-operated switches, etc. as required for complete and functional system.

3.3 ADJUST AND CLEAN

A. Clean up all debris, keeping the premises clean and neat at all times.

B. Make necessary adjustment for safe, efficient operation of operable and electrical athletic equipment.

END OF SECTION 32 1900

SECTION 323113.19 –CHAIN-LINK FENCES AND GATES (PVC CLAD)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The provisions of the Contract Documents apply to the work of this Section.

1.2 WORK INCLUDED

A. Polyvinyl Chloride (PVC) clad chain link fence and gates

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's technical data and installation instructions for fencing, fabric, gates and accessories.

B. Shop Drawings: Submit shop drawings indicating location of fence (with dimensions), height, post locations, details of post installation, gate swing, hardware and accessories. Identify PVC touch up paint.

C. Samples: None required

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who has completed chain-link fences and gates similar in material, design, and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Source Limitations for Chain-Link Fences and Gates: Obtain each color, grade, finish, type, and variety of component for chain-link fences and gates from one source with resources to provide chain-link fences and gates of consistent quality in appearance and physical properties.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify layout information for chain-link fences and gates indicated in relation to property survey and existing structures. Verify dimensions by field measurements.

PART 2 - PRODUCTS

2.1 GENERAL:

A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

1. PVC Coated Steel Fencing and Fabric:

a) Colorguard Fence Products, Inc.
b) American Chain Link Fence Company
c) Semmerling Fence & Supply, Inc.
d) Anchor Fence, Inc.

2.2 FABRIC:

A. Steel Fabric: Comply with Chain Link Fence Manufacturers Institute (CLMFI) Product Manual. Provide one-piece fabric widths. Wire size includes zinc coating.

B. Size: 2-inch diamond mesh, 9-gauge (0.148-inch diameter) wire.

C. PVC Coating: ASTM F668, Class 2B (fused and adhered) PVC coating, black color. Bonded or extruded & glued fabric may not be used.

D. Selvage shall be knuckled at the top and bottom.

2.3 FRAMING:

A. Strength requirements for posts and rails shall conform to ASTM F 669.

B. Pipe shall be straight, true to section, material and sizes specified.

C. Steel Framework, General: Posts, rails, braces and gate frames.

1. Type II Pipe: Manufactured from steel conforming to ASTM A 569 or A 446, grade D, cold formed, electric welded with minimum yield strength of 50,000 p.s.i. and triple coated with minimum 0.9 oz. Zinc per square foot after welding, a chromatic conversion coating and a clear polymer overcoat. Corrosion protection on inside surfaces shall protect the metal from corrosion when subjected to the salt spray test of ASTM B 117 for 300 hours with the end point of 5% Red Rust.
2. PVC-Coating finish: In accordance with ASTM F668, Class 2B (fused and adhered) apply supplemental color coating of 10 to 15 mils (0.254 – 0.38mm) of thermally fused PVC in color to match fabric.

D. End, Corner and Pull Posts:

1. For fabric height up to 6’ - 2.375” OD Type II steel pipe (3.12 lb/ft). [2.875”, 73mm, 5.79 lb/ft.]
2. For fabric height over 6’ - 2.875” OD Type II steel pipe.(4.64 lb/ft). [4.00”, 101.6mm, 9.11 lb/ft]

E. Line Posts:

1. For fabric height up to 6’ - 1.90” OD Type II steel pipe (2.28 lb/ft).
2. For fabric height over 6’ - 2.375” OD Type II steel pipe (3.65 lb/ft).

F. Gate Posts:

1. Provide posts for supporting single gate leaf, or one leaf of a double gate installation, for nominal gate widths as follows:
   a) 6' or Under: 2.875" OD Type II steel pipe (4.64lb/ft).
   b) Over 6': 4.000" OD Type II steel pipe (8.65 lb/ft).

G. Top & Bottom Rail:

1. Manufacturer's longest lengths, with expansion-type couplings, approximately 6" long, for each joint. Provide means for attaching rail securely to each gate corner, pull, & end post.
   a) 1-1/4" NPS (1.66" OD) Type II steel pipe.

H. Intermediate and/or Center Rail:

1. Same material as top rail. Manufacturer's standard galvanized steel cap required for each end.

2.4 FITTINGS AND ACCESSORIES:

A. Material: Comply with ASTM F 626. Mill finished galvanized steel, to suit manufacturer's standards.

1. Zinc Coating: Unless specified otherwise, galvanize steel fence fittings and accessories in accordance with ASTM A 153, with zinc weights indicated.
2. Supplemental Color Coating: In accordance with ASTM F668, Class 2B (fused and adhered), apply supplemental color coating of 10 to 15 mils (0.254 – 0.38mm) of thermally fused PVC in color to match fabric. Apply to exterior surfaces and, except inside cap shapes, to exposed interior surfaces. Color to match chain link fabric.

B. Tension Wire: 7 gauge (0.177" diameter) metallic coated steel marcelled tension wire conforming to ASTM A 824 with finish to match fabric.

1. PVC-Coated finish: In accordance with ASTM F668, Class 2B (fused and adhered), apply supplemental color coating of 10 to 15 mils (0.254 – 0.38mm) of thermally fused PVC in color to match fabric.

C. Wire Ties:

1. 9 gauge [0.148" (3.76mm)] galvanized steel wire for attachment of fabric to line posts.
2. Double wrap 13 gauge [0.092" (2.324mm)] for rails and braces.
3. Hog ring ties of 12-1/2 gauge [0.0985" (2.502mm)] for attachment of fabric to tension wire

D. Post Brace Assembly:

1. Manufacturer's standard adjustable brace at end of gate posts and at both sides of corner and pull posts, with horizontal brace located at mid height of fabric. Provide same material as top rail for brace, and truss to line posts with 0.375" diameter rod and adjustable tightener. Manufacturer's standard galvanized steel cap required for each end.

E. Post and Line Caps: Weathertight closure cap required for each post. If top rail is required, use line post caps with loop.

F. Tension or Stretcher Bars: Hot-dip galvanized steel with minimum length 2" less than full height of fabric, minimum cross section of 3/16" by ¾" and minimum 1.2 oz. zinc coating per sq. ft. of surface area. One bar is required for each gate and end post and two for each corner and pull post, except where fabric is integrally woven into post.

G. Tension and Brace Bands: Minimum ¾" wide hot-dip galvanized steel with minimum 1.2 oz. zinc coating per sq. ft. of surface area.

1. Tension bands: Minimum 14 gauge (0.074") thick.
2. Tension and Brace bands: Minimum 12 gauge (0.105") thick.

H. Nuts and bolts shall be galvanized but not vinyl coated. Provide touch up paint and color coat nuts and bolts to match fabric.

2.5 POST Setting MATERIALS

A. Comply with the requirements for VDOT Std. Class A3 concrete.

2.6 GATES:

A. Fabrication:

1. Fabricate perimeter frames of gates from metal and finish to match fence framework. Utilize Fusion or stainless-steel welded connections to form a rigid one-piece unit. Assemble gate frames by welding, providing security against removal or breakage connections. Provide horizontal and vertical members to ensure proper gate operation and attachment of fabric, hardware and accessories. Space frame members maximum of 8' apart unless otherwise indicated.
2. Provide same fabric as for fence. Install fabric with stretcher bars at vertical edges and at top and bottom edges. Attach stretcher hooks to gate frame at not more than 15" o.c.
3. Install diagonal cross-bracing consisting of 3/8" diameter adjustable length truss rods on gates to ensure frame rigidity without sag or twist.

B. Swing Gates: Comply with ASTM F 900.

1. Fabricate perimeter frames of minimum 1.90" OD Type II steel pipe.

C. Gate Hardware: Provide hardware and accessories for each gate, galvanized per ASTM A 153, and in accordance with the following:

1. Hinges: Size and material to suit gate size, non-lift-off type, offset to permit 180 degrees gate opening. Provide 1-1/2 pair of hinges for each leaf over 6' nominal height.
2. Latch: Forked type to permit operation from either side of gate, with padlock eye as integral part of latch.
3. Keeper: Provide keeper that automatically engages gate leaf and holds it in open position until manually released.
4. Double Gates: Provide gate stops for double gates, consisting of mushroom type flush plate with anchors, set in concrete, and designed to engage center drop rod or plunger bar. Ensure plunger bar cannot be removed without tools. Include locking device and padlock eyes as integral part of latch, permitting both gate leaves to be locked with single padlock.

5. Hardware materials: Provide hot dipped galvanized steel or malleable iron shapes to suit gate size. Field coat hardware parts (e.g. hinges, latch, keeper and drop bar) with PVC touch up paint, provided by manufacturer, to match adjacent finishes.

PART 3 - EXECUTION

3.1 INSTALLATION:

A. General: Install fence in compliance with ASTM F 567 and manufacturers recommendations. Do not begin installation and erection before final grading is completed, unless otherwise permitted. Apply fabric to outside of framework, unless otherwise indicated.

B. Locate terminal post at each fence termination and change in horizontal or vertical direction of 30º or more, or as indicated on plans.

C. Excavation:

1. Drill or hand excavate (using post hole digger) holes for posts to diameters and spacing indicated, in firm, undisturbed or compacted soil.
2. Holes in asphalt or concrete surfaces will be cut by core-drilling with a bit of diameter at least equal to the required hole diameter. Holes in concrete may be formed prior to placing concrete.
3. Excavate holes for each post to minimum diameter recommended by fence manufacturer, but not less than 4 times largest cross-section of post.
4. Excavate hole to depths approximately 6” lower than post bottom, with bottom of posts set not less than 36” below finish grade surface.

D. Setting Posts:

1. Space 10’ o.c. maximum, unless otherwise indicated.
2. Center and align posts in hole, 6” above bottom of excavation.
3. Protect portions of concrete posts above ground from concrete splatter. Place concrete around post and vibrate or tamp for consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operations.
4. Extend concrete above grade and slope all around (dome) to allow for drainage away from post. Uniformly and neatly texture the concrete surface with a broom finish. Remove any spilled or splashed concrete from the post and surrounding area immediately.

E. Top Rails:

1. Run rail continuously through line post caps, bending to radius for curved runs and at other posts terminating into rail end attached to posts or post caps fabricated to receive rail. Provide expansion couplings as recommended by fencing manufacturer.

F. Center Rails:

1. Install in one place between posts and flush with post on fabric side, using rail ends and special offset fittings where necessary. Provide center rails for fence 12’ or taller, or as indicated on drawings.

G. Bottom Rails:

1. Install in one piece between posts and flush with post on fabric side, using rail ends and special offset fittings when necessary.

H. Brace Assemblies:

1. Install braces so posts are plumb when diagonal rod is under proper tension.

I. Top and Bottom Tension Wire:

1. Install tension wires through post cap loops before stretching fabric and tie to each post cap with not less than same gauge and type of wire. Pull wire taut, without sags. Fasten fabric to tension wire, using 11 - ga. galvanized steel hog rings spaced maximum 24" o.c. Install where top and/or bottom rails are not specified on plans.

J. Fabric:

1. Leave approximately 2" between finish grade and bottom selvage. Pull fabric taut and tie to posts, rails and tension wires. Attach fabric with wire ties to line posts at 12"-15" (381mm) o.c. and to rails, braces, and tension wire at 24" (600 mm) o.c. Install fabric on security side of fence, unless otherwise indicated, and anchor to framework so that fabric remains in tension after pulling force is released.
2. For athletic field fencing, install fabric on the field side of the fence unless otherwise indicated.

K. Stretcher Bars:

1. Thread through fabric 4" o.c., and secure to end, corner, pull and gate posts with tension bands spaced maximum 15" o.c.

L. Accessories

1. Tie Wires: Use U-shaped wire, conforming to diameter of pipe to which attached, clasping pipe and fabric firmly with ends twisted at least 2 full turns. Bend ends of wire to minimize hazard to persons or clothing.

M. Fasteners:

1. Install nuts for tension bands and hardware bolts on site of fence opposite fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

N. Gates:

1. Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.2 FINISHING

A. Remove and replace sections of fence and fittings with damaged PVC coating. Minor aesthetic damage may be touched up with a suitable spray on material provided by the manufacturer.

B. Clean up debris and unused material and remove from the site.

END OF SECTION 323113.19

SECTION 331000 - EXTERIOR WATER SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The provisions of the Contract Documents apply to the work of this Section.

1.2 SUMMARY

A. This section includes water service piping, fire protection service mains and appurtenances from the source of water to a point 5 feet outside the building.

1.3 SUBMITTALS

A. Product data for piping, valves, vaults, fire hydrants, and identification devices.

1.4 QUALITY ASSURANCE

A. Comply with local utility department and fire department standards pertaining to materials, meter boxes, hose threads and installation.

B. Comply with the requirements of the latest edition of the City of Staunton's Service Authority's Construction Specifications.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Preparation for Transport: Prepare valves, including fire hydrants, for shipping as follows:

1. Ensure valves are dry and internally protected against rust and corrosion.
2. Protect valves against damage to threaded ends, flange faces, and weld ends.
3. Set valves in best position for handling. Set gate valves and fire hydrants closed to prevent rattling.

B. Storage: Use the following precautions for valves, including fire hydrants, during storage:

1. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
2. Protect valves from weather. Store valves indoors. Maintain valve temperature higher than the ambient dew point temperature. If outdoor storage is necessary, support valves off the ground or pavement in watertight enclosures.

C. Handling: Use a sling to handle valves, including fire hydrants, whose size requires handling by crane or lift. Rig valves to avoid damage to exposed valve parts. Do not use handwheels or stems as lifting or rigging points.

D. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.

E. Protect stored piping from moisture and dirt. Elevate above grade. Do not exceed structural capacity of floor when storing inside.

F. Protect flanges, fittings, and specialties from moisture and dirt.

G. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

1.6 PROJECT CONDITIONS

A. Site Information: Perform site surveys, research public utility records, and verify existing utility locations. Verify that exterior water system may be installed in compliance with the original design and referenced standards. Notify Architect immediately of any discrepancies.

B. Coordinate connection to the existing water service with

1.7 SEQUENCING AND SCHEDULING

A. Coordinate with interior water piping and interior fire protection piping.

B. Coordinate with other utility work.

C. Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions:

1. Notify Architect not less than two days in advance of the proposed interruption.
2. Do not proceed with the interruption without Architects written permission.
3. Provide temporary utility service to the facility.

PART 2 - PRODUCTS

2.1 GENERAL

A. All piping, valves, fittings, fire hydrants, meters, meter vaults, appurtenances and other products shall conform to the requirements of the latest edition of the City of Staunton's Service Authority's Construction Specifications.

PART 3 - EXECUTION

3.1 GENERAL

A. Installation of the exterior water system shall comply with the requirements of the latest edition of the City of Staunton's Service Authority's Construction Specifications.

3.2 PREPARATION OF BURIED PIPE FOUNDATION

A. Grade trench bottom to provide a smooth, firm, stable, and rock-free foundation throughout the length of the pipe.

B. Remove unstable, soft, and unsuitable materials at the surface upon which pipes are to be laid and backfill with clean sand or pea gravel to indicated level.

C. Shape bottom of trench to fit bottom of pipe. Fill unevenness with tamped sand backfill. Dig bell holes at each pipe joint to relieve the bells of all loads and to ensure continuous bearing of the pipe barrel on the foundation.

3.3 PIPE AND PIPE FITTINGS INSTALLATION

A. Depth of Cover: Provide minimum cover over piping of 18 inches below average local frost depth or 42 inches below finished grade, whichever is greater.

B. Water Service Termination: Terminate water service piping 5'-0" from building foundation in location and invert as indicated. Coordinate location with interior water piping and interior fire service piping. Provide temporary pipe plug for piping extension into building.

3.4 IDENTIFICATION INSTALLATION

A. Install underground warning tape and tracing wire for underground water service piping, as required by the latest edition of the City of Staunton's Service Authority's Construction Specifications.

3.5 FIELD QUALITY CONTROL

A. Testing and Disinfection: Disinfect, flush and test in accordance with the requirements of the latest edition of the City of Staunton's Service Authority's Construction Specifications.

END OF SECTION 331000

MONTGOMERY HALL PARK TENNIS COURT IMPROVEMENTS

SITE PLAN

CITY OF STAUNTON, VIRGINIA

10/18/2021

SITE DATA:

PARCEL ID: 9116

PARCEL LOCATION: ON MONTGOMERY AVE BETWEEN STUART ST AND LACY B KING WAY

SITE ADDRESS: 1000 MONTGOMERY AVE

PARCEL AREA: 148 ACRES

LIMITS OF DISTURBANCE: 9,860 SF < 10,000 SF, NO EROSION AND SEDIMENT CONTROL OR STORMWATER IS REQUIRED

SOURCE OF BOUNDARY AND TOPOGRAPHY: TIMMONS GROUP
28 IMPERIAL DRIVE
STAUNTON, VA 24401
JOE MEDLEY
(804) 200-6555

VERTICAL DATUM REFERENCE: NAVD 88

PROPOSED USE: TENNIS COURTS

ZONED: R-4

REQUIRED SETBACKS: FRONT: 35' MIN.
REAR: 5' MIN.
SIDE: 5' MIN.

PROPOSED BUILDING HEIGHT: MAX 15 FT

PRE-DEVELOPED ONSITE IMPERVIOUS AREA: 4,284 SF

POST-DEVELOPED ONSITE IMPERVIOUS AREA: 4,124 SF

PARKING REQUIRED: N/A

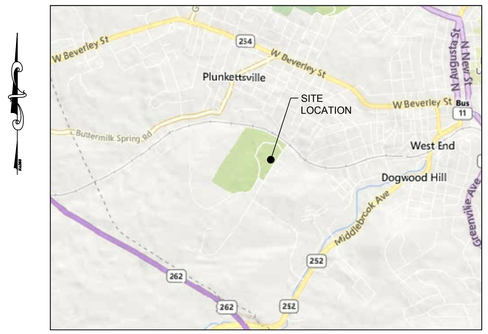
PARKING SPACES PROVIDED: N/A, NO CHANGES TO PARKING ARE PROPOSED

ADA PARKING REQUIRED/PROVIDED: N/A

6th ORDER HUC: PS06 020700050301

RECEIVING WATERS: MIDDLE RIVER - LEWIS CREEK

RESPONSIBLE LAND DISTURBER (RLD):
THE RESPONSIBLE LAND DISTURBER SHALL BE THE ENGINEER OF RECORD FOR THE PURPOSES OF PLAN APPROVAL ONLY. THE CONTRACTOR SHALL DESIGNATE A QUALIFIED RESPONSIBLE LAND DISTURBER UPON AWARD OF CONTRACT.



VICINITY MAP

SCALE: 1" = 2000'

OWNER:

CITY OF STAUNTON
CONTACT: LYLE HARTT, P.E.
P.O. BOX 58
STAUNTON, VA 24402
TELEPHONE: (540) 332-3804
FAX: (540) 332-3894

ENGINEER OF RECORD:

TIMMONS GROUP
608 PRESTON AVENUE, SUITE 200
CHARLOTTESVILLE, VA 22903
CONTACT: JESSICA DENKO, P.E.
TELEPHONE: (434) 295-5624
FAX: (434) 295-8317

Sheet List Table

Sheet Number	Sheet Title
C0.0	COVER
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C1.2	NOTES & DETAILS
C1.3	NOTES & DETAILS
C2.0	EXISTING CONDITIONS AND DEMOLITION PLAN
C3.0	LAYOUT PLAN
C4.0	GRADING AND DRAINAGE PLAN
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E5.11	DETAILS & DIAGRAMS
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P0.02	LOADS & RISER DIAGRAMS
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NUMBER OF SHEETS = 16

COMMONWEALTH OF VIRGINIA
JESSICA R. DENKO
Lic. No. 57291
3/1/22
PROFESSIONAL ENGINEER

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YOUR VISION ACHIEVED THROUGH OURS.

DATE	REVISION DESCRIPTION
01/06/2022	REVISED PER CITY COMMENTS
03/01/2022	REVISED PER CITY COMMENTS

DATE: 10/18/2021
DRAWN BY: J. FOX
DESIGNED BY: J. DENKO
CHECKED BY: J. DENKO
SCALE: N/A

TIMMONS GROUP

MONTGOMERY HALL PARK
CITY OF STAUNTON, VA
COVER

JOB NO. 48793
SHEET NO. C0.0

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GENERAL NOTES:

UTILITIES

1. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONTRACTOR OR ITS SUBCONTRACTORS SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY AND REPAIRED AT CONTRACTOR'S EXPENSE.
2. THE CONTRACT DOCUMENTS DO NOT GUARANTEE THE EXISTENCE, NON-EXISTENCE OR LOCATION OF UTILITIES. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OR THE NON-EXISTENCE OF UTILITIES. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION, CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-552-7001) AND/OR THE RESPECTIVE UTILITY COMPANIES FOR GAS, WATER, SEWER, POWER, PHONE AND CABLE. CONTRACTOR SHALL TIMELY ARRANGE TO HAVE THE VARIOUS UTILITIES LOCATED, AND TO HAVE THEM REMOVED OR RELOCATED, OR TO DETERMINE THE METHOD OF PROTECTION ACCEPTABLE TO THE RESPECTIVE OWNER, IF THE METHOD OF PROTECTION IS NOT OTHERWISE SPECIFIED. CONTRACTOR SHALL CONDUCT ITS WORK IN THE VICINITY OF EXISTING UTILITIES IN ACCORDANCE WITH THE RESPECTIVE UTILITY'S RULES AND REGULATIONS. ANY COST INCURRED FOR REMOVING, RELOCATING OR PROTECTING UTILITIES SHALL BE BORNE BY CONTRACTOR UNLESS INDICATED OTHERWISE. CONTRACTOR SHALL EXCAVATE TO LOCATE BURIED UTILITIES FAR ENOUGH IN ADVANCE OF ITS WORK TO ALLOW FOR HORIZONTAL AND /OR VERTICAL ADJUSTMENTS TO ITS WORK AND/OR THE UTILITIES. NO ADJUSTMENT IN COMPENSATION OR SCHEDULE WILL BE ALLOWED FOR DELAYS RESULTING FROM CONTRACTOR'S FAILURE TO CONTACT AND COORDINATE WITH UTILITIES.
3. WHEN THE WORK CROSSES EXISTING UTILITIES, THE EXISTING UTILITIES SHALL BE ADEQUATELY SUPPORTED AND PROTECTED FROM DAMAGE DUE TO THE WORK. ALL METHODS FOR SUPPORTING AND MAINTAINING THE EXISTING UTILITIES SHALL BE APPROVED BY THE RESPECTIVE UTILITY COMPANY AND/OR THE ENGINEER. CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT THE GRADE AND ALIGNMENT OF EXISTING UTILITIES ARE MAINTAINED AND THAT NO JOINTS OR CONNECTIONS ARE DISPLACED. BACKFILL SHALL BE CAREFULLY PLACED AND COMPACTED TO PREVENT FUTURE DAMAGE OR SETTLEMENT TO EXISTING UTILITIES. ANY UTILITIES REMOVED AS PART OF THE WORK, AND NOT INDICATED TO BE REMOVED OR ABANDONED, SHALL BE RESTORED USING MATERIALS AND INSTALLATION EQUAL TO THE UTILITY'S STANDARDS.
4. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS, TENANTS, THE CITY OF STAUNTON, AND THE ENGINEER PRIOR TO THE INTERRUPTION OF ANY SERVICES. SERVICE INTERRUPTIONS SHALL BE KEPT TO A MINIMUM.
5. ALL RECTANGULAR WATER METER BOXES LOCATED IN SIDEWALKS SHALL BE REPLACED WITH ROUND ONES. THE ADJUSTMENT OF ALL MANHOLE TOPS, WATER VALVE BOXES, GAS VALVE BOXES AND WATER METER BOXES SHALL BE THE RESPONSIBILITY OF CONTRACTOR.
6. ALL WATER METER, VALVES AND FIRE HYDRANT ADJUSTMENTS/RELOCATIONS SHALL BE PERFORMED BY THE CONTRACTOR PER THE CITY OF STAUNTON INSPECTOR'S REQUIREMENTS.
7. ALL UTILITIES MUST BE UNDERGROUND.

EROSION CONTROL & WORK AREA PROTECTION AND MAINTENANCE

1. ALL FENCES REQUIRED TO BE REMOVED OR DISTURBED BY CONSTRUCTION SHALL BE SALVAGED, STORED, PROTECTED AND RE-INSTALLED BY CONTRACTOR. IF SUCH FENCE MATERIAL CANNOT BE REUSED DUE TO DAMAGE CAUSED BY CONTRACTOR, CONTRACTOR SHALL INSTALL NEW FENCE OF THE SAME TYPE OF MATERIAL. TEMPORARY FENCING REQUIRED BY PRIVATE PROPERTY OWNERS SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR IS ADVISED TO CONTACT PROPERTY OWNERS AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF REMOVING ANY FENCE IN ORDER TO COORDINATE RELOCATION AND/OR PROTECTION OF ANY ANIMALS, AND TO ESTABLISH AND CONFIRM WITH THE OWNER THE PRE-CONSTRUCTION CONDITION OF ANY FENCE TO BE REMOVED, DISTURBED OR REPLACED.
2. CONTRACTOR SHALL OBTAIN A PERMIT TO WORK IN PUBLIC RIGHT-OF-WAY. CONTRACTOR IS PERMITTED TO WORK IN TEMPORARY OR PERMANENT EASEMENTS OBTAINED BY OWNER. NOTIFY PROPERTY OWNER(S) FORTY-EIGHT (48) HOURS PRIOR TO WORKING ON ANY PRIVATE PROPERTY TO COORDINATE ACCESS.
3. CONTRACTOR SHALL, AT HIS EXPENSE, MAINTAIN THE WORK SITE IN A CLEAN AND ORDERLY APPEARANCE AT ALL TIMES. ALL DEBRIS AND SURPLUS MATERIAL COLLECTED SHALL BE DISPOSED OF OFF THE WORK SITE BY CONTRACTOR, AT HIS EXPENSE.
4. EXISTING LAWNS, TREES, SHRUBS, FENCES, UTILITIES, CULVERTS, WALLS, WALKS, DRIVEWAYS, POLES, SIGNS, RIGHT-OF-WAY MONUMENTS, MAILBOXES AND THE LIKE SHALL BE PROTECTED FROM DAMAGE DURING THE WORK. ANY DAMAGE CAUSED TO SUCH ITEMS SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST. PROPERTY PINS DISTURBED BY CONTRACTOR THAT ARE NOT SHOWN ON THE PLANS TO BE DISTURBED SHALL BE RESTORED BY A LICENSED SURVEYOR AT CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL EMPLOY EROSION CONTROL DEVICES AND METHODS AS REQUIRED TO MEET THE REQUIREMENTS AND INTENT OF THE CITY OF STAUNTON EROSION CONTROL ORDINANCE. CONTRACTOR SHALL PROVIDE THE NECESSARY DIVERSION DITCHES, DIKES OR TEMPORARY CULVERTS REQUIRED TO PREVENT MUD AND DEBRIS FROM BEING WASHED ONTO THE STREETS OR PROPERTY. CONTRACTOR'S VEHICLES SHALL BE KEPT CLEAN TO PREVENT MUD OR DUST FROM BEING DEPOSITED ON STREETS. NO AREA SHALL BE LEFT DENUDED FOR MORE THAN SEVEN (7) CALENDAR DAYS.
6. CONTRACTOR SHALL CLEAN UP, RESTORE, PERMANENTLY SEED AND MAINTAIN ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF WORK ON EACH SITE. TOPSOIL, SEED, FERTILIZER AND MULCH SHALL BE PLACED IN ACCORDANCE WITH CITY OF STAUNTON STANDARDS ON ALL DISTURBED AREAS. A PERMANENT STAND OF GRASS ADEQUATE TO PREVENT EROSION SHALL BE ESTABLISHED PRIOR TO FINAL ACCEPTANCE.
7. AS DETERMINED BY THE ENGINEER, ANY DEFECTIVE, FAULTY, CRACKED, BROKEN OR GRAFFITIED SIDEWALKS, DRIVEWAYS, HANDICAP RAMPS OR CURB & GUTTER SHALL BE REMOVED AND REPLACED PRIOR TO FINAL ACCEPTANCE. NO ADDITIONAL PAYMENT WILL BE MADE FOR SUCH WORK.

EARTHWORK AND SITE CONDITIONS

1. EXCEPT AS OTHERWISE SHOWN ON THE PLANS, ALL CUTS AND FILLS SHALL MATCH EXISTING SLOPES OR BE NO GREATER THAN 2:1.
2. NO NEW SIDEWALK SHALL EXCEED 2.0% CROSS-SLOPE (PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAFFIC).
3. ALL GRADING AND IMPROVEMENTS TO BE CONFINED TO THE PROJECT AREA UNLESS OTHERWISE INDICATED.
4. ALL MATERIALS AND INSTALLATION DETAILS SHALL CONFORM TO THE CITY OF STAUNTON ENGINEERING DIVISION STANDARDS AND ALL OTHER APPLICABLE CITY OF STAUNTON ORDINANCES.
5. ANY UNUSUAL OR UNANTICIPATED SUBSURFACE CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO BEGINNING WORK, AND IMMEDIATELY NOTIFY THE ENGINEER IN THE EVENT THERE ARE ANY DISCREPANCIES BETWEEN SUCH CONDITIONS AND THOSE SHOWN ON THE PLANS AND SPECIFICATIONS.

CONCRETE AND ASPHALT

1. ALL FORMS SHALL BE INSPECTED BY THE ENGINEERING INSPECTOR BEFORE ANY CONCRETE IS PLACED. THE ENGINEER INSPECTOR MAY REQUIRE CONTRACTOR, AT NO ADDITIONAL COST, TO REMOVE AND REPLACE CONCRETE PLACED PRIOR TO OR WITHOUT SUCH INSPECTION.
2. ALL MATERIAL INSIDE FORMS SHALL BE CLEAN AND FREE OF ALL ROCKS AND OTHER LOOSE DEBRIS. SUB-BASE MATERIAL SHALL BE COMPACTED BY MECHANICAL MEANS.
3. CONCRETE SHALL NOT BE PLACED UNLESS THE AIR TEMPERATURE IS AT LEAST 40 DEGREES FAHRENHEIT (F) IN THE SHADE AND RISING OR CONTRACTOR ADMINISTERS ADEQUATE HEATING AND/OR INSULATING METHODS TO ENSURE PROPER CURING OF CONCRETE.
4. CONCRETE SHALL NOT BE PLACED UNTIL STEEL DOWELS HAVE BEEN INSTALLED IN EXISTING CONCRETE IN ACCORDANCE WITH CITY OF STAUNTON STANDARDS.
5. 1/2" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE PLACED AT A MAXIMUM OF 30' INTERVALS ON NEW SIDEWALK, CURB, CURB & GUTTER, AT EACH END OF DRIVEWAY ENTRANCES, AT EACH END OF HANDICAP RAMPS, SOME POINT ON ENTRANCE WALKS AND STEPS ADJUSTMENTS, AND ALONG BUILDINGS AND WALLS WHERE NEW CONCRETE SIDEWALKS ARE PLACED AGAINST THEM.
6. ALL EXISTING CURBS, CURB & GUTTER, SIDEWALK AND STEPS TO BE REMOVED SHALL BE TAKEN OUT TO THE NEAREST JOINT. DEMOLITION AND DISPOSAL COST TO BE INCLUDED IN OTHER UNIT BID ITEMS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
7. DRIVEWAY ADJUSTMENTS ARE TO BE DONE IN GENTLE TRANSITIONS RATHER THAN ABRUPT BREAKS AT THE BACK OF WALKS. GRAVEL DRIVEWAYS ABOVE STREET GRADE SHALL BE PAVED FOR A MINIMUM DISTANCE OF 20' BEYOND THE BACK OF THE SIDEWALK OR CURB & GUTTER APRON WHERE APPLICABLE.
8. EXISTING ASPHALT PAVEMENT SHALL BE SAW CUT AND REMOVED AS PER THE SPECIFICATIONS. REMOVAL SHALL BE DONE IN SUCH A MANNER AS TO NOT TEAR, BULGE OR DISPLACE ADJACENT PAVEMENT. EDGES SHALL BE CLEAN AND VERTICAL, ALL CUTS SHALL BE PARALLEL OR PERPENDICULAR TO THE DIRECTION OF TRAFFIC.
9. DISPOSAL OF ALL EXCESS MATERIAL IS THE RESPONSIBILITY OF CONTRACTOR.

DRAINAGE

1. CONTRACTOR SHALL EXERCISE CARE, ESPECIALLY AT INTERSECTIONS AND GUTTER LINES, TO PROVIDE POSITIVE DRAINAGE. ANY AREAS WHERE WATER IS IMPOUNDED SHALL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL COST. POSITIVE DRAINAGE OF ALL ROADWAY AREAS TO THE STORM DRAIN INLETS OR OTHER ACCEPTABLE DRAINAGE CHANNELS AS NOTED ON THE PLANS IS REQUIRED.
2. CONTRACTOR SHALL MAINTAIN EXISTING STREAMS, DITCHES, DRAINAGE STRUCTURES, CULVERTS AND FLOWS AT ALL TIMES DURING THE WORK. CONTRACTOR SHALL PAY FOR ALL PERSONAL INJURY AND PROPERTY DAMAGE WHICH MAY OCCUR AS A RESULT OF FAILING TO MAINTAIN ADEQUATE DRAINAGE.
3. ALL PIPES, DI'S AND OTHER STRUCTURES SHALL BE INSPECTED BY THE ENGINEERING INSPECTOR BEFORE BEING BACKFILLED OR BURIED. THE ENGINEERING INSPECTOR MAY REQUIRE CONTRACTOR, AT NO ADDITIONAL COST, TO UNCOVER AND RE-COVER SUCH STRUCTURES IF THEY HAVE BEEN BACKFILLED OR BURIED WITHOUT SUCH INSPECTION.
4. REMOVED PIPE SHALL BE THE PROPERTY OF CONTRACTOR AND IF NOT SALVAGED FOR RE-USE, SHALL BE DISPOSED OF LAWFULLY.
5. ALL STORM SEWER PIPE AND DROP INLETS SHALL BE CLEARED OF DEBRIS AND ERODED MATERIAL PRIOR TO FINAL ACCEPTANCE.
6. ALL STORM SEWER PIPE JOINTS SHALL BE SEATED AND SEALED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
7. ALL EXISTING ROOF DRAINS AND OTHER DRAINAGE CONDUIT TIED INTO EXISTING PIPE SHALL BE TIED INTO NEW PIPE. ALL EXISTING ROOF DRAINS AND OTHER DRAINAGE CONDUIT BLOCKED OR DISRUPTED FROM THEIR PRE-CONSTRUCTION DRAINAGE PATTERNS SHALL BE SHORTENED, EXTENDED OR OTHERWISE CONNECTED TO THE NEW WORK USING MATERIALS APPROVED BY THE ENGINEERING INSPECTOR, AND IN SUCH A WAY THAT THE NEW DRAINAGE PATTERNS ARE ACCEPTABLE TO ENGINEER.

VEGETATION

1. PRIOR TO REMOVING ANY VEGETATION, CONTRACTOR SHALL MEET WITH THE PROPERTY OWNERS AND THE ENGINEER TO REVIEW THE LIMITS OF CONSTRUCTION AND OBTAIN PERMISSION TO REMOVE VEGETATION REQUIRED TO DO THE WORK.
2. TREE AND PLANT ROOTS OR BRANCHES THAT MAY INTERFERE WITH THE WORK SHALL BE TRIMMED OR CUT ONLY WITH THE APPROVAL OF THE OWNER AND ENGINEER. ANY TREES OR PLANTS WHICH ARE SHOWN TO REMAIN THAT DO NOT INTERFERE WITH THE WORK, BUT ARE DAMAGED BY CONTRACTOR OR HIS SUBCONTRACTORS, SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST.

TRAFFIC AND SIGNAGE

1. ALL TEMPORARY NO PARKING REQUIREMENTS SHALL BE PROVIDED BY CONTRACTOR WITH APPROVAL OF THE TRAFFIC ENGINEER.
2. CONTRACTOR SHALL PROVIDE NECESSARY REFLECTORS, BARRICADES, TRAFFIC CONTROL DEVICES AND/OR FLAG PERSONS TO INSURE THE SAFETY OF ITS WORKERS AND THE PUBLIC.
3. CONTRACTOR SHALL MAINTAIN SAFE AND PASSABLE PUBLIC ACCESS TO PROPERTIES AND THE PUBLIC RIGHT-OF-WAY DURING CONSTRUCTION. EXCEPT AS APPROVED IN ADVANCE IN WRITING BY THE ENGINEER, TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGH WORK AREAS WITHIN THE PUBLIC RIGHT-OF-WAY. THESE TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT MUTCD MANUAL. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
4. EXCEPT AS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE WORK SHALL BE COORDINATED AND PERFORMED IN A MANNER SO THAT ALL EXISTING FIRE HYDRANTS SHALL BE ACCESSIBLE AT ALL TIMES DURING THE WORK.
5. CONTRACTOR SHALL NOTIFY PROPERTY OWNER(S) TWELVE (12) HOURS IN ADVANCE OF BLOCKING ANY ENTRANCE. NO ENTRANCE SHALL BE BLOCKED FOR MORE THAN TWELVE (12) HOURS IN ANY 24 HOUR PERIOD WITHOUT APPROVAL OF THE PROPERTY OWNER, EXCEPT WHERE NEW ENTRANCES ARE CONSTRUCTED.
6. WITHIN 24 HOURS OF THEIR REMOVAL, CONTRACTOR SHALL REPLACE MAILBOXES, STREET SIGNS, TRAFFIC SIGNS, AND THE LIKE THAT ARE REMOVED FOR CONSTRUCTION. PERMANENT OR SUITABLE TEMPORARY ITEMS WILL BE USED AS THE STATUS OF WORK PERMITS. PERMANENT OR TEMPORARY STOP SIGNS MUST BE IN PLACE AT ALL TIMES.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE CITY OF STAUNTON, PUBLIC WORKS, TRAFFIC DIVISION ONE FULL WORKING DAY PRIOR TO ANY CONCRETE POUR WHERE TRAFFIC AND STREET SIGNS ARE TO BE REPLACED. .

MISCELLANEOUS

1. AN EXCAVATION PERMIT MUST BE OBTAINED FROM PUBLIC WORKS AND A LETTER OF CREDIT FOR THE AMOUNT OF $2,500.00 MUST BE SUBMITTED TO PUBLIC WORKS PRIOR TO EXCAVATION IN CITY RIGHT-OF-WAY. PUBLIC WORKS TELEPHONE NUMBER IS 540-332-3892.
2. RETAINING WALLS WITH A MAX HEIGHT OF 12" OR LESS SHALL BE POURED IN CONTINUITY WITH THE SIDEWALK. WALLS WITH A MAX HEIGHT GREATER THAN 12" SHALL BE SEGMENTAL BLOCK WALLS.
3. ALL SIGNS TO BE RELOCATED SHALL BE LOCATED WITHIN 6 INCHES BEHIND THE BACK EDGE OF THE SIDEWALK.

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS AND STANDARDS.
2. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL CONSULT THE ENGINEER AND VERIFY THE APPROVAL OF THE PLANS BY ALL FEDERAL, STATE AND LOCAL AGENCIES.
3. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL POINTS OF CONNECTION OR PROPOSED WORK TO EXISTING CURBS, SANITARY LINES, WATERLINES, ETC, PRIOR TO CONSTRUCTION.
4. UPON DISCOVERY OF SOILS THAT ARE UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR OTHER ROADWAY CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE OWNER. THESE AREAS SHALL BE EXCAVATED BELOW PLAN GRADE AS DIRECTED BY THE OWNER, BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED IN ACCORDANCE WITH CURRENT STANDARDS.
5. ALL CONCRETE SHALL BE A3-AE (AIR ENTRAINED 3,000 PSI), UNLESS OTHERWISE NOTED.
6. DESIGN CHANGES, SPECIFIED MATERIALS CHANGES AND/OR FIELD CHANGES FROM THE APPROVED PLANS NEED TO BE RESUBMITTED TO THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. A LETTER OF EXPLANATION SHALL ACCOMPANY THE REVISED PLANS AND/OR THE DRAINAGE CALCULATIONS, WHICH MUST BE SUBMITTED AND APPROVED BY THE ENGINEER.
7. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN. IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THIS PLAN, CALL MISS UTILITY OF CENTRAL VIRGINIA AT 1-800-552-7001.
8. THE INSTALLATION OF SEWER, WATER, AND GAS MAINS (INCLUDING SERVICE LATERALS AND SLEEVES) SHALL BE COMPLETED PRIOR TO THE PLACEMENT OF AGGREGATE BASE COURSE.
9. A PRIME COAT SEAL BETWEEN THE AGGREGATE BASE AND BITUMINOUS CONCRETE WILL BE REQUIRED AT THE RATE OF 0.30 GALLONS PER SQUARE YARD (REC-250 PRIME COAT) PER CITY OF STAUNTON STANDARDS AND SPECIFICATIONS.
10. THE SCHEDULING OF AGGREGATE BASE INSTALLATION AND SUBSEQUENT PAVING ACTIVITIES SHALL ACCOMMODATE FORECAST WEATHER CONDITIONS PER SECTION 315 OF THE ROAD AND BRIDGE SPECIFICATIONS.
11. THE OWNERS REPRESENTATIVE SHALL HAVE APPROVED THE AGGREGATE BASE COURSE(S) FOR DEPTH, TEMPLATE AND PERFORMED THE REQUIRED FIELD INSPECTION (PROOF ROLL) PRIOR TO PLACEMENT OF ANY SURFACE COURSE(S). CONTACT THE OWNER FOR INSPECTION FOR THE AGGREGATE BASE COURSE(S) 48 HOURS PRIOR TO APPLICATION OF THE SURFACE COURSE(S).
12. ALL VEGETATION AND ORGANIC MATERIAL MATERIAL IS TO BE REMOVED FROM THE PROPOSED PAVEMENT LIMITS PRIOR TO CONDITIONING OF THE SUBGRADE.
13. CERTIFICATION AND SOURCE OF MATERIALS ARE TO BE SUBMITTED TO THE OWNER FOR ALL MATERIALS AND BE IN ACCORDANCE WITH THE ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS.
14. CONTRACTOR SHALL PROVIDE A SEQUENCE OF CONSTRUCTION/MAINTENANCE OF TRAFFIC PLAN IN ACCORDANCE WITH THE STANDARDS AND GUIDELINES CONTAINED IN THE 2011 EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUEL FOR REVIEW BY THE ENGINEER, OWNER AND THE CITY OF STAUNTON PRIOR TO STARTING WORK THAT IMPACTS TRAFFIC ON PUBLIC ROADS.
15. ALL NEW HANDICAP ACCESSIBLE REQUIREMENTS ON-SITE AND WITHIN ALL NEW STRUCTURES SHALL COMPLY WITH THE 2006 UNIFORM STATEWIDE BUILDING CODE, 2006 VIRGINIA CONSTRUCTION CODE, AND ICC/ANSI A117.1-03.
16. HORIZONTAL AND VERTICAL SIGHT DISTANCES SHALL BE FREE OF PARKED VEHICLES.

LEGEND

- 100 / 100 — STORM PIPE & STRUCTURE NO.
- 100 — DROP INLET & STRUCTURE NO.
- 200 — EXISTING CONTOUR
- 200 — PROPOSED CONTOUR
- 240.50 — PROPOSED SPOT ELEVATION

SEWER

- S — EXISTING SANITARY SEWER

WATER

- W — EXISTING WATER LINE
- W — PROPOSED WATER LINE
- W — PROPOSED VALVE
- W — PROPOSED TAPPING SLEEVE

GRADING

TC = TOP OF CURB
BC = BACK OF CURB
EP = EDGE OF PAVEMENT
TW = TOP OF WALL
BW = BOTTOM OF WALL
TS = TOP OF STAIRS
BS = BOTTOM OF STAIRS
N/A = NOT APPLICABLE TO THIS PROJECT

COMMONWEALTH OF VIRGINIA
JESSICA R. DENKO
Lic. No. 57291
3/1/22
PROFESSIONAL ENGINEER

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DATE	REVISION DESCRIPTION
01/06/2022	REVISED PER CITY COMMENTS
03/01/2022	REVISED PER CITY COMMENTS

DATE: 10/18/2021
DRAWN BY: J. FOX
DESIGNED BY: J. DENKO
CHECKED BY: J. DENKO
SCALE: N/A

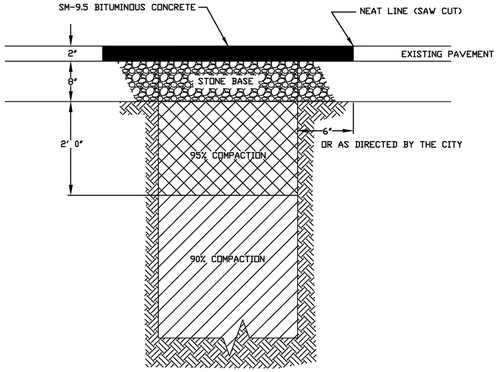
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MONTGOMERY HALL PARK
CITY OF STAUNTON, VA
NOTES & DETAILS

JOB NO. 48793
SHEET NO. C1.0

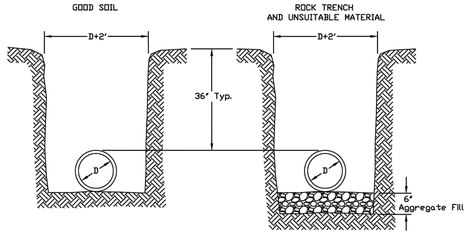
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NOTE:
1. COMPLETED PATCH TO BE FLUSH WITH EXISTING PAVEMENT

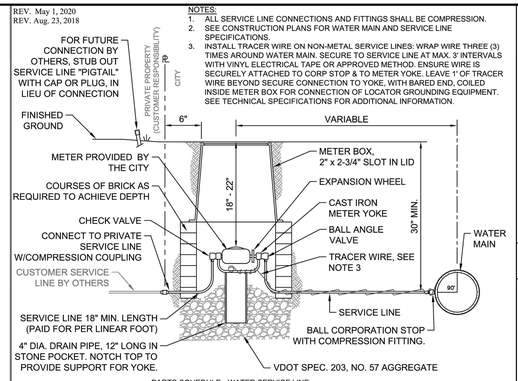
CITY OF STAUNTON, VA	**STANDARD PATCH FOR ASPHALT PAVEMENT**	Draw No. **M-5**



NOTE:
1. ALL BEDDING SHALL BE CONTINUOUS AND UNIFORM
2. EXCAVATION IS REQUIRED TO ENSURE THERE IS NO ROCK WITHIN 6" OF THE BOTTOM OF THE PIPE

CITY OF STAUNTON, VA	**WATER PIPE INSTALLATION**	Draw No. **W-12**

REV. May 1, 2020
REV. Aug. 23, 2018



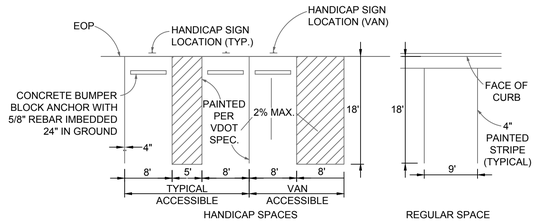
NOTES:
1. ALL SERVICE LINE CONNECTIONS AND FITTINGS SHALL BE COMPRESSION.
2. SEE CONSTRUCTION PLANS FOR WATER MAIN AND SERVICE LINE SPECIFICATIONS.
3. INSTALL TRACER WIRE ON NON-METAL SERVICE LINES: WRAP WIRE THREE (3) TIMES AROUND WATER MAIN. SECURE TO SERVICE LINE AT MAX. 3' INTERVALS WITH VINYL ELECTRICAL TAPE OR APPROVED METHOD. ENSURE WIRE IS SECURELY ATTACHED TO CORP STOP & TO METER YOKE. LEAVE 1' OF TRACER WIRE BEYOND SECURE CONNECTION TO YOKE, WITH BARED END, COILED INSIDE METER BOX FOR CONNECTION OF LOCATOR GROUNDING EQUIPMENT. SEE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PARTS SCHEDULE - WATER SERVICE LINE

PART DESCRIPTION	MANUFACTURER	MODEL# for METER SIZE INDICATED 5/8"	3/4"	1"
CORP STOP	FORD	FB1001-3-G-NL		FB1001-4-G-NL
	MUELLER	B-25009N 3/4"		B-25009N 1"
	A.Y. McDONALD	74701B-3Q 3/4"		74701B-3Q 1"
BALL ANGLE VALVE	FORD	BA94-313W-G-NL	BA94-323W-G-NL	BA94-444W-G-NL
	MUELLER	B-24273-N 5/8"	B-24273-N 3/4"	B-24273-N 1"
	A.Y. McDONALD	74642BYG 3/4"x5/8"	74642BYG 3/4"	74642BYG 1"
CAST IRON METER YOKE	FORD	Y501	Y503	Y504
	MUELLER	5010	H5030	H5040
	A.Y. McDONALD	14-1	14-3	14-4
EXPANSION WHEEL	FORD	EC-1-NL	EC-23-NL	EC-4-NL
	MUELLER	H-14234-5/8"	H-14234-3/4"	H-14234-1"
	A.Y. McDONALD	714-1EHG	714-2EHG	714-4EHG
ANGLE CHECK VALVE	FORD	HHCA94-313-G-NL	HHCA94-323-G-NL 3/4"	HHCA94-444-G-NL
	MUELLER	H-14466-AN 5/8"x3/4"	H-14466-AN 3/4"	H-14466-AN 1"
	A.Y. McDONALD	712-3YT 23	712-3YT 33	712-3YT 44
COMPRESSION UNION	FORD	C44-33-4-7S-G-NL		C44-44-G-NL
	MUELLER	H-15409N 3/4"		H-15409N 1"
	A.Y. McDONALD	74758-11 3/4"		74758-11 1"
COMPRESSION WYE: 1" x 3/4" x 3/4"	FORD	Y44-243-G-NL		(TYPE III CONNECTION ONLY)
	MUELLER	H-15354N		
	A.Y. McDONALD	709YSQZ 1x3/4"		
METER BOX	CAPITAL FOUNDRY of VA	MBX3130		N/A
	DFW	N/A		1324C-18MAFDEEP

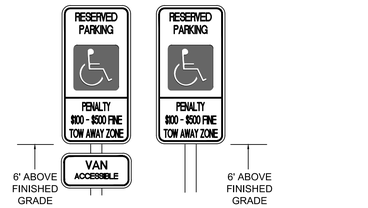
NOT TO SCALE

CITY of STAUNTON, VIRGINIA	**TYPICAL NEW WATER SERVICE CONNECTION & METER ASSEMBLY UP TO 1"**	DRAWING NUMBER **W-1**



TYPICAL PARKING SPACE DETAILS

No Scale

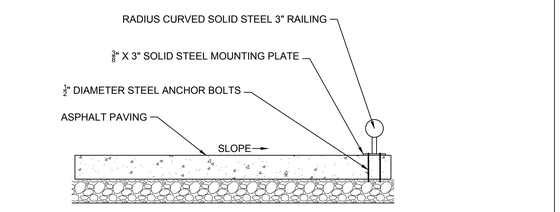


SPACES SHALL BE IDENTIFIED BY ABOVE GRADE SIGNS AS RESERVED FOR PHYSICALLY DISABLED PERSONS. PROVIDE ONE (1) R-7-8 SIGN AT EACH PARKING SPACE INDICATED ON SITE PLAN. SIGN SHALL BE ALUMINUM (PAINTED WHITE) WITH GREEN LETTERS AND INTERNATIONAL WHEELCHAIR SYMBOL. SIGN SHALL BE PLACED ON STEEL POST 1-1/2" O PAINTED BLACK SET IN MIN. 2' OF CONCRETE.

VA. SIGN FOR THE DISABLED ON 0.80 GAUGE ALUMINUM. COLORS: GREEN BORDER & LEGEND, BLUE SYMBOL FOR ACCESSIBILITY, WHITE BACKGROUND.

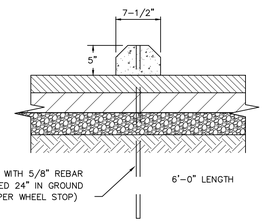
PARKING SIGNS FOR THE DISABLED

No Scale



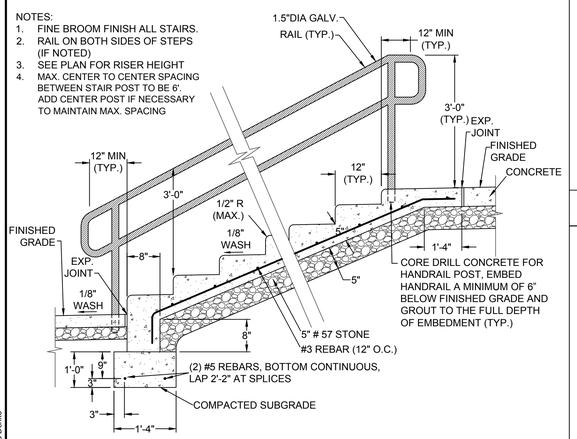
SHORT RAIL

No Scale



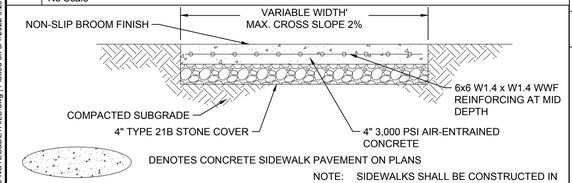
PRECAST WHEELSTOP DETAIL

No Scale



EXTERIOR STAIRS

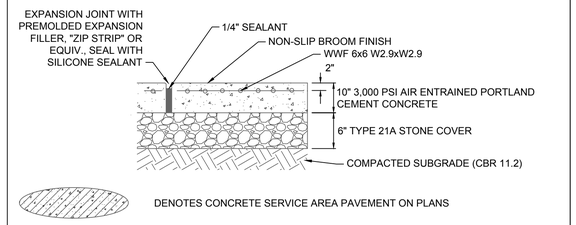
No Scale



NOTE: SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH VDOT STANDARDS.

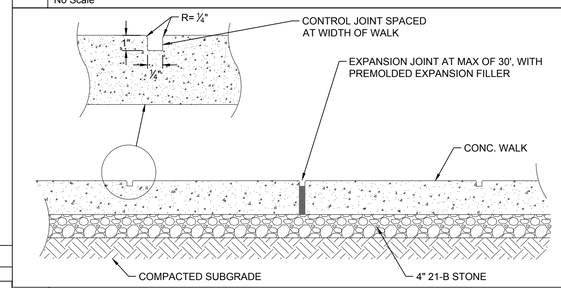
CONCRETE SIDEWALK PAVEMENT SECTION

No Scale



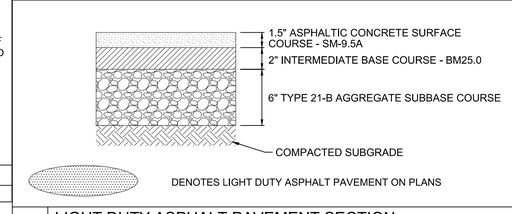
HEAVY DUTY CONCRETE SECTION

No Scale



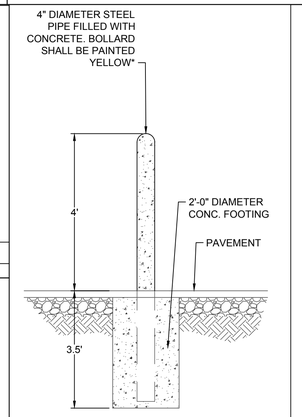
CONCRETE SIDEWALK JOINT DETAIL

No Scale



LIGHT DUTY ASPHALT PAVEMENT SECTION

No Scale



*IN LIEU OF PAINTING, A PLASTIC BOLLARD COVER WITH REFLECTOR CAN BE USED

BOLLARD DETAIL

No Scale

COMMONWEALTH OF VIRGINIA
JESSICA R. DENKO
Lic. No. 57291
3/1/22
PROFESSIONAL ENGINEER

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03/01/2022	REVISED PER CITY COMMENTS

DATE 10/18/2021
DRAWN BY J. FOX
DESIGNED BY J. DENKO
CHECKED BY J. DENKO
SCALE N/A

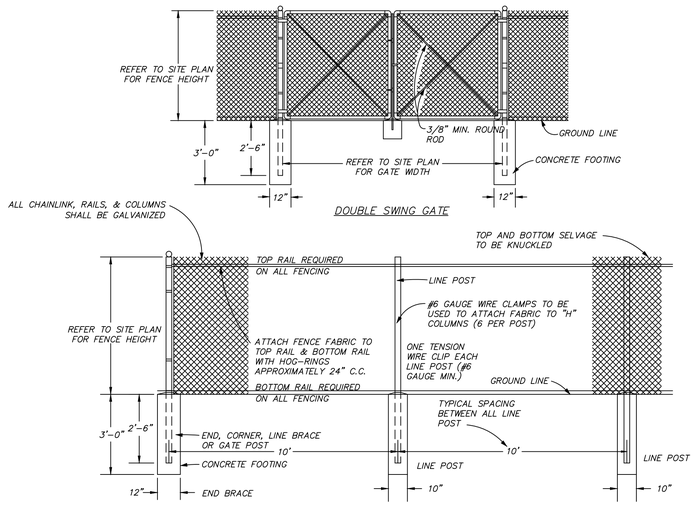
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MONTGOMERY HALL PARK
CITY OF STAUNTON, VA
NOTES & DETAILS

JOB NO. 48793
SHEET NO. C1.2

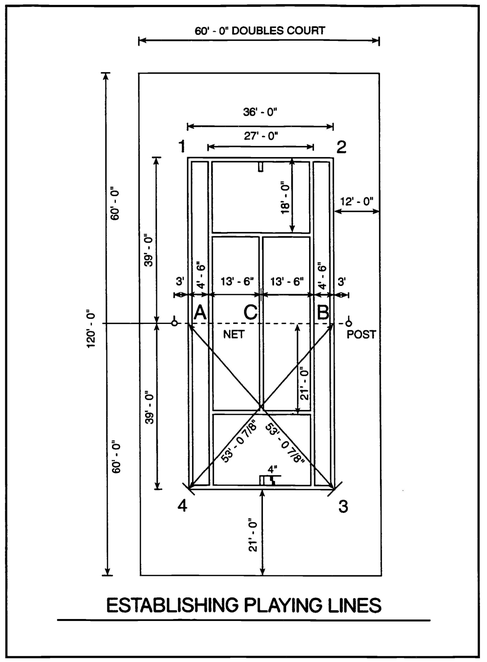
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STANDARD GALVANIZED CHAIN LINK FENCE

No Scale



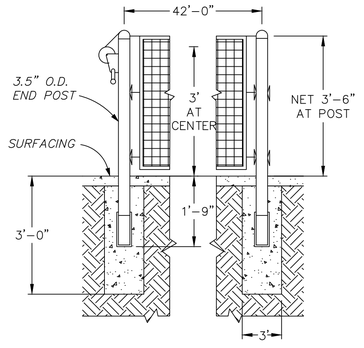
ESTABLISHING PLAYING LINES

DRAWINGS ARE ILLUSTRATIVE ONLY AND USTC&TBA AND USTA ACCEPTS NO RESPONSIBILITY FOR THEIR USE.

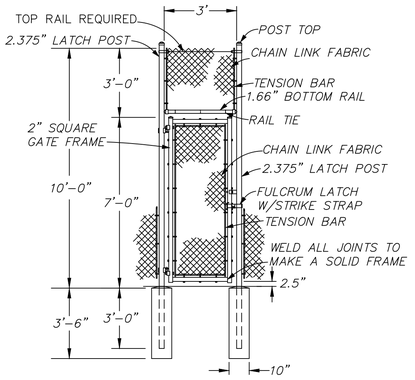
16

TENNIS COURT RESTRIPING

No Scale



TENNIS COURT POST



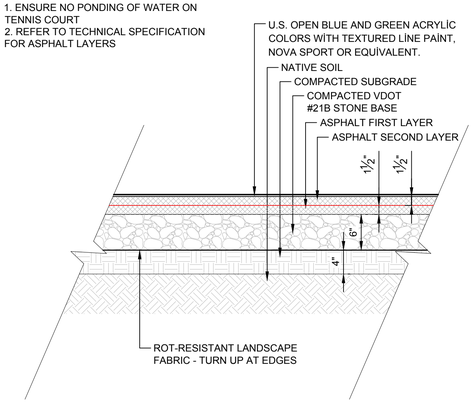
TENNIS COURT GATE DETAIL

NOTE: ALL CHAINLINK FENCING, POSTS, AND ACCESS ARE TO BE BLACK PVC CLAD

TENNIS COURT DETAILS

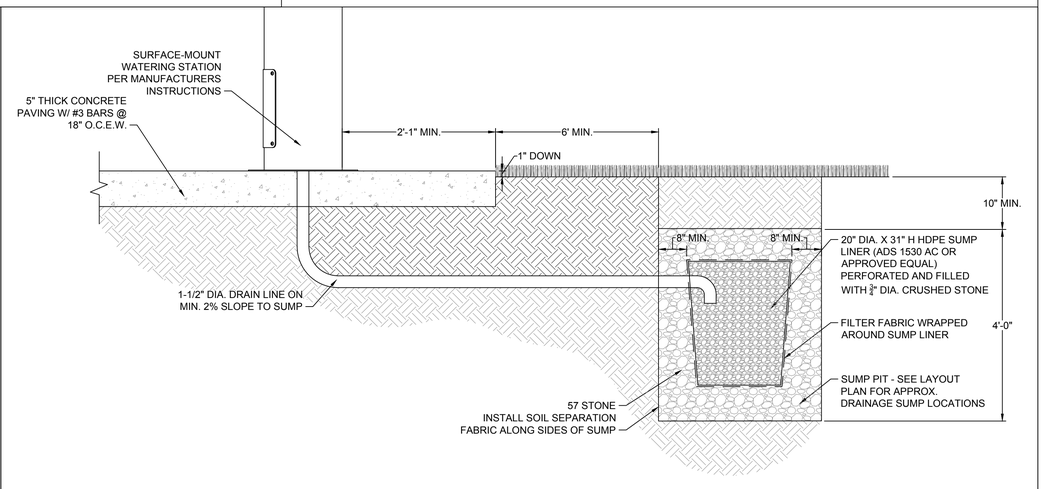
No Scale

NOTES:
1. ENSURE NO PONDING OF WATER ON TENNIS COURT
2. REFER TO TECHNICAL SPECIFICATION FOR ASPHALT LAYERS



TENNIS COURT REPAVING

No Scale



WATERING STATION SUMP PIT DETAIL

No Scale

Rally Master Backboards

Vertical or Sloped
Rally Master Backboards can be used for tennis, lacrosse, soccer, basketball and many other applications. Backboards are available in a vertical or a sloped option. All backboards measure 10' high and are available in 12', 16' or 20' widths. Backboards can be installed on standard fence post diameters of 2-1/2", 3" or 4" OD. Backboards come with an industry leading 20-year warranty.

When ordering please specify Vertical or Sloped along with the outside diameter of the fence post the backboard will be installed on.

34852	10' x 12'	Each	500 lbs.
34854	10' x 16'	Each	650 lbs.
34856	10' x 20'	Each	800 lbs.

Rally Master Catch Net
These heavy duty, black, UV stabilized catch nets mount to the top of the backboard with powder coated steel brackets. The net support frame is made of powder coated steel tubing and super-strength corrosion resistant connectors. Nets are 5' high and available in 12', 16' or 20' widths.

34852N	5' x 12'	Each	16 lbs.
34854N	5' x 16'	Each	20 lbs.
34856N	5' x 20'	Each	24 lbs.

- Panel Construction
  Rally master Backboard panels are solid-core, dense plastic with the rich color molded directly into the panel. Density and flexibility combine to make Rally Master the most durable backboard on the market. Rally Master backboards include an industry-leading 20-year warranty.
- Reduced Sound
  Rally Masters patent-pending vibration dampeners and mounting technique substantially reduce rebound noise. Decibel readings indicate that a tennis ball hitting a Rally Master Backboard is no louder than a tennis ball hitting a tennis racket, and even quieter than a basketball being dribbled on an asphalt court.
- Vandal Resistance
  The unique Rally Master panel design combines solid dense plastic, enhance with unmatched flexibility and strength.
- Versatility
  Backboard practice is also great for soccer, lacrosse, and basketball. These uses can ruin other types of backboards.
- Permanent Net Line
  Rally Master net lines are permanently etched into the panels.
- Mountings System
  Rally Master has made installation simple by developing a faster panel mounting system. It provides a universal fence bracket that allows the installer to quickly adjust the strut alignment to compensate for fence posts that are slightly bent or out of plumb.
- Corrosion-resistant Hardware
  Panels are mounted to heavy-duty, galvanized cross braces that are attached to vertical posts using galvanized hardware for unmatched durability.
- Sizing
  Rally Master Backboards are manufactured in 10' x 4' panels. The minimum size available for purchase is 10' x 12'. There is no limit on length, the only requirement being that the total length is divisible by four feet.



- Specifications and Installation

Panel Detail:
- Panels to be green with an integrated white net line.
- Solid, 3/4" UV stabilized plastic panels. (150 lbs. per panel)
- Panels are 10' high and available in any 4' wide increment
- Custom colors and custom engraving available
- Highly flexible panel on a patent-pending mounting system

Mounting Hardware:
The patent pending mounting system includes all mounting hardware.
- (4) 12 gauge, galvanized mounting brackets are mounted horizontally to fence posts
- Bottom panel support is powder coated aluminum
- All nuts, bolts and mounting brackets are stainless steel
- Polyethylene dampeners help to reduce sound and vibration
- 8-degree back-sloped models utilize aluminum columns

Mounting Requirements:
Rally Master Backboards are generally installed on tennis courts utilizing round pipe. However, they can be adapted to be mounted as free-standing units or mounted on block balls.
- Minimum fence post requirements: 2-1/2" OD pipe, SS40
- Maximum post spacing: 10' on center



douglas® 1-800-553-8907 | douglas-sports.com

*OR APPROVED EQUAL

BACKBOARD DETAIL

No Scale

ELKAY SPECIFICATIONS

Elkay Outdoor ezH2O Upper Bottle Filling Station Bi-Level Pedestal with Pet Station Non-Filtered Model
Model LK4420BF1UDB

OPTIONAL ACCESSORIES

LK4471LHB
97890C
4481FP

MOUNTING INSTRUCTIONS and PLUMBING CONNECTIONS
Provide solid, well-drained surface to mount pedestal fountain (concrete pad recommended). Mount on a smooth, flat, finished surface with adequate support (300 lb. load minimum). Secure unit with (8) 3/8" minimum fasteners (not included). Refer to rough-in. Should be attached firmly to mounting surface in order to secure unit.

Modified low stream height bubbler for pet fountain.

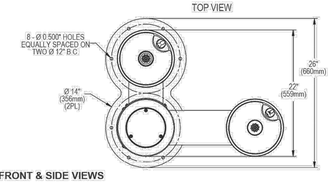
Locate and install plumbing through ground as required.

NOTE: Unit is not furnished with service valve.

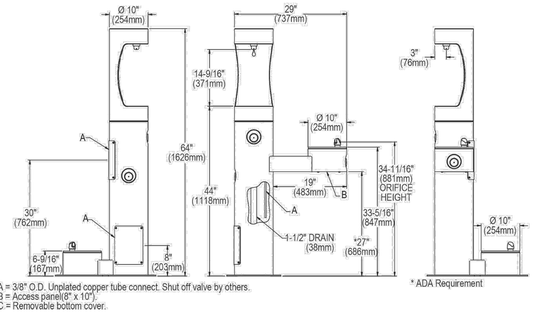
Position pedestal over plumbing and secure base to fasteners. Remove access panels and connect supply and water lines. Turn on water supply and check for leaks. Reassemble access panels to pedestal.
Trap and service stop not included.

OPERATING PRESSURES:
Supply water 20 – 105 psi maximum

TOP VIEW



FRONT & SIDE VIEWS



A = 3/8" O.D. Unplated copper tube connect. Shut off valve by others.
B = Access panel(8" x 10").
C = Removable bottom cover.

* ADA Requirement

In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit elkay.com for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.

*OR APPROVED EQUAL

WATER STATION WITH BOTTLE FILLER AND PET STATION

No Scale

COMMONWEALTH OF VIRGINIA
JESSICA R. DENKO
Lic. No. 57291
3/1/22
PROFESSIONAL ENGINEER

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DESIGNED BY J. DENKO
CHECKED BY J. DENKO
SCALE N/A

TIMMONS GROUP

MONTGOMERY HALL PARK
CITY OF STAUNTON, VA
NOTES & DETAILS

JOB NO. 48793
SHEET NO. C1.3

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LEGEND:

- REMOVE ASPHALT
- REMOVE CONCRETE
- REMOVE ASPHALT PAVEMENT TO SUBBASE
- SAWCUT

NAD 83

SCALE 1"=20'

0 20' 40'

(PART OF) CITY PID 9166
CITY OF STAUNTON
ZONED: R4

BENCHMARK SPIKE SET FLUSH W/ GRND. ELEV=1527.53'

BENCHMARK SPIKE SET ELEV=1526.97'

DEMOLISH EXISTING *CONC. STAIR 21 TREADS 22 RISERS*

DEMOLISH EXISTING *ASPHALT*

DEMOLISH EXISTING ASPHALT

DEMOLISH EX. ASPHALT PATH

REMOVE *CHAIN-LINK FENCE (HT.=10')*

SAWCUT ASPHALT

EXISTING FENCE TO BE REMOVED

TO REMAIN *(4) PICKLE BALL HARD COURTS* CONTRACTOR TO PROTECT PICKLE BALL COURT SURFACE DURING CONSTRUCTION

REMOVE TENNIS HARD COURT ASPHALT PAVEMENT TO SUBBASE

EXISTING FENCE TO BE REMOVED

TENNIS HARD COURT

SAWCUT ASPHALT

DEMOLISH EXISTING *ASPHALT PATH*

DEMOLISH EXISTING ASPHALT

DEMOLISH EXISTING *CONC. STAIR 21 TREADS 22 RISERS*

REMOVE STAIRS

DEMOLISH EXISTING *ASPHALT PATH*

DEMOLISH EXISTING *ASPHALT (SWALE)*

CHAIN-LINK FENCE (HT.=10')

DEMOLISH EXISTING *ASPHALT (SWALE)*

REMOVE TENNIS HARD COURT ASPHALT PAVEMENT TO SUBBASE

TENNIS HARD COURT

REMOVE TENNIS HARD COURT ASPHALT PAVEMENT TO SUBBASE

TENNIS HARD COURT

DEMOLISH EXISTING *ASPHALT*

CHAIN-LINK FENCE (HT.=10')

PARK BASKETBALL COURTS

ASPHALT PARKING

ASPHALT ROAD

ASPHALT PARKING

(RAMP CONTINUES)

CONC. LANDING

CONC. RAMP W/ HANDRAIL

28.7' x 37.3' CONC. PAD W/ WOOD FRAME PAVILILION

1 LEVEL BLOCK POOL HOUSE

DISC GOLF BASKET

24" SPRUCE

(PRIVATE ENTR.)

MHS TOP=1503.65'

WATERLINE (D&SHED) FROM CITY MAPPING

SAN. SEWER AS MARKED

STORM INL W 3.4' x 3' TOP=1482 INV. OUT=

24" RCP

MONTGOMERY AVENUE
(PUBLIC STREET)

S:\16\348793-Staunton_Pickleball\DWG\Sheet\CD\48793-103-C4.0-DEMO.dwg | Plotted on 3/1/2022 9:22 AM | by Jessica Denko

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JESSICA R. DENKO
Lic. No. 57291
3/1/22
PROFESSIONAL ENGINEER

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DRAWN BY J. FOX
DESIGNED BY J. DENKO
CHECKED BY J. DENKO
SCALE 1"=20'

TIMMONS GROUP

MONTGOMERY HALL PARK

CITY OF STAUNTON, VA

EXISTING CONDITIONS AND DEMOLITION PLAN

JOB NO. 48793
SHEET NO. C2.0

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LEGEND:

- CONCRETE SIDEWALK
- ASPHALT
- TENNIS COURT PAVING
- HEAVY DUTY CONCRETE
- ACCESSIBLE ROUTE (MAX 5% RUNNING SLOPE AND 2% CROSS SLOPE, MAX 8.33% RUNNING SLOPE FOR RAMPS

NAD 83

SCALE 1"=20'
0 20' 40'

(PART OF) CITY PID 9166
CITY OF STAUNTON
ZONED: R4

3' NO PARKING STRIPING
ADA PARKING SIGN
6' SIDEWALK
5' LANDING PAD
SHORT RAIL
ADA VIEWING AREA
16 - 6" RISERS W/ HANDRAIL ON BOTHSIDES
5' LANDING PAD
TRASH RECEPTACLE
16 - 6" RISERS W/ HANDRAIL ON BOTH SIDES
5' LANDING PAD
4' CONCRETE SIDEWALK
10' CHAIN LIKE FENCE
8' PLAYER BENCH (BY OTHERS)
GATE
COURT A
EX. PICKLEBALL COURT SURFACE - TO REMAIN
COURT B
NEW TENNIS COURT SURFACE
10'X12' TENNIS BACKBOARD
BENCHMARK SPIKE SET FLUSH W/ GRND. ELEV=1527.53'
BENCHMARK SPIKE SET ELEV=1526.97'
PARK BASKETBALL COURTS
CHAIN-LINK FENCE (HT.=10')
CONC. RAMP W/ HANDRAIL
CONC. LANDING
28.7' x 37.3' CONC. PAD W/ WOOD FRAME PAVILILION
1 LEVEL BLOCK POOL HOUSE
ASPHALT ROAD
BOLLARD
R24'
R40'
R20'
NO PARKING STRIPING
R15'
4' CONCRETE SIDEWALK
4' CONCRETE SIDEWALK
3' X 6' ADA SPECTATOR VIEWING PAD
TRASH RECEPTACLE (BY OTHERS)
GATE VALVE
WATERING STATION SUMP PIT
NEW WATERING STATION
CURB STOP
ADA PARKING SIGN
12'X12' HEAVY DUTY CONCRETE PAD FOR STORAGE BUILDING
TRASH RECEPTACLE
12 - 6" RISERS W/ HANDRAIL ON BOTH SIDES
5' LANDING PAD
12 - 6" RISERS W/ HANDRAIL ON BOTH SIDES
3' X 6' ADA SPECTATORS VIEWING PAD
8' PLAYER BENCH (BY OTHERS)
COURT C
NEW TENNIS COURT SURFACE
COURT D
NEW TENNIS COURT SURFACE
10' CHAIN LIKE FENCE
¾ " XLPE (MUNICIPEX OR EQUAL) PIPE
¾" METER BOX
CONNECT TO EXISTING CITY WATER LINE WITH ¾" CORP STOP
WATERLINE (DASHED) FROM CITY MAPPING
MONTGOMERY AVENUE
(PUBLIC STREET)
SAN. SEWER AS MARKED
STORM INL
W 3.4' x 3.
TOP=1482
INV. OUT=
24" RCP
DISC GOLF BASKET
24" SPRUCE
(PRIVATE ENTR.)
MHS
TOP=1503.65'

COMMONWEALTH OF VIRGINIA
JESSICA R. DENKO
Lic. No. 57291
3/1/22
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DESIGNED BY J. DENKO
CHECKED BY J. DENKO
SCALE 1"=20'

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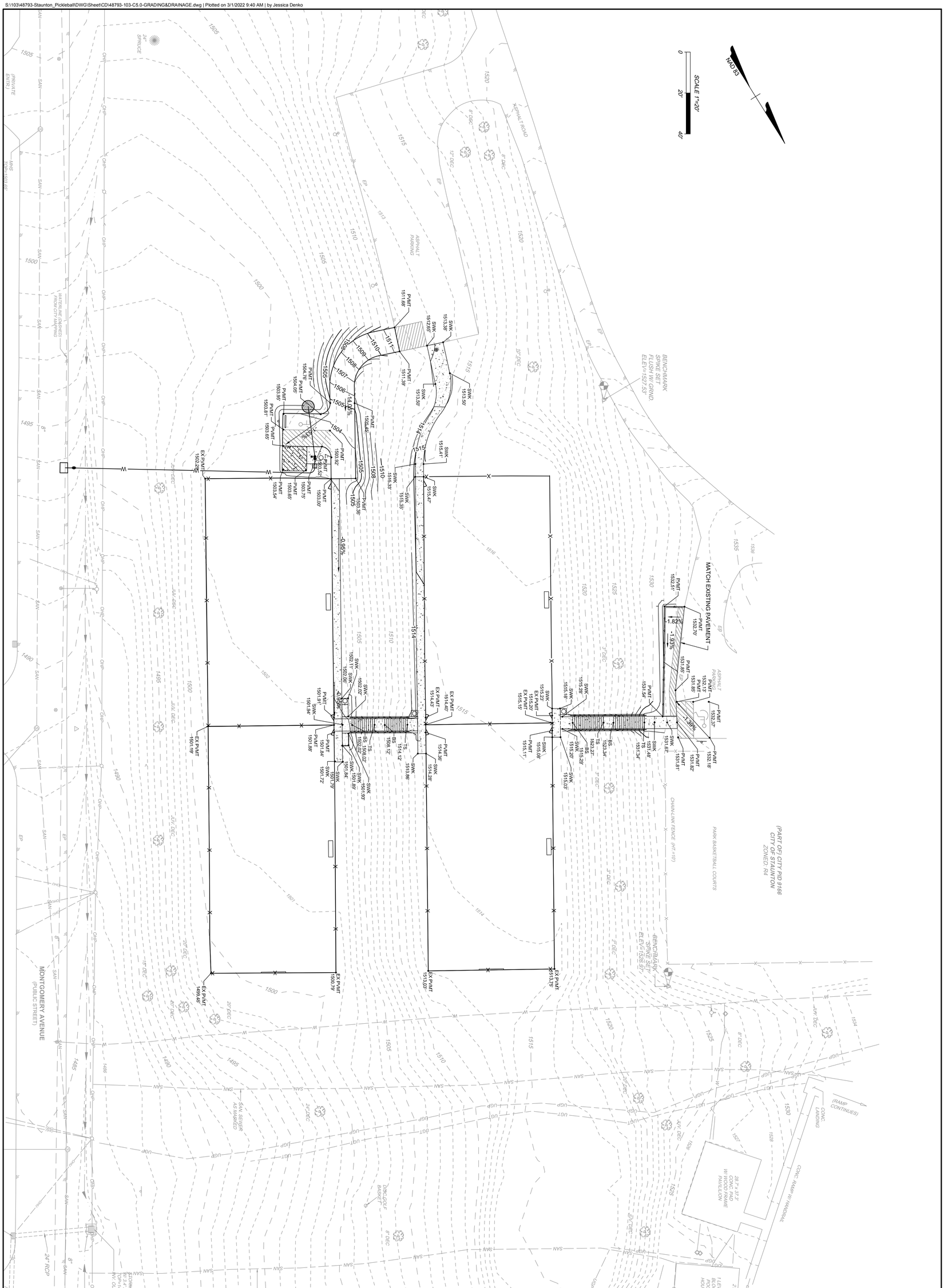
MONTGOMERY HALL PARK
CITY OF STAUNTON, VA
LAYOUT PLAN

JOB NO. 48793
SHEET NO. C3.0

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S:\103\48793-Staunton_Pickleball\DWG\Sheet\CD\48793-103-C5.0-GRADING&DRAINAGE.dwg | Plotted on 3/1/2022 9:40 AM | by Jessica Denko



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JESSICA R. DENKO
Lic. No. 57291
PROFESSIONAL ENGINEER
3/1/22

MONTGOMERY HALL PARK

CITY OF STAUNTON, VA

GRADING AND DRAINAGE PLAN

SHEET NO.	JOB NO.	SCALE	CHECKED BY	DESIGNED BY	DRAWN BY	DATE
C4.0	48793	1"=20'	J. DENKO	J. DENKO	J. FOX	10/18/2021

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PROJECT SUMMARY

Project: City Of Staunton Parks - Pickleball & Tennis Courts

Quote No.:

Drawn By:

Date Created: 3-14-2022

Sales Agent: Old Dominion Lighting



☐ ALP ™ G2
80W/100W/120W/150W /200W
Weight: 21 lbs.
EPA: 0.5 ft²



☒ ALP ™ G2
240W/320W
Weight: 26.9 lbs.
EPA: 0.53 ft²



☐ ALP ™ G2
400W/500W
Weight: 33 lbs.
EPA: 0.53 ft²

Luminaire Summary	
Color/CRI/Type:	5000K – 70CRI – Type III
Luminaire Output:	44284 Lumens
Total Load:	9.98 kW
No.of Luminaire:	32
LED Lifetime:	L70>140,000 hours
Electrical Load:	Refer to Amperage Draw Chart in product spec sheet.
Aiming/Installation:	Results ± 3% nominal voltage at line side of driver & structures located within 3ft of layout locations.
Measurement:	Illuminance (FC) are measured at a 1m (3ft) elevation within PPA (Primary Playing Area).
Illumination Performance:	LLF is 0.93 includes the dirt depreciation factor, Illumination level guaranteed minimum 10 years & up to 25 years based on usage. *Refer to Warranty Letter.
Spill Reading:	Spill reading listed do not account for any foliage or obstructions.

THIS DESIGN WAS DONE IN ACCORDANCE WITH ILLUMINATION SOCIETY OR NORTH AMERICA STANDARDS

MAINTAINED

GUARANTEE IS BASED ON PROPER INSTALLATION, MINIMUM INPUT VOLTAGE+/- 3 FEET, AND POLES PLACED WITHIN 4 FEET OF SPECIFIED LOCATIONS, POLES TO COMPLY WITH CURRENT AISHTO STANDARDS.

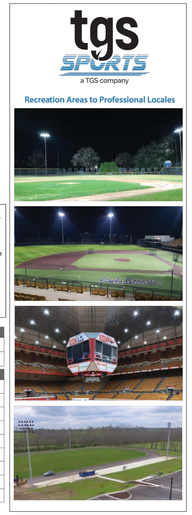
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Illumination Calculation Summary (Primary Playing Area)

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Lum. Watts	Total Watts	Description
	16	A	TWIN	44284	0.930	311.974	9983.168	ALP-G2 320W 30K Type3

Calculation Summary (Primary Playing Area)

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts	CV	UG	PtSpcLr	PtSpcTb	Grid Z
Pickle 1	Illuminance	Fc	34.41	42.1	31.0	1.64	2.00	15	0.16	1.54	10	10	3
Pickle 2	Illuminance	Fc	34.97	41.5	33.2	1.31	1.79	15	0.13	1.46	10	10	3
Pickle 3	Illuminance	Fc	30.39	36.2	26.0	1.32	1.81	15	0.14	1.60	10	10	3
Pickle 4	Illuminance	Fc	30.95	36.0	23.2	1.33	1.55	15	0.12	1.44	10	10	3
Spill	Illuminance	Fc	0.22	9.3	0.1	2.20	3.00	12	0.41	N.A.	30	N.A.	N.A
Tennis 1	Illuminance	Fc	31.56	39.9	22.8	1.38	1.75	30	0.13	1.36	10	10	3
Tennis 2	Illuminance	Fc	32.24	41.8	22.8	1.41	1.83	30	0.14	1.36	10	10	3
Tennis 3	Illuminance	Fc	34.73	41.7	2.0	13.37	20.85	30	0.46	2.08	10	10	3



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ILLUMINATION SUMMARY

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Luminaire Location Summary						
LumNo	Label	X	Y	Z	Orient	Tilt
1	A	-3	217	25	0	0
2	A	61	217	25	180	0
3	A	103	217	25	0	0
4	A	167	217	25	180	0
5	A	-3	147	25	0	0
6	A	61	147	25	180	0
7	A	103	147	25	0	0
8	A	167	147	25	180	0
9	A	103	97	25	0	0
10	A	167	97	25	180	0
11	A	0	93	25	0	0
12	A	61	93	25	180	0
13	A	103	27	25	0	0
14	A	167	27	25	180	0
15	A	0	35	25	0	0
16	A	61	25	25	180	0



TGS-VTS4-D
Factory installed
Shipped with Pole

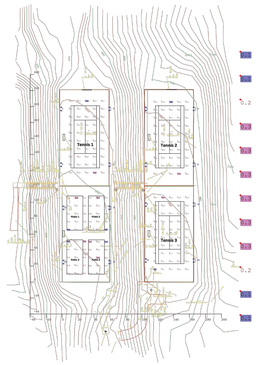


TGS-RB2.5TR180H-D
Field Installed



DN180

Mounting Height: 25ft (Above Grade)

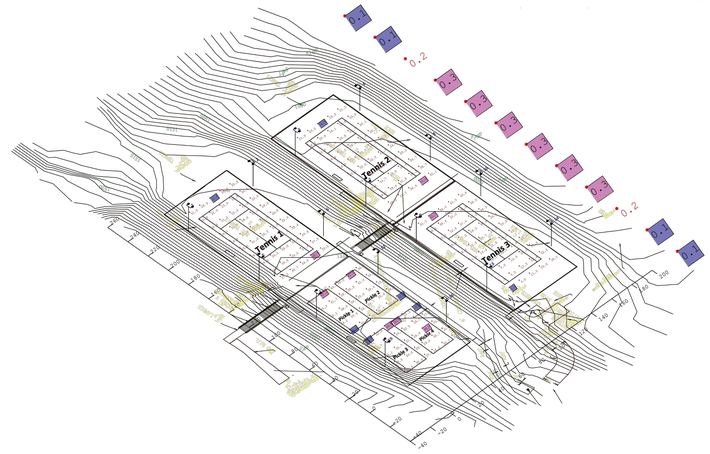


Orient values shown in TGS Installation layout are based on 0° being Plan East. Plan East means 0° is heading to the right side of layout drawing as you hold it in front of you, which is not necessarily geodetic or True East.

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3D ILLUMINATION REFERENCE

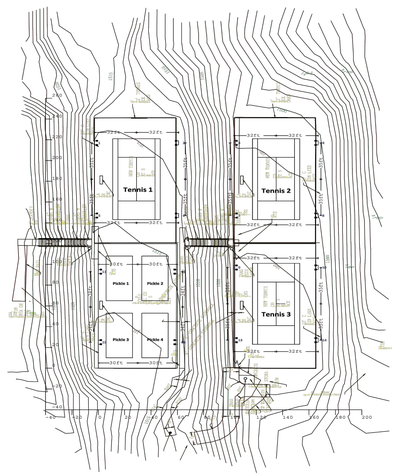
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POLE LOCATION

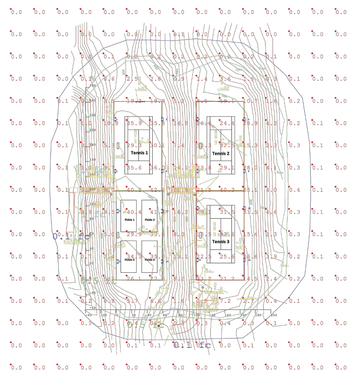
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ENVIRONMENTAL IMPACT SUMMARY

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COMMONWEALTH OF VIRGINIA
JESSICA R. DENKO
Lic. No. 57291
3/17/22
PROFESSIONAL ENGINEER

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YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE
REVISED PER CITY COMMENTS	01/06/2022
REVISED PER CITY COMMENTS	03/01/2022

DATE: 10/18/2021
DRAWN BY: J. FOX
DESIGNED BY: J. DENKO
CHECKED BY: J. DENKO
SCALE: 1"=20'

TIMMONS GROUP

MONTGOMERY HALL PARK

CITY OF STAUNTON, VA

PHOTOMETRIC LAYOUT

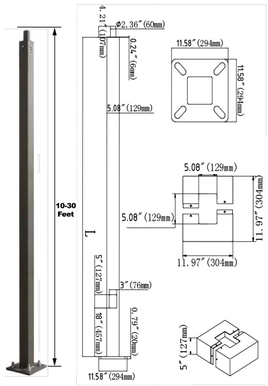
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SHEET NO. L1.0

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Straight Square Steel Poles, 4" & 5"



The TGS Series Straight Square Steel poles are built from high strength steel tube and are available side drilled for arm mounted area lighting luminaires or with tenon mounts for flood and post top luminaires. Typical area lighting applications include retail centers, industrial parks, schools and universities, public transit and airports, office buildings and medical facilities. Mounting heights of 10 to 30 feet can be used based on selected luminaire application.

Specifications and Features: Pole

Specifications:
Conforms to ASTM-A 500 Grade B: Minimum Yield Strength of 46,000 PSI.

Finish:
Textured Architectural Bronze Powder coat Finish, Baked to Ensure Maximum Paint Adhesion, Hardness and Durability.

Anchor Bolts:
Anchor Bolts are Included, Sized Based on Pole Data Charts for the Selected Pole Size.

Hand Hole:
Cast Iron-Reinforced Hand Hole and Cover with Ground Screw.

Base Cover:
Poles are Provided With a Two-Piece Formed Steel Base Cover that is Easily Assembled and Fitted Over Pole Base.

Pole Length:
Poles are Available in Standard Lengths as Shown in the Order Matrix. Poles can be Custom Cut to Order. Consult Factory.

Mounting Options:
Standard Length Poles Include 2¾" OD Tenon, Side Drilled 4@90 Degrees, Polycarbonate Top Cover and Hole Plugs for Unused Drilling Locations.

Cut To Order Poles can be Side Drilled for 2@180 Degrees or 4@90 Degrees, Includes Polycarbonate Top Cover and Hole Plugs for Unused Drilling Locations.

Cut To Order Poles May Also Be Ordered With 2¾" OD Tenons for Use With Post Top Decorative Luminaires, Flood/Area Slip Fitter Fixtures, or Any of a Wide Variety of Pole Top Mounting Accessories.

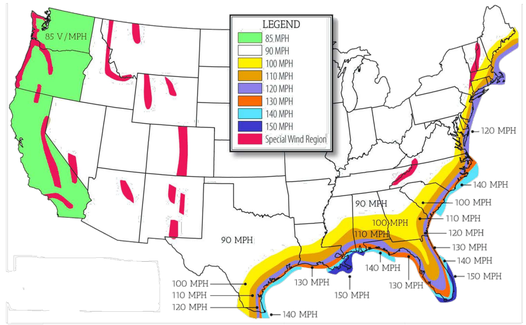
Our standard equipment is to make a top adapter with 2.5 inches. There is no opening on the top of the light pole. If ARM installation is needed, the top adapter shall be removed and holes shall be opened on the wall of the light pole. Finally, seal the top with a plastic rain cover.

Specifications:

Specification type	10FT	15FT	20FT	25FT	30FT
TGS-10FT4-11G-D	L=3.0 (m)	L=4.6 (m)	L=6.1 (m)	L=7.6 (m)	L=9.1 (m)
TGS-15FT4-11G-D					
TGS-20FT4-11G-D					
TGS-25FT4-11G-D					
TGS-30FT5-11G-D					

Dimension data:

Catalog #	Mt. height	Wall thickness	Shaft size	Pole weight	Bolt projection	EPA 70	EPA 80	EPA 90	EPA 100	EPA 110	EPA 120
TGS-R10FT3-11G-D	10 ft.	11 gauge	3 inch	46 lbs.	2.75 in.	28.2	23.5	20.1	14.4	13.3	11.6
TGS-R15FT4-11G-D	15 ft.	11 gauge	4 inch	90 lbs.	2.75 in.	18.2	15.5	13.1	11.5	9.9	7.4
TGS-R20FT4-11G-D	20 ft.	11 gauge	4 inch	117 lbs.	2.75 in.	12.2	10.3	9	7.2	6	4.6
TGS-R25FT4-11G-D	25 ft.	11 gauge	4 inch	139 lbs.	2.75 in.	11.9	8.9	7.7	6.1	5.8	4.2
TGS-R30FT5-11G-D	30 ft.	11 gauge	5 inch	180 lbs.	2.75 in.	9.2	7.4	6.1	5.8	4.8	3.2



ACCESSORIES:



Base Mounting Screw
NO. TGS-BMS-S
Weight:10 lbs
Finish: Silver
Before installing the lamp pole, the installation hook should be buried underground and fixed by cement. After fixing, the lamp pole should be fixed by locking screw and base installed.



Install Base Shield
NO.TGS-IBS4-D
Weight:10 lbs
Finish: Dark Bronze
The 4" installation of base shield is used to protect the base after fixing the lamp pole, so that the lamp pole base is not damaged, thereby increasing the service life of the lamp pole.



Install Base Shield
NO.TGS-IBS5-D
Weight:10 lbs
Finish: Dark Bronze
The 5" Installation of base shield is used to protect the base after fixing the lamp pole, so that the lamp pole base is not damaged, thereby increasing the service life of the lamp pole.

ORDERING EXAMPLE:TGS-10FT4-11G-D

TGS	10FT	4	11G	D
Brand	Height	Size	Wall Thickness	Finish
TGS	**10FT** (3.0M) **15FT** (4.6M) **20FT**(6.1M) **25FT** (7.6M) **30FT**(9.1M)	4 (4X4in.) 5 (5X5in.)	11 (11gauge)	D Dark Bronze

COMMONWEALTH OF VIRGINIA
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TIMMONS GROUP

MONTGOMERY HALL PARK
CITY OF STAUNTON, VA
PHOTOMETRIC DETAILS

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ELEC - DRAWING INDEX

SHEET NUMBER	SHEET NAME
E0.01	LEGEND, NOTES, & ABBREVIATIONS
E1.01	ELECTRICAL PLAN
E5.11	DETAILS & DIAGRAMS
E6.11	SHEET SPECIFICATION

GENERAL NOTES

1. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL EQUIPMENT. EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND PLUMBING DRAWINGS AND SPECIFICATIONS, AND BECOME FAMILIAR WITH, AND COORDINATE WITH, ALL CONDITIONS AFFECTING ELECTRICAL WORK.
2. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF CIRCUITS AND OUTLETS. LOCATIONS OF SWITCHES, PANELBOARDS, CONDUIT AND OTHER WORK. ALL ITEMS NOT SPECIFICALLY NOTED, BUT NECESSARY TO A COMPLETE WORKING INSTALLATION SHALL BE INCLUDED AT NO EXTRA COST.
3. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE BUILDING OWNER, OR THE OWNER, OR THEIR AUTHORIZED REPRESENTATIVES.
4. COORDINATE ELECTRICAL EQUIPMENT LOCATION AND INSTALLATION WITH EQUIPMENT BEING SERVED.
5. GANG ALL MULTIPLE SWITCHES UNDER ONE COMMON COVERPLATE, AND MOUNT IN A MULTI-GANGED OUTLET BOX OF ADEQUATE SIZE. PROVIDE BARRIERS WHERE REQUIRED.
6. CONTRACTOR SHALL COORDINATE AND ADJUST RECEPTACLES AND/OR CIRCUITS WITH ACTUAL EQUIPMENT PURCHASED WHEN APPROVED EQUIPMENT DIFFERS FROM ORIGINAL CONTRACT DRAWINGS.
7. COORDINATE EXACT LOCATIONS OF MODULAR PARTITION CONNECTIONS WITH FURNITURE BEING PROVIDED.
8. OUTLETS ABOVE COUNTERTOPS SHALL BE 2" ABOVE BACKSPLASH TO BOTTOM OF WALLPLATE UNLESS NOTED OTHERWISE. COORDINATE WITH CASEWORK INSTALLER.
9. A NYLON PULL CORD SHALL BE INSTALLED IN ALL CONDUITS IN WHICH CONDUCTORS ARE NOT INSTALLED. A 10 INCH LENGTH OF THE CORD SHALL EXTEND PAST EACH END OF THE BOX/CONDUIT.
10. WHERE NEW CIRCUITS ARE SHOWN TO BE CONNECTED TO EXISTING PANELS, PROVIDE NEW CIRCUIT BREAKERS IN PANELS. NEW BREAKERS BE SHALL BE COMPATIBLE WITH, SAME MAKE AS, AND SHALL MEET OR EXCEED INTERRUPTING RATING OF EXISTING EQUIPMENT. MEASURE PANEL LOADS BEFORE AND AFTER MODIFYING PANEL. CORRECT ANY OVERLOADS. BRING ANY OVERLOADED CONDITIONS THAT CANNOT BE RESOLVED TO THE ATTENTION OF THE ENGINEER.
11. WHERE NEW LOADS ARE SHOWN TO BE CONNECTED TO EXISTING CIRCUITS, MEASURE CIRCUIT'S LOAD BEFORE AND AFTER MODIFICATION. CORRECT ANY OVERLOADS. BRING ANY OVERLOADED CIRCUITS THAT CANNOT BE RESOLVED TO THE ATTENTION OF THE ENGINEER.
12. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK AND SHALL NOTIFY THE ARCHITECT AND/OR ENGINEER IF A CONDITION EXISTS WHICH PREVENTS THE CONTRACTOR FROM ACCOMPLISHING THE INTENT OF THESE PLANS.
13. EQUIPMENT FOUND TO BE DEFECTIVE SHALL BE DOCUMENTED BY ELECTRICAL CONTRACTOR. EQUIPMENT DAMAGED IN THE COURSE OF INSTALLATION OR TEST SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING THE APPROVAL OF THE ARCHITECT AND ENGINEER. WHERE APPLICABLE, ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH NEMA STANDARDS.
14. MAINTAIN THE CONTINUITY OF ALL CIRCUITS TO REMAIN.
15. COORDINATE ALL WORK REQUIRING INTERRUPTION OF ELECTRICAL POWER WITH THE BUILDING OWNER AND OBTAIN WRITTEN PERMISSION FROM THE BUILDING OWNER PRIOR TO SHUTTING DOWN POWER TO ANY PANELBOARD OR SWITCHBOARD. ADDITIONALLY, PROVIDE NOTICE TO ALL OTHER TRADES OF ALL SCHEDULED INTERRUPTIONS.
16. WHERE CORE DRILLS OCCUR, THE CONTRACTOR SHALL BE REQUIRED TO LOCATE BY MEANS OF X-RAY OR RADIATION, EXISTING REBAR AND CONDUITS IN THE SLAB AND MARK THE EXACT PROPOSED LOCATION OF CORE DRILLS. THE ELECTRICAL CONTRACTOR MUST RECEIVE WRITTEN PERMISSION FROM THE ARCHITECT AND THE STRUCTURAL ENGINEER PRIOR TO ACCOMPLISHING SAID CORE DRILLS.
17. PRIOR TO SUBMITTING BIDS ON THE PROJECT, VISIT THE SITE OF THE WORK TO BECOME AWARE OF THE EXISTING CONDITIONS WHICH MAY AFFECT THE COST OF THE WORK. REVIEW THE SCOPE OF DEMOLITION AND NEW CONSTRUCTION. NO ADDITIONAL COSTS SHALL BE BROUGHT UPON THE OWNER FOR LACK OF THIS REVIEW.
18. WHERE WORK UNDER THIS PROJECT REQUIRES EXTENSION, RELOCATION, RECONNECTION OR MODIFICATIONS TO THE EXISTING EQUIPMENT OR WIRING SYSTEMS, THE EXISTING SYSTEMS OR EQUIPMENT SHALL BE RESTORED TO THEIR ORIGINAL AND FULLY OPERABLE CONDITION. EXTEND HOMERUNS OR CIRCUIT EXTENSIONS WHERE REQUIRED. DISCONNECT AND REMOVE ALL EQUIPMENT INDICATED TO BE DEMOLISHED, INCLUDING OUTLETS, DEVICES, RACEWAY, SUPPORTS AND CONDUCTORS BACK TO THE BRANCH CIRCUIT BREAKER.
19. CARE SHALL BE EXERCISED IN THE REMOVAL AND STORAGE OF DEVICES AND EQUIPMENT TO BE RELOCATED OR REMOVED AND REUSED. PRIOR TO REINSTALLATION, EQUIPMENT SHALL BE CLEANED, RELAMPED (AS APPLICABLE), AND MARRED OR CHIPPED FINISHES AND ACCESSORIES SHALL BE RESTORED. PROVIDE NEW REPLACEMENT EQUIPMENT FOR ANY ITEM DEEMED UNSALVAGEABLE BY THE OWNER DUE TO MISHANDLING OR ABUSE DURING STORAGE PERIOD, AT NO ADDITIONAL COSTS TO THE OWNER.
20. UPON COMPLETION OF PROJECT, MEASURE AND BALANCE EACH PANEL'S BRANCH CIRCUIT LOAD TO WITHIN 10% BETWEEN PHASES. THIS INCLUDES EXISTING PANELS AFFECTED BY THE CONTRACT.
21. ALL SPECIAL EQUIPMENT AND MECHANICAL CONNECTIONS SHALL BE VERIFIED WITH ACTUAL EQUIPMENT PURCHASED PRIOR TO ROUGH-IN. ALL UNVERIFIED ROUGH-INS FOR SPECIAL EQUIPMENT AND MECHANICAL CONNECTIONS SHALL BE CORRECTED AT NO ADDITIONAL COST.
22. FOR ALL ELECTRICAL HEAT SOURCES BELOW KITCHEN HOODS, A SHUNT TRIP BREAKER SHALL BE INSTALLED TO AUTOMATICALLY DISCONNECT THE COOKING EQUIPMENT WHEN THE FIRE SUPPRESSION SYSTEM IS ACTIVATED CONFROM TO NFPA 96 10.4.
23. ALL FIXTURES INSTALLED IN FIRE RATED CEILINGS OR OTHER FIRE MEMBRANES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED.

GENERAL NOTES

EXECUTION:

1. COORDINATION
   - A. BEFORE ANY CABLING, BOXES, CONDUIT, OUTLETS, EQUIPMENT, LIGHTING FIXTURES, ETC. ARE LOCATED IN ANY AREA, COORDINATE THE SPACE REQUIREMENTS OF ALL TRADES. SUCH SHALL BE ARRANGED SO THAT SPACE CONDITIONS WILL ALLOW ALL TRADES TO INSTALL THEIR WORK, AND WILL ALSO PERMIT ACCESS FOR FUTURE MAINTENANCE AND REPAIR.
   - B. COORDINATION OF SPACE REQUIREMENTS WITH ALL TRADES SHALL BE PERFORMED SO THAT NO PIPING, DUCTWORK, ETC. IS WITHIN DEDICATED EQUIPMENT OR WORKING SPACES. VERIFY CLEARANCES PER ARTICLE 110-26 OF THE NEC.
   - C. LIGHTING SHALL NOT BE INSTALLED ABOVE PIPING, DUCTS, OR OTHER OBSTRUCTIONS.
2. PROTECTION OF MATERIAL
   - A. ALL CONDUIT AND OTHER OPENINGS SHALL BE KEPT PROTECTED TO PREVENT ENTRY OF FOREIGN MATTER. FIXTURES, EQUIPMENT AND APPARATUS SHALL BE KEPT COVERED FOR PROTECTION AGAINST DIRT, WATER, CHEMICAL AND MECHANICAL DAMAGE BEFORE AND DURING CONSTRUCTION.
   - B. THE ORIGINAL FINISH, INCLUDING SHOP COAT OF PAINT OF FIXTURE, APPARATUS OR EQUIPMENT THAT HAS BEEN DAMAGED, SHALL BE RESTORED.
3. FIRESTOPPING
   - A. CONFORM TO ASTM E814, UL 1479 AND UL FIRE RESISTANCE DIRECTORY.
   - B. ALL CORE DRILLS IN SLAB OR CUTTING OF FIRE RATED WALLS SHALL BE RESTORED TO THEIR ORIGINAL FIRE RATING.
   - C. FIRESTOP ALL PENETRATIONS THROUGH FIRE WALLS PER IBC 712 AND ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
   - D. PROVIDE FIRE-PROOFING MATERIAL APPROPRIATE FOR THE APPLICATION AND AS SHOWN IN THE LATEST EDITION OF THE UL FIRE RESISTANCE DIRECTORY.
   - E. DO NOT REDUCE THE FIRE RATING OF FIRE WALLS WITH RECESSED BOXES OR FIXTURES. WHERE SMALL, RECESSED, STEEL, 1 & 2 GANG DEVICE BOXES ARE LOCATED BACK-TO-BACK ON FIRE RATED WALLS, THEY SHALL BE A MINIMUM OF 24" APART HORIZONTALLY, OR PROVIDE PUTTY PADS OF ADEQUATE FIRE RATING.

SINGLE LINE DIAGRAM SYMBOLS

FXXX	INDICATES THE MAXIMUM AMOUNT OF CURRENT ALLOWED TO PASS THROUGH THE FEEDER
100 AF/ 100 AT 1PH GF PROTECTION	CIRCUIT BREAKER WITH GROUND FAULT PROTECTION SHOWING FRAME RATING IN AMPS, TRIP RATING IN AMPS, NUMBER OF PHASES
N G 100 V 100 A FRAME 100 A TRIP	DISCONNECT SWITCH WITH ENCLOSED CIRCUIT BREAKER SHOWING VOLTAGE RATING, FRAME RATING IN AMPS, TRIP RATING IN AMPS
N G 100 V 100 A FRAME 100 A FUSE	FUSED DISCONNECT SWITCH SHOWING VOLTAGE RATING, FRAME RATING IN AMPS, FUSE RATING IN AMPS
100 A 120 V / 208 V 10 KAIC 4 W, 3 PH MCB	PANELBOARD WITH MINIATURE CIRCUIT BREAKER SHOWING THE BREAKER RATING, AMPERE RATING, L-N VOLTAGE,L-L VOLTAGE, FAULT CURRENT RATING NO. OF WIRES, NO. OF PHASES MCB OR MLO
112.5 kVA 480 V △ 208 V ⏦	STEP UP OR STEP DOWN TRANSFORMER SHOWING KILO VOLT-AMPERE RATING, PRIMARY L-L VOLTAGE, DELTA/STAR CONNECTED SECONDARY L-L VOLTAGE, DELTA/STAR CONNECTED

LIGHTING DEVICES

S	SINGLE POLE LIGHT SWITCH
S3	THREE WAY LIGHT SWITCH
SM	MOTOR RATED SWITCH
SE SD SP	DIMMER SWITCH E = ELV DIMMING 0 = 0-10V DIMMING P = PHASE DIMMING NOTE: '3' PREFIX INDICATES 3-WAY CAPABLE
M	WALL MOUNTED MOTION SENSOR
ME M0 MP	WALL MOUNTED MOTION SENSOR WITH DIMMER SWITCH E = ELV DIMMING 0 = 0-10V DIMMING P = PHASE DIMMING NOTE: '3' PREFIX INDICATES 3-WAY CAPABLE DUAL TECHNOLOGY SENSOR
C	LIGHTING CONTACTOR.
MS	MASTER SWITCH FOR ALL LIGHTING ZONES. WIRE TO N PUT OF LIGHTING CONTACTOR OR LIGHTING CONTROL SYSTEM TO TURN ALL LIGHT FIXTURES IN THE BUILDING OFF.
TC	TIMECLOCK.
OV	MANUAL OVERRIDE SWITCH TO BUILDING TIME CLOCK(S). WIRE TO AN INPUT OF THE TIMECLOCK SYSTEM TO ALLOW FOR A MAXIMUM OF 2 HR MANUAL OVERRIDE TO ALL TEMPORARY LIGHTING FOR AFTER HOURS BUILDING USE.

ELECTRICAL FIXTURES

STANDARD SYMBOLS:

NOTE: ALL WALL MOUNTED RECEPTACLES MOUNTED 18" AFF UNO. WHEN INDICATED ABOVE A COUNTER, MOUNT AT 6" AFC UNO. ALL DUPLEX AND QUADPLEX RECEPTACLES TO BE NEMA 5-20R UNO.

- DUPLEX RECEPTACLE, WALL MOUNTED
- QUADPLEX RECEPTACLE, WALL MOUNTED
- GROUND FAULT PROTECT DEVICE (REFER TO DIVISION 26 27 26 NOTE 2), WALL MOUNTED. WHEN LOCATED OUTDOORS, PROVIDE IN A WEATHERPROOF ENCLOSURE.
- DUPLEX RECEPTACLE FLOOR BOX
- QUADPLEX RECEPTACLE FLOOR BOX
- DATA OUTLET (SEE DETAIL SHEET)
- DISCONNECT SWITCH
- SMOKE ALARM. SMOKE ALARMS IN EACH DWELLING UNIT SHALL BE INTERCONNECTED.
- SURFACE MOUNTED PANELBOARD WITH WORKING CLEARANCE.

GENERAL MOUNTING TYPE SYMBOLS:

NOTE: LABELS WITHIN THE SHAPES LISTED BELOW INDICATE A SPECIAL SPECIFICATION. REFER TO THE ELECTRICAL CONNECTION SCHEDULE AND DETAIL SHEET FOR MORE INFORMATION.

- (J) CEILING MOUNTED
- [J] FLOOR BOX OR POKE THRU
- ⟨J⟩ WALL-MOUNTED

REFERENCE SYMBOLS

- MECHANICAL AIR DEVICES (TYP). SHOWN HALF TONE FOR REFERENCE ONLY. REFER TO MECHANICAL FOR ADDITIONAL INFORMATION.
- AV DEVICE. WHEN 'AV' INDICATOR IS USED, IT MEANS

LIGHTING FIXTURES

- RECESSED DOWN LIGHT
- PENDANT LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- 2X4 LED LIGHT FIXTURE
- 2X2 LED LIGHT FIXTURE
- 2X4 EMERGENCY LED LIGHT FIXTURE
- 2X2 EMERGENCY LED LIGHT FIXTURE
- REMOTE FIXTURE POWERED BY ADJACENT EMERGENCY EGRESS FIXTURE
- EXIT LIGHT, DUAL FACE, ARROWS INDICATE DIRECTION OF EMERGENCY EGRESS.
- EXIT LIGHT, SINGLE FACE, ARROWS INDICATE DIRECTION OF EMERGENCY EGRESS.
- WALL MOUNTED EMERGENCY LIGHT FIXTURE WITH BATTERY PACK - FIXTURE SHALL BE LISTED FOR EMERGENCY EGRESS USE.
- CEILING MOUNTED EMERGENCY LIGHT FIXTURE WITH BATTERY PACK - FIXTURE SHALL BE LISTED FOR EMERGENCY EGRESS USE.
- COMBO EXIT SIGN / EMERGENCY LIGHT FIXTURE WITH BATTERY PACK - FIXTURE SHALL BE LISTED FOR EMERGENCY EGRESS USE. ARROWS INDICATE DIRECTION OF EMERGENCY EGRESS.
- SITE LIGHT SINGLE HEAD

LIGHTING WIRING

A/3A 0-10V	LIGHT FIXTURE DESIGNATOR. FIRST LETTER(S) INDICATE FIXTURE ID, SECOND LETTERS (AFTER SLASH) INDICATE SWITCHING ZONE WHEN APPLICABLE), TEXT BELOW INDICATES THE DIMMING TYPE FOR FIXTURE REQUIRING DIMMING.
	UNSWITCHED LIGHTING CIRCUIT
	SWITCHED LIGHTING CIRCUIT
HD-1	PANEL NAME AND CIRCUIT NUMBER

ABBREVIATIONS

1PH OR 3PH	SINGLE PHASE OR THREE PHASE
3W OR 4W	THREE WIRE OR FOUR WIRE
A	AMPS
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFC	ABOVE FINISHED COUNTER
AHU	AIR HANDLER UNIT
AL	ALUMINIUM
AT	AMPERE TRIP
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BFC	BELOW FINISHED COUNTER
BOD	BASIS OF DESIGN
CKT	CIRCUIT
CONN.	CONNECTED
CT	CURRENT TRANSFORMER
CU	COPPER
DISC	DISCONNECT
EC	ELECTRICAL CONTRACTOR
EGC	EQUIPMENT GROUNDING CONDUCTOR
ELV	ELECTRONIC LOW VOLTAGE
EMT	ELECTRIC METALLIC TUBE
EST.	ESTIMATED
FC	FOOT CANDLE
GC	GENERAL CONTRACTOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GF	GROUND FAULT
GFI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HACR	HEATING, AIR CONDITION & REFRIGERATION
HOA	HAND-OFF-AUTO
HVAC	HEAT VENTILATION & AIR CONDITIONING
IDU	INDOOR UNIT
IMC	INTERMEDIATE METAL CONDUIT
KAIC	KILO-AMPERES INTERRUPTING CAPACITY
KVA	KILOVOLT AMPS
L-L	LINE TO LINE
LM	LUMEN
L-N	LINE TO NEUTRAL
MBJ	MAIN BONDING JUMPER
MC	METAL CLAD
MS	MASTER CONTROL SWITCH
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE
NM	NON METALLIC
NO	NUMBER
ODU	OUTDOOR UNIT
P	POLES
PH	PHASE
PIR	PERIODIC INSPECTION REPORT
QTY	QUANTITY
RMC	RIGID METALLIC CONDUIT
RTU	ROOF TOP UNIT
SE	SERVICE ENTRANCE
SLD	SINGLE LINE DIAGRAM
SBJ	SYSTEM BONDING JUMPER
SSBJ	SUPPLY-SIDE BONDING JUMPER
SWD	SWITCH-DUTY
THHN	THERMOPLASTIC, HIGH HEAT, NYLON
THHW	THERMOPLASTIC, HIGH HEAT,WATER RESISTANT
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT AMPS
W	WATTS
WP	WEATHERPROOF

ENGINEER'S INFORMATION

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CODE DATA

2015 VIRGINIA ENERGY CONSERVATION CODE (2015 IECC WITH AMENDMENTS)
2015 VIRGINIA CONSTRUCTION CODE (2015 IBC WITH AMENDMENTS)
2015 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VA USBC)
2015 VCC CHAPTER 27-ELECTRICAL (2014 NFPA 70 WITH AMENDMENTS)

ELECTRICAL BULLETIN LIST

SHEET NUMBER	COMMENT NUMBER	COMMENT
BULLETIN A		
E1.01	1	ADDED ENLARGED SERVICE EQUIPMENT PLAN.
E1.01	2	ADDED NEW GFI WP RECEPTACLE.
E1.01	3	ADDED NOTE FOR CONTRACTOR TO COORDINATE WITH DE FOR SERVICE.
E1.01	4	RELOCATED METER LOCATION AND ADDED SERVICE DISCONNECT AND FUTURE PANEL B .
E1.01	5	RELOCATED PANEL A AND LIGHTING CONTROLS.
E1.01	6	UPDATED ELECTRICAL FEEDER SCHEDULE.
E1.01	7	UPDATED ENLARGED EQUIPMENT PLAN.
E1.01	8	UPDATED LIGHT FIXTURE SCHEDULE.
E1.01	9	UPDATED SLD.
E5.11	10	ADDED PANEL SCHEDULE.
E5.11	11	ADDED TIME CLOCK-2 DETAILS.
E5.11	12	UPDATED PANEL SCHEDULE.

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COMMONWEALTH OF VIRGINIA
KENNETH MICHAEL SHULTZ
Lic. No. 053673
1 DEC 2021
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

BUILDING DATA

MONTGOMERY HALL PARK

MONTGOMERY AVE, STAUNTON, VA 24401

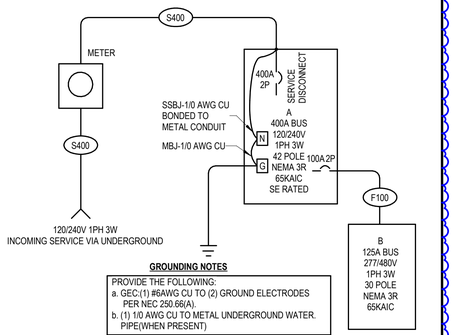
PROJECT NO: 21.4379

01 DECEMBER 2021

LEGEND, NOTES, & ABBREVIATIONS

E0.01

1/8" = 1'-0"



GROUNDING NOTES

PROVIDE THE FOLLOWING:
a. GEC:(1) #6AWG CU TO (2) GROUND ELECTRODES PER NEC 250.66(A).
b. (1) 1/0 AWG CU TO METAL UNDERGROUND WATER. PIPE(WHEN PRESENT)

NOTES: CONTRACTOR SHALL COORDINATE WITH DOMINION ENERGY FOR INSTALLATION, LOCATION AND COORDINATION OF ALL OTHER REQUIREMENTS RELATED TO ELECTRICAL SERVICE.

SINGLE LINE DIAGRAM

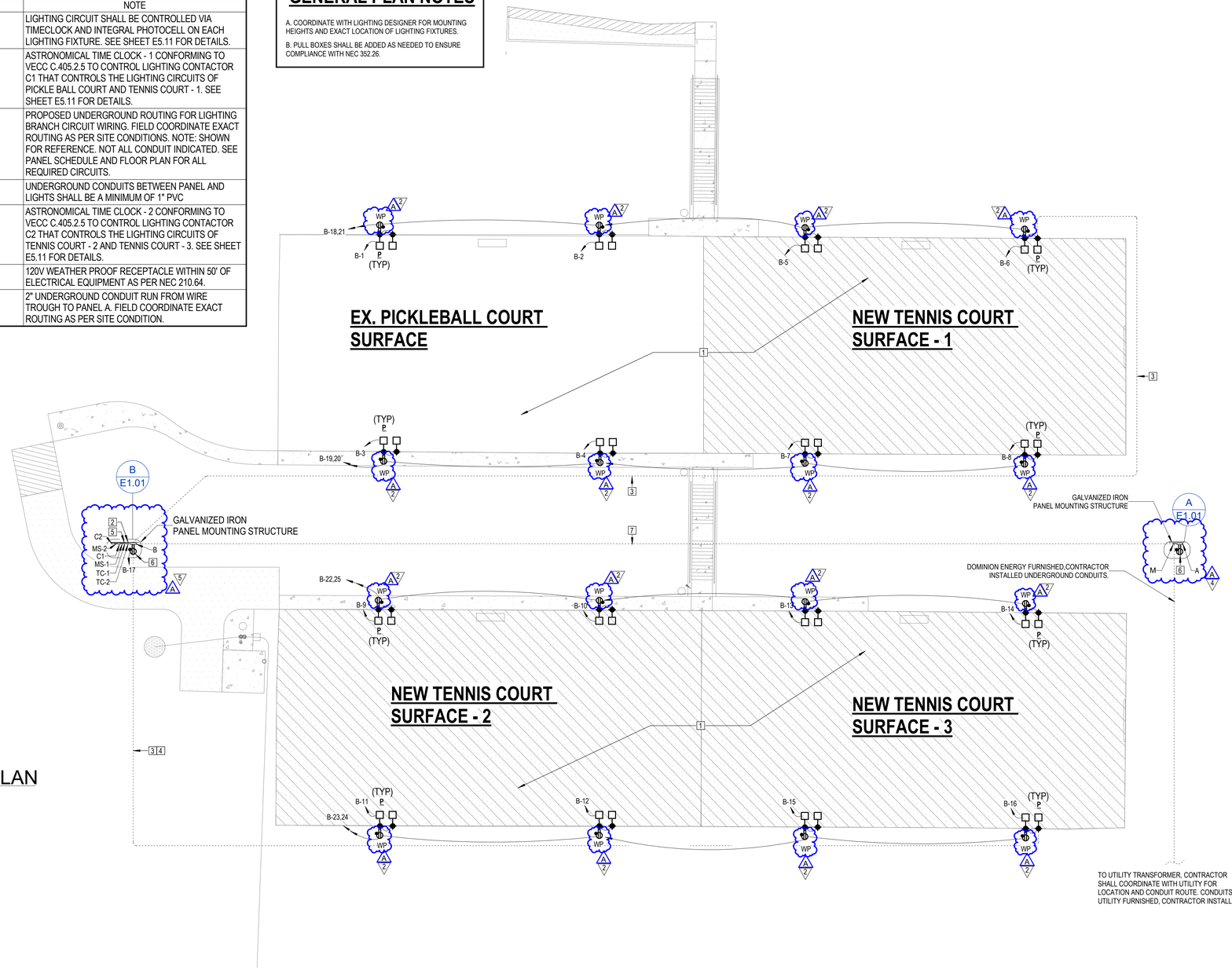
ELECTRICAL PLAN NOTES

#	NOTE
1	LIGHTING CIRCUIT SHALL BE CONTROLLED VIA TIMECLOCK AND INTEGRAL PHOTOCELL ON EACH LIGHTING FIXTURE. SEE SHEET E5.11 FOR DETAILS.
2	ASTRONOMICAL TIME CLOCK - 1 CONFORMING TO VECC C.405.2.5 TO CONTROL LIGHTING CONTACTOR C1 THAT CONTROLS THE LIGHTING CIRCUITS OF PICKLE BALL COURT AND TENNIS COURT - 1. SEE SHEET E5.11 FOR DETAILS.
3	PROPOSED UNDERGROUND ROUTING FOR LIGHTING BRANCH CIRCUIT WIRING. FIELD COORDINATE EXACT ROUTING AS PER SITE CONDITIONS. NOTE: SHOWN FOR REFERENCE. NOT ALL CONDUIT INDICATED. SEE PANEL SCHEDULE AND FLOOR PLAN FOR ALL REQUIRED CIRCUITS.
4	UNDERGROUND CONDUITS BETWEEN PANEL AND LIGHTS SHALL BE A MINIMUM OF 1" PVC
5	ASTRONOMICAL TIME CLOCK - 2 CONFORMING TO VECC C.405.2.5 TO CONTROL LIGHTING CONTACTOR C2 THAT CONTROLS THE LIGHTING CIRCUITS OF TENNIS COURT - 2 AND TENNIS COURT - 3. SEE SHEET E5.11 FOR DETAILS.
6	120V WEATHER PROOF RECEPTACLE WITHIN 50' OF ELECTRICAL EQUIPMENT AS PER NEC 210.64.
7	2" UNDERGROUND CONDUIT RUN FROM WIRE TROUGH TO PANEL A. FIELD COORDINATE EXACT ROUTING AS PER SITE CONDITION.

GENERAL PLAN NOTES

A. COORDINATE WITH LIGHTING DESIGNER FOR MOUNTING HEIGHTS AND EXACT LOCATION OF LIGHTING FIXTURES.

B. PULL BOXES SHALL BE ADDED AS NEEDED TO ENSURE COMPLIANCE WITH NEC 352.26.



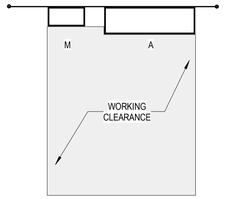
1 LEVEL 1 - ELECTRICAL PLAN
1/16" = 1'-0"

ELECTRICAL FEEDER SCHEDULE

FEEDER ID	AL CONDUCTOR SIZE	CONDUIT SIZE BELOW GRADE	CONDUIT SIZE ABOVE GRADE
F100	(3) #1 AWG + #6 EGC	2" SCH 40 PVC	2" EMT
S400	(2) SETS [(3) 250KCMIL]	(2) 2.5" SCH 40 PVC [1][2]	(2) 2.5" EMT

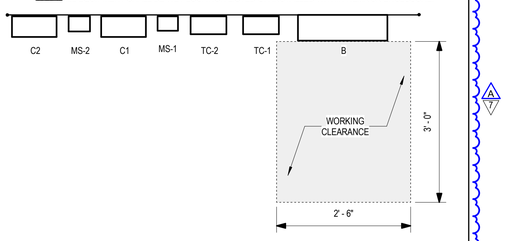
NOTES:
[1] COORDINATE WITH DOMINION ENERGY ENGINEER ON SITE FOR FURNISHING AND INSTALLATION OF UNDERGROUND SERVICE CONDUCTORS.
[2] DOMINION ENERGY FURNISHED. CONTRACTOR INSTALLED UNDERGROUND CONDUITS.

NOTE: ALL EQUIPMENT SHALL BE WET LOCATION LISTED OR INSTALLED WITHIN NEMA 3R ENCLOSURE.



A E1.01 LEVEL 1 - ENLARGED SERVICE EQUIPMENT PLAN
3/4" = 1'-0"

NOTE: ALL EQUIPMENT SHALL BE WET LOCATION LISTED OR INSTALLED WITHIN NEMA 3R ENCLOSURE.



B E1.01 LEVEL 1 - ENLARGED EQUIPMENT PLAN
3/4" = 1'-0"

ELECTRICAL LIGHTING FIXTURE SCHEDULE

TYPE	COUNT (FOR REFERENCE ONLY)	FIXTURE SPECIFICATIONS: DESCRIPTION	MANUFACTURER	MODEL	FIXTURE SPECIFICATIONS: DIMMING	LAMP SPECIFICATIONS: LAMP TYPE	LAMP COUNT	LAMP LUMENS	TOTAL LUMENS	LAMP WATTS	MINIMUM EFFICACY	COLOR TEMPERATURE	ELECTRICAL: TOTAL MAX INPUT WATTS	VOLTS	ELECTRICAL SUMMARY	REMARKS
NEW WORK																
P	32	SITE LIGHT SINGLE HEAD	TRULY GREEN SOLUTIONS	ALP G2 320W 50K TYPE 3 H D4 DIM4-U		LED / DRIVER	1	44284 lm	44284 lm	320.00 W	138 lm/W	5000 K	320 VA	120 V	120 V/1-320 VA	[1][2][3][4]

NOTES:
[1] CONTRACTOR TO ENSURE LIGHT FIXTURES SHALL BE PROVIDED WITH INTEGRAL DIMULATOR DIMMING PHOTOCONTROL OPTION TO COMPLY WITH VECC C405.2.5.
[2] COORDINATE FINISH SELECTIONS WITH OWNER.
[3] INSTALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. WHERE CONFLICT OCCURS BETWEEN DETAIL ON E5.11 AND THE MANUFACTURER INSTALLATION REQUIREMENTS EXISTS, CONFORM TO MANUFACTURER SPECIFICATIONS. PROVIDE WITH ALL REQUIRED ACCESSORIES AND MOUNTING OPTIONS FOR COMPLETE POLE MOUNTED INSTALLATION.
[4] PROVIDE WITH RADIANT WIRELESS CONTROL SYSTEM. INCLUDE CENTRAL CONTROL BASE STATION. FIELD COORDINATE BASE STATION CONTROLLER LOCATION WITH OWNER PRIOR TO INSTALLATION. PROVIDE REQUIRED POWER AND CONTROLS WIRING FOR FULLY INSTALLED SYSTEM. INCLUDE IN PROPOSAL TRAINING AND STARTUP FOR THE RADIANT WIRELESS CONTROL SYSTEM. ALL FIXTURES SHALL BE CAPABLE OF CONTROL OVER THE RADIANT WIRELESS CONTROL SYSTEM. FURNISH ALL FIXTURES WITH REQUIRED APPURTENANCES TO SUPPORT CONTROL POWER MONITORING, COMMUNICATIONS, DIMMING AND ON/OFF CONTROL, AND OVER-THE-AIR SOFTWARE UPGRADES.

GRAPHIC SCALE: 1 INCH = 1 FEET
0' 1' 2' 3' 4'

GRAPHIC SCALE: 1 INCH = 16 FEET
0' 16' 32' 48' 64'

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COMMONWEALTH OF VIRGINIA
KENNETH MICHAEL SHULTZ
Lic. No. 053673
1 DEC 2021
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE
A	BULLETIN A	DECEMBER 01, 2021

BUILDING DATA

MONTGOMERY HALL PARK

MONTGOMERY AVE,
STAUNTON, VA 24401

PROJECT NO: 21.4379

01 DECEMBER 2021

ELECTRICAL PLAN

E1.01

As indicated

PANEL NAME: A

LOCATION: SEE PLAN
SUPPLY FROM: UTILITY
MOUNTING: SURFACE
TOTAL # OF POLES: 42
ENCLOSURE TYPE: NEMA 3R

VOLTS: 120/240 Single
PHASES: 1
WIRES: 3

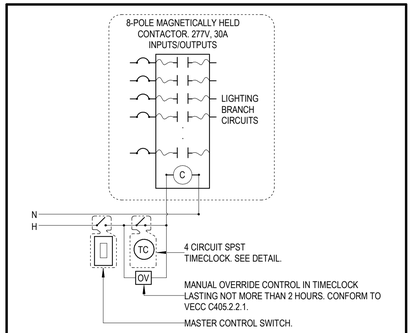
A.I.C. RATING: 65000
MAINS TYPE: MLO
BUS RATING: 400 A
MCB RATING: 400 A

A10

#	DESCRIPTION	SIZE	TYPE	BKR	P	A (kVA)		B (kVA)		P	BKR	TYPE	SIZE	DESCRIPTION	#
1	SERV EQUIPMENT RCPT	1-#12, 1-#12, 1-#12	CU	20	1	0.2	0.0			1	20	--	--	SPARE	2
3	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	4
5	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	6
7	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	8
9	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	10
11	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	12
13	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	14
15	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	16
17	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	18
19	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	20
21	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	22
23	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	24
25	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	26
27	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	28
29	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	30
31	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	32
33	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	34
35	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	36
37	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	38
39	SPARE	--	--	20	1			0.0	6.7	2	100	CU	2-#2, 1-#2, 1-#6	PANEL B	40,42
41	SPARE	--	--	20	1	0.0	6.6								
					Total Load:	7 kVA		7 kVA							
					Total Amps:	56 A		56 A							

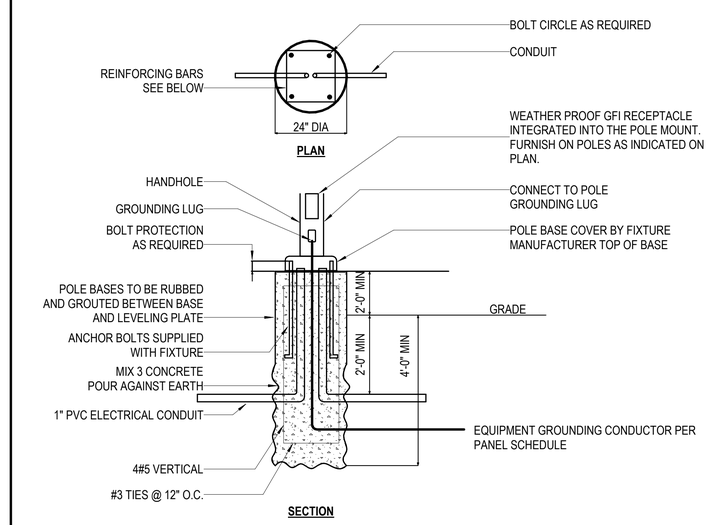
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	10240 VA	125.00%	12800 VA		
Receptacle	3240 VA	100.00%	3240 VA	**Total Conn. Load:**	13 kVA
				Total Est. Demand:	16 kVA
				Total Conn. Current:	56 A
				Total Est. Demand Current:	67 A

Notes:



LIGHTING CONTACTOR MAKE/MODEL: GE/CR463L80ANA20A0

LIGHTING CONTACTOR - MASTER CONTROL SWITCH



SITE - POLE BASE DETAIL

PANEL NAME: B

LOCATION: SEE PLAN
SUPPLY FROM: A
MOUNTING: SURFACE
TOTAL # OF POLES: 30
ENCLOSURE TYPE: NEMA 3R

VOLTS: 120/240 Single
PHASES: 1
WIRES: 3

A.I.C. RATING: SEE SLD
MAINS TYPE: MLO
BUS RATING: 125 A

#	DESCRIPTION	SIZE	TYPE	BKR	P	A (kVA)		B (kVA)		P	BKR	TYPE	SIZE	DESCRIPTION	#
1	PICKLE BALL LIGHTING [1]	1-#12, 1-#12, 1-#12	CU	20	1	0.6	0.6			1	20	CU	1-#12, 1-#12, 1-#12	PICKLE BALL LIGHTING [1]	2
3	PICKLE BALL LIGHTING [1]	1-#12, 1-#12, 1-#12	CU	20	1			0.6	0.6	1	20	CU	1-#12, 1-#12, 1-#12	PICKLE BALL LIGHTING [1]	4
5	TENNIS COURT-1 LIGHTING [1]	1-#12, 1-#12, 1-#12	CU	20	1	0.6	0.6			1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-1 LIGHTING [1]	6
7	TENNIS COURT-1 LIGHTING [1]	1-#12, 1-#12, 1-#12	CU	20	1			0.6	0.6	1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-1 LIGHTING [1]	8
9	TENNIS COURT-2 LIGHTING [1]	1-#12, 1-#12, 1-#12	CU	20	1	0.6	0.6			1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-2 LIGHTING [1]	10
11	TENNIS COURT-2 LIGHTING [1]	1-#12, 1-#12, 1-#12	CU	20	1			0.6	0.6	1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-2 LIGHTING [1]	12
13	TENNIS COURT-3 LIGHTING [1]	1-#12, 1-#12, 1-#12	CU	20	1	0.6	0.6			1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-3 LIGHTING [1]	14
15	TENNIS COURT-3 LIGHTING [1]	1-#12, 1-#12, 1-#12	CU	20	1			0.6	0.6	1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-3 LIGHTING [1]	16
17	SERV EQUIPMENT RCPT	1-#12, 1-#12, 1-#12	CU	20	1	0.2	0.4			1	20	CU	1-#12, 1-#12, 1-#12	PICKLEBALL RCPTS	18
19	PICKLEBALL RCPTS	1-#12, 1-#12, 1-#12	CU	20	1			0.4	0.4	1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-1 RCPTS	20
21	TENNIS COURT-1 RCPTS	1-#12, 1-#12, 1-#12	CU	20	1	0.4	0.4			1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-2 RCPTS	22
23	TENNIS COURT-2 RCPTS	1-#12, 1-#12, 1-#12	CU	20	1			0.4	0.4	1	20	CU	1-#12, 1-#12, 1-#12	TENNIS COURT-3 RCPTS	24
25	TENNIS COURT-3 RCPTS	1-#12, 1-#12, 1-#12	CU	20	1	0.4	0.0			1	20	--	--	SPARE	26
27	SPARE	--	--	20	1			0.0	0.0	1	20	--	--	SPARE	28
29	SPARE	--	--	20	1	0.0	0.0			1	20	--	--	SPARE	30
					Total Load:	7 kVA		7 kVA							
					Total Amps:	56 A		55 A							

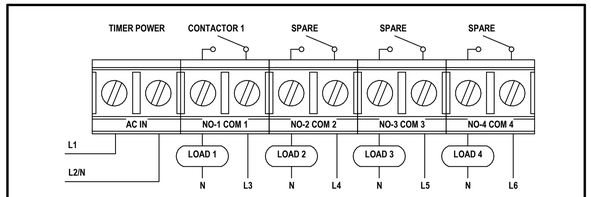
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	10240 VA	125.00%	12800 VA		
Receptacle	3060 VA	100.00%	3060 VA	**Total Conn. Load:**	13 kVA
				Total Est. Demand:	16 kVA
				Total Conn. Current:	55 A
				Total Est. Demand Current:	66 A

Notes:
[1] WIRE CIRCUIT VIA TIMECLOCK.

A12

SERVICE LOAD CALCULATION

PANEL A DEMAND LOAD = 17KW (PANEL B DEMAND LOAD) + 38 KW (ASSUMED FUTURE DEMAND LOAD)
TOTAL SERVICE DEMAND LOAD = 16KW + 38KW = 54KW
TOTAL DEMAND AMPS @ 240V = 225A



4 - INDIVIDUAL 277 VAC LOADS
OUTPUT CONFIGURATION: IND - CIRCUIT 1 AND 2
OUTPUT CONFIGURATION: IND - CIRCUIT 3 AND 4

MAKE/MODEL: INTERMATIC ET90415CR

ALL LIGHTING AREAS SHALL BE CONTROLLED BY TIMECLOCK

PROVIDE TIMECLOCK CONTROLS AS SHOWN IN THE DETAIL BELOW.

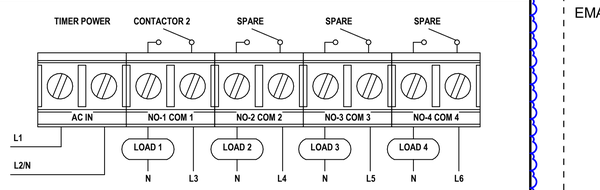


SEQUENCE OF OPERATIONS:

PICKLE BALL & TENNIS COURT LIGHTING CIRCUITS - SHALL BE PROGRAMMED FOR RELAY TO BE CLOSED FROM 5PM-7AM AND SHALL BE OPEN FROM 7AM-5PM.

CONFIRM ALL TIME SETTINGS WITH OWNER DURING COMMISSIONING, SEE "ELECTRICAL SYSTEMS TESTING AND COMMISSIONING" SPECIFICATION. ONE OUTPUT PER CIRCUIT.

TIMECLOCK-1 DETAIL - 4 CIRCUIT SPST



4 - INDIVIDUAL 277 VAC LOADS
OUTPUT CONFIGURATION: IND - CIRCUIT 1 AND 2
OUTPUT CONFIGURATION: IND - CIRCUIT 3 AND 4

MAKE/MODEL: INTERMATIC ET90415CR

ALL LIGHTING AREAS SHALL BE CONTROLLED BY TIMECLOCK

PROVIDE TIMECLOCK CONTROLS AS SHOWN IN THE DETAIL BELOW.



SEQUENCE OF OPERATIONS:

PICKLE BALL & TENNIS COURT LIGHTING CIRCUITS - SHALL BE PROGRAMMED FOR RELAY TO BE CLOSED FROM 5PM-7AM AND SHALL BE OPEN FROM 7AM-5PM.

CONFIRM ALL TIME SETTINGS WITH OWNER DURING COMMISSIONING, SEE "ELECTRICAL SYSTEMS TESTING AND COMMISSIONING" SPECIFICATION. ONE OUTPUT PER CIRCUIT.

TIMECLOCK-2 DETAIL - 4 CIRCUIT SPST

A11

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COMMONWEALTH OF VIRGINIA
KENNETH MICHAEL SHULTZ
Lic. No. 053673
1 DEC 2021
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE
A	BULLETIN A	DECEMBER 01, 2021

BUILDING DATA

MONTGOMERY HALL PARK

MONTGOMERY AVE,
STAUNTON, VA 24401

PROJECT NO: 21.4379

01 DECEMBER 2021

DETAILS & DIAGRAMS

E5.11

As indicated

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26 00 00 - ELECTRICAL GENERAL PROVISIONS

1. THE WORK TO BE PERFORMED UNDER THIS DIVISION CONSISTS OF FURNISHING, INSTALLING, AND PLACING INTO OPERATION ALL ELECTRICAL WORK INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREINAFTER. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE INSTALLATION.
2. INSTALLATION OF ALL ELECTRICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FOLLOWING REGULATIONS, CODES, ETC.:
   - A. VUSBC - VIRGINIA UNIFORM STATEWIDE BUILDING CODE - 2015, INCLUDING;
     - a. IBC/2015 - INTERNATIONAL BUILDING CODE, WITH VIRGINIA AMENDMENTS
     - b. NFPA 70/2014 - NATIONAL ELECTRICAL CODE
     - c. NFPA 72/2015 - NATIONAL FIRE ALARM CODE
   - B. ADAAG - AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
   - C. ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE
   - D. ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS
   - E. IEEE - INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
   - F. IESNA - ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA
   - G. NECA - NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
   - H. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
   - I. NETA - INTERNATIONAL ELECTRICAL TESTING ASSOCIATION
   - J. NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
   - K. OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
   - L. UL - UNDERWRITERS LABORATORIES, INC.
   - M. 2012 IBC INTERNATIONAL ENERGY CONSERVATION CODE
   - N. LOCAL ELECTRICAL UTILITY COMPANY STANDARDS
   - O. NSI A17.1/ASME 17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS
   - P. ALL LOCAL JURISDICTION CODES AND ORDINANCES
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES, AND PAY ALL FEES AS REQUIRED FOR EXECUTION OF THE CONTRACT. ARRANGE FOR NECESSARY INSPECTIONS AND PRESENT CERTIFICATES OF APPROVAL TO THE OWNER.
4. DRAWINGS:
   - A. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL EQUIPMENT. EXAMINE THE ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS AND BECOME FAMILIAR WITH AND COORDINATE WITH ALL CONDITIONS AFFECTING ELECTRICAL WORK.
   - B. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES.
5. STANDARDS FOR MATERIALS AND WORKMANSHIP:
   - A. ALL MATERIAL SHALL BE NEW (UNLESS SPECIFICALLY INDICATED TO BE REUSED).
   - B. THE MATERIALS OF THE SAME TYPE SHALL BE THE PRODUCT OF ONE MANUFACTURER.
   - C. THE PUBLISHED STANDARDS AND REQUIREMENTS OF THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATIONS, THE AMERICAN NATIONAL STANDARDS INSTITUTE, THE INSTITUTES OF ELECTRICAL AND ELECTRONIC ENGINEERS AND THE AMERICAN SOCIETY OF TESTING MATERIALS SHALL APPLY WHERE APPLICABLE.
   - D. SPECIFIED CATALOG NUMBERS AND TRADE NAMES ARE INTENDED TO DESCRIBE THE MATERIAL, DEVICES OR APPARATUS DESIRED. SIMILAR MATERIALS OF OTHER MANUFACTURERS, IF OF EQUAL QUALITY, CAPACITY, AND CHARACTER, MAY BE USED UPON OWNER'S APPROVAL. SUBSTITUTIONS FROM MANUFACTURES WITH INADEQUATE LOCAL SUPPORT OR MARKET SHARE MAY BE REJECTED.
6. UNDERWRITER'S LABEL AND LISTING:
   - A. ALL TYPES OF MATERIALS WHICH ARE COMMONLY UL LISTED SHALL BE UL LISTED, AND SHALL BEAR THE INSPECTION LABEL OF UNDERWRITER'S LABORATORIES, INC. (UL). WHERE CUSTOM BUILT EQUIPMENT IS SPECIFIED AND THE UL LABEL OR LISTING IS NOT APPLICABLE TO THE COMPLETED PRODUCT, ALL COMPONENTS USED IN THE CONSTRUCTION OF SUCH EQUIPMENT SHALL BE LABELED OR LISTED BY UL AS APPLICABLE.
7. SHOP DRAWINGS AND ENGINEERING DATA:
   - A. COMPLETE SHOP DRAWINGS AND ENGINEERING DATA ON ALL EQUIPMENT AND MATERIALS TO BE USED IN THE WORK OF THIS DIVISION SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
   - B. SUBMISSIONS SHALL BE STAMPED AS APPROVED BY THE CONTRACTOR AND HAVE ALL FEATURES, OPTIONS, ACCESSORIES, AND CATALOG NUMBERS CLEARLY INDICATED.
8. TESTS:
   - A. AT THE COMPLETION OF THE ELECTRICAL INSTALLATION AND AT SUCH TIME AS THE ARCHITECT OR OWNER MAY DIRECT, THE CONTRACTOR FOR THE DIVISION SHALL CONDUCT AN OPERATING TEST FOR APPROVAL. ALL EQUIPMENT SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS AS INTENDED, PROVING SYSTEM INTEGRITY.
9. FINAL INSPECTION:
   - A. WHEN THE WORK ON THE PROJECT HAS BEEN COMPLETED AND IS READY FOR FINAL INSPECTION, SUCH AN INSPECTION WILL BE MADE. AT THIS TIME THE CONTRACTOR SHALL DEMONSTRATE THAT THE REQUIREMENTS OF THIS DIVISION HAVE BEEN MET.

WARRANTY

1. THE COMPONENTS OF THE ELECTRICAL SYSTEMS SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE THEREOF EITHER FOR BENEFICIAL USE OR FINAL ACCEPTANCE, WHICHEVER IS EARLIER, AGAINST DEFECTIVE MATERIALS, DESIGN, AND WORKMANSHIP.

26 05 26 - GROUNDING

1. RACEWAYS, BOXES, OUTLETS, AND ENCLOSURES SHALL BE BOUND TOGETHER TO FORM A CONTINUOUS METALLIC GROUNDING CIRCUIT IN ACCORDANCE WITH NEC ART. 250.
2. THE MINIMUM SIZE OF GROUNDING CONDUCTOR SHALL BE PER NEC UNLESS NOTED TO BE LARGER ON THE DRAWINGS.
3. GROUNDING CONDUCTORS SHALL BE PROVIDED FOR ALL BRANCH CIRCUITS AND FEEDERS. NO EXCEPTIONS! EXTEND AND CONNECT TO EACH DEVICE AND EQUIPMENT.
4. EGC: PROVIDE SEPARATE BARE COPPER OR INSULATED GREEN GROUND CONDUCTOR IN ALL FEEDERS AND BRANCH CIRCUITS.
5. BONDING: PROVIDE BONDING OF ALL NON-CURRENT-CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, METALLIC RACEWAYS AND ENCLOSURE PER NEC ARTICLE 250. BOND ALL METAL BUILDING COMPONENTS, INCLUDING PIPING, DUCTWORK AND METAL BUILDING COMPONENTS.
6. GEC: PROVIDE GEC AND MBJ AS INDICATED ON SINGLE LINE DIAGRAM. PROVIDE GROUND ELECTRODE BONDING OF METAL WATER SERVICE PIPING AND BUILDING STEEL PER NEC ARTICLE 250.

26 05 33 - RACEWAYS AND JUNCTION BOXES

1. RACEWAYS
   - A. CONDUIT SHALL BE GALVANIZED RMC, IMC, OR EMT UNLESS OTHERWISE SPECIFIED IN FEEDER SCHEDULE OR ON DRAWINGS. RIGID OR INTERMEDIATE METALLIC CONDUIT SHALL BE USED WHERE SUBJECT TO DAMAGE OR EXPOSED OUTSIDE OF BUILDING. EMT MAY BE USED ABOVE CONCEALED CEILINGS OR WITHIN WALLS, AND EXPOSED IN DRY, INTERIOR LOCATIONS. TYPE MC CABLE WITH GROUND MAY BE USED IN LIEU OF EMT BETWEEN WIRING DEVICES WHERE CONCEALED AND PERMITTED BY CODE. TYPE AC CABLE MAY BE USED FOR COMPUTER ROOM WIRING BELOW RAISED FLOOR.
   - B. RACEWAYS SHALL BE INSTALLED AS A COMPLETE SYSTEM AND SHALL BE CONTINUOUS FROM OUTLET TO OUTLET, UNLESS NOTED OTHERWISE. RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO ALL BOXES AND FITTINGS. RACEWAYS AND BOXES SHALL BE SUPPORTED FROM STRUCTURAL STEEL AND NOT SUPPORTED FROM THE CEILING GRID OR ROOF DECKING PER NEC.
   - C. ALL CONDUIT SHALL BE INSTALLED CONCEALED EXCEPT IN UNFINISHED SPACES OR WHERE SHOWN OTHERWISE.
   - D. MINIMUM SIZE CONDUIT SHALL BE 3/4 INCH.
   - E. A NYLON PULL CORD SHALL BE INSTALLED IN ALL CONDUITS IN WHICH CONDUCTORS ARE NOT INSTALLED. A 10 INCH LENGTH OF THE FISH CORD SHALL EXTEND OUT OF EACH END OF THE CONDUIT.
   - F. FLEXIBLE LIQUID-TIGHT METAL CONDUIT SHALL BE USED FOR CONNECTIONS TO ALL MOTORS, DRY-TYPE TRANSFORMERS AND ANY EQUIPMENT WHERE REQUIRED BECAUSE OF VIBRATION OR RELATIVE MOTION.
   - G. SURFACE RACEWAY MAY ONLY BE USED WHERE SPECIFICALLY SHOWN ON DRAWINGS OR APPROVED BY ARCHITECT/ENGINEER. WHERE PERMITTED, RACEWAY SHALL BE METAL AND ATTACHED TO THE WALL USING METAL FASTENERS. VERTICAL RUNS SHALL BE IN CORNERS OR AGAINST VERTICAL MOLDINGS, SUCH AS DOOR TRIM. PROVIDE MULTI-CHANNEL RACEWAY WHERE COMMUNICATIONS AND POWER ARE REQUIRED. PROVIDE ALL TRIM, FACEPLATES, AND ACCESSORIES FOR A FINISHED LOOK AND COMPLETE INSTALLATION. SYSTEM SHALL BE COMPATIBLE WITH OWNER'S COMMUNICATIONS DEVICES.
2. JUNCTION BOXES
   - A. PULL BOXES SHALL BE INSTALLED AT ALL NECESSARY POINTS, WHETHER INDICATED ON THE DRAWINGS OR NOT. PROVIDE WHERE REQUIRED FOR A PROPER INSTALLATION AND TO PREVENT INJURY TO THE CONDUCTORS THAT MIGHT RESULT FROM PULLING. MINIMUM DIMENSIONS SHALL NOT BE LESS THAN NEC REQUIREMENTS.
   - B. ALL INDOOR AND DRY LOCATIONS BOXES SHALL BE NEMA 1, GALVANIZED STEEL, RIGIDLY SECURED IN POSITION TO THE STRUCTURE. OUTDOOR BOXES SHALL BE NEMA 3R. PROVIDE WEATHERPROOF BOX WITH SINGLE GASKET FOR USE IN WET OR DAMP LOCATIONS.
   - C. PROVIDE BOXES, COMPLETE WITH COVER OR DEVICE PLATE FOR SWITCHES, RECEPTACLES, OR OTHER DEVICES, OR WHERE REQUIRED FOR JOINING BRANCH CIRCUIT WIRING.
   - D. CONDUIT BODIES MAY BE USED ON EXPOSED CONDUIT, WHERE ALLOWED BY THE NEC.
   - E. EXTERIOR PULL BOXES/MANHOLES SHALL BE PRECAST STEEL-REINFORCED CONCRETE OR FIBERGLASS-REINFORCED POLYMER CONCRETE. COVERS SHALL BE LABELED FOR SYSTEM AND CAPABLE OF SUPPORTING VEHICLE TRAFFIC/MOWING EQUIPMENT LIKELY TO BE ENCOUNTERED. PROVIDE MINIMUM 12" GRAVEL BELOW BOX FOR DRAINAGE. PROVIDE DEPTH TO EXCEED REQUIRED CONDUIT BURIAL DEPTH.
   - F. EFFECTIVELY CLOSE ALL UNUSED OPENING IN CABINETS, BOXES, EQUIPMENT HOUSINGS, GUTTERS, ETC.
   - G. COORDINATE BOX LOCATIONS WITH ARCHITECT AND OWNER. PROVIDE PULL & JUNCTION BOXES LOCATED ABOVE CEILINGS UON.
   - H. FIELD COORDINATE LOCATION OF ALL EQUIPMENT FOR ELECTRICAL BOX LOCATIONS. COORDINATE LOCATIONS OF BOXES IN OR ABOVE MILLWORK WITH ARCHITECT/MILLWORK CONTRACTOR.
   - I. VERIFY ALL FIXTURE AND OUTLET BOX LOCATIONS WITH ARCHITECT/OWNER PRIOR TO ROUGH-IN.
   - J. PROVIDE MINIMUM OF 6" LATERAL OR VERTICAL SEPARATION FOR BACK-TO-BACK OUTLET BOXES.

26 27 26 - WIRING DEVICES

1. WIRING DEVICES SHALL BE COMPLETE WITH ALL MOUNTING DEVICES AND OTHER APPURTENANCES AS REQUIRED. ALL WIRING DEVICES SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER EXCEPT AS SPECIFICALLY STATED OTHERWISE.

26 05 19 - POWER CONDUCTORS AND CABLE

1. CONFORM TO NEMA WC7, UL 83, UL 486C, UL 486E, UL 1581.
2. ALL WIRING SHALL BE: UL 83, 600-VOLT, TYPE THHN/THHW INSULATION, UON:
   - A. #10 AWG AND SMALLER: SOFT-DRAWN ANNEALED COPPER, SOLID.
   - B. #8 AWG AND LARGER : SOFT-DRAWN ANNEALED COPPER, STRANDED.
   - C. 100 AMPERES AND LARGER: AL COMPACT-STRANDED CONDUCTORS OF EQUAL AMPACITY MAY BE SUBSTITUTED FOR COPPER. CONTRACTOR RESPONSIBLE FOR COORDINATING WIRE AND CONDUIT SIZE. VERIFY THAT ALL TERMINATION LUGS ARE RATED FOR SIZE AND TYPE WIRE PROVIDED.
   - D. WIRING METHODS:
     - a. FEEDERS
       - SCHEDULE 40 PVC BELOW GRADE.
       - EMT ABOVE GRADE.
     - b. BRANCH CIRCUITS (ABOVE GRADE)
       - MC CABLE WHERE HIDDEN.
       - EMT WHERE EXPOSED
     - c. BRANCH CIRCUITS BELOW GRADE (LIGHTING)
       - UF-B CABLE FOR DIRECT BURIAL.
       - SCHEDULE 40 PVC BELOW GRADE.
     - d. MINI-SPLIT HEAT PUMP INTERCONNECTION WIRING: PROTECT CONDUCTORS FROM DAMAGE USING CONDUIT OR USE UL LISTED FOR INDOORS, OUTDOORS, SUNLIGHT RESISTANT AND DIRECT BURIAL.
     - e. ARMORED CABLE ASSEMBLIES: TYPE MC CABLE (UL 1569).
     - f. USE STRANDED WIRING FOR ALL CONTROL CIRCUITS.
   - E. TERMINATIONS, PROVIDED AS FOLLOWS:
     - a. BRANCH CIRCUITS: SOLDER-LESS, COMPRESSION, TWIST SPRING CONNECTORS (WIRE NUTS) OR OTHER LISTED MEANS.
     - b. BOLTED BUS CONNECTIONS: 2-HOLE COMPRESSION LUGS.
     - c. WIRING SPLICES NOT PERMITTED.
   - F. ROUTE POWER WIRING AND LOW-VOLTAGE CONTROL WIRING IN SEPARATE RACEWAYS. DO NOT ROUTE CIRCUITS FROM DIFFERENT SYSTEMS IN THE SAME RACEWAY.
   - G. PROVIDE SEPARATE, DEDICATED NEUTRAL CONDUCTORS FOR ALL BRANCH CIRCUITS SERVING COMPUTER OR MECHANICAL EQUIPMENT.
   - H. WIRING SHALL BE NEATLY TRAINED AND LACED IN ENCLOSURES. TEST ALL WIRING FOR CONTINUITY AND TO BE FREE OF FAULTS AND SHORT CIRCUITS.
   - I. USE SUITABLE ANTI-OXIDIZING COMPOUND FOR ALL ALUMINUM WIRING TERMINATIONS.
   - J. LABEL CONDUCTORS WITH CIRCUIT DESIGNATION AT EACH BRANCH CIRCUIT TERMINATION.
   - K. IN THE ABSENCE OF A CONSISTENT EXISTING COLOR CODE, CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS:
     - 277/480V.
     - PHASE A - BROWN
     - PHASE B - ORANGE
     - PHASE C- YELLOW
     - NEUTRAL - GRAY
     - GROUND - GREEN

26 05 53 - ELECTRICAL IDENTIFICATION

1. MATERIALS:
   - A. EQUIPMENT NAMEPLATES: PROVIDE NAMEPLATES CONSTRUCTED OF 1/16" THICK PLASTIC LAMINATED MATERIAL. ENGRAVE THROUGH COLORED SURFACE MATERIAL TO CONTRASTING COLORED SUBLAYER.
   - B. LIGHT SWITCH, RECEPTACLE, AND JUNCTION BOX LABELS: PROVIDE LABELS BY ELECTRONIC LABELER BROTHER P-TOUCH, MODEL PT-20/25, DYMO-TAPE, OR EQUAL. LABEL WITH PANEL NAME AND CIRCUIT NUMBER.
   - C. CIRCUIT DIRECTORIES: PROVIDE NEATLY TYPES SCHEDULE UNDER PLASTIC JACKET OR PROTECTIVE COVER FOR PROTECTION FROM DAMAGE OR DIRT.
2. FOR SERVICE EQUIPMENT, PROVIDE LABEL PER 1.A INDICATING AVAILABLE FAULT CURRENT PER NEC ARTICLE 110.24. SEE SINGLE LINE.
3. PROVIDE CIRCUIT DIRECTORIES FOR EACH LOAD CENTER, PANELBOARDS, AND SWITCHBOARD BASED ON AS-BUILT CONDITIONS.
   - A. NUMBER EACH SINGLE POLE SPACE: ODD-NUMBERED CIRCUITS ON LEFT, EVEN ON RIGHT.
   - B. SECURELY MOUNT ON INSIDE FACE OF PANELBOARD DOOR.
   - C. WHEN THERE IS NO COVER, PROVIDE INDIVIDUAL NAMEPLATES PER 1.A FOR EACH OVERCURRENT AND OTHER DEVICE.
   - D. DEFINE BRIEFLY, BUT ACCURATELY, NATURE OF CONNECTED LOAD (I.E. LIGHTING OFFICE, ELEC ROOM, ETC.).
   - E. PROVIDE ROOM LOCATIONS FOR ALL LOADS AND INDICATE PANEL NAME ON THE SCHEDULE.
   - F. MULTIPOLE CIRCUITS: USE FIRST POLE SPACE NUMBER AS CIRCUIT NUMBER.
   - G. CONFIRM ROOM NUMBERS WITH OWNER BEFORE NOTING ON SCHEDULES.
   - H. SPARE CIRCUIT BREAKERS AND SPACE POSITIONS SHALL BE NOTED.

26 24 16 - PANELBOARDS

1. PROVIDE WITH 100% RATED NEUTRAL UNLESS SCHEDULED OTHERWISE. ALL BUS BARS SHALL BE TIN (OR COPPER) PLATED ALUMINUM. REFER TO SCHEDULES FOR RATINGS, MAIN AND BRANCH DEVICES. PANELS AND BREAKERS SHALL BE RATED FOR THE AVAILABLE INTERRUPTING CURRENT AND IN NO CASE BE LESS THAN 10,000 AMPERES RMS SYMMETRICAL INTERRUPTING CAPACITY.
2. PROVIDE HANDLE LOCKING DEVICES AS REQUIRED FOR EMERGENCY LIGHTING AND FIRE ALARM LOADS.
3. PROVIDE HANDLE-TIES FOR ALL MULTI-WIRE BRANCH CIRCUITS WITH SHARED NEUTRAL CONDUCTORS PER NEC 210.4.
4. INSTALL PANELBOARDS WITH HIGHEST OPERATOR/HANDLE AT HIGHEST POSITION AT 79" OR LESS.
5. CIRCUIT BREAKERS SHALL BE COMBINATION THERMAL AND MAGNETIC MOLDED CASE TYPE, QUICK-MAKE AND QUICK-BREAK, BOTH ON MANUAL AND ON OVERCURRENT OPERATION. BREAKERS SHALL BE OF THE OVER-THE-CENTER TOGGLE OPERATING TYPE WITH THE HANDLE GOING TO A POSITION BETWEEN "ON" AND "OFF" TO INDICATE AUTOMATIC TRIPPING. ALL MULTI-POLE BREAKERS SHALL BE INTERNAL COMMON TRIP.
6. PANELBOARDS SHALL BE SURFACE MOUNTED OR RECESSED AS INDICATED, WITH BAKED-ON ENAMEL TRIM, ADJUSTABLE TRIM CLAMPS AND DOOR WITH LOCK AND CATCH.
7. PROVIDE COMPLETE TYPED WRITTEN PANELBOARD DIRECTORIES INDICATING LOAD TYPE AND LOCATION WITH FIELD CHANGES RECORDED.
8. PANELBOARDS SHALL BE BY SQUARE D, SIEMENS, GENERAL ELECTRIC, OR CUTLER-HAMMER.
9. LOAD CENTERS MAY ONLY BE USED WITHIN DWELLING UNITS.
10. FOR ALL NEW BREAKERS INSTALLED IN EXISTING PANELS, FAULT CURRENT INTERRUPTING CAPACITY SHALL MATCH THAT OF THE PANEL RATING.

26 28 16 - DISCONNECT SWITCHES AND CIRCUIT BREAKERS

1. DISCONNECT SWITCHES
   - A. FUSED AND NONFUSED DISCONNECT SWITCHES SHALL BE PROVIDED AS REQUIRED. SUCH SWITCHES SHALL BE OF THE PROPER SIZE AND NUMBER OF POLES FOR USE WITH THE EQUIPMENT REQUIRING THE SWITCH. WHERE THE MOTOR CONTROLLER IS NOT WITHIN SIGHT OF THE MOTOR OR OVERCURRENT PROTECTION, PROVIDE TWO SWITCHES AS REQUIRED.
   - B. DISCONNECT SWITCHES SHALL BE THE ENCLOSED HEAVY-DUTY TYPE WITH QUICK-MAKE, QUICK-BREAK MECHANISM AND EXTERNAL PAD-LOCKING OPERATING HANDLE.
   - C. ALL SWITCH ENCLOSURES SHALL BE NEMA TYPE 1, EXCEPT SWITCHES EXPOSED TO THE WEATHER SHALL HAVE NEMA TYPE 3R, RAIN TIGHT ENCLOSURES.
   - D. COMBINATION STARTER/DISCONNECTS AND CIRCUIT BREAKER DISCONNECTS MAY ALSO BE USED FOR MOTOR LOADS.
   - E. COORDINATE DISCONNECT SWITCH POLES, NEUTRAL REQUIREMENTS, FUSE, VOLTAGE, AND AMPACITY WITH NAMEPLATE DATA OF EQUIPMENT SERVICED.
   - F. COORDINATE REQUIREMENTS FOR FUSE HOLDERS AND BLOCKS, AND REQUIRED.
   - G. LOCATE SWITCHES ACCESSIBLE AND WITHIN SIGHT OF EQUIPMENT SERVICED.
   - H. INSTALL DISCONNECT SWITCHES WITH HIGHEST OPERATOR/HANDLE AT HIGHEST POSITION 79" OR LESS.
   - I. PROVIDE DISCONNECT SWITCH FOR ALL CONDENSING UNITS.
2. CIRCUIT BREAKERS
   - A. CONFORM TO NEMA AB 1, UL 50, UL 489, NEMA SG3.
   - B. CIRCUIT BREAKERS SHALL BE BY SIEMENS, CUTLER-HAMMER, GENERAL ELECTRIC, OR SQUARE-D.
   - C. COORDINATE CIRCUIT BREAKER POLES, NEUTRAL REQUIREMENTS, VOLTAGE, AND AMPACITY WITH NAMEPLATE OF EQUIPMENT SERVICES.
   - D. COORDINATE SHORT CIRCUIT CURRENT RATINGS.
     - A. SERIES RATINGS: PROVIDE MANUFACTURER TEST DATA FOR ALL EXISTING AND PROPOSED DEVICES UTILIZING SERIES RATINGS, SEALED BY PROFESSIONAL ENGINEER.
     - B. PROVIDE SUBMITTAL DATA FOR LISTED SERIES RATED DEVICES INDICATING HOW DEVICES MEET OR EXCEED AVAILABLE FAULT CURRENT.
     - C. PROVIDE SERIES RATINGS CALCULATIONS, WHERE REQUIRED.
     - D. DO NOT USE SERIES RATING COMBINATIONS FOR MOTOR APPLICATIONS.
   - E. MOLDED CASE CIRCUIT BREAKERS: TOGGLE-TYPE HANDLE WITH OVER-CURRENT TRIP PROTECTION AND QUICK-MAKE, QUICK-BREAK, NON-WELDING SILVER-ALLOY CONTACTS. UNIT SHALL INDICATE TRIP BY HANDLE POSITION OR INDICATOR VIEWING WINDOW.
   - F. PROVIDE MOTOR CIRCUIT PROTECTOR FOR MOTOR LOADS.
   - G. PROVIDE CIRCUIT BREAKER LOCK FOR ALL CIRCUIT BREAKERS FEEDING HVAC EQUIPMENT OR WATER HEATERS.
   - H. MOLDED CASE CIRCUIT BREAKERS SHALL BE "HACR" RATED FOR HVAC EQUIPMENT LOADS AND "SWD" RATED FOR LIGHTING LOADS.
   - I. CIRCUIT BREAKER ENCLOSURES
     - A. CONFORM TO UL 50, UL 98, NEMA AB1.
     - B. ENCLOSURES FOR CIRCUIT BREAKERS SHALL MATCH MANUFACTURER OF INSTALLED CIRCUIT BREAKER.
     - C. LOCATED ENCLOSED CIRCUIT BREAKERS ACCESSIBLE AND WITHIN SIGHT OF EQUIPMENT SERVICES.
     - D. INSTALL ENCLOSED CIRCUIT BREAKERS WITH HIGHEST OPERATOR/HANDLE AT HIGHEST POSITION 78" OR LESS.

26 28 13 - FUSES

1. FUSES SHALL CONFORM TO THE LATEST EDITIONS OF NEMA, UL, AND NEC.
2. FUSES SHALL BE DUAL-ELEMENT, 600-VOLT, CURRENT LIMITING, 200,000 AIC, AND SUITABLE FOR USE WITH DOWNSTREAM CIRCUIT BREAKERS, AS APPLICABLE.
3. FURNISH AND INSTALL COMPLETE SETS OF FUSES FOR ALL SWITCHES REQUIRING SAME, INCLUDING THOSE REQUIRED IN SWITCHBOARDS AND MOTOR CONTROLLERS.
4. FUSES SERVING ONLY MOTOR LOADS SHALL BE CLASS RK5
5. FUSES SERVING DISTRIBUTION SHALL BE CLASS RK1 OR L.
6. PROVIDE 1 SPARE SET OF EACH TYPE/SIZE FUSE.

26 09 23 - LIGHTING FIXTURES AND ACCESSORIES

1. LIGHTING SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDED IES STANDARDS.
2. ALL FIXTURES SHALL BE FURNISHED COMPLETE WITH SOCKETS, INTERNAL WIRING, LEADS, TRIM, HANGERS, SUPPORTS, FRAMES, BALLASTS, ETC., AS APPLICABLE.
3. ALL FIXTURES SHALL BE SUPPORTED BY MEANS OF ADEQUATE HANGERS WITH ATTACHMENTS TO BUILDING CONSTRUCTION INDEPENDENT OF ANY CEILING SYSTEM.
4. IN NEW BUILDINGS, ALL LAMPS SHALL BE 3500 DEG K IN COLOR. MATCH EXISTING LAMP COLOR IN EXISTING CONSTRUCTION.
5. PER THE ENERGY CODE, ALL LIGHTING SHALL BE AUTOMATICALLY CONTROLLED, EXCEPT AS INDICATED, WITH MANUAL OVERRIDES. IT IS THE INTENTION OF THIS CONTRACT TO USE OCCUPANCY SENSORS AND LIGHTING CONTROL PANELS (INDEPENDENT FROM ONE ANOTHER) TO ACCOMPLISH THIS. LIGHTS REQUIRING AUTOMATIC CONTROL NOT CONTROLED BY OCCUPANCY SENSORS ARE TO BE CONTROLLED BY A TIME CLOCK.
6. PROVIDE FIXTURES WITH TOTAL FIXTURE WATTS NO GREATER THAN THOSE SCHEDULED.
7. COORDINATE FIXTURE MOUNTING WITH ARCHITECTURAL REFLECTED CEILING PLANS, SPECIFICATIONS, AND ELEVATIONS AND PROVIDE TRIM AS REQUIRED FOR CEILING TYPES WHERE INSTALLED.
8. SUPPORT FIXTURES FROM STRUCTURE ONLY.
9. ALL BALLASTS SHALL BE HIGH-POWER-FACTOR (0.95 MINIMUM), LOW THD (10% MAXIMUM), ENERGY-SAVING, ELECTRONIC TYPE.
10. COORDINATE DIMMING BALLAST/DRIVER REQUIREMENTS WITH DIMMERS AND DIMMING ZONES SHOWN WHEN REQUIRED FOR LED DIMMING.PROVIDE 0-10V DIMMING DRIVERS AS APPROPRIATE.
11. EXTERIOR LIGHTING SHALL BE CONTROLLED BY PHOTOCELLS/TIMERS FOR "DUSK-TO-DAWN" OPERATION, UON. LOCATE PHOTOCELLS WITH SENSOR FACING GENERALLY NORTH TO NORTHEAST, WHERE POSSIBLE.
12. PROVIDE FIXTURES LOCATED IN UNHEATED SPACES WITH LOW TEMPERATURE BALLAST AND LAMPS.
13. ALL EXTERIOR LIGHTING LAMPS SHALL BE OF THE SAME COLOR TEMPERATURE.
14. FIXTURES ARE PERMITTED TO PROVIDE LUMINOSITY UP TO 10% GREATER THAN THE SPECIFIED LUMENS IN THE LIGHT FIXTURE SCHEDULE. LUMENS ARE NOT PERMITTED TO BE RATED A LUMINOSITY LESS THAN THE SPECIFIED LUMENS IN THE LIGHT FIXTURE SCHEDULE.

TESTING

1. TEST VOLTAGE AT SERVICE EQUIPMENT AND SUBMIT MEASUREMENTS TO ENGINEER OF RECORD FOR REVIEW.
2. FOR SINGLE PHASE SERVICE, MEASURE VOLTAGES: A-B, B-N, AND A-N.
3. FOR THREE PHASE SERVICE, MEASURE VOLTAGE: A-B, B-C, C-A, A-N, B-N, AND C-N.
4. TEST VOLTAGE AT **EXISTING** SERVICE EQUIPMENT

ELECTRICAL SYSTEMS TESTING AND COMMISSIONING

1. CONFORM TO UL 1244, UL 1436, NECA 90, NEMA AB4, NETA ATS.
2. TIGHTEN AND VERIFY BOLTED BUS, MECHANICAL LUGS, AND WIRING TERMINATIONS TO MANUFACTURER SPECIFIED TORQUE.
3. TEST INSULATION RESISTANCE (MEGGER) ALL NEW CIRCUITS TO INDICATE MINIMUM OF 250KOHM.
4. TEST GROUNDING SYSTEM FOR CONTINUITY USING FALL OF POTENTIAL METHOD AND TO INDICATE MAXIMUM RESISTANCE OF 5OHM.
5. VERIFY PHASE, NEUTRAL AND GROUND POLARITY FOR ALL WIRING DEVICES.
6. TEST OPERATION OF ALL GROUND-FAULT CIRCUIT INTERRUPTER DEVICES.

TAKE NOTE BEFORE ANY WORK IS STARTED OR EQUIPMENT IS PURCHASED:

ANY WORK COMPLETED OR EQUIPMENT THAT IS PURCHASED PRIOR TO THE SUBMISSION AND APPROVAL OF THESE SUBMITTALS SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR.

NOTE: DESIGN IS CONTINGENT ON HAVING THE FOLLOWING INFORMATION. NO EQUIPMENT OR CONSTRUCTION SHALL BE PERMITTED TO BEGIN PRIOR TO SUBMITTING THE INFORMATION LISTED BELOW FOR ENGINEERING APPROVAL. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THIS INFORMATION IS GATHERED AND SUBMITTED TO THE ENGINEER IN A TIMELY MANNER.

SCHEDULE OF REQUIRED SUBMITTALS

- **PRODUCT DATA**
  - A. THE ENGINEER SHALL BE PROVIDED WITH CUT SHEETS OF THE FOLLOWING ITEMS FOR REVIEW:
    - a. ELECTRICAL EQUIPMENT (INCLUDING SERVICE EQUIPMENT AND PANELBOARDS)
    - b. LIGHT FIXTURES
    - c. DISCONNECTS (INCLUDING FUSE SELECTIONS IF APPLICABLE)
- **FAULT CURRENT LETTER**
  1. SUBMIT FAULT CURRENT LETTER FROM ELECTRICAL UTILITY INDICATING MAXIMUM AVAILABLE FAULT CURRENT AT POINT OF DELIVERY.
- **SHOP DRAWINGS AND EQUIPMENT LISTS**
  1. SHOP DRAWINGS OF THE ELECTRICAL EQUIPMENT

COMcheck Software Version 4.1.5.3

Exterior Lighting Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	MONTGOMERY HALL PARK
Project Type:	New Construction
Exterior Lighting Zone	2 (Residential mixed use area (LZ2))

Construction Site: MONTGOMERY AVE STAUNTON, VA 24401

Owner/Agent:

Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Tennis Courts (Outdoor sales area/lot)	40729 ft2	0.25	Yes	10182
			Total Tradable Watts (a) =	10182
			Total Allowed Watts =	10182
			Total Allowed Supplemental Watts (b) =	600

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Tennis Courts (Outdoor sales area/lot 40729 ft2): Tradable Wattage				
LED 6: P: Site light single head: Other:	1	32	320	10240
			Total Tradable Proposed Watts =	10240

Exterior Lighting PASSES: Design 5% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2015 IECC requirements in COM*check* Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

Project Title: MONTGOMERY HALL PARK
Data filename: Untitled.cck

Report date: 10/15/21
Page 1 of 5

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GENERAL NOTES

INTENT OF THE DRAWINGS

1. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND SHOW THE GENERAL LOCATION OF PIPING, AND EQUIPMENT. THE DRAWINGS DO NOT SHOW ALL NECESSARY OFFSETS, TRANSITIONS, AND ADJUSTMENTS NECESSITATED BY COORDINATION WITH OTHER TRADES. THE COST OF ALL OFFSETS, TRANSITIONS, AND ADJUSTMENTS NECESSITATED BY COORDINATION WITH OTHER TRADES SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

COORDINATION WITH OTHER TRADES

1. EXAMINE AND REVIEW THE CONTRACT DOCUMENTS OF ALL DIVISIONS OF THE SPECIFICATIONS IN ORDER TO COORDINATE THE INSTALLATION OF WORK.
2. USE DIMENSIONED ARCHITECTURAL AND STRUCTURAL CONTRACT DRAWINGS TO VERIFY THE SPACE NECESSARY FOR LOCATING PIPING, DUCTWORK, AND EQUIPMENT. USE FIELD MEASUREMENTS TO VERIFY DIMENSIONS WHERE AREAS ARE CONGESTED, AND EXACT LOCATION IS CRITICAL TO ASSURE PROPER INSTALLATION.
3. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, VERIFYING THE LOCATION AND SIZE OF OPENINGS IN FLOORS, WALLS, PARTITIONS, CEILINGS, AND ROOFS WITH THE INSTALLING TRADES; ALLOCATION OF SPACE WITH OTHER TRADES INSTALLING WORK IN CHASES, SHAFTS, CEILING INTERSTITIAL SPACES, AND EQUIPMENT SPACES; AND THE PHASING OF INSTALLATION WORK WITH THAT OF OTHER TRADES.

WORKMANSHIP

1. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER THAT PROVIDES A PROFESSIONAL, COMPLETE INSTALLATION.

EQUIPMENT

1. CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, THE SPECIFICATIONS, AND APPROVED SHOP DRAWINGS FOR EACH PIECE OF EQUIPMENT.
2. PROVIDE SERVICE AND OPERATING CLEARANCES AROUND ALL SIDES OF EACH PIECE OF EQUIPMENT IN ACCORDANCE WITH CODE AND THE MANUFACTURER'S PRINTED REQUIREMENTS AND RECOMMENDATIONS.

PIPING

1. PROVIDE ALL PIPING IN ACCORDANCE WITH THE SPECIFICATIONS; THE PIPING PLANS AND DETAILS; AND THE PIPE INSULATION SCHEDULE.
2. PIPING SCHEMATICS AND DIAGRAMS SHOW ONLY THE BASIC FLOW PATTERN AND EQUIPMENT ARRANGEMENT, AND DO NOT SHOW ALL TERMINAL EQUIPMENT CONNECTED TO THE SYSTEM. REFER TO THE PLANS AND SECTIONS FOR DETAILED SYSTEM LAYOUT.

SLEEVES

1. DIMENSIONED AND COORDINATED SHOP DRAWINGS INDICATING THE LOCATION AND SIZE OF ALL SLEEVES AND CAST IN PLACE ITEMS NECESSARY FOR ALL WORK REQUIRED SHALL BE FURNISHED TO THE PRE-CAST CONCRETE FABRICATOR BEFORE THE FABRICATION OF THE PRE-CAST CONCRETE WORK.

PRODUCT SUBMITTALS

1. WHERE A PRODUCT IS SUBMITTED THAT IS NOT THE BASIS OF DESIGN (WHETHER STATED IN THE DOCUMENTS OR NOT), COORDINATE THE DIFFERENCES IN THE PRODUCT THAT IMPACT OTHER TRADES WITH THE AFFECTED TRADES. THE COST IMPACT ON OTHER TRADES RESULTING FROM A PRODUCT SUBMITTAL THAT IS NOT THE BASIS OF DESIGN SHALL BE INCLUDED IN THE CONTRACTOR'S PRICE AND SHALL NOT BE PASSED ON TO THE OWNER.

CORE DRILL

1. GROUND PENETRATING RADAR SHALL BE PERFORMED PRIOR TO ALL CORE DRILLING TO CONFIRM LOCATIONS OF ALL UNDERGROUND DRAINAGE/PIPING.

HVAC

1. THE PLUMBING CONTRACTOR SHALL NOT BE RESPONSIBLE FOR THE INSTALLATION OF CONDENSATE PIPING FOR HVAC EQUIPMENT.
2. THE PLUMBING CONTRACTOR SHALL INSTALL DRAINS AS SPECIFIED IN THIS DRAWING SET FOR THE DISPOSAL OF CONDENSATE.
3. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDENSATE PIPING ATTACHED TO HVAC EQUIPMENT.

FIRE SPRINKLER

1. CONTRACTOR SHALL INCLUDE BASE BID PROVISIONS FOR A SPRINKLER DRAIN CONNECTION WITH 40' PVC (INCLUDING SAW CUTTING AND BACK FILLING AS REQUIRED) EXTENDING AND CONNECTING INTO THE BUILDING DRAIN SYSTEM. FINAL DRAIN LOCATION WILL BE PROVIDED ONCE FIRE SPRINKLER SHOP DRAWINGS HAVE BEEN SUBMITTED.

CODE DATA

BUILDING CODES AND STANDARDS
ICC/ANSI 117.1-2009
2015 VIRGINIA BUILDING CODE

MEP SPECIFIC CODES AND STANDARDS
2015 VIRGINIA PLUMBING CODE (VPC)
2015 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VA USBC)

PLUMBING ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AAV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ANT	ACID NEUTRALIZATION TANK
AP	ACCESS PANEL
APPROX	APPROXIMATE OR APPROXIMATELY
ARCH	ARCHITECT OR ARCHITECTURAL
ASJ	ALL SERVICE JACKET
AUTO	AUTOMATIC
AV	ACID VENT
AW	ACID WASTE
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
C OR °C	DEGREES CELSIUS
C.I.	CAST-IRON
CA	COMPRESSED AIR
CBV	CALIBRATED BALANCING VALVE
CL	CENTERLINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COMB	COMBINATION
COMP	COMPRESSOR
COND	CONDENSATE
CONN	CONNECT OR CONNECTION
Cv	COEFFICIENT, VALVE FLOW
CW	COLD WATER
DEG	DEGREE
DELTA P	PRESSURE DROP
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EACH
EFD	EMERGENCY FLOOR DRAIN
ELEV	ELEVATION
EQUIP	EQUIPMENT
EXIST OR (E)	EXISTING
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FLEX	FLEXIBLE
FLEX CONN	FLEXIBLE CONNECTION
FOV	FULL OPEN VALVE
FW	FILTERED WATER
GPM	GALLONS PER MINUTE
GW	GREY WATER
H2O	WATER
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RETURN
Hz	HERTZ
INSUL	INSULATION
MAX	MAXIMUM
MIN	MINIMUM
OSD	OPEN SITE DRAIN
PRESS	PRESSURE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RAD	RADIUS
REQD	REQUIRED
SOV	SHUT OFF VALVE
TEMP	TEMPERATURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VENT
VERT	VERTICAL
VTR	VENT THRU ROOF
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER

LEGEND

- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RETURN
- FILTERED WATER
- SOIL OR WASTE
- VENT PIPING
- STORM PIPING
- CONDENSATE PIPING
- GAS PIPING
- BRANCH, SIDE CONNECTION
- CAP
- PIPING TURNING DOWN
- PIPING TURNING UP THROUGH FLOOR OR ROOF ABOVE
- POINT OF DEMOLITION
- POINT OF CONNECTION
- EGRESS PATHWAY (FOR REFERENCE ONLY)
- 1 HR RATED FIRE WALL (WHEN DRAWN OVER WALLS)
- 6 — PLAN NOTE. SEE PLAN NOTE SCHEDULE.
- 15 WSFU / 5.1 FPS — WATER BRANCH TAG INDICATING WATER SUPPLY FIXTURE UNIT & FLOW PER SECOND
- S / 1 / 3" / 18 — DRAINAGE STACK(S), WATER RISER(C,H,HR), OR VENT STACK (V); TAG NUMBER; PIPE SIZE IN INCHES / FIXTURE UNITS

PLUMBING DRAWING INDEX

SHEET NUMBER	SHEET NAME
P0.01	LEGEND, NOTES, & ABBREVIATIONS
P0.02	LOADS & RISER DIAGRAMS
P1.10	PLUMBING PLANS

PLUMBING BULLETIN LIST

SHEET NUMBER	COMMENT NUMBER	COMMENT
BULLETIN A		
P0.01	1	DRAWING INDEX HAS BENN UPDATED.
P0.01	2	UPDATED GENERAL NOTES
P0.02	3	UPDATED WATER METER DETAIL.
P0.02, P1.10	4	DCW PIPE SIZE HAS BEEN UPDATED TO 3/4". UPDATED IN FLOOR PLAN AND RISER DIAGRAM.
P0.02, P1.10	5	RPZ SIZE HAS BEEN UPDATED TO 3/4". UPDATED IN FLOOR PLAN AND RISER DIAGRAM.
BULLETIN B		
P0.02, P1.10	1	REMOVED RPZ FROM PLANS.
P1.10	2	REMOVED RPZ DETAILS FROM PLANS.

TAKE NOTE BEFORE ANY WORK IS STARTED OR EQUIPMENT IS PURCHASED:

SCHEDULE OF REQUIRED SUBMITTALS

PRE-CONSTRUCTION ACTION SUBMITTALS

ANY WORK COMPLETED OR EQUIPMENT THAT IS PURCHASED PRIOR TO THE SUBMISSION AND APPROVAL OF THESE SUBMITTALS SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR.

NOTE: DESIGN IS CONTINGENT ON HAVING THE FOLLOWING INFORMATION. IT IS THE RESPONSIBILITY OF THE CLIENT TO ENSURE THAT THIS INFORMATION IS GATHERED AND SUBMITTED TO THE ENGINEER IN A TIMELY MANNER. TO WAIVE ANY OF THESE REQUIREMENTS, THE CONTRACTOR AND THE OWNER SHALL REQUEST IN WRITING AND RECEIVE APPROVAL FROM THE ENGINEER OF RECORD.

EXISTING CONDITIONS DISCLAIMER: THIS DESIGN WAS COMPLETED WITH SOME ASSUMPTIONS ABOUT THE EXISTING CONDITIONS WITHIN THE SPACE. PERMITZIP DOES NOT COMPLETE COMPREHENSIVE AS-BUILTS PRIOR TO DESIGN WORK AND WILL NOT GUARANTEE THAT THE EXISTING CONDITIONS MATCH THE ASSUMPTIONS MADE IN THIS DRAWING SET.

- **FLOW TEST**
  - A. FLOW TEST SHALL BE COORDINATED BETWEEN DPU OPERATIONS AND THE PERFORMING CONTRACTOR.
  - B. FLOW TEST SHALL CONFORM TO THE RECOMMENDED METHOD IN NFPA 291.
  - C. ALL FLOW TEST RESULTS SHALL BE DELIVERED TO THE ENGINEER FOR REVIEW PRIOR TO ROUGH IN.

- **FINISHED FLOOR ELEVATIONS**
  - A. A SKETCH SHALL BE SUBMITTED SHOWING THE FINISHED FLOOR ELEVATIONS.

- **PRODUCT DATA**
  - A. THE ENGINEER SHALL BE PROVIDED WITH CUT SHEETS OF THE FOLLOWING ITEMS FOR REVIEW:
    - a. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER
    - b. ALL POINT OF USE BACKFLOW PREVENTERS
    - c. ALL FIXTURES OR EQUIPMENT THAT IS REQUIRED TO HAVE A BACKFLOW PREVENTION METHOD ACCORDING TO THE FIXTURE SCHEDULE.

CLOSE-OUT SUBMITTALS

THE FOLLOWING CLOSEOUT DOCUMENTATION IS REQUIRED PRIOR TO ENGAGING PERMITZIP FOR ANY CONSTRUCTION ADMINISTRATION RELATED TO THE PERFORMANCE OF INSTALLED PLUMBING SYSTEMS WITHIN THE SCOPE OF THIS CONSTRUCTION DOCUMENT.

CLOSEOUT NOTE: PERMITZIP IS NOT RESPONISIBLE FOR REVIEWING, TROUBLESHOOTING, OR INVESTIGATING ANY PART OF THE SYSTEMS DESIGNED HEREIN. THE STARTUP AND COMMISSIONING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INSTALLING THE SYSTEM. THE CONTRACT SHALL COMPLETE THE FOLLOWING CLOSE-OUT WORK PRIOR TO CERTIFICATE OF OCCUPANCY AND SUBMIT TO PERMITZIP FOR REVIEW NO LATER THAN FOUR WEEKS AFTER CERTIFICATE OF OCCUPANCY IS ACHIEVED. FAILURE TO SUBMIT ON TIME WILL RESULT IN OUT-OF-SCOPE SUBMITTAL REVIEW AND WILL BE BILLED TO THE SUBMITTING PARTY AT THE HOURLY RATE OF $225 PER HOUR FOR ALL REVIEWS AND PROJECT-RELATED QUESTIONS AFTER THIS PERIOD OF TIME HAS EXPIRED.

- **TESTING & COMMISSIONING**
  - A. PRIOR TO WALLS AND TRENCHES BEING CLOSED, OR ANY OTHER FINISHING WORK WHICH, UPON COMPLETION, WOULD HINDER ACCESS TO ANY PART OF THE PLUMBING SYSTEM IN THIS PLAN, COMMISSIONING SHALL BE COMPLETED FOR EACH ELEMENT OF THE DESIGNED SYSTEM.
    - a. CONTRACTOR SHALL PERFORM TESTING AND COMMISSIONING OR SHALL INCLUDE IN PRICING THE FEE TO HIRE A PROFESSIONAL COMMISSIONING ENGINEER.
    - b. COMMISSIONING SHALL ENCOMPASS ALL NEW WORK COMPONENTS OF THE DESIGN IN THIS CONSTRUCTION DOCUMENT.
    - c. REPORT SHALL BE PROVIDED TO THE DESIGN ENGINEER OF RECORD AND OWNER SHOWING THE PERFORMANCE OF EACH DESIGN COMPONENT OF THE PLUMBING AND GAS SYSTEMS.
    - d. IN THE EVENT THAT ANY PART OF THE NEW WORK DESIGN IS FOUND TO BE UNABLE TO ACHEIVE THE PERFORMANCE INTENDED IN THE DESIGN DOCUMENTS, STEPS SHALL BE TAKEN TO REMEDY THE ISSUE PRIOR TO FINISHING WORK THAT MAY HINDER ACCESS TO COMPONENTS OF THE DESIGN.
    - e. THE ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR ANY PERFORMANCE ISSUES IN SYSTEM COMPONENTS THAT WERE NOT INSTALLED AS DESIGNED.
- HANDOFF
  1. CONTRACTOR SHALL BE RESPONSIBLE FOR PACKAGING ALL OWNERS MANUALS, WARRANTIES, COMMISSIONING REPORTS AND OTHER DOCUMENTATION RELATED TO THE EQUIPMENT THAT WAS PURCHASED AND INSTALLED. THIS DOCUMENT PACKAGE SHALL BE HANDED OFF TO THE OWNER OR OWNER REPRESENTATIVE UPON COMPLETION OF TESTING AND COMMISSIONING.

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COMMONWEALTH OF VIRGINIA
BENJAMIN MICHAEL RICKEY
Lic. No. 0402059426
02/28/2022
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

BUILDING DATA

MONTGOMERY HALL PARK
MONTGOMERY AVE,
STAUNTON, VA 24401

PROJECT NO: 21.4379

28 FEBRUARY 2022

LEGEND, NOTES, & ABBREVIATIONS

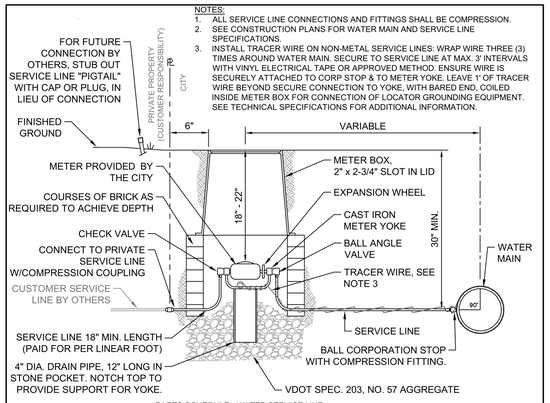
P0.01

As indicated

Positive Displacement Meters

METER SIZE	MODEL	AWWA NORMAL FLOW (gpm)	AWWA MINIMUM FLOW (gpm)	AWWA CONTINUOUS FLOW (gpm)	LAYING LENGTH (inches)	PRESSURE LOSS (psi @ gpm)
¾" & ⅝" x ¾"	SRII	1-20	¼	10	7½	7.0 @ 20
¾" & ¾" x 1"	SRII	2-30	½	15	9-7½ *	9.0 @ 30
1"	SRII	3-50	¼	25	10¼	7.3 @ 50
¾" & ⅝" x ½"	SR	1-20	¼	10	7½	10.8 @ 20
¾" & ¾" x 1"	SR	2-30	½	15	9-7½ *	11.0 @ 30
1" & 1" x 1¼"	SR	3-50	¾	25	10¾	10.9 @ 50
1½"	SR	5-100	1½	50	12¾-13 **	11.4 @ 100
2"	SR	8-160	2	80	15¼-17 **	12.1 @ 160

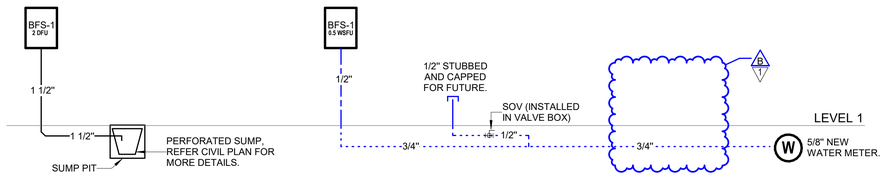
* Short version
** Flanged end version



PARTS SCHEDULE - WATER SERVICE LINE

PART DESCRIPTION	MANUFACTURER	MODEL# for METER SIZE INDICATED			
		5/8"	3/4"	1"	
CORP STOP	FORD	FB1001-3-G-NL		FB1001-4-G-NL	
	MUELLER	B-25009N 3/4"		B-25009N 1"	
	A.Y. McDONALD	74701B-3Q 3/4"		74701B-3Q 1"	
BALL ANGLE VALVE	FORD	BA94-313W-G-NL	BA94-323W-G-NL	BA94-444W-G-NL	
	MUELLER	B-24273-N 5/8"	B-24273-N 3/4"	B-24273-N 1"	
	A.Y. McDONALD	74642BYG 3/4"x5/8"	74642BYG 3/4"	74642BYG 1"	
CAST IRON METER YOKE	FORD	Y501	Y503	Y504	
	MUELLER	5010	H5030	H5040	
	A.Y. McDONALD	14-1	14-3	14-4	
EXPANSION WHEEL	FORD	EC-1-NL	EC-23-NL	EC-4-NL	
	MUELLER	H-14234-5/8"	H-14234-3/4"	H-14234-1"	
	A.Y. McDONALD	714-1EHG	714-2EHG	714-4EHG	
ANGLE CHECK VALVE	FORD	HHCA94-313-G-NL	HHCA94-323-G-NL 3/4"	HHCA94-444-G-NL	
	MUELLER	H-14466-AN 5/8"x3/4"	H-14466-AN 3/4"	H-14466-AN 1"	
	A.Y. McDONALD	712-3YT 23	712-3YT 33	712-3YT 44	
COMPRESSION UNION	FORD	C44-33-4-75-G-NL		C44-44-G-NL	
	MUELLER	H-15409N 3/4"		H-15409N 1"	
	A.Y. McDONALD	74758-11 3/4"		74758-11 1"	
COMPRESSION WYE: 1" x 3/4" x 3/4"	FORD	Y44-243-G-NL		(TYPE III CONNECTION ONLY)	
	MUELLER	H-15354N			
	A.Y. McDONALD	708YSQZ 1x3/4"			
METER BOX	CAPITAL FOUNDRY of VA	MBX3130		N/A	NOT TO SCALE
	DFW	N/A		1324C-18MAFDEEP	

1.01 - WATER SERVICE, METER, AND DISTRIBUTION PIPE SIZING DETAIL



1 SANITARY & WATER RISER DIAGRAM
SCALE: NONE

PLUMBING FIXTURE SCHEDULE

NOTE: SHUT OFF VALVES SHALL BE PROVIDED FOR ALL DOMESTIC COLD WATER AND DOMESTIC HOT WATER SUPPLY LINES FOR EACH FIXTURE. SHUT OFF VALVES SHALL BE ACCESSIBLE.

FIXTURE ID	QTY	FIXTURE	PLUMBING CONNECTIONS			TEMPERED WATER METHOD	BACKFLOW PREVENTION METHOD	WATER HAMMER METHOD	REMARKS
			WATER CONNECTION		DRAIN CONNECTION				
			CW	HW					
NEW WORK									
BFS-1	1	BOTTLE FILLER STATION	1/2"	0"	1 1/2"				MODEL No. LK4420BF1UDBFRK - ELKAY OUTDOOR ezH2O UPPER BOTTLE FILLING STATION BI-LEVEL PEDESTAL WITH PET STATION, NON-FILTERED, NON -REFRIGERATED FREEZE RESISTANT .PROVIDED WITH SANITARYFR3 VALVE.
NEW WORK: 1	1								

PLUMBING PIPING SYSTEM SCHEDULE

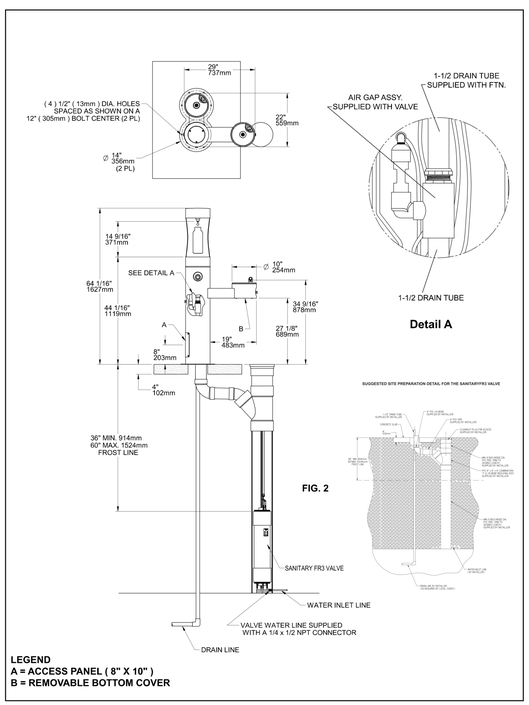
SYSTEM	ABOVE GROUND	BELOW GROUND	JOINT METHOD	STANDARDS AND REMARKS
DOMESTIC WATER	CPVC	CPVC	JOINTS SHALL BE MADE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S INSTALLATION INSTRUCTIONS.	PIPING SHALL COMPLY WITH ASTM 2846, ASTM F 441, AND ASTM F 442.
SANITARY/VENT	PVC	PVC	PURPLE COLORED PRIMER CONFORMING TO ASTM F 656 SHALL BE APPLIED TO CLEAN, DRY JOINTS. SOLVENT CEMENT SHALL NOT BE PURPLE AND SHALL CONFORM WITH ASTM D 2564,CSA B137.3, CSA B181.2, OR CSA B182.1. JOINT SHALL CONFORM WITH ASTM D 2855.	PIPING SHALL CONFORM WITH ASTM D 2665, ASTM F 891, ASTM F 1488.

PIPING NOTES

1. PIPING SHALL ADHERE TO THIS SPECIFICATION UNLESS OTHERWISE NOTED IN THE PLANS. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ANY PIPING WHICH DOES NOT MATCH THIS SPECIFICATION.
2. AS PER VPC 2015 -305.4 , WATER SUPPLY SYSTEM PIPE SHALL BE LAID UNDERGROUND NOT LESS THAN 6 INCHES BELOW FROST LINE AND NOT LESS THAT 12 INCHES BELOW GRADE.
3. TRENCHING, EXCAVATION AND BACKFILL SHALL COMPLY VPC 2015 - SECTION 306.

PLUMBING LOAD CALCULATIONS

FIXTURE ID	QTY	FIXTURE	DEMAND CALCULATIONS							
			WATER						DRAINAGE	
			COLD	TOTAL COLD	HOT	TOTAL HOT	TOTAL	TOTAL WSFU	DFU	TOTAL DFU
BFS-1	1	BOTTLE FILLER STATION	0.75	0.75	0	0	0.75	0.75	2	2
: 1	1			0.75		0		0.75		2

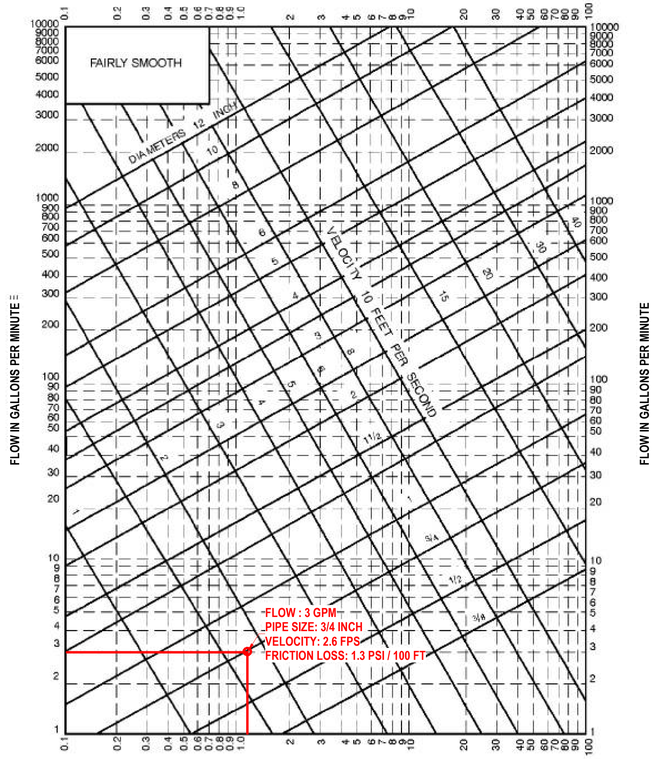


LEGEND
A = ACCESS PANEL (8" X 10")
B = REMOVABLE BOTTOM COVER

6.06 BOTTLE FILLER STATION WITH PET FOUNTAIN

NOTE: REFER TO MANUFACTURER SHEET FOR MORE DETAILS
NOT TO SCALE

FRICTION LOSS POUNDS PER SQUARE INCH HEAD PER 100 FEET LENGTH



For SI: 1 inch= 25.4 mm, 1 foot= 304.8 mm, 1 gpm= 3.785 L/m, 1 psi= 6.895 kPa, 1 foot per second= 0.305 m/s
a. This chart applies to smooth new steel (fairly smooth) pipe and to actual diameters of standard- weight pipe.

1.03 - FRICTION LOSS IN FAIRLY SMOOTH PIPE

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COMMONWEALTH OF VIRGINIA
BENJAMIN MICHAEL RICKEY
Lic. No. 0402059426
02/28/2022
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE
A	BULLETIN A	DECEMBER 01, 2021
B	BULLETIN B	FEBRUARY 28, 2022

BUILDING DATA

MONTGOMERY HALL PARK

MONTGOMERY AVE,
STAUNTON, VA 24401

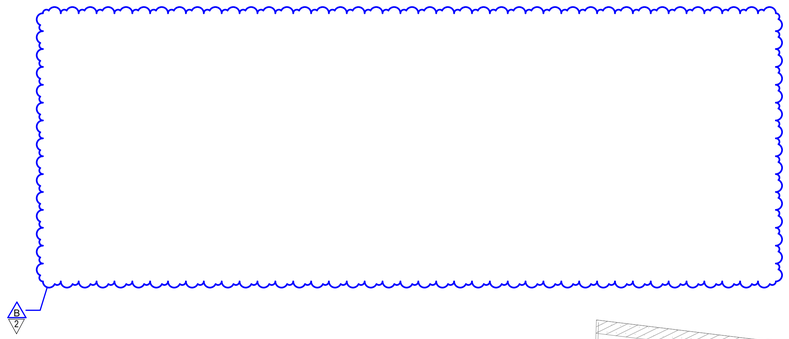
PROJECT NO: 21.4379

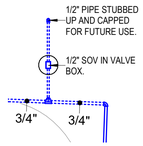
28 FEBRUARY 2022

LOADS & RISER DIAGRAMS

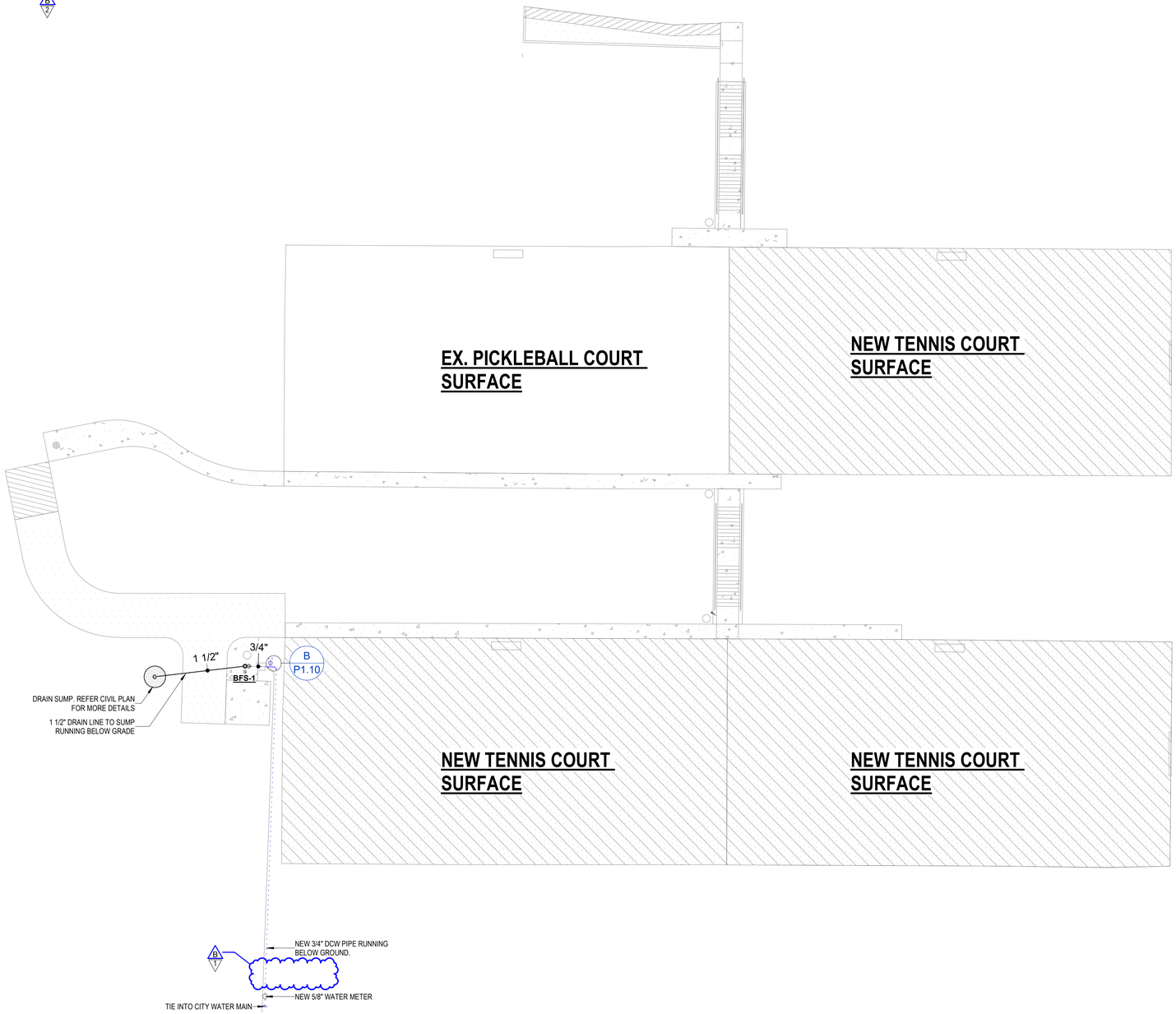
P0.02

As indicated





B
P1.10
ENLARGED VIEW - FUTURE TAP OFF
1/2" = 1'-0"



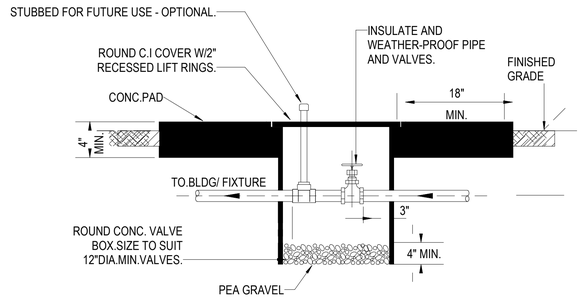
1 LEVEL 1 - PLUMBING PLAN
1/16" = 1'-0"

WATER SUPPLY DRAFTING LEGEND

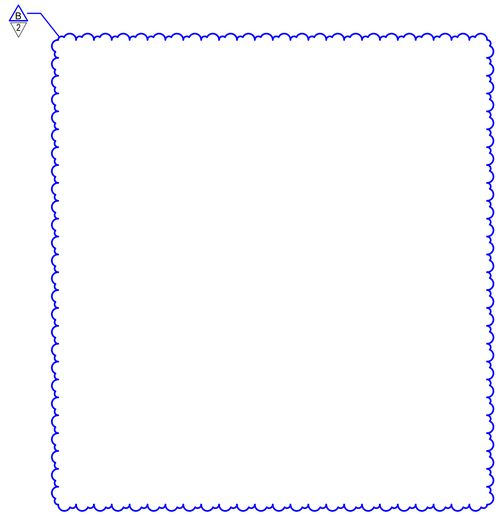
EXISTING WATER PIPE:	DCW	
WATER PIPES UNDER SLAB:	DCW	
DISTRIBUTION WITHIN UNITS (DOWNSTREAM OF SOV):	DCW	
MAIN DISTRIBUTION PIPE :	DCW	

SANITARY DRAFTING LEGEND

SANITARY WASTE PIPE:	



2.03 VALVE BOX DETAIL
SCALE: NONE



GRAPHIC SCALE: 1 INCH = 16 FEET
0' 16' 32' 48' 64'

permitZIP
3412 W Leigh St, Richmond, VA 23230 > 833-TWO-WEEK > www.permitzip.com

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COMMONWEALTH OF VIRGINIA
BENJAMIN MICHAEL RICKEY
Lic. No. 0402059426
02/28/2022
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE
B	BULLETIN B	FEBRUARY 28, 2022

BUILDING DATA

MONTGOMERY HALL PARK
MONTGOMERY AVE,
STAUNTON, VA 24401

PROJECT NO: 21.4379

28 FEBRUARY 2022

PLUMBING PLANS

P1.10
As indicated