KANSAS CITY KANSAS PUBLIC SCHOOLS / USD 500

PURCHASING OFFICE | 2010 N. 59TH STREET | ROOM 370 \ KANSAS CITY, KS 66104

WEB SITE: WWW.KCKPS.ORG/PURCHASING

WYANDOTTE HIGH SCHOOL RENOVATIONS

BID NO:	**IFB 24-010**	**ISSUE DATE:**	**2/15/2024**

Kansas City Kansas Public Schools will receive sealed bids, on this form at the Purchasing Office, 2010 N. 59th Street, Room 370, Kansas City, KS 66104 until **2:00PM, 3/12/2024**, at which time bids received will be publicly opened and read, all in accordance with bid instructions, specifications and/or bid conditions attached hereto or as shown below.

Contact/Technical Contact:
[Enter Contact Name] | [Enter Contact Phone No.] | eMail: [Enter Contact Email]

BID INSTRUCTIONS:

FAXED BIDS WILL NOT BE ACCEPTED / EMAILED BIDS WILL NOT BE ACCEPTED.

Per attached specifications listed in this invitation to bid. Bidders must specify unit price on services/rates/deliverables on the Bid Form or bid may be determined to be non-responsive.

- Pricing shall be FOB Kansas City, KS (All freight and fuel charges must be included in the bid price).
- Award will be to ONE Contractor per each Scope of Work.
- The District reserves the right to reject any or all bids, to waive any informalities, irregularities or technical defects in bids, and unless otherwise specified by the District to accept any item or groups of items in the bid, as may be in the best interest of the District.
- Time (days, weeks, etc.) required for delivery is a significant consideration with respect to this award process. The time required for delivery must be indicated in the space provided or your bid may be found non-responsive and may not be considered.
- Bid shall include copies of pertinent warranty information pertaining to the product or service offered. The bidder agrees that equipment furnished under any resultant purchase order issued by Kansas City Kansas Public Schools shall be covered by commercial warranties the contractor gives to any customer for such supplies. All warranty information and certificates shall be furnished and become the property of the District upon delivery and acceptance of said items and/or the contractor must honor services and all rights and remedies stated in the warranties.
- All items are new manufacture unless otherwise specifically stated in this bid.
- All products must have passed the first line quality standard as set by the manufacturer and no seconds, blemished articles or items having defective workmanship are included.
- Bid may not be considered if a service charge, minimum dollar or minimum quantity order is applied.
- The outcome of this bid will be posted on the District's Purchasing site www.kckps.org/purchasing under Awards Section and will include a bid tabulation/summary.
- Bidder shall acknowledge all addenda for this bid and include the form acknowledgements with their bid.

SUMMARY OF WORK:
It is the intent of the Kansas City Kansas Public Schools, Kansas City, Kansas to enter into an agreement for Site Improvements and Interior Renovations to Wyandotte High School. KCKPS reserves the right to increase or decrease the approximate amount at each site as needed.

Copies of the bid must be submitted in a sealed envelope with the Wyandotte High School Renovations on the envelope. Any bid form that does not include a separate dollar value for each item will be deemed non-responsive and will not be considered. Any proposal that lists, "$0", or "no bid" in lieu of a dollar value will be deemed non-responsive and will not be considered.

All work will begin by June 3rd, 2024 and is to be completed prior to August 2nd, 2024.

PRE-BID MEETING

A pre-bid meeting will be held: 2/28/2024 @ 1:00PM

Wyandotte High School – Meet at NW Corner of East Parking Lot
2501 Minnesota Ave.
Kansas City, Kansas 66102

Travel to various sites for "walk-thru" will follow the pre-bid meeting. Attendance is recommended, but not mandatory.

Bid Security
Bid Bond: Bid security shall be submitted with each bid in the amount of five percent (5%) of the bid amount. No bids may be withdrawn for a period of sixty (60) days after opening of bids. Owner reserves the right to reject any and all bids and to waive informalities and irregularities.

Payment & Performance Bond: Bidder agrees to furnish a Payment & Performance Bond, in the amount of 100% (one hundred percent) of total contract value after receipt of contract, if the project value exceeds $100,000 per KSA 60-1111.

Prevailing Wage/Union
Prevailing Wage IS NOT required. There is no union labor requirement for this solicitation.

Time of Completion
Successful bidder shall begin the Work on receipt of the Notice to Proceed and shall complete the Work (Substantial Completion) no later than **August 2nd, 2024**.

Liquidated Damages
Completion of this project before August 2nd, 2024 is imperative. At the District's sole discretion, liquidated damages in the amount of [Enter amount of LDs in words] ($[Enter amount of LDs in numbers]) per calendar day will be assessed against the Contract if the project is not completed by the date indicated.

Clean-Up
The Contractor will keep the premises free from accumulations of debris and waste materials caused by its

employees in performance of the work. At completion of the project, Contractor shall remove all crating, packaging, waste and debris from the building and the site, and all tools, scaffolding and surplus materials, and shall leave the building and site "broom clean" or its equivalent.

Permits, Codes and Ordinances

Each Contractor shall file and pay for required permits affecting its work (if applicable). Each contractor shall conform to applicable codes and ordinances, including OSHA requirements.

Damage to District Property

Contractor at its own expense shall promptly remedy and repair all damages or loss to any property caused in whole or part by its employees, subcontractor(s), supplier or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable.

No Smoking: The District adheres to the mandatory "No Smoking" policy on school premises and/or at school functions. All bidders shall comply with this "No Smoking" policy.

INCLEMENT WEATHER OR EMERGENCY

IF THERE IS A BUILDING CLOSING THE DAY OF THE OPENING OF PROPOSALS DUE TO INCLEMENT WEATHER OR AN EMERGENCY, THE OPENING OF PROPOSALS WILL OCCUR AT 2:00PM (CENTRAL) THE NEXT BUSINESS DAY THE DISTRICT IS OPEN.

ATTACHMENT A – USD 500 STANDARD TERMS AND CONDITIONS

1. SCOPE: The following terms and conditions shall prevail unless otherwise modified by U.S.D. 500 within this bid document. U.S.D. 500 reserves the right to reject any bid which takes exception to these terms and conditions.
2. DEFINITIONS AS USED HEREIN:
   a. The term "bid request" means a solicitation of a formal sealed bid.
   b. The term "bid" means the price offered by the bidder.
   c. The term "bidder" means the offeror or Contractor.
   d. The term "U.S.D. 500" means Unified School District No. 500.
   e. The term "Board of Education" or "BOE" means the governing body of Unified School District No.500
3. COMPLETING BID: Bids must be submitted ONLY on the form provided in this bid document. All information must be legible. Any and all corrections and /or erasures must be initialed. Each bid sheet must be signed by the authorized bidder and required information must be provided.
4. CONFIDENTIALITY OF BID INFORMATION: Each bid must be sealed and submitted in or under cover of the enclosed envelope to provide confidentiality of the bid information prior to the bid opening. Supporting documents and/or descriptive literature may be submitted with the bid or in a separate envelope marked "Literature for Bid (Number)." Do NOT indicate bid prices on literature. All bids and supporting bid documents become public information after the bid opening and are available for inspection by the general public in accordance with the Kansas Open Records Act.
5. ACCURACY OF BID: Each bid is publicly opened and is made part of the public record of U.S.D. 500. Therefore, it is necessary that any and all information presented is accurate and/or will be that by which the bidder will complete the contract. If there is a discrepancy between the unit price and extended total, the unit price will prevail.
6. SUBMISSION OF BID: Bids are to be sealed and submitted to the Purchasing Department Office, 2010 North 59th Street, Room 370, Kansas City, Kansas, 66104, prior to the date and time indicated on the cover sheet.
7. ADDENDA: All changes in connection with this bid will be issued by the Purchasing Office in the form of a written addendum. Signed acknowledgement of receipt of each addendum must be submitted with the bid.
8. LATE BIDS AND MODIFICATION OR WITHDRAWALS: Bids received after the deadline designated in this bid document shall not be considered and shall be returned unopened.
9. BIDS BINDING: All bids submitted shall be binding upon the bidder if accepted by U.S.D. 500 within sixty (60) calendar days after the bid opening.
10. EQUIVALENT BIDS: When brand or trade names are used in the bid invitation, it is for the purpose of item identification and to establish standards for quality, style and features. Bids on equivalent items of substantially the same quality, style and features are invited unless items are marked "No Substitute." Equivalent bids must be accompanied by descriptive literature and/ or samples may be required and shall be supplied at no charge to the school district.
11. NEW MATERIALS, SUPPLIES AND EQUIPMENT: Unless otherwise specified, all materials, supplies or equipment offered by a bidder shall be new, unused, of recent manufacture, first class in every respect, and suitable for their intended purpose. All equipment shall be assembled and fully serviced, ready for operation when delivered.
12. WARRANTY: Supplies or services furnished as a result of this bid shall be covered by the most favorable commercial warranties, expressed or implied, that the bidder and/or manufacturer gives to any customer. The rights and remedies provided herein are in addition to and do not limit any rights afforded to U.S.D. 500 by any other clause of this bid reserves the right to request from bidders a separate manufacturer certification of all statements made in the Proposal.
13. METHOD OF AWARD AND NOTIFICATION: Bids will be analyzed and the award made to the lowest and best, responsive and responsible bidder(s) whose bid conforms to the specifications and whose bid is considered to be the best value in the opinion of U.S.D. 500.
14. U.S.D. 500 reserves the right to reject any or all bids and any part of a bid: to waive informalities, technical defects, and minor irregularities in bids received: and to award the bid on an item by item basis by specified groups of items or to consider bids submitted on an "all or nothing "basis if the bid is clearly designed as such or when it is determined to be in the best interest of U.S.D. 500.
15. The signed bid shall be considered an offer on the part of the bidder: such offer shall be deemed accepted upon the issuance by U.S.D. 500 of a Purchase Order or other contractual document.
16. DELIVERY TERMS: All deliveries shall be F.O.B. Destination and all freight charges shall be included in the bid price.
17. DAMAGED AND/OR LATE SHIPMENTS: U.S.D 500 has no obligation to accept damaged shipments and reserves the right to return at the Contractor's expense damaged merchandise even though the damage was not apparent or discovered until after receipt of the items. The Contractor is responsible to notify U.S.D. 500 Purchasing Office of any late or delayed shipments. U.S.D. 500 reserves the right to cancel all or any part of an order if the shipment is not made as promised.
18. CREDIT TERMS: Bidder shall indicate all discounts for full and/or prompt payment. Discounts shall be considered as a cost factor in the determination of award, except discounts offered for payment within less than ten (10) calendar days. Discounts offered shall be computed from date of receipt of correct invoice or receipt and acceptance of products, whichever is later.
19. SELLER'S INVOICE: Invoices shall be prepared and submitted in duplicate to address shown on the Purchase Order. Invoices shall contain the following information: Purchase Order number, contract number, item number, description of supplies or services, sizes, unit of measure, quantity, unit price and extended totals.
20. TAX EXEMPT: U.S.D. 500 is exempt from Federal, State and local taxes by KS-FZLEKBLQ. Sites of all transactions under the order(s) that shall be derived from this bid request shall be deemed to have been accomplished within the State of Kansas.
21. SAFETY: All practices, materials, supplies and equipment shall comply with the federal Occupational Safety and Health Act, as well as any pertinent Federal, State and/or local safety or environmental codes.
22. DISCLAIMER OR LIABILITY: U.S.D. 500 will not hold harmless or indemnify any bidder for any liability whatsoever.
23. TERMINATION RIGHTS: KCKPS shall have the right to terminate/cancel the Agreement for its convenience and without penalty upon thirty (30) days prior written notice to the Contractor.

24. HOLD HARMLESS: The Contractor agrees to protect, defend, indemnify and hold the Board of Education, its officers, employees and agents fee and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities or every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings or causes of action of every kind and character in connection with or arising directly or indirectly out of this agreement and/or the performance hereof. Without limiting the generality of the foregoing, any and all such claims, etc., relating to personal injury, infringement of any patent trademark, copyright (or application for any thereof) or of any other tangible or intangible personal or property right, or actual or alleged violation of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court, shall be included in the indemnity hereunder. The Contractor further agrees to investigate, handle, respond to, provide defense for and defend any such claims, etc., at his/her sole expense and agrees to bear all other costs and expenses related thereto, even if such claim is groundless, false or fraudulent.

NO MUTUAL INDEMNIFICATION:

K.S.A.72-8201a: Contracts; indemnification or hold harmless provisions, void.

(a) It is the public policy of the state of Kansas that all contracts entered into by the board of education of a school district, or any officers or employees thereof acting on behalf of the board, provide that the school district and board of education shall be responsible solely for the district's or board's actions or failure to act under a contract.

(b) The board of education of a school district or any officers or employees thereof acting on behalf of the board shall not have the authority to enter into a contract under which the school district or board agrees to, or is required to, indemnify or hold harmless against damages, injury or death resulting from the actions or failure to act on the part of any party to a contract other than the board or district.

(c) The provisions of any contract entered into in violation of this section shall be contrary to the public policy of the state of Kansas and shall be void and unenforceable.

25. INSURANCE: Upon receipt of award, Contractor shall provide Certificate of Insurance as required within three (3) days after notification issued by the Purchasing Department.

A. The following general insurance requirements apply to any and all work under this contract by all Contractors and subcontractors of any tier.

(1) Any and all insurance required by this contract with each and any and all insurance required by this contract shall be maintained during the entire length of this contract, including any extensions thereto, and until all work has been completed to the satisfaction of the Kansas City Kansas Public Schools. Any and all insurance must be on an occurrence basis.

(2) No Contractor or subcontractor shall commence work under a contract until all insurance requirements contained within the solicitation have been complied with and until evidence of all insurance requirements in each and every contract with each and every subcontractor of any tier and shall require the same to comply with all such requirements.

(3) The Kansas City Kansas Public Schools shall be covered as an Additional Insured under any and all insurance required by this contract. Confirmation of this shall appear on all certificates of insurance and on any and all applicable policies. The title of the awarded contract shall also appear on any and all applicable policies.

(4) The Kansas City Kansas Public Schools shall be given no less than thirty (30) days' written notice of cancellation. The Kansas City Kansas Public Schools shall be given not less than thirty (30) days' prior written notice of material changes of any insurance required under this contract. The Kansas City Kansas Public Schools shall be given written notice of renewal of coverage not less than thirty (30) days prior to the expiration of any particular policy.

(5) Each and every agent shall warrant when signing the certificate of insurance that he is acting as an authorized representative on behalf of the companies affording insurance coverage under the contract and that he is licensed by the State of Kansas to conduct insurance business in the State of Kansas and that the companies affording insurance coverage are currently licensed by the State of Kansas and are currently in good standing with the Commissioner of Insurance for the State of Kansas.

(6) Any and all companies providing insurance required by this contract shall meet the minimum financial security requirements as set forth below. The rating for each company must be indicated on the certificate of insurance.

For all contracts, regardless of risk, companies providing insurance under this contract must have a current:

(a) Best's Rating not less than A, and

(b) Best's Financial Size Category not less than Class VII

(7) In the event the Contractor neglects, refuses, or fails to provide insurance required by the contract documents, or if such insurance is canceled for any reason, Kansas City Kansas Public Schools shall have the right, but not the duty, to procure the same, and the cost thereof shall be deducted from monies then due or thereafter to become due to the Contractor or Kansas City Kansas Public Schools shall have the right to cancel the contract.

B. Worker's Compensation and Employer's Liability Insurance

The Contractor shall procure and maintain Worker's Compensation and Employer's Liability Insurance in the following limits. Such insurance is to cover each and every employee who is or may be engaged in work under this contract.

Worker's Compensation..... Statutory

Employer's Liability

Bodily Injury by Accident..... $1,000,000 each accident

Bodily Injury by Disease..... $1,000,000 each employee

Bodily Injury by Disease..... $1,000,000 policy limit

C. Comprehensive General Liability Insurance

The Contractor shall procure and maintain Comprehensive Insurance in an amount not less than $1,000,000 for bodily injury and property damage combined single limit. The following specific extensions of coverage shall be provided and indicated on the certificate of insurance:

(1) Comprehensive Form

(2) Contractual Insurance

(3) Personal Injury
(4) Broad Form Property Damage
(5) Premises – Operations
(6) Completed Operations

This coverage shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability under this contract. Policy coverage must be on an occurrence basis.

D. Automobile Liability Insurance

The Contractor shall procure and maintain Automobile Liability Insurance in an amount not less than $1,000,000 for bodily injury and property damage combined single limit. The following extensions of coverage shall be provided and indicated on the certificate of insurance.

(1) Comprehensive Form
(2) Owned, Hired, Leased and non-owned vehicles

If the Contractor does not own any vehicles in the corporate name, non-owned vehicles coverage shall apply and must be endorsed on either the Contractor's personal automobile policy or the Comprehensive General Liability coverage required under this contract.

E. Commercial Crime insurance (when applicable)

The Contractor shall procure and maintain Commercial Crime/Fidelity insurance in an amount not less than $1,000,000.00, including coverage for theft or loss of KCKPS property.

26. LAW GOVERNING: All contractual agreements shall be subject to, governed by, and construed according to the laws of the State of Kansas.
27. ANTI-DISCRIMINATION CLAUSE: No bidder on this request shall in any way, directly or indirectly, discriminate against any person because of age, race, color handicap, sex, national origin, or religious creed.
28. BID BOND/PERFORMANCE BOND (Applicable to Construction/Remodel/Repair Projects, Unless Waived by the District)
    A. Each proposal must be accompanied by a certified or cashier's check, or a bid bond in the amount of five percent (5%) of the Contractor's total bid.
    B. A Performance Bond and a Material and Labor Payment Bond in amounts equal to one hundred percent (100%) of the contract price shall be furnished by the successful bidder. Bonds shall be issued by a surety acceptable to the Board.
29. DISQUALIFICATION:
    A. The Director of Purchasing may, at her/his sole discretion, disqualify a bidder for one or any combination of the following reasons:
        1. Bidder's product does not meet the specifications or bid conditions of the solicitation;
        2. Bidder's tendered bid is not received on the District's bid form;
        3. Bidder's tendered bid is not signed;
        4. Required bid bond is not furnished at time of bid opening;
        5. Failure to comply with bid instructions, terms and conditions that are judged to be essential to the competitive process and in the best interests of the District.
    B. Disqualification of bidders on future bids may be considered for any one or combination of the following reasons:
        1. Refusal of the bidder to complete a contract or bid;
        2. Bidder's past history of late deliveries or partial/incomplete shipments,
        3. Bidder's products or services have proven unreliable, unworkable or have not accomplished the result requested in the District's specifications.
30. SUPPLIER DIVERSITY: The Kansas City Kansas Public Schools encourages supplier diversity and participation of MBE/WBE/DBE designated businesses. However, such participation will not result in any selection or scoring advantage in the bid evaluation process.

INCLEMENT WEATHER OR EMERGENCY

IF THERE IS A BUILDING CLOSING THE DAY OF THE OPENING OF PROPOSALS DUE TO INCLEMENT WEATHER OR AN EMERGENCY, THE OPENING OF PROPOSALS WILL OCCUR AT 2:00PM (CENTRAL) THE NEXT BUSINESS DAY THE DISTRICT IS OPEN.

ATTACHMENT B – CONTRACTUAL PROVISIONS ATTACHMENT

Important: This form contains mandatory contract provisions and must be attached to or incorporated in all copies of any contractual agreement. If it is attached to the vendor/contractor's standard contract form, then that form must be altered to contain the following provision:

"The Provisions found in Contractual Provisions Attachment (Form DA-146a, Rev. 06-12), which is attached hereto, are hereby incorporated in this contract and made a part thereof."

The parties agree that the following provisions are hereby incorporated into the contract to which it is attached and made a part thereof, said contract being the date of the Purchase Order issued.

1. **Terms Herein Controlling Provisions**: It is expressly agreed that the terms of each and every provision in this attachment shall prevail and control over the terms of any other conflicting provision in any other document relating to and a part of the contract in which this attachment is incorporated. Any terms that conflict or could be interpreted to conflict with this attachment are nullified.

2. **Kansas Law and Venue**: This contract shall be subject to, governed by, and construed according to the laws of the State of Kansas, and jurisdiction and venue of any suit in connection with this contract shall reside only in courts located in the State of Kansas.

3. **Termination Due to Lack of Funding Appropriation**: If, in the judgment of the Director of Accounts and Reports, Department of Administration, sufficient funds are not appropriated to continue the function performed in this agreement and for the payment of the charges hereunder, State may terminate this agreement at the end of its current fiscal year. State agrees to give written notice of termination to contractor at least thirty (30) days prior to the end of its current fiscal year, and shall give such notice for a greater period prior to the end of such fiscal year as may be provided in this contract, except that such notice shall not be required prior to ninety (90) days before the end of such fiscal year. Contractor shall have the right, at the end of such fiscal year, to take possession of any equipment provided State under the contract. State will pay to the contractor all regular contractual payments incurred through the end of such fiscal year, plus contractual charges incidental to the return of any such equipment. Upon termination of the agreement by State, title to any such equipment shall revert to contractor at the end of the State's current fiscal year. The termination of the contract pursuant to this paragraph shall not cause any penalty to be charged to the agency or the contractor.

4. **Disclaimer of Liability**: No provision of this contract will be given effect that attempts to require the State of Kansas or its agencies to defend, hold harmless, or indemnify any contractor or third party for any acts or omissions. The liability of the State of Kansas is defined under the Kansas Tort Claims Act (K.S.A. 75-6101 et seq.).

5. **Anti-Discrimination Clause**: The contractor agrees: (a) to comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 et seq.) and the Kansas Age Discrimination in Employment Act (K.S.A. 44-1111 et seq.) and the applicable provisions of the Americans With Disabilities Act (42 U.S.C. 12101 et seq.) (ADA) and to not discriminate against any person because of race, religion, color, sex, disability, national origin or ancestry, or age in the admission or access to, or treatment or employment in, its programs or activities; (b) to include in all solicitations or advertisements for employees, the phrase "equal opportunity employer"; (c) to comply with the reporting requirements set out at K.S.A. 44-1031 and K.S.A. 44-1116; (d) to include those provisions in every subcontract or purchase order so that they are binding upon such subcontractor or vendor; (e) that a failure to comply with the reporting requirements of (c) above or if the contractor is found guilty of any violation of such acts by the Kansas Human Rights Commission, such violation shall constitute a breach of contract and the contract may be cancelled, terminated or suspended, in whole or in part, by the contracting state agency or the Kansas Department of Administration; (f) if it is determined that the contractor has violated applicable provisions of ADA, such violation shall constitute a breach of contract and the contract may be cancelled, terminated or suspended, in whole or in part, by the contracting state agency or the Kansas Department of Administration.

   Contractor agrees to comply with all applicable state and federal anti-discrimination laws.

   The provisions of this paragraph number 5 (with the exception of those provisions relating to the ADA) are not applicable to a contractor who employs fewer than four employees during the term of such contract or whose contracts with the contracting State agency cumulatively total $5,000 or less during the fiscal year of such agency.

6. **Acceptance of Contract**: This contract shall not be considered accepted, approved or otherwise effective until the statutorily required approvals and certifications have been given.

7. **Arbitration, Damages, Warranties**: Notwithstanding any language to the contrary, no interpretation of this contract shall find that the State or its agencies have agreed to binding arbitration, or the payment of damages or penalties. Further, the State of Kansas and its agencies do not agree to pay attorney fees, costs, or late payment charges beyond those available under the Kansas Prompt Payment Act (K.S.A. 75-6403), and no provision will be given effect that attempts to exclude, modify, disclaim or otherwise attempt to limit any damages available to the State of Kansas or its agencies at law, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

8. **Representative's Authority to Contract**: By signing this contract, the representative of the contractor thereby represents that such person is duly authorized by the contractor to execute this contract on behalf of the contractor and that the contractor agrees to be bound by the provisions thereof.

9. **Responsibility for Taxes**: The State of Kansas and its agencies shall not be responsible for, nor indemnify a contractor for, any federal, state or local taxes which may be imposed or levied upon the subject matter of thiscontract.

10. **Insurance**: The State of Kansas and its agencies shall not be required to purchase any insurance against loss or damage to property or any other subject matter relating to this contract, nor shall this contract require them to establish a "self-insurance" fund to protect against any such loss or damage. Subject to the provisions of the Kansas Tort Claims Act (K.S.A. 75-6101 et seq.), the contractor shall bear the risk of any loss or damage to any property in which the contractor holds title.

11. **Information**: **No provision of this contract shall be construed as limiting the Legislative Division of Post Audit from having access to information pursuant to K.S.A. 46-1101 et seq.**

12. **The Eleventh Amendment**: "The Eleventh Amendment is an inherent and incumbent protection with the State of Kansas and need not be reserved, but prudence requires the State to reiterate that nothing related to this contract shall be deemed a waiver of the Eleventh Amendment."

13. **Campaign Contributions / Lobbying**: Funds provided through a grant award or contract shall not be given or received in exchange for the making of a campaign contribution. No part of the funds provided through this contract shall be used to influence or attempt to influence an officer or employee of any State of Kansas agency or a member of the Legislature regarding any pending legislation or the awarding, extension, continuation, renewal, amendment or modification of any government contract, grant, loan, or cooperative agreement.

Construction Manager's Manual

Wyandotte High School Renovations

Construction Manager (Contractor)
Universal Construction Company, Inc.

Owner
Unified School District #500

Architect
Incite Design

CM-000100 – CONSTRUCTION MANAGER'S MANUAL TABLE of CONTENTS

CM.002101 – PREBID REQUEST FOR INFORMATION (RFI) FORM.

Project: Unified School District #500 - Wyandotte High School Renovations

Date: _____

Bidder/Sub-Bidder/Supplier: _____

Contact Name and Email: _____

Specification Section: _____

Drawing Number(s): _____

Attach any information relevant to your RFI with this form.

Question:
Answer:

CM.002400 - INDEX To SCOPES OF WORK

<End of Index To Scopes of Work>

CM.002400.001 – GENERAL SCOPE OF WORK FOR ALL TRADES

Provide all labor and materials, tools, equipment, supervision and other items necessary to furnish and install the Scope of Work assigned, as required per the contract documents, bidding documents, this Scope of Work and other items as issued by Addenda. The Bid Package Contract specifically includes, but is not limited to, the following.

1. General

1.1. This is a CM agency project so each Scope of Work will be a Prime Contractor to the Owner as identified in the specifications.
1.2. All General Requirements required by the Contract Documents.
1.3. Providing the most stringent should any discrepancies occur between the Contract Documents, that were not clarified in writing prior to bid.
1.4. Perform their own take off, to verify quantities.
1.5. Provide the most stringent (costly) should any discrepancies occur between the quantities listed on drawings/specifications and actual quantities that can be taken off.
1.6. Items listed throughout each Scope of Work apply to the entire Scope of Work and do not pertain specifically to the section they are listed under.
1.7. Provide all Bonds required. This includes bonds required by the Contract Documents, City, State, and any other Governing Agencies having jurisdiction.
1.8. Review the entire Contract Documents, including but not limited to all specifications, drawings, addendum, pre-bid meeting minutes, notes on plans and schedules, etc., for work required to be completed by their Scope of Work.
1.9. The term “as required” used throughout each Scope of Work, means as drawn, specified and/or reasonable inferred by the Contract Documents.
1.10. The term “Provide” means furnish and install, including but not limited to all labor, materials, equipment, tools, delivery, etc. necessary for a complete and function system.
1.11. Procurement of complete hard sets of construction documents for field and office use.
1.12. If/where notes in drawings refer to the General Contractor this is understood to be a specific Trade Contractor as impacted by the Scope of Work(s). The Construction Manager is not the General Contractor.

2. Schedule and Work Hours

2.1. Notice to Proceed is anticipated to be issued per the milestone schedule. Each Contractor should be prepared to start work on shop drawings, etc. as required immediately upon notice to proceed and in accordance with the construction schedule established by the CM.
2.2. The overall project timeline is included in the milestone schedule.
2.3. The milestone schedule will be updated, and overall construction schedule will be developed once durations have been received and contracts have been awarded.
2.4. Provide all means for completing their work per the construction schedule and the durations they provided with their bid. Extended work hours or weekend work shall be included as required to meet the durations provided to allow the succeeding Scope of Work to complete their scope of work within their allotted time frame.
2.5. Multiple crews and mobilizations will be required for the completion of each Scope of Work.
2.6. Perform field measurements, etc. in sufficient time to ensure delivery of their materials per the construction schedule.
2.7. Failure to field measure immediately upon availability, will result in being held responsible for delays caused by such action.
2.8. Notify the Construction Manager immediately if there are concerns with the availability of when work could be field verified in time to procure materials. If such is the case, then through coordination with other trades, Owner, Architect and Construction Manager, dimensions may be established for the Contractor to procure the

materials. If Contractor doesn't notify CM of such concerns in sufficient time, then Contractor bears sole responsibility for delays.

2.9. Provide schedules to the Construction Manager for the procurement and installation of their work. This includes 3 week look ahead schedules, overall procurement schedule and other schedules as required by the Construction Manager.

2.10. Work Hours will be Monday through Friday 7:00AM to 3:30PM.

2.11. No Contractor shall perform work outside of these hours without written approval from the Construction Manager.

2.12. The Construction Manager may elect to modify work hours to Start/End 1 hour earlier or later at no additional cost.

3. Safety

3.1. The Contractor and all subcontractors to the Contract must require all on-site employees to complete the ten-hour construction safety training program.

3.2. Provide background checks of all onsite personnel as outlined in the front end of the Contract Documents.

3.3. Safety as it pertains to their work and as required by authorities having jurisdiction, including safety of all persons and property during performance of their work.

3.4. Submit a Project Specific Safety Plan as it relates to their work to the Construction Manager.

3.5. Ensuring safe working conditions for all other personnel inside the building as it relates to exposed or open conditions, scrubbers required for indoor equipment, and proper ventilation, etc. complete as needed.

4. Permits and Inspections

4.1. The Owner will obtain a Building Permit, but all other permits as required by AHJ's are to be by the Contractor performing the work (ie. Demo, Electrical, Mechanical, Plumbing, etc.).

4.2. Coordinate City and Special Inspections as required for the installation of their work with the Construction Manager and the Special Inspector/City Inspectors in this order.

5. Layout, Surveying, and Existing Conditions

5.1. All layout, surveying, etc. required to complete the installation of their work. This includes verifying existing construction that Contractor is to build off of prior to installing their work.

5.2. Responsible for reviewing the existing conditions which includes work installed by others prior to the start of their work and notify the Construction Manager in writing immediately of any issues, etc. with the substrate that would prevent the installation of Contractor's work. Issues include but are not limited to layout, incorrect substrate material, etc.

5.3. When Contractor starts work, they are accepting the substrate and acknowledging the work that they are building upon is correct. If Contractor fails to notify Construction Manager and rework is required, then Contractor is responsible for the rework of their work.

5.4. Visiting the site prior to submitting a bid to verify actual conditions that they would be responsible for as part of their Contract.

6. Cleanup

6.1. Cleanup of debris, materials, etc. that result from their construction operations. Clean up the debris from their work at the end of each day and upon immediate notice from the Construction Manager. This includes sweeping floors, etc. as necessary to provide a clean and safe environment.

6.2. Clean mud, gravel, or other debris that is tracked onto surrounding roads. Clean all trucks, equipment, delivery vehicles, etc. prior to leaving the construction site.

7. Temporary Protection, Facilities, and Utilities

7.1. Unless specifically noted otherwise within a bid scope. The ***OWNER*** will provide portable toilets and dumpsters for Contractor usage. Owner provided dumpsters should not be used for Masonry, Concrete, Asphalt, Roofing, Steel, and Soils/Earthwork Debris. Such items are to be removed from site by Contractor creating such debris.

7.2. Provide for water usage and potable water as required to compete the Scope of Work. This includes providing their own water meter for temporary water usage as needed to complete the installation of their work. Water bills will be paid for by owner so long as meter is put into the Owners name.

7.3. Once the Construction allows, the Electrical Contractor will provide temporary lighting and 20amp power inside the building. Temporary lighting is for general egress and access through the building and not task specific lighting. Each Contractor shall provide their own Task Specific Lighting and Power necessary to complete their work. This includes providing generators, etc. as necessary.

7.4. Properly cover and protect existing finishes to prevent damage during completion of the Work. This includes all floors, walls, furniture, ceilings, doors, fixtures, and all other finishes both at the work area and to and from such areas inside and outside the building.

8. Receiving, Handling, and Storage of Materials.

8.1. Receiving, unloading, handling and storing of materials, equipment, goods, etc.

8.2. Construction Manager is not responsible for any loading, unloading, or for providing storage facilities.

8.3. There will be minimal onsite storage space, therefore carefully plan the work so that materials are brought to the site and installed immediately.

8.4. Storage of materials inside the building footprint without prior approval from the Construction Manager is not allowed.

8.5. The use of storage containers, job trailers, etc. onsite will only be allowed by the approval of the Construction Manager and only setup in areas shown on the site staging plan or a location directed by the Construction Manager.

8.6. Provide offsite storage of materials as necessary to complete the installation of their work and in order to meet the project schedule.

8.7. If materials are allowed to be stored onsite, they shall be kept in an organized manner, on moveable carts, racks, pallets, etc., and labeled with the Contractor's name and contact information.

8.8. Moving materials when directed by the Construction Manager.

8.9. All materials stored onsite shall not be stored in walkways, drives, and egress paths.

9. Meetings and Coordination

9.1. Coordination with the Construction Manager and other trades as required for the completion of the project.

9.2. This includes but is not limited to where Contractor's work is required to penetrate or be embedded in other trade's work. Including but not limited to such items as MEPFT penetrations, fire extinguisher cabinets, embedded anchors, blocking, supports, steel penetrations, misc sleeves, etc.

9.3. This includes coordinating in advance so as to not delay the project schedule.

9.4. Review other trades Scope of Work for coordination and scope identification, none of which relieve a Contractor of responsibilities identified in their Scope of Work. If there is a double up in Scope of Work then bring it to the Construction Manager's attention prior to bid otherwise both Scopes of Work shall include the cost for the work in their bid and the CM will seek a deductive Change Order after the fact.

9.5. Acknowledges and agrees to terms of the Mandatory Meetings, Submittal Procedures, Cleaning, and all other Division 1 items as described in there corresponding specification sections.

9.6. Below is a brief list of meetings required for each Contractor, it is not an exclusive list as there will be additional meetings required.

9.7. Preconstruction meeting at the start of the project.

9.8. Pre-installation meetings 1 month prior to the start of major components of work.

9.9. Weekly Scheduling and Planning meetings.

9.10. MEPFT Coordination Meetings

9.11. Daily Coordination Standup or Meetings maybe held at the discretion of the Construction Manager. The purpose of this meeting would be to discuss, coordinate, and plan the next day(s) work amongst all onsite Contractors and should be attend by the onsite lead supervisor for each Contractor. Anticipate this to take approximately 15.

9.12. The Construction Manager may elect to hold all site personnel meetings to discuss issues that may arise during the project. These meetings are not anticipated to take longer than 15 minutes and would not be held more than on a weekly basis. All personnel currently working on the jobsite are required to attend.

9.13. Any other meetings deemed necessary by the Construction Manager.

9.14. The Construction Manager may elect to enforce a $200 fine for missed meetings.

9.15. If your onsite lead and/or project manager cannot attend these meetings, then a company representative shall attend who is familiar with the project or you should get written approval from the Construction Manager that your company will not be present.

9.16. In addition to the above meetings, Contractor should be holding their own meetings for their field personnel.

<End CM.002400.001 General Scope for All Trades>

CM.002400.033 – SOW-033 Cast-In-Place Concrete

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Cast-In-Place Concrete Work** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
   - **1.2.** Concrete – Complete in its entirety.
   - **1.3.** Reinforcing Steel – Complete in its entirety.
   - **1.4.** 312000 – Earth Moving – Complete as related to this Scope of Work.
   - **1.5.** 321313 – Concrete Paving – Complete in its entirety.
   - **1.6.** 321373 – Concrete Paving Joint Sealants – Complete in its entirety.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates** - Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** CM Alternate #01 - NA
   - **3.2.** CM Alternate #02 – Deduct for Gravel Subbase under Concrete Paving and Sidewalks. Note that the levelling course under curbs will still be required by this Scope of Work if this CM Alternate is accepted.

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and Shop Drawings Complete
   - **4.2.** Installation of Building Concrete
   - **4.3.** Installation of Retaining Wall
   - **4.4.** Installation of Concrete Paving and Sidewalks.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** Provide the reinforcing bar allowance indicated in the Specifications and/or Drawings.

6. Includes but is not limited to the following:

- **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.
- **6.2.** Provide flag personnel, road closures, and any associated permits as necessary during this Scope of Work operations.
- **6.3.** Dewatering
- **6.4.** Means for concrete washout and removal.
- **6.5.** Finishing and curing methods
- **6.6.** Reinforcing
- **6.7.** Surveying and layout as required, including confirming subgrade elevations when provided by others.
- **6.8.** Drilling, epoxy, and anchors for concrete to concrete connections.
- **6.9.** Multiple mobilizations as required to complete this Contractor's work.
- **6.10.** Related Cleanup.
- **6.11.** Safety, fall protection, safety barricades and fences as required. Any trench left open over night shall be protected.
- **6.12.** Any shoring/bracing required for this Contractor's work.
- **6.13.** Concrete slabs, ramps, sidewalks, paving, curbs, gutters, wheel stops, stairs, walls, footings, and foundations.
- **6.14.** Joints and Sealants in Concrete including but not limited to expansion joints, isolation joints, contraction joints, dowled joints, etc. Including in existing concrete walls/paving where indicated.
- **6.15.** Includes joints between concrete and dissimilar or existing surfaces/materials.
- **6.16.** Saw cutting New Concrete as required.
- **6.17.** Gravel Subbase under concrete, see alternate deduct for pricing.
- **6.18.** Aggregate leveling course under curbs.
- **6.19.** Flowable Fill at Curb Replacement
- **6.20.** Compacted subgrade will be brought to +- 1/10 of a foot for this Scope to build off of. Scheduling of compaction of subgrade will be coordinated with all trades to allow this Scope of Work to start their work upon completion. If this Scope of Work fails to immediately start their work after subgrade has been turned over then this Scope of Work is responsible for recompacting and testing as necessary.
- **6.21.** Retaining Walls and Footings
- **6.22.** Projecting Strips
- **6.23.** Sleeves for penetration as required. Coordinate with other trades as required.
- **6.24.** Geofoam.
- **6.25.** Vapor barriers.
- **6.26.** Place concrete in patterns as drawn and/or specified, including saw cutting.
- **6.27.** Include sealing or staining of concrete were drawn and/or specified.
- **6.28.** SOW-310 Earthwork will over excavate for installation of retaining wall and backfill.
- **6.29.** Excavation and backfill for footings and foundations. Stockpile of spoils onsite as directed by Construction Manager for SOW-310 Earthwork to use or haul off.
- **6.30.** Costs associated with pouring concrete during hot/cold weather are to be included as part of the contract reference milestone schedules for the approximate time frame the work will take place.
- **6.31.** Flowable Fill / Lean Concrete Backfill.
- **6.32.** Concrete bollards.
- **6.33.** Keyways, Void Forms, Molded Sheet Drainage Panels
- **6.34.** Reference All Drawings including Civil, Architectural, and Architectural Site for Work that is required.
- **6.35.** Foundations for Granite Slabs
- **6.36.** 1/2" PMEJ between paving and granite.

7. Exclusions - The following items are to be excluded from this scope of work and will be provided by others.

- **7.1.** Polished Concrete.
- **7.2.** Asphalt Paving.
- **7.3.** Granite Slabs (ie. B1/AS1.10).
- **7.4.** Pavement Markings.
- **7.5.** Traffic and Parking Signage.

<End of SOW-033>

CM.002400.036 – SOW-036 Polished Concrete

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Polished Concrete Work** as required per the Contract Documents, Bid Documents, this Scope of Work, and other items as issued by Addenda. Subcontract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 0 and 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by this Scope of Work.
   - **1.2.** Concrete – As related to this Scope of Work.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates -** Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** None

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and Shop Drawings Complete
   - **4.2.** Procurement of materials.
   - **4.3.** Installation of polished concrete floor finish.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** Include an allowance in base bid to redo the polish concrete floor at Gym ADA Seating per sheet A1.97 at all 6 locations.

6. **Includes but is not limited to the following:**
   - **6.1.** Floors will be broom swept prior to turning over slabs, any additional cleaning/prep work is by this Scope of Work.
   - **6.2.** All floor cleaning, prep, grinding, joint and crack filling, grinding, cleaning of joints, curing, etc. as required.
   - **6.3.** Reference Joint Sealant and other sections, as necessary that could impact the work.
   - **6.4.** Dust control as required for the work of this contract.

6.5. A color sample shall be provided to ensure color match of existing floors.

6.6. There is no finish schedule reference all drawings for scope identification including A1.92 and other Architectural Plan Keynotes for locations of Work.

7. Exclusions

7.1. None

<End SOW-036>

CM.002400.042 – SOW-042 Masonry

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Masonry Work** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 0 and 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by this Scope of Work.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates -** Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** None

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and Shop Drawings Complete.
   - **4.2.** Procurement.
   - **4.3.** Installation complete.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** None

6. **Includes but is not limited to the following:**
   - **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.
   - **6.2.** Contractor to furnish all labor, equipment and materials necessary to complete the installation of all masonry work and related items as required.
   - **6.3.** Provide layout of all masonry work. The layout shall be from dimensions shown on plans using reference lines provided.

6.4. Clean mud and other debris off footings/foundations as required to install masonry work.
6.5. Provide all fall protection as required by OSHA to complete your work.
6.6. Provide cleaning and rubbing down of brick / block as required to prepare for final product to receive paint.
6.7. This package will be required to repair and regrade ruts, etc. caused by this packages work
6.8. Architectural Cast Stone Façade
6.9. Granite caps, slabs and ledges.
6.10. Masonry Joints
6.11. Reference All Drawings for Masonry work required by this Scope this includes all Architectural, Civil, Structural, Architectural Site, Landscape, etc. (ie. C19, C20, AS1.00, AS1.10, etc.)
6.12. Control Joints
6.13. Caulking of all Joints in Cast Stone, Granite Slabs, Masonry.
6.14. Mortar, grout, and any other misc materials necessary for a complete installation.

7. Exclusions

7.1. 1/2” PMEJ between paving and granite is by others.

<End of SOW-042 Masonry>

CM.002400.051 – SOW-051 Steel

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Steel Work** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates** - Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** None

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and Shop Drawings Complete
   - **4.2.** Procurement complete.
   - **4.3.** Installation complete.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** Provide any steel allowances only if drawings or specifications indicate such.

6. **Includes but is not limited to the following:**
   - **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Scope of Work is a Prime Contractor to the owner, all requirements indicated are the responsibility of every Contractor.
   - **6.2.** Provide all interior and exterior railing, plates, attachment methods, etc. (ie. Handrail, Guardrails, etc.).
   - **6.3.** Provide Steel Tubes (ie. A1.95, etc.)
   - **6.4.** Provide any other steel indicated or required.
   - **6.5.** This Bidder is required to reference all drawings including civil, architectural, architectural site, etc. Note there is work on numerous sheets (ie. C16, etc.).

6.6. Embeds if required, coordinate with other trades.
6.7. Drilling, epoxying, and attaching steel plates, anchors, etc. to others work as required.
6.8. Shop Primers and Coatings.
6.9. Weld Joints
6.10. Galvanization and touch up galvanization when required.

7. Exclusions

7.1. Exterior Traffic Signs and Posts.
7.2. Field applied painting.

<End of SOW-051>

CM.002400.061 – SOW-061 Interior Demolition and General Trades

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Selective Demolition and General Trades Work** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
   - **1.2.** Selective Demolition – Complete in its entirety are interior demolition, unless specifically excluded below.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates -** Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** None

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and Shop Drawings Complete.
   - **4.2.** Interior demolition complete.
   - **4.3.** Interior patching, reinstallation of items, reworking benches complete.
   - **4.4.** Final cleaning complete.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** None

6. **Includes but is not limited to the following:**
   - **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.
   - **6.2.** Interior Demolition complete, except for any MEPFT. Includes concrete, ramps, railings, chairs, door panels, etc.

6.3. Temporary shoring or bracing where required.
6.4. Temporary Protection of existing finishes as required.
6.5. Saw cutting to complete demolition under this Scope of Work.
6.6. Remove from site and legally dispose of all work demolished by this Scope of Work. This includes dumpsters, hauling, dump fees, etc. Owner provided dumpsters shall not be used for work demolished by this Scope of Work.
6.7. Rough and Finish Carpentry where required.
6.8. Final Cleaning of Interior Areas prior to substantial completion is by this Scope of Work.
6.9. Patching and Repairs of Finishes (Floor, Wall, Ceiling) as required due to demolition and as indicated excludes painting or polished concrete.
6.10. Remove, Salvage, and Reinstall Mullions.
6.11. Remove, Salvage and Reinstall Door Panels.
6.12. Remove, Salvage and Reinstall Seats.
6.13. Cut benches and rework as required with new bench edge. Where Bench is removed patch any penetrations in floor and flooring as required.
6.14. Coordinate with other trades prior to demolition (ie slab demo for new concrete slab, should be coordinated with SOW-033 Concrete, etc.).

7. Exclusions

7.1. Concrete Work
7.2. Polished Concrete
7.3. Site Demolition
7.4. Painting.

<End of SOW-061>

CM.002400.099 - SOW-099 Painting

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Painting Work** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 – General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparing and submitting submittals.
3. **Alternates** - Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** None
4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and Shop Drawings Complete
   - **4.2.** Painting complete.
5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** Provide 16 hours of miscellaneous painting above and beyond what is required by this scope. Allowance should include materials and labor.
6. **Includes but is not limited to the following:**
   - **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.
   - **6.2.** Reference all drawings for painting required which includes painting of all handrails, guard rails, and other steel items.
   - **6.3.** Paint at patching and wall repairs.
7. **Exclusions**
   - **7.1.** None

<End of SOW-099>

CM.002400.140 – SOW-140 Lifts

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Lift Work** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
   - **1.2.** Vertical Portable Wheelchair Lifts – Complete in its entirety.
   - **1.3.** Stair Lift for Straight Stairways – Complete in its entirety.
   - **1.4.** Stair Lift for Turning Stairways – Complete in its entirety.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates -** Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** None

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days, as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Duration #01 All Submittals Complete.
   - **4.2.** Duration #02 Procurement
   - **4.3.** Duration #03 Installation Complete

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** None

6. **Includes but is not limited to the following:**
   - **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.
   - **6.2.** Provide equipment with a single point of connection for power and other systems (ie. Electrical).

6.3. All finishes
6.4. Wiring from single point of connection to throughout equipment.
6.5. Thoroughly review the Lift Specifications on G3.00 all work required for Lifts complete under these specifications are by this Scope of Work no exclusions, including call stations, lights, safety, code requirements, finishes, sensors, platforms, decks, rails, restraining arms, skirts, windows, gates, drive and guide rails, locks, seats, alarms, tower mount struts, etc. etc. etc.
6.6. Attachment and mounting means and methods to existing construction as required, including any drilling or epoxying if required.

7. Exclusions - The following items are to be excluded from this scope of work and will be provided by others.

7.1. None

<End of SOW-140 Lifts>

CM.002400.260 – SOW-260 Electrical

Provide all material, labor, equipment, tools, supervision and other items necessary to complete the **Electrical Work** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
   - **1.2.** Division 26 Specifications as listed on drawings (ie. E.01 and E.02) – Complete in its entirety.
   - **1.3.** 312000 Earth Moving – Complete as related to this Scope of Work.
   - **1.4.** Related Lift Specifications for power requirement coordination as necessary.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates -** Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** None

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and Shop Drawings Complete
   - **4.2.** Procurement
   - **4.3.** Interior Work Complete
   - **4.4.** Exterior Work Complete.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** None

6. **Includes but is not limited to the following:**
   - **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.

6.2. Provide all Electrical Demolition as required.
6.3. Remove, salvage and reinstall all Mechanical Equipment as required, review Architectural and other drawings as required.
6.4. Provide power requirements and electrical connections to Lifts.
6.5. Clarifications of Electrical Connections to Equipment Provided by Others
6.6. If Equipment is required to come with an integral Disconnect (Factory Installed or required to be mounted on equipment) then such Disconnect and wiring from such throughout equipment is to be by Contractor providing equipment. Electrical Contractor will bring power from panel to only 1 single point of connection at equipment.
6.7. If Equipment is required to have a field installed (Installed away from equipment) Disconnects then such will be provided by This Contractor who will bring power to disconnect and from disconnect to a single point of connection at Unit.
6.8. This Contractor shall coordinate all equipment power requirements with the Construction Manager and Other Contractors, Owner, etc. prior to installing work.
6.9. If Equipment is to be plugged in, then the Contract that provides the equipment shall also provide the whip and male end with their equipment. Plugging in of such equipment is by Contract providing equipment.
6.10. All Motor Starters and VFD's will be provided by Contractor providing equipment, this includes all wiring required to complete the installation.
6.11. This Contractor will Furnish and install all conduits, raceways, pull boxes, etc. necessary for Facilities/Building Management Systems and Control wiring. Wiring will be by Contractor who provides equipment, fixtures, and devices etc. for such systems. Contractors should reference other Division Specifications as necessary to complete their work.
6.12. Motor rated toggle switches or fan speed controllers are by Contractor providing equipment, including wiring to single point of connection for electrician.
6.13. Coordination with other trades as required including coordinate of power requirements.
6.14. Creating, patching, and sealing of penetrations in existing walls, ceilings, or floors as necessary to complete this Work.
6.15. Required permits.
6.16. Patching and repairs created by this Contract's work.
6.17. Related cleanup.
6.18. Related Layout – This Contractor is responsible for all layouts associated with the installation of their work from existing control points.
6.19. Concrete site light fixture bases will be by SOW-033 but this package shall coordinate any penetrations, conduit, size of bases, etc. as required.
6.20. If lifts are required to be tied into any lift safety systems then this package shall include such at a single point of connection at each lift.
6.21. Excavation and backfill for exterior electrical work.

7. Exclusions

7.1. None

<End of SOW-260>

CM.002400.310 – SOW-310 Site Demo and Earthwork

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Site Demo and Earthwork** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
   - **1.2.** Selective Demolition – Complete Site Demolition in its entirety (reference G Sheets).
   - **1.3.** 311000 Site Clearing – Complete In its entirety.
   - **1.4.** 312000 Earth Moving – Complete in its entirety, unless specifically excluded below.
   - **1.5.** Reference other Div 31/32 sections as necessary for completion of this Work.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates** - Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** CM Alternate #01 – Add to Provide Gravel Subbase under Asphalt Paving Complete.
   - **3.2.** CM Alternate #02 – Add to Provide Gravel Subbase under Concrete Paving Complete.

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and shop drawings complete.
   - **4.2.** Install erosion control measures and site demo complete.
   - **4.3.** Over excavation for retaining wall complete.
   - **4.4.** Rough grading and subgrades for paving complete.
   - **4.5.** Backfill retaining wall.
   - **4.6.** Backfill curbs, finish grading, spread topsoil.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** None

6. Includes but is not limited to the following:

- **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.
- **6.2.** Provide flag personnel, road closures, and any associated permits as necessary during this Scope of Work operations.
- **6.3.** Dewater and provide temporary drainage of this Scope of Work's excavations.
- **6.4.** Any drainage/dewatering established by this Scope of Work shall not make worse the pre-existing site drainage.
- **6.5.** Tree and other protection as required.
- **6.6.** Controlling dust on the job site, includes but is not limited to providing water truck/sprinkler as needed.
- **6.7.** SWPPP Work Complete
- **6.8.** Rip-rap, gravel filter bags, silt fence (including wire reinforced), hay bales, blankets, wattles, rip rap, rock, inlet protection, temporary seeding and/or other means necessary as indicated on the drawings and as required for all stockpiled fill, soil, spoils, slopes, etc. per contract documents and/or government agencies.
- **6.9.** Maintenance of Erosion Control
- **6.10.** Provide monitoring and reporting of Erosion Control throughout the contract. Includes performing weekly inspections and after each rainfall event producing runoff.
- **6.11.** Construction Entrances and maintenance of such during construction.
- **6.12.** Weed Barriers
- **6.13.** Kansas River Rock and Cut of Grade
- **6.14.** Removal of Erosion Control is by this Scope unless specifically excluded below.
- **6.15.** Site Demolition Complete
- **6.16.** Complete all site demolition and clearing. Including but not limited to the removal of all asphalt, concrete, gravel, structures, paving, rip, rap, overhead electrical and utility poles, storm structures, storm pipe, etc.
- **6.17.** Demo in such a manner to Protect all trees, vegetation, concrete, asphalt, etc. identified to remain.
- **6.18.** Take photos and videos prior to the start of demolition to verify existing conditions and submit documentation to the Construction Manager. Including photos of any items indicated to be salvaged and reused or turned over to Owner.
- **6.19.** Where applicable items removed by this Scope of Work shall be legally disposed of offsite.
- **6.20.** Removal of light poles, bases and conduit feeding such. Coordinate with SOW-260 to minimize over demolition in case circuits need to be reused.
- **6.21.** Removal of Site Utilities.
- **6.22.** Earthwork Complete unless specifically excluded below.
- **6.23.** All clearing, grubbing and stripping.
- **6.24.** Stockpile all topsoil in a location as coordinated with the Construction Manager.
- **6.25.** Remove from site or reuse on site if allowed spoils from other trades (ie. Concrete, MEPFT, Utility, etc. excavations).
- **6.26.** Haul in of fill material as required.
- **6.27.** Haul off excess spoils as required.
- **6.28.** Excavation, backfill, rough grading and final grading of all building pads, drives, walks, parking areas, landscape areas, etc.
- **6.29.** Rough Grade Site initially and then the Topsoil / Fine Grade site will not be done until directed by Construction Manager.
- **6.30.** Preparation and supply of all sub-grades including compaction/proof rolling as required for building pad, asphalt paving, concrete paving, slabs, walks, curbs, hard surface areas as required by the contract documents.
- **6.31.** All sub-grades to be within a tenth of a foot.
- **6.32.** Include any undercut and building back as required.

6.33. Stockpile, spread, and place topsoil and other excess soils by hand and/or machine as required for final grading. Import topsoil if there isn't enough existing.

6.34. Remove unacceptable debris (rocks, sticks, etc.) from topsoil to meet requirements of documents. Once topsoil has been spread it will be reviewed with SOW-310 Earthwork, Construction Manager, SOW-329 Landscaping, and if available Design Team/Owner for acceptance at which point SOW-329 Landscaping will be responsible for maintaining soil, including additional debris removal (rock, sticks, etc.).

6.35. Backfill Curbs

6.36. Geofabric

7. Exclusions

7.1. Utilities

7.2. Landscaping

7.3. Excavation and backfill of footings, curbs, sidewalk, site electrical, and utilities is by others. However, haul off or redistributing excess spoils onsite if allowed is by this Contract.

7.4. Removal of Silt Fence and Inlet Protection is by SOW-329.

7.5. Aggregate Base under paving, however an Alternate Add Price is being requested see Alternates.

<End SOW-310 Earthwork>

CM.002400.321 – SOW-321 Asphalt Paving

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Asphalt Paving** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
   - **1.2.** 312000 Earth Moving – Complete as related to this Scope of Work (ie. Aggregate Subbase)..
   - **1.3.** 321216 Asphalt Paving – Complete in its entirety.
   - **1.4.** Reference other Div 31/32 sections as necessary for coordination and related requirements.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates -** Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** CM Alternate #01 – Add to Provide Gravel Subbase under Asphalt Paving Complete.

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and shop drawings complete.
   - **4.2.** Asphalt paving complete.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** None

6. **Includes but is not limited to the following**:
   - **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.
   - **6.2.** This Contractor is responsible for cleaning existing or new asphalt areas identified for paint or markings.
   - **6.3.** Related Layout.

6.4. Related Cleanup.
6.5. Dispose of excess asphalt, rock, and other debris generated by this contractor off-site. Owner provided dumpsters are not to be used for this package's waste.
6.6. Subgrades will be compacted, tested, and approved as required by others and areas will be turned over to this package for immediate installation of this Contract's paving. The intent is to coordinate turnover to allow this Contract to install their work and avoid rework of the subgrade. If this Contractor fails to install their work upon receiving the subgrade then any rework of the subgrade will be this Contractors responsibility.
6.7. Aggregate under Asphalt Paving, see deduct alternate.
6.8. Include all milling and overlay work as shown.
6.9. All new traffic and parking signage with posts, including sleeves, coring existing paving, patch/fill with asphalt as required.
6.10. Pavement markings.
6.11. Asphalt paving joints, sealants, sealers, etc.
6.12. Provide flag personnel, road closures, and any associated permits as necessary during this Scope of Work operations.
6.13. Dewater and provide temporary drainage of this Scope of Work's excavations.

7. Exclusions

7.1. Site Concrete.
7.2. Wheel Stops.
7.3. Concrete fill at curb replacement detail.

<End SOW-321>

CM.002400.329 – SOW-329 Landscaping

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Landscaping** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
   - **1.2.** 312000 Earth Moving – Complete as related to this Scope of Work.
   - **1.3.** Landscaping Specifications per L02 – Complete in its entirety.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates -** Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** CM #01 – NA
   - **3.2.** CM #02 - NA
   - **3.3.** CM #03 – Deduct Alternate if Owner removes the landscape maintenance requirement of 90 days after substantial completion. Note temporary maintenance until substantial completion will still be required.

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and shop drawings complete.
   - **4.2.** Installation Complete.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** None

6. **Includes but is not limited to the following**:
   - **6.1.** Reference General Scopes for All Trades and the front-end specifications. Since each Contractor is a Prime Contractor to the owner, all requirements indicated are the responsibility of each Contractor.

6.2. Related Layout.
6.3. Related Cleanup.
6.4. Seed and Sod.
6.5. Respreading of existing topsoil is by SOW-310 Earthwork, however any soil testing, amendments, cultivation, etc. necessary to meet the requirements of the documents is by SOW-329 Landscaping.
6.5.1. Once topsoil has been spread it will be reviewed with SOW-310 Earthwork, Construction Manager, SOW-329 Landscaping, and if available Design Team/Owner for acceptance at which point SOW-329 Landscaping will be responsible for maintaining soil, additional debris removal (rock, sticks, etc.).
6.6. Excavation for plantings, including by hand as necessary.
6.7. Mulch
6.8. Root Stimulator, Additives,
6.9. Temporary maintenance, mowing, irrigation and watering until substantial completion
6.10. Provide maintenance as indicated in the specifications for a period of 90 days after substantial completion.
6.11. Re-establish disturbed areas, may require reviewing Civil and Erosion Control drawings to determine the extents of areas disturbed beyond what might be shown on Landscape Plans.
6.12. Removal of Silt Fence, and Inlet Protection upon completion of Landscaping.

7. Exclusions

7.1. None.

<End of SOW-329>

CM.002400.330 – SOW-330 Utilities

Provide all material, labor, equipment, tools, supervision, and other items necessary to complete the **Utilities** as required per the contract documents, bidding documents, this Scope of Work, and other items as issued by Addenda. Contract specifically includes, but is not limited to, the following:

1. **Related Divisions and Specifications**
   - **1.1.** Division 1 - General Conditions, General Requirements and Special Provisions – Complete, as required by the work of this Contract.
   - **1.2.** 312000 Earth Moving – Complete as related to this Scope of Work.
   - **1.3.** 334100 Storm Utility Drainage Piping – Complete in its entirety.

2. **Unit Prices**
   - **2.1.** Unit Price #01 – Lump Sum Cost included in the Bid for preparation and submission of submittals and shop drawings.

3. **Alternates -** Review the Alternate Section and CM Alternate Section and provide alternate pricing for any add or deduct cost for such alternates that impact this Scope of Work. Note leaving the bid form blank or marking NA, No Bid, etc. is the same as indicating a zero-dollar amount. If Alternates are approved there is no opportunity after the award of Subcontract to seek additional costs. Items listed in this scope of work are courtesy only, and it is the responsibility of the Bidder to review and analyze all Alternates indicated by the Documents for how they impact this Scope of Work and provide pricing for each alternate with their Bid.
   - **3.1.** None.

4. **Durations** – Durations are to be number (#) of working days, start to finish and should not include weather days. A working day will be considered an eight (8) hour day. Durations should account for all their work required to complete the activity and be ready for turnover area to other trades. Weather Days as outlined in the Contract Documents, will be incorporated into the project schedule by the Construction Manager and should not be accounted for in durations listed on the bid form. Contractor's Durations on this bid form will be used in conjunction with the overall project schedule; Durations will be one of the criteria along with cost, qualifications, etc. when awarding a Contract. By submitting a bid this contractor understands and acknowledges multiple crews are anticipated to be working in multiple areas and multiple mobilizations to complete work in same area and/or different areas is anticipated to complete the entire work of this package.
   - **4.1.** Submittals and shop drawings complete.
   - **4.2.** Procurement complete.
   - **4.3.** Installation complete.

5. **Allowances** – Provide the following allowances as part of the base bid of the contract. Unused amounts will be returned to the owner. Note that O&P cannot be billed against an allowance, as such any O&P that would want to be added to these amounts should be included in the Base Bid and such O&P would not be returned to owner if allowance amount is returned.
   - **5.1.** None

6. **Includes but is not limited to the following**:
   - **6.1.** Provide all structures, inlets, manholes, piping, connections, taps, fees, cleanouts, concrete collars, bedding, grates, covers, etc. as required for complete installation.
   - **6.2.** Adjust manhole cover elevations, as required.
   - **6.3.** Cleaning of existing inlets, and grates.

6.4. Include removal of sediment from storm boxes/structures as needed/required.
6.5. Field Verifications of existing depths as required.
6.6. Layout and Surveying
6.7. Coordination with other trades
6.8. Bedding and granular fill at piping.
6.9. Excavation and backfill including compaction for all utilities.
6.10. Curb Inlet Blanket Drain.
6.11. Boring under existing paving if required to install utilities.
6.12. Connections to existing utilities as required, including any modifications to structures as necessary.
6.13. Hydrodynamic Separators.
6.14. Protection of existing walls, paving, etc. as required during this Work.

7. Exclusions

7.1. Site Electrical
7.2. Utility Demolition

<End of SOW-330>

CM.004100 – BID FORM

Bid To: Universal Construction Company, Inc.
Bid For: Wyandotte High School Renovations
Bid Opening Location: Hard Copies of the Bid Form, and required attachments shall be placed in a sealed envelope and delivered to 2010 N. 59th Street, KCKS 66104
Date and Time of Bid Opening: March 5th, 2024 at 2:00PM Unless modified by Addendum.
Owner: Unified School District #500

Scope of Work # and Name(s)_____
Name of Company Bidding _____
Address of Company Bidding _____
Contact Name of Bidder _____
Contact Email Address _____ Phone # _____

THE SITE AND DOCUMENTS

_____ We have examined the Contract, Bid Requirements, Drawings, Specifications, Geotechnical Reports, Contract Terms, General Conditions, Project Site(s), etc. for the Work and being familiar with all conditions affecting the construction of the Project, hereby propose and agree to provide and furnish all labor, material, equipment, supervision, insurance, bonds, taxes, fees, overhead, profit, and other items necessary to perform and complete, in a workmanlike manner, all Work required by the Contract Documents for the Scope of Work, per the stated Bid below.

_____ We have initialed each page of the General Scope of Work for All Trades and our Specific Scope of Work and attached such to our Bid.

_____ We have sent previously our qualification statement or included such as an attachment to our bid.

_____ We have reviewed and included the following Addenda
LETTERS _____, _____, _____ , _____ , _____, and _____).

BASE BID

We propose to furnish all materials and labor called for by the above Documents for the "Total Base Bid" Work for the total sum of: _____ Dollars and _____ Cents ($_____).

Alternates

If accepted we propose to furnish all materials, labor, equipment, etc. necessary for completion of the following alternates per the amounts listed below as related to our scope of work and as further described in the documents and alternate section. We the undersigned below understand that the descriptions below are vague by nature and the documents take precedence of any discrepancy between them and the description on this bid form. We also understand by leaving an item blank or writing anything other than a value (ie. N/A), will be treated as a zero-dollar bid for the alternate**. Circle Add or Deduct.**

CM Alternate #01: Deduct SOW-321 for removing the granular subbase under asphalt paving, Add SOW-310 for providing granular subbase under asphalt paving.
_____ Dollars and _____ Cents ($_____).

CM Alternate #02: Deduct SOW-033 for granular subbase under concrete paving, Add SOW-310 for providing granular subbase under concrete paving.
_____ Dollars and _____ Cents ($_____).

CM Alternate #03: Deduct SOW-329 for removing the 90 day landscape maintenance requirement after substantial completion.
_____ Dollars and _____ Cents ($_____).

Voluntary Alternates
If the Bidder has any voluntary alternates they wish to submit they can do so as attachment to the bid and write in here that you have done so: _____

Amounts for Unit Prices
We, the undersigned, have furnished as an attachment to our bid the Unit Price Form for Labor Rates and have provided below the Unit Prices as indicated in our Scope of Work(s). We propose to base adjustments to the Subcontract Sum, if ordered by the Construction Manager during the Subcontract Time, on the unit prices listed therein. These unit prices constitute full compensation or credit for the complete provision and installation for each item listed based solely on Work in place. The Unit Prices as stated include all necessary appurtenances and connections required to complete the Work in place, insurance, overhead, profit and superintendence, etc.

Unit Price #01 Cost included in the Bid for submittals and shop drawings $_____ Lump Sum.
Unit Price #02 _____ Unit _____
Unit Price #03 _____ Unit _____
Unit Price #04 _____ Unit _____

Durations
We, the undersigned, have included with our bid the durations below as indicated in our Scope of Work(s). We propose to complete are portions of work per these durations. We understand that durations for submittals/shop drawings are for a complete submittal ready for review and approval by the Design Team. We understand that the durations for procurement include both fabrication and delivery to the job site all materials, hardware, accessories, etc. necessary to complete our work. We understand that the durations for installation are for a complete installation ready for the subsequent trade to install their work. Durations are Working Days as defined by the Contract Documents.

Duration #01 _____ Duration #02 _____ Duration #03 _____ Duration #04 _____
Duration #05 _____ Duration #06 _____ Duration #07 _____ Duration #08 _____

Acknowledgments
We, the undersigned, acknowledge and agree that the Construction Manager reserves the right to waive any informality in any Bid and to reject any or all Bids. The undersigned Bidder, on behalf of itself and all sub-bidders, releases the Construction Manager, Owner, Architect, and other Bidders from any claim arising out of or relating to the acceptance, non-acceptance, or rejection of the undersigned's or any other Bidder's Bid, including without limitation Bids of its sub-bidders, on this Project.

NOTE: If the Contractor is a Corporation, Proposal must be signed by an authorized officer, showing his title.

Yours very truly,

Corporate Seal

FIRM: _____

ADDRESS: _____

_____

TELEPHONE: _____

SIGNATURE: _____

PRINTED NAME: _____

TITLE: _____

STATE OF INCORPORATION _____

FIN: _____ OR SSN: _____

Notary Seal

_____

Notary Public

STATE OF: _____

COUNTY OF: _____

My Commission Expires: _____

<End of CM.004100 Bid Form>

CM.004313 – BID SECURITY FORM

1. Bid Bond

1.1. The Form of the Bid Bond shall be the American Institute of Architects Document AIA Document A310 "Bid Bond" and is included by reference.

1.2. Copies may be obtained at cost from the below or other means available to bidders:
Kansas City Chapter, American Institute of Architects,
1801 McGee, Kansas City, Missouri 64108.
Telephone: (816) 221-3485.

<End of CM.004313 – Bid Security Form>

CM.004513 – BIDDERS QUALIFICATIONS

1. Bidders Qualification Statement Form

1.1. The Form of the Contractor's Qualification Statement shall be AIA Document A305, current edition.

1.2. This form is to be completed and submitted 48hours before the time of bid opening.

1.3. Copies may be obtained at cost, from the below location or other means available to the bidder.
Kansas City Chapter, American Institute of Architects,
1801 McGee, Kansas City, Missouri 64108.
Telephone: (816) 221-3485.

<End of CM.004513 – Bidders Qualifications>

CM.005000 – CONTRACT AGREEMENT AND GENERAL CONDITIONS

1. Owner and Contractor Agreement Form

1.1. The Form of the Owner and Contractor Agreement shall be AIA Document A132-2019 Owner and Contractor Agreement CM as Advisor.

1.2. A Draft copy of the agreement form is included for reference.

2. General Conditions

2.1. Shall be AIA Document A232-2019 General Conditions CMa Edition as attached hereto.

<End of CM.005000 Contract Agreement and General Conditions>

DRAFT

AIA® Document A132® – 2019

Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month, and year.)

BETWEEN the Owner:
(Name, legal status, address, and other information)

« »« »
« »
« »
« »

and the Contractor:
(Name, legal status, address, and other information)

« »« »
« »
« »
« »

for the following Project:
(Name, location, and detailed description)

« »
« »
« »

The Construction Manager:
(Name, legal status, address, and other information)

« »« »
« »
« »
« »

The Architect:
(Name, legal status, address, and other information)

« »« »
« »
« »
« »

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An ***Additions and Deletions Report*** that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser. AIA Document A232™–2019 is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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TABLE OF ARTICLES

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

[« »] The date of this Agreement.

[« »] A date set forth in a notice to proceed issued by the Owner.

[« »] Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

« »

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion of the Project or Portions Thereof

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the date of Substantial Completion of the Work of all of the Contractors for the Project will be:
(Insert the date of Substantial Completion of the Work of all Contractors for the Project.)

« »

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of all of the Contractors for the Project are to be completed prior to Substantial Completion of the entire Work of all of the Contractors for the Project, the Contractors shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.4 When the Work of this Contract, or any Portion Thereof, is Substantially Complete

§ 3.4.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall substantially complete the entire Work of this Contract:
(Check one of the following boxes and complete the necessary information.)

[« »] Not later than « » (« ») calendar days from the date of commencement of the Work.

[« »] By the following date: « »

§ 3.4.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of this Contract are to be substantially complete prior to when the entire Work of this Contract shall be substantially complete, the Contractor shall substantially complete such portions by the following dates:

Portion of Work	Date to be substantially complete

§ 3.4.3 If the Contractor fails to substantially complete the Work of this Contract, or portions thereof, as provided in this Section 3.4, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:
(Check the appropriate box.)

[« »] Stipulated Sum, in accordance with Section 4.2 below

[« »] Cost of the Work plus the Contractor's Fee, in accordance with Section 4.3 below

[« »] Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 4.4 below

(Based on the selection above, complete Section 4.2, 4.3 or 4.4 below.)

§ 4.2 Stipulated Sum

§ 4.2.1 The Contract Sum shall be « » ($ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2.2 Alternates

§ 4.2.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.2.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.2.4 Unit prices, if any:
(Identify the item and state the unit price, and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.3 Cost of the Work Plus Contractor's Fee without a Guaranteed Maximum Price

§ 4.3.1 The Cost of the Work is as defined in Exhibit B, Determination of the Cost of the Work.

§ 4.3.2 The Contractor's Fee:
(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee.)

« »

§ 4.3.3 The method of adjustment of the Contractor's Fee for changes in the Work:

« »

§ 4.3.4 Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

« »

§ 4.3.5 Rental rates for Contractor-owned equipment shall not exceed « » percent (« » %) of the standard rental rate paid at the place of the Project.

§ 4.3.6 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.3.7 The Contractor shall prepare and submit to the Construction Manager, within 14 days of executing this Agreement, a written Control Estimate for the Owner's review and approval. The Control Estimate shall include the items in Section B.1 of Exhibit B, Determination of the Cost of the Work.

§ 4.4 Cost of the Work Plus Contractor's Fee with a Guaranteed Maximum Price

§ 4.4.1 The Cost of the Work is as defined in Exhibit B, Determination of the Cost of the Work.

§ 4.4.2 The Contractor's Fee:
(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee.)

« »

§ 4.4.3 The method of adjustment of the Contractor's Fee for changes in the Work:

« »

§ 4.4.4 Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

« »

§ 4.4.5 Rental rates for Contractor-owned equipment shall not exceed « » percent (« » %) of the standard rental rate paid at the place of the Project.

§ 4.4.6 Unit Prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.4.7 Guaranteed Maximum Price

§ 4.4.7.1 The Contract Sum is guaranteed by the Contractor not to exceed « » ($ « »), subject to additions and deductions by Change Order as provided in the Contract Documents. This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.

§ 4.4.7.2 Alternates

§ 4.4.7.2.1 Alternates, if any, included in the Guaranteed Maximum Price:

Item	Price

§ 4.4.7.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.4.7.3 Allowances, if any, included in the Guaranteed Maximum Price:
(Identify each allowance.)

Item	Price

§ 4.4.7.4 Assumptions, if any, upon which the Guaranteed Maximum Price is based:
(Identify each assumption.)

« »

§ 4.4.8 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes, or equipment, all of which, if required, shall be incorporated by Change Order.

§ 4.4.9 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in Section 4.4.7.4. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions contained in Section 4.4.7.4 and the revised Contract Documents.

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any, to be assessed in accordance with Section 3.4.)

« »

§ 4.6 Other:
(Insert provisions for bonus, cost savings or other incentives, if any, that might result in a change to the Contract Sum.)

« »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Construction Manager by the Contractor, and Certificates for Payment issued by the Construction Manager and Architect, the Owner shall make progress payments on account of the Contract Sum, to the Contractor, as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that an Application for Payment is received by the Construction Manager not later than the « » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the « » day of the « » month. If an Application for Payment is received by the Construction Manager after the application date fixed above, payment of the amount certified shall be made by the Owner not later than « » (« ») days after the Construction Manager receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Progress Payments Where the Contract Sum is Based on a Stipulated Sum

§ 5.1.4.1 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Construction Manager and Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.4.2 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.4.3 In accordance with AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.4.3.1 The amount of each progress payment shall first include:

- **.1** That portion of the Contract Sum properly allocable to completed Work;
- **.2** That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- **.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.4.3.2 The amount of each progress payment shall then be reduced by:

- **.1** The aggregate of any amounts previously paid by the Owner;
- **.2** The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;
- **.3** Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- **.4** For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019; and
- **.5** Retainage withheld pursuant to Section 5.1.7.

§ 5.1.5 Progress Payments Where the Contract Sum is Based on the Cost of the Work without a Guaranteed Maximum Price

§ 5.1.5.1 With each Application for Payment, the Contractor shall submit the cost control information required in Exhibit B, Determination of the Cost of the Work, along with payrolls, petty cash accounts, receipted invoices, or invoices with check vouchers attached, and any other evidence required by the Owner, Construction Manager or Architect to demonstrate that payments already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor, plus payrolls for the period covered by the present Application for Payment, less that portion of the payments attributable to the Contractor's Fee.

§ 5.1.5.2 Applications for Payment shall show the Cost of the Work actually incurred by the Contractor through the end of the period covered by the Application for Payment and for which the Contractor has made or intends to make actual payment prior to the next Application for Payment.

§ 5.1.5.3 In accordance with AIA Document A232-2019 and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.5.3.1 The amount of each progress payment shall first include:

.1 The Cost of the Work as described in Exhibit B, Determination of the Cost of the Work;

.2 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified; and

.3 The Contractor's Fee computed upon the Cost of the Work described in the preceding Section 5.1.5.3.1.1 at the rate stated in Section 4.3.2; or if the Contractor's Fee is stated as a fixed sum in Section 4.3.2 an amount which bears the same ratio to that fixed-sum Fee as the Cost of the Work included in Section 5.1.5.3.1.1 bears to a reasonable estimate of the probable Cost of the Work upon its completion.

§ 5.1.5.3.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019;

.5 The shortfall, if any, indicated by the Contractor in the documentation required by Section 5.1.5.1 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.6 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.5.4 The Owner, Construction Manager and Contractor shall agree upon a mutually acceptable procedure for review and approval of payments to Subcontractors and the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements.

§ 5.1.5.5 In taking action on the Contractor's Applications for Payment, the Construction Manager and Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Contractor, and such action shall not be deemed to be a representation that (1) the Construction Manager and Architect have made a detailed examination, audit or arithmetic verification of the documentation submitted in accordance with Article 5 or other supporting data; (2) that the Construction Manager and Architect have made exhaustive or continuous on-site inspections; or (3) that the Construction Manager and Architect have made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

§ 5.1.5.6 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.1.5.7 If final completion of the Work is materially delayed through no fault of the Contractor, then the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A232-2019.

§ 5.1.6 Progress Payments Where the Contract Sum is Based on the Cost of the Work with a Guaranteed Maximum Price

§ 5.1.6.1 With each Application for Payment, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner, Construction Manager or Architect to demonstrate that payments already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Contractor's Fee.

§ 5.1.6.2 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Guaranteed Maximum Price among: (1) the various portions of the Work; (2) any contingency for costs that are included in the Guaranteed Maximum Price but not otherwise allocated to another line item or included in a Change Order; and (3) the Contractor's Fee.

§ 5.1.6.2.1 The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Construction Manager and Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.6.2.2 The allocation of the Guaranteed Maximum Price under this Section 5.1.6.2 shall not constitute a separate guaranteed maximum price for the Cost of the Work of each individual line item in the schedule of values.

§ 5.1.6.2.3 When the Contractor allocates costs from a contingency to another line item in the schedule of values, the Contractor shall submit supporting documentation to the Architect and Construction Manager.

§ 5.1.6.3 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. The percentage of completion shall be the lesser of (1) the percentage of that portion of the Work which has actually been completed; or (2) the percentage obtained by dividing (a) the expense that has actually been incurred by the Contractor on account of that portion of the Work and for which the Contractor has made payment or intends to make payment prior to the next Application for Payment by (b) the share of the Guaranteed Maximum Price allocated to that portion of the Work in the schedule of values.

§ 5.1.6.4 In accordance with AIA Document A232-2019, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.4.1 The amount of each progress payment shall first include:

- **.1** That portion of the Guaranteed Maximum Price properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the Guaranteed Maximum Price allocated to that portion of the Work in the most recent schedule of values;
- **.2** That portion of the Guaranteed Maximum Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction or, if approved in writing in advance by the Owner, suitably stored off the site at a location agreed upon in writing;
- **.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified; and
- **.4** The Contractor's Fee, computed upon the Cost of the Work described in the preceding Sections 5.1.6.4.1.1 and 5.1.6.4.1.2 at the rate stated in Section 4.4.2 or, if the Contractor's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum fee as the Cost of the Work included in Sections 5.1.6.4.1.1 and 5.1.6.4.1.2 bears to a reasonable estimate of the probable Cost of the Work upon its completion.

§ 5.1.6.4.2 The amount of each progress payment shall then be reduced by:

- **.1** The aggregate of any amounts previously paid by the Owner;
- **.2** The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;
- **.3** Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019;

.5 The shortfall, if any, indicated by the Contractor in the documentation required by Section 5.1.6.1 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.6 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.6.5 The Owner and the Contractor shall agree upon a mutually acceptable procedure for review and approval of payments to Subcontractors and the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements.

§ 5.1.6.6 In taking action on the Contractor's Applications for Payment, the Construction Manager and Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Contractor and such action shall not be deemed to be a representation that (1) the Construction Manager or Architect have made a detailed examination, audit, or arithmetic verification of the documentation submitted in accordance with Section 5.1.6.1 or other supporting data; (2) that the Construction Manager or Architect have made exhaustive or continuous on-site inspections; or (3) that the Construction Manager or Architect have made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits, and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

§ 5.1.6.7 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.1.6.8 If final completion of the Work is materially delayed through no fault of the Contractor, then the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A232-2019.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to when the Work of this Contract is substantially complete, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

« »

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

« »

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to when the entire Work of this Contract is substantially complete, including modifications for completion of portions of the Work as provided in Section 3.4.2, insert provisions for such modifications.)

« »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, when the Work of this Contract is substantially complete, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted when the Work of this Contract is substantially complete shall not include retainage as follows:
(Insert any other conditions for release of retainage when the Work of this Contract is substantially complete, or upon Substantial Completion of the Work of all Contractors on the Project or portions thereof.)

« »

§ 5.2 Final Payment

§ 5.2.1 Final Payment Where the Contract Sum is Based on a Stipulated Sum

§ 5.2.1.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A232–2019, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect.

§ 5.2.1.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment, or as follows:

« »

§ 5.2.2 Final Payment Where the Contract Sum is Based on the Cost of the Work with or without a Guaranteed Maximum Price

§ 5.2.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A232–2019, and to satisfy other requirements, if any, which extend beyond final payment;

.2 the Contractor has submitted a final accounting for the Cost of the Work, pursuant to Exhibit B, Determination of the Cost of the Work and a final Application for Payment; and

.3 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect in accordance with Exhibit B, Determination of the Cost of the Work.

§ 5.2.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment, or as follows:

« »

§ 5.3 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

« » % « »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as Initial Decision Maker pursuant to Article 15 of AIA Document A232–2019, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« »
« »
« »
« »

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A232–2019, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[« »] Arbitration pursuant to Article 15 of AIA Document A232–2019.

[« »] Litigation in a court of competent jurisdiction.

[« »] Other: *(Specify)*

« »

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 Where the Contract Sum is a Stipulated Sum

§ 7.1.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2019.

§ 7.1.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A232–2019, then the Owner shall pay the Contractor a termination fee as follows:
(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

« »

§ 7.1.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232–2019.

§ 7.2 Where the Contract Sum is Based on the Cost of the Work with or without a Guaranteed Maximum Price

§ 7.2.1 Termination

§ 7.2.1.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2019.

§ 7.2.1.2 Termination by the Owner for Cause

§ 7.2.1.2.1 If the Owner terminates the Contract for cause as provided in Article 14 of AIA Document A232–2019, the Owner shall then only pay the Contractor an amount as follows:

.1 Take the Cost of the Work incurred by the Contractor to the date of termination;

.2 Add the Contractor's Fee, computed upon the Cost of the Work to the date of termination at the rate stated in Section 4.3.2 or 4.4.2, as applicable, or, if the Contractor's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum Fee as the Cost of the Work at the time of termination bears to a reasonable estimate of the probable Cost of the Work upon its completion;

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract the costs and damages incurred, or to be incurred, by the Owner under Article 14 of AIA Document A232–2019.

§ 7.2.1.2.2 When the Contract Sum is based on the Cost of the Work with a Guaranteed Maximum Price, if the Owner terminates the Contract for cause as provided in Article 14 of AIA Document A232-2019, the amount, if any, to be paid to the Contractor under Article 14 of AIA Document A232-2019 shall not cause the Guaranteed Maximum Price to be exceeded, nor shall it exceed the amount calculated in Section 7.2.1.2.1.

§ 7.2.1.2.3 The Owner shall also pay the Contractor fair compensation, either by purchase or rental at the election of the Owner, for any equipment owned by the Contractor that the Owner elects to retain and that is not otherwise included in the Cost of the Work under Section 7.2.1.2.1.1. To the extent that the Owner elects to take legal assignment of subcontracts and purchase orders (including rental agreements), the Contractor shall, as a condition of receiving the payments referred to in this Article 7, execute and deliver all such papers and take all such steps, including the legal assignment of such subcontracts and other contractual rights of the Contractor, as the Owner may require for the purpose of fully vesting in the Owner the rights and benefits of the Contractor under such subcontracts or purchase orders. All Subcontracts, purchase orders and rental agreements entered into by the Contractor will contain provisions allowing for assignment to the Owner as described above.

§ 7.2.1.3 Termination by the Owner for Convenience

If the Owner terminates the Contract for convenience in accordance with Article 14 of AIA Document A232–2019, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of or method for determining the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

« »

§ 7.3 Suspension

The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232–2019; in such case, the Contract Sum and Contract Time shall be increased as provided in Article 14 of AIA Document A232–2019, except that the term "profit" shall be understood to mean the Contractor's Fee as described in Section 4.3.2 or 4.4.2, as applicable, of this Agreement.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A232–2019 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

§ 8.3 The Contractor's representative:

(Name, address, email address, and other information)

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« »

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A132™–2019, Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A232–2019, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

« »

§ 8.7 Relationship of the Parties

Where the Contract is based on the Cost of the Work plus the Contractor's Fee, with or without a Guaranteed Maximum Price, the Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

§ 8.8 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition

.2 AIA Document A132™–2019, Exhibit A, Insurance and Bonds Exhibit

.3 AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

.4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

« »

.5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages

.7 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[« »] AIA Document A132™–2019, Exhibit B, Determination of the Cost of the Work

[« »] AIA Document E235™–2019, Sustainable Projects Exhibit, Construction Manager as Adviser Edition, dated as indicated below:
(Insert the date of the E235-2019 incorporated into this Agreement.)

« »

[« »] The Sustainability Plan:

Title	Date	Pages

[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A232–2019 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

« »

This Agreement is entered into as of the day and year first written above.

OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
« »« »	« »« »
(Printed name and title)	*(Printed name and title)*

DRAFT

AIA® Document A232® – 2019

General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

for the following PROJECT:
(Name, and location or address)

« »
« »

THE CONSTRUCTION MANAGER:
(Name, legal status, and address)

« »« »
« »

THE OWNER:
(Name, legal status, and address)

« »« »
« »

THE ARCHITECT:
(Name, legal status, and address)

« »« »
« »

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An ***Additions and Deletions Report*** that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

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TABLE OF ARTICLES

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents. The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract. The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and the Construction Manager or the Construction Manager's consultants, (3) between the Owner and the Architect or the Architect's consultants, (4) between the Contractor and the Construction Manager or the Construction Manager's consultants, (5) between the Owner and a Subcontractor or Sub-subcontractor (6) between the Construction Manager and the Architect, or (7) between any persons or entities other than the Owner and Contractor. The Construction Manager and Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of their duties.

§ 1.1.3 The Work. The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Contractors, and by the Owner's own forces and Separate Contractors.

§ 1.1.5 Contractors. Contractors are persons or entities, other than the Contractor or Separate Contractors, who perform Work under contracts with the Owner that are administered by the Architect and Construction Manager.

§ 1.1.6 Separate Contractors. Separate Contractors are persons or entities who perform construction under separate contracts with the Owner not administered by the Architect and Construction Manager.

§ 1.1.7 The Drawings. The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.8 The Specifications. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.9 Instruments of Service. Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.10 Initial Decision Maker. The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building

Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Construction Manager and the Architect do not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work, and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements,

assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. Unless otherwise provided under the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 The Owner shall retain a construction manager adviser lawfully practicing construction management in the jurisdiction where the Project is located. That person or entity is identified as the Construction Manager in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.4 If the employment of the Construction Manager or Architect terminates, the Owner shall employ a successor construction manager or architect to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Construction Manager or Architect, respectively.

§ 2.3.5 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.6 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.7 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3.8 The Owner shall forward all communications to the Contractor through the Construction Manager. Other communication shall be made as set forth in Section 4.2.6.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to review by the Construction Manager and prior approval of the Architect, and the Construction Manager or Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Construction Manager's and Architect's and their respective consultants' additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction

where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager or Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.5, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Construction Manager and Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information submitted to the Construction Manager in such form as the Construction Manager and Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Construction Manager and Architect any nonconformity discovered by or made known to the Contractor as a request for information submitted to Construction Manager in such form as the Construction Manager and Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner, the Construction Manager, and the Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. The Construction Manager shall review the proposed alternative for sequencing, constructability, and coordination impacts on the other Contractors. Unless the Architect or the Construction Manager objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of the Project already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect, in consultation with the Construction Manager, and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner, Construction Manager, and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Construction Manager or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices, and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit. The Contractor shall secure and pay for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or

(2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner, Construction Manager, and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect and Construction Manager will promptly investigate such conditions and, if the Architect, in consultation with the Construction Manager, determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect, in consultation with the Construction Manager, determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner, Construction Manager, and Contractor, stating the reasons. If the Owner or Contractor disputes the Architect's determination or recommendation, either party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner, Construction Manager, and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- **.1** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- **.2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- **.3** whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect, through the Construction Manager, of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor, stating whether the Owner, the Construction Manager, or the Architect (1) has reasonable objection to the proposed superintendent or (2) require additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner, Construction Manager, or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information, and the Construction Manager's use in developing the Project schedule, a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Contractors, or the construction or operations of the Owner's own forces or Separate Contractors.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Construction Manager's and Architect's approval. The Architect and Construction Manager's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Construction Manager and Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall participate with other Contractors, the Construction Manager, and the Owner in reviewing and coordinating all schedules for incorporation into the Project schedule that is prepared by the Construction Manager. The Contractor shall make revisions to the construction schedule and submittal schedule as deemed necessary by the Construction Manager to conform to the Project schedule.

§ 3.10.4 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner, Construction Manager, and Architect, and incorporated into the approved Project schedule.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Construction Manager, Architect, and Owner, and delivered to the Construction Manager for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data, and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect and Construction Manager is subject to the limitations of Sections 4.2.10 through 4.2.12. Informational submittals upon which the Construction Manager and Architect are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Construction Manager or Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Construction Manager, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract

Documents, in accordance with the Project submittal schedule approved by the Construction Manager and Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of other Contractors, Separate Contractors, or the Owner's own forces. The Contractor shall cooperate with the Construction Manager in the coordination of the Contractor's Shop Drawings, Product Data, Samples, and similar submittals with related documents submitted by other Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner, Construction Manager, and Architect, that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been reviewed and approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Construction Manager and Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Construction Manager and Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner, the Architect, and the Construction Manager shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Construction Manager shall review submittals for sequencing, constructability, and coordination impacts on other Contractors.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Construction Manager and Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.13.2 The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Construction Manager before using any portion of the site.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner, Separate Contractors, or of other Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner, Separate Contractors, or by other Contractors except with written consent of the Construction Manager, Owner, and such other Contractors or Separate Contractors. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Separate Contractors, other Contractors, or the Owner, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner, or Construction Manager with the Owner's approval, may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner, Construction Manager, and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner, Construction Manager, and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner, Architect, or Construction Manager. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect through the Construction Manager.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Construction Manager, Architect, Construction Manager's and Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT AND CONSTRUCTION MANAGER

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 The Construction Manager is the person or entity retained by the Owner pursuant to Section 2.3.3 and identified as such in the Agreement.

§ 4.1.3 Duties, responsibilities, and limitations of authority of the Construction Manager and Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Construction Manager, Architect, and Contractor. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Construction Manager and Architect will provide administration of the Contract as described in the Contract Documents and will be the Owner's representatives during construction until the date the Architect issues the final Certificate for Payment. The Construction Manager and Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect will keep the Owner and the Construction Manager reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner and Construction Manager known deviations from the Contract Documents and defects and deficiencies observed in the Work.

§ 4.2.3 The Construction Manager shall provide one or more representatives who shall be in attendance at the Project site whenever the Work is being performed. The Construction Manager will determine in general if the Work observed is being performed in accordance with the Contract Documents, will keep the Owner and Architect reasonably informed of the progress of the Work, and will promptly report to the Owner and Architect known deviations from the Contract Documents and the most recent Project schedule, and defects and deficiencies observed in the Work.

§ 4.2.4 The Construction Manager will schedule and coordinate the activities of the Contractor and other Contractors in accordance with the latest approved Project schedule.

§ 4.2.5 The Construction Manager, except to the extent required by Section 4.2.4, and Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, and neither will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Neither the Construction Manager nor the Architect will have control over or charge of, or be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or of any other persons or entities performing portions of the Work.

§ 4.2.6 Communications. The Owner shall communicate with the Contractor and the Construction Manager's consultants through the Construction Manager about matters arising out of or relating to the Contract Documents. The Owner and Construction Manager shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Construction Manager otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with other Contractors shall be

through the Construction Manager. Communications by and with the Owner's own forces and Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.7 The Construction Manager and Architect will review and certify all Applications for Payment by the Contractor, in accordance with the provisions of Article 9.

§ 4.2.8 The Architect and Construction Manager have authority to reject Work that does not conform to the Contract Documents, and will notify each other about the rejection. Whenever the Construction Manager considers it necessary or advisable, the Construction Manager will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, upon written authorization of the Owner, whether or not the Work is fabricated, installed or completed. The foregoing authority of the Construction Manager will be subject to the provisions of Sections 4.2.18 through 4.2.20 inclusive, with respect to interpretations and decisions of the Architect. However, neither the Architect's nor the Construction Manager's authority to act under this Section 4.2.8 nor a decision made by either of them in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Construction Manager to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons performing any of the Work.

§ 4.2.9 Utilizing the submittal schedule provided by the Contractor, the Construction Manager shall prepare, and revise as necessary, a Project submittal schedule incorporating information from other Contractors, the Owner, Owner's consultants, Owner's Separate Contractors and vendors, governmental agencies, and participants in the Project under the management of the Construction Manager. The Project submittal schedule and any revisions shall be submitted to the Architect for approval.

§ 4.2.10 The Construction Manager will receive and promptly review for conformance with the submittal requirements of the Contract Documents, all submittals from the Contractor such as Shop Drawings, Product Data, and Samples. Where there are other Contractors, the Construction Manager will also check and coordinate the information contained within each submittal received from the Contractor and other Contractors, and transmit to the Architect those recommended for approval. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Construction Manager represents to the Owner and Architect that the Construction Manager has reviewed and recommended them for approval. The Construction Manager's actions will be taken in accordance with the Project submittal schedule approved by the Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness while allowing sufficient time to permit adequate review by the Architect.

§ 4.2.11 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Upon the Architect's completed review, the Architect shall transmit its submittal review to the Construction Manager.

§ 4.2.12 Review of the Contractor's submittals by the Construction Manager and Architect is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Construction Manager and Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Construction Manager and Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.13 The Construction Manager will prepare Change Orders and Construction Change Directives.

§ 4.2.14 The Construction Manager and the Architect will take appropriate action on Change Orders or Construction Change Directives in accordance with Article 7, and the Architect will have authority to order minor changes in the Work as provided in Section 7.4. The Architect, in consultation with the Construction Manager, will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.15 Utilizing the documents provided by the Contractor, the Construction Manager will maintain at the site for the Owner one copy of all Contract Documents, approved Shop Drawings, Product Data, Samples, and similar required submittals, in good order and marked currently to record all changes and selections made during construction. These will be available to the Architect and the Contractor, and will be delivered to the Owner upon completion of the Project.

§ 4.2.16 The Construction Manager will assist the Architect in conducting inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion in conjunction with the Architect pursuant to Section 9.8; and receive and forward to the Owner written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10. The Construction Manager will forward to the Architect a final Application and Certificate for Payment or final Project Application and Project Certificate for Payment upon the Contractor's compliance with the requirements of the Contract Documents.

§ 4.2.17 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Construction Manager of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.18 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of the Construction Manager, Owner, or Contractor through the Construction Manager. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.19 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions so rendered in good faith.

§ 4.2.20 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.21 The Construction Manager will receive and review requests for information from the Contractor, and forward each request for information to the Architect, with the Construction Manager's recommendation. The Architect will review and respond in writing, through the Construction Manager, to requests for information about the Contract Documents. The Construction Manager's recommendation and the Architect's response to each request will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include other Contractors or Separate Contractors or the subcontractors of other Contractors or Separate Contractors.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Construction Manager, for review by the Owner, Construction Manager and Architect, of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor whether the Owner, the Construction Manager or the Architect (1) has reasonable objection to any such proposed person or entity or, (2) requires additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner, Construction Manager or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner, Construction Manager or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Construction Manager or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner, Construction Manager or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, that the Contractor, by these Contract Documents, assumes toward the Owner, Construction Manager and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner, Construction Manager and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- **.1** assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- **.2** assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor Contractor or other entity. If the Owner assigns the subcontract to a successor Contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor Contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When the Owner performs construction or operations with the Owner's own forces or Separate Contractors, the Owner shall provide for coordination of such forces and Separate Contractors with the Work of the Contractor, who shall cooperate with them.

§ 6.1.3 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner's own forces, Separate Contractors, Construction Manager and other Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces, Separate Contractors or other Contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Construction Manager and Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor or other Contractors that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Construction Manager and the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's or other Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractors or other Contractors that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs, including costs that are payable to a Separate Contractors or to other Contractors, because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of delays, improperly timed activities, damage to the Work or defective construction by the Owner's own forces, Separate Contractors, or other Contractors.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction, or to property of the Owner, Separate Contractors, or other Contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner, Separate Contractors, and other Contractors shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, other Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Construction Manager, with notice to the Architect, will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Construction Manager, Architect and Contractor. A Construction Change Directive requires agreement by the Owner, Construction Manager and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

A Change Order is a written instrument prepared by the Construction Manager and signed by the Owner, Construction Manager, Architect, and Contractor, stating their agreement upon all of the following:

.1 The change in the Work;
.2 The amount of the adjustment, if any, in the Contract Sum; and
.3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Construction Manager and signed by the Owner, Construction Manager and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
.2 Unit prices stated in the Contract Documents or subsequently agreed upon;
.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
.4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Construction Manager shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

.1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Construction Manager and Architect;
.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
.5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Construction Manager and Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Construction Manager and Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Construction Manager and Architect determine to be reasonably justified. The interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Construction Manager and Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Construction Manager shall prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Construction Manager and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Construction Manager that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner, Architect, Construction Manager, or an employee of any of them, or of the Owner's own forces, Separate Contractors, or other Contractors; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section

15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts and the Architect, based on the recommendation of the Construction Manager, determines justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Construction Manager, before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Construction Manager and the Architect. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. The Construction Manager shall forward to the Architect the Contractor's schedule of values. Any changes to the schedule of values shall be submitted to the Construction Manager and supported by such data to substantiate its accuracy as the Construction Manager and the Architect may require, and unless objected to by the Construction Manager or the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least fifteen days before the date established for each progress payment, the Contractor shall submit to the Construction Manager an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner, Construction Manager or Architect require, such as copies of requisitions, and releases of waivers of lien from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Construction Manager and Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all

Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 Where there is only one Contractor, the Construction Manager will, within seven days after the Construction Manager's receipt of the Contractor's Application for Payment, review the Application, certify the amount the Construction Manager determines is due the Contractor, and forward the Contractor's Application and Certificate for Payment to the Architect. Within seven days after the Architect receives the Contractor's Application for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Certificate for Payment, in the full amount of the Application for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward to the Contractor the Architect's notice of withholding certification.

§ 9.4.2 Where there is more than one Contractor performing portions of the Project, the Construction Manager will, within seven days after the Construction Manager receives all of the Contractors' Applications for Payment: (1) review the Applications and certify the amount the Construction Manager determines is due each of the Contractors; (2) prepare a Summary of Contractors' Applications for Payment by combining information from each Contractor's application with information from similar applications for progress payments from the other Contractors; (3) prepare a Project Application and Certificate for Payment; (4) certify the amount the Construction Manager determines is due all Contractors; and (5) forward the Summary of Contractors' Applications for Payment and Project Application and Certificate for Payment to the Architect.

§ 9.4.2.1 Within seven days after the Architect receives the Project Application and Project Certificate for Payment and the Summary of Contractors' Applications for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Project Certificate for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Project Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Project Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward the Architect's notice of withholding certification to the Contractors.

§ 9.4.3 The Construction Manager's certification of an Application for Payment or, in the case of more than one Contractor, a Project Application and Certificate for Payment, shall be based upon the Construction Manager's evaluation of the Work and the data in the Application or Applications for Payment. The Construction Manager's certification will constitute a representation that, to the best of the Construction Manager's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.4 The Architect's issuance of a Certificate for Payment or, in the case of more than one Contractor, Project Application and Certificate for Payment, shall be based upon the Architect's evaluation of the Work, the recommendation of the Construction Manager, and data in the Application for Payment or Project Application for Payment. The Architect's certification will constitute a representation that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.5 The representations made pursuant to Sections 9.4.3 and 9.4.4 are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Construction Manager or Architect.

§ 9.4.6 The issuance of a Certificate for Payment or a Project Certificate for Payment will not be a representation that the Construction Manager or Architect has (1) made exhaustive or continuous on-site inspections to check the quality

or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Construction Manager or Architect may withhold a Certificate for Payment or Project Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Section 9.4.3 and 9.4.4 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager will notify the Contractor and Owner as provided in Section 9.4.1 and 9.4.2. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment or a Project Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Construction Manager or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment or Project Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from the acts and omissions described in Section 3.3.2 because of

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- **.4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- **.5** damage to the Owner or a Separate Contractor or other Contractor;
- **.6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- **.7** repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect or Construction Manager withholds certification for payment under Section 9.5.1, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Construction Manager, and both will reflect such payment on the next Certificate for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment or Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Construction Manager will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner, Construction Manager and Architect on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor

fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner, Construction Manager nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Construction Manager and Architect do not issue a Certificate for Payment or a Project Certificate for Payment, through no fault of the Contractor, within fourteen days after the Construction Manager's receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Construction Manager and Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Construction Manager, and the Contractor and Construction Manager shall jointly prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the list, the Architect, assisted by the Construction Manager, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect, assisted by the Construction Manager, to determine Substantial Completion.

§ 9.8.4 When the Architect, assisted by the Construction Manager, determines that the Work of all of the Contractors, or designated portion thereof, is substantially complete, the Construction Manager will prepare, and the Construction

Manager and Architect shall execute, a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor and Construction Manager shall jointly prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect after consultation with the Construction Manager.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Construction Manager, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon completion of the Work, the Contractor shall forward to the Construction Manager a notice that the Work is ready for final inspection and acceptance, and shall also forward to the Construction Manager a final Contractor's Application for Payment. Upon receipt, the Construction Manager shall perform an inspection to confirm the completion of Work of the Contractor. The Construction Manager shall make recommendations to the Architect when the Work of all of the Contractors is ready for final inspection, and shall then forward the Contractors' notices and Application for Payment or Project Application for Payment, to the Architect, who will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Construction Manager and Architect will promptly issue a final Certificate for Payment or Project Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Construction Manager's and Architect's final Certificate for Payment or Project Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect through the Construction Manager (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6), if required by the Owner, other data

establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Construction Manager and Architect so confirm, the Owner shall, upon application by the Contractor and certification by the Construction Manager and Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect through the Construction Manager prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- **.1** liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- **.2** failure of the Work to comply with the requirements of the Contract Documents;
- **.3** terms of special warranties required by the Contract Documents; or
- **.4** audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Construction Manager for review and coordination with the safety programs of other Contractors. The Construction Manager's responsibilities for review and coordination of safety programs shall not extend to direct control over or charge of the acts or omissions of the Contractors, Subcontractors, agents or employees of the Contractors or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Construction Manager.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- **.1** employees on the Work and other persons who may be affected thereby;
- **.2** the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- **.3** other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction; and
- **.4** construction or operations by the Owner, Separate Contractors, or other Contractors.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner, Construction Manager or Architect or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner, Construction Manager and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner, Construction Manager and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor, Construction Manager and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor, the Construction Manager and the Architect will promptly reply to the Owner in writing stating whether or not any of them has reasonable objection to the persons or entities proposed by the Owner. If the Contractor, Construction Manager or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor, the Construction Manager and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Construction Manager, Architect, their consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of

tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Construction Manager and Construction Manager's consultants, and the Architect and Architect's consultants, shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice directly to the Owner, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the

Contract Documents, the Owner shall inform both the Contractor and the Construction Manager, separately and in writing, prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice directly to the Contractor, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Construction Manager and Construction Manager's consultants; (3) the Architect and Architect's consultants; (4) other Contractors and any of their subcontractors, sub-subcontractors, agents, and employees; and (5) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Construction Manager, Construction Manager's consultants, Architect, Architect's consultants, other Contractors, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor, Architect, and Construction Manager for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to

requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Construction Manager, Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Construction Manager, Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Construction Manager's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by either, be uncovered for their examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Construction Manager or Architect has not specifically requested to examine prior to its being covered, the Construction Manager or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Construction Manager or Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion, and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner, Construction Manager or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner, Separate Contractors, or other Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Construction Manager, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Construction Manager and Architect timely notice of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become

requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Construction Manager, Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Construction Manager and Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Construction Manager and Architect of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Construction Manager's and Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager for transmittal to the Architect.

§ 13.4.5 If the Construction Manager or Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Construction Manager or Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- **.1** Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- **.2** An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- **.3** Because the Construction Manager has not certified or the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- **.4** The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees, or any other persons performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- **.1** repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- **.3** repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- **.4** otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, after consultation with the Construction Manager, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- **.1** Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- **.2** Accept assignment of subcontracts pursuant to Section 5.4; and
- **.3** Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall, upon application, be certified by the Initial Decision Maker after consultation with the Construction Manager, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and the Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

- **.1** that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- **.2** that an equitable adjustment is made or denied under another provision of this Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- **.1** cease operations as directed by the Owner in the notice;
- **.2** take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Construction Manager and Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost. If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties, the Construction Manager, and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation

within 30 days of receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

CM.006113 – PERFORMANCE AND PAYMENT BOND

1. Performance Bond and Payment Bond

1.1. Unless State Statutes require Bonds to be on different forms, the Forms of the Performance Bond and Payment Bond shall be AIA Document A312, current edition, or similar document approved by the Owner and Construction Manager.

1.2. The Contractor is responsible for procurement of forms.

2. Modifications to Performance Bond

2.1. The Performance Bond AIA Document A312, current edition, shall be written for one hundred percent (100%) of the Contract Sum and shall be modified to additionally require the prompt and faithful performance of all guarantees, warranties, required by the Contract for a period of one (1) year after final payment for the Work is due. Such limitation as to the sureties' obligation shall not reduce the obligation of the Contractor under or through the Contract.

3. Modifications to Payment Bond

3.1. The Payment Bond, AIA Document A312, current edition, shall be written for one hundred percent (100%) of the Contract Sum.

<End of CM.006113 - Performance and Payment Bond>

CM.006273 – APPLICATION AND CERTIFICATION FOR PAYMENT

1. **Application and Certification for Payment**
   - **1.1.** The Form of the Application and Certificate for Payment shall be on an AIA Documents G732 and G703, current edition or a similar document as approved by the Construction Manager.
   - **1.2.** Applications for Payment shall be submitted on or before the 20th of the Month and cover a period of the 1st day to the last day of the month.
   - **1.3.** Submit Applications for Payment to the Construction Manager via Procore unless indicated otherwise elsewhere.

CM.006275 – PARTIAL LIEN WAVER

To: Unified School District #500

Contractor: _____

Address: _____

Project: Wyandotte High School Renovations

Scope of Work #: _____

Period To: _____

Amount of Previous Payments: _____

Amount of Current Payment Due: _____

I hereby certify that the work performed, and the materials supplied to date represent the actual value of accomplishment under the terms of the Contract (and all authorized changes thereto) between the undersigned and Unified School District #500 relating to the above referenced project.

I also certify that payments, less applicable retention, have been made through the period covered by previous payments received from the Contractor, to (1) all my subcontractors (subcontractors) and (2) for all materials and labor used in or in connection with the performance of the Contract. I further certify I have complied with Federal, State and local tax laws, including Social Security, Unemployment Compensation, and Workmen's Compensation laws as applicable to the performance of the Contract.

Furthermore in consideration of the payments received, the undersigned does hereby waive, release and relinquish all claim or rights which the undersigned may now have upon the premises except for claims or right of lien for contract and/or change order work performed to extent that payment is being retained or will subsequently become due.

Date: _____

Name: _____

Signature: _____

Title: _____

Subscribed and sworn before me this _____ day of _____,20___

Notary Public: _____

My Commission Expires: _____

Seal:

<End of CM.006275>

Universal Construction Company, Inc.
1615 Argentine Boulevard | Kansas City, KS 66105 | (913) 342-1150

CM.006276 – NON-NEGOTIABLE BAILMENT RECEIPT

Bailor: _____

Bailor address: _____

Bailee: _____

Bailee address: _____

Project: Unified School District #500 - Wyandotte High School Renovations

Location of Storage: _____

The goods and materials described below are held and stored pursuant to the Subcontract by and between Bailee, as Subcontractor/Supplier, and the Bailor as Contractor, for Work to be performed at the above referenced Project location. Said goods and materials are to be transferred or delivered to the Project site in conjunction with the performance of Bailee's Contract referenced above or upon the direction of the Contractor and no other. The Bailee acknowledges that it has no ownership rights or title in, nor shall claim any lien or interest in or upon, said goods and materials.

QUANTITY	DESCRIPTION OF ITEM
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Receipted and Acknowledged Bailee

By:_____ Dated: _____

<End CM.06276>

CM.006277 – BILL OF SALE

SELLER: _____

Address: _____

Buyer/Owner:

In consideration of payments made pursuant to its Subcontract, dated _____ for the Project known as Unified School District #500 - Wyandotte High School Renovations; Seller does hereby grant, sell, transfer, and deliver to Buyer right, title, and interest in the following goods:

_____

_____

_____

_____

_____

The Buyer shall have all rights and title to the goods in himself and his executors, administrators, and assigns. The Seller is the lawful owner of the goods, and the goods are free from all encumbrances. The Seller has good right to sell the goods and will warrant and defend the right against the lawful claims and demands of all persons. It is expressly understood and agreed that the acceptance of the goods described herein is not a waiver of any right of action that the Buyer may have for breach of warranty of any other cause under the Subcontract referenced above or law. In Witness Whereof, Seller has executed this Agreement the _____day of _____, 20_____.

Signed (Seller): _____

Printed Name: _____

Title: _____

Notary Seal

Subscribed and sworn before me this _____day of, _____ 20_____

Notary Public: _____

My Commission Expires: _____

<End of CM.006277>

WYANDOTTE HIGH SCHOOL RENOVATION
UNIFIED PUBLIC SCHOOL DISTRICT #500

PERMIT SET
1/31/2024

DRAWING INDEX

ARCHITECT

INCITE DESIGN STUDIO, LLC
7200 WEST 75TH STREET
OVERLAND PARK, KS 66204
PHONE: 913-381-4437

CIVIL ENGINEER

MKEC ENGINEERING, INC.
11827 W 112TH STREET
OVERLAND PARK, KS 66210
PHONE: 913-317-9390

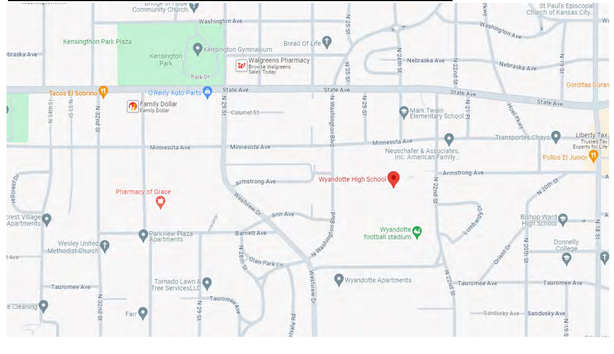
MEP ENGINEER

RTM ENGINEERING CONSULTANTS
9225 INDIAN CREEK PKWY., SUITE 1075
OVERLAND PARK, KS 66210
PHONE: 913-322-1400

CONSTRUCTION MANAGER

UNIVERSAL CONSTRUCTION
1615 ARGENTINE BLVD
KANSAS CITY, KS 66105
PHONE: 913-342-1150

LOCATION: WYANDOTTE HIGH SCHOOL, 2501 MINESSOTA AVE, KANSAS CITY, KS 66102



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Architect
INCITE DESIGN STUDIO
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Civil
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Mech., Plumb., Elec., Telecom.
RTM ENGINEERING CONSULTANTS
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OVERLAND PARK, KS 66210
913.322.1400

Construction Manager
UNIVERSAL CONSTRUCTION
1615 ARGENTINE BLVD
KANSAS CITY, KS 66105
913.342.1150

Licensed Architect
DUANE CASH

License
KS #7083

Cert. of Authority
A-543
INCITE DESIGN STUDIO, LLC

NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

Project Number
24-304

Issue Date
1/31/2024

Revision No.	Description	Date Issued

Area Plan

Sheet Name
SHEET INDEX

Sheet Number
G1.00

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ABBREVIATIONS

A/C	AIR CONDITIONING(ER)
A AMP	AMPERE
A	COMPRESSED AIR
AAP	AREA ALARM PANEL
AB	ANCHOR BOLT
ABS	ACRYLONITRILE-BUTADIENE-STYRENE
AC	ALTERNATING CURRENT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
ACM	ALUMINUM COMPOSITE MATERIAL
ACST	ACOUSTIC
ACT	ACOUSTICAL CEILING TILE
AD	ACCESS DOOR
AD	AREA DRAIN
ADDN	ADDITION OR ADDITIONAL
ADJ	ADJUSTABLE
ADJT	ADJACENT
ADMIN	ADMINISTRATION
AF	AIR FILTER
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AI	AREA INLET
ALT	ALTERNATE
ALUM	ALUMINUM
ALCW	ALUMINUM CURTAIN WALL
ALSF	ALUMINUM STORE FRONT
AMB	AMBIENT
ANCH	ANCHOR
AP	ACCESS PANEL
APC	ACOUSTICAL PANEL CEILING
APP	ATACTIC-POLYPROPYLENE (ROOFING)
AR	ACID RESISTING
ARCH	ARCHITECTURAL
ASB	ASBESTOS
ASPH	ASPHALT
AUTO	AUTOMATIC
AV	AIR VENT
AV	AVERAGE
AWG	AMERICAN WIRE GAUGE
AWP	ACOUSTICAL WALL PANEL
B to B	BACK TO BACK
BBO	BOILER BLOW OFF
BCMU	BURNISHED CONCRETE MASONRY UNIT
BD	BOARD
BFP	BACKFLOW PREVENTER
BFR	BELOW FLOOR
BHP	BREAK HORSE POWER
BKR	BREAKER
BL	BUILDING LINE
BLDG	BUILDING
BLK	BLOCK
BLCKG	BLOCKING
BLKHD	BULKHEAD
BM	BEAM
BM	BENCH MARK
BO	BOTTOM OF
BOD	BOTTOM OF DUCT
BOF	BOTTOM OF FOOTING
BRDG	BRIDGING
BRKT	BRACKET
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BUR	BUILT UP ROOFING
C	CONDUIT
CAB	CABINET
CANT	CANTILEVER
CAP	CAPACITY
CAS	CASING
CD	CONDENSATE DRAIN
CCTV	CLOSED CIRCUIT TELEVISION
CE	COVER ELEVATION
CEM	CEMENT
CENT	CENTRIFUGAL
CER	CERAMIC
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CG	CORNER GUARD
CH	CHANNEL
CI	CURB INLET
CIP	CAST IN PLACE
CIRC	CIRCULATING
CJ	CONTROL JOINT
CKT	CIRCUIT
CKT BK	CIRCUIT BREAKER
CL	CENTER LINE
CLG	CEILING
CLOS	CLOSET
CLR	CLEAR
CM	CEILING MOUNTED
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
CO	CONDUIT ONLY
CO2	CARBON DIOXIDE
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATIONS
COMP	COMPOSITE
COMP	COMPRESSOR UNIT
COMPR	COMPRESSIBLE
CONC	CONCRETE
CONF	CONFERENCE
CONFIG	CONFIGURATION
CONN	CONNECT
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR OR CONTRACT
CONV	CONVECTOR
CORR	CORRIDOR
CP	CONDENSER PUMP
CP	COVER PLATE
CPS	CYCLES PER SECOND
CPT	CARPET
CR	CORROSION RESISTANT
CS	COUNTERSINK
CSK	COUNTERSUNK
CSTJ	CONSTRUCTION JOINT
CSWK	CASEWORK
CT	CERAMIC TILE
CTR	CENTER
CU	COPPER
CU	CONDENSING UNIT
CU	CUBIC
CU	COMBINATION UNIT
CW	COLD WATER
CY	CUBIC YARD
CYL	CYLINDER
D	DRAIN
D	DEPTH
D	DATA
DB	DRY BULB
DB	DECIBEL
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DC	DUST COLLECTOR
DCJ	DUMMY CONTROL JOINT
d	PENNY (AS NAIL 100)
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREE
DEPR	DEPRESS(ION)(ED)
DEPT	DEPARTMENT
DET	DETENTION
DF	DRINKING FOUNTAIN
DG	DOOR GRILLE
DH	DUCT HEATER
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DISC SW	DISCONNECT SWITCH
DISC	DISCONNECT
DISCH	DISCHARGE
DISTR	DISTRIBUTION
DL	DEAD LOAD
DM	DAMPER MOTOR
DMPR	DAMPER
DN	DOWN
DN	DOWNSPOUT NOZZLE
DO OR "	DITTO
DPFG	DAMPPROOFING
DR	DOOR
DR	DRAIN
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DTL	DETAIL
DTR	DUCT THRU ROOF
DW	DISHWASHER
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
DXS	DOUBLE EXTRA STRONG
E	EAST
EA	EACH
EB	EXPANSION BOLT
EC	ELECTRICAL CONTRACTOR
EE	EACH END
EER	ENERGY EFFICIENT RATIO
EEW	EMERGENCY EYEWASH
EEWS	EMERGENCY EYEWASH/SHOWER
EF	EACH FACE
EF	EXHAUST FAN
EFF	EFFICIENCY
EH	ELECTRICAL HEATER
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAS	ELASTOMERIC
ELEC	ELECTRIC(AL)
EMER	EMERGENCY
EMD	ESTIMATED MAXIMUM DEMAND
EMV	EMERGENCY MIXING VALVE
ENCL	ENCLOSURE
ENTR	ENTRANCE
EOMD	END OF MAIN DRIP
EP	ELECTRO-PNEUMATIC
EPO	EMERGENCY POWER OFF
ERF	EPOXY RESIN FLOORING
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ES	EXTRA STRONG
EST	ESTIMATE
ET	EXPANSION TANK
EW	EACH WAY
EXC	EXCAVATE
EXG	EXISTING
EXH	EXHAUST
EXP	EXPANSION
EXP	EXPOSED
EXT	EXTERIOR
F	FAHRENHEIT
F	FIRE LANE
F	FURNACE
FA	FIRE ALARM
FAB	FABRICATED
FB	FACE BRICK
FC	FOOT CANDLE
FCMU	FLUTED CONCRETE MASONRY UNIT
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FDR	FEEDER
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FH	FILTER HOUSING
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIG	FIGURE
FIN	FINISH
FIX	FIXTURE
FL	FLOOR
FLASH	FLASHING
FLEX	FLEXIBLE
FLOUR	FLUORESCENT
FLG	FLOORING
FLM	FULL LENGTH MIRROR
FM	FACTORY MUTUAL
FM	FIRE MAIN
FO	FACE OF
FO	FINISH OPENING
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
FP	FIREPROOFING
FPM	FEET PER MINUTE
FR	FIRE RESISTIVE
FR	FRAME
FS	FLOOR SINK
FS	FLOW SWITCH
FSD	FIRE/SMOKE DAMPER
FT	FEET (FOOT)
FT	FLOW TRANSMITTER
FTG	FOOTING
FUT	FUTURE
FVC	FIRE VALVE CABINET
FWC	FABRIC WALL COVERING
G	GRILLE
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GCO	GROUND CLEAN OUT
GCMU	GLAZED CONCRETE MASONRY UNIT
GD	GARBAGE DISPOSAL
GEN	GENERAL
GEN	GENERATOR
GFA	GROSS FLOOR AREA
GFI	GROUND FAULT INTERRUPTER
GFRC	GLASS FIBER REINFORCED CONCRETE
GI	GALVANIZED IRON
GLAM	GLUE LAMINATED
GL	GLASS
GMU	GLASS MASONRY UNIT
GND	GROUNDED
GOVT	GOVERNMENT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GUARD RAIL
GR	GRILLE
GRC	GLASS REINFORCED CONCRETE
GRGP	GLASS REINFORCED GYPSUM PLASTER
GRS	GALVANIZED ROD STEEL
GS	GASOLINE
GV	GATE VALUE
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
GYP BD	GYPSUM BOARD
H	HEIGHT
HB	HOSE BIB
HC	HANDICAP
HC	HOLLOW CORE
HCB	HANDICAP BENCH
HD	HAND DRYER OR HAIR DRYER
HDBD	HARDBOARD
HDR	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HD	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HOA	HAND OFF AUTOMATIC
HORIZ	HORIZONTAL
HP	HEAT PUMP
HP	HIGH PRESSURE
HP	HORSEPOWER
HR	HANDRAIL
HR	HOUR
HS	HEAD STUD
HSTR	HIGH STRENGTH
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HTWR	HIGH TEMP HOT WATER RETURN
HTWS	HIGH TEMP HOT WATER SUPPLY
HUM	HUMIDIFIER
HV	HEATING VENTILATING UNIT
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HX	HEAT EXCHANGER
HZ	HERTZ
IAQ	INDOOR AIR QUALITY
IAW	IN ACCORDANCE WITH
IB	INFRARED BURNER
IBC	INTERNATIONAL BUILDING CODE
IC	INTERCOM
ID	INSIDE DIMENSION
IE	INVERT ELEVATION
IES	ILLUMINATING ENGINEERING SOCIETY
IF	INSIDE FACE
IG	ISOLATED GROUND
IF	ISOLATION JOINT
IJS	IN JOIST SPACE
IN	INCH
INC	INCLUDE (ING)
INSUL	INSULATION
INT	INTERIOR
IP	IRON PIPE
IW	INDIRECT WASTE
JAN	JANITOR
JB	JUNCTION BOX
JCT	JUNCTION
JFB	JOINT FILLER BOARD
JST	JOIST
JT	JOINT ANGLE
L	LAVATORY
LA	LABORATORY COMPRESSED AIR
LAB	LAVATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LB	POUND
LBR	LUMBER
LBS	POUNDS
LDG	LOADING
LF	LINEAR FOOT (FEET)
LG	LENGTH (LONG)
LN	LINEAR
LINO	LINOLEUM
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LONG	LONGITUDINAL
LS	LAWN SPRINKLER
LSC	LIFE SAFETY CODE
LT	LIGHT
LTG	LIGHTING
LV	LOUVER
LV	LAVATORY VACUUM
LW	LONG WAY
M	THOUSAND
MA	MIXED AIR
MAC	MACHINE
MAG	MAGNETIC
MAINT	MAINTENANCE
MAN	MANUAL
MAS	MASONRY
MATL	MATERIAL
MAU	MAKEUP AIR UNIT
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBS	MODIFIED BITUMEN MEMBRANE
MBD	MARKER BOARD
MBH	MOP/BROOM HOLDER
MBH	THOUSAND BTU PER HOUR
MBTUH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MC	MEDICINE CABINET
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILLS
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MEZZ	MEZZANINE
MFCTR	MANUFACTURER
MFRG	MANUFACTURING
MH	MANHOLE
MH	METAL HALIDE
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	MOTORIZED LOUVER
MLDG	MOULDING
MLWK	MILLWORK
MO	MASONRY OPENING
MR	MIRROR
MS	MAGNETIC STARTER
MSP	METAL SOFFIT PANEL
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MUL	MULLION
MWP	METAL WALL PANEL
N	NITROGEN
N	NORTH
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NC	NURSE CALL
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSN.
NEUT	NEUTRAL
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO	NUMBER
NO	NITROUS OXIDE
NOM	NOMINAL
NS	NEUTRAL SENSOR
NTS	NOT TO SCALE
O&M	OPERATION AND MAINTENANCE
O to O	OUT TO OUT
OA	OVERALL
OA	OUTSIDE AIR
OBSC	OBSCURE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OD	OVERFLOW DRAIN
OF	OUTSIDE FACE
OFC	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFI	OWNER FURNISHED OWNER INSTALLED
OH	OTHER HAND
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
OPG	OPENING
OPP	OPPOSITE
OSD	OVERFLOW STORM DRAIN
OTCS	OPEN TO CEILING SPACE
OVFL	OVERFLOW
OVHD	OVERHEAD
OX	OXYGEN
P	POLE
P	PUMP
P/T	PRESSURE/TEMPERATURE TEST PORT
PA	PUBLIC ADDRESS
PAN B	PANIC BOLT
PAR	PARALLEL
PB	PARTICLE BOARD
PB	PULL BOX
PB	PUSH BUTTON
PBS	PUSH BUTTON START
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
PCT	PORCELAIN CERAMIC TILE
PD	PUMP DISCHARGE
PDI	PLUMBING & DRAINAGE INSTITUTE
PENT	PENTHOUSE
PERF	PERFORATED
PERP	PERPENDICULAR
PF	POWER FACTOR
PG	PRESSURE GAUGE
PH	PHASE
PI	POINT OF INTERSECTION
PL	PLACE(S)
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLWD	PLYWOOD
PNL	PANEL
POC	POINT OF CONNECTION
PORC	PORCELAIN
PR	PAIR
PREFAB	PREFABRICATED
PRE-FIN	PRE-FINISHED
PROJ	PROJECTION
PS	PIPE SUPPORT
PS	PROJECTION SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT/PNT	PAINT
PT	POINT
PTD	PAPER TOWEL DISPENSER
PTD/R	PAPER TOWEL DISPENSER/RECEPTACLE
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PWL	SOUND POWER LEVEL
PWR	POWER
QT	QUARRY TILE
QTR RND	QUARTER ROUND
QTZ	QUARTZ
R	RISER
RA	RETURN AIR
RAD	RADIATOR
RAD or R	RADIUS
RB	RUBBER BASE
RC	REMOTE CONTROL
RCP	REFLECTED CEILING PLAN
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RD	REFRIGERANT DISCHARGE
REC'D	RECOMMENDED
RECP	RECEPTACLE
RE	REFERENCE
REFL	REFLECTED
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCEMENT
REM	REMOVABLE
REQ'D	REQUIRE(D)
RESIL	RESILIENT
RET	RETAINING (WALL)
REV	REVISIONS
RF	RETURN FAN
RF	RUBBER FLOOR
RFM	RECESSED FLOOR MAT
RH	RELATIVE HUMIDITY
RH	RELIEF HOOD
RI&C	ROUGH IN AND CONNECT
RJS	RISE IN JOIST SPACE
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
S	SINK
S	SANITARY SEWER
S	SOAP DISH
S	SOUTH
S	SPRINKLER LINE
SA	SUPPLY AIR
SAN	SANITARY WASTE
SBS	STYRENE-BUTADIENE-STYRENE (ROOFING)
SC	SEALED CONC
SC	SECURITY
SC	SOLID CORE
SC	SPECIAL COATING
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SCT	STRUCTURAL CLAY TILE
SD	SOAP DISPENSER
SD	SMOKE DETECTOR
SD	STORM DRAIN
SEC	SECONDARY
SECT	SECTION
SECY	SECRETARY
SENS	SENSIBLE
SF	SQUARE FOOT
SF	SUPPLY FAN
SFCMU	SPLIT-FACED CONCRETE MASONRY UNIT
SFU	STRUCTURAL FACING UNIT
SGL	SINGLE
SHEATH	SHEATHING
SHM	SECURITY HOLLOW METAL
SHT	SHEET
SIM	SIMILAR
SL	SHORT LEG
SLNT	SEALANT
SM	SHEET METAL
SM	SPRINKLER MAIN
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SP	STAND PIPE
SPEC	SPECIFICATIONS
SPK	SPRINKLER
SPL	SPECIAL
SPL BLK	SPLASH BLOCK
SQ	SQUARE
SS	STAINLESS STEEL
SS	SOLID SURFACE
SSA	SHORT SHELTER AREA
ST	STAIR
ST	STORM SEWER
STAG'D	STAGGERED
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STE	SINGLE TAPERED END
STGR	STRINGER
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL / STRUCTURE
SUB	SUBSTATION
SUBFL	SUBFLOOR
SURF	SURFACE
SUSP	SUSPENDED
SV	SHEET VINYL
SW	SHORT WAY
SW	SWITCH
SWBD	SWITCH BOARD
SYM	SYMMETRICAL
T	TEMPERED
T	THERMOSTAT
T	TREAD
T & B	TOP & BOTTOM
T & G	TONGUE & GROOVE
TA	TRANSFER AIR
TAB	TEST AND BALANCE
TAN	TANGENT
TB	TERMINAL BOX
TBD	TACK BOARD
TC	TEMPERATURE CONTROL
TC	TIME CLOCK
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPERATURE
TEMP	TEMPERED - TEMPORARY
TERR	TERRAZZO
TEXT	TEXTURE(D)
TGL	TOGGLE
TH	THRESHOLD
THK	THICK(NESS)
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOIL	TOILET
TO	TOP OF
TOP	TOP OF PAVING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPV	TRAP PRIMER
TR	TRIP
TRANS	TRANSVERSE
TRD	TREAD
TS	TEMPERATURE SENSOR
TS	TUBE STEEL
TSP	TOTAL STATIC PRESSURE
TT	TERRAZZO TILE
TTD	TOILET TISSUE DISPENSER
TV	TELEVISION
TW	TACK WALL
TYP	TYPICAL
U	URINAL
UC	UNIT COOLER
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRICAL
UGT	UNDERGROUND TELEPHONE
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UNEX	UNEXCAVATED
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
US	UTILITY SHELF
UTIL	UTILITY
UV	UNIT VENTILATOR
V	VENT
V	VOLT
VA	VALVE
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VAPOR BARRIER
VB	VINYL BASE
VBF	VENT BELOW FLOOR
VCB	VENTED COVE BASE
VCT	VINYL COMPOSITION TILE
VEL	VELOCITY
VENT	VENTILATION
VENT	VENTILATOR
VERT	VERTICAL
VEST	VESTIBULE
VF	VINYL FLOOR
VIF	VERIFY IN FIELD
VOL	VOLUME
VP	VENEER PLASTER
VP	VACUUM PUMP
VT	VINYL TILE
VTR	VENT THROUGH ROOF
VWC	VINYL WALLCOVERING
VWM	VERIFY WITH MANUFACTURER
W	WIDE; WIDTH
W	WASTE (PLUG)
W	WATT
W	WEST
W	WIDE FLANGE
W/	WITH
W/O	WITHOUT
WB	WALL BASE
WC	WALL COVERING
WC	WATER CLOSET
WCC	WATER COOLED CONDENSER
WCL	WATER CLOSET/LAVATORY COMBINATION
WCO	WALL CLEAN OUT
WD	WOOD
WDW	WINDOW
WF	WASH FOUNTAIN
WH	WALL HYDRANT
WH	WATER HEATER
WHM	WATT HOUR METER
WMG	WATER MOTOR GONG
WNSCT	WAINSCOT
WP	WEATHERPROOF
WPF	WATERPROOF
WPFG	WATERPROOFING
WR	WATER RESISTANT
WR	WASTE RECEPTACLE
WT	WEIGHT
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER
XMTR	TRANSMITTER
YD	YARD
YH	YARD HYDRANT
Z	IMPEDANCE
&	AND
@	AT
i.e.	THAT IS
#	NUMBER

GENERAL NOTES

1. GENERAL NOTES APPLY TO ALL SHEETS.
2. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUD, FACE OF CONCRETE WALL, FACE OF CMU WALL, FACE OF FRAMES, OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE.
3. ALL PENETRATIONS THROUGH WALLS SHALL BE SEALED WITH FIRE STOPPING MATERIAL AS REQUIRED TO ACHIEVE THE RESPECTIVE FIRE-RESISTIVE RATING AND SMOKE STOPPAGE.
4. THE OWNER SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTIOON SCHEDULE AS ESTABLISHED BY THE CONTRACTOR.

GENERAL SYMBOLS

- DETAIL OR WALL SECTION
- BUILDING SECTION
- BUILDING ELEVATION (55 / A10.3)
- INTERIOR ELEVATION (-/- SIM)
- LEGEND / KEY NOTE (1)
- STRUCTURAL GRID (1)
- ROOM NAME / ROOM NUMBER (XXX / XXX)
- OCCUPANT LOAD
- DOOR NUMBER (A102)
- WINDOW NUMBER (A102)
- WALL TYPE (B2)
- TOILET ACCESSORY TAG/ EQUIPMENT TAG (PT)
- REVISION NUMBER

- EARTH
- CONCRETE MASONRY UNIT
- GRAVEL / BALLAST
- BRICK
- MORTAR / GROUT
- GYPSUM WALL BOARD
- CONCRETE
- BATT / MINERAL FIBER INSULATION
- STEEL
- RIGID INSULATION
- GYM FLOOR
- PLYWOOD
- GLASS
- WOOD (TRIM / FINISH)
- STONE
- METAL STUDS
- WOOD BLOCKING - CONTINUOUS
- WOOD BLOCKING - NON-CONTINUOUS

*RE: INTERIOR FINISH LEGEND FOR TYPICAL INTERIOR MATERIALS

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DUANE A. CASH — 7083 — KANSAS — ARCHITECT — NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

Project Number
24-304

Issue Date
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Revision No.	Description	Date Issued

Area Plan

Sheet Name
SYMBOLS & ABBREVIATIONS

Sheet Number
G1.01

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SYMBOL AND ABBREVIATION LEGEND*

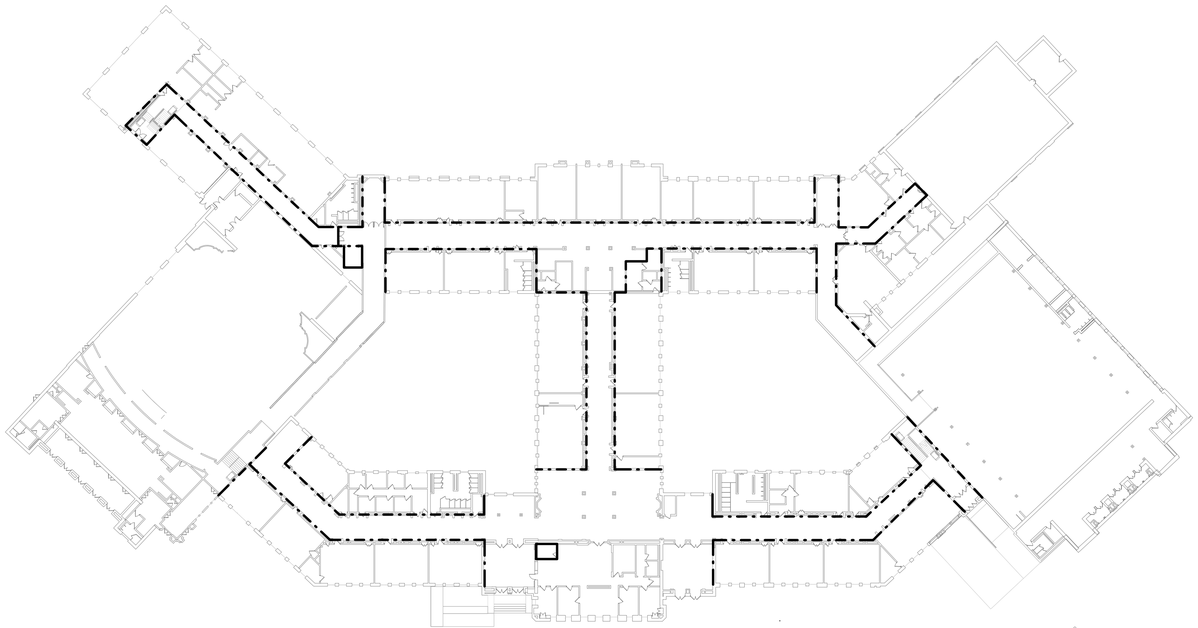
SYMBOLS:

— · — 1FB — ONE HOUR SEPARATION (CH. 7)

— · — 2FB — TWO HOUR SEPARATION (CH. 7)

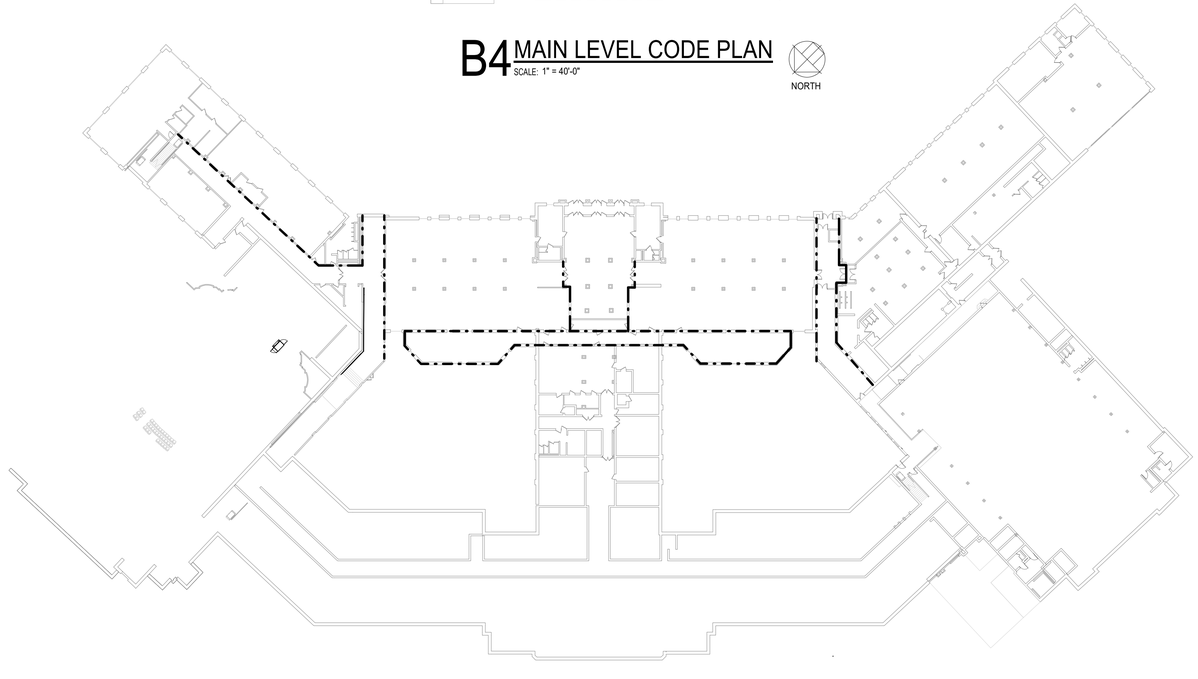
ABBREVIATIONS:

FW (706) – FIRE WALL	SB (709) – SMOKE BARRIER
FB (707) – FIRE BARRIER	SP (710) – SMOKE PARTITION
FP (708) – FIRE PARTITION	SE (713) – SHAFT ENCLOSURE



B4 MAIN LEVEL CODE PLAN
SCALE: 1" = 40'-0"

NORTH



A4 LOWER LEVEL CODE PLAN
SCALE: 1" = 40'-0"

NORTH

IBC 2018

CH 3 OCCUPANCY USE AND CLASSIFICATION

SECTION 303 ASSEMBLY GROUP A
SECTION 303.1.3: ASSOCIATED WITH GROUP E OCCPANCIES A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES THAT IS ASSOCIATED WITH A GROUP E OCCUPANCY IS NOT CONSIDERED A SEPARATE OCCUPANCY: WEIGHTLIFTING, PERSONAL FITNESS

SECTION 305 EDUCATIONAL GROUP E
SECTION 305.1: EDUCATIONAL GROUP E OCCUPANCY INCLUDES, AMONG OTHERS, THE USE OF A BUILDING OR STRUCTURE, OR A PORTION THEREOF, BY SIX OR MORE PERSONS FOR EDUCATIONAL PURPOSES THROUGH THE 12TH GRADE.

CH 5 GENERAL BUILDING HEIGHTS AND AREAS
PROJECT DOES NOT ALTER BUILDING HEIGHT OR AREA.

CH 6 TYPE OF CONSTRUCTION

CONSTRUCTION CLASSIFICATION
VB

FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS

STRUCTURAL FRAME	
(INCL. COLUMNS, GIRDERS, AND TRUSSES)	0HR
BEARING WALLS	
EXTERIOR	0HR
INTERIOR	0HR
NONBEARING WALLS AND PARTITION	
EXTERIOR	TABLE 602
INTERIOR	0HR
FLOOR CONSTRUCTION	
(INCL. SUPPORTING BEAMS AND JOISTS)	0HR
ROOF CONSTRUCTION	
(INCL. SUPPORTING BEAMS AND JOISTS)	0HR

FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS
TABLE 602 FIRE-RESISTIVE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE = X (FEET) : 10 ≤ X < 30 : 0

CH 7 FIRE RESISTANCE RATED CONSTRUCTION

SECTION 705 EXTERIOR WALLS
705.5 FIRE-RESISTANCE RATINGS: EXTERIOR WALLS SHALL BE FIRE-RESISTANCE RATED IN ACCORDANCE WITH TABLES 601 AND 602 IN THIS SECTION. THE REQUIRED FIRE-RESISTANCE RATING OF EXTERIOR WALLS WITH A FIRE SEPARATION DISTANCE GREATER THAN 10 FEET (3048MM) SHALL BE RATED FOR EXPOSURE TO FIRE FROM THE INSIDE. THE REQUIRED FIRE-RESISTANCE RATING OF EXTERIOR WALLS WITH A FIRE SEPARATION DISTANCE OF LESS THAN OR EQUAL TO 10 FEET (3048MM) SHALL BE RATED FOR EXPOSURE TO FIRE FROM BOTH SIDES.

CH 8 WALLS AND CEILING FINISHES

803.5 TEXTILE WALL COVERINGS
WHERE USED AS INTERIOR WALL FINISH MATERIALS, TEXTILE WALL COVERINGS, INCLUDING MATERIALS HAVING WOVEN OR NONWOVEN, NAPPED, TUFTED, LOOPED, OR SIMILAR SURFACE AND CARPET AND SIMILAR TEXTILE MATERIALS, SHALL BE TESTED IN THE MANNER INTENDED FOR USE, USING THE PRODUCT-MOUNTING SYSTEM, INCLUDING ADHESIVE, AND SHALL COMPLY WITH THE REQUIREMENTS OF ONE OF THE FOLLOWING: SECTION 803.1.1, 803.5.1, OR 803.5.2.

CH 9 FIRE PROTECTION SYSTEMS

AUTOMATIC SPRINKLER SYSTEM	NOT REQUIRED / NOT PROVIDED
STANDPIPE SYSTEM	NOT REQUIRED / NOT PROVIDED
PORTABLE FIRE EXTINGUISHERS	REQUIRED / PROVIDED
FIRE ALARM & DETECTION SYSTEMS	REQUIRED / PROVIDED
EMERGENCY ALARM SYSTEMS	REQUIRED / PROVIDED
SMOKE COMPARTMENT SYSTEMS	REQUIRED / PROVIDED
SMOKE AND HEAT VENTS	NOT REQUIRED / NOT PROVIDED
FIRE COMMAND CENTER	REQUIRED / PROVIDED
FIRE DEPARTMENT CONNECTIONS	NOT REQUIRED / NOT PROVIDED
EXIT SIGNS	REQUIRED / PROVIDED
EMERGENCY LIGHTS	REQUIRED / PROVIDED

CH 10 MEANS OF EGRESS

ALLOWABLE MAX TRAVEL DISTANCE (TABLE 1017.2):	200 FEET
MAX COMMON PATH ALLOWED (TABLE 1006.2.1):	75 FEET
MIN. CORRIDOR EGRESS WIDTH REQUIRED:	EXISTING, NO CHANGE
ACTUAL EGRESS WIDTH PROVIDED:	EXISTING, NO CHANGE
REQUIRED EXITS:	EXISTING, NO CHANGE
EXITS PROVIDED:	EXISTING, NO CHANGE

**PROJECT DOES NOT ALTER EGRESS. EXISTING EGRESS TO REMAIN.

GENERAL INFORMATION

LOCATION
WYANDOTTE HIGH SCHOOL
2501 MINNESOTA AVE,
KANSAS CITY, KS 66102

OWNER INFORMATION
KANSAS CITY, KANSAS PUBLIC SCHOOLS
UNIFIED SCHOOL DISTRICT #500
2010 N. 59TH ST.

JURISDICTION HAVING AUTHORITY
WYANDOTTE COUNTY

PROJECT DESCRIPTION
RENOVATE STAIRS AND RAMPS FOR ACCESSIBILITY.

CODE DATA (PER WYANDOTTE COUNTY ORDINANCES)

APPLICABLE CODES:

2018 INTERNATIONAL BUILDING CODE
2018 UNIFORM PLUMBING CODE
2018 INTERNATIONAL MECHANICAL CODE
2017 NATIONAL ELECTRICAL CODE
2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL PROPERTY MAINTENANCE CODE
2018 NFPA LIFE SAFETY CODE

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WYANDOTTE HIGH SCHOOL RENOVATION

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Area Plan

Sheet Name
CODE PLAN

Sheet Number
G2.00

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SELECTIVE DEMOLITION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
   1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of school.
   2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
   3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
   4. Remove temporary barricades and protections where hazards no longer exist.

B. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
   1. Proceed with selective demolition systematically. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
   2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   3. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
   4. Dispose of demolished items and materials promptly.

C. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with walkways and other adjacent occupied and used facilities.

D. Removed and Reinstalled Items:
   1. Clean and repair items to functional condition adequate for intended reuse.
   2. Pack or crate items after cleaning and repairing. Identify contents of containers.
   3. Protect items from damage during transport and storage.
   4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition, cleaned and reinstalled in their original locations after selective demolition operations are complete.

F. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.

G. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.

CONCRETE

A. All concrete for foundations (walls, grade beams and footings) shall develop minimum ultimate compressive design strength of 3500 psi in 28 days, but not less than 500 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 6 gallons of water per 100 pounds of cement and not over 4 inches of slump.

B. All concrete for interior flatwork shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 540 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5.40 gallons of water per 100 pounds of cement and not over 4 inches of slump. Concrete mix shop drawing shall contain testing data proving concrete design mix shrinkage is less than 0.034% at 28 days when tested according to ASTM C157 (air drying method only).

C. All concrete for exterior flatwork shall have a minimum design compressive strength of 4500 psi in 28 days, with not less than 560 pounds of cement per cubic yard of concrete, not over 5 gallons of water per 100 pounds of cement, with 6% +/- 1% air entrainment, and a maximum of 4 inches of slump.

D. The preceding minimum mix requirements may have water-reducing admixtures conforming to ASTM C494 added to the mix at manufacturer's dosage rates for improved workability.

E. The preceding minimum mix requirements may have up to 15% maximum of the cement content replaced with an approved ASTM C618 Class C fly ash, provided the total minimum cementitious content is not reduced.

F. All interior concrete slabs on grade shall be placed over 15 mil, Class A Vapor Barrier per ASTM E1745 with less than 0.01 perms, tested after mandatory conditioning. All joints shall be lapped and sealed per manufacturer's recommendations. All penetrations, as well as damaged vapor barrier material shall also be sealed per manufacturer's recommendation prior to concrete placement. Install barrier per manufacturer recommended details at all discontinuous edges (at interior columns, exterior edge of slab, etc.) to ensure terms of warranty are followed. The vapor barrier shall be placed over free-draining granular material as prescribed by the project soils report.

G. All concrete is reinforced concrete unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any details not shown shall be detailed per ACI 315 and meet requirements of ACI 318, current editions.

H. Control joints in dirt formed slab to be as shown on plans. Where not shown, limit controlled areas to not more than 144 square feet, or 12 feet on any side. Slab panel side ratio shall not exceed 1 1/2 to 1.

I. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.

J. Construction joints in beams, slabs, and grade beams shall occur at midspan (middle third) unless noted otherwise. Provide 2 x 4 horizontal keys at construction joints for shear transfer.

K. No aluminum items shall be embedded in any concrete.

L. Geofoam to be expanded polystyrene, EPS 15.

M. Molded Sheet Drainage Panel: Geocomposite Drainage Board shall consist of a dimple raised molded polystyrene core with a non-woven geotextile fabric bonded to the dimples of the core.
   1. Basis of Design: Mel-Drain 5012 by W.R. Meadows, Inc.

REINFORCING STEEL

A. All reinforcing steel shall conform to the requirements of ASTM A615 or A706 grade 60 steel. Welded plain wire fabric shall be supplied in sheets and conform to the requirements of ASTM A185.

B. Clear coverage of concrete over reinforcing steel shall be as follows:
   1. Concrete placed against earth: 3"
   2. Formed concrete against earth: 2"
   3. Slabs: 1"
   4. Beams or Columns: 1-1/2"
   5. Other 2"

C. All coverage shall be nominal bar diameter minimum.

D. All dowels shall be the same size and spacing as adjoining main bars (splice lap 48 bar diameters or 24" minimum unless noted otherwise).

E. At corners of all walls, beams, and grade beams supply corner bars (minimum 2'-0" in each direction or 48 bar diameters) in outside face of wall, matching size and spacing of horizontal bars. Where there are no vertical bars in outside face of wall, supply 3 - #4 vertical support bars for corner bars.

F. Bars marked continuous and all vertical steel shall be lapped 48 bar diameters (2'-0" minimum) at splices and embedments, unless shown otherwise. Splice top bars near midspan and splice bottom bars over supports, unless noted otherwise.

G. At all holes in concrete walls and slabs, add 2 - #5 bars (opening dimension plus 96 diameters long) at each of four sides and add 2 - #5 x 5'-0" diagonally at each of four corners of hole. Openings in 8" thick walls are reinforced similar, but with 1 - #5 instead of 2 - #5, respectively.

H. Unless otherwise covered on architectural plans or specifications, vertical control joints in concrete wall shall be spaced at a maximum of 20'-0" on center and coordinated with the architect. Every other horizontal wall reinforcing bar shall be discontinuous at control joints except heavy top and bottom bars unless noted otherwise. Provide base seal waterstop style number 772 (by Greenstreak Inc. or approved equal) on dirt face side of wall at all walls below grade.

I. Accessories shall be as specified in latest edition of the ACI Detailing Handbook and the concrete Reinforcing Steel Institute Design Handbook. Maximum accessory spacing shall be 4'-0" on center, and all accessories on exposed surfaces are to have plastic coated feet.

J. All slabs and stairs not shown otherwise shall be 6" thick with #4 bars at 12" on center each way. All exterior porches and stoops not otherwise detailed may be constructed in any standard manner, solid or hollow, but must be reinforced with #4 bars at 12" on center each way minimum. Porches shall be doweled to adjacent walls or grade beams with #4 bars at 12" on center, hooked or embedded 48 diameters into both members. Slope porches 1/8" per foot for drainage unless noted otherwise.

K. Allow 0.5 ton of reinforcing bars #4 or larger to be used as directed in the field for special conditions by the engineer of record (labor for placing same to be included).

METAL HANDRAILS

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Steel Pipe: 1-1/2-inch nominal diameter for vertical and horizontal railing. ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.Provide shop-primed finish for interior installations. Plates, Shapes, and Bars: ASTM A36/A36M.

C. Post-Installed Anchors: Fastener systems with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193 or ICC-ES AC308.
   1. Carbon steel components zinc plated to comply with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5, unless otherwise indicated.
   2. Fastener Type: Concrete slab; 3/8-inch by 8-inch Hilti HAS and HIS-N insert.

D. Shop prime railing prior to install. Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

E. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

F. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing the Work. Form changes in direction by flush bends. Bend members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

G. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32-inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

H. Form work true to line and level with accurate angles and surfaces.

I. Fabricate railings with welded connections unless otherwise indicated.
   1. Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
   2. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   3. Obtain fusion without undercut or overlap.
   4. Remove flux immediately.
   5. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 1 welds; no evidence of a welded joint.

J. Provide necessary floor mounts, inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure. Cut, reinforce, drill, and tap as needed to receive finish hardware, anchors, and similar items unless otherwise indicated.

VERTICAL PORTABLE WHEELCHAIR LIFTS

A. Lift Product: Virtuoso 5460P as manufactured by Ascension. Portable lifting device, unenclosed and self-contained, requiring no additional components or facility modifications. Raises and lowers platform and occupant providing accessibility to stages, platforms, or similar elevated surfaces.
   1. Low Profile: No machine tower to maintain viewing lines.
   2. Platform: Supported on an electro-hydraulic lifting mechanism with built-in casters for portability.
   3. Casters: Permit easy movement of unoccupied lift over hard, level surfaces.
      a. With Casters Removed: Lift to rest firmly on any hard, level surface, providing a stable base for operation of lift.
   4. Independent Use: By individuals with disabilities
   5. ADA Compliant: Includes applicable operating and safety devices.
   6. Platform Profile: Low profile facilitating entry to the lift. Eliminates need for a pit or access ramp at lower landing.

B. Physical Characteristics:
   1. Lifting Capacity: 750 pounds (340 kg).
   2. Weight of Lift: 1025 pounds (465 kg) maximum.
   3. Vertical Speed: 7 fpm (2.1 mpm).
   4. Vertical Travel: 12 to 60 inches (305 to 1524 mm), infinitely adjustable.

C. Gate Configuration:
   1. Lower Platform Gate:
      a. Manual Operation: Left-handed. Self-closing.
   2. Upper Platform Gate:
      a. Manual Operation: Right-handed. Self-closing.

D. Dimensions:
   1. No part of the lift to be over 44 inches (1117 mm) high when platform is on the ground except when equipped with optional stage guard.
   2. Space Requirements; Operational, Storage, and Transport (HxLxW): 44 x 66 x 48 inches (1117 x 1677 x 1219 mm). Height is for platform in the down position.
   3. Platform Clear Space: 36 x 54 inches (914 x 1372 mm).
      a. Sidewalls and Platform Gates: 43 inches (1092 mm) high

E. Materials:
   1. Platform, Base Frame, and Lifting Device: ASTM A 36 or similar low-carbon steel.
   2. Windows: 1/4 inch (6 mm) thick high impact strength clear thermoplastic.
   3. Safety Skirt: Constructed from rigid plastic.

F. Finish:
   1. Exposed Metal Surfaces: Finished by powder coating.
      a. Color: Black.

G. Drive Configuration: Direct-acting hydraulic.
   1. Synchronized Hydraulic Cylinders: Evenly support both sides of lift platform.
   2. Hydraulic Power Unit: Mounted on vibration-isolating supports minimizing vibration transmission and reducing frame-borne noise.

H. Electrical Requirements:
   1. Amperage Draw per Lift: 13 Amps maximum.
   2. Service: 120 VAC, 60 hertz, single phase, 15 amp service. Three prong grounded electrical cord. Length: 20 feet (6.1 m).
   3. A Ground Fault Circuit Interrupter (GFCI).
   4. Motor: 1/2 hp, 115 V AC single phase.
   5. Electrical System: Certified to ASME A17.5 by independent testing laboratory.

I. Lift Safety Devices:
   1. Lift Construction: Meet applicable requirements of ASME A18.1, ASME A17.5, ADAAG, ANSI 117.1, and NFPA 70 (NEC).
   2. Included Safety Features: For passenger and general public protection.
      a. Safety Skirt: Completely encloses and protects area under platform.
         1) Switches: Stop platform movement in case of excess skirt deflection.
      b. Operating Switches: Constant pressure.
      c. Emergency Stop Button: Lighted, sounds audible alarm.
      d. Electro-Mechanical Interlock: Prevents accidental opening of lower platform gate, and if provided, the upper landing gate.
      e. Gate Switches: Prevent operation if either platform gate is open.
      f. Hand Pump: Allows platform to manually be raised or lowered.
      g. Sidewalls and Platform Gates: 43 inches (1092 mm) high.
         1) Visibility: Unobstructed view. Transparent sidewalls and platform gates.
      h. Lift platform stop height sensor.
      i. Platform Floor: Low profile and slip resistant surface.
      j. No installation pit or external access ramp at the lower landing.

J. Portability:
   1. Casters: 3-1/2 inches (89 mm) diameter hard rubber. Attachable to platform without tools; stored in base frame when not in use.
      a. Once attached, lift rolls easily over hard, smooth, level surfaces.
   2. Lift may be moved via fork lift or fork truck.

K. Operating Characteristics:
   1. Three Constant Pressure "UP/DOWN" Switches
   2. Platform Stop Height: Adjustable without use of tools.
   3. Opening Upper Landing Platform Gate: Deploys a dock plate that rests on the upper landing surface.
      a. Dock Plate: Provides smooth transition between platform and upper landing. Closing upper landing platform gate retracts the dock plate.

L. Compression Capability: May be compressed to 33 inches (838 mm) wide facilitating relocation through a 36 inches (914 mm) wide doorway.
   1. Compression Tool Kit: Recommended to facilitate compression of the lift. From Ascension.

STAIR LIFT FOR STRAIGHT STAIRWAYS

A. Inclined Platform Lift: Garaventa Stair-Lift Model XPRESS II to serve one flight of straight stairs, with two landings and two stops. Lift consists of an extruded aluminum guide rail, a folding platform that is moved along the guide rail by an integrated rack and pinion drive system, overspeed safety system and call stations at each landing and powered by buildings main power supply. Conform to the following design requirements:
   1. Application:
      a. Indoor.
   2. Platform Load Rating: 550 lbs (250 kg).
   3. Travel Speed: 13 fpm (4 m/min) traveling up; 16 fpm (5 m/min) traveling down.
   4. Platform Deck: Surface shall be slip resistant with the following features:
      a. Platform Size A (ADA Compliant): 31-1/2 inches (800 mm) wide by 49-1/4 inches (1250 mm) long.
   5. Platform Operation:
      a. Automatic Fold: Folded and unfolded electrically from the call station.
      b. Emergency Manual Fold: When left in the open position, platform may be manually folded and retained in the closed position.
   6. Under Platform Obstruction Sensing:
      a. Provide under-platform sensing device to stop platform from traveling in the downward direction when encountering 4 lb/f (20 N) of pressure.
      b. Platform is permitted to travel in the opposite direction of the obstruction to allow clearing.
   7. Passenger Restraining Arms:
      a. Platform equipped with retractable passenger restraining arms in compliance with ASME A18.1a.
      b. Arms stop moving when an obstruction causing 4 lb/f (20 N) of pressure is encountered and immediately retract when signal is removed.
      c. Arms folded and unfolded electrically from the call stations or platform controls.
      d. Provide with means to manually unlock and open the restraining arms for passenger emergency evacuation.
      e. Top of arms mounted 32 inches (800 mm) to 38 inches (1000 mm) above platform deck. When in guarding position arms are located above the perimeter of the platform.
      f. Gaps between ends of the arms shall not exceed 4 inches (100 mm).
   8. Boarding Ramps:
      a. Provide boarding sides of platform with retractable ramps positioned for travel at a height of 6 inches (150 mm) measured vertically above platform deck.
      b. Lock ramps in guarding positions during travel. When platform is at the landing, only the retractable ramp servicing the landing shall be operable.
      c. Ramps folded and unfolded electrically.
      d. Retractable ramps, in the guarded position, shall withstand a force of 125 lb/f (550 N) applied on any 4 inches (100 mm) by 4 inches (100 mm) area. This force shall not cause the height of the ramp, at any point in its length, to be less than 6 inches (150 mm) measured vertically above the platform deck.
      e. Provide a means to manually unlock the ramps for emergency evacuation when platform is located at landing.
      f. Provide with a bi-directional obstruction sensitive device on the travel direction side end of the platform to stop the lift when 4 lb/f (20 N) of pressure is encountered. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
   9. Platform Sidewall:
      a. Provide on the non-boarding and non-guide rail side of the platform a sidewall of not less 6 inches (150 mm) in height, measured vertically from the platform deck.
      b. When the platform is folded sidewall shall cover the platform controls, providing protection from vandalism.
   10. Hand Grips:
      a. Equip platform with a 1-1/4 inch (32 mm) tubular steel hand grip or grab bar at the top of the platform. Hand grip is to cover the entire width of the platform.
   11. Clearances Dimensions:
      a. Platform shall not protrude more than 10-1/4 inches (260 mm) from the mounting surface when folded and stored.
      b. Platform shall not protrude more than 40-1/4 inches (1020 mm) from the mounting surface when unfolded and in use.
   12. Controls:
      a. Controls: 24 VDC Low Voltage type.
      b. Platform equipped with emergency stop switch located within reach of passenger. Emergency stop button shall cause electric power to be removed from the drive system stopping lift immediately.
      c. Platform operating controls shall be two separate 1-1/2 inch (36 mm) diameter round illuminated continuous pressure buttons with directional arrows, mounted on the front surface of the platform control panel.
      d. When the platform arrives at landing and the user releases the directional control button, the passenger restraining arms and boarding ramp shall unfold automatically allowing passenger to disembark.
      e. Platform control panel includes a receptacle for an optional plug-in hand-held attendant pendant control.
      f. Platform equipped for:
         1) Keyless Operation.
      g. Provide control wiring to allow the platform to be folded into the storage position from the opposite call station.
   13. Passenger Seat: Fold-down type with safety belt. Minimum rated load of 250 lbs (115 kg).
   14. Side Loading Platform: Provide with automatic folding ramps and kick plates at boarding sides of platform.
   15. Platform Security Lock: Provide to prevent unauthorized unfolding of the platform.
   16. Attendant Hand-Held Pendant Control: Provide lift with a plug-in pendant control for attendant operation.
   17. Platform on-Board Emergency Alarm: Provide platform with an on-board alarm that sounds when emergency stop button is pushed. The alarm shall have a battery back-up so that it will continue to function if lift power is lost.

B. Drive and Guide Rail System:
   1. Operation:
      a. Motor: 3/4 HP (0.6 kW) electric motor with an integrated brake.
      b. Required Power: 208-240 VAC, single phase, 50/60 Hz. on a dedicated 20 amp circuit.
      c. Power Transmission: Worm gear reduction to a pinion moving on a fixed gear rack.
      d. Provide a frequency inverter to smoothly start and stop the platform motion.
      e. Locate drive carriage and associated control devices within the platform conveyance.
      f. Provide an upper final limit switch to stop the lift in the event of a failure of the primary limit switch.
      g. Equip drive system with an hour counter.
   2. Guide Rail System:
      a. Two-part guide rail system consisting of:
         1) Main Upper Rail: Anodized aluminum extrusion weighing 8 lb/ft (11.9 kg/m) with integrally mounted zinc plated gear rack.
         2) Lower Rail: 1-1/2 inches (38 mm) by 2-1/2 inches (64 mm) anodized aluminum extrusion.
      b. Rail Mounting:
         1) Rails directly mounted to the stairway wall.
         2) Upper rail attached to a 2 inch (51 mm) by 8 inch (203 mm) board that is secured to the wall. Lower rail attached to a 2 inch (51 mm) by 4 inch (102 mm) board secured to the wall. Fasten each board to every available stud with a minimum of two fasteners.
         3) Mount rails to steel support posts secured to the lower landing floor and stair treads. Support posts shall be 2-1/2 inches (64 mm) by 2-1/2 inches (64 mm) hollow structural steel.
      c. Provide a mechanical stop at the upper landing to prevent over-travel of the drive carriage in the event of a switch failure.
   3. Provide overspeed governor and brake on upper carriage drive, containing mechanical overspeed sensor and lock, with electrical drive cut-out protection.
   4. Provide with manual handwheel for emergency operation.

C. Call Stations:
   1. Provide surface mounted call stations at both landings.
   2. Call station:
      a. Operating voltage 24V wired.
   3. Call stations shall be provided with directional control buttons for call and send.
   4. A one-touch control system shall be used to automatically fold/unfold the platform, boarding ramps and passenger restraining arms.
   5. Mounting:
      a. Lower landing call station:
         1) Flush mounted call station: Provide powder-coated trim collar.
      b. Upper landing call station:
         1) Pedestal mounted call station: Provide free-standing mounting pedestal.

D. Additional Safety or Code Requirements:
   1. Wall Mounted Audio-Visual Alert: Provide wall mounted audio-visual alert(s) with adjustable volume control that sound while the lift is in operation and are visible by pedestrian traffic from all flights and landings.

E. Finish:
   1. Design and fabricate lift to manufacturer's standard design for indoor and outdoor locations.
      a. Aluminum guide rails and ramps to be anodized aluminum. Steel components shall be painted with electrostatically applied and baked powder coat as follows:
         1) Custom color as selected by Architect from an RAL color chart.

STAIR LIFT FOR TURNING STAIRWAYS

A. Inclined Platform Lift: Garaventa Stair-Lift, Model GSL Artira inclined platform lift for straight and turning stairways. Lift consists of a tubular guide rail system, a folding platform that is moved along the guide rails by a rope sprocket drive system, overspeed safety system and call stations at each landing. Conform to the following design requirements:
   1. Application:
      a. Indoor.
   2. Platform Load Rating: 660 lbs (330 kg).
   3. Travel Speed: 20 fpm (101.6 mm/s), slowing to 50 percent of rated speed before entering and while rounding corners.
   4. Platform Deck: 16 gauge (1.6 mm) sheet metal coated with electrostatically applied and baked anti-skid Sandex black paint.
      a. Platform Size A (ADA Compliant): 31-1/2 inches (800 mm) wide by 48 inches (1220 mm) long.
   5. Platform Operation:
      a. Automatic Fold: Folded and unfolded electrically from the call station.
      b. Emergency Manual Fold: When unit is left in the open position, platform may be manually folded and retained in closed position.
   6. Under Platform Obstruction Sensing:
      a. Provide an under platform sensing device to stop the platform from traveling in the downward direction when encountering 4 lbs (1.8 kg) of pressure.
      b. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
   7. Passenger Restraining Arms:
      a. Platform equipped with retractable passenger restraining arms in compliance with ASME A18.1a.
      b. Arms stop moving when an obstruction causing 4 lbs (1.8 kg) of pressure is encountered and will immediately retract when the signal is removed.
      c. Provide with means to manually unlock and open the restraining arms for passenger emergency evacuation.
      d. Arms are folded and unfolded electrically from the call stations or platform controls.
      e. Top of arms mounted 37-3/8 inches (948 mm) above the platform deck. When in guarding position the arms are located above the perimeter of the platform.
      f. The gaps between ends of arms shall not exceed 4 inches (100 mm).
   8. Boarding Ramps:
      a. Provide boarding sides of platform with retractable ramps positioned for travel at a height of 6 inches (152 mm) measured vertically above the platform deck.
      b. Lock ramps in their guarding positions during travel. When the platform is at the landing, only the retractable ramp servicing the landing shall be operable.
      c. Ramps shall be folded and unfolded electrically.
      d. Retractable ramps, in the guarded position, shall withstand a force of 125 lbs (556 N) applied on any 4 inch (100 mm) by 4 inch (100 mm) area. This force shall not cause the height of the ramp, at any point in its length, to be less than 6 inches (152 mm) measured vertically above the platform deck.
      e. Provide a means to manually unlock the ramps for emergency evacuation when platform is located at a landing.
      f. Provide with a bi-directional obstruction sensitive device on the travel direction side end of the platform to stop lift when 1.8 kg (4 lbs.) of pressure is encountered. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
      g. When platform folds, passenger restraining arms shall fold down and be covered by the folded platform.
   9. Platform Kick Plate:
      a. Provide non-boarding and non-guide-rail side of the platform with a kick plate barrier not less than 6 inches (152 mm) in height, measured vertically from the platform deck.
      b. When the platform is folded the side-wall shall cover the platform controls providing protection from vandalism.
   10. Pedestrian Safety Lights:
      a. Equip platform with amber pedestrian safety lights located at both ends of the platform to alert pedestrian traffic that the platform is on the stairway.
   11. Hand Grips:
      a. Equip platform with two 6-7/8 inch (174 mm) long by 1-1/4 inch (32 mm) diameter aluminum hand grips or grab bars on the front face of the platform with the top being 33-1/4 inch (845 mm) above the platform deck.
   12. Clearance Dimensions:
      a. When folded platform shall not protrude more than 12-5/8 inches (321 mm) to 13-5/8 inches (346 mm) from mounting surface.
      b. When unfolded and in use platform shall not protrude more than 40 inches (1015 mm) to 41 inches (1040 mm) from wall.
   13. Controls:
      a. Platform Controls: 24 V Low Voltage type.
      b. Platform equipped with emergency stop switch located within reach of the passenger 37-1/8 inches (942 mm) above platform deck. When activated emergency stop button shall cause electric power to be removed from the drive system stopping lift immediately.
      c. Operating controls shall be two separate 1-1/2 inches (36 mm) round continuous pressure buttons with directional arrows mounted on the front surface of the platform control panel.
      d. Directional buttons shall prompt the user with the available travel direction by illuminating the appropriate button.
      e. When platform arrives at landing and the user releases the directional button, the passenger restraining arms and boarding ramp shall unfold automatically allowing passenger to disembark.
      f. Platform shall equipped for:
         1) Keyless operation.
   14. Passenger Seat: Fold-down type with safety belt.
   15. Attendant Hand Held Pendant Control: Provide with plug-in socket on platform control panel.
   16. Pedestrian Audio Alert: Provide chime mounted on platform to indicate platform is folded up and in motion, traveling on stairway.
   17. Platform On Board Emergency Alarm: Provide platform with on board alarm that sounds when emergency stop button is pushed. Provide battery back up for platform on board alarm.
   18. Under Hanger Sensing: Provide bottom of platform hanger with a sensing plate to stop the platform from traveling in the downward direction when encountered with 4 lbs (1.8Kg) of pressure. It shall be possible to drive the platform away from the obstruction.
   19. Side of Hanger Obstruction Device: Provide a sensor that detects obstructions in the path of the side of the hanger. Lift shall stop immediately and not travel until the obstruction is removed. It shall be possible to drive the platform away from the obstruction.

B. Drive and Guide Rail System
   1. Operation:
      a. Motor: 2 H.P. electric motor with an integrated brake.
      b. Required Power: 208-240 VAC, single phase, 50/60 Hz. on a dedicated 20 amp circuit. Rated current shall be 7 amps for operation with rated load.
      c. Locate roped sprocket drive system consisting of a motor, gearbox and PCC controller (Programmable Configuration Controller) at the upper end of the tubes. PCC controller shall be custom programmed to soft start and stop and the slow down platform travel speed for all corners and landings of the lift. Normal operating speed shall be 20 feet per minute (6 m per minute), slowing to 50 percent of this speed before entering and while rounding corners.
      d. Equip drive with an emergency manual lowering system.
   2. Standard Drive Cabinet:
      a. Cabinet: 20-1/2 inches (520 mm) wide by 41-1/2 inches (1053 mm) high by 10-5/8 inches (270 mm) deep.
      b. Cabinet door is key locked and monitored with an electrical cutout safety switch.
      c. Provide an integrated lockable main disconnect switch and breaker on the drive cabinet.
   3. Guide Rail:
      a. Construct of two 2 inch (51 mm) diameter steel tubes spaced 23-5/8 inches (600 mm) apart vertically. Tubes will run parallel to the stairs and horizontal to landings throughout the length of travel.
      b. When negotiating a horizontal landing a third 2 inch (51 mm) diameter steel tube shall be added to the tube system to guide and stabilize platform.
      c. Tube system shall not protrude more than 4-7/8 inches (125 mm) to 5-7/8 inches (150 mm) from the wall.
      d. Suspension means contained in the tubes shall be a 3/8 inch (8 mm) diameter galvanized steel core wire rope with a breaking strength of 9460 pounds (4300 kg).
      e. Locate overspeed safety at the bottom of the tube assembly and shall consist of a mechanical overspeed sensor and brake with electrical drive cut-out protection.
      f. Provide a final limit switch at the upper end of the tubes to stop the platform if it travels past the normal terminal stopping device.
   4. Rail Mounting:
      a. Tower Mount Struts: Provide with 2-1/2 inches (65 mm) by 2-1/2 inches (65 mm) hollow structural steel tubular posts to support the guide rails.

C. Pedestrian Handrail Integrated with Guide Rail:
   1. A third rail acting as a handrail shall be added where existing handrails are either removed or blocked by the lifting equipment.
   2. The top of the handrail gripping surface shall be between 34 inches (864 mm) and 38 inches (965 mm) above the stair nosing and have a smooth gripping surface 1-1/2 inch (38 mm) in diameter.
   3. Handrail shall be in the same vertical plane as the guide rail system.
   4. Handrails shall be mounted to the tube assembly and shall not be interrupted by newel posts, or other construction elements or obstructions.

D. Call Stations:
   1. Provide a call station at each serviced landing that will automatically shut off if left unattended for over 2 minutes.
   2. Call stations, 24 V low voltage with four illuminated 2 inches (51 mm) by 2 inches (51mm) square membrane touch sensitive buttons: one touch platform fold, one touch platform unfold and two directional call and send buttons.
   3. Provide call stations with Smart-Lite Technology to prompt the user with the next sequential step of operation. Call station buttons will emit an audible "beep" when pushed to confirm button activation to the user.
   4. SpecifiCall stations shall equipped for:
      a. Keyed Operation.
   5. Call Station Mounting:
      a. Lower and Intermediate landing call station.
         1) Provide flush mounting call station painted finish collars to trim all call stations that are recessed into the walls.
      b. Upper landing call station.
         1) Provide flush mounting call station painted finish collars to trim all call stations that are recessed into the walls.
      c. Provide free-standing mounting pedestals for call stations located as follows:
         1) Lower landing.
         2) Upper landing.

E. Additional Safety or Code Requirements
   1. Wall Mounted Audio Visual Alerts: Provide with adjustable volume control that sound while the lift is in operation and are visible by pedestrian traffic from all flights and landings.

F. Finish Environment Requirements:
   1. Design and fabricate lift to manufacturer's standard design for indoor location.
   2. Painting: After pretreating paint with electrostatically applied and baked powder coat as follows:
      a. Custom color as selected by Architect from manufacturers standard RAL colors.

Architect
INCITE DESIGN STUDIO
7200 WEST 75TH STREET
OVERLAND PARK, KS 66204
913.381.4437

Civil
MKEC ENGINEERING, INC.
11827 W 112TH STREET
OVERLAND PARK, KS 66210
913.317.9390

Mech., Plumb., Elec., Telecom.
RTM ENGINEERING CONSULTANTS
9225 INDIAN CREEK PKWY., SUITE 1075
OVERLAND PARK, KS 66210
913.322.1400

Construction Manager
UNIVERSAL CONSTRUCTION
1615 ARGENTINE BLVD
KANSAS CITY, KS 66105
913.342.1150

Licensed Architect
DUANE CASH

License
KS #7083

Cert. of Authority
A-543
INCITE DESIGN STUDIO, LLC

DUANE A. CASH — 7083 — KANSAS — ARCHITECT — NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

Project Number
24-304

Issue Date
1/31/2024

Revision No.	Description	Date Issued

Area Plan

Sheet Name
SPECIFICATIONS

Sheet Number
G3.00

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GENERAL NOTES:

1. THE CONTRACTOR, **PRIOR TO** ANY EXCAVATION OR NEW CONSTRUCTION, SHALL HAVE UTILITIES FIELD LOCATED BY THE APPROPRIATE UTILITY COMPANY AND/OR CITY/COUNTY DEPARTMENT.
2. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THESE PLANS, REPRESENTS THE BEST INFORMATION AVAILABLE TO THE ENGINEER. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES WHETHER THESE UTILITIES ARE SHOWN ON THE PLANS, NOT SHOWN ON THE PLANS, OR SHOWN INCORRECTLY. UTILITIES DAMAGED THROUGH THE FAILURE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF THOSE UTILITIES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE. THE CONTRACTOR SHALL, PRIOR TO ANY EXCAVATION OR NEW CONSTRUCTION, HAVE ALL UTILITIES FIELD LOCATED BY THE APPROPRIATE UTILITY COMPANY, CITY OR COUNTY DEPARTMENT, OR ONE-CALL SERVICE.
3. THE SITE PLAN IS BASED ON A SURVEY OF THE SITE. CONDITIONS OF THE SITE AT THE TIME OF CONSTRUCTION MAY VARY FROM THE SURVEYED CONDITIONS. CONTRACTOR TO VERIFY EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
4. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS SHALL BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
5. NO CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF THE DESIGN ENGINEER.
6. IF BLASTING IS REQUIRED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCIES TO OBTAIN THE REQUIRED PERMITS. IF BLASTING IS ALLOWED, THE CONTRACTOR SHALL PERFORM BLASTING OPERATIONS ACCORDING TO STATE REGULATIONS AND LOCAL ORDINANCES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY PINS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY PINS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH PINS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
8. CONTRACTOR TO HAVE REGISTERED LAND SURVEYOR RESET SECTION CORNER MONUMENT IF DISTURBED DURING CONSTRUCTION.
9. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES, DIMENSIONS, AND PLAN SCALES AND SHALL IMMEDIATELY NOTIFY THE OWNER/ENGINEER/ARCHITECT OF ANY SUCH DISCREPANCIES. ALL QUANTITIES, DIMENSIONS, AND PLAN SCALES PROVIDED ARE FOR GENERAL INFORMATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL QUANTITIES NECESSARY FOR THE COMPLETION OF THE WORK AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS IRRESPECTIVE OF THE QUANTITIES, DIMENSIONS, AND PLAN SCALES NOTED, NOT NOTED, OR NOTED INCORRECTLY.
10. ANY CURB, GUTTER, SIDEWALKS, AND PAVING THAT IS DAMAGED IN EXCESS OF THE CONSTRUCTION SHOWN IN THIS PLAN SET SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
11. ALL REMOVALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PER APPLICABLE STANDARDS (UNLESS OTHERWISE NOTED).
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL WHEN WORKING WITHIN THE PUBLIC RIGHT-OF-WAY. ALL SUCH TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL" AND/OR LOCAL JURISDICTION SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL ENSURE ALL TRAFFIC CONTROL DEVICES ARE CLEAN, PROPERLY VISIBLE, OPERATING CORRECTLY, AND LOCATED PROPERLY. THE CONTRACTOR SHALL IMMEDIATELY REPLACE ANY DAMAGED, DEFACED, OR INOPERABLE, OR MISSING TRAFFIC CONTROL DEVICES.
13. THE CONTRACTOR IS TO PROVIDE PERMANENT SEEDING, FERTILIZING, MULCHING OR SODDING OF ALL DISTURBED AREAS. THIS WORK TO BE DONE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
14. ALL SITE WORK FOR THIS PROJECT IS CONSIDERED "UNCLASSIFIED." THE TERM "UNCLASSIFIED" EXCAVATION SHALL BE DEFINED AS MEANING THE SITE CONTRACTOR BEARS THE ENTIRE RISK OF THE SOIL QUANTITIES AND/OR TYPES (E.G. ROCK, CLAY, PEAT, SILT, SHALE, ETC.) ENCOUNTERED ABOVE THE BOTTOM OF REQUIRED EXCAVATIONS AND OVER-EXCAVATED / TREATED SOILS AREAS. ABOVE THE BOTTOM OF REQUIRED EXCAVATIONS, THE SITE CONTRACTOR SHALL BEAR THE ENTIRE COST OF SUCH ADDITIONAL WORK IN THE EVENT IT BECOMES NECESSARY FOR UNSUITABLE SOILS TO BE HANDLED, REMOVED FROM THE SITE, OR FOR SUITABLE FILL MATERIAL TO BE IMPORTED TO THE SITE. THIS DEFINITION OF "UNCLASSIFIED" SUPERSEDES ANY CONTRARY DEFINITIONS OR STATEMENTS WHICH MAY BE CONTAINED IN THE SPECIFICATIONS, PLANS, OR OTHER CONTRACT DOCUMENTS. THE UNCLASSIFIED SITE SHALL INCLUDE ALL WORK ABOVE THE BOTTOM OF REQUIRED EXCAVATIONS AND/OR REQUIRED SOIL REMEDIATION/REPLACEMENT.
15. PROPOSED CONTOURS SHOWN ON THESE PLANS ARE FINAL SURFACE CONTOURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS FOR PAVEMENT THICKNESS, SUBGRADE THICKNESS, TOPSOIL, REMOVALS, ETC.

CONTACT INFORMATION

PROPERTY OWNER
KANSAS CITY KANSAS PUBLIC SCHOOLS, USD #500
2010 N 59TH ST
KANSAS CITY, KS 66104
(913) 551-3200

ENGINEER
MKEC ENGINEERING, INC.
11827 W 112TH ST, SUITE 200
OVERLAND PARK, KS 66210
(913) 317-9390

UTILITY
KANSAS ONE CALL
811 OR 1-800-DIG-SAFE

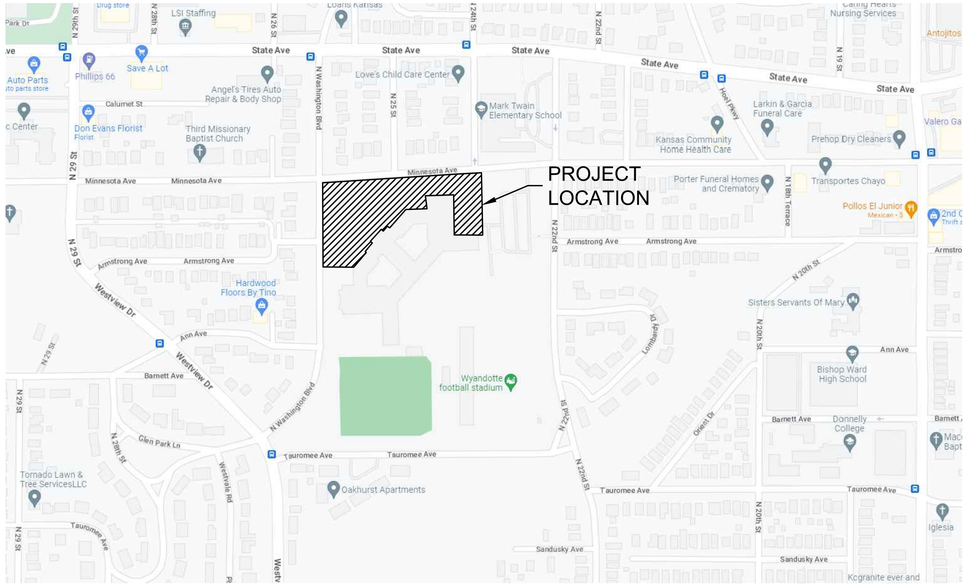
SUE Quality Levels

Utility	Quality Level
Storm Sewer	C
Sanitary Sewer	C
Electric	C
Gas	C
Water	C
Telecommunication	C
Other	C

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102



LOCATION MAP

NTS

Sheet List Table	
Sheet Number	Sheet Title
C01	COVER SHEET
C02	EXISTING CONDITIONS PLAN
C03	EXISTING CONDITIONS PLAN - DOCK
C04	DEMOLITION PLAN
C05	DEMOLITION PLAN - DOCK
C06	UTILITY PLAN
C07	UTILITY PLAN - DOCK
C08	PAVING PLAN
C09	PAVING PLAN - DOCK
C10	JOINTING PLAN - DOCK
C11	GRADING PLAN
C12	GRADING PLAN - DOCK
C13	EROSION CONTROL PLAN
C14	EROSION CONTROL PLAN - DOCK
C15	UTILITY DETAILS
C16	PAVING DETAILS
C17	EROSION CONTROL DETAILS 1
C18	EROSION CONTROL DETAILS 2
C19	RETAINING WALL PLAN & GEN. NOTES - DOCK
C20	RETAINING WALL DETAILS - DOCK
C21	311000 - SITE CLEARING
C22	312000-EARTH MOVING
C23	321216-ASHPALT PAVING
C24	321313-CONCRETE PAVING
C25	321373-CONCRETE PAVING JOINT SEALANTS
C26	334100-STORM UTILITY DRAINAGE PIPING
L01	LANDSCAPE PLAN
L02	LANDSCAPE DETAILS & NOTES
E01	ELECTRICAL SITE PLAN

UTILITY CONTACTS

WATER
KANSAS CITY BOARD OF PUBLIC UTILITIES
300 N. 65TH STREET
KANSAS CITY, KS 66102
(913) 573-9835
(913) 573-9854 (FAX)

ELECTRIC
KANSAS CITY BOARD OF PUBLIC UTILITIES
BOARD OF PUBLIC UTILITIES
6742 RIVERVIEW AVE
KANSAS CITY, KS 66106
(913) 573-9538

TELEPHONE
AT&T SOUTHWEST
5400 FOXRIDGE DR., RM 500
MISSION, KS. 66202
(913) 676-1281

GAS
KANSAS GAS SERVICE
(913) 599-8953

CABLE
TIME WARNER CABLE
WALTER FERGUSON
(816) 215-8858

UNIFIED GOVERNMENT
SEWER MAINTENANCE
KEVIN SWEARENGIN
(913) 573-1360

NOTES:

1. ALL WORK IN PUBLIC EASEMENT AND RIGHT-OF-WAY AND ALL EROSION WORK MUST COMPLY WITH THE LATEST EDITION OF THE TECHNICAL PROVISION & STANDARD DRAWINGS FOR ROADS AND SEWERS, OF THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS. IF ANY OF THE GENERAL NOTES CONFLICTS WITH THE TECHNICAL PROVISIONS & STANDARD DRAWINGS FOR ROAD AND SEWERS, OF THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS (THE UNIFIED GOVERNMENT), THE UNIFIED GOVERNMENT STANDARDS SHALL OVERRIDE.
2. BASED ON PROVISIONS WITHIN THE UNIFIED GOVERNMENT STORM DRAINAGE CRITERIA FOR PRIVATE DEVELOPMENTS, DETENTION WILL NOT BE REQUIRED DUE TO THE NET INCREASE IN IMPERVIOUS AREA OF 5,271 SF.
3. UG STORM WATER ORDINANCE REQUIRES STORM WATER QUALITY WHEN DEVELOPMENTS ARE 1.0 ACRES OR MORE. STORM WATER QUALITY IS REQUIRED ON THIS PROJECT.

QUANTITIES:

1. TOTAL AREA OF LAND DISTURBANCE = 1.57 ACRES
2. NET INCREASE IN IMPERVIOUS AREA = 22,115 S.F. (0.51 ACRES)
3. EARTHWORK QUANTITIES:
   - 3.1. ESTIMATED CUT = 980 C.Y.
   - 3.2. ESTIMATED FILL = 864 C.Y. (ADJ. 15%)
   - 3.3. ESTIMATED NET = 116 C.Y. (CUT)
4. EARTHWORK QUANTITIES ARE PROVIDED FOR INFORMATION ONLY. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY EARTHWORK REQUIRED TO COMPLETE THE IMPROVEMENTS SHOWN ON THE PLANS, IRRESPECTIVE OF EARTHWORK QUANTITIES LISTED ABOVE.

LEGEND

- 6IN – TREE AND DIAMETER
- 3IN – TREE AND DIAMETER
- 18" – TREE STUMP AND DIAMETER
- SN – SIGN
- BUSH
- MAIL BOX
- POLE
- GATE
- POST / BOLLARD
- FLAG POLE
- X — X – FENCE
- EDGE OF TREES
- TR – TELEPHONE RISER
- UGT – UNDERGROUND TELEPHONE LINE
- OHT – OVERHEAD TELEPHONE LINE
- TV – CABLE TV RISER
- FO – FIBER OPTICS INDICATOR SIGN
- TV – UNDERGROUND CABLE TV LINE
- FOC – UNDERGROUND FIBER OPTIC CABLE
- PP – POWER POLE AND DEADMAN
- LIGHT POLE
- ELECTRIC TRANSFORMER
- SCHOOL ZONE SIGNAL LIGHT
- TC – TRAFFIC CONTROL BOX
- TRAFFIC SIGNAL LIGHT POLE
- UGE – UNDERGROUND ELECTRIC LINE
- OHE – OVERHEAD ELECTRIC LINE
- GAS METER
- GV – GAS VALVE
- G – GAS LINE
- SS – SANITARY SEWER MANHOLE
- CO – CLEANOUT
- SS – SANITARY SEWER LINE
- INLET
- S – STORM WATER MANHOLE
- ROOF DRAIN
- GRATE INLET
- EXISTING STORM SEWER PIPE
- PROPOSED STORM SEWER PIPE
- SW – ROOF DRAIN LINE
- PD – PERFORATE DRAIN PIPE
- FIRE HYDRANT
- WV – WATER VALVE
- WM – WATER METER
- M – MONITORING WELL
- WV – WATER METER VAULT
- WATER SPIGOT
- W – WATER LINE
- FP – FIRE PROTECTION LINE
- IC – IRRIGATION CONTROL VALVE
- 925 – EXISTING MAJOR CONTOUR
- 926 – EXISTING MINOR CONTOUR

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NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR
WYANDOTTE HIGH SCHOOL IMPROVEMENTS
2501 MINNESOTA AVE. KANSAS CITY, KS 66102

COVER SHEET

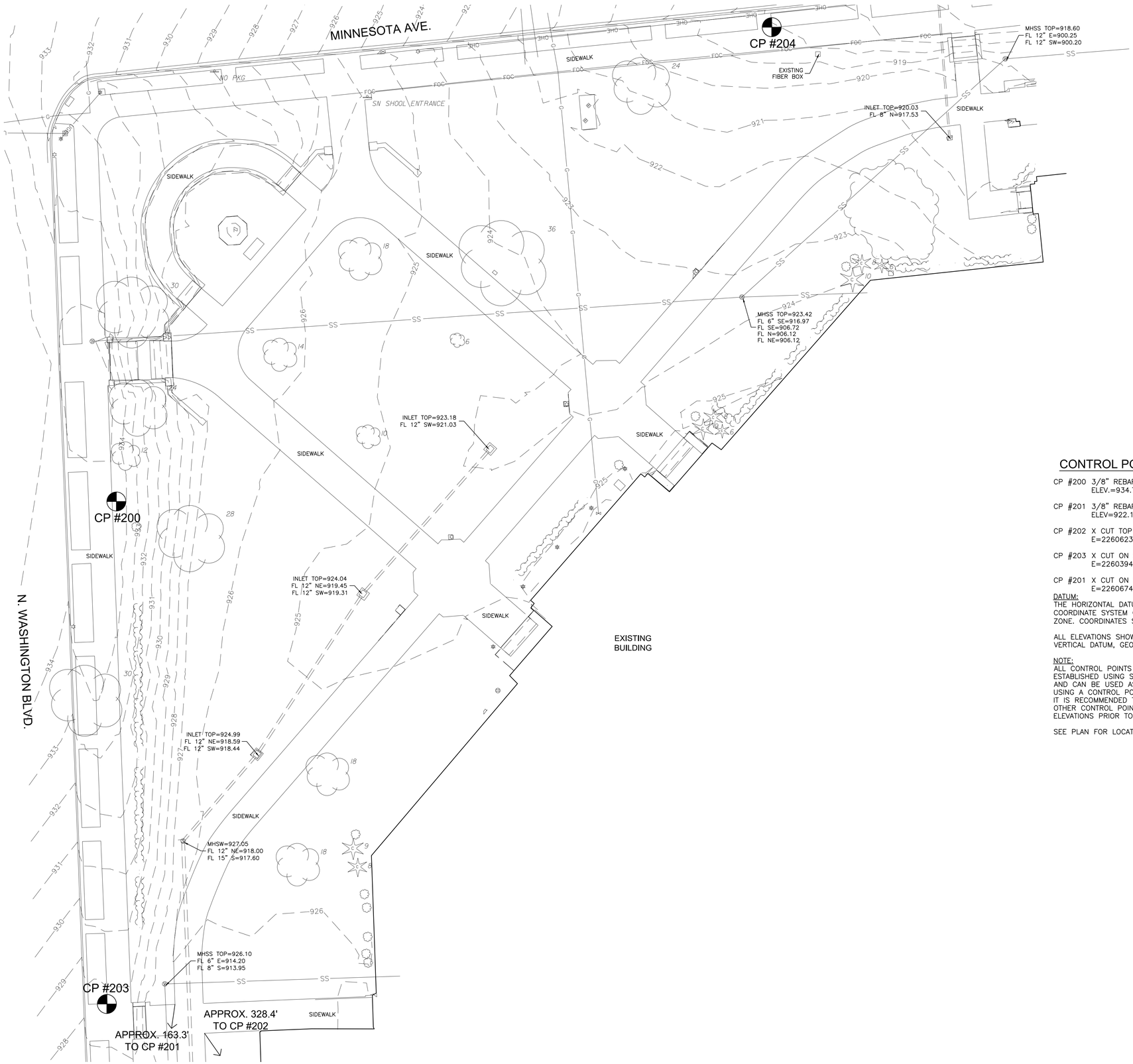
PROJECT NO. 2202010801
SCALE N/A

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C01

P:\PROJECTS\2023\2302010053_KCKPS_WYANDOTTE HS DOCK DRIVE\00 230053 CAD\SHTS\05 CIVIL\C05\230053-05-01100.DWG



CONTROL POINTS & BENCHMARKS

CP #200 3/8" REBAR N=302113.430, E=2260398.020
ELEV.=934.772

CP #201 3/8" REBAR N=301739.747, E=2260399.347,
ELEV=922.160

CP #202 X CUT TOP OF CURB N=301619.877,
E=2260623.051, ELEV=907.319

CP #203 X CUT ON SIDEWALK N=301901.525,
E=2260394.001, ELEV=928.648

CP #201 X CUT ON SIDEWALK N=302313.451,
E=2260674.313, ELEV=918.072

DATUM:
THE HORIZONTAL DATUM IS BASED ON THE KANSAS COORDINATE SYSTEM OF 1983, NAD83(2011), NORTH ZONE. COORDINATES SHOWN ARE STATE PLANE VALUES.

ALL ELEVATIONS SHOWN ARE BASED ON THE NAVD 88 VERTICAL DATUM, GEOID 18 IN US FEET.

NOTE:
ALL CONTROL POINTS SHOWN HAVE ELEVATIONS ESTABLISHED USING STANDARD SURVEYING PROCEDURES AND CAN BE USED AS TEMPORARY BENCHMARKS. WHEN USING A CONTROL POINT AS A TEMPORARY BENCHMARK, IT IS RECOMMENDED THAT CROSS-CHECKS BE MADE TO OTHER CONTROL POINTS OR BENCHMARKS TO CONFIRM ELEVATIONS PRIOR TO USE.

SEE PLAN FOR LOCATIONS.

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BRIAN STERLING KOCH
NUMBER 25611
STATE OF KANSAS
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

EXISTING CONDITIONS PLAN

PROJECT NO. 2202010801

SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C02

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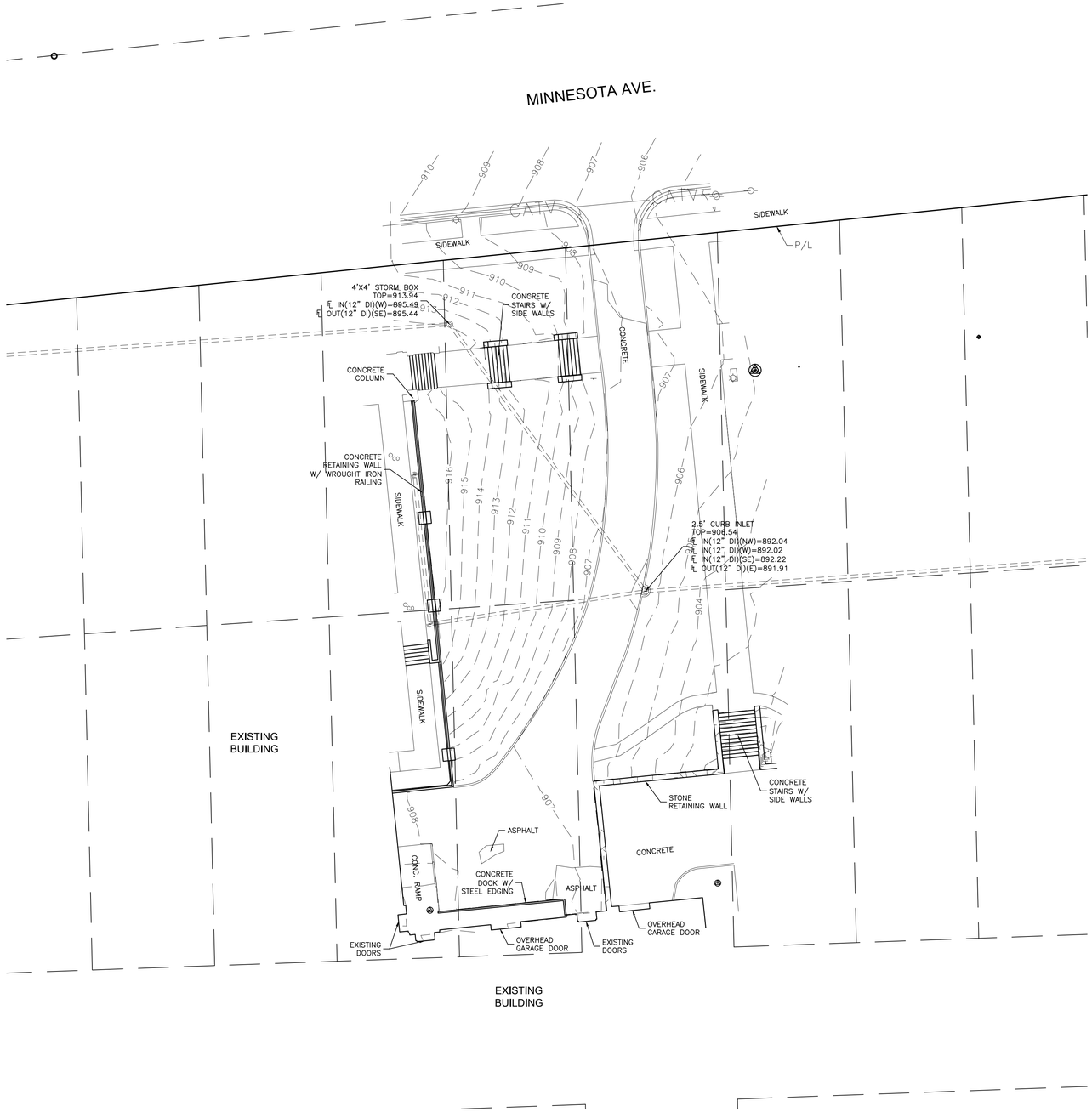

NOTES:

1. SURVEY COMPLETED BY STRICK & COMPANY INC. PLAN SHOWN FOR REFERENCE ONLY.

N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING HAGEMAN
LICENSED
2024
NOT FOR CONSTRUCTION
KANSAS
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

EXISTING CONDITIONS PLAN - DOCK

PROJECT NO.	
	2202010801
SCALE	
	1"=20'

DRAWN	DESIGNED	CHECKED
JLB	MKB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO.
C03

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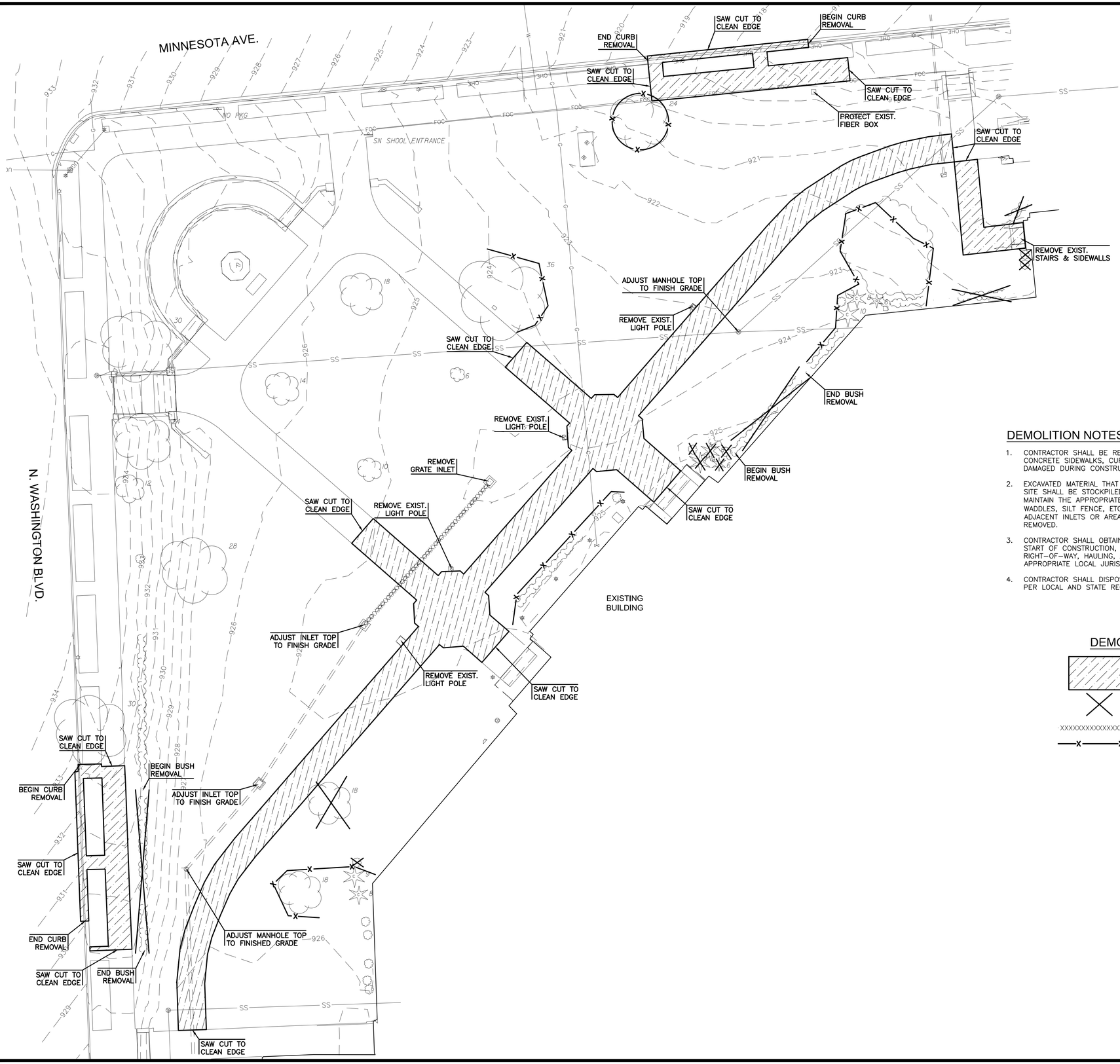

DEMOLITION NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR AND REPLACE EXISTING CONCRETE SIDEWALKS, CURB & GUTTER, AND ANY EXISTING PAVEMENT DAMAGED DURING CONSTRUCTION.
2. EXCAVATED MATERIAL THAT IS NOT IMMEDIATELY LOADED AND HAULED OFF SITE SHALL BE STOCKPILED ON SITE. CONTRACTOR SHALL PROVIDE AND MAINTAIN THE APPROPRIATE BMP (COMPOST SOCK, GRAVEL FILTER BAGS, WADDLES, SILT FENCE, ETC.) AROUND STOCKPILE AREA TO PROTECT ADJACENT INLETS OR AREAS, ETC., UNTIL SUCH TIME THAT STOCKPILE IS REMOVED.
3. CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, RIGHT–OF–WAY, HAULING, AND LAND DISTURBANCE PERMITS WITH THE APPROPRIATE LOCAL JURISDICTION.
4. CONTRACTOR SHALL DISPOSE OF ALL DEMOLITION ITEMS APPROPRIATELY PER LOCAL AND STATE REQUIREMENTS.

DEMOLITION LEGEND

- PAVEMENT REMOVAL
- TREE REMOVAL
- XXXXXXXXXXXXXXXXXXXX – UTILITY REMOVAL
- TREE PROTECTION

N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING KANSAS LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

DEMOLITION PLAN

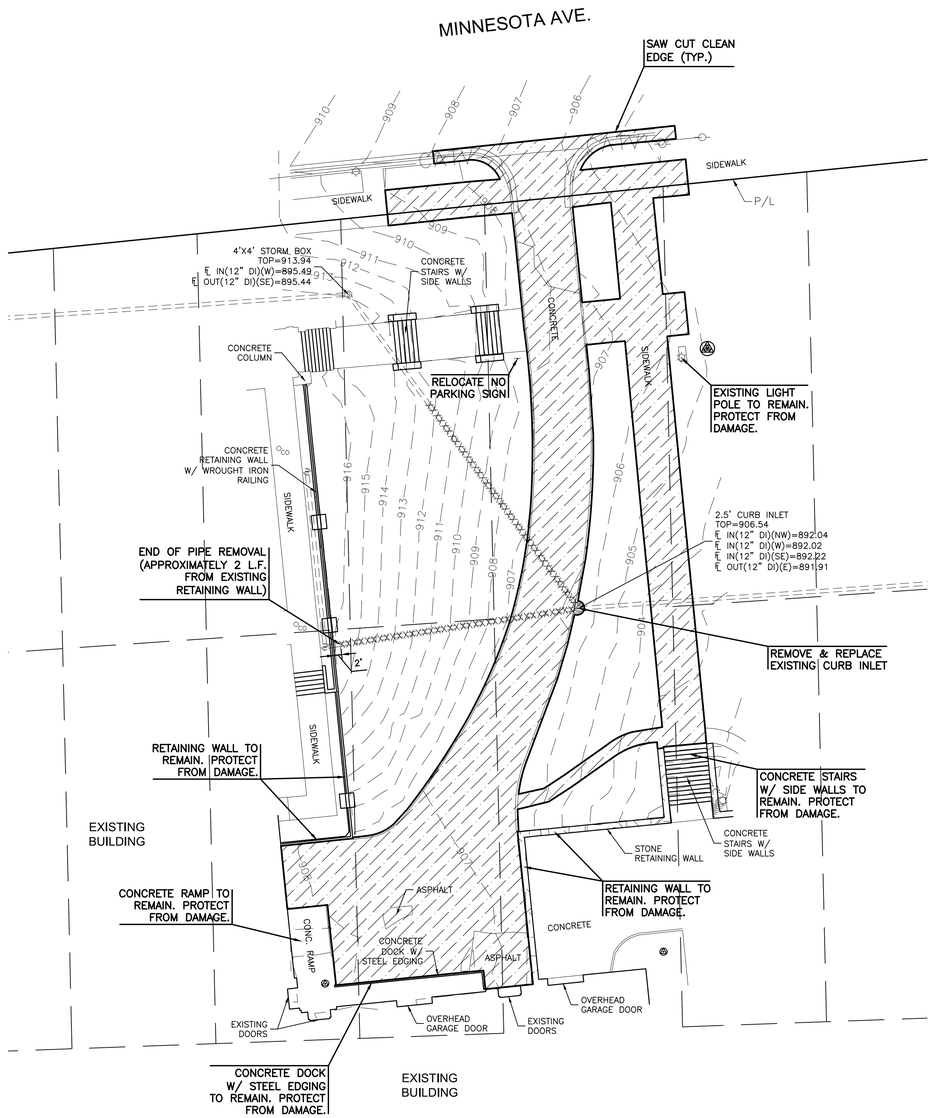
PROJECT NO, 2202010801

SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C04



DEMOLITION NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR AND REPLACE EXISTING CONCRETE SIDEWALKS, CURB & GUTTER, AND ANY EXISTING PAVEMENT DAMAGED DURING CONSTRUCTION.
2. EXCAVATED MATERIAL THAT IS NOT IMMEDIATELY LOADED AND HAULED OFF SITE SHALL BE STOCKPILED ON SITE. CONTRACTOR SHALL PROVIDE AND MAINTAIN THE APPROPRIATE BMP (COMPOST SOCK, GRAVEL FILTER BAGS, WADDLES, SILT FENCE, ETC.) AROUND STOCKPILE AREA TO PROTECT ADJACENT INLETS OR AREAS, ETC., UNTIL SUCH TIME THAT STOCKPILE IS REMOVED.
3. CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, RIGHT-OF-WAY, HAULING, AND LAND DISTURBANCE PERMITS WITH THE APPROPRIATE LOCAL JURISDICTION.
4. CONTRACTOR SHALL DISPOSE OF ALL DEMOLITION ITEMS APPROPRIATELY PER LOCAL AND STATE REQUIREMENTS.

DEMOLITION LEGEND

- PAVEMENT REMOVAL
- TREE REMOVAL
- XXXXXXXXXXXXXXXXXXX – UTILITY REMOVAL
- —X———X— – TREE PROTECTION

N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING HALL LICENSED 2021 KANSAS PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

CONSTRUCTION DOCUMENTS FOR
2501 MINNESOTA AVE. KANSAS CITY, KS 66102

DEMOLITION PLAN - DOCK

PROJECT NO. 2202010801

SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
JLB	MKB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C05

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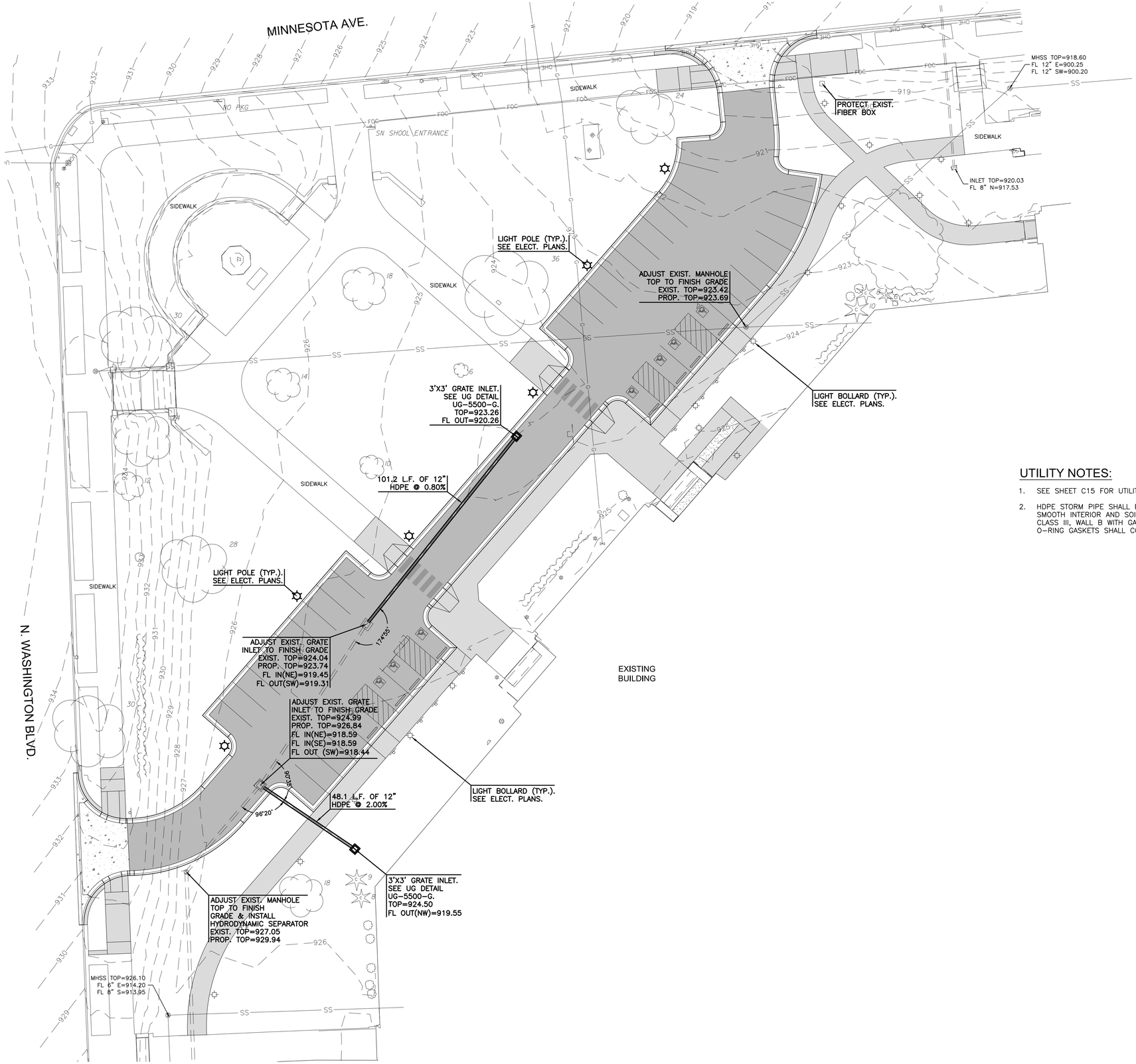

UTILITY NOTES:

1. SEE SHEET C15 FOR UTILITY DETAILS.
2. HDPE STORM PIPE SHALL BE CORRUGATED DUAL WALL HDPE WITH SMOOTH INTERIOR AND SOIL-TIGHT JOINTS. RCP STORM PIPE SHALL BE CLASS III, WALL B WITH GASKETED JOINTS CONFORMING TO ASTM C76. O-RING GASKETS SHALL CONFORM TO ASTM C361 AND ASTM C443.

N

SCALE: 1"=20'

0 20 40

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Overland Park, KS • 913.317.9390

BRIAN STERLING KEITH NUMBER 25391 STATE OF KANSAS PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

UTILITY PLAN

PROJECT NO. 2202010801

SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C06

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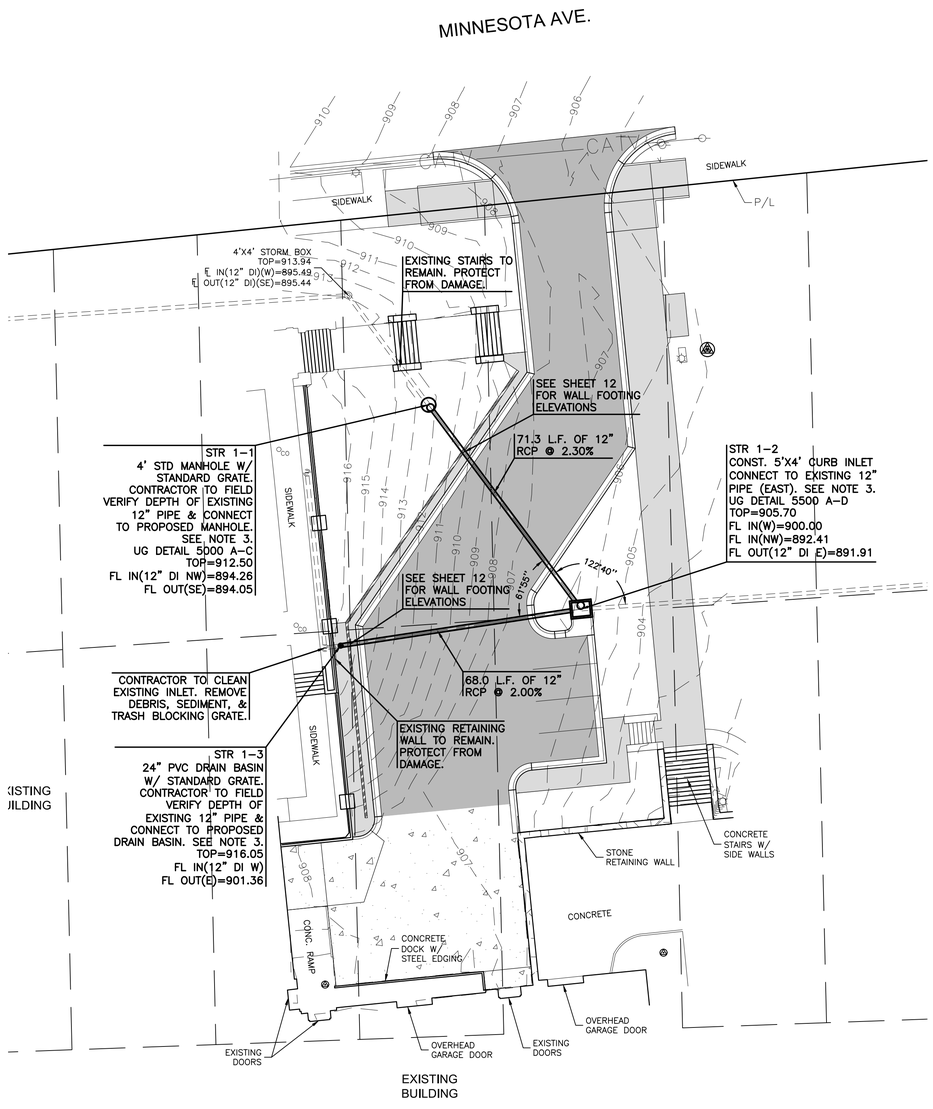

UTILITY NOTES:

1. SEE SHEET C15 FOR UTILITY DETAILS.
2. RCP STORM PIPE SHALL BE CLASS III, WALL B WITH GASKETED JOINTS CONFORMING TO ASTM C76. O-RING GASKETS SHALL CONFORM TO ASTM C361 AND ASTM C443.
3. CONTRACTOR TO FIELD VERIFY THE LOCATION AND DEPTH OF EXISTING STORM WATER SEWER PIPES PRIOR TO CONSTRUCTION. PROPOSED STRUCTURES SHALL NOT BE FABRICATED UNTIL THE EXISTING CONNECTING PIPE FLOWLINES HAVE BEEN VERIFIED AT THE PROPOSED STRUCTURE LOCATIONS.

SCALE: 1"=20'
0 20 40

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BRIAN STERLING HAMILTON — LICENSED — 23-1 — PROFESSIONAL ENGINEER — KANSAS
NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

UTILITY PLAN - DOCK

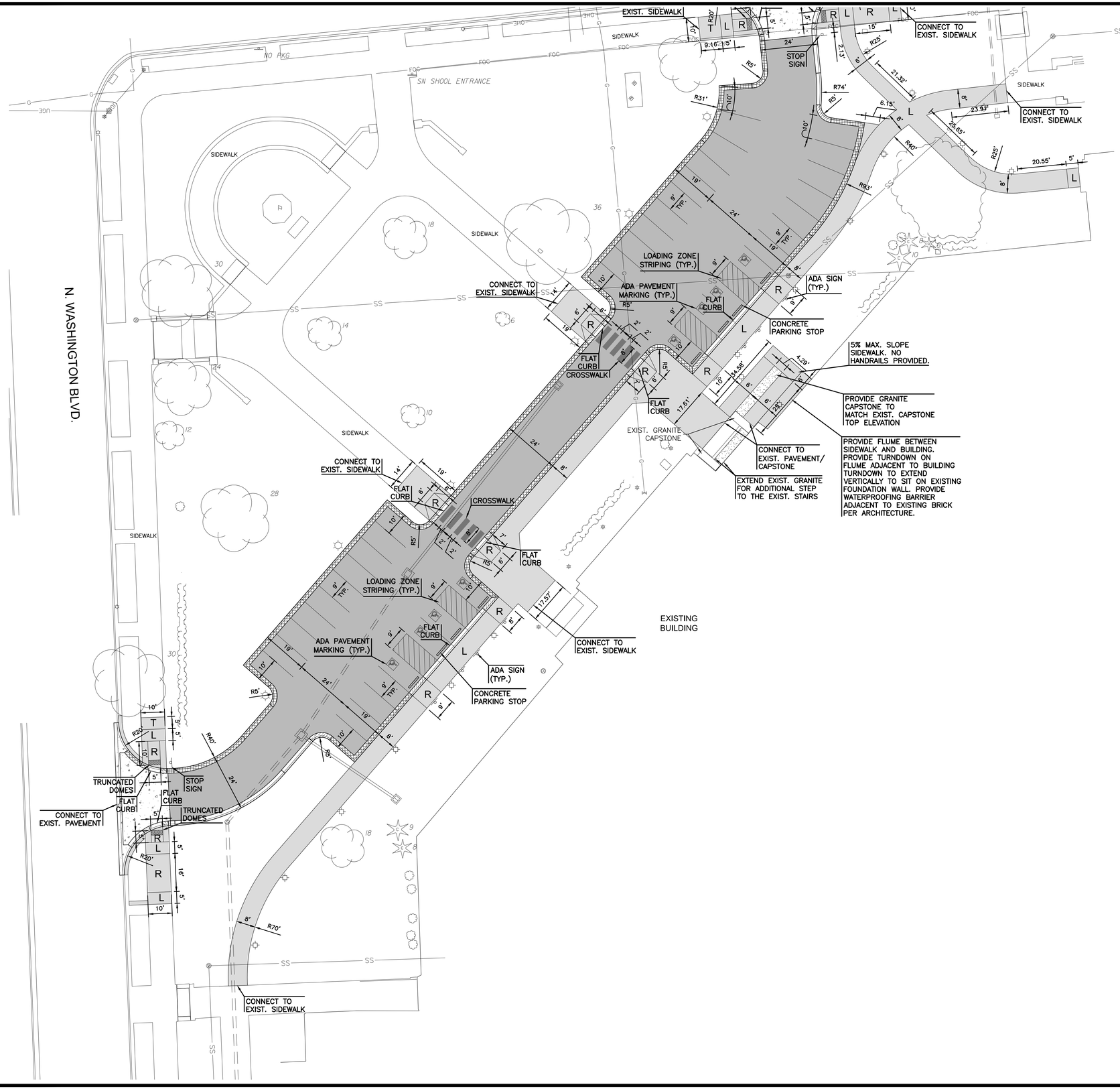
PROJECT NO.	
	2202010801
SCALE	1"=20'

DRAWN	DESIGNED	CHECKED
JLB	MKB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO.
C07

P:\PROJECTS\2023\2302010053_KCKPS_WYANDOTTE HS DOCK DRIVE\D00 230053 CAD\SHTS\05 CIVIL\CDS\230053-05-4200.DWG



PAVING NOTES:

1. SEE SHEET C16 FOR PAVEMENT DETAILS.
2. ALL DIMENSIONS ARE TO BACK OF CURB.
3. INSTALL CONCRETE PARKING STOP ON ALL HANDICAP PARKING STALLS.
4. ALL PARKING STALLS ARE 9' X 19' UNLESS OTHERWISE NOTED.
5. ALL ASPHALT PARKING LOTS AND DRIVES SHALL CONFORM TO CURRENT APWA KC METRO CHAPTER SPECIFICATIONS WITH THICKNESS AND SUBGRADE PER GEOTECHNICAL REPORT RECOMMENDATIONS. RECYCLED CONTENT IS ALLOWED WITHIN THE APWA LIMITS.
6. PORTLAND CEMENT CONCRETE SHALL CONFORM WITH THE KANSAS CITY METRO MATERIALS BOARD MINIMUM 4000 PSI GRANITE MIX (KCMMB 4K).
7. ALL SIDEWALKS SHALL BE 4" UN-REINFORCED CONCRETE.
8. SIDEWALK RAMPS ON PRIVATE PROPERTY DO NOT REQUIRE 2' WIDE DETECTABLE WARNING STRIPS (TRUNCATED DOMES).
9. COMPACTED SUBGRADE AND AGGREGATE BASE UNDER PAVEMENTS SHALL EXTEND A MINIMUM OF 2' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB, WHICHEVER IS APPLICABLE.
10. PARKING STALL STRIPING SHALL BE 4" WHITE, 15 MILS MIN. THICKNESS.
11. HANDICAP PARKING STALL LOADING ZONE AND DIAGONAL STRIPING SHALL BE 4" WHITE, 2' O.C. @ 45° ANGLE, 15 MILS MIN. THICKNESS.
12. INSTALL HANDICAP PAVEMENT MARKING ON HANDICAP PARKING STALLS PER DETAIL ON SHEET C16.
13. ALL CURBS SHALL BE CG-1 UNLESS OTHERWISE NOTED.
14. 5' WIDE SIDEWALKS SHALL HAVE A MAXIMUM OF 5' CONTRACTION JOINT SPACING. 6' WIDE SIDEWALKS SHALL HAVE A MAXIMUM CONTRACTION JOINT SPACING OF 6'. 8' WIDE SIDEWALKS SHALL HAVE A MAXIMUM 4' CONTRACTION JOINT SPACING WITH A LONGITUDINAL CONTRACTION JOINT DOWN THE MIDDLE OF THE SIDEWALK.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TRAFFIC CONTROL NECESSARY ON SURROUNDING STREETS FOR CONSTRUCTION. TRAFFIC CONTROL SHALL COMPLY WITH THE LATEST EDITION OF MUTCD AND CITY SPECIFICATIONS.
16. CROSS WALK AND STOP BARS STRIPING SHALL BE 12" WIDE AND 24" RESPECTIVELY. THERMOPLASTIC MARKINGS TYPE, COLOR WHITE.
17. ALL SIGNS SHALL CONFORM TO THE LATEST EDITION OF MUTCD. STOP SIGN: R1-1, 36"X36"

PAVING LEGEND

- 4" CONCRETE SIDEWALK
- 6" ASPHALT SECTION
- 8" CONCRETE SECTION
- MATCH EXIST. GRANITE
- DRY CURB
- CURB TRANSITION
- R – RAMP
- L – LANDING

N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING KEARNEY NUMBER 25 STATE OF KANSAS PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

CONSTRUCTION DOCUMENTS FOR

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

PAVING PLAN

PROJECT NO. 2202010801

SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C08

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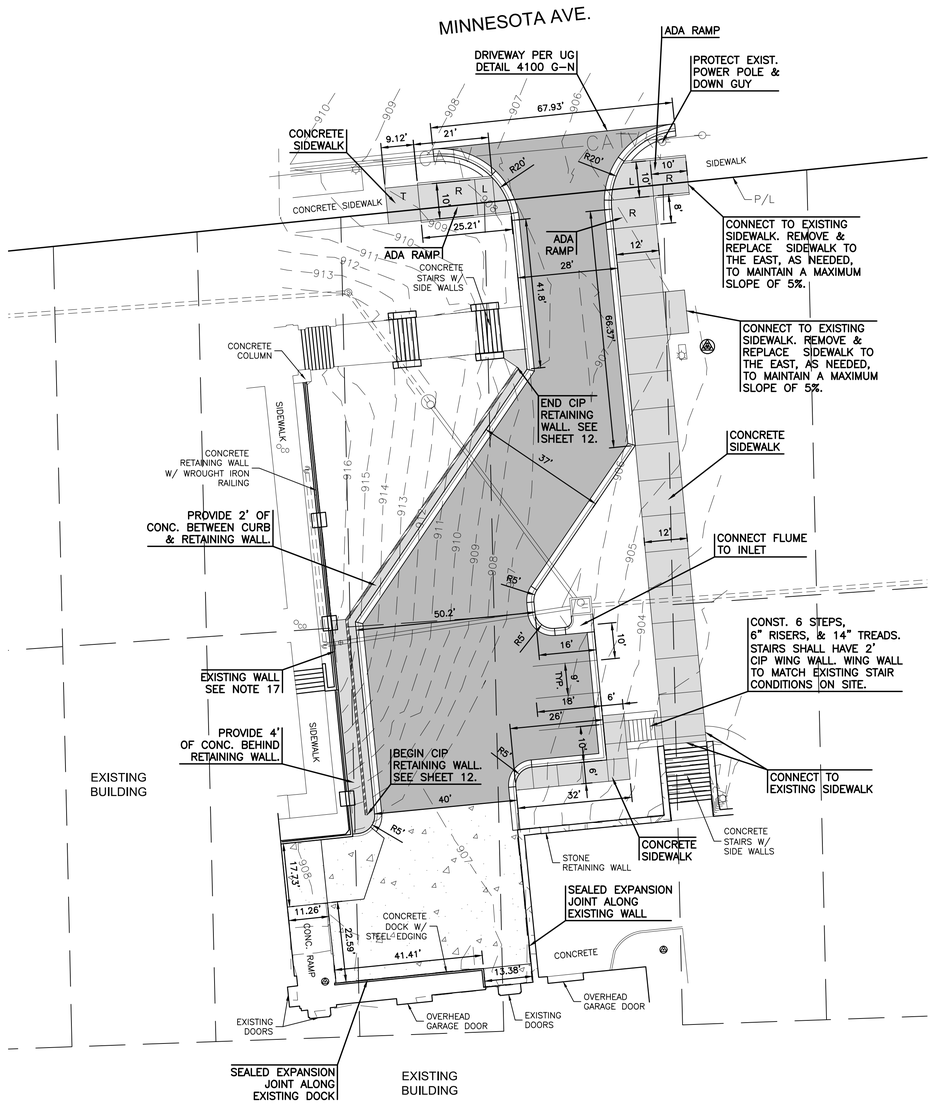

PAVING NOTES:

1. SEE SHEET C16 FOR PAVEMENT DETAILS.
2. ALL DIMENSIONS ARE TO BACK OF CURB.
3. ALL PARKING STALLS ARE 9' X 18' UNLESS OTHERWISE NOTED.
4. ALL ASPHALT PARKING LOTS AND DRIVES SHALL CONFORM TO CURRENT APWA KC METRO CHAPTER SPECIFICATIONS. RECYCLED CONTENT IS ALLOWED WITHIN THE APWA LIMITS.
5. PORTLAND CEMENT CONCRETE SHALL CONFORM WITH THE KANSAS CITY METRO MATERIALS BOARD MINIMUM 4000 PSI GRANITE MIX (KCMMB 4K).
6. ALL SIDEWALKS SHALL BE 4" UN-REINFORCED CONCRETE.
7. SIDEWALK RAMPS ON PRIVATE PROPERTY DO NOT REQUIRE 2' WIDE DETECTABLE WARNING STRIPS (TRUNCATED DOMES).
8. COMPACTED SUBGRADE AND AGGREGATE BASE UNDER PAVEMENTS SHALL EXTEND A MINIMUM OF 2' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB, WHICHEVER IS APPLICABLE.
9. INSTALL GRAVEL BLANKET DRAINS AT ALL PARKING LOT AND ROADWAY CURB INLETS PER DETAIL PRIOR TO SUBGRADE AND PAVEMENT INSTALLATION.
10. PARKING STALL STRIPING SHALL BE 4" YELLOW, 15 MILS MIN. THICKNESS.
11. ALL CURBS SHALL BE CG-1 UNLESS OTHERWISE NOTED.
12. 5' WIDE SIDEWALKS SHALL HAVE A MAXIMUM OF 5' CONTRACTION JOINT SPACING. 6' WIDE SIDEWALKS SHALL HAVE A MAXIMUM CONTRACTION JOINT SPACING OF 6'. 8' WIDE SIDEWALKS SHALL HAVE A MAXIMUM 4' CONTRACTION JOINT SPACING WITH A LONGITUDINAL CONTRACTION JOINT DOWN THE MIDDLE OF THE SIDEWALK.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TRAFFIC CONTROL NECESSARY ON SURROUNDING STREETS FOR CONSTRUCTION. TRAFFIC CONTROL SHALL COMPLY WITH THE LATEST EDITION OF MUTCD AND CITY SPECIFICATIONS.
14. CROSS WALK AND STOP BARS STRIPING SHALL BE 12" WIDE AND 24" RESPECTIVELY. THERMOPLASTIC MARKINGS TYPE, COLOR WHITE.
15. COORDINATE INSTALLATION OF PVC SLEEVES AND GRANULAR TRENCH BACKFILL FOR IRRIGATION PRIOR TO PAVEMENT INSTALLATION.
16. ALL SIGNS SHALL CONFORM TO THE LATEST EDITION OF MUTCD.
17. CONTRACTOR TO PROTECT AND SHORE EXISTING WALL AS NECESSARY TO ACCOMMODATE NEW WALL INSTALLATION.

PAVING LEGEND

- – 4" CONCRETE SIDEWALK
- – 8" DOWEL REINFORCED CONCRETE SECTION
- – 8" REINFORCED CONCRETE SECTION
- – DRY CURB
- – CURB TRANSITION
- R – RAMP
- L – LANDING
- T – TRANSITION

N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING HAMM — LICENSED — 19911 — PROFESSIONAL ENGINEER — KANSAS

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

PAVING
PLAN - DOCK

PROJECT NO. 2202010801

SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
JLB	MKB	BSH

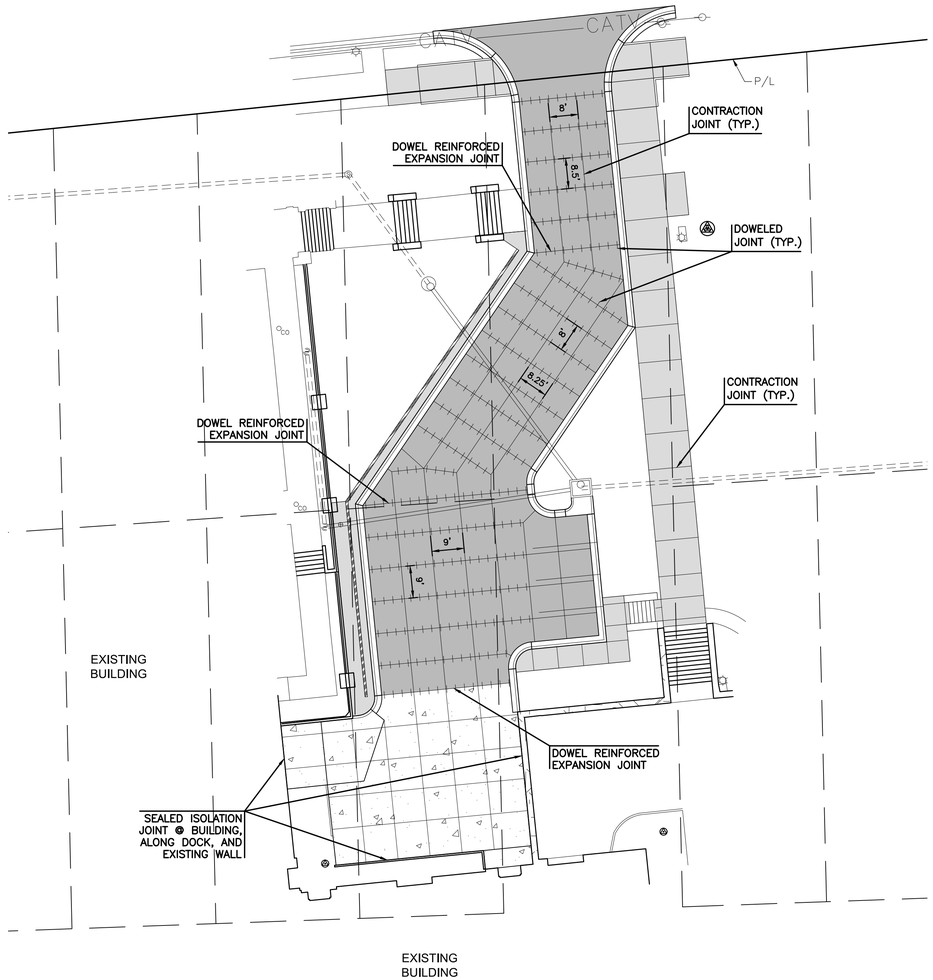
NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO.
C09

P:\PROJECTS\2023\2302010058\3_KCKPS_WYANDOTTE HS DOCK DRIVE\00 230053 CAD\SHTS\HS CIVIL\C09\230053-05-5200.DWG

NOTES:

1. SEE SHEET C09 FOR PAVING NOTES.



N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING HAMILTON NUMBER 23053 STATE OF KANSAS PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

JOINTING PLAN - DOCK

PROJECT NO. 2202010801

SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
JLB	MKB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C10

P:\PROJECTS\2022\2202010053_KCKPS_WYANDOTTE HS DOCK DRIVE\00 230053 CAD\SHTS\05 CIVIL\CDS\230053-05-0210.DWG

GRADING NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FINISHED GRADE.
2. ALL CURB SPOT ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED.
3. SATISFACTORY SOIL AND FILL MATERIAL SHALL BE PROVIDED PER THE GEOTECHNICAL REPORT. SEE GEOTECHNICAL REPORT FOR MAXIMUM FILL LIFT THICKNESS.
4. CLEAR AND GRUB IMPROVEMENT AREA. REMOVE ALL ORGANIC AND TOPSOIL MATERIAL REGARDLESS OF SIZE AND DEPTH. ALL CLEARED AND EXCESS MATERIAL SHALL BECOME CONTRACTORS PROPERTY AND SHALL BE REMOVED FROM THE PROJECT SITE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE EARTHWORK QUANTITIES. ALL IMPORT AND EXPORT OF SOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT HIS EXPENSE.
6. NOTIFY TESTING AGENCY WHEN EXCAVATIONS HAVE REACHED REQUIRED SUBGRADE. SUBGRADE SHALL BE PREPARED AND COMPACTED PER THE GEOTECHNICAL REPORT.
7. IF GEOTECHNICAL ENGINEER DETERMINES THAT UNSATISFACTORY SOIL IS PRESENT, CONTINUE EXCAVATION AND REPLACE WITH COMPACTED BACKFILL OR FILL MATERIAL AS DIRECTED.
8. SEE EARTH WORK SPECIFICATIONS FOR COMPACTION & PROOF-ROLLING REQUIREMENTS.
9. RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURE, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES, WITHOUT ADDITIONAL COMPENSATION.
10. COMPACTED SUBGRADE AND AGGREGATE BASE UNDER PAVEMENTS SHALL EXTEND A MINIMUM OF 2' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB, WHICHEVER IS APPLICABLE.
11. ALL EXCESS SOIL AND WASTE MATERIAL SHALL BECOME THE CONTRACTORS PROPERTY AND SHALL BE REMOVED FROM THE SITE.

GRADING LEGEND

- 925 — PROPOSED MAJOR CONTOUR
- 926 — PROPOSED MINOR CONTOUR
- 00.00 — FINISH GRADE
- EX00.00 — EXISTING ELEVATION
- EP00.00 — EDGE OF PAVEMENT
- TW00.00 — TOP OF CAPSTONE ELEVATION

N

SCALE: 1"=20'
0 20 40

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BRIAN STERLING HAGENBUCH — 25101 — KANSAS — PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

GRADING PLAN

PROJECT NO. 2202010801

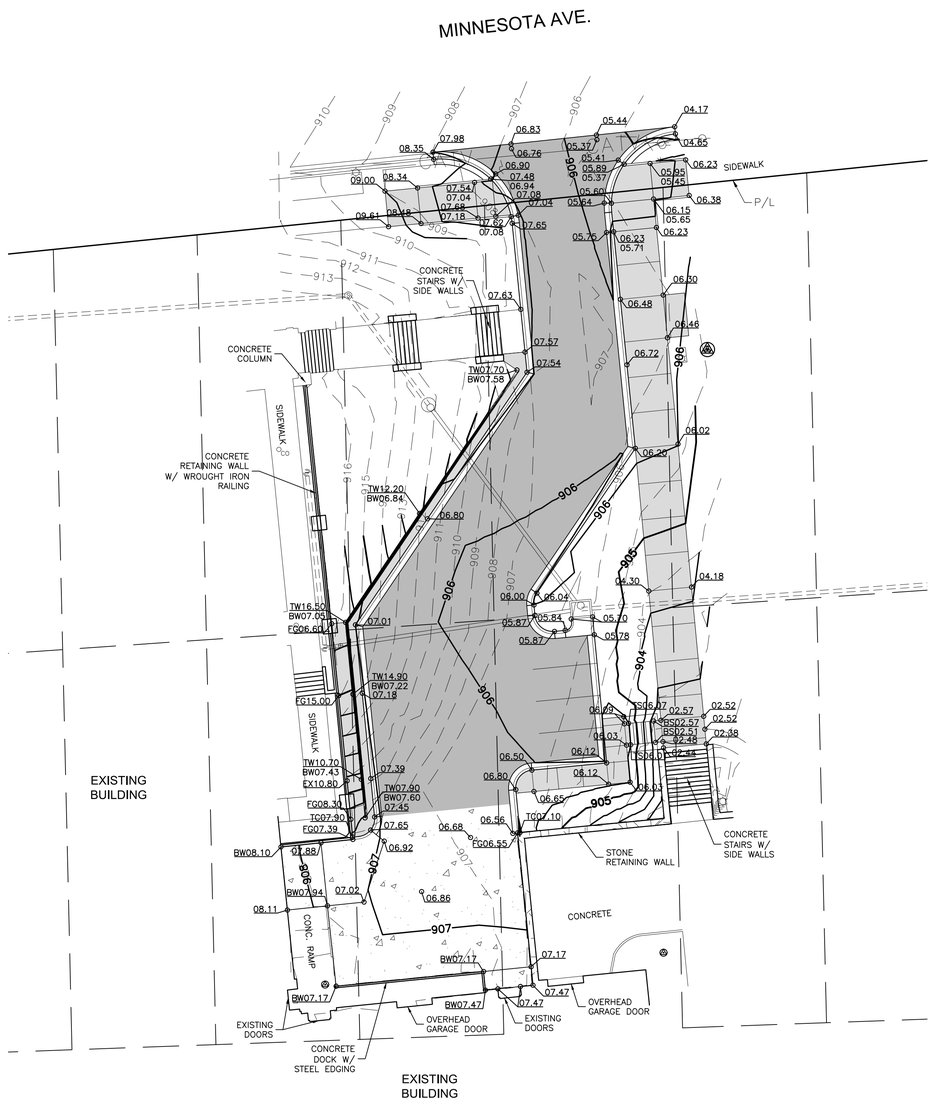
SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C11

P:\PROJECTS\2022\2202010801_KCKPS_WYANDOTTE HIGH SCHOOL PARKING\00 2202801 CAD\SHTS\05 CIVIL\FDPS\2202801-05-1200-FDP.DWG



GRADING NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FINISHED GRADE.
2. ALL CURB SPOT ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED.
3. SATISFACTORY SOIL AND FILL MATERIAL SHALL BE PROVIDED PER THE GEOTECHNICAL REPRESENTATIVE. SEE SPECIFICATIONS FOR MAXIMUM FILL LIFT THICKNESS.
4. CLEAR AND GRUB IMPROVEMENT AREA. REMOVE ALL ORGANIC AND TOPSOIL MATERIAL REGARDLESS OF SIZE AND DEPTH. ALL CLEARED AND EXCESS MATERIAL SHALL BECOME CONTRACTORS PROPERTY AND SHALL BE REMOVED FROM THE PROJECT SITE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE EARTHWORK QUANTITIES. ALL IMPORT AND EXPORT OF SOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT HIS EXPENSE.
6. NOTIFY TESTING AGENCY WHEN EXCAVATIONS HAVE REACHED REQUIRED SUBGRADE. SUBGRADE SHALL BE PREPARED AND COMPACTED PER THE GEOTECHNICAL REPRESENTATIVE.
7. IF GEOTECHNICAL ENGINEER DETERMINES THAT UNSATISFACTORY SOIL IS PRESENT, CONTINUE EXCAVATION AND REPLACE WITH COMPACTED BACKFILL OR FILL MATERIAL AS DIRECTED.
8. SEE EARTH WORK SPECIFICATIONS FOR COMPACTION & PROOF–ROLLING REQUIREMENTS.
9. RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURE, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES, WITHOUT ADDITIONAL COMPENSATION.
10. COMPACTED SUBGRADE AND AGGREGATE BASE UNDER PAVEMENTS SHALL EXTEND A MINIMUM OF 2' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB, WHICHEVER IS APPLICABLE.
11. ALL EXCESS SOIL AND WASTE MATERIAL SHALL BECOME THE CONTRACTORS PROPERTY AND SHALL BE REMOVED FROM THE SITE.

GRADING LEGEND

900	– PROPOSED MAJOR CONTOUR
901	– PROPOSED MINOR CONTOUR
00.00	– FINISH GRADE
TW00.00	– TOP OF WALL
BW00.00	– FINISH GRADE AT BOTTOM OF WALL
EX00.00	– EXISTING ELEVATION
TS00.00	– TOP OF STEP
BS00.00	– BOTTOM OF STEP
TC00.00	– TOP OF CURB
FG00.00	– FINISH GRADE

N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING KOCH — LICENSED — 25 — KANSAS — PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

GRADING PLAN - DOCK

PROJECT NO. 2202010801

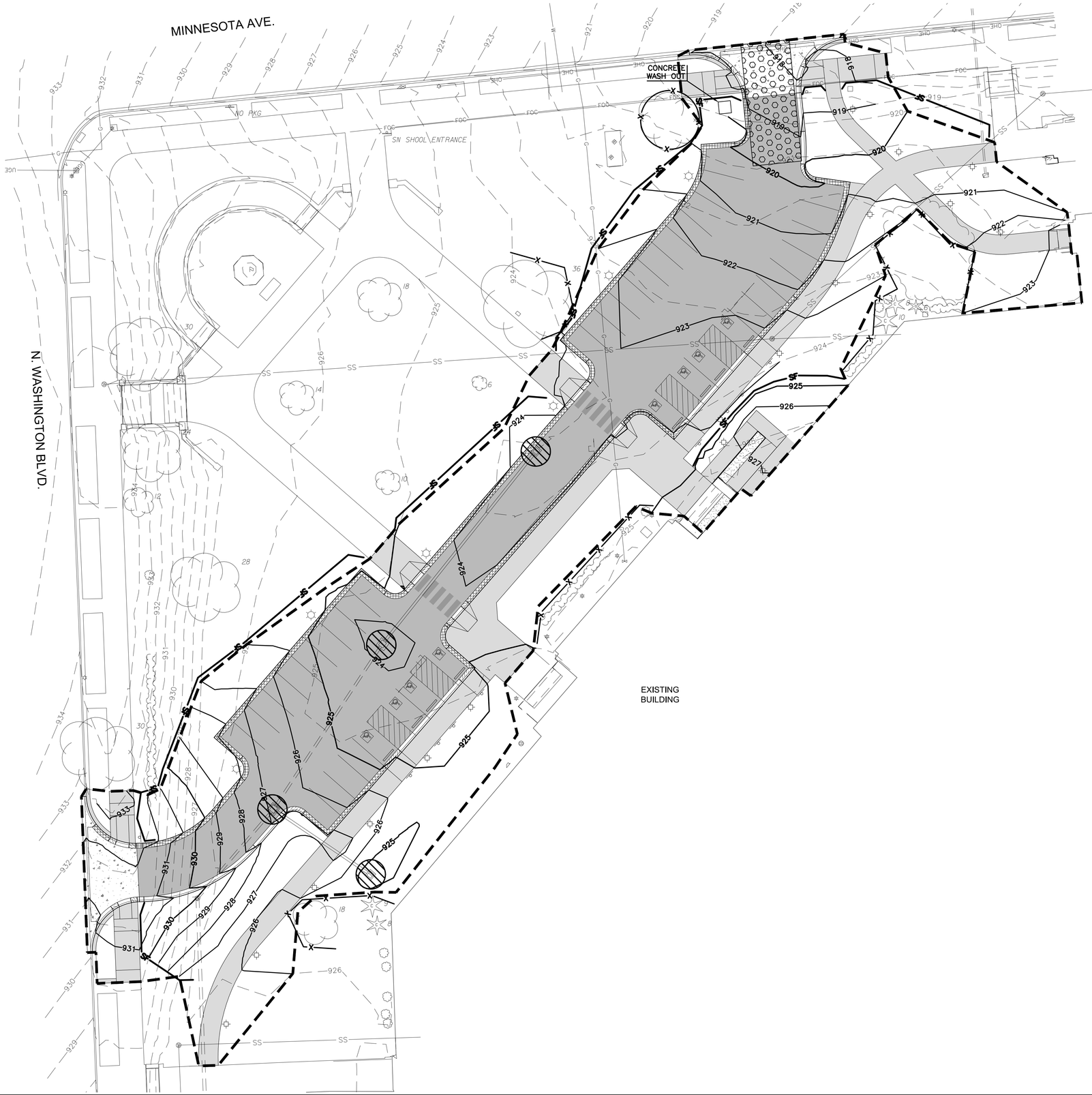
SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
JLB	MKB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C12

P:\PROJECTS\2022\2202010053_KCKPS_WYANDOTTE HS DOCK DRIVE\00 230053 CAD\SHTS\05 CIVIL\CDS\230053-05-1200.DWG



EROSION CONTROL NOTES:

1. ALL WORK IN PUBLIC EASEMENTS AND RIGHT-OF-WAY AND ALL EROSION CONTROL WORK MUST COMPLY WITH THE LATEST EDITION OF THE TECHNICAL PROVISIONS & STANDARD DRAWINGS FOR ROADS AND SEWERS, OF THE UNITED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS (THE UG). IF ANY OF THE GENERAL NOTES CONFLICT WITH THE TECHNICAL PROVISIONS AND STANDARD DRAWINGS FOR ROADS AND SEWERS OF THE UG, THE UG'S STANDARDS SHALL OVERRIDE.
2. THE CONTRACTOR SHALL SEED, MULCH, OR OTHERWISE STABILIZE ANY DISTURBED AREA WHERE THE LAND DISTURBANCE ACTIVITY HAS CEASED FOR MORE THAN 14 DAYS. INITIAL STABILIZATION ACTIVITIES SHALL BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES HAVE CEASED. ALL SEEDING ACTIVITY SHALL INCLUDE MULCHING OR EQUIVALENT SOIL STABILIZING BMP MEASURE OF THE DISTURBED AREA. THE CONTRACTOR SHALL PERFORM INSPECTIONS OF EROSION AND SEDIMENT CONTROL MEASURES AT LEAST ONCE PER WEEK AND WHENEVER A RAINFALL TOTAL OF 0.5 INCHES OR GREATER IS OBSERVED BASED ON A SINGLE MONITORING EVENT; OR BASED ON THE CUMULATIVE TOTAL OF TWO CONSECUTIVE MONITORING EVENTS WHEN THE RAINFALL TOTAL OF THE FIRST MONITORING EVENT IS LESS THAN 0.5 INCHES. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG INCLUDING THE INSPECTOR'S NAME, DATE OF INSPECTION, OBSERVATIONS AS TO THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL MEASURES, ACTIONS NECESSARY TO CORRECT DEFICIENCIES, WHEN DEFICIENCIES ARE CORRECTED, AND THE SIGNATURE OF THE PERSON PERFORMING THE INSPECTION. CONTRACTOR SHALL ADD EROSION CONTROL MEASURES AS NECESSARY TO CONTROL SEDIMENT RUNOFF FROM THE SITE, ADDITIONAL MEASURES SHALL BE AT THE CONTRACTORS EXPENSE.
3. CONTRACTOR TO HAVE A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE AT ALL TIMES. INSPECTION LOGS AND ANY CHANGES TO EROSION CONTROL MEASURES SHALL BE ADDED TO THE SWPPP.
4. CONCRETE WASH OR RINSE WATER FROM CONCRETE MIXING EQUIPMENT, TOOLS AND/OR READY-MIX TRUCKS, TOOLS, ETC. MAY NOT BE DISCHARGED INTO OR BE ALLOWED TO RUN DIRECTLY INTO ANY EXISTING WATER BODY OR STORM INLET. ONE OR MORE LOCATIONS FOR CONCRETE WASH OUT WILL BE DESIGNATED ON SITE, SUCH THAT DISCHARGES DURING CONCRETE WASHOUT WILL BE CONTAINED IN A SMALL AREA WHERE WASTE CONCRETE CAN SOLIDIFY IN PLACE AND EXCESS WATER EVAPORATED OR INFILTRATED INTO THE GROUND.
5. CHEMICALS OR MATERIALS CAPABLE OF CAUSING POLLUTION MAY ONLY BE STORED ONSITE IN THEIR ORIGINAL CONTAINER. MATERIALS STORED OUTSIDE MUST BE IN CLOSED AND SEALED WATER-PROOF CONTAINERS AND LOCATED OUTSIDE OF DRAINAGE WAYS OR AREAS SUBJECT TO FLOODING. LOCKS AND OTHER MEANS TO PREVENT OR REDUCE VANDALISM SHALL BE USED. SPILLS WILL BE REPORTED AS REQUIRED BY LAW AND IMMEDIATE ACTIONS TAKEN TO CONTAIN THEM.
6. SEE SHEETS C17-C18 FOR EROSION CONTROL DETAILS.
7. CONTRACTOR TO KEEP ALL SEDIMENT FROM EXISTING OR PROPOSED PAVEMENT.
8. CONTRACTOR SHALL PROVIDE DUST CONTROL DURING CONSTRUCTION ACTIVITIES.
9. CONTRACTOR TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF CITY, STATE, AND FEDERAL REGULATIONS FOR EROSION CONTROL.
10. ALL DISTURBED AREAS SHALL BE SODDED UPON COMPLETION OF PROJECT. REFER TO FESCUE TURF NOTES ON SHEET L02 FOR INSTALLATION INSTRUCTIONS.
11. GOOD HOUSEKEEPING, INCLUDING SPILL RESPONSE SHALL BE PERFORMED IN ACCORDANCE WITH THE KANSAS CITY CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION STANDARD SPECIFICATIONS, SECTION 2150.
12. THE CONTRACTOR SHALL INSTALL EROSION CONTROL DEVICES PRIOR TO STARTING ANY CONSTRUCTION ACTIVITY.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL EROSION CONTROL MEASURES OR MODIFICATIONS IF THE PLAN FAIL OR SUBSTANTIALLY CONTROL EROSION OR OFFSITE SEDIMENTATION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL DEVICES AND REMOVING SEDIMENT UNTIL A MINIMUM OF 70% OF PERMANENT VEGETATION HAS BECOME STABILIZED AND ESTABLISHED. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL 70% ESTABLISHED VEGETATION IS MET, OR THE DURATION OF THE PROJECT, WHICHEVER IS THE LATER DATE.
15. THE CONTRACTOR SHALL REPLACE DISTURBED AREAS WITH SOD AND SHALL BE INSTALLED WITHIN 14 DAYS AFTER PAVING COMPLETION AND FINAL TOPSOIL GRADING.
16. TOTAL DISTURBED LAND AREA = 1.57 AC.
17. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT, AND LABOR AS NECESSARY TO INSTALL AND MAINTAIN ADEQUATE EROSION CONTROL. KEEP THE STREETS CLEAN OF MUD AND DEBRIS, AND PREVENT SOIL FROM LEAVING THE PROJECT SITE. THE CONTRACTOR'S EROSION CONTROL MEASURES SHALL CONFORM TO THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KS TECHNICAL PROVISIONS SPECIFICATIONS.

EROSION CONTROL LEGEND

- INLET PROTECTION
- SILT FENCE
- CONSTRUCTION ENTRANCE
- TREE PROTECTION
- CONSTRUCTION LIMITS

N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING HAMILTON — LICENSED — 19 — KANSAS — PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

EROSION CONTROL PLAN

PROJECT NO. 2202010801

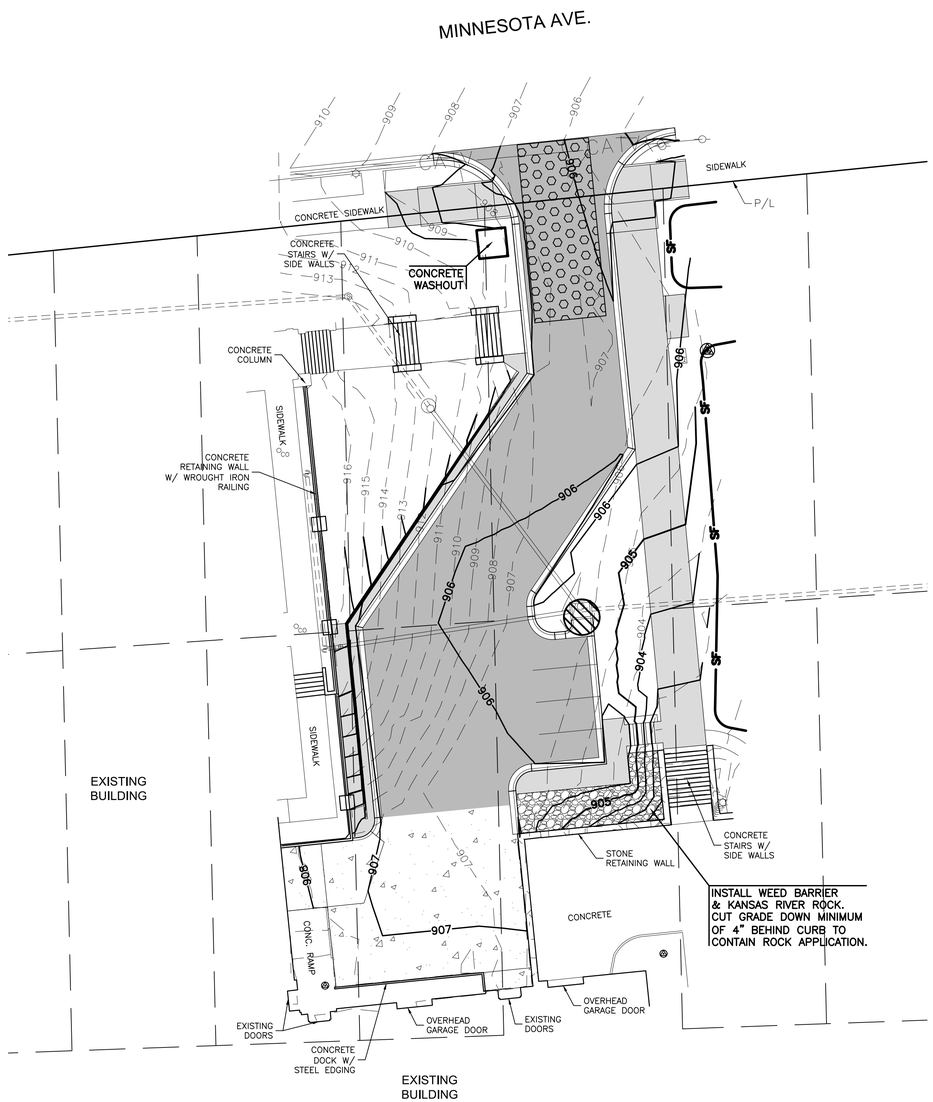
SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C13

P:\PROJECTS\2022\2202010801_KCKPS_WYANDOTTE HIGH SCHOOL PARKING\00 2202001 CAD\SHTS\05 CIVIL\TDPS\2202001-05-6200-FDP.DWG



EROSION CONTROL NOTES:

1. ALL WORK IN PUBLIC EASEMENTS AND RIGHT-OF-WAY AND ALL EROSION CONTROL WORK MUST COMPLY WITH THE LATEST EDITION OF THE TECHNICAL PROVISIONS & STANDARD DRAWINGS FOR ROADS AND SEWERS, OF THE UNITED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS (THE UG). IF ANY OF THE GENERAL NOTES CONFLICT WITH THE TECHNICAL PROVISIONS AND STANDARD DRAWINGS FOR ROADS AND SEWERS OF THE UG, THE UG'S STANDARDS SHALL OVERRIDE.
2. THE CONTRACTOR SHALL SEED, MULCH, OR OTHERWISE STABILIZE ANY DISTURBED AREA WHERE THE LAND DISTURBANCE ACTIVITY HAS CEASED FOR MORE THAN 14 DAYS. INITIAL STABILIZATION ACTIVITIES SHALL BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES HAVE CEASED. ALL SEEDING ACTIVITY SHALL INCLUDE MULCHING OR EQUIVALENT SOIL STABILIZING BMP MEASURE OF THE DISTURBED AREA. THE CONTRACTOR SHALL PERFORM INSPECTIONS OF EROSION AND SEDIMENT CONTROL MEASURES AT LEAST ONCE PER WEEK AND WHENEVER A RAINFALL TOTAL OF 0.5 INCHES OR GREATER IS OBSERVED BASED ON A SINGLE MONITORING EVENT, OR BASED ON THE CUMULATIVE TOTAL OF TWO CONSECUTIVE MONITORING EVENTS WHEN THE RAINFALL TOTAL OF THE FIRST MONITORING EVENT IS LESS THAN 0.5 INCHES. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG INCLUDING THE INSPECTOR'S NAME, DATE OF INSPECTION, OBSERVATIONS AS TO THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL MEASURES, ACTIONS NECESSARY TO CORRECT DEFICIENCIES, WHEN DEFICIENCIES ARE CORRECTED, AND THE SIGNATURE OF THE PERSON PERFORMING THE INSPECTION. CONTRACTOR SHALL ADD EROSION CONTROL MEASURES AS NECESSARY TO CONTROL SEDIMENT RUNOFF FROM THE SITE, ADDITIONAL MEASURES SHALL BE AT THE CONTRACTORS EXPENSE.
3. CONTRACTOR TO HAVE A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE AT ALL TIMES. INSPECTION LOGS AND ANY CHANGES TO EROSION CONTROL MEASURES SHALL BE ADDED TO THE SWPPP.
4. CONCRETE WASH OR RINSE WATER FROM CONCRETE MIXING EQUIPMENT, TOOLS AND/OR READY-MIX TRUCKS, TOOLS, ETC. MAY NOT BE DISCHARGED INTO OR BE ALLOWED TO RUN DIRECTLY INTO ANY EXISTING WATER BODY OR STORM INLET. ONE OR MORE LOCATIONS FOR CONCRETE WASH OUT WILL BE DESIGNATED ON SITE, SUCH THAT DISCHARGES DURING CONCRETE WASHOUT WILL BE CONTAINED IN A SMALL AREA WHERE WASTE CONCRETE CAN SOLIDIFY IN PLACE AND EXCESS WATER EVAPORATED OR INFILTRATED INTO THE GROUND.
5. CHEMICALS OR MATERIALS CAPABLE OF CAUSING POLLUTION MAY ONLY BE STORED ONSITE IN THEIR ORIGINAL CONTAINER. MATERIALS STORED OUTSIDE MUST BE IN CLOSED AND SEALED WATER-PROOF CONTAINERS AND LOCATED OUTSIDE OF DRAINAGE WAYS OR AREAS SUBJECT TO FLOODING. LOCKS AND OTHER MEANS TO PREVENT OR REDUCE VANDALISM SHALL BE USED. SPILLS WILL BE REPORTED AS REQUIRED BY LAW AND IMMEDIATE ACTIONS TAKEN TO CONTAIN THEM.
6. SEE SHEETS C17-C18 FOR EROSION CONTROL DETAILS.
7. CONTRACTOR TO KEEP ALL SEDIMENT FROM EXISTING OR PROPOSED PAVEMENT.
8. CONTRACTOR SHALL PROVIDE DUST CONTROL DURING CONSTRUCTION ACTIVITIES.
9. CONTRACTOR TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF CITY, STATE, AND FEDERAL REGULATIONS FOR EROSION CONTROL.
10. ALL DISTURBED AREAS SHALL BE SODDED UPON COMPLETION OF PROJECT. REFER TO FESCUE TURF NOTES ON SHEET L02 FOR INSTALLATION INSTRUCTIONS.
11. GOOD HOUSEKEEPING, INCLUDING SPILL RESPONSE SHALL BE PERFORMED IN ACCORDANCE WITH THE KANSAS CITY CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION STANDARD SPECIFICATIONS, SECTION 2150.
12. THE CONTRACTOR SHALL INSTALL EROSION CONTROL DEVICES PRIOR TO STARTING ANY CONSTRUCTION ACTIVITY.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL EROSION CONTROL MEASURES OR MODIFICATIONS IF THE PLAN FAIL OR SUBSTANTIALLY CONTROL EROSION OR OFFSITE SEDIMENTATION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL DEVICES AND REMOVING SEDIMENT UNTIL A MINIMUM OF 70% OF PERMANENT VEGETATION HAS BECOME STABILIZED AND ESTABLISHED. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL 70% ESTABLISHED VEGETATION IS MET, OR THE DURATION OF THE PROJECT, WHICHEVER IS THE LATER DATE.
15. THE CONTRACTOR SHALL REPLACE DISTURBED AREAS WITH SOD AND SHALL BE INSTALLED WITHIN 14 DAYS AFTER PAVING COMPLETION AND FINAL TOPSOIL GRADING.
16. TOTAL DISTURBED LAND AREA = 1.57 AC.
17. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT, AND LABOR AS NECESSARY TO INSTALL AND MAINTAIN ADEQUATE EROSION CONTROL. KEEP THE STREETS CLEAN OF MUD AND DEBRIS, AND PREVENT SOIL FROM LEAVING THE PROJECT SITE. THE CONTRACTOR'S EROSION CONTROL MEASURES SHALL CONFORM TO THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KS TECHNICAL PROVISIONS SPECIFICATIONS.

EROSION CONTROL LEGEND

- INLET PROTECTION
- SILT FENCE (UG DETAIL 1400 E)
- CONSTRUCTION ENTRANCE

N

SCALE: 1"=20'

0 20 40

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BRIAN STERLING JACKSON — 2024 — KANSAS — PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

EROSION CONTROL PLAN - DOCK

PROJECT NO. 2202010801

SCALE 1"=20'

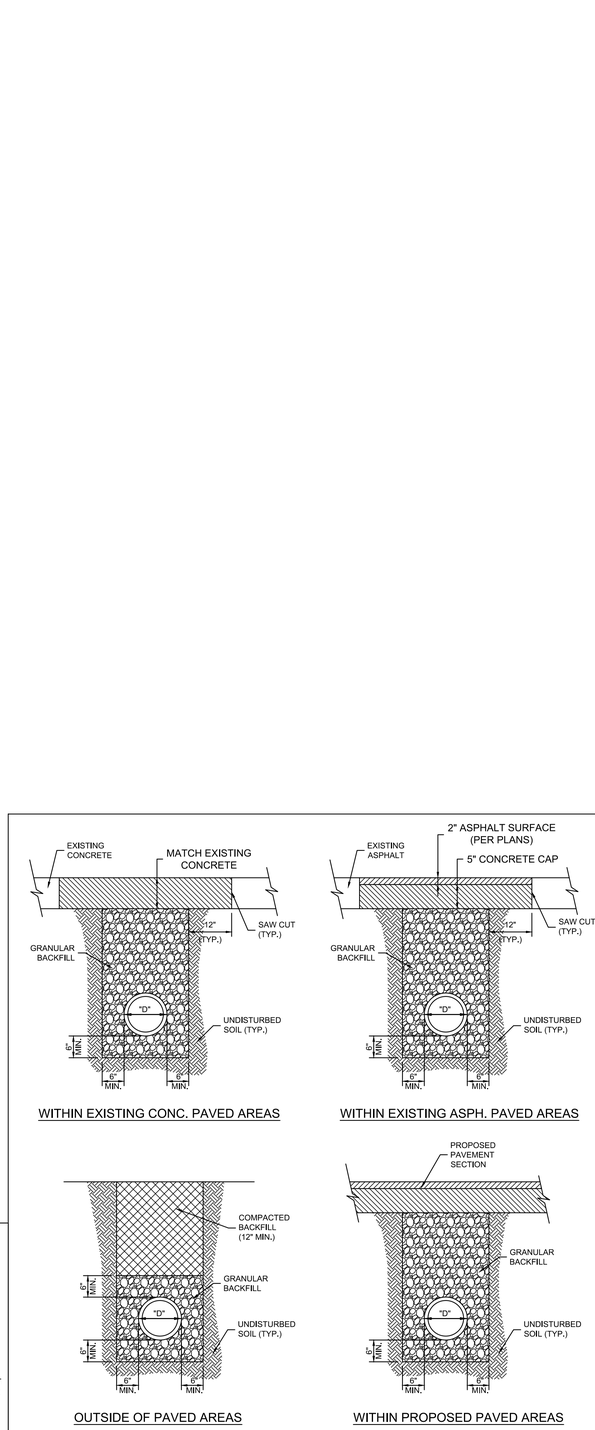
DRAWN	DESIGNED	CHECKED
JLB	MKB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C14

CURB INLET BLANKET DRAIN

SCALE: NTS



TRENCHING DETAILS

SCALE: NTS

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.
2. GRANULAR FILL SHALL BE 1/2" CLEAN ROCK, PLACED IN 6" LIFTS AND COMPACTED BY SLICING WITH A SHOVEL.
3. FILL SHALL BE FINELY DIVIDED, JOB EXCAVATED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL, AND STONES, AND COMPACTED.
4. BACKFILL TO BE COMPACTED TO 90% OF STANDARD DENSITY OUTSIDE OF PAVED AREAS.

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BRIAN STERLING HACKENBRACH
NUMBER 25171
STATE OF KANSAS
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

UTILITY DETAILS

PROJECT NO. 2202010801

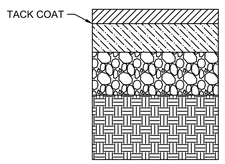
SCALE N/A

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

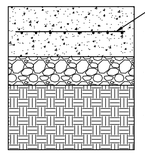
NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

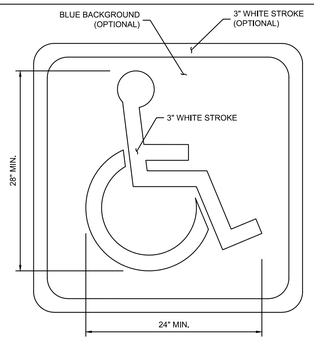
SHEET NO. C15

6" ASPHALT SECTION



8" REINFORCED CONCRETE SECTION

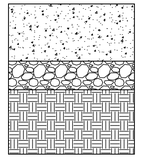


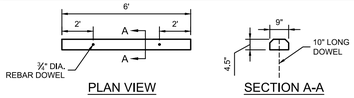


ADA PAVEMENT MARKING

SCALE: NTS

8" DOWEL REINFORCED CONCRETE SECTION

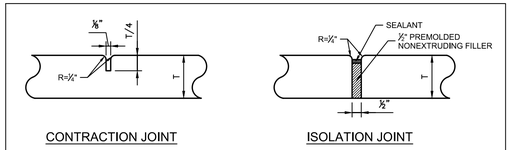




NOTES:
1. REBAR DOWEL SHALL BE GALVANIZED STEEL.
2. PROVIDE DRAINAGE SLOTS ON THE UNDERSIDE OF THE BLOCK TO ALLOW WATER TO PASS THROUGH.
3. BLOCKS TO BE PRE-CAST, AIR-ENTRAINED 2500 PSI MINIMUM CONCRETE.

CONCRETE PARKING STOP

SCALE: NTS



CONTRACTION JOINT

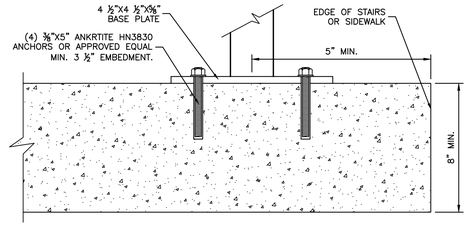
NOTES:
1. CONTRACTION JOINTS SHALL BE CONSTRUCTED WITH A GROOVING TOOL (HAND TOOLED).

ISOLATION JOINT

NOTE:
1. ISOLATION JOINTS JOINTS SHALL BE PLACED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE AND IN AREAS WHERE CONCRETE ABUTS BUILDINGS.

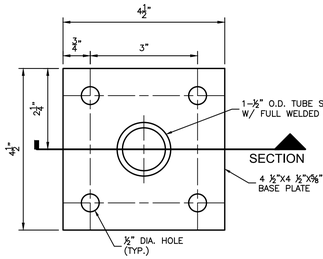
JOINT DETAILS

SCALE: NTS



SECTION

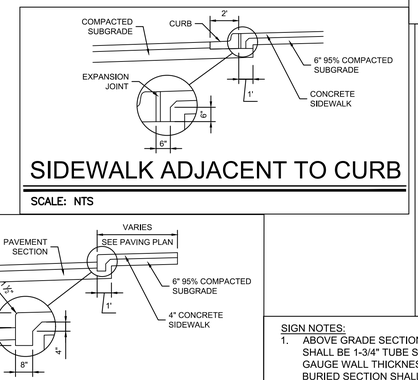
HANDRAIL NOTES:
1. ALL TUBING MATERIAL TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.
2. PIPE TO BE ASTM A53 (Fy=35 KSI), TYPE F OR S, SCHEDULE 40.
3. FULL WELDED JOINTS TO BE USED.
4. PLATES SHALL BE ASTM A36 AND SHALL BE HOT DIPPED GALVANIZED.



HANDRAIL BASE PLATE PLAN

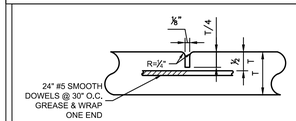
HANDRAIL SURFACE MOUNT

SCALE: NTS



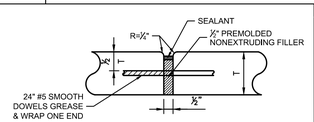
SIDEWALK ADJACENT TO CURB

SCALE: NTS



DOWELED CONTRACTION JOINT

NOTES:
1. DOWELED CONTRACTION JOINTS SHALL BE PLACED AS INDICATED ON THE JOINT LAYOUT PLAN AND MAY BE CONSTRUCTED WITH A GROOVING TOOL OR WITH A CONCRETE SAW AFTER THE CONCRETE IS SET.

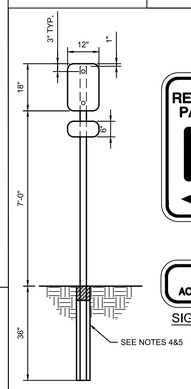


DOWELED ISOLATION JOINT

NOTES:
1. DOWELED ISOLATION JOINTS SHALL BE PLACED @ ALL P.C.'s, P.T.'s AND TRANSITIONS, AND WHERE NEW CURB OR CONCRETE PAVEMENT TIES INTO EXISTING CURB OR CONCRETE PAVEMENT.
2. SMOOTH BARS SHALL BE 24" LONG.

DOWELED JOINT DETAILS

SCALE: NTS



SIGN DETAIL

SIGN NOTES:
1. ABOVE GRADE SECTION OF SIGN POST SHALL BE 1-3/4" TUBE SECTION (14 GAUGE WALL THICKNESS) AND THE BURIED SECTION SHALL BE 2" TUBE SECTION (12 GAUGE WALL THICKNESS)
2. ALL HARDWARE SHALL BE ZINC PLATED.
3. ALL BOLTS, NUTS, WASHERS, ETC. SHALL COMPLY WITH CURRENT STATE DOT STANDARDS.
4. FOR POST HOLE IN EXISTING PAVEMNET, CORE 4" DIAMETER HOLE THROUGH PAVEMENT AND INSTALL POST IN HOLE WITH NATIVE SOIL. PLACE 2" OF ASPHALT SURFACE MATERIAL AROUND POST AND COMPACT FLUSH WITH SURROUNDING PAVEMENT TO PROVIDE WATERTIGHT SEAL.
5. FOR POST HOLE IN PROPOSED PAVEMENT, PROVIDE A 4" PVC SLEEVE 36" LONG IN PAVEMENT FOR INSTALLATION OF SIGN POST. INSTALL POST IN HOLE WITH NATIVE SOIL AND PLACE 2" OF ASPHALT SURFACE MATERIAL AROUND POST AND COMPACT FLUSH WITH SURROUNDING PAVEMENT TO PROVIDE WATERTIGHT SEAL.

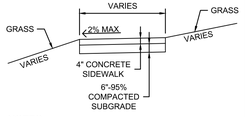
ADA SIGN MOUNTING DETAIL

SCALE: NTS

NOTES:
1. ½" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE PLACED AT POINTS OF CURVATURE, CURB RETURNS, CURB INLETS, AND AT 250' CENTERS.
2. JOINTS SHALL BE TOOLED IF CURB IS HAND FORMED.

TURNDOWN SIDEWALK

SCALE: NTS

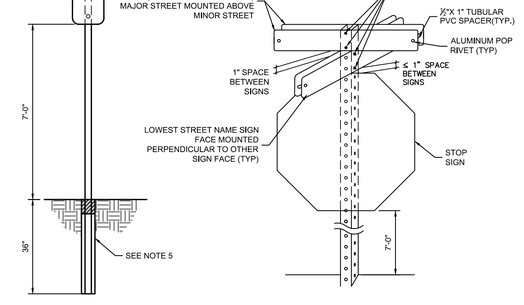


NOTES:
1. ½" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE PLACED AT POINTS OF CURVATURE, CURB RETURNS, CURB INLETS, AND AT 250' CENTERS.

SIDEWALK DETAIL

SCALE: NTS

SIGN NOTES:
1. ABOVE GRADE SECTION OF SIGN POST SHALL BE 1-3/4" TUBE SECTION (14 GAUGE WALL THICKNESS) AND THE BURIED SECTION SHALL BE 2" TUBE SECTION (12 GAUGE WALL THICKNESS)
2. ALL HARDWARE SHALL BE ZINC PLATED.
3. ALL BOLTS, NUTS, WASHERS, ETC. SHALL COMPLY WITH CURRENT STATE DOT STANDARDS.
4. FOR POST HOLE IN EXISTING PAVEMNET, CORE 4" DIAMETER HOLE THROUGH PAVEMENT AND INSTALL POST IN HOLE WITH NATIVE SOIL. PLACE 2" OF ASPHALT SURFACE MATERIAL AROUND POST AND COMPACT FLUSH WITH SURROUNDING PAVEMENT TO PROVIDE WATERTIGHT SEAL.
5. FOR POST HOLE IN PROPOSED PAVEMENT, PROVIDE A 4" PVC SLEEVE 36" LONG IN PAVEMENT FOR INSTALLATION OF SIGN POST. INSTALL POST IN HOLE WITH NATIVE SOIL AND PLACE 2" OF ASPHALT SURFACE MATERIAL AROUND POST AND COMPACT FLUSH WITH SURROUNDING PAVEMENT TO PROVIDE WATERTIGHT SEAL.

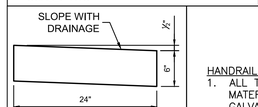


MISCELLANEOUS SIGN

STREET NAME SIGN ASSEMBLY

SIGN MOUNTING DETAILS

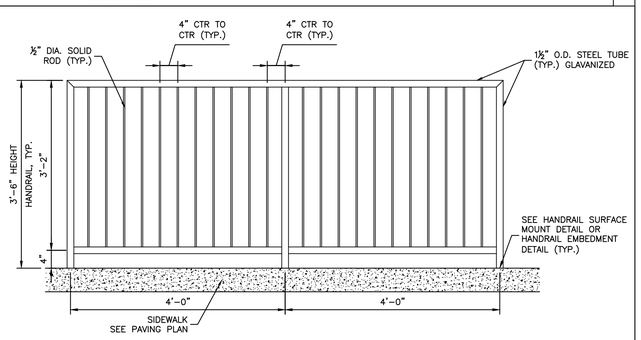
SCALE: NTS



FLAT CURB

SCALE: NTS

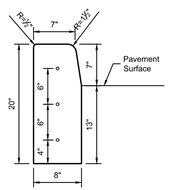
HANDRAIL NOTES:
1. ALL TUBING & FENCING MATERIAL TO BE HOT DIPPED GALVANIZED AFTER FABRICATION AND PAINTED BLACK WITH AN EPOXY BASED BLACK PAINT.
2. PIPE TO BE ASTM A53 (Fy=35 KSI)
3. FULL WELDED JOINTS TO BE USED
4. CONTRACTOR TO USE 4' LENGTH SECTIONS ON CURVED SECTIONS OF WALL.
5. PLATES SHALL BE ASTM A36 AND SHALL BE HOT DIPPED GALVANIZED.
6. EXPANSION JOINTS SHLL BE PLACED AT 50' CENTERS AND IN BOTH RAILS.



GUARDRAIL - 8' SECTION

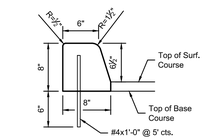
PEDESTRIAN GUARDRAIL

SCALE: NTS



STRAIGHT CURB

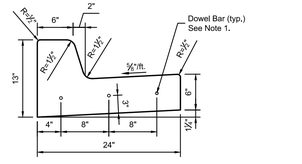
(TYPE C-1)



DOWELLED CURB

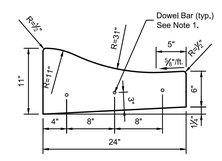
(TYPE DC)

GENERAL NOTES:
1. ⅜" Isolation Joints with ⅝" dia. x 2' smooth dowels shall be placed at radius points and at 150' intervals. These dowel bars shall be greased and wrapped on one end with expansion tubes.
2. 1" deep Contraction Joints shall be installed at approximately 10' intervals. these joints shall pass across the entire curb section.
3. Fix dowel bars with bar supports.
4. Depth of curb shall be a minimum of 8" through the handicap access ramp.
5. Concrete shall conform to Standard Specifications Section 2208.2.B.
6. Asphaltic concrete surface course shall conform to Standard Specification Section 2205.2.



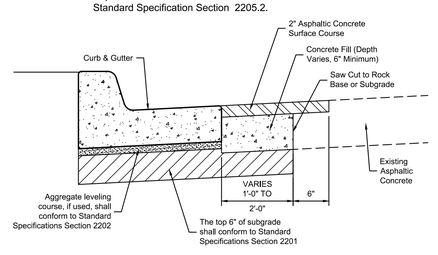
STRAIGHT BACK CURB & GUTTER

(TYPE CG-1)

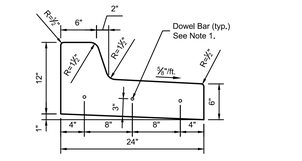


ROLL BACK CURB & GUTTER

(TYPE CG-2)

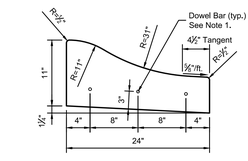


CURB REPLACEMENT DETAIL



STRAIGHT BACK DRY CURB & GUTTER

(TYPE CG-1 DRY)



ROLL BACK DRY CURB & GUTTER

(TYPE CG-2 DRY)

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NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

CONSTRUCTION DOCUMENTS FOR
2501 MINNESOTA AVE. KANSAS CITY, KS 66102

PAVING DETAILS

PROJECT NO. 2202010801

SCALE N/A

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

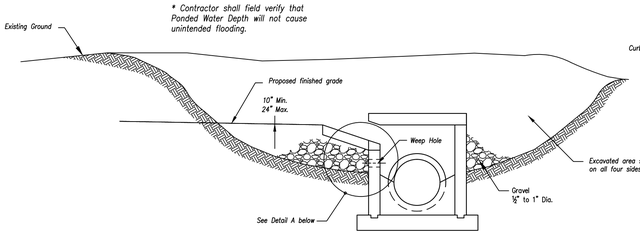
NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

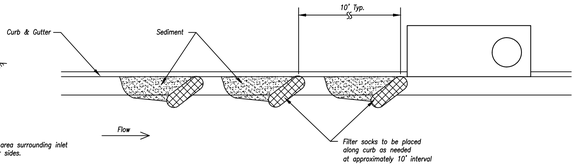
SHEET NO. C16

AMERICAN PUBLIC WORKS ASSOCIATION (APWA)
KANSAS CITY METROPOLITAN CHAPTER

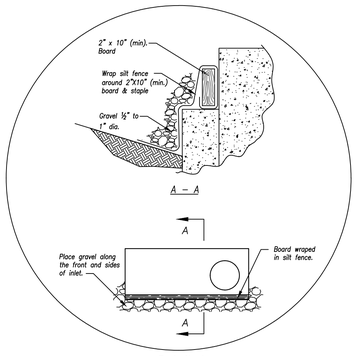
CURB DETAILS

STANDARD DRAWING NUMBER C - 1
ADOPTED: MAY 23, 2001





On Grade Curb Inlet Protection



Detail A

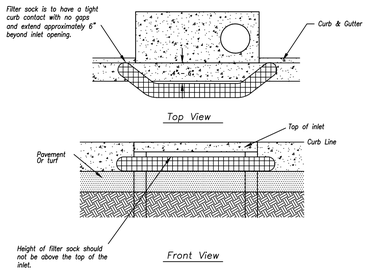
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" x 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

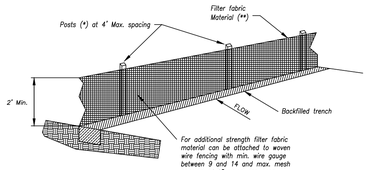


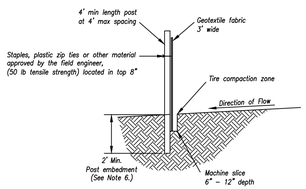
Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06
	ADOPTED: 10/24/2016





(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ⅜" x 1 ⅜"
- NO.2 SOUTHERN PINE 2 ⅜" x 2 ⅜"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

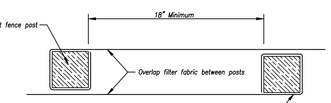
Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

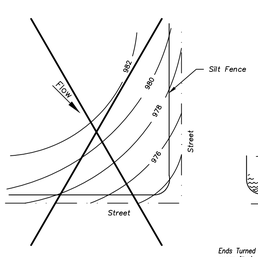
Maintenance:

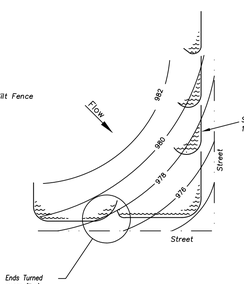
1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

SILT FENCE DETAILS
Not to Scale



JOINING FENCE SECTIONS
Not to Scale





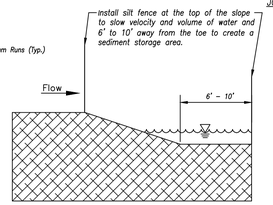
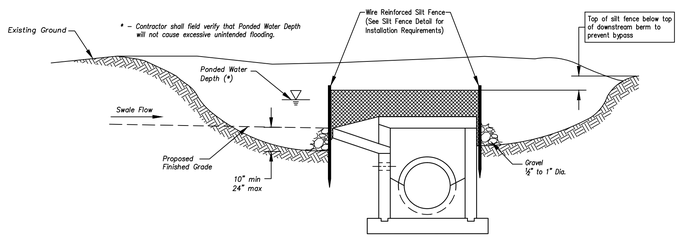


Figure A

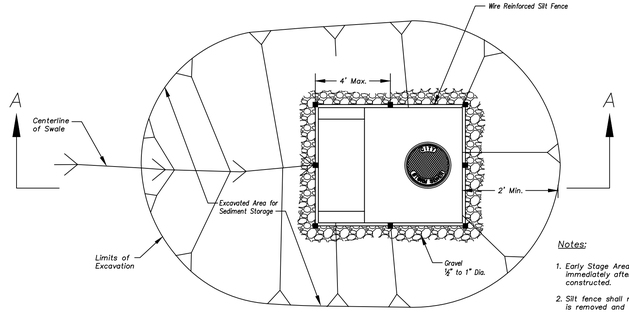
SILT FENCE LAYOUT
Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03
	ADOPTED: 10/24/2016



Section A–A
Not to Scale

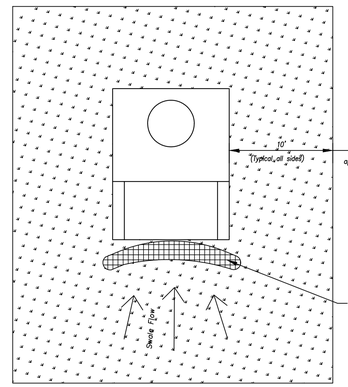


Plan
Not to Scale

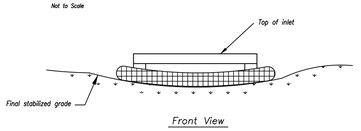
EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.



Plan
Not to Scale



Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07
	ADOPTED: 10/24/2016

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BRIAN STERLING CASEBOLT — LICENSED — 2021 — KANSAS — PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

EROSION CONTROL DETAILS 1

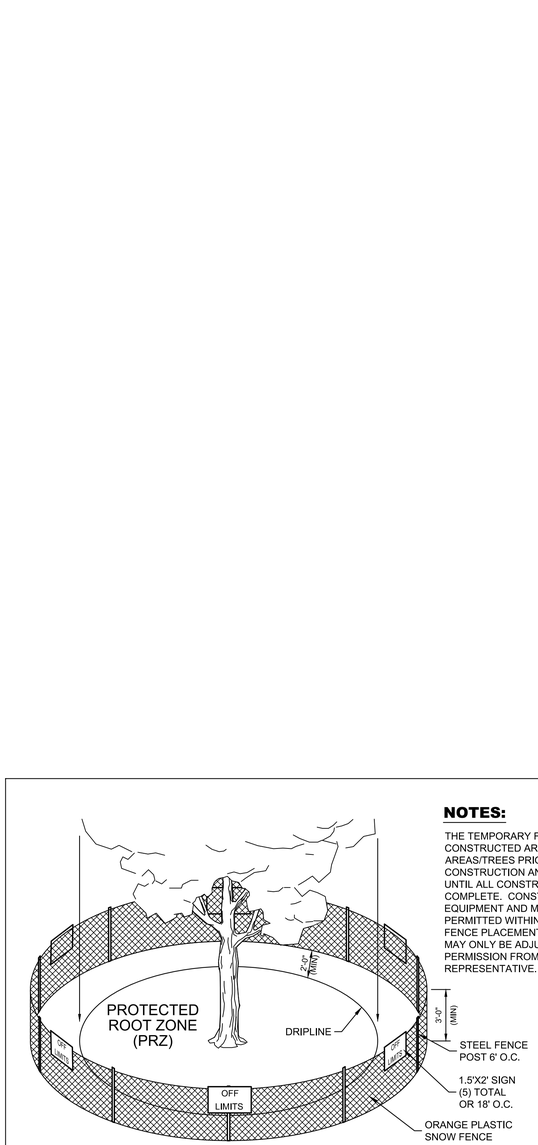
PROJECT NO. 2202010801

SCALE N/A

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C17



TREE PROTECTION DETAIL

SCALE: NTS

NOTES:

THE TEMPORARY FENCE IS TO BE CONSTRUCTED AROUND SPECIFIED AREAS/TREES PRIOR TO ANY CONSTRUCTION AND SHALL REMAIN UNTIL ALL CONSTRUCTION IS COMPLETE. CONSTRUCTION EQUIPMENT AND MATERIALS ARE NOT PERMITTED WITHIN THE (PRZ). THE FENCE PLACEMENT AROUND THE (PRZ) MAY ONLY BE ADJUSTED WITH PERMISSION FROM THE OWNER'S REPRESENTATIVE.

Plan View
Not to Scale

Side Elevation
Not to Scale

Section A–A
Not to Scale

Notes for Construction Entrance:

1. *Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.*
2. *Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.*
3. *If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.*
4. *Install pipe under the entrance if needed to maintain drainage ditches along public roads.*
5. *Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.*
6. *Divert all surface runoff and drainage from the entrance to a sediment control device.*
7. *If conditions warrant, place geotextile fabric on the graded foundation to improve stability.*

Maintenance for Construction Entrance:

1. *Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.*

CONSTRUCTION ENTRANCE

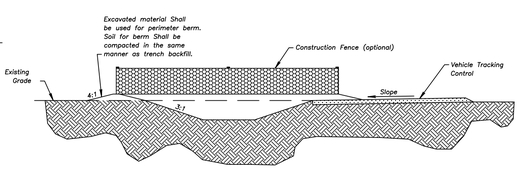
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

Notes for Concrete Washout:

1. *Concrete washout areas shall be installed prior to any concrete placement on site.*
2. *Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.*
3. *Vehicle tracking control is required at the access point to all concrete washout areas.*
4. *Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.*
5. *A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.*

Maintenance for Concrete Washout:

1. *Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.*
2. *Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.*
3. *Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water–tight container and disposed of properly.*
4. *Concrete washout areas shall remain in place until all concrete for the project is placed.*
5. *When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.*



CONCRETE WASHOUT

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
APWA
AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01
ADOPTED: 10/24/2016

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BRIAN STERLING HACKENBRACH
2021
KANSAS
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

EROSION CONTROL DETAILS 2

PROJECT NO. 2202010801

SCALE N/A

DRAWN	DESIGNED	CHECKED
SEK	JLB	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C18

STRUCTURAL GENERAL NOTES

DESIGN CRITERIA

1. PROJ. LOCATION: WYANDOTTE HIGH SCHOOL
   2501 MINNESOTA AVENUE
   KANSAS CITY, KS 66102

2. BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC)

3. DESIGN CODES: ASCE/SEI 7–16 MINIMUM DESIGN LOADS FOR BUILDINGS & OTHER STRUCTURES
   ACI 318–14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

4. DESIGN SOIL VALUES & RETAINING WALL LOADS:

ACTIVE PRESSURE	35 PSF
PASSIVE PRESSURE	250 PSF/FT
SOIL DENSITY	110 PCF
SOIL REACTION MODULUS	250 PCI
SURCHARGE OVER TOE	100 PSF
RAILING ALLOWANCE	20 PLF
APPLIED WIND PRESSURE	20 PSF

GENERAL PROJECT REQUIREMENTS

5. DO NOT SCALE PLANS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS. DO NOT SCALE SECTIONS OR DETAILS AS THEY MAY BE DRAWN FOR A NON–SPECIFIC, TYPICAL CONDITION. WHERE REQUIRED DIMENSIONS CANNOT BE DETERMINED FROM THE INFORMATION PROVIDED OR THERE APPEARS TO BE A DISCREPANCY, NOTIFY THE ENGINEER FOR CLARIFICATION AND/OR CORRECTION.

6. THE STRUCTURAL DRAWINGS REPRESENT THE STRUCTURES IN THE COMPLETED CONDITION AND DO NOT IMPLY A SPECIFIC METHOD OR SEQUENCE OF CONSTRUCTION UNLESS SPECIFICALLY NOTED. MEANS AND METHODS OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR.

7. ALL TEMPORARY SHORING AND/OR BRACING AS REQUIRED TO SAFELY CONSTRUCT THE STRUCTURE IS THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN, INSTALL, AND MAINTAIN. INSTALLED SHORING AND BRACING MUST REMAIN IN PLACE UNTIL SUPPORTED MEMBERS HAVE BEEN INSTALLED AND CONNECTIONS HAVE BEEN COMPLETED.

8. THE CONTRACTOR WILL REVIEW, MAKE COMMENTS, AND APPROVE ALL SHOP DRAWINGS PRIOR TO SUBMITTAL, NOTING ALL CHANGES MADE THAT DO NOT COMPLY WITH THE CONSTRUCTION DOCUMENTS FOR THE ATTENTION OF THE ENGINEER.

9. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION THAT MAY AFFECT THE NEW CONSTRUCTION, WHETHER OR NOT NOTED ON DRAWINGS, AND REPORT DISCREPANCIES TO THE ENGINEER. EXISTING ABANDONED ELEMENTS THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.

FOUNDATIONS & SOILS

10. THE CONTRACTOR WILL ENGAGE A LICENSED GEOTECHNICAL ENGINEER TO CONDUCT A GEOTECHNICAL INVESTIGATION OF THE LOCATION OF THE NEW RETAINING WALL AND VERIFY SUBSURFACE CONDITIONS. IF THE EXISTING CONDITIONS DO NOT COMPLY WITH THE DESIGN ASSUMPTIONS NOTIFY THE ENGINEER IMMEDIATELY. THE GEOTECHNICAL ENGINEER MUST VERIFY THE FOLLOWING CONDITIONS:

    A. ALLOWABLE NET SOIL BEARING PRESSURE OF 2,000 PSF FOR FOUNDATIONS IN UNDISTURBED SOILS AND/OR ENGINEERED FILLS USED FOR DESIGN IS APPROPRIATE.

    B. TOTAL SETTLEMENT OF LESS THAN ¾" AND DIFFERENTIAL SETTLEMENT OF LESS THAN ½" IS REASONABLY EXPECTED WITHOUT OVEREXCAVATION AND REPLACEMENT OF FILL.

    C. NO DETRIMENTAL SHRINK/SWELL POTENTIAL OF SOILS EXISTS AND THE DEPTHS NOTED ARE ADEQUATE FOR THE SITE.

11. SOIL SUPPORTED FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON UNDISTURBED SOIL OR APPROVED ENGINEERED FILL WITH AN ALLOWABLE NET BEARING PRESSURE OF 2,000 PSF.

12. EARTH–RETAINING WALLS HAVE BEEN DESIGNED FOR THE LOADS AND CONDITIONS NOTED ABOVE.

13. CAPACITY AND CONDITION OF THE RETAINING WALL FOUNDATION BEARING MATERIALS MUST BE VERIFIED WITH A GEOTECHNICAL INVESTIGATION MADE BY A LICENSED GEOTECHNICAL ENGINEER WITH RECOMMENDED AND REQUIRED ADJUSTMENTS MADE PRIOR TO POURING FOUNDATIONS.

14. EARTH–RETAINING WALL CONTINUOUS SHALLOW FOOTINGS AND CONCRETE STAIR TRENCH FOOTINGS MAY HAVE EARTH–FORMED SIDES POURED TO THE DESIGN DIMENSIONS BUT NO MORE THAN 6" GREATER THAN THE DESIGN DIMENSIONS. EARTH–RETAINING WALLS AND CONCRETE STAIRS SUPPORT WALLS WILL BE FULLY FORMED AND POURED TO THE DESIGN DIMENSIONS.

15. THE PROXIMITY OF UNDERGROUND UTILITIES AND UTILITY TRENCHES TO THE EARTH–RETAINING WALL SYSTEM, SHOULD THEY EXIST, MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER FOR THE INTEGRITY OF THE BEARING MATERIAL.

16. DO NOT BACKFILL EARTH–RETAINING WALLS UNTIL FINAL PAVING AND/OR ADEQUATE BRACING HAS BEEN INSTALLED. BACKFILL WILL BE PLACED AND COMPACTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

CAST–IN–PLACE CONCRETE

17. CAST–IN–PLACE CONCRETE MUST BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT "ACI MANUAL OF CONCRETE PRACTICE." CONCRETE CONSTRUCTION MUST SPECIFICALLY CONFORM TO ACI 301 AND BE CONSTRUCTED WITHIN THE TOLERANCES REQUIRED BY ACI 117. CONCRETE WILL BE MIXED, BATCHED, AND TRANSPORTED PER ASTM C94.

18. NORMAL–WEIGHT CONCRETE MATERIAL MUST BE MADE WITH CLEAN, POTABLE WATER; CEMENT CONFORMING TO ASTM C150, TYPE I/II; FLY ASH, WHERE USED, CONFORMING TO ASTM C618 TYPE C OR F AND REPLACING UP TO A MAXIMUM OF 20% OF THE CEMENT; FINE & COARSE AGGREGATES CONFORMING TO ASTM C33 WITH COARSE AGGREGATES MEETING #57/#67 GRADATION REQUIREMENTS AND COARSE AGGREGATES MAKING UP NO LESS THAN 50% OF THE TOTAL AGGREGATES BY WEIGHT FOR THE COMBINED GRADATION.

19. CONCRETE MUST HAVE A MINIMUM 28–DAY COMPRESSIVE STRENGTH OF 4,000 PSI, MAXIMUM WATER/CEMENT RATIO OF 0.45, AND 4% TO 7% AIR ENTRAINMENT.

20. EXPOSED EDGES OF CONCRETE MUST BE CHAMFERED 3/4" INSIDE FORMS OR TOOLED TO A 3/4" RADIUS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

21. NO ALUMINUM MAY BE EMBEDDED IN CONCRETE.

CONCRETE REINFORCEMENT

22. REINFORCING BARS (REINF.) MUST CONFORM TO ASTM A615, GRADE 60 EXCEPT WHERE IT MAY BE SPECIFICALLY NOTED ON THE DRAWINGS AS 40 KSI MATERIAL FOR FIELD BENDING.

23. WELDING OF REINF. IS PROHIBITED.

24. REINF. MUST BE DETAILED IN ACCORDANCE WITH ACI 315.

25. REINF. SHALL BE CONTINUOUS OR LAPPED THE GREATER OF 40 BAR DIAMETERS OR 24" AT A MINIMUM, UNLESS NOTED OTHERWISE ON THE DRAWINGS TO A GREATER OR LESSER EXTENT.

26. REINF. WILL BE PLACED AND SUPPORTED ON BOLSTERS/CHAIRS TO THE DESIGN DIMENSIONS AND MAINTAIN THE REQUIRED COVERAGE AND CLEARANCE PER ACI AND CRSI, UNLESS STRICTER REQUIREMENTS ARE NOTED ON THE DRAWINGS.

27. REINF. SHALL HAVE MINIMUM CLEAR COVERAGE AS LISTED, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

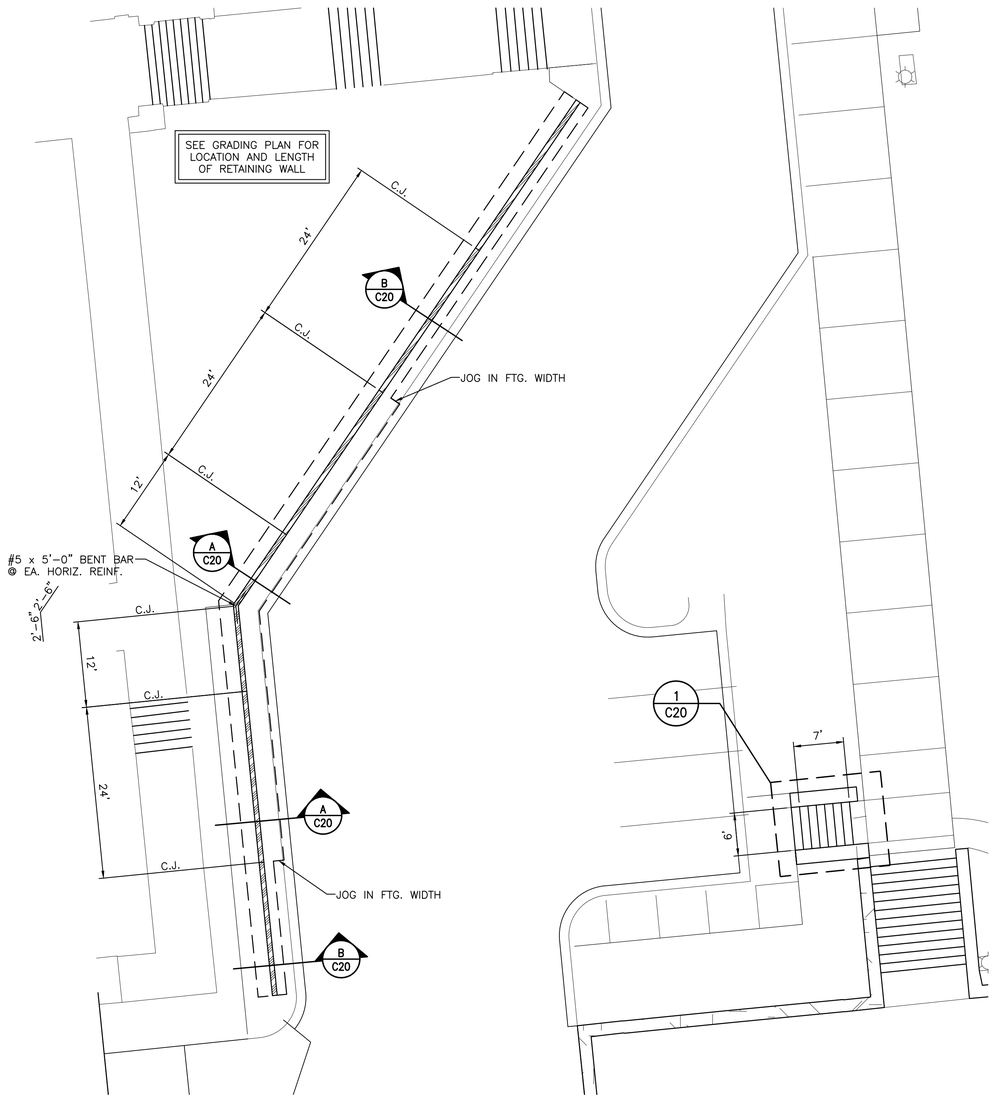
CAST AGAINST EARTH (FROM BOTTOM OR SIDES)	3"
FORMED & EXPOSED TO SOIL, WEATHER, OR LIQUIDS	2"

28. DO NOT CUT REINF. EXCEPT AS APPROVED BY THE ENGINEER.

STRUCTURAL TESTS, INSPECTIONS, AND QUALITY ASSURANCE

29. STRUCTURAL TESTS AND INSPECTIONS TO BE PERFORMED PER THE REFERENCED BUILDING CODE, INCLUDING CHAPTER 17 (SPECIAL INSPECTIONS) WILL BE AS REQUIRED AND PROVIDED BY OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.
    SOILS: IBC §1705.6 AND TBL. 1705.6
    CONCRETE: IBC §1705.3 AND TBL. 1705.3

30. NOTIFY THE ENGINEER FOR OTHER SPECIFIC TESTS AND INSPECTIONS AS MAY BE REQUIRED PER THE OWNER'S REQUIREMENTS.



N

1 C19 SITE PLAN

SCALE: 1"=10'

0 10 20

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JASON A. COOK
LICENSED
83316
PROFESSIONAL ENGINEER
KANSAS
1-31-2024

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

RETAINING WALL PLAN & GEN. NOTES - DOCK

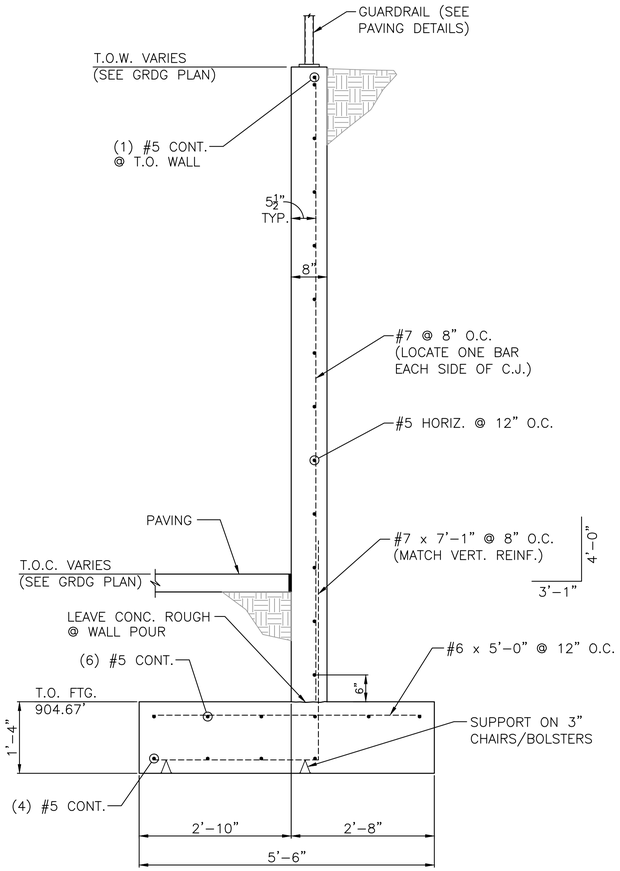
PROJECT NO. 2202010801

SCALE 1"=10'

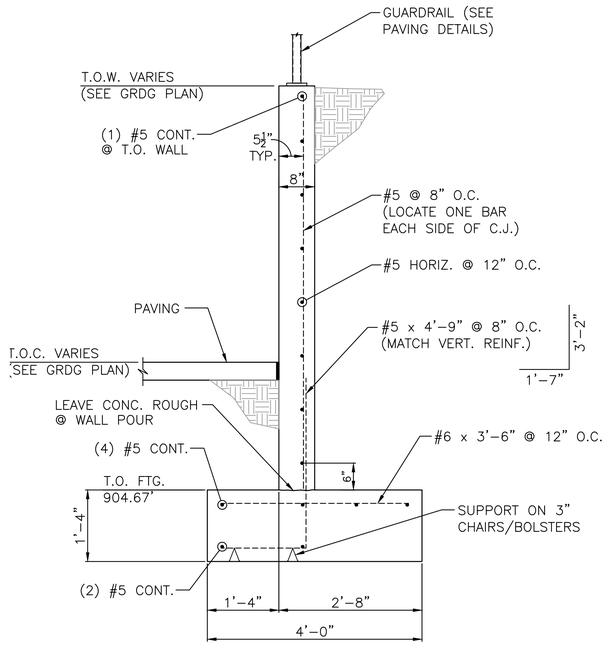
DRAWN	DESIGNED	CHECKED
MAS	JAC	JAC

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.2024
	FINAL DEVELOPMENT PLANS	01.26.24

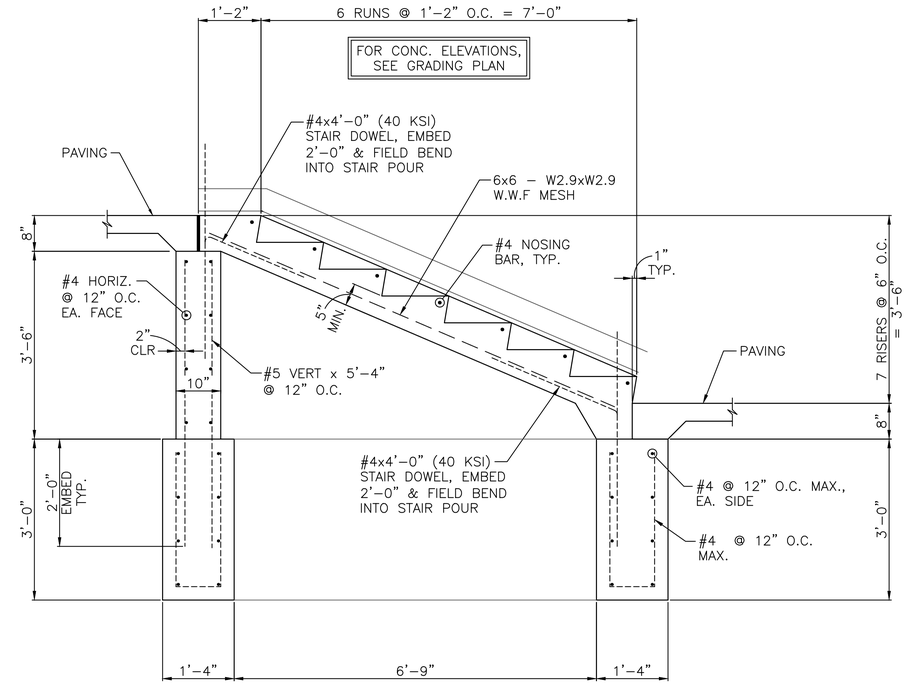
SHEET NO. C19



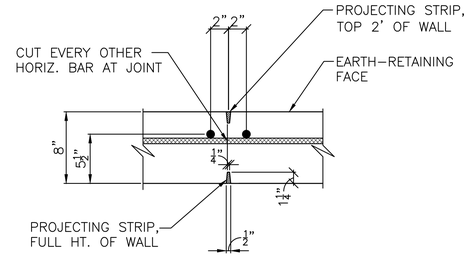
A C20 FOUNDATION SECTION
SCALE: 3/4" = 1'-0"



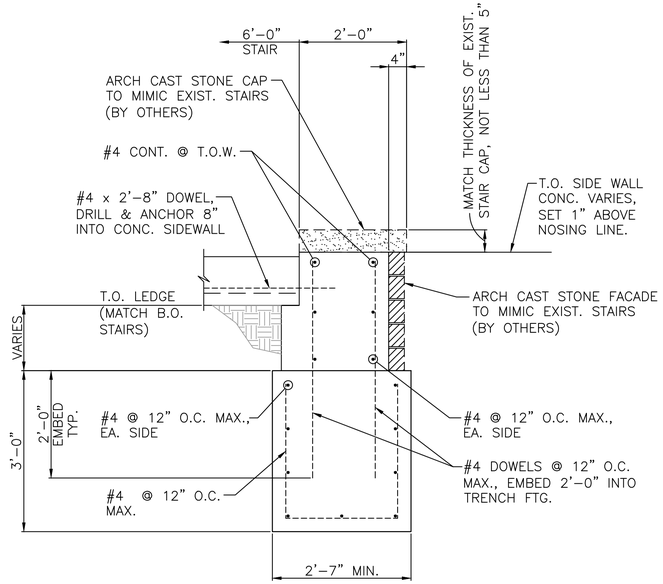
B C20 FOUNDATION SECTION
SCALE: 3/4" = 1'-0"



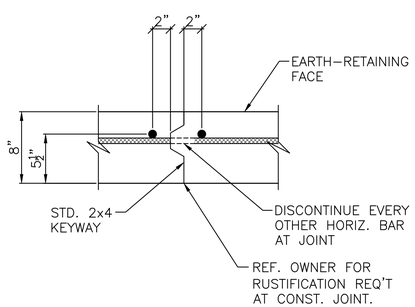
C C20 FOUNDATION SECTION
SCALE: 3/4" = 1'-0"



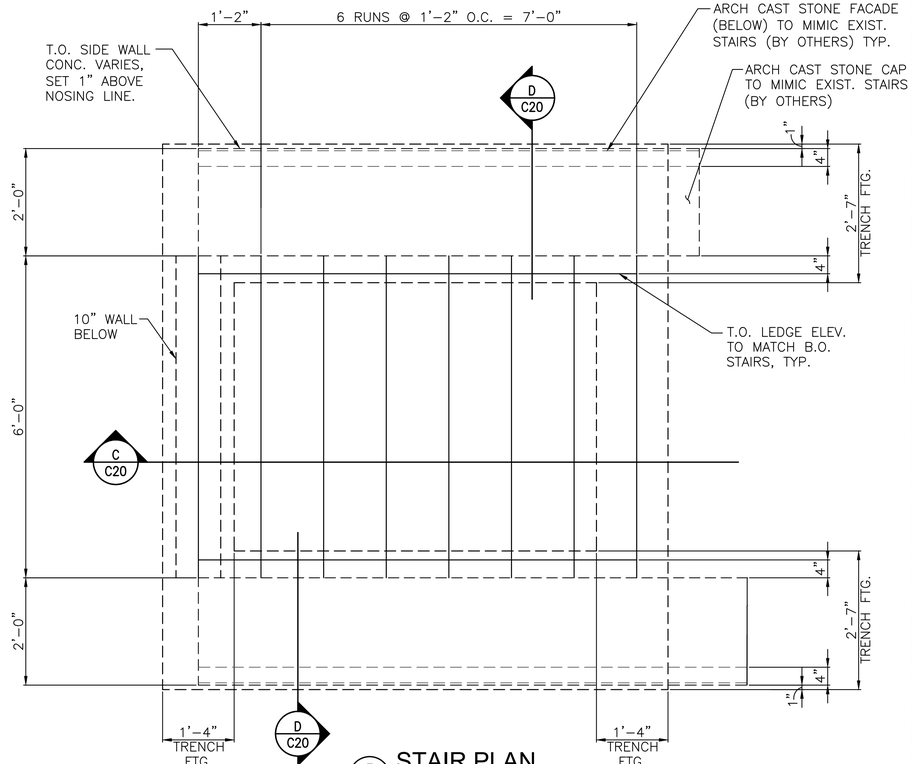
1 C20 TYP. CONTRACTION/CONTROL JOINT
SCALE: 1 1/2" = 1'-0"



D C20 SIDEWALL SECTION
SCALE: 3/4" = 1'-0"



2 C20 TYP. CONSTRUCTION JOINT
SCALE: 1 1/2" = 1'-0"



3 C20 STAIR PLAN
SCALE: 3/4" = 1'-0"

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JASON A. CONNOR LICENSED 23341 PROFESSIONAL ENGINEER STATE OF KANSAS
NOT FOR CONSTRUCTION
1-31-2024

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

RETAINING WALL DETAILS - DOCK

PROJECT NO. 2202010801
SCALE N/A

DRAWN	DESIGNED	CHECKED
MAS	JAC	JAC

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.2024
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. C20

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Section 311000 – SITE CLEARING

PART 1 – GENERAL

1) RELATED DOCUMENTS
   a. Drawings and general provision of the Contract including, General and Supplementary Conditions and Division 01 Specification Sections, apply to this section.
2) SUMMARY
   a. Section Includes
      - Protecting existing vegetation to remain.
      - Removing existing vegetation.
      - Clearing and grubbing.
      - Stripping and stockpiling topsoil.
      - Removing above – and below – grade site improvements.
      - Temporary erosion – and sedimentation – control measures.
3) DEFINITIONS
   b. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
   c. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
   d. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in–place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
   e. Plant–Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.
   f. Tree–Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and indicated on Drawings.
   g. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.
4) MATERIAL OWNERSHIP
   a. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site. All stripped topsoil shall remain onsite and be distributed onsite per the Construction Manager's direction. See Earth Moving specification for soil material instruction.
5) SUBMITTALS
   a. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
      - Use sufficiently detailed photographs or videotape.
      - Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.
   b. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.
6) PROJECT CONDITIONS
   a. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site–clearing operations.
      - 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 Owner or authorities having jurisdiction.
   b. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises.
   c. Utility Locator Service: Notify utility locator service and appropriate City and County agencies for area where Project is located before site clearing.
   d. Do not commence site clearing operations until temporary erosion– and sedimentation–control and plant–protection measures are in place.
   e. Protect existing trees as indicated on drawings.
   f. The following practices are prohibited within protection zones:
      - Storage of construction materials, debris, or excavated material.
      - Parking vehicles or equipment.
      - Foot traffic.
      - Erection of sheds or structures.
      - Impoundment of water.
      - Excavation or other digging unless otherwise indicated.
      - Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
      - Sediment encroachment.
   g. Do not direct vehicle or equipment exhaust towards protection zones.
   h. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.
   i. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

PART 2 – PRODUCTS

7) MATERIALS
   a. Satisfactory Soil Material: Requirements for satisfactory soil material shall be provided by the Geotechnical Engineer.
      - Obtain approved borrow soil material off–site when satisfactory soil material is not available on–site. Coordinate with Geotechnical engineer for acceptable soil material.

PART 3 –EXECUTION

8) PREPARATION
   a. Protect and maintain benchmarks and survey control points from disturbance during construction.
   b. Locate and clearly identify trees, shrubs, and other vegetation to remain.
   c. Protect existing site improvements to remain from damage during construction.
      - Restore damaged improvements to their original condition, as acceptable to Owner.
9) TEMPORARY EROSION AND SEDIMENTATION CONTROL
   a. Provide temporary erosion– and sedimentation–control measures to prevent soil erosion and discharge of soil–bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion– and sedimentation–control Drawings and requirements of authorities having jurisdiction.
   b. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
   c. Inspect, maintain, and repair erosion– and sedimentation–control measures during construction until permanent vegetation has been established.
   d. Contractor to keep inspection logs of erosion control measures and update provided Storm Water Pollution Prevention Plan (SWPPP).
10) TREE AND PLANT PROTECTION
   a. General: Protect trees and plants remaining on–site according to requirements in Division 01 Section "Temporary Tree and Plant Protection."
   b. Contractor to protect existing trees onsite as indicated on drawings.
   c. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, as indicated on drawings.
   d. For trees to be removed, remove entire root ball, all root and organic materials.
11) EXISTING UTILITIES
   a. Contractor to arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.
      - Utility service shall be maintained to the existing school building during construction of the proposed building. Contractor shall coordinate with utility service providers to provide temporary service to the existing building as necessary. See demolition notes on drawings.
   b. Locate, identify, and disconnect utilities indicated to be abandoned in place.
   c. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
      - Do not proceed with utility interruptions without Construction Managers and Owners written permission.
12) CLEARING AND GRUBBING
   a. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
   b. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
      - Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density per geotechnical representative requirements.
13) TOPSOIL STRIPPING
   a. Remove sod and grass before stripping topsoil.
   b. Strip topsoil in a manner to prevent intermingling with underlying subsoil or other waste materials.
      - Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.
      - Geotechnical engineer to monitor stripping operations to observe that all unsuitable materials have been removed.
   c. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
      - Do not stockpile topsoil within protection zones.
      - Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
      - Stockpile surplus topsoil to allow for respreading deeper topsoil.
   d. Remove all topsoil and all organic material from proposed building footprint and pavement areas. Excavate as deep as necessary to ensure all organic material has been removed.
14) SITE IMPROVEMENTS
   a. Remove existing above– and below–grade improvements as indicated from the site. See demolition notes on drawings.
   b. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
      - Unless existing full–depth joints coincide with line of demolition, neatly saw–cut along line of existing pavement to remain before removing adjacent existing pavement. Saw–cut faces vertically.
      - Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.
15) DISPOSAL OF SURPLUS AND WASTE MATERIALS
   a. Remove surplus unsuitable soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
   b. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

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BRIAN STERLING HAGEMAN — LICENSED — 2023 — STATE OF KANSAS — PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

311000
SITE CLEARING

PROJECT NO. 2202010801

SCALE N.T.S.

DRAWN	DESIGNED	CHECKED
JLB	SEK	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24

SHEET NO. C21

SECTION 312000 – EARTH MOVING

PART 1 – GENERAL

1) RELATED DOCUMENTS
   a. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

2) SUMMARY
   a. Section includes:
      - Excavating and backfilling trenches for utilities and pits for buried utility structures.
      - Preparing subgrade for pavements and grass areas.
      - General earthwork and excavation.
   b. Related sections:
      - Section 311000 "Site Clearing" for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above– and below–grade improvements and utilities.

3) UNCLASSIFIED SITE
   a. All site work for this project is considered "unclassified." The term "unclassified" excavation shall be defined as meaning the site contractor bears the entire risk of the soil quantities and/or types (e.g. rock, clay, peat, silt, shale, etc.) encountered above the bottom of required excavations and over–excavated / treated soils areas. Above the bottom of required excavations, the site contractor shall bear the entire cost of such additional work in the event it becomes necessary for unsuitable soils to be handled, removed from the site, or for suitable fill material to be imported to the site. This definition of "unclassified" supersedes any contrary definitions or statements which may be contained in the specifications, plans, or other contract documents. The unclassified site shall include all work above the bottom of required excavations and/or required soil remediation/replacement.
   b. The contractor shall be responsible to determine earthwork quantities. All import or export of earth material shall be the responsibility of the contractor at his expense.

5) DEFINITIONS
   a. Backfill: Soil material or controlled low–strength material used to fill an excavation.
      - Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
      - Final Backfill: Backfill placed over initial backfill to fill a trench.
   b. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
   c. Borrow Soil: Satisfactory soil imported from off–site for use as fill or backfill.
   d. Drainage Course: Aggregate layer supporting the slab–on–grade that also minimizes upward capillary flow of pore water.
   e. Fill: Soil materials used to raise existing grades.
   f. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man–made stationary features constructed above or below the ground surface.
   g. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
   h. Utilities: On–site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

6) SUBMITTALS
   a. Product Data: For each type of the following manufactured products required:
      - Geotextiles.
      - Controlled low–strength material, including design mixture.
      - Warning tapes.
   b. Qualification Data: For qualified testing agency.
   c. Material Test Reports: For each on–site and borrow soil material proposed for fill and backfill according to Geotechnical Engineer requirements.
   d. Preexcavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.

7) QUALITY ASSURANCE
   a. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.
   b. Preexcavation Conference: Conduct conference at Project site.

8) PROJECT CONDITIONS
   a. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
      - 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 Owner or authorities having jurisdiction.
   b. Improvements on Adjoining Property: Authority for performing earth moving indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
      - Do not proceed with work on adjoining property until directed by Architect.
   c. Utility Locator Service: Notify utility locator service and City and County agencies for area where Project is located before beginning earth moving operations.
   d. Do not commence earth moving operations until temporary erosion– and sedimentation–control measures, are in place.

PART 2 – PRODUCTS

9) SOIL MATERIALS
   a. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
   b. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D2487, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
   c. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D2487, or a combination of these groups.
      - Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
   d. Bedding Course: Naturally or artificially graded mixture of natural stone or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1–inch sieve and not more than 8 percent passing a No. 200 sieve.
   e. Sub–drainage Aggregate: Naturally or artificially graded mixture of natural stone, clean with no fines. Aggregate range shall be ½" to ¾".

10) GEOTEXTILES
   a. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
      - Survivability: Class 3; AASHTO M 288.
      - Grab Tensile Strength: 120 lbf; ASTM D 4632.
      - Sewn Seam Strength: 222 lbf; ASTM D 4632.
      - Tear Strength: 50 lbf; ASTM D 4533.
      - Puncture Strength: 90 lbf; ASTM D 4833.
      - Apparent Opening Size: No. 70 sieve, maximum; ASTM D 4751.
      - Permittivity: 1.7 second–1, minimum; ASTM D 4491.
      - UV Stability: 70 percent after 500 hours' exposure; ASTM D 4355.

11) ACCESSORIES
   a. Warning Tape: Acid– and alkali–resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored as follows:
      - Red: Electric.
      - Yellow: Gas, oil, steam, and dangerous materials.
      - Orange: Telephone and other communications.
      - Blue: Water systems.
      - Green: Sewer systems.
   b. Detectable Warning Tape: Acid– and alkali–resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
      - Red: Electric.
      - Yellow: Gas, oil, steam, and dangerous materials.
      - Orange: Telephone and other communications.
      - Blue: Water systems.
      - Green: Sewer systems.

PART 3 – EXECUTION

12) PREPARATION
   a. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
   b. Protect and maintain erosion and sedimentation controls during earth moving operations.
   c. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

13) DEWATERING
   a. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
   b. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
      - Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

14) EXPLOSIVES
   a. Explosives: Do not use explosives.

15) EXCAVATION, GENERAL
   a. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials as determined by the Geotechnical Engineer.

16) EXCAVATION FOR WALKS AND PAVEMENTS
   a. Evaluate surfaces under future walks and pavements to indicated lines, cross sections, elevations, and subgrades, and excavate unsuitable materials as recommended by the geotechnical engineer.

17) EXCAVATION FOR UTILITY TRENCHES
   a. Excavate trenches to indicated gradients, lines, depths, and elevations.
      - Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
   b. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.
      - Clearance: As indicated on plans.

18) PAVEMENT SUBGRADE INSPECTION
   a. Notify testing agency when excavations have reached required subgrade.
   b. If Geotech Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
   c. Proof–roll subgrade below proposed pavements with a pneumatic–tired and loaded 10–wheel, tandem–axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof–roll wet or saturated subgrades. Proof–roll within two days of paving operations.
      - Completely proof–roll subgrade in one direction, repeating proof–rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
      - Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by the Geotechnical Engineer, and replace with compacted backfill or fill as directed to the proper moisture content and density.
      - After proof rolling and repairing deep subgrade deficiencies, the entire subgrade should be scarified to a depth of 8 inches and uniformly compacted to at least 95% of the standard proctor maximum dry density to provide a uniform subgrade for pavement construction. Moisture content and density of subgrade to be checked within two days prior to the commencement of paving operations.
   d. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, without additional compensation.
   e. Authorized additional excavation and replacement / stabilization of soils will be paid for according to Contract provisions for unit prices and allowances for work necessary below the bottom of required excavations only.
   f. Subgrades under pavements and building pads shall be free of all organic material.

19) STORAGE OF SOIL MATERIALS
   a. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
      - Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

20) BACKFILL
   a. Place and compact backfill in excavations promptly, but not before completing the following:
      - Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
      - Surveying locations of underground utilities for Record Documents.
      - Testing and inspecting underground utilities.
      - Removing concrete formwork.
      - Removing trash and debris.
      - Removing temporary shoring and bracing, and sheeting.
      - Installing permanent or temporary horizontal bracing on horizontally supported walls.
   b. Place backfill on subgrades free of mud, frost, snow, or ice.
   c. Backfill tree root ball excavations with structural fill as defined in the Grading Notes in the plans. Areas under pavements or building pads shall be compacted to 95% standard density. All other areas shall be compacted to 90% standard density.

21) UTILITY TRENCH BACKFILL
   a. Place backfill on subgrades free of mud, frost, snow, or ice.
   b. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
   c. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.
   d. Install a clay plug around pipes within 5' of the building face to prevent water migration through the trench into the building. Plug material should consist of clay compacted at a water content at or above the soils optimum water content.
   e. Utility trenches should be backfilled per the requirements of the plan details.

22) SOIL FILL
   a. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
   b. Place and compact fill material in 9 inch loose lifts and compacted to at least 95% of the materials max dry density and moisture control as recommended by the geotechnical testing representative.
   c. Place soil fill on subgrades free of mud, frost, snow, or ice.
   d. The exposed grade prior to fill being placed shall be scarified to a minimum depth of 12" and the moisture content should be adjusted to within the range recommended for structural fill. The material should then be proof–rolled and compacted per the project requirements.
   e. Bench existing slopes of 5:1 or greater where fill is to be placed.

23) SOIL MOISTURE CONTROL
   a. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction as recommended by the geotechnical testing representative.
      - Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
      - Remove and replace, or scarify and air dry, otherwise satisfactory soil material not meeting moisture requirements.

24) COMPACTION OF SOIL BACKFILLS AND FILLS
   a. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand–operated tampers.
   b. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
   c. Compact soil materials to requirements determined by Geotechnical Engineer.
   d. Utility trenches – compaction testing to be performed every 200 cubic yards at backfill or each lift within 200 linear feet of trench, whichever is less.

25) BUILDING PAD PREPARATION
   a. Prepare low–volume change material, capillary barrier, and vapor barrier for the building pad. The LVC shall consist of the following section from the bottom: 8" of structural fill material (geotechnical engineer to determine material), 12" of KDOT AB–3 aggregate, and 4" capillary barrier.
   b. Moisture condition and compact native soils below the LVC zone as necessary per onsite geotechnical representative.
   c. Proof–roll subgrade below proposed building pads with a pneumatic–tired and loaded 10–wheel, tandem–axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof–roll wet or saturated subgrades. Proof–roll within two days of building pad construction.
      - Completely proof–roll subgrade in one direction, repeating proof–rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
      - Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by the Geotechnical Engineer, and replace with compacted backfill or fill as directed to the proper moisture content and density.
      - After proof rolling and repairing deep subgrade deficiencies, the entire subgrade should be scarified and uniformly compacted to at least 95% of the standard proctor maximum dry density to provide a uniform subgrade for building pad construction. Moisture content and density of subgrade to be checked within two days prior to the commencement of building pad construction.
   d. Authorized additional excavation and replacement / stabilization of soils will be paid for according to Contract provisions for unit prices and allowances for work necessary below the bottom of required excavations / low volume change material only.

26) GRADING
   a. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
      - Provide a smooth transition between adjacent existing grades and new grades.
      - Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
   b. Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
      - Turf or Unpaved Areas: Plus or minus 1 inch.
      - Walks: Plus or minus 1/4 inch.
      - Pavements: Plus or minus 1/4 inch.

27) FIELD QUALITY CONTROL
   a. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:
      - Determine prior to placement of fill that site has been prepared in compliance with requirements.
      - Determine that fill material and maximum lift thickness comply with requirements.
      - Determine, at the required frequency, that in–place density of compacted fill complies with requirements.
   b. Testing Agency: Owner will engage a qualified geotechnical engineering testing agency to perform tests and inspections.
   c. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
   d. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

28) PROTECTION
   a. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
   b. Install erosion control measures as indicated on the plans. Install additional measures as necessary to prevent erosion or damage to erosion control measures.
   c. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
      - Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.
   d. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
      - Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

29) DISPOSAL OF SURPLUS AND WASTE MATERIALS
   a. Transport surplus satisfactory soil offsite. Stockpile / spread topsoil per contract documents prior to soil removal from site.
      - Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

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BRIAN STERLING JACKSON — 2023 — KANSAS — PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

312000
EARTH MOVING

PROJECT NO, 2202010801
SCALE N.T.S.

DRAWN	DESIGNED	CHECKED
JLB	SEK	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24

SHEET NO. C22

SECTION 321216 – ASPHALT PAVING

PART 1 – GENERAL

1) RELATED DOCUMENTS
   a. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
2) SUMMARY
   a. Section Includes:
      - Hot–mix asphalt paving.
   b. Related Sections:
      - Section 312000 "Earth Moving" for aggregate subbase and base courses.
      - Division 32 Sections for other paving installed as part of crosswalks in asphalt pavement areas.
3) DEFINITION
   a. Hot–Mix Asphalt Paving Terminology: Refer to ASTM D 8 for definitions of terms.
4) SUBMITTALS
   a. Product Data: For each type of product indicated. Include technical data and tested physical and performance properties.
      - Job–Mix Designs: For each job mix proposed for the Work.
   b. Material Certificates: For each paving material, from manufacturer. Certifying that each material complies with or exceeds specified requirements.
   c. Material Test Reports: For each paving material.
5) QUALITY ASSURANCE
   a. Manufacturer Qualifications: A paving–mix manufacturer registered with a history of successful performance.
   b. Installer Qualifications: Engage an experienced installer who is trained and approved for installations required for this Project.
   c. Testing Agency Qualifications: Qualified according to ASTM D 3666 for testing indicated.
   d. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of the pavement specifications called out in the geotechnical report for asphalt paving work.
   e. Preinstallation Conference: Conduct conference at a site acceptable to the Construction Manager.
      - Review methods and procedures related to hot–mix asphalt paving including, but not limited to, the following:
        1. Review proposed sources of paving materials, including capabilities and location of plant that will manufacture hot–mix asphalt.
        2. Review condition of subgrade and preparatory work.
        3. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.
        4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
6) DELIVERY, STORAGE, AND HANDLING
   a. Deliver pavement–marking materials to Project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.
7) PROJECT CONDITIONS
   a. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:
      - Tack Coat: Minimum surface temperature of 50 deg F.
      - Slurry Coat: Comply with weather limitations in ASTM D 3910.
      - Asphalt Base Course: Minimum surface temperature of 40 deg F and rising at time of placement.
      - Asphalt Surface Course: Minimum surface temperature of 50 deg F at time of placement and when base is dry.

PART 2 – PRODUCTS

8) MATERIALS AND MIXES
   a. General: All work on the site as herein called for shall be done in accord with the American Public Works Association (APWA), Kansas City Metropolitan Chapter, Division II, "Construction and Materials Specifications for Paving", Section 2200, latest edition. The work herein required is not of the magnitude of work described in the aforesaid Standard Specification, therefore only applicable limitations will be enforced. However, this is not a relaxing of the requirements for the quality of the work. When work is obviously substandard, necessary tests will be made for compliance to the specifications. Work found to be in noncompliance with the specification shall be removed and replaced at the expense of the Contractor, including the costs of all tests.
      - Use locally available materials and gradations that exhibit a satisfactory record of previous installations.
   b. Base Course Mix: Conform to requirements for mix designations APWA Type 1–01, per section 2205 of referenced APWA Specifications. Recycled content per APWA specifications allowed.
   c. Surface Course Mix: Conform to requirements for mix designation APWA Type 3–01, per Section 2205 of referenced APWA Specifications. Recycled content per APWA specifications allowed.
   d. Marking Paint: Alkyd–resin type, ready–mixed complying with AASHTO M248, Type I.
      - Colors: White.
9) ASPHALT–AGGREGATE MIXTURE
   a. Provide plant–mixed, hot–laid asphalt–aggregate mixture complying with ASTM D 3515 and as recommended by local paving authorities to suit project conditions.

PART 3 – EXECUTION

10) EXAMINATION
   a. Verify that subgrade is dry and in suitable condition to begin paving.
   b. Proof–roll subgrade below proposed pavements with a pneumatic–tired and loaded 10–wheel, tandem–axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof–roll wet or saturated subgrades. Proof–roll within two days of paving operations.
      - Completely proof–roll subgrade in one direction, repeating proof–rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
      - Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by the Geotechnical Engineer, and replace with compacted backfill or fill as directed to the proper moisture content and density.
      - After proof rolling and repairing deep subgrade deficiencies, the entire subgrade should be scarified to a depth of 8 inches and uniformly compacted to at least 95% of the standard proctor maximum dry density to provide a uniform subgrade for pavement construction. Moisture content and density of subgrade to be checked within two days prior to the commencement of paving operations.
      - Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, without additional compensation.
   c. Proceed with paving only after unsatisfactory conditions have been corrected.
11) SURFACE PREPARATION
   a. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
   b. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd.
      - Allow tack coat to cure undisturbed before applying hot–mix asphalt paving.
      - Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
12) HOT–MIX ASPHALT PLACING
   a. Machine place hot–mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
      - Place hot–mix asphalt base course in number of lifts and thicknesses indicated.
      - Place hot–mix asphalt surface course in single lift.
      - Spread mix at minimum temperature required by the mix design and outside temperature.
      - Begin applying mix along centerline of crown for crowned sections and on high side of one–way slopes unless otherwise indicated.
      - Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt–paving mat.
   b. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
      - After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt base course before placing asphalt surface course.
   c. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot–mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.
13) JOINTS
   a. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot–mix asphalt course.
      - Clean contact surfaces and apply tack coat to joints.
      - Offset longitudinal joints, in successive courses, a minimum of 6 inches.
      - Offset transverse joints, in successive courses, a minimum of 24 inches.
      - Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time.
      - Compact joints as soon as hot–mix asphalt will bear roller weight without excessive displacement.
      - Compact asphalt at joints to a density within 2 percent of specified course density.
14) COMPACTION
   a. General: Begin compaction as soon as placed hot–mix paving will bear roller weight without excessive displacement. Compact hot–mix paving with hot, hand tampers or with vibratory–plate compactors in areas inaccessible to rollers.
      - Complete compaction before mix temperature cools to 185 deg F.
   b. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
   c. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot–mix asphalt is still hot enough to achieve specified density. Continue rolling until hot–mix asphalt course has been uniformly compacted to the following density:
      - Average Density: 96 percent of reference laboratory density according to ASTM D 6927, but not less than 94 percent nor greater than 100 percent.
   d. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot–mix asphalt is still warm.
   e. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
   f. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot–mix asphalt. Compact by rolling to specified density and surface smoothness.
   g. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
   h. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.
15) PAVEMENT MARKING
   a. Do not apply pavement–marking paint until layout, colors, and placement have been verified with Architect.
   b. Allow paving to age for 5 days before starting pavement marking.
   c. Sweep and clean surface to eliminate loose material and dust.
   d. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
16) INSTALLATION TOLERANCES
   a. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:
      - Base Course: Plus or minus 1/4 inch.
      - Surface Course: Plus 1/4 inch, no minus.
   b. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10–foot straightedge applied transversely or longitudinally to paved areas:
      - Base Course: 1/4 inch.
      - Surface Course: 1/8 inch.
      - Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.
17) FIELD QUALITY CONTROL
   a. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
   b. Thickness: In–place compacted thickness of hot–mix asphalt courses will be determined according to ASTM D 3549.
   c. Surface Smoothness: Finished surface of each hot–mix asphalt course will be tested for compliance with smoothness tolerances.
   d. In–Place Density: Testing agency will take samples of uncompacted paving mixtures and compacted pavement according to ASTM standards.
      - Reference maximum theoretical density will be determined by averaging results from four samples of hot–mix asphalt–paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job–mix specifications.
      - In–place density of compacted pavement will be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.
        1. One core sample will be taken for every 1000 sq. yd. or less of installed pavement, with no fewer than 3 cores taken.
        2. Field density of in–place compacted pavement may also be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.
   e. Replace and compact hot–mix asphalt where core tests were taken.
   f. Remove and replace or install additional hot–mix asphalt where test results or measurements indicate that it does not comply with specified requirements.
18) DISPOSAL
   a. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an EPA–approved landfill.
      - Do not allow milled materials to accumulate on–site.

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BRIAN STERLING KRAUSE — LICENSED — 2023 — STATE OF KANSAS — PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

CONSTRUCTION DOCUMENTS FOR
2501 MINNESOTA AVE. KANSAS CITY, KS 66102

321216
ASPHALT PAVING

PROJECT NO. 2202010801
SCALE N.T.S.

DRAWN	DESIGNED	CHECKED
JLB	SEK	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24

SHEET NO.
C23

SECTION 321313 – CONCRETE PAVING

PART 1 – GENERAL

1) RELATED DOCUMENTS
   a. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
2) SUMMARY
   a. Section Includes:
      - Curbs and gutters.
      - Walks.
      - Driveways.
      - Pavement.
   b. Related Sections:
      - Section 321373 "Concrete Paving Joint Sealants" for joint sealants in expansion and contraction joints within concrete paving and in joints between concrete paving and asphalt paving or adjacent construction.
   c. All concrete shall conform with the Kansas City Metro Materials Board minimum 4000 PSI granite mix (KCMMB 4K). If there are any contradictions to this mix in this specification, the KCMMB 4K mix shall govern.
3) DEFINITIONS
   a. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and ground granulated blast–furnace slag.
4) SUBMITTALS
   a. Product Data: For each type of product indicated.
   b. Other Action Submittals:
      - Cementitious materials.
      - Steel reinforcement and reinforcement accessories.
      - Admixtures.
      - Curing compounds.
      - Applied finish materials.
      - Bonding agent or epoxy adhesive.
      - Joint fillers.
   c. Material Test Reports: For each of the following:
      - Aggregates. Include service–record data indicating absence of deleterious expansion of concrete due to alkali–aggregate reactivity.
   d. Field quality–control reports.
5) QUALITY ASSURANCE
   a. Detectable Warning Installer Qualifications: An employer of workers trained and approved by manufacturer of brick paving systems.
   b. Ready–Mix–Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready–mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
      - Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual – Section 3, "Plant Certification Checklist").
   c. Testing Agency Qualifications: Qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
      - Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP–1 or an equivalent certification program.
   d. Concrete Testing Service: Engage a qualified testing agency to perform material evaluation tests and to design concrete mixtures.
   e. ACI Publications: Comply with ACI 301 unless otherwise indicated.
   f. Preinstallation Conference: Conduct conference at Project site.
      - Review methods and procedures related to concrete paving, including but not limited to, the following:
        1. Concrete mixture design.
        2. Quality control of concrete materials and concrete paving construction practices.
      - Require representatives of each entity directly concerned with concrete paving to attend, including the following:
        1. Contractor's superintendent.
        2. Independent testing agency responsible for concrete design mixtures.
        3. Ready–mix concrete manufacturer.
        4. Concrete paving subcontractor.
6) PROJECT CONDITIONS
   a. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 – PRODUCTS

7) FORMS
   a. Form Materials: Plywood, metal, metal–framed plywood, or other approved panel–type materials to provide full–depth, continuous, straight, and smooth exposed surfaces.
      - Use flexible or uniformly curved forms for curves with a radius of 100 feet or less. Do not use notched and bent forms.
   b. Form–Release Agent: Commercially formulated form–release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.
8) STEEL REINFORCEMENT
   a. Plain–Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from steel wire into flat sheets.
   b. Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.
   c. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60 plain–steel bars. Cut bars true to length with ends square and free of burrs.
   d. Tie Bars: ASTM A 615/A 615M, Grade 60, deformed.
9) CONCRETE MATERIALS
   a. Cementitious Material: Use the following cementitious materials, of same type, brand, and source throughout Project:
      - Portland Cement: ASTM C 150, gray or white portland cement Type I.
        1. Fly Ash: ASTM C 618, Class C.
      - Blended Hydraulic Cement: ASTM C 595, Type IS, portland blast–furnace slag or Type IP, portland–pozzolan cement.
   b. Normal–Weight Aggregates: Aggregates shall be in accordance with KCMMB–4K specifications.) Provide aggregates from a single source with documented service–record data of at least 10 years' satisfactory service in similar paving applications and service conditions using similar aggregates and cementitious materials.
      - Maximum Coarse–Aggregate Size: 3/4 inch nominal.
      - Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement and shall meet KCMMB 4K mix.
   c. Water: Potable and complying with ASTM C 94/C 94M.
   d. Air–Entraining Admixture: ASTM C 260.
   e. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water–soluble chloride ions by mass of cementitious material.
      - Water–Reducing Admixture: ASTM C 494/C 494M, Type A.
      - Retarding Admixture: ASTM C 494/C 494M, Type B.
      - Water–Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
      - High–Range, Water–Reducing Admixture: ASTM C 494/C 494M, Type F.
      - High–Range, Water–Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
      - Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
10) CURING MATERIALS
   a. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry.
   b. Moisture–Retaining Cover: ASTM C 171, polyethylene film or white burlap–polyethylene sheet.
   c. Water: Potable.
   d. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
      - Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
        1. Axim Italcementi Group, Inc.; Caltexol CIMFILM.
        2. BASF Construction Chemicals, LLC; Confilm.
        3. ChemMasters; Spray–Film.
        4. Conspec by Dayton Superior; Aquafilm.
        5. Dayton Superior Corporation; Sure Film (J–74).
        6. Edoco by Dayton Superior; BurkeFilm.
        7. Euclid Chemical Company (The), an RPM company; Eucobar.
        8. Kaufman Products, Inc.; VaporAid.
        9. Lambert Corporation; LAMBCO Skin.
        10. L&M Construction Chemicals, Inc.; E–CON.
        11. Meadows, W. R., Inc.; EVAPRE.
        12. Metalcrete Industries; Waterhold.
        13. Nox–Crete Products Group; MONOFILM.
        14. Sika Corporation, Inc.; SikaFilm.
        15. SpecChem, LLC; Spec Film.
        16. Symons by Dayton Superior; Finishing Aid.
        17. TK Products, Division of Sierra Corporation; TK–2120 TRI–FILM.
        18. Unitex; PRO–FILM.
        19. Vexcon Chemicals Inc.; Certi–Vex EnvioAssist.
   e. Clear, Waterborne, Membrane–Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.
      - Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
        1. Anti–Hydro International, Inc.; A–H Curing Compound #2 DR WB.
        2. ChemMasters; Safe–Cure Clear.
        3. Conspec by Dayton Superior; D.O.T. Resin Cure, DSSCC Clear Resin Cure.
        4. Dayton Superior Corporation; Day–Chem Rez Cure (J–11–W).
        5. Edoco by Dayton Superior; DSSCC Clear Resin Cure, Resin Emulsion Cure V.O.C. (Type I).
        6. Euclid Chemical Company (The), an RPM company; Kurez W VOX.
        7. Kaufman Products, Inc.; Thinfilm 420.
        8. Lambert Corporation; AQUA KURE – CLEAR.
        9. L&M Construction Chemicals, Inc.; L&M CURE R.
        10. Meadows, W. R., Inc.; 1100–CLEAR SERIES.
        11. Nox–Crete Products Group; Resin Cure E.
        12. SpecChem, LLC; PaveCure Rez.
        13. Symons by Dayton Superior; Resi–Chem Clear.
        14. Tamms Industries, Inc., Euclid Chemical Company (The); TAMMSCURE WB 30C.
        15. TK Products, Division of Sierra Corporation.
        16. Vexcon Chemicals Inc.; Certi–Vex Enviocure 100.
11) RELATED MATERIALS
   a. Joint Fillers: ASTM D 1751, asphalt–saturated cellulosic fiber or ASTM D 1752, cork or self–expanding cork in preformed strips.
   c. Epoxy Bonding Adhesive: ASTM C 881/C 881M, two–component epoxy resin capable of humid curing and bonding to damp surfaces; of class suitable for application temperature, of grade complying with requirements, and of the following types:
      - Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
   d. Chemical Surface Retarder: Water–soluble, liquid, set retarder with color dye, for horizontal concrete surface application, capable of temporarily delaying final hardening of concrete to a depth of 1/8 to 1/4 inch.
      - Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
        1. ChemMasters; Exposee.
        2. Conspec by Dayton Superior; Delay S.
        3. Dayton Superior Corporation; Sure Etch (J–73).
        4. Edoco by Dayton Superior; True Etch Surface Retarder.
        5. Euclid Chemical Company (The), an RPM company; Surface Retarder Formula S.
        6. Kaufman Products, Inc.; Expose.
        7. Meadows, W. R., Inc.; TOP–STOP.
        8. Metalcrete Industries; Surftard.
        9. Nox–Crete Products Group; CRETE–NOX TA.
        10. Scofield, L. M. Company; LITHOTEX Top Surface Retarder.
        11. Sika Corporation, Inc.; Rugasol–S.
        12. SpecChem, LLC; Spec Etch.
        13. TK Products, Division of Sierra Corporation; TK–6000 Concrete Surface Retarder.
        14. Unitex; TOP–ETCH Surface Retarder.
        15. Vexcon Chemicals Inc.; Certi–Vex Envioset
12) WHEEL STOPS
   e. Wheel Stops: Precast, air–entrained concrete, 3000–psi minimum compressive strength, 4–1/2 inches high by 9 inches wide by 72 inches long. Provide chamfered corners and drainage slots on underside and holes for anchoring to substrate.
      - Dowels: Galvanized steel, 3/4 inch in diameter, 10–inch minimum length.
13) CONCRETE CURBS
   a. Curbs to comply with the plan details.
14) CONCRETE MIXTURES
   a. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal–weight concrete, and as determined by either laboratory trial mixtures or field experience. Use ASTM C150, Type 1 – portland cement. Aggregates per KCMMB–4K specifications.
      - See concrete requirements in geotechnical report.
      - Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
      - When automatic machine placement is used, determine design mixtures and obtain laboratory test results that meet or exceed requirements.
   b. Proportion mixtures to provide normal–weight concrete with the following properties:
      - Compressive Strength (28 Days): 4000 psi.
      - Maximum Water–Cementitious Materials Ratio at Point of Placement: 0.45.
      - Slump Limit: 4 inches plus or minus 1 inch for paving and 2□ plus or minus one inch for curbs and gutters.
   c. Add air–entraining admixture at manufacturer's prescribed rate to result in normal–weight concrete at point of placement having an air content as follows:
      - Air Content: 6 percent plus or minus 1 percent.
   d. Limit water–soluble, chloride–ion content in hardened concrete to 0.15 percent by weight of cement.
   e. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.
      - Use water–reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
   f. Cementitious Materials: Limit percentage by weight of cementitious materials other than portland cement according to ACI 301 requirements as follows:
      - Fly Ash or Pozzolan: 25 percent.
      - Ground Granulated Blast–Furnace Slag: 50 percent.
      - Combined Fly Ash or Pozzolan, and Ground Granulated Blast–Furnace Slag: 50 percent, with fly ash or pozzolan not exceeding 25 percent.
15) CONCRETE MIXING
   a. Ready–Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M, and ASTM C 1116/C 1116M. Furnish batch certificates for each batch discharged and used in the Work.
      - When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1–1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.
   b. Project–Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum–type batch machine mixer.
      - For concrete batches of 1 cu. yd. or smaller, continue mixing at least 1–1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
      - For concrete batches larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixing time, quantity, and amount of water added.

PART 3 – EXECUTION

16) EXAMINATION
   a. Notify testing agency when excavations have reached required subgrade.
   b. Proof–roll subgrade below proposed pavements with a pneumatic–tired and loaded 10–wheel, tandem–axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof–roll wet or saturated subgrades. Proof–roll within two days of paving operations.
      - Completely proof–roll subgrade in one direction, repeating proof–rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
      - Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by the Geotechnical Engineer, and replace with compacted backfill or fill as directed to the proper moisture content and density.
      - After proof rolling and repairing deep subgrade deficiencies, the entire subgrade should be scarified to a depth of 8 inches and uniformly compacted to at least 95% of the standard proctor maximum dry density to provide a uniform subgrade for pavement construction. Moisture content and density of subgrade to be checked within two days prior to the commencement of paving operations.
      - Soil treatment□
   c. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, without additional compensation.
   d. Proceed with paving only after unsatisfactory conditions have been corrected.
17) PREPARATION
   a. Remove loose material from compacted subbase surface immediately before placing concrete.
18) EDGE FORMS AND SCREED CONSTRUCTION
   a. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
   b. Clean forms after each use and coat with form–release agent to ensure separation from concrete without damage.
19) STEEL REINFORCEMENT
   a. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
   b. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond–reducing materials.
   c. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
   d. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
   e. Epoxy–Coated Reinforcement: Use epoxy–coated steel wire ties to fasten epoxy–coated reinforcement. Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D 3963/D 3963M.
   f. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2–inch (50–mm) overlap of adjacent mats.
20) JOINTS
   a. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
      - When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.
   b. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one–half hour unless paving terminates at isolation joints.
      - Continue steel reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of paving strips unless otherwise indicated.
      - Provide tie bars at sides of paving strips where indicated.
      - Butt Joints: Use bonding agent or epoxy bonding adhesive at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
      - Keyed Joints: Provide preformed keyway–section forms or bulkhead forms with keys unless otherwise indicated. Embed keys at least 1–1/2 inches into concrete.
      - Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one–half of dowel length to prevent concrete bonding to one side of joint.
   c. Isolation Joints: Form isolation joints of preformed joint–filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
      - Locate expansion joints at intervals of 50 feet unless otherwise indicated.
      - Extend joint fillers full width and depth of joint.
      - Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface if joint sealant is indicated.
      - Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
      - Furnish joint fillers in one–piece lengths. Where more than one length is required, lace or clip joint–filler sections together.
      - During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
   d. Contraction Joints: Form weakened–plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one–fourth of the concrete thickness, as follows:
      - Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a 1/4–inch radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate grooving–tool marks on concrete surfaces.
        1. Tolerance: Ensure that grooved joints are within 3 inches either way from centers of dowels.
      - Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond–rimmed blades. Cut 1/8–inch– wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
        1. Tolerance: Ensure that sawed joints are within 3 inches either way from centers of dowels.
      - Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one–half of dowel length to prevent concrete bonding to one side of joint.
   e. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4–inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging–tool marks on concrete surfaces.
21) CONCRETE PLACEMENT
   a. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast–in.
   b. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.
   c. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
   d. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
   e. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
   f. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
   g. Consolidate concrete according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
      - Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square–faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
   h. Screed paving surface with a straightedge and strike off.
   i. Commence initial floating using bull floats or darbies to impart an open–textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
   j. Curbs and Gutters: Use design mixture for automatic machine placement. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing.
   k. Slip–Form Paving: Use design mixture for automatic machine placement. Produce paving to required thickness, lines, grades, finish, and jointing.
      - Compact subbase and prepare subgrade of sufficient width to prevent displacement of slip–form paving machine during operations.
   l. Cold–Weather Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
      - When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
      - Do not use frozen materials or materials containing ice or snow.
      - Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.
   m. Hot–Weather Placement: Comply with ACI 301 and as follows when hot–weather conditions exist:
      - Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
      - Cover steel reinforcement with water–soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
      - Fog–spray forms and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.
22) FLOAT FINISHING
   a. General: Do not add water to concrete surfaces during finishing operations.
   b. Float Finish: Begin the second floating operation when bleed–water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power–driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
      - Burlap Finish: Drag a seamless strip of damp burlap across float–finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
      - Medium–to–Fine–Textured Broom Finish: Draw a soft–bristle broom across float–finished concrete surface perpendicular to line of traffic to provide a uniform, fine–line texture.
23) CONCRETE PROTECTION AND CURING
   a. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
   b. Comply with ACI 306.1 for cold–weather protection.
   c. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
   d. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
   e. Curing Methods: Cure concrete by moisture curing, moisture–retaining–cover curing, curing compound or a combination of these as follows:
      - Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
        1. Water
        2. Continuous water–fog spray.
        3. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12–inch lap over adjacent absorptive covers.
      - Moisture–Retaining–Cover Curing: Cover concrete surfaces with moisture–retaining cover, placed in widest practicable width, with sides and ends lapped at least 12 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears occurring during installation or curing period using cover material and waterproof tape.
      - Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas that have been subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.
24) PAVING TOLERANCES
   a. Comply with tolerances in ACI 117 and as follows:
      - Elevation: 1/4 inch.
      - Thickness: Plus 3/8 inch, minus 1/4 inch.
      - Surface: Gap below 10–foot– long, unleveled straightedge not to exceed 1/2 inch.
      - Alignment of Tie–Bar End Relative to Line Perpendicular to Paving Edge: 1/2 inch per 12 inches of tie bar.
      - Lateral Alignment and Spacing of Dowels: 1 inch.
      - Vertical Alignment of Dowels: 1/4 inch.
      - Alignment of Dowel–Bar End Relative to Line Perpendicular to Paving Edge: 1/4 inch per 12 inches of dowel.
      - Joint Spacing: 3 inches.
      - Contraction Joint Depth: Plus 1/4 inch, no minus.
      - Joint Width: Plus 1/8 inch, no minus.
25) CONCRETE CURBS
   a. Install curbs per plan details.
26) PAVEMENT MARKING
   a. Do not apply pavement–marking paint until layout, colors, and placement have been verified with Architect.
   b. Allow paving to age for 30 days before starting pavement marking.
   c. Sweep and clean surface to eliminate loose material and dust.
   d. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
27) FIELD QUALITY CONTROL
   a. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
   b. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements outlined by the geotechnical representative.
28) REPAIRS AND PROTECTION
29) Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
30) Drill test cores, where directed by Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with portland cement concrete bonded to paving with epoxy adhesive.
31) Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
32) Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

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CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

321313
CONCRETE PAVING

PROJECT NO. 2202010801
SCALE N.T.S.

DRAWN	DESIGNED	CHECKED
JLB	SEK	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24

SHEET NO. C24

SECTION 321373 – CONCRETE PAVING JOINT SEALANTS

PART 1 – GENERAL

1) RELATED DOCUMENTS
   a. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
2) SUMMARY
   a. Section Includes:
      - Cold–applied joint sealants.
      - Hot–applied joint sealants.
   b. Related Sections:
      - Section 321216 "Asphalt Paving" for constructing joints between concrete and asphalt pavement.
      - Section 321313 "Concrete Paving" for constructing joints in concrete pavement.
3) ACTION SUBMITTALS
   a. Product Data: For each joint–sealant product indicated.
   b. Pavement–Joint–Sealant Schedule: Include the following information:
      - Joint–sealant application, joint location, and designation.
      - Joint–sealant manufacturer and product name.
      - Joint–sealant formulation.
      - Joint–sealant color.
4) INFORMATIONAL SUBMITTALS
   a. Qualification Data: For qualified Installer.
   b. Product Certificates: For each type of joint sealant and accessory, from manufacturer.
   c. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for joint sealants.
5) QUALITY ASSURANCE
   a. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
   b. Source Limitations: Obtain each type of joint sealant from single source from single manufacturer.
   c. Product Testing: Test joint sealants using a qualified testing agency.
      - Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
6) PROJECT CONDITIONS
   a. Do not proceed with installation of joint sealants under the following conditions:
      - When ambient and substrate temperature conditions are outside limits permitted by joint–sealant manufacturer.
      - When joint substrates are wet.
      - Where joint widths are less than those allowed by joint–sealant manufacturer for applications indicated.
      - Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 – PRODUCTS

7) MATERIALS
   a. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint–sealant manufacturer based on testing and field experience.
   b. Colors of Exposed Joint Sealants: As indicated by manufacturer's designations.
8) COLD–APPLIED JOINT SEALANTS
   a. Single–Component, Nonsag, Silicone Joint Sealant for Concrete: ASTM D 5893, Type NS.
      - Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
        1. Crafco Inc., an ERGON company; RoadSaver Silicone.
        2. Dow Corning Corporation; 888.
        3. Pecora Corporation; 301 NS.
   b. Single–Component, Self–Leveling, Silicone Joint Sealant for Concrete: ASTM D 5893, Type SL.
      - Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
        1. Crafco Inc., an ERGON company; RoadSaver Silicone SL.
        2. Dow Corning Corporation; 890–SL.
        3. Pecora Corporation; 300 SL.
   c. Multicomponent, Pourable, Traffic–Grade, Urethane Joint Sealant for Concrete: ASTM C 920, Type M, Grade P, Class 25, for Use T.
      - Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
        1. Pecora Corporation; Urexpan NR–200.
9) HOT–APPLIED JOINT SEALANTS
   a. Hot–Applied, Single–Component Joint Sealant for Concrete: ASTM D 3406.
      - Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
        1. Crafco Inc., an ERGON company; Superseal 444/777.
   b. Hot–Applied, Single–Component Joint Sealant for Concrete and Asphalt: ASTM D 6690, Types I, II, and III.
      - Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
        1. Meadows, W. R., Inc.; Sealtight Hi–Spec or Sealtight 3405.
        2. Right Pointe; D–3405 Hot Applied Sealant.
10) JOINT–SEALANT BACKER MATERIALS
   a. General: Provide joint–sealant backer materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by joint–sealant manufacturer based on field experience and laboratory testing.
   b. Round Backer Rods for Cold– and Hot–Applied Joint Sealants: ASTM D 5249, Type 1, of diameter and density required to control sealant depth and prevent bottom–side adhesion of sealant.
   c. Round Backer Rods for Cold–Applied Joint Sealants: ASTM D 5249, Type 3, of diameter and density required to control joint–sealant depth and prevent bottom–side adhesion of sealant.
   d. Backer Strips for Cold– and Hot–Applied Joint Sealants: ASTM D 5249; Type 2; of thickness and width required to control joint–sealant depth, prevent bottom–side adhesion of sealant, and fill remainder of joint opening under sealant.
11) PRIMERS
   a. Primers: Product recommended by joint–sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint–sealant–substrate tests and field tests.

PART 3 – EXECUTION

12) EXAMINATION
   a. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint–sealant performance.
   b. Proceed with installation only after unsatisfactory conditions have been corrected.
13) PREPARATION
   a. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint–sealant manufacturer's written instructions.
   b. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint–sealant manufacturer, based on preconstruction joint–sealant–substrate tests or prior experience. Apply primer to comply with joint–sealant manufacturer's written instructions. Confine primers to areas of joint–sealant bond; do not allow spillage or migration onto adjoining surfaces.
14) INSTALLATION OF JOINT SEALANTS
   a. General: Comply with joint–sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
   b. Joint–Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
   c. Install joint–sealant backings of kind indicated to support joint sealants during application and at position required to produce cross–sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
      - Do not leave gaps between ends of joint–sealant backings.
      - Do not stretch, twist, puncture, or tear joint–sealant backings.
      - Remove absorbent joint–sealant backings that have become wet before sealant application and replace them with dry materials.
   d. Install joint sealants using proven techniques that comply with the following and at the same time backings are installed:
      - Place joint sealants so they directly contact and fully wet joint substrates.
      - Completely fill recesses in each joint configuration.
      - Produce uniform, cross–sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
   e. Tooling of Nonsag Joint Sealants: Immediately after joint–sealant application and before skinning or curing begins, tool sealants according to the following requirements to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:
      - Remove excess joint sealant from surfaces adjacent to joints.
      - Use tooling agents that are approved in writing by joint–sealant manufacturer and that do not discolor sealants or adjacent surfaces.
   f. Provide joint configuration to comply with joint–sealant manufacturer's written instructions unless otherwise indicated.
15) CLEANING
   a. Clean off excess joint sealant or sealant smears adjacent to joints as the Work progresses, by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.
16) PROTECTION
   a. Protect joint sealants, during and after curing period, from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and replace with joint sealant so installations in repaired areas are indistinguishable from the original work.
17) PAVEMENT–JOINT–SEALANT SCHEDULE
   a. Joint–Sealant Application: Joints within cement concrete pavement:
      - Joint Location:
        1. Expansion and isolation joints in cast–in–place concrete pavement.
        2. Other joints as indicated.
      - Silicone Joint Sealant for Concrete: Single component, nonsag or single component, self–leveling.
      - Urethane Joint Sealant for Concrete: Multicomponent, pourable.
      - Hot–Applied Joint Sealant for Concrete: Single component.
      - Joint–Sealant Color: Grey.
   b. Joint–Sealant Application: Joints between cement concrete and asphalt pavement.
      - Joint Location:
        1. Joints between concrete and asphalt pavement.
      - Hot–Applied Joint Sealant for Concrete and Asphalt: Single component.
      - Retain subparagraph below if joint sealants specified are offered in a choice of colors and colors are not specified on Drawings. Typically, color choice is not available for pavement joint sealants.
      - Joint–Sealant Color: As indicated by manufacturer's designations.

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CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

321373
CONCRETE PAVING
JOINT SEALANTS

PROJECT NO. 2202010801
SCALE N.T.S.

DRAWN	DESIGNED	CHECKED
JLB	SEK	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24

SHEET NO.
C25

SECTION 334100 – STORM UTILITY DRAINAGE PIPING

PART 1 – GENERAL

1) RELATED DOCUMENTS
   a. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
2) SUMMARY
   a. Section Includes:
      - Pipe and fittings.
      - Cleanouts.
      - Stormwater inlets.
      - Manholes / Junction Boxes.
3) SUBMITTALS
   a. Product Data: For each type of product indicated.
   b. Shop Drawings:
      - Trench Drain: Include elevations, sections, details, frames, covers, and depths.
      - Drain Basin: Include elevations, details, covers, and depths.
      - Concrete Structures: Include elevations, sections, details, frames, covers, and depths.
      - End Sections: Product specifications and grate protection.
4) DELIVERY, STORAGE, AND HANDLING
   a. Do not store plastic manholes, pipe, and fittings in direct sunlight.
   b. Protect pipe, pipe fittings, and seals from dirt and damage.
   c. Handle manholes according to manufacturer's written rigging instructions.
   d. Handle stormwater inlets according to manufacturer's written rigging instructions.
5) PROJECT CONDITIONS
   a. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
      - Notify Construction Manager and Owner no fewer than two days in advance of proposed interruption of service.

PART 2 – PRODUCTS

6) PE PIPE AND FITTINGS
   a. HDPE Dual–Wall Pipe and Fittings NPS 3 to NPS 10: AASHTO M 252M, Type S, with smooth waterway for coupling joints.
      - Soiltight Couplings: AASHTO M 252M, corrugated, matching tube and fittings.
   b. HDPE Dual–Wall Pipe and Fittings NPS 12 to NPS 60: AASHTO M 294M, Type S, with smooth waterway for coupling joints.
      - Soiltight Couplings: AASHTO M 294M, corrugated, matching pipe and fittings.
7) PVC PIPE AND FITTINGS
   a. Pipe: ASTM D1785 Schedule 40 PVC, with plain ends for solvent–cemented joints.
   b. PVC pipe to be used as riser pipe for building downspouts below grade.
8) CONCRETE PIPE AND FITTINGS
   a. Reinforced–Concrete Sewer Pipe and Fittings conforming to ASTM C76.
      - Bell–and–spigot ends with gasketed joints. O–ring gaskets shall be synthetic rubber and shall conform to ASTM C361 and ASTM C443.
      - Class III, Wall B.
9) CLEANOUTS
   a. Plastic Cleanouts:
      - Manufacturers: Subject to compliance with requirements available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
        1. Canplas LLC.
        2. IPS Corporation.
        3. NDS Inc.
        4. Plastic Oddities; a division of Diverse Corporate Technologies, Inc.
        5. Sioux Chief Manufacturing Company, Inc.
        6. Zurn Light Commercial Products Operation; Zurn Plumbing Products Group.
      - Description: PVC body with PVC threaded plug. Include PVC sewer pipe fitting and riser to cleanout of same material as sewer piping.
10) PVC DRAIN BASINS
   a. Drain basins shall be manufactured from PVC pipe stock conforming to ASTM D1784 cell class 12454. Structure and pipe connections shall be watertight conforming to ASTM D3212.
      - Frames and grates shall be ductile iron and shall meet loading requirements shown.
11) STORMWATER INLETS / MANHOLES / JUNCTION BOXES
   a. Curb inlets, manholes, and junction boxes per plan details.
12) PIPE OUTLETS
   a. Install concrete toe wall on pipe end section and turf reinforcement mat at pipe end sections. See plans for location and details.
   b. Pipe outfalls shall have HDPE or CMP pre–manufactured end sections.
   c. HDPE end sections shall conform to ASTM D3530 minimum cell classification 213320C. End sections shall have a toe plate to cast into a concrete toe wall.
   d. Corrugated metal end sections shall be fabricated from galvanized base metal, conform to ASTM A 760/A, and meet CMP pipe manufacturer design standards. End sections shall have a toe plate to cast into a concrete toe wall
13) CONCRETE
   a. General: Cast–in–place concrete according to ACI 318, and the following:
      - Cement: ASTM C 150, Type II.
      - Fine Aggregate: ASTM C 33, sand.
      - Coarse Aggregate: ASTM C 33, crushed gravel.
      - Water: Potable.
   b. Portland Cement Design Mix: 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio.
      - Reinforcing Fabric: ASTM A 185/A 185M, steel, welded wire fabric, plain.
      - Reinforcing Bars: ASTM A 615/A 615M, Grade 60 deformed steel.

PART 3 – EXECUTION

15) EARHWORK
   a. Excavation, trenching, and backfilling are specified in Section 312000 "Earth Moving."
16) PIPING INSTALLATION
   a. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
   b. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
   c. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
   d. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe–jacking process of microtunneling.
   e. Install gravity–flow, nonpressure drainage piping according to the following:
      - Install piping pitched down in direction of flow.
      - Install PE corrugated sewer piping according to ASTM D 2321.
      - Install PVC sewer piping according to ASTM D 2321 and ASTM F 1668.
      - Install reinforced–concrete sewer piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."
17) PIPE JOINT CONSTRUCTION
   a. Join gravity–flow, nonpressure drainage piping according to the following:
      - Join corrugated PE piping according to ASTM D 3212 for push–on joints.
      - Join PVC cellular–core piping according to ASTM D 2321 and ASTM F 891 for solvent–cemented joints.
      - Join reinforced–concrete sewer piping according to ACPA's "Concrete Pipe Installation Manual" for rubber–gasketed joints.
      - Join dissimilar pipe materials with nonpressure–type flexible couplings.
18) CLEANOUT INSTALLATION
   a. Install cleanouts and riser extensions from sewer pipes to cleanouts at grade. Install piping so cleanouts open in direction of flow in sewer pipe.
      - Use Light–Duty, top–loading classification cleanouts in earth or unpaved foot–traffic areas.
      - Use Heavy–Duty, top–loading classification cleanouts in vehicle–traffic service areas.
   b. Set cleanout frames and covers in concrete pavement and roads with tops flush with pavement surface.
19) PVC DRAIN BASINS
   a. PVC drain basins shall be installed per ASTM D2321 and manufacturer specifications.
20) TRENCH DRAIN
   a. Install trench drain per manufacturer specifications.
21) CONNECTIONS
   a. Connect nonpressure, gravity–flow drainage piping in building's storm building drains specified in Section 221413 "Storm Drainage Piping."
   b. Make connections to piping.
      - Use commercially manufactured wye fittings for piping branch connections unless a structure is indicated.
      - Make connections to structures by cutting into existing unit and creating an opening large enough to allow 3 inches of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches of concrete for minimum length of 12 inches to provide additional support of collar from connection to undisturbed ground.
        1. Use concrete that will attain a minimum 28–day compressive strength of 3000 psi unless otherwise indicated.
        2. Use epoxy–bonding compound as interface between new and existing concrete and piping materials.
      - Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.
22) IDENTIFICATION
   a. Materials and their installation are specified in Division 31 Section "Earth Moving." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
      - Use warning tape or detectable warning tape over ferrous piping.
      - Use detectable warning tape over nonferrous piping and over edges of underground structures.
23) FIELD QUALITY CONTROL
   a. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
      - Submit separate reports for each system inspection.
      - Defects requiring correction include the following:
        1. Alignment: Less than full diameter of inside of pipe is visible between structures.
        2. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
        3. Damage: Crushed, broken, cracked, or otherwise damaged piping.
        4. Infiltration: Water leakage into piping.
        5. Exfiltration: Water leakage from or around piping.
      - Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
      - Reinspect and repeat procedure until results are satisfactory.
   b. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
      - Do not enclose, cover, or put into service before inspection and approval.
      - Test completed piping systems according to requirements of authorities having jurisdiction.
      - Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
      - Submit separate report for each test.
      - Gravity–Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI–B–6, and the following:
        1. Exception: Piping with soiltight joints unless required by authorities having jurisdiction.
        2. Option: Test plastic piping according to ASTM F 1417.
        3. Option: Test concrete piping according to ASTM C 924.
   c. Leaks and loss in test pressure constitute defects that must be repaired.
   d. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.
24) CLEANING
   a. Clean interior of piping of dirt and superfluous materials. Flush with water.

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CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

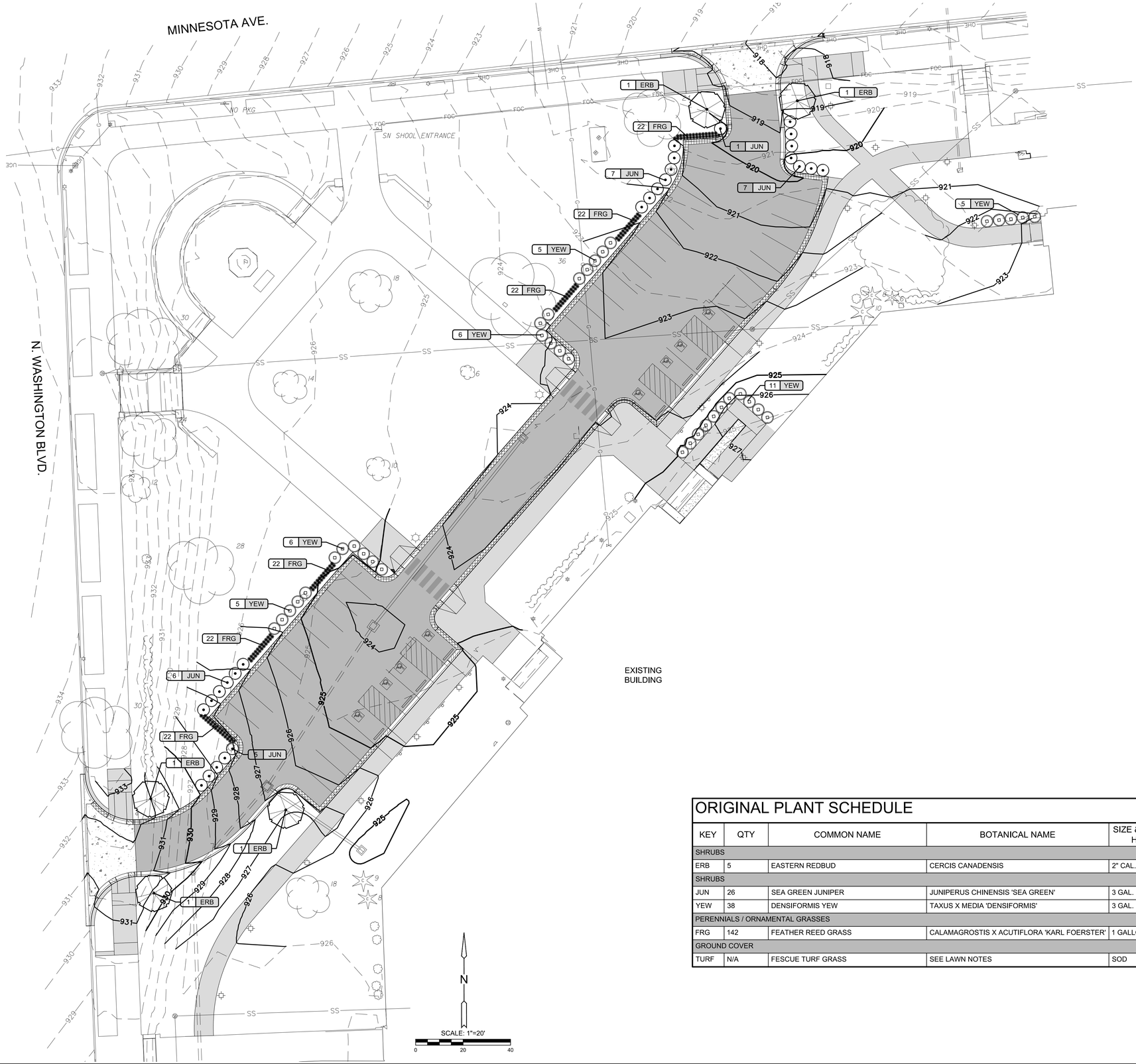
334100
STORM UTILITY
DRAINAGE PIPING

PROJECT NO. 2202010801
SCALE N.T.S.

DRAWN	DESIGNED	CHECKED
JLB	SEK	BSH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.24

SHEET NO. C26



ORIGINAL PLANT SCHEDULE

KEY	QTY	COMMON NAME	BOTANICAL NAME	SIZE & METHOD OF HANDLING
SHRUBS				
ERB	5	EASTERN REDBUD	CERCIS CANADENSIS	2" CAL.
SHRUBS				
JUN	26	SEA GREEN JUNIPER	JUNIPERUS CHINENSIS 'SEA GREEN'	3 GAL.
YEW	38	DENSIFORMIS YEW	TAXUS X MEDIA 'DENSIFORMIS'	3 GAL.
PERENNIALS / ORNAMENTAL GRASSES				
FRG	142	FEATHER REED GRASS	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	1 GALLON
GROUND COVER				
TURF	N/A	FESCUE TURF GRASS	SEE LAWN NOTES	SOD

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CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

LANDSCAPE PLAN

PROJECT NO. 2202010801

SCALE 1"=20'

DRAWN	DESIGNED	CHECKED
BJH	BJH	BJH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.2024
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. L01

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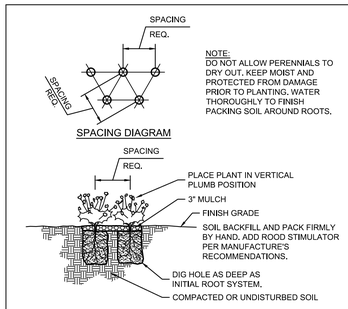
GENERAL LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHOULD READ ALL LANDSCAPE PLANS, SPECIFICATIONS AND VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. IF A DISCREPANCY BETWEEN PLANT QUANTITIES SHOWN ON PLANS AND WITHIN THE PLANT SCHEDULE EXIST THE PLANS QUANTITIES SHALL BE USED. PLANT SCHEDULE QUANTITIES FOR INFORMATION ONLY.
2. ANY AND ALL QUESTIONS CONCERNING THE LANDSCAPE PLANS AND SPECIFICATIONS SHALL BE DIRECTED TO THE OWNER AND / OR MKEC LANDSCAPE ARCHITECT AT 913-317-9390.
3. THE LANDSCAPE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES (INCLUDING THOSE INDICATED ON THE PLAN) PRIOR TO INSTALLATION OF PLANT MATERIAL.
4. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MULCHING, AND OTHER REQUIREMENTS OF PLANT MATERIALS WHILE THEY ARE TEMPORARILY STORED ON OR OFF SITE.
5. THE LANDSCAPE CONTRACTOR SHALL COORDINATE LAYOUT OF PLANTING BEDS, PLANT MASSING, STAKED LOCATION OF TREES AND INSTALLATION OF PLANT MATERIAL WITH OWNER PRIOR TO COMMENCEMENT OF WORK.
6. ALL PLANT MATERIAL (EXCEPT SHADE TREES) IS DELINEATED AT MATURE SIZE OF PLANT MATERIAL. SHADE TREES ARE DELINEATED AT 85% OF ACTUAL MATURE SIZE.
7. ALL PLANT MATERIALS MEET THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1996) PER THE AMERICAN ASSOCIATION OF NURSERYMEN.
8. PER OWNER'S DIRECTION, THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT ALL PLANT MATERIAL AT THE NURSERY, PRIOR TO DIGGING.
9. AREAS DISTURBED AREAS SHALL BE 'FESCUE TURF' ARE TO RECEIVE SOD AS FOLLOWS:
   SOD: FESCUE TURF.
   FERTILIZER: HAVE SOIL TESTED TO OBTAIN RECOMMENDED SOIL AMENDMENTS FOR THE GRASSES LISTED. REPORT RECOMMENDATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE ANY APPLICATION OF FERTILIZER IS MADE.
10. CONDUCT PLANTING UNDER FAVORABLE WEATHER CONDITIONS DURING EITHER THE SPRING PLANTING SEASON, MARCH 1ST TO JUNE 1ST, OR THE FALL PLANTING SEASON, SEPTEMBER 30TH UNTIL FREEZING OF THE GROUND. DURING THE FALL PLANTING SEASON, CONIFEROUS MATERIAL PLANTING SHALL BE CONDUCTED AUGUST 15TH TO OCTOBER 1ST. DEVIATION FROM THE ABOVE PLANTING DATES WILL ONLY BE PERMITTED WITH APPROVAL IN WRITING BY THE LANDSCAPE ARCHITECT.
11. THE PLANTING SOIL MIXTURE FOR ALL TREE PLANTINGS SHALL INCLUDE SOIL EXCAVATED FROM THE HOLE. RATIO: 50% VIRGIN SOIL + 50% AMENDED TOP SOIL.
12. ROOT STIMULATOR SHALL BE APPLIED TO ALL PLANT MATERIALS WITH THE EXCEPTION OF LAWN AREAS. APPLY AS PER THE MANUFACTURERS RECOMMENDATIONS.
13. THE LANDSCAPE CONTRACTOR SHALL RESTORE FINISH GRADES IN ALL PLANTING AREAS (PER GRADING PLANS) WHICH MAY HAVE BEEN DISTURBED DURING PLANTING OPERATIONS.
14. ALL TREE SAUCERS AND PLANTING BEDS ARE TO BE MULCHED WITH A MINIMUM OF 4" DOUBLE-GROUND OAK MULCH (COLOR DIED); COLOR TO BE 'JAVA BROWN'. WHERE PLANTING BEDS ARE ADJACENT TO WALKS AND CURBS THE SOIL LEVEL SHALL BE 4" LOWER TO ALLOW FOR MULCH LAYER. WHERE SOD IS INDICATED, ITS THICKNESS SHALL ALSO BE ACCOUNTED FOR SO THAT THE SOIL SURFACE IN THE SOD IS ½" BELOW THE HARDSCAPE SURFACE.
15. ALL PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE SUCH AS TREFLAN OR EQUAL. APPLY AS PER MANUFACTURER'S RECOMMENDATION. THE PRE-EMERGENT SHALL NOT BE APPLIED UNTIL AFTER ALL PLANTING WITHIN THESE AREAS IS COMPLETE, BUT BEFORE THESE AREAS ARE MULCHED. DO NOT DISTURB AREAS AFTER APPLICATION. WATER AS DIRECTED.
16. MULCH, STAKES, GUY WIRE, PRE-EMERGENT HERBICIDES, ETC. SHALL BE SUBSIDIARY TO INDIVIDUAL PLANTS.
17. LANDSCAPE EDGING: ALL PLANTING BEDS ABUTTING LAWN AREAS SHALL BE EDGED WITH BLACK STEEL EDGING.
18. ALL SLOPES THAT EXCEED A 3:1 GRADE SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET – NORTH AMERICAN GREEN S150. INSTALL AS PER THE MANUFACTURER'S RECOMMENDATIONS.
19. LABEL EACH TREE AND SHRUB WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTH BOTANICAL AND COMMON NAME. LABEL EACH ORNAMENTAL GRASS, GROUNDCOVER, PERENNIAL AND ANNUAL WITH THE LABEL PROVIDED BY THE ORIGINAL GROWER OF THE PLANT. LABELS SHALL NOT BE REMOVED UNTIL AFTER PROVISIONAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT.
20. STAKES AND GUYING SHALL BE REMOVED AT THE END OF ONE FULL GROWING SEASON.
21. ALL PLANTING BEDS SHALL BE OVER EXCAVATED TO A DEPTH OF 2'. ALL AREAS DENOTED WITH SOD (LAWN AREAS) SHALL HAVE A 6" MINIMUM TOPSOIL LAYER. TOPSOIL SHALL BE LAID IN 3" LIFTS. IN AREAS WHERE CONSTRUCTION GRADING HAS NOT OCCURED AND THE VIRGIN GRADE YET EXIST, THE TOPSOIL LAYER MAY NOT BE REQUIRED BASED ON THE DECISION OF THE LANDSCAPE ARCHITECT.
22. TOPSOIL SHALL BE FERTILE NATURAL TOPSOIL, TYPICAL OF THE LOCALITY, FOLLOWING MAJOR GRADING OPERATIONS THE FINAL 8" LIFT SHALL BE HIGH QUALITY TOPSOIL. SOIL SHALL BE OBTAINED FROM WELL DRAINED AREAS. STOCKPILED TOPSOIL MAY BE USED. IT SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OR SLAG AND SHALL BE FREE OF STONES, LUMPS, STICKS, PLANTS OR THEIR ROOTS, TOXIC SUBSTANCES OR OTHER EXTRANEOUS MATTER THAT MAY BE HARMFUL TO PLANT GROWTH OR WOULD INTERFERE WITH FUTURE MAINTENANCE. TOPSOIL PH RANGE SHALL BE 5.5 TO 7.0.
23. THERE SHALL BE NO ADDITIONS, DELETIONS OR SUBSTITUTION OF PLANT MATERIAL SPECIES WITHOUT THE WRITTEN APPROVAL BY THE OWNER AND / OR MKEC LANDSCAPE ARCHITECT. ANY SUBSTITUTION WHICH HAS NOT BEEN APPROVED SHALL BE REMOVED AND IMMEDIATELY REPLACED WITH THE CORRECT PLANT AT LANDSCAPE CONTRACTOR'S EXPENSE.
24. IN THE CONDITION WHERE THE PLANT MATERIAL HAS BEEN SUPPLIED BY THE OWNER THROUGH A PLANT PROCUREMENT PROGRAM WITH A MYKE PRO 2 YEAR WARRANTY, THE LANDSCAPE CONTRACTOR'S WARRANTY OF PLANT MATERIAL SHALL BEGIN FROM THE TIME OF HANDLING PLANT MATERIAL AT TIME OF DELIVERY THROUGH INSTALLATION AND END AFTER THE SUBSTANTIAL COMPLETION AND FINAL PUNCH-LIST APPROVAL BY LANDSCAPE ARCHITECT.
25. THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR THE COLLECTION, REMOVAL, AND PROPER DISPOSAL OF ANY AND ALL DEBRIS GENERATED DURING THE INSTALLATION OF THE LANDSCAPE CONSTRUCTION.
26. COORDINATE WITH THE OWNER AND GENERAL CONTRACTOR FOR SLEEVE LOCATIONS AND TIMING OF SLEEVE INSTALLATION. ALL SLEEVING REQUIRED UNDER HARDSCAPE SURFACES FOR THE IRRIGATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.
27. THE CONTRACTOR SHALL FURNISH TOPSOIL; TOPSOIL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT. REFER TO SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.
28. THE CONTRACTOR SHALL SUPPLY ALL PLANTING SOIL MIX.
31. ALL LANDSCAPE AREAS SHALL BE IRRIGATED BY A TEMPORARY IRRIGATION SYSTEM. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MONITOR INSTALLED PLANT MATERIAL FOR A MINIMUM OF 90 DAYS. TO ESTABLISH PLANT MATERIALS, WATER FROM SOURCES AND KEEP LAWN UNIFORMLY MOIST TO A DEPTH OF 4 INCHES. WATER LAWN AND LANDSCAPE BEDS AT A MINIMUM RATE OF (1) ONE INCHES PER WEEK OR AS NECESSARY TO PROVIDE A HEALTHY GREEN APPEARANCE. INSTALLATION, MAINTENANCE, AND MONITORING OF THE TEMPORARY IRRIGATION SYSTEM WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR FOR THE FIRST 90 DAYS. AT THE END OF THE ESTABLISHMENT PERIOD, CONTRACTOR IS TO COORDINATE WITH SCHOOL DISTRICT FOR MAINTENANCE OF PLANT MATERIAL. CONTRACTOR TO REMOVE TEMPORARY IRRIGATION SYSTEM WITH APPROVAL FROM SCHOOL DISTRICT.
32. THE PLANTING SOIL MIX SHALL BE APPROVED BY THE LANDSCAPE CONTRACTOR PRIOR TO ANY BACKFILLING.
33. THE TYPICAL PLANTING SOIL MIX FOR ALL PLANTING BEDS (SHRUBS, ORNAMENTAL GRASS AND PERENNIAL BED AREAS) SHALL CONSIST OF THE FOLLOWING MAKE-UP UNLESS OTHERWISE INDICATED IN THESE PLANS:
   - 80% TOPSOIL AS SPECIFIED
   - 20% PREPARED ADDITIVES (BY VOLUME AS FOLLOWS):
     - 2 PARTS HUMAS AND/OR PEAT
     - 1 PART STERILIZED COW MANURE
     - 1 PART SHREDDED PINE BARK (BARK PIECES BETWEEN ¼"AND 1-½" IN LENGTH/DIAMETER.
   - COMMERCIAL FERTILIZER AS RECOMMENDED BY SOIL REPORT.
   - LIME AS RECOMMENDED BY SOIL REPORT.

FESCUE TURF NOTES:

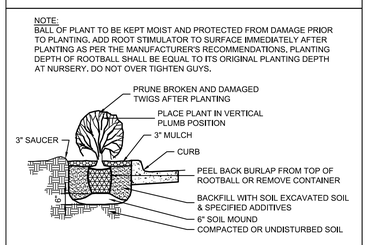
1. INSTALL FESCUE TURF SOD PER NOTES BELOW. ALL DISTURBED AREAS UNLESS OTHERWISE SHOWN SHALL BE SODDED. SEE EROSION CONTROL PLANS FOR LIMITS OF DISTURBANCE.
2. SUBMITTALS SHALL INCLUDE: PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED, CERTIFICATION OF SOD AS KANSAS STATE FESCUE TRIAL MIX, PRODUCT CERTIFICATES: FOR SOIL AMENDMENTS AND FERTILIZERS, SIGNED BY PRODUCT MANUFACTURER, MATERIAL TEST REPORTS: FOR EXISTING SURFACE SOIL AND IMPORTED TOPSOIL, AND PLANTING SCHEDULE: INDICATING ANTICIPATED PLANTING DATES FOR SOD INSTALLATION.
3. INSTALLER QUALIFICATIONS: A QUALIFIED LANDSCAPE INSTALLER WHOSE WORK HAS RESULTED IN SUCCESSFUL LAWN ESTABLISHMENT.
4. INSTALLER'S FIELD SUPERVISION: REQUIRE INSTALLER TO MAINTAIN AN EXPERIENCED FULL-TIME SUPERVISOR ON PROJECT SITE WHEN PLANTING IS IN PROGRESS.
5. REPORT SUITABILITY OF TOPSOIL FOR LAWN GROWTH. STATE RECOMMENDED QUANTITIES OF NITROGEN, PHOSPHORUS, AND POTASH NUTRIENTS AND SOIL AMENDMENTS TO BE ADDED TO PRODUCE SATISFACTORY TOPSOIL.
6. DELIVERY, STORAGE, AND HANDLING FOR SOD: HARVEST, DELIVER, STORE, AND HANDLE SOD ACCORDING TO REQUIREMENTS IN TPI'S "SPECIFICATIONS FOR TURFGRASS SOD MATERIALS" AND "SPECIFICATIONS FOR TURFGRASS SOD TRANSPLANTING AND INSTALLATION" IN ITS "GUIDELINE SPECIFICATIONS TO TURFGRASS SODDING."
7. LAWN MAINTENANCE: BEGIN MAINTENANCE IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE UNTIL ACCEPTABLE LAWN IS ESTABLISHED, BUT FOR NOT LESS THAN 90 DAYS FROM DATE OF SUBSTANTIAL COMPLETION. MAINTAIN AND ESTABLISH LAWN BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING, AND OTHER OPERATIONS. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS TO PRODUCE A UNIFORMLY SMOOTH LAWN. WATERING: PROVIDE AND MAINTAIN TEMPORARY IRRIGATION SYSTEM TO CONVEY WATER FROM SOURCES AND TO KEEP LAWN UNIFORMLY MOIST TO A DEPTH OF 4 INCHES.
8. WATER LAWN AT A MINIMUM RATE OF 1 INCH PER WEEK OR AS NECESSARY TO PROVIDE A HEALTHY GREEN APPEARANCE. A DEEP ROOT SYSTEM IS DESIRED THEREFORE DO NOT WATER LAWNS AFTER ESTABLISHMENT MORE THAN EVERY OTHER DAY.
9. MOW LAWN AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN 33 PERCENT OF GRASS HEIGHT. REMOVE NO MORE THAN 33 PERCENT OF GRASS-LEAF GROWTH IN INITIAL OR SUBSEQUENT MOWINGS. DO NOT DELAY MOWING UNTIL GRASS BLADES BEND OVER AND BECOME MATTED. DO NOT MOW WHEN GRASS IS WET. SCHEDULE INITIAL AND SUBSEQUENT MOWINGS TO MAINTAIN THE FOLLOWING GRASS HEIGHT: MOW GRASS 2 INCHES HIGH IN SPRING AND FALL AND 2 ½ INCHES HIGH IN THE SUMMER. TRIM AND EDGE ALONG WALKS, WALLS, ETC.
10. LAWN POSTFERTILIZATION: APPLY FERTILIZER AFTER INITIAL MOWING AND WHEN GRASS IS DRY.
11. TURFGRASS SPECIES: GRASS SPECIES, AS FOLLOWS, WITH NOT LESS THAN 95 PERCENT GERMINATION, NOT LESS THAN 85 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED: MOST CURRENT AVAILABLE KANSAS STATE FESCUE TRIAL MIX, RATED IN TOP 1/3 OF VARIETIES TESTED FOR VISUAL APPEARANCE AVERAGE THROUGHOUT THE YEAR OR APPROVED EQUAL.
12. TOPSOIL: ASTM D 5268, PH RANGE OF 5.5 TO 7, A MINIMUM OF 4 PERCENT ORGANIC MATERIAL CONTENT; FREE OF STONES 1 INCH OR LARGER IN ANY DIMENSION AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.
13. TOPSOIL SOURCE: REUSE SURFACE SOIL STOCKPILED ON-SITE. VERIFY SUITABILITY OF STOCKPILED SURFACE SOIL TO PRODUCE TOPSOIL. CLEAN SURFACE SOIL OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH. SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF-SITE SOURCES WHEN QUANTITIES ARE INSUFFICIENT. OBTAIN TOPSOIL DISPLACED FROM NATURALLY WELL-DRAINED CONSTRUCTION OR MINING SITES WHERE TOPSOIL OCCURS AT LEAST 4 INCHES DEEP; DO NOT OBTAIN FROM BOGS OR MARSHES. TOPSOIL TO BE PLACED IN AN 8" LIFT IN ALL PLANTING BED AREAS.
14. AMEND SOIL AS NECESSARY TO MEET TOPSOIL REQUIREMENTS OF ASTM D 5268.
15. EXAMINE AREAS TO RECEIVE LAWNS AND GRASS FOR COMPLIANCE WITH REQUIREMENTS AND OTHER CONDITIONS AFFECTING PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
16. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES, TREES, SHRUBS, AND PLANTINGS FROM DAMAGE CAUSED BY PLANTING OPERATIONS. PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS. ELIMINATE COMPETING GRASS VEGETATION IN ALL AREAS TO BE IMPROVED WITH "ROUNDUP" OR AN APPROVED EQUAL ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. SEVERAL APPLICATIONS MAY BE NECESSARY. WORK TO REMOVE COMPETING VEGETATION, SHALL BEGIN SEVERAL MONTHS BEFORE SODDING OPERATIONS COMMENCE.
17. LIMIT SOD SUBGRADE PREPARATION TO AREAS TO BE PLANTED THE SAME OR FOLLOWING DAY. NEWLY GRADED AREAS: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY. APPLY FERTILIZER DIRECTLY TO SUBGRADE BEFORE LOOSENING. SPREAD TOPSOIL IF NECESSARY, APPLY SOIL AMENDMENTS AND FERTILIZER ON SURFACE, AND THOROUGHLY BLEND.
18. LEGALLY DISPOSE OF WASTE MATERIAL, INCLUDING GRASS, VEGETATION AND TURF OFF OWNER'S PROPERTY.
19. PRIOR TO LAYING SOD THE CONTRACTOR SHALL DEMONSTRATE TO THE OWNER AND OWNER'S REPRESENTATIVE THAT WATER IS AVAILABLE AND IN A WORKING ORDER TO ADEQUATELY COVER ALL SODDED AREAS. THE LANDSCAPE CONTRACTOR MUST COORDINATE WITH THE GENERAL CONTRACTOR AND OWNER, TO CONNECT TO BUILDING HOSE BIBS OR OTHER MEANS PRIOR TO SOD INSTALLATION. LAY SOD WITHIN 24 HOURS OF HARVESTING. DO NOT LAY SOD IF DORMANT OR IF GROUND IS FROZEN OR MUDDY.
20. LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD; DO NOT STRETCH OR OVERLAP. STAGGER SOD STRIPS OR PADS TO OFFSET JOINTS IN ADJACENT COURSES. AVOID DAMAGE TO SUBGRADE OR SOD DURING INSTALLATION. TAMP AND ROLL LIGHTLY TO ENSURE CONTACT WITH SUBGRADE, ELIMINATE AIR POCKETS, AND FORM A SMOOTH SURFACE. WORK SIFTED SOIL OR FINE SAND INTO MINOR CRACKS BETWEEN PIECES OF SOD; REMOVE EXCESS TO AVOID SMOTHERING SOD AND ADJACENT GRASS. DO NOT ALLOW EDGES OF SOD TO TURN UP WHEN INSTALLING.LAY SOD ACROSS ANGLE OF SLOPES EXCEEDING 1:3. ANCHOR SOD ON SLOPES EXCEEDING 1:6 WITH WOOD PEGS OR STEEL STAPLES SPACED AS RECOMMENDED BY SOD MANUFACTURER BUT NOT LESS THAN 2 ANCHORS PER SOD STRIP TO PREVENT SLIPPAGE.SATURATE SOD WITH FINE WATER SPRAY WITHIN TWO HOURS OF PLANTING. DURING FIRST WEEK, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF 1-1/2 INCHES BELOW SOD.SATISFACTORY SODDED LAWN: WITHIN 60 DAYS AND AT END OF MAINTENANCE PERIOD, A HEALTHY, WELL-ROOTED, EVEN-COLORED, VIABLE LAWN HAS BEEN ESTABLISHED, FREE OF WEEDS, OPEN JOINTS, BARE AREAS, AND SURFACE IRREGULARITIES.
21. REESTABLISH LAWNS THAT DO NOT COMPLY WITH REQUIREMENTS AND CONTINUE MAINTENANCE UNTIL LAWNS ARE SATISFACTORY. SATISFACTORY SODDED LAWN: WITHIN 60 DAYS AND AT END OF MAINTENANCE PERIOD, A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING (90 PERCENT OVER ANY 10 SQ. FT. AND BARE SPOTS NOT EXCEEDING 5 BY 5 INCHES).
22. PROMPTLY REMOVE SOIL AND DEBRIS CREATED BY LAWN WORK FROM PAVED AREAS. CLEAN WHEELS OF VEHICLES BEFORE LEAVING SITE TO AVOID TRACKING SOIL ONTO ROADS, WALKS, OR OTHER PAVED AREAS. ERECT BARRICADES AND WARNING SIGNS AS REQUIRED TO PROTECT NEWLY PLANTED AREAS FROM TRAFFIC. MAINTAIN BARRICADES THROUGHOUT MAINTENANCE PERIOD AND REMOVE AFTER LAWN IS ESTABLISHED. REMOVE EROSION CONTROL MEASURES AFTER GRASS ESTABLISHMENT PERIOD.



NOTE:
DO NOT ALLOW PERENNIALS TO DRY OUT. KEEP MOIST AND PROTECTED FROM DAMAGE PRIOR TO PLANTING. WATER THOROUGHLY TO FINISH PACKING SOIL AROUND ROOTS.

SPACING DIAGRAM

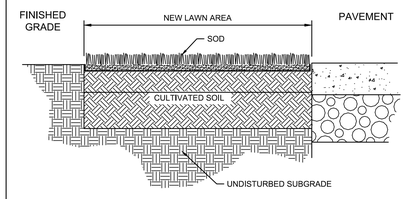
PERENNIAL PLANTING
N.T.S.



NOTE:
BALL OF PLANT TO BE KEPT MOIST AND PROTECTED FROM DAMAGE PRIOR TO PLANTING. ADD ROOT STIMULATOR TO SURFACE IMMEDIATELY AFTER PLANTING AS PER THE MANUFACTURER'S RECOMMENDATIONS. PLANTING DEPTH OF ROOTBALL SHALL BE EQUAL TO ITS ORIGINAL PLANTING DEPTH AT NURSERY. DO NOT OVER TIGHTEN GUYS.

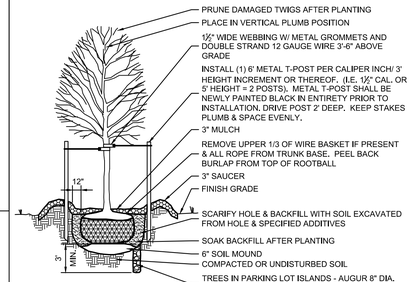
SHRUB PLANTING ADJACENT TO CURB
N.T.S.

SOD INSTALLATION NOTE:
1. FINISH GRADES SHALL BE ACCURATE.
2. CULTIVATE ENTIRE AREA TO A MINIMUM 6" DEPTH, EXCEPTIONS TO AREAS MAY BE MADE IF TREE ROOTS ARE ENCOUNTERED WITHIN THE DRIPLINE OF EXISTING TREES. HAND RAKE SMOOTH.
3. ADD ADDITIVES (AS PER SOIL TEXT RECOMMENDATIONS) AND TILL INTO SOIL.
4. LAY AND ROLL SOD. WATER THOROUGHLY.



SOD INSTALLATION
N.T.S.

NOTE:
BALL OF PLANT TO BE KEPT MOIST AND PROTECTED FROM DAMAGE PRIOR TO PLANTING. ADD ROOT STIMULATOR TO SURFACE IMMEDIATELY AFTER PLANTING AS PER THE MANUFACTURER'S RECOMMENDATIONS. PLANTING DEPTH OF ROOTBALL SHALL BE EQUAL TO ITS ORIGINAL PLANTING DEPTH AT NURSERY. DO NOT OVER TIGHTEN GUYS.



DECIDUOUS TREE PLANTING
N.T.S.

MKEC
Overland Park, KS • 913.317.9390

BRIAN J. HOCHSTEIN
LICENSED
2024
KANSAS
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

CONSTRUCTION DOCUMENTS FOR

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

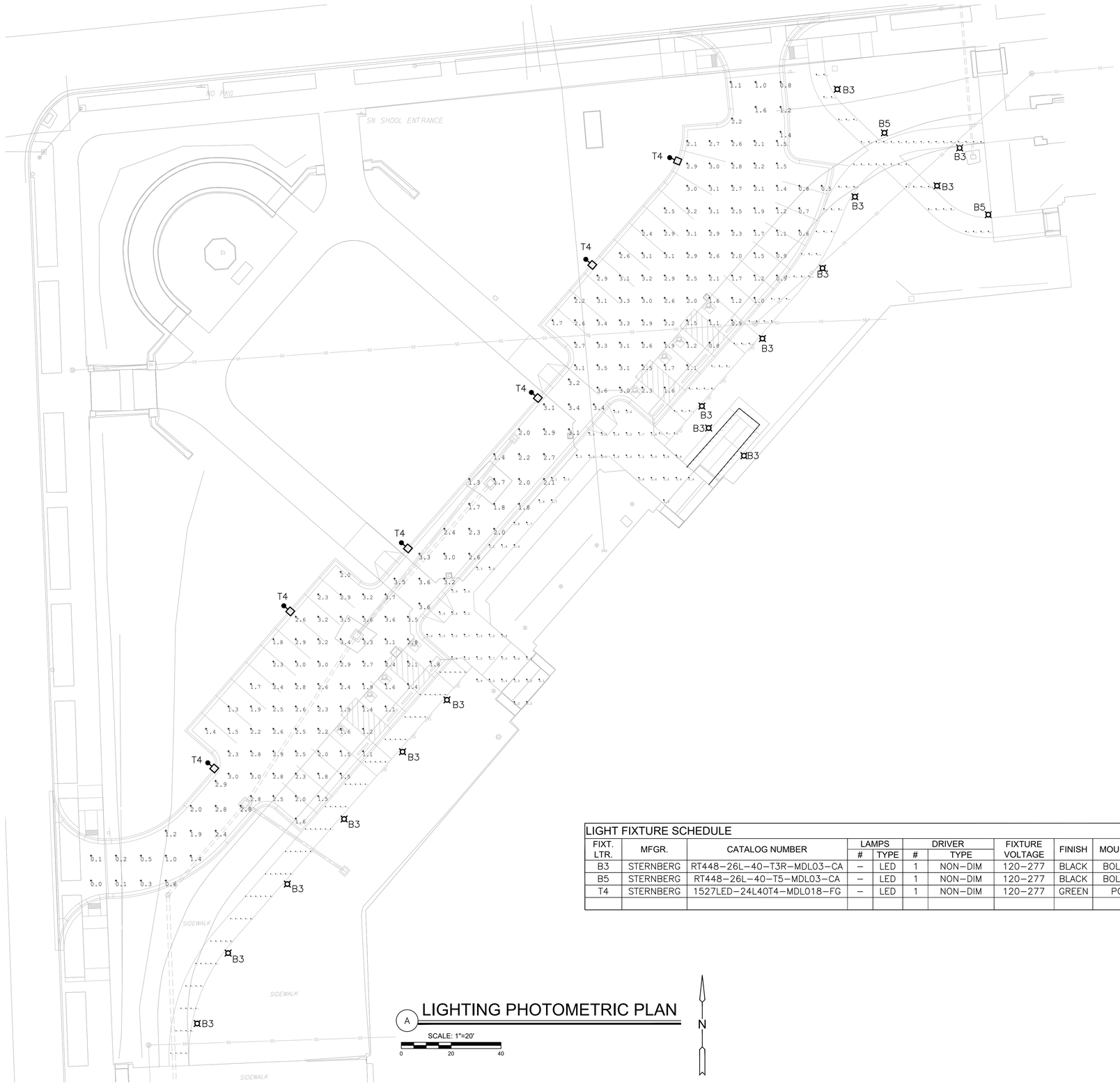
LANDSCAPE DETAILS & NOTES

PROJECT NO. 2202010801
SCALE N/A

DRAWN	DESIGNED	CHECKED
BJH	BJH	BJH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	01.31.2024
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. L02



A LIGHTING PHOTOMETRIC PLAN

SCALE: 1"=20'

0 20 40

N

LIGHT FIXTURE SCHEDULE

FIXT. LTR.	MFGR.	CATALOG NUMBER	LAMPS #	LAMPS TYPE	DRIVER #	DRIVER TYPE	FIXTURE VOLTAGE	FINISH	MOUNTING	MOUNTING HEIGHT	FIXTURE VA	REMARKS/DESCRIPTION	NOTES
B3	STERNBERG	RT448–26L–40–T3R–MDL03–CA	–	LED	1	NON–DIM	120–277	BLACK	BOLLARD	4'–0"	31	TYPE 3R LED BOLLARD	
B5	STERNBERG	RT448–26L–40–T5–MDL03–CA	–	LED	1	NON–DIM	120–277	BLACK	BOLLARD	4'–0"	31	TYPE 5 LED BOLLARD	
T4	STERNBERG	1527LED–24L40T4–MDL018–FG	–	LED	1	NON–DIM	120–277	GREEN	POLE	25'–0"	118	TYPE 4 LED SITE AREA	

MKEC
Overland Park, KS • 913.317.9390

STEVEN LEE KOEHLER
STATE OF KANSAS
PROFESSIONAL ENGINEER
2024.01.26 13:57:47 -06'00'

WYANDOTTE HIGH SCHOOL IMPROVEMENTS

CONSTRUCTION DOCUMENTS FOR

2501 MINNESOTA AVE. KANSAS CITY, KS 66102

ELECTRICAL LIGHTING PHOTOMETRICS PLAN

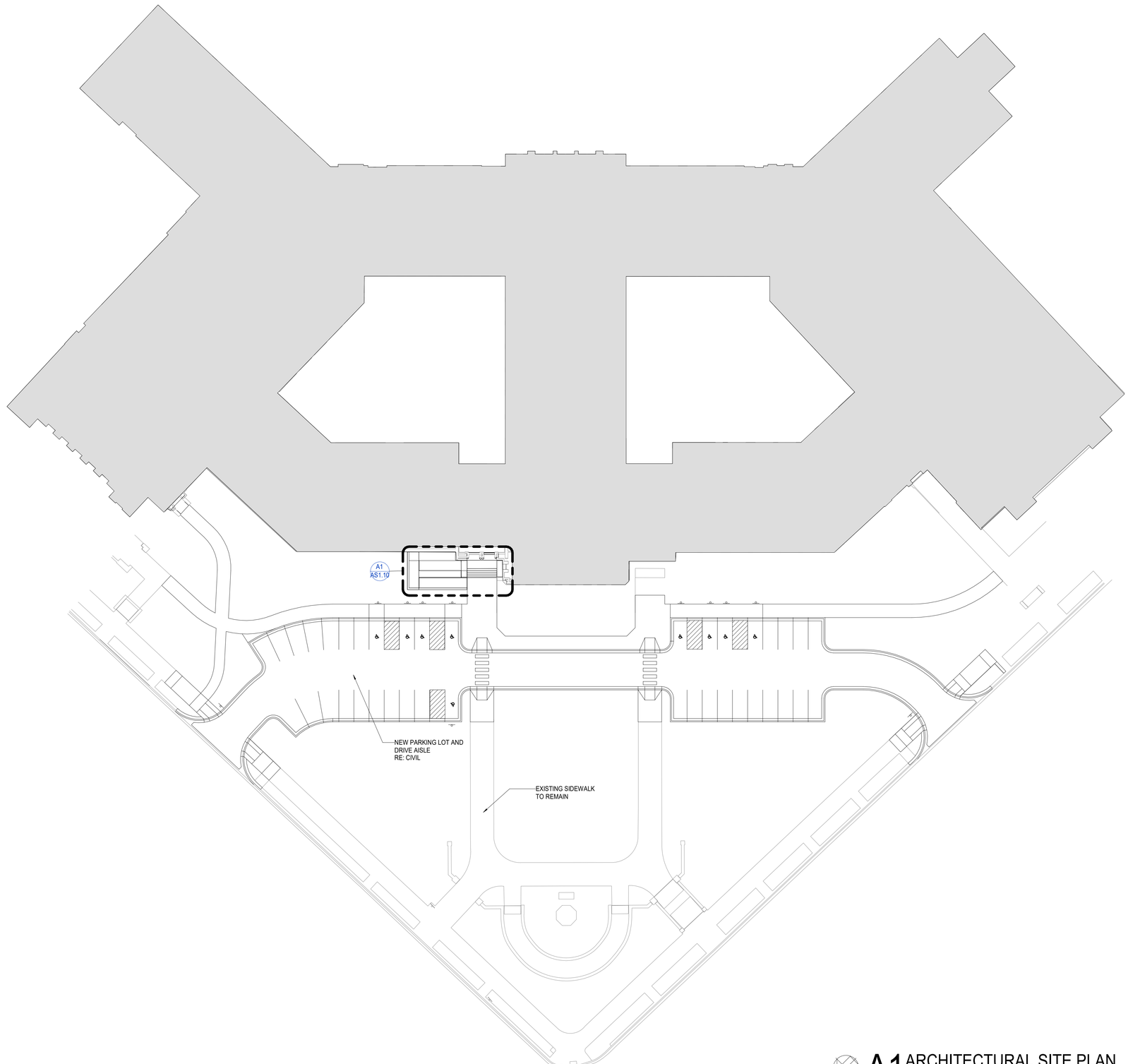
PROJECT NO. 2202010801

SCALE AS NOTED

DRAWN	DESIGNED	CHECKED
JAC	GAKH	GAKH

NO.	REVISION	DATE
	CONSTRUCTION DOCUMENTS	02.01.24
	FINAL DEVELOPMENT PLANS	01.26.24

SHEET NO. E01



NORTH

A1 ARCHITECTURAL SITE PLAN
SCALE: 1" = 30'-0"

Architect
INCITE DESIGN STUDIO
7200 WEST 75TH STREET
OVERLAND PARK, KS 66204
913.381.4437

Civil
MKEC ENGINEERING, INC.
11827 W 112TH STREET
OVERLAND PARK, KS 66210
913.317.9390

Mech., Plumb., Elec., Telecom.
RTM ENGINEERING CONSULTANTS
9225 INDIAN CREEK PKWY., SUITE 1075
OVERLAND PARK, KS 66210
913.322.1400

Construction Manager
UNIVERSAL CONSTRUCTION
1615 ARGENTINE BLVD
KANSAS CITY, KS 66105
913.342.1150

Licensed Architect
DUANE CASH

License
KS #7083

Cert. of Authority
A-543
INCITE DESIGN STUDIO, LLC

NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

Project Number
24-304

Issue Date
1/31/2024

Revision No.	Description	Date Issued

Area Plan

Sheet Name
ARCHITECTURAL SITE PLAN - OVERALL

Sheet Number
AS1.00

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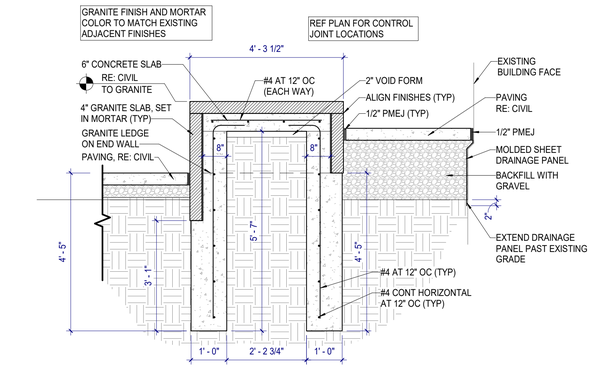
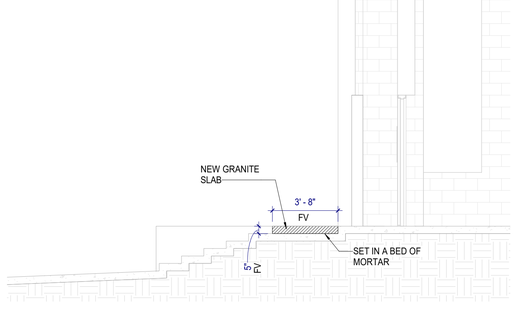
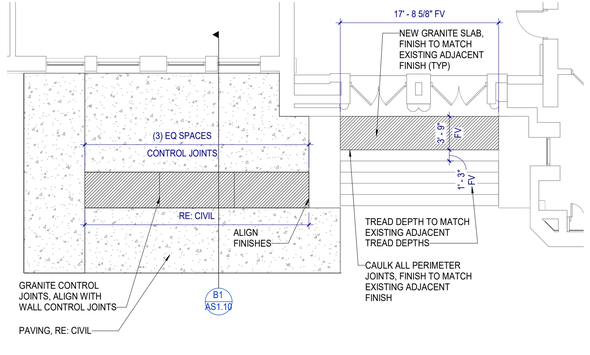


B1 RAMP SECTION
SCALE: 1/2" = 1'-0"



A3 ENTRY SECTION 1
SCALE: 1/4" = 1'-0"



A1 ENTRY RAMP ENLARGED PLAN
SCALE: 1/8" = 1'-0"

Architect
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7200 WEST 75TH STREET
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WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

Project Number
24-304

Issue Date
1/31/2024

Revision No.	Description	Date Issued

Area Plan

Sheet Name
ENTRY RAMP AND DETAILS

Sheet Number
AS1.10

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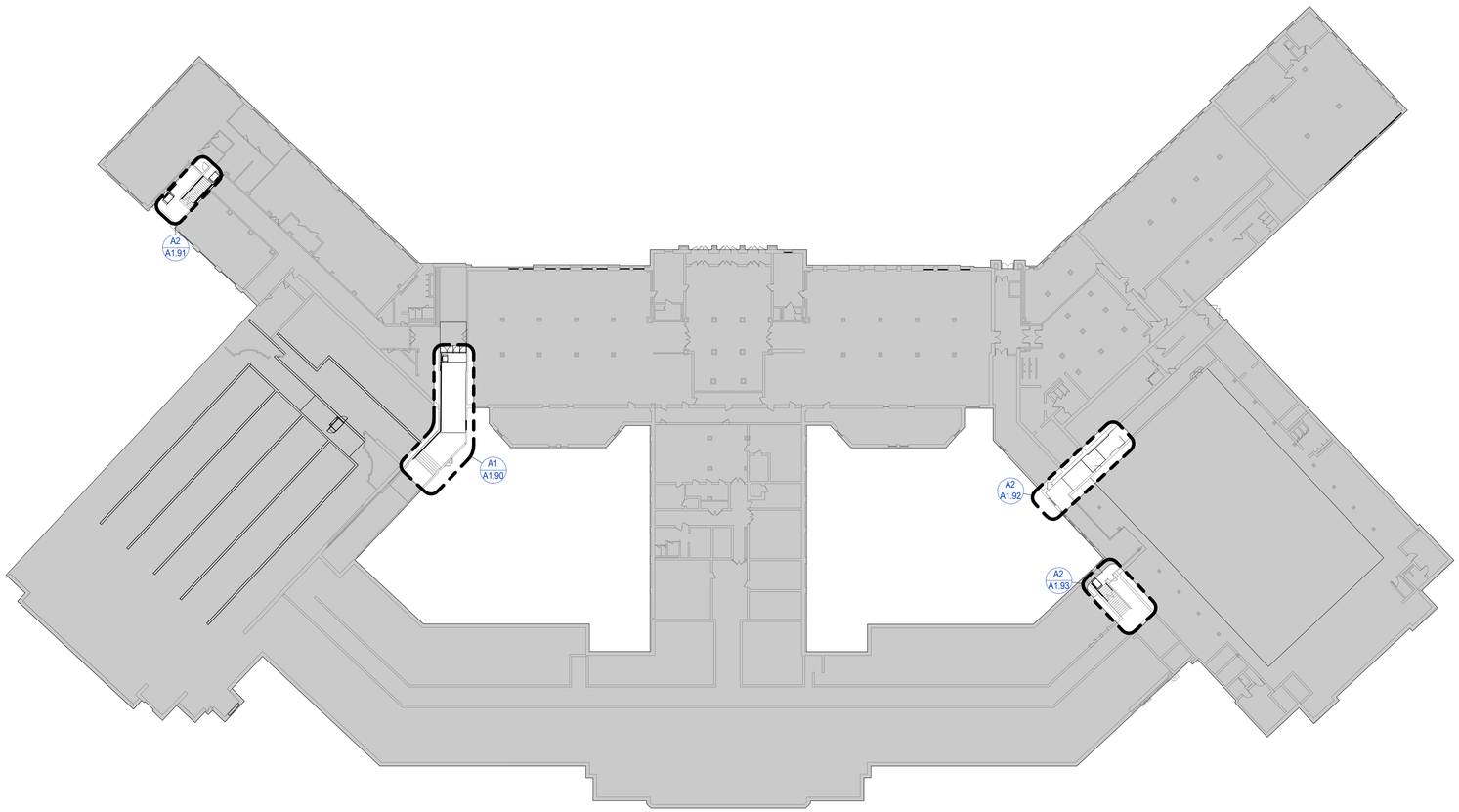
FLOOR PLAN NOTES

1. NOTES APPLY TO ALL FLOOR PLAN SHEETS.
2. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUD, FACE OF CONCRETE WALL, FACE OF CMU WALL, FACE OF FRAME, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
3. GC TO VERIFY ALL DIMENSIONS.



NORTH

B2 LOWER LEVEL FLOOR PLAN - OVERALL

SCALE: 1/32" = 1'-0"

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1/31/2024

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Area Plan

Sheet Name
LOWER LEVEL FLOOR PLAN - OVERALL

Sheet Number
A1.00

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FLOOR PLAN NOTES

1. NOTES APPLY TO ALL FLOOR PLAN SHEETS.
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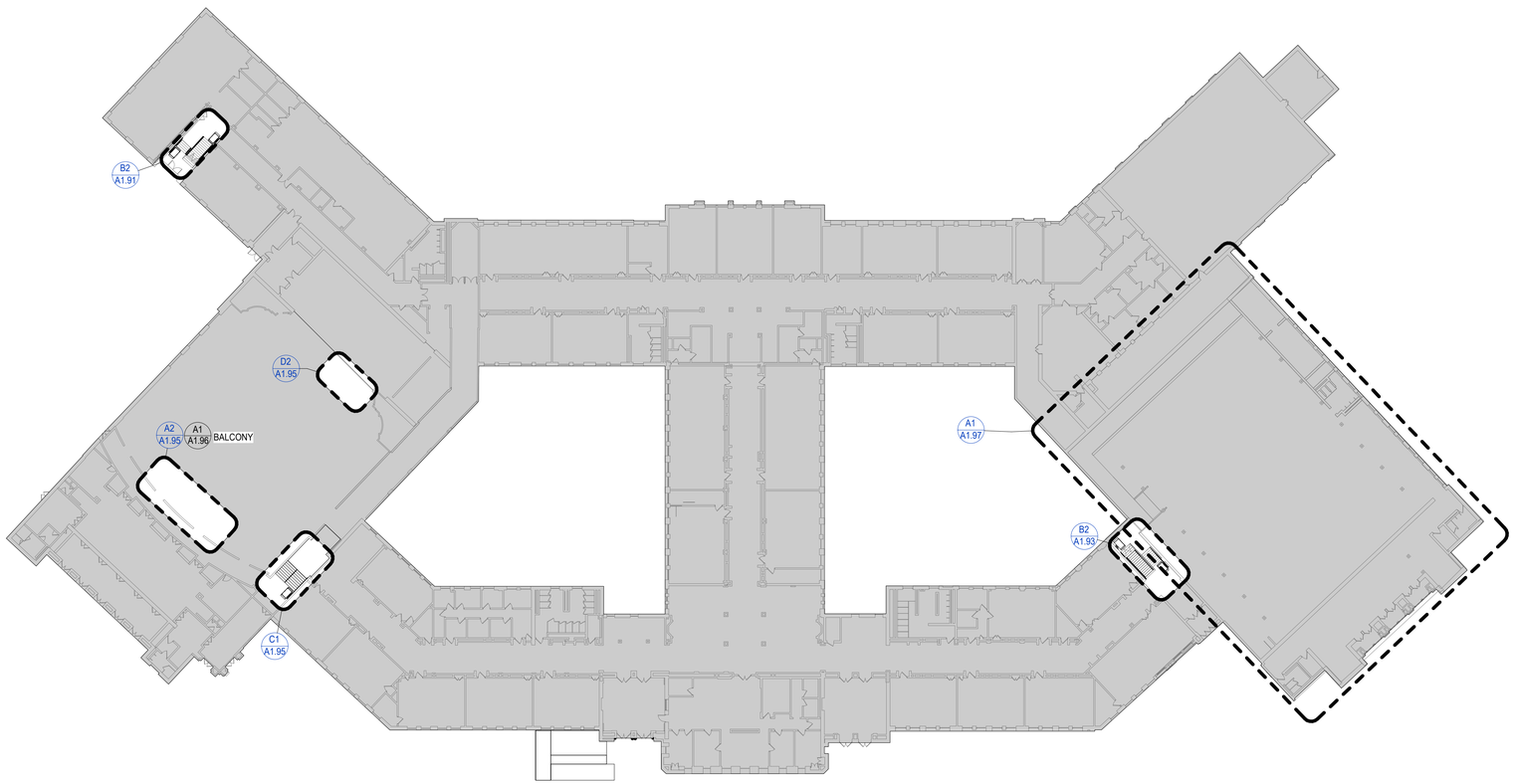
3. GC TO VERIFY ALL DIMENSIONS.



A1 MAIN LEVEL FLOOR PLAN - OVERALL
NORTH
SCALE: 1/32" = 1'-0"

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architects building relationships

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Area Plan

Sheet Name
MAIN LEVEL FLOOR PLAN - OVERALL

Sheet Number
A1.10

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DOOR AND FRAME SCHEDULE REMARKS

1. HM FRAME TO REMAIN. GC TO VERIFY OPENING SIZE.

KEYNOTES

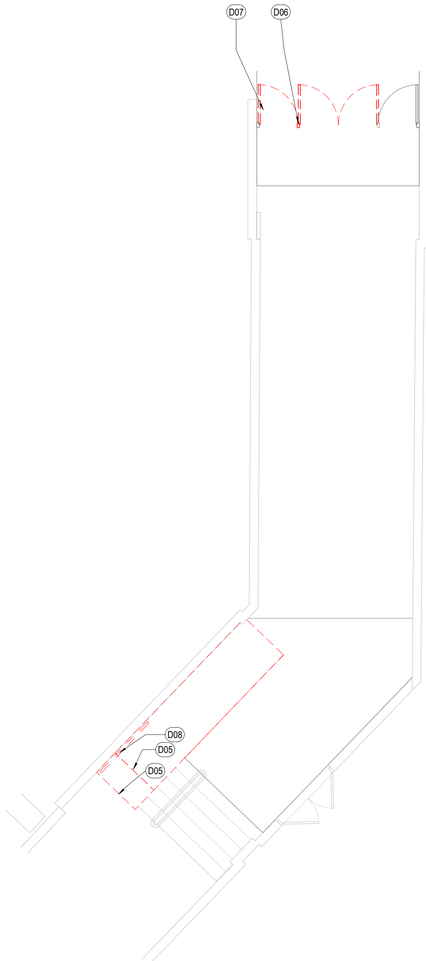
05	INCLINED LIFT FOR STRAIGHT STAIR. RE: SPECS
12	REINSTALLED SALVAGED DOOR PANELS.
14	REINSTALL SALVAGE MULLION AT LOCATION FOR PROPER DOOR FUNCTION.
D05	REMOVE EXISTING RAMP. PATCH AND REPAIR ADJACENT FINISHES.
D06	REMOVE AND SALVAGE MULLION FOR REINSTALLATION.
D07	REMOVE AND SALVAGE DOOR PANELS, HM FRAME TO REMAIN
D08	REMOVE HANDRAIL. PATCH AND REPAIR SURFACES.

FLOOR PLAN NOTES

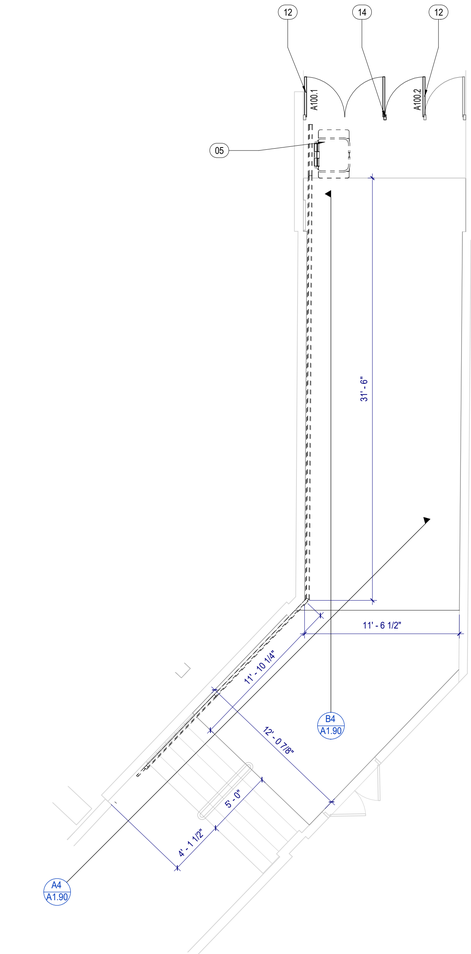
1. NOTES APPLY TO ALL FLOOR PLAN SHEETS.
2. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUD, FACE OF CONCRETE WALL, FACE OF CMU WALL, FACE OF FRAME, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
3. GC TO VERIFY ALL DIMENSIONS.

B4 LIFT SECTION
SCALE: 1/4" = 1'-0"

A4 LIFT SECTION
SCALE: 1/4" = 1'-0"



NORTH A3 PAC LIFT DEMO PLAN
SCALE: 3/16" = 1'-0"



NORTH A1 PAC LIFT ENLARGED PLAN
SCALE: 3/16" = 1'-0"

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WYANDOTTE HIGH SCHOOL RENOVATION

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KANSAS CITY, KS

Project Phase
PERMIT SET

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24-304

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Area Plan

Sheet Name
PAC LIFT AND DETAILS

Sheet Number
A1.90

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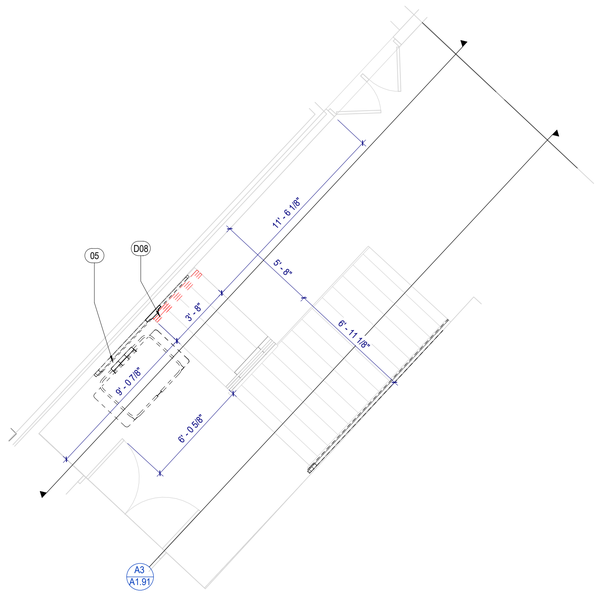
KEYNOTES

05	INCLINED LIFT FOR STRAIGHT STAIR. RE: SPECS
D08	REMOVE HANDRAIL. PATCH AND REPAIR SURFACES.

FLOOR PLAN NOTES

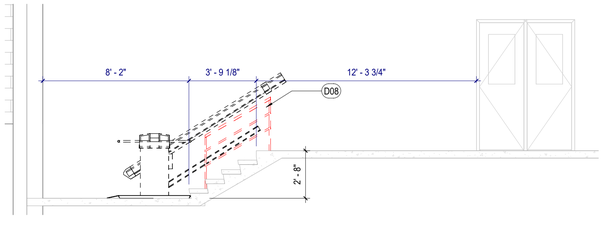
1. NOTES APPLY TO ALL FLOOR PLAN SHEETS.
2. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUD, FACE OF CONCRETE WALL, FACE OF CMU WALL, FACE OF FRAME, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
3. GC TO VERIFY ALL DIMENSIONS.



B2 EAST STAIR MAIN LEVEL PLAN

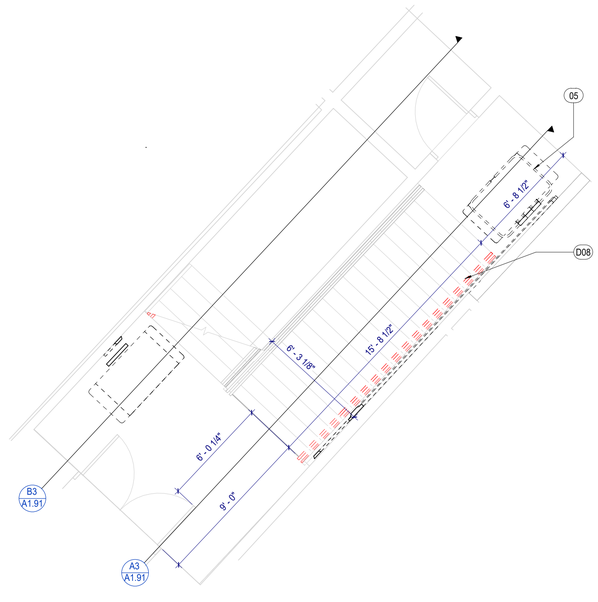
SCALE: 1/4" = 1'-0"

NORTH



B3 EAST STAIR SECTION

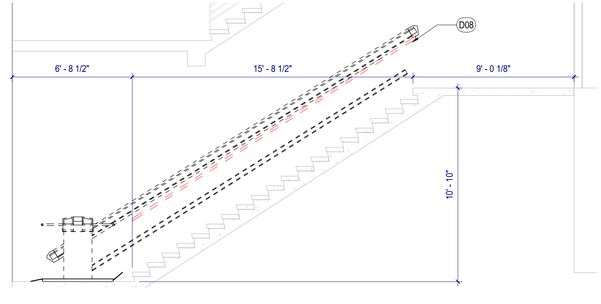
SCALE: 1/4" = 1'-0"



A2 EAST STAIR LOWER LEVEL PLAN

SCALE: 1/4" = 1'-0"

NORTH



A3 EAST STAIR SECTION

SCALE: 1/4" = 1'-0"

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2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

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24-304

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1/31/2024

Revision No.	Description	Date Issued

Area Plan

Sheet Name
EAST STAIRS AND DETAILS

Sheet Number
A1.91

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KEYNOTES

01	RELOCATED MECHANICAL EQUIPMENT, RE: MECHANICAL.
07	4" CONCRETE SLAB ATOP GEOFOAM, REINFORCE SLAB WITH 6X6-W2.9/W2.9 WWF. POLISHED CONCRETE. GRIND AND STAIN TO MATCH EXISTING ADJACENT FINISHES.
15	SURFACE MOUNTED STAINLESS STEEL HANDRAIL, RETURN TO WALL.
D03	REMOVE EXISTING CONCRETE STEPS.
D04	REMOVE AND SALVAGE HVAC UNIT FOR REINSTALLATION. REF MECH.

FLOOR PLAN NOTES

1. NOTES APPLY TO ALL FLOOR PLAN SHEETS.
2. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUD, FACE OF CONCRETE WALL, FACE OF CMU WALL, FACE OF FRAME, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
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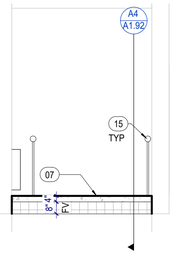
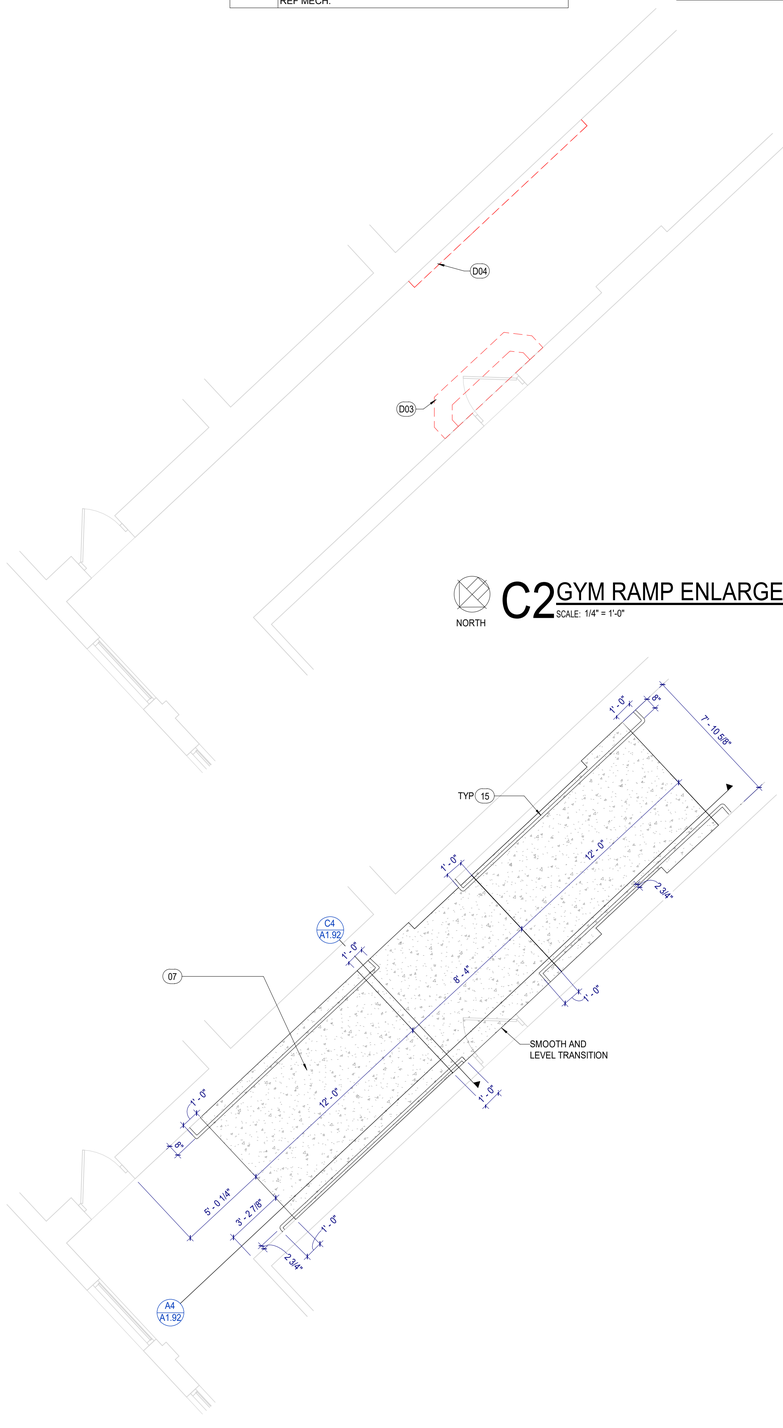
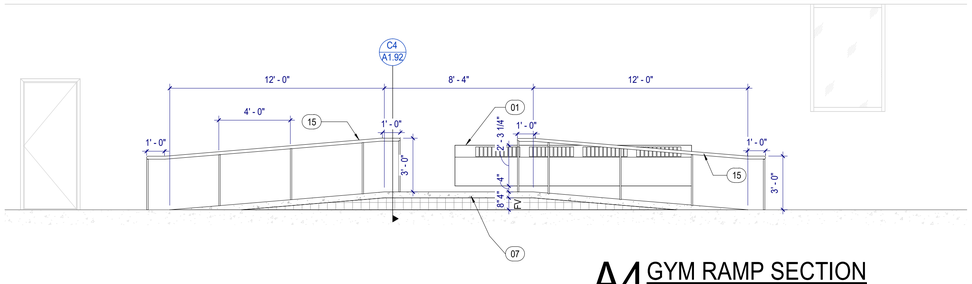


C4 GYM RAMP SECTION
SCALE: 1/4" = 1'-0"



NORTH C2 GYM RAMP ENLARGED PLAN - DEMO
SCALE: 1/4" = 1'-0"



A4 GYM RAMP SECTION
SCALE: 1/4" = 1'-0"

NORTH A2 GYM RAMP ENLARGED PLAN
SCALE: 1/4" = 1'-0"

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WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
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Area Plan

Sheet Name
GYM RAMP AND DETAILS

Sheet Number
A1.92

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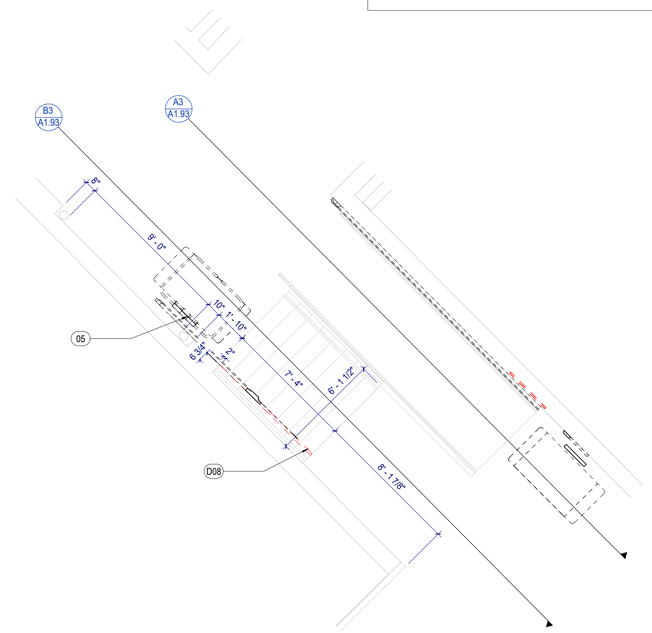
KEYNOTES	
05	INCLINED LIFT FOR STRAIGHT STAIR. RE: SPECS
D08	REMOVE HANDRAIL. PATCH AND REPAIR SURFACES.

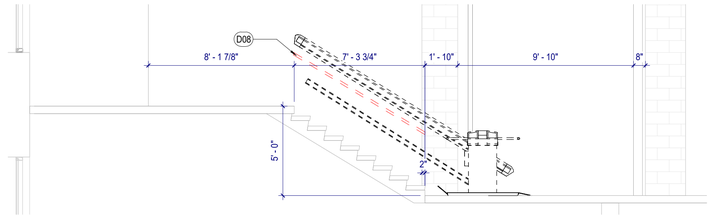
FLOOR PLAN NOTES

1. NOTES APPLY TO ALL FLOOR PLAN SHEETS.
2. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUD, FACE OF CONCRETE WALL, FACE OF CMU WALL, FACE OF FRAME, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
3. GC TO VERIFY ALL DIMENSIONS.



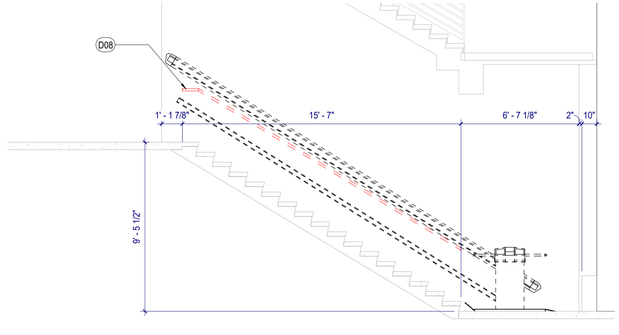
B2 SOUTH STAIRS MAIN LEVEL PLAN

NORTH SCALE: 1/4" = 1'-0"



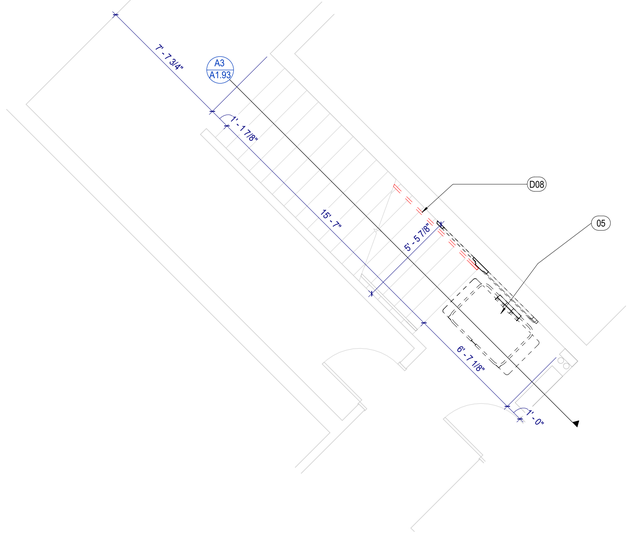
B3 SOUTH STAIR SECTION

SCALE: 1/4" = 1'-0"



A3 SOUTH STAIR SECTION

SCALE: 1/4" = 1'-0"



A2 SOUTH STAIRS LOWER LEVEL PLAN

NORTH SCALE: 1/4" = 1'-0"

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Area Plan

Sheet Name
SOUTH STAIRS AND DETAILS

Sheet Number
A1.93

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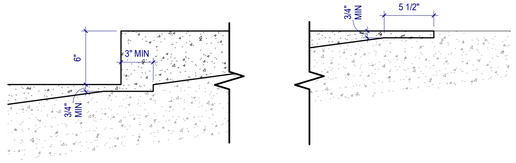
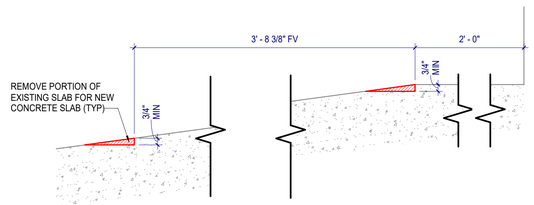
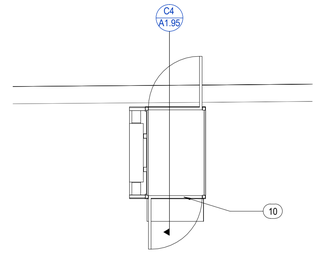


D5 CONCRETE EDGE DETAIL
SCALE: 1 1/2" = 1'-0"



D4 CONCRETE DEMO DETAIL
SCALE: 1 1/2" = 1'-0"



D2 PAC STAGE LIFT ENLARGED PLAN
SCALE: 1/4" = 1'-0"

FLOOR PLAN NOTES

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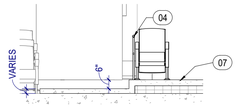
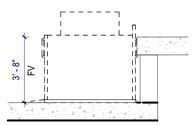
2. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUD, FACE OF CONCRETE WALL, FACE OF CMU WALL, FACE OF FRAME, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
3. GC TO VERIFY ALL DIMENSIONS.

KEYNOTES

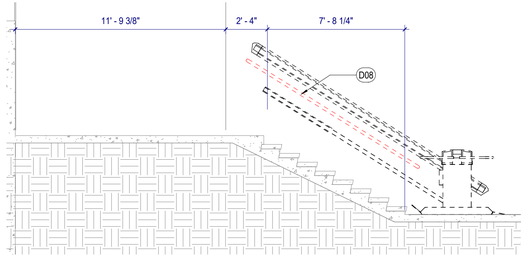
03	REINSTALLED SEAT.
04	PERIMETER RAILING RE: SHEET A1.96.
05	INCLINED LIFT FOR STRAIGHT STAIR. RE: SPECS
07	4" CONCRETE SLAB ATOP GEOFOAM, REINFORCE SLAB WITH 6X6-W2.9/W2.9 WWF. POLISHED CONCRETE. GRIND AND STAIN TO MATCH EXISTING ADJACENT FINISHES.
10	1 1/2" STEEL TUBE, SHOP PRIME, FIELD PAINTED. FINISH TO MATCH EXISTING ADJACENT FINISHES.
D01	REMOVE FLOOR FINISH.
D02	REMOVE AND SALVAGE SEATS FOR REINSTALLATION. REF PLANS FOR LOCATION. COORDINATE REINSTALLED SEATS AND FINAL LOCATION OF REMAINING SEATS WITH OWNER.
D08	REMOVE HANDRAIL. PATCH AND REPAIR SURFACES.



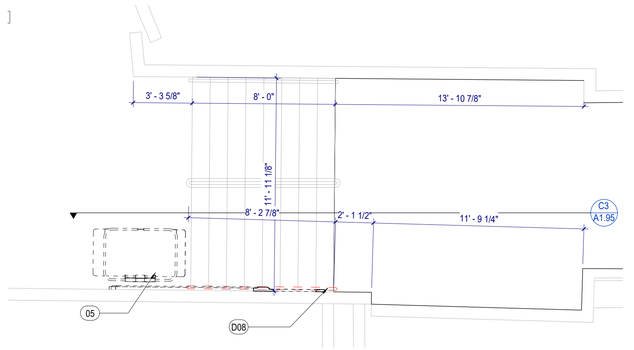
C5 ACCESSIBLE SEATING SECTION
SCALE: 1/4" = 1'-0"



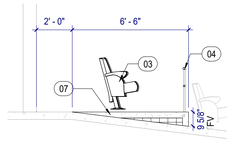
C4 PAC STAGE LIFT SECTION.
SCALE: 1/4" = 1'-0"



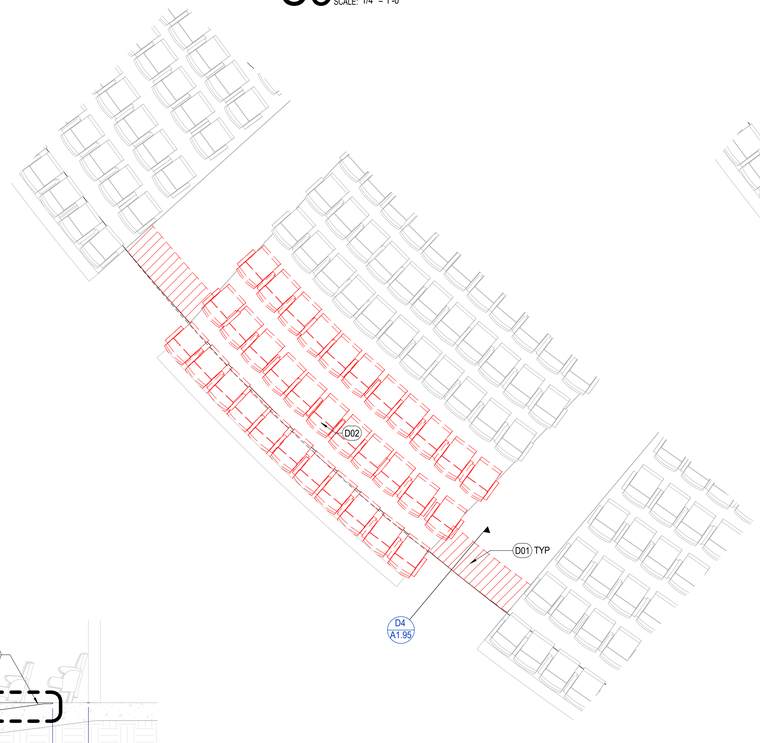
C3 PAC STAIR SECTION
SCALE: 1/4" = 1'-0"

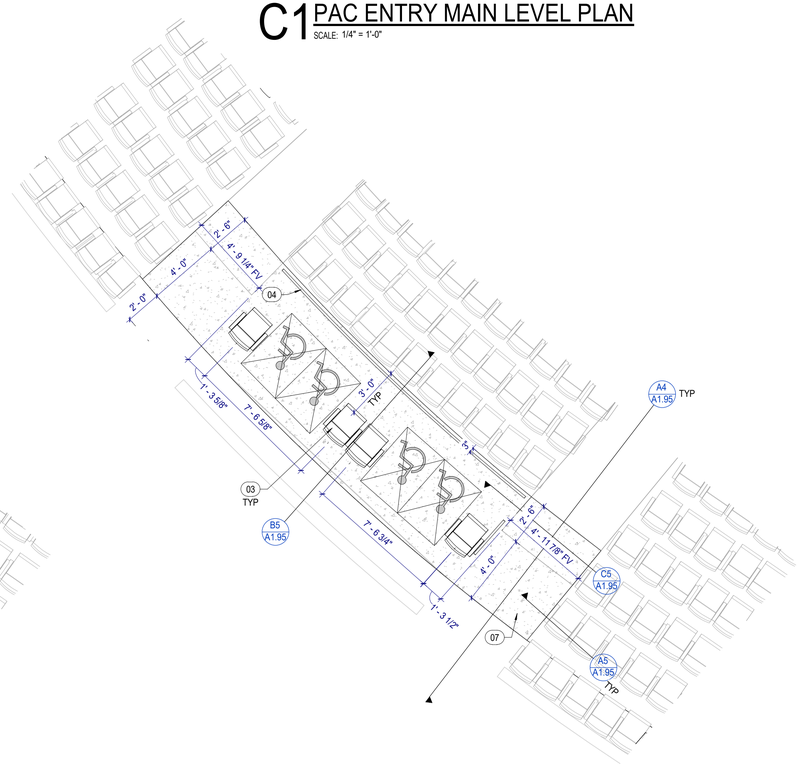


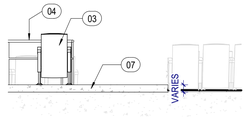
C1 PAC ENTRY MAIN LEVEL PLAN
SCALE: 1/4" = 1'-0"



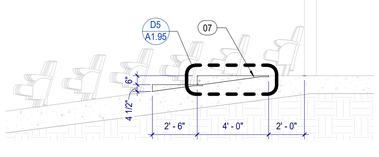
B5 ACCESSIBLE SEATING SECTION
SCALE: 1/4" = 1'-0"







A5 ACCESSIBLE SEATING SECTION
SCALE: 1/4" = 1'-0"



A4 ACCESSIBLE SEATING SECTION
SCALE: 1/4" = 1'-0"

NORTH

A3 PAC MAIN LEVEL ENLARGED PLAN - DEMO
SCALE: 1/4" = 1'-0"

NORTH

A2 PAC MAIN LEVEL ENLARGED PLAN
SCALE: 1/4" = 1'-0"

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NOT FOR CONSTRUCTION

WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

Project Number
24-304

Issue Date
1/31/2024

Revision No.	Description	Date Issued

Area Plan

Sheet Name
PAC MAIN LEVEL SEATING AND STAGE LIFT

Sheet Number
A1.95

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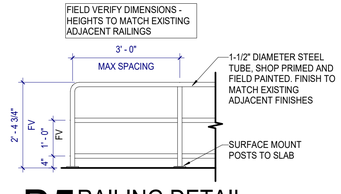
KEYNOTES

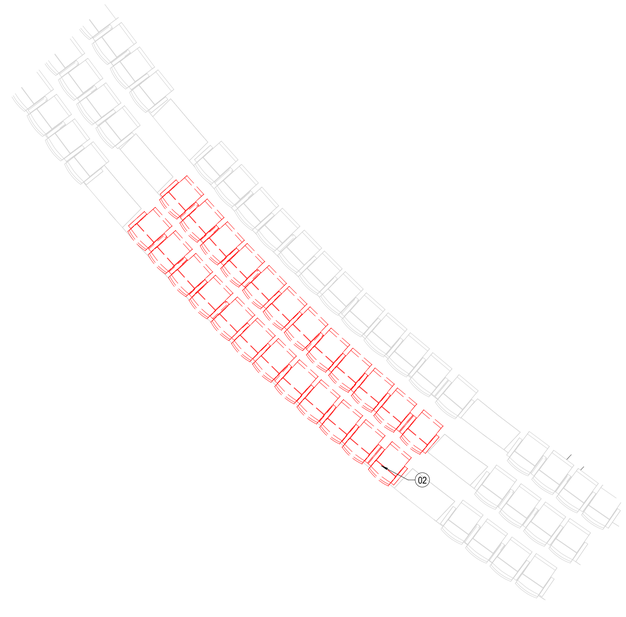
02	EXISTING CONDUIT ON WALL.
03	REINSTALLED SEAT.
04	PERIMETER RAILING RE: SHEET A1.96.
07	4" CONCRETE SLAB ATOP GEOFOAM, REINFORCE SLAB WITH 6X6-W2.9/W2.9 WWF. POLISHED CONCRETE. GRIND AND STAIN TO MATCH EXISTING ADJACENT FINISHES.

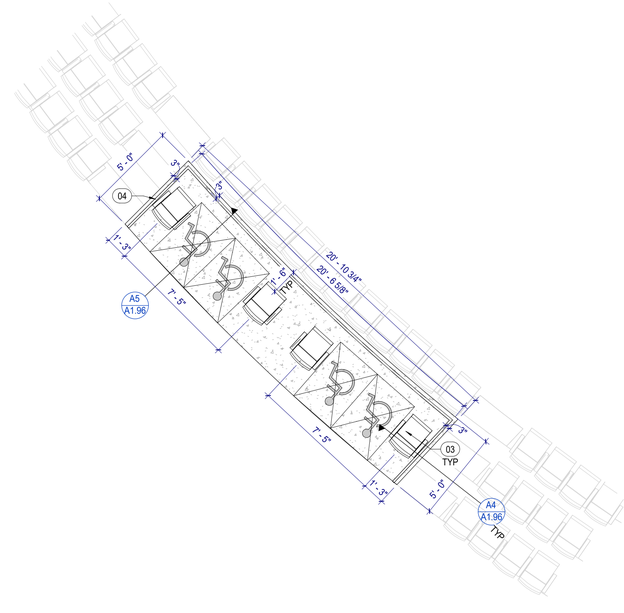
FLOOR PLAN NOTES

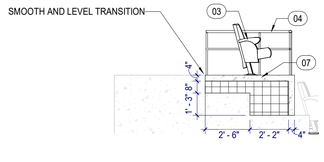
1. NOTES APPLY TO ALL FLOOR PLAN SHEETS.
2. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUD, FACE OF CONCRETE WALL, FACE OF CMU WALL, FACE OF FRAME, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
3. GC TO VERIFY ALL DIMENSIONS.



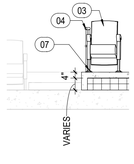
B5 RAILING DETAIL
SCALE: 1/2" = 1'-0"







A5 PAC BALCONY SECTION
SCALE: 1/4" = 1'-0"



A4 PAC BALCONY SECTION
SCALE: 1/4" = 1'-0"

NORTH

A3 PAC BALCONY ENLARGED PLAN - DEMO
SCALE: 1/4" = 1'-0"

NORTH

A1 PAC BALCONY ENLARGED PLAN
SCALE: 1/4" = 1'-0"

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Area Plan

Sheet Name
PAC BALCONY LEVEL SEATING ENLARGED PLAN

Sheet Number
A1.96

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FLOOR PLAN NOTES

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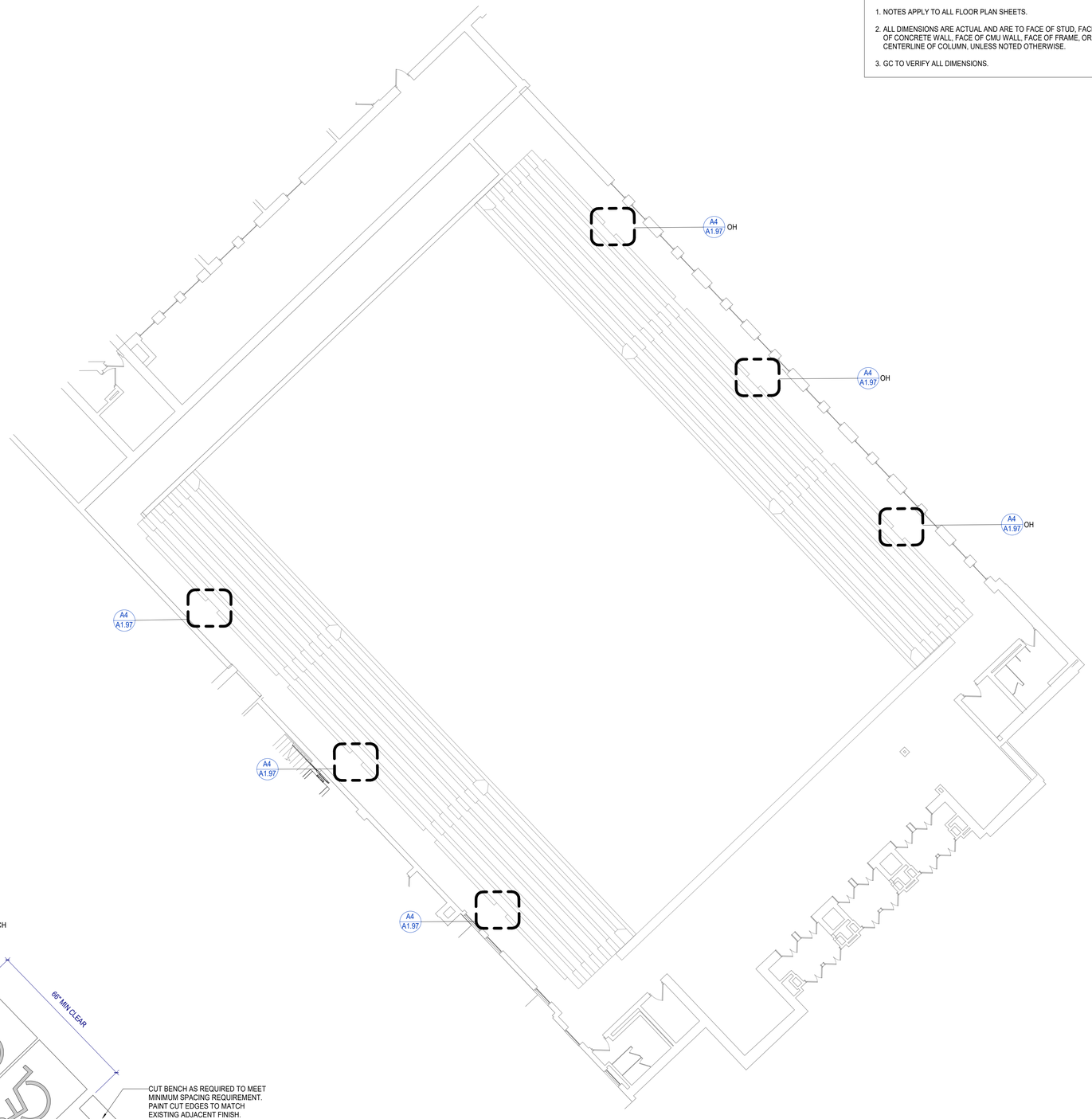

A4 GYM BENCH
SCALE: 1/2" = 1'-0"

NORTH

A1 GYM MAIN LEVEL SEATING
SCALE: 3/32" = 1'-0"

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Sheet Number
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LUMINAIRES:

"A" (x)	RECESSED LIGHT FIXTURE, TYPE & CONTROL ZONE
"A" (x)	LIGHT FIXTURE, TYPE & CONTROL ZONE - EMERGENCY
"A" (x,z)	LIGHT FIXTURE, TYPE & CONTROL ZONE - DUAL LEVEL SWITCHING
"A" NL	LIGHT FIXTURE AND TYPE - NIGHT LIGHT - UNSWITCHED

HORIZONTAL LINE IN SYMBOL INDICATES ORIENTATION OF CENTER "BASKET" IN ARCHITECTURAL FIXTURES WHERE APPLICABLE.

"A"	RECESSED ROUND CAN LIGHT FIXTURE AND TYPE
"A"	SUSPENDED ROUND LIGHT FIXTURE AND TYPE
"A"	WALL MOUNTED LIGHT FIXTURE AND TYPE
"A"	SURFACE MOUNTED LINEAR LIGHT FIXTURE AND TYPE
"A"	SUSPENDED LINEAR LIGHT FIXTURE AND TYPE
"D" "E" "F" J	TRACK LIGHT AND TYPE
"X" "X"	CEILING AND WALL MOUNTED EXIT LIGHT AND TYPE -ARROW INDICATES CHEVRON DIRECTION(S) -FILLED SEGMENT INDICATES FACE DIRECTION(S)
"EM"	EMERGENCY LIGHT AND TYPE
"X"	CEILING MOUNTED COMBINATION EXIT / EMERGENCY LIGHT AND TYPE
"X1"	WALL MOUNTED COMBINATION EXIT / EMERGENCY LIGHT AND TYPE
"A"	EXTERIOR POLE MOUNTED LIGHT FIXTURE AND TYPE WITH NUMBER OF HEADS INDICATED ON DRAWINGS.
(x)	DESIGNATION OF CONTROL ZONE FOR LUMINARE. DESIGNATION IS ASSOCIATED WITH BOTH CONTROL DEVICES AND LUMINAIRES.

RACEWAYS:

	CONDUIT OR CIRCUIT CONCEALED IN CEILING OR WALL
	CONDUIT OR CIRCUIT CONCEALED IN FLOOR SLAB
	EXPOSED CONDUIT OR CIRCUIT
	EXPOSED METAL RACEWAY - WIREMOLD
	HOME RUN - LINES INDICATE NUMBER OF WIRES, ARROWS INDICATE NUMBER OF CIRCUITS. HOT NEUTRAL GROUND
X	#14 WIRE
Z	#16 WIRE
	#18 WIRE
	SHEATHED CABLE
UGE	UNDERGROUND ELECTRIC
OHE	OVERHEAD ELECTRIC
UGT	UNDERGROUND TELEPHONE
OHT	OVERHEAD TELEPHONE

WIRING DEVICES AND OUTLETS:

REFER TO SPECIFICATION SECTION 260533 RACEWAYS AND BOXES FOR INSTALLATION HEIGHTS AND COORDINATION OF LOCATION REQUIREMENTS.

$	20 AMP, SINGLE POLE, 120/277 VOLT SWITCH
$3	THREE-WAY 120/277 VOLT SWITCH
$4	FOUR-WAY 120/277 VOLT SWITCH
$P	120/277 VOLT SWITCH WITH PILOT LIGHT
$K	KEYED 120/277 VOLT SWITCH
$WP	WEATHERPROOF 120/277 VOLT SWITCH
$2	DOUBLE POLE, 120/277 VOLT SWITCH
$D	120/277 VOLT DIMMER SWITCH
$M	MOMENTARY CONTACT 120/277 VOLT SWITCH
$HOA	HAND-OFF-AUTO SELECTOR SWITCH
$TO	MANUAL STARTER WITH THERMAL OVERLOADS
$OT	120/277 VOLT SPRING WOUND TIMER SWITCH
$ET	120/277 VOLT ELECTRIC TIMER SWITCH
$N	120/277 VOLT NARROW SWITCH
$LV	LOW VOLTAGE SWITCH - REFER TO LIGHTING DEVICE SCHEDULE
$VA1	WALL MOUNT VACANCY SENSOR SWITCH AND TYPE
M#	WALL MOUNT VACANCY SENSOR REFER TO LIGHTING DEVICE SCHEDULE
M#	CEILING MOUNT VACANCY SENSOR REFER TO LIGHTING DEVICE SCHEDULE
$ OC1	WALL MOUNT OCCUPANCY SENSOR SWITCH AND TYPE
RC1	ROOM CONTROL DEVICE FOR DISTRIBUTED LIGHTING CONTROLS
PP1	POWER PACK FOR LIGHTING CONTROLS
	SWITCHED RECEPTACLE, HALF OF OUTLETS SWITCHED, NEMA TYPE AS INDICATED
	SIMPLEX, 20 A, 125 V, 2 P, 3 W, GROUNDING RECEPTACLE - NEMA 5-20R
	CEILING MOUNTED DUPLEX, 20 A, 125 V, 2 P, 3 W, GROUNDING RECEPTACLE - NEMA 5-20R
	DUPLEX, 20 A, 125 V, 2 P, 3 W, GROUNDING RECEPTACLE - NEMA 5-20R
	DOUBLE DUPLEX, 20 A, 125 V, 2 P, 3 W, GROUNDING RECEPTACLE - NEMA 5-20R
	DUPLEX, 20 A, 125 V, 2 P, 3 W, GROUND FAULT INTERRUPTER TYPE GROUNDING RECEPTACLE - NEMA 5-20R
	DOUBLE DUPLEX, 20 A, 125 V, 2 P, 3 W, GROUND FAULT INTERRUPTER TYPE GROUNDING RECEPTACLE - NEMA 5-20R
	DUPLEX, 20 A, 125 V, 2 P, 3 W, GROUNDING TYPE RECEPTACLE WITH DUAL USB PORTS
	20AMP, 125V, 2P, 3W GROUNDING 4-PORT USB CHARGING OUTLET
A 20	ADDITIONAL SPECIAL RECEPTACLE DESIGNATORS - REFER TO RECEPTACLE SCHEDULE OR PLAN NOTES FOR RECEPTACLE REQUIREMENTS.
FB1	RECESSED RECTANGULAR FLOOR BOX - MAY INCLUDE DATA AND POWER - REFER TO FLOOR BOX SCHEDULE FOR DETAILS
FB1	RECESSED ROUND FLOOR BOX - MAY INCLUDE DATA AND POWER - REFER TO FLOOR BOX SCHEDULE FOR DETAILS
FB1	SURFACE MOUNTED FLOOR BOX - MAY INCLUDE DATA AND POWER - REFER TO FLOOR BOX SCHEDULE FOR DETAILS

FIRE ALARM:

WS	WATER FLOW SWITCH
TS	VALVE TAMPER SWITCH
FR	FAN SHUTDOWN RELAY
R	FIRE ALARM RELAY
	FIRE ALARM STROBE - WALL MOUNTED
	FIRE ALARM STROBE - CEILING MOUNTED
F	MANUAL FIRE ALARM PULL STATION
F	FIRE ALARM BELL
	FIRE HORN AND STROBE - WALL MOUNTED
	FIRE HORN
C S	FIRE SPEAKER - CEILING MOUNTED
S	FIRE SPEAKER - WALL MOUNTED
	FIRE SPEAKER AND STROBE - WALL MOUNTED
C	FIRE SPEAKER AND STROBE - CEILING MOUNTED

INSTALLATION HEIGHT OF ALL FIRE ALARM DEVICES SHALL BE AS REQUIRED BY THE LATEST EDITION OF NFPA 72. COORDINATE WITH EQUIPMENT MANUFACTURER BASED ON ACTUAL PROVIDED EQUIPMENT.

FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL
CO	CARBON DIOXIDE SENSOR
D	DUCT SMOKE DETECTOR
	CEILING SMOKE DETECTOR
	THERMAL DETECTOR (HEAT)
DH	ELECTRIC DOOR HOLDER
F	FIREMAN'S TELEPHONE OUTLET

COMMUNICATIONS:

1	**TELEPHONE OUTLET - NUMBER INDICATES QTY OF CABLE AND JACK OUTLETS. WHERE NO NUMBER IS INDICATED, ONE CABLE AND JACK OUTLET IS STANDARD.
3/2	**DATA / TELEPHONE COMBINATION OUTLET - NUMBERS INDICATES QTY OF CABLE AND JACK OUTLETS FOR DATA/TELEPHONE. WHERE NO NUMBER IS INDICATED, TWO CABLES AND JACK OUTLETS IS STANDARD.
3	**DATA OUTLET - NUMBER INDICATES QTY OF CABLE AND JACK OUTLETS. WHERE NO NUMBER IS INDICATED, ONE CABLE AND JACK OUTLET IS STANDARD.
WAP	**WIRELESS ACCESS POINT.
TV	**TELEVISION OUTLET - WALL MOUNT

** THESE OUTLETS REQUIRE 4/S - 3/4 BOX WITH SINGLE GANG PLASTER RING AND 0.75" CONDUIT WITH 90 DEGREE SWEEP ABOVE CEILING WITH DE-BURRED END

	TELEPHONE TERMINAL CABINET ("TTC")
TP	TELEPHONE - POWER POLE
	MASTER CLOCK
ACU	INTERCOM ADMINISTRATIVE CONTROL UNIT
MA	MUSIC SYSTEM AMP
PA	PAGING SYSTEM AMP
TC	TIME CLOCK
	WALL SPEAKER
C	COMBINATION CLOCK SPEAKER
	CEILING SPEAKER
	COLUMN SPEAKER
	HORN TYPE SPEAKER

ELECTRICAL NOTATIONS:

AC	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATE DEVICE BOTTOM TO BE 4" ABOVE COUNTERTOP BACKSPLASH
IG	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATE ISOLATED GROUND DEVICE
SS	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATE SURGE SUPPRESSION DEVICE
TR	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATE TAMPER RESISTANT DEVICE
WP	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATE WEATHER-PROOF ENCLOSURE
WPI	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATE WEATHER-PROOF IN-USE ENCLOSURE
XP	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATE EXPLOSION-PROOF ENCLOSURE
60"	DIMENSIONS ADJACENT TO ANY SYMBOL INDICATE MOUNTING HEIGHT TO CENTER OF DEVICE
(TIE)	INDICATES HOMERUNS WITH SAME CIRCUIT NUMBER TO BE WIRED TOGETHER ON SAME CIRCUIT.

ABBREVIATIONS:

AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
C	CONDUIT
CO	CLEANOUT
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CW	DOMESTIC COLD WATER
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
DF	DRINKING FOUNTAIN
DN	DOWN
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FFCO	FINISHED FLOOR CLEANOUT
FGCO	FINISHED GRADE CLEANOUT
FTR	FIN TUBE RADIATION
FWCO	FINISHED WALL CLEANOUT
G	GROUND WIRE
HHP	HYDRONIC HEAT PUMP
HP	HEAT PUMP
HW	DOMESTIC HOT WATER
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
OA	OUTSIDE AIR
OC	ON CENTER
RA	RETURN AIR
SA	SUPPLY AIR
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE

POWER EQUIPMENT:

	LIGHTING AND APPLIANCE PANEL
	DISTRIBUTION, FEEDER OR POWER PANEL
	DISCONNECT SWITCH
	MAGNETIC MOTOR CONTROLLER
	COMBINATION MAGNETIC MOTOR CONTROLLER
	ELEVATOR POWER MODULE
T	TIME SWITCH
LC	LIGHTING CONTACTOR
PC	PHOTOCELL
PP	POWER POLE
	TRANSFORMER - THIN OUTLINE INDICATES EQUIPMENT PAD WHERE FLOOR MOUNTED.

PLAN NOTATIONS:

NORTH	INDICATES DIRECTION OF NORTH
1 M1	DETAIL REFERENCE - UPPER NUMBER INDICATES DETAIL NUMBER, LOWER NUMBER INDICATES SHEET NUMBER
1	PLAN NOTE REFERENCE
	INDICATES CONNECTION TO EXISTING SYSTEM
1 M1	SECTION REFERENCE - UPPER NUMBER INDICATES DETAIL NUMBER, LOWER NUMBER INDICATES SHEET NUMBER

GENERAL NOTES:

A. THESE GENERAL NOTES APPLY TO ALL ELECTRICAL AND SPECIAL SYSTEMS DRAWINGS. REFER TO DIVISION 26, 27 AND 28 SPECIFICATIONS FOR ADDITIONAL ELECTRICAL AND SPECIAL SYSTEMS SPECIFICATIONS AND REQUIREMENTS.

B. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE 2017 NATIONAL ELECTRIC CODE AS ADOPTED BY THE LOCAL AHJ.

C. FOR ALL ELECTRICAL QUESTIONS ON THIS PROJECT, CONTACT RTM ENGINEERING CONSULTANTS AT (913) 303-0084. CONTACT: RAUL CABRERA.

D. CONTRACTOR SHALL SECURE AND PAY FOR NECESSARY MEP PERMITS AND CERTIFICATES OF INSPECTION REQUIRED BY GOVERNMENTAL ORDINANCES, LAWS, RULES, OR REGULATIONS.

E. FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO THE CONDITION THAT ALL SYSTEMS, EQUIPMENT, APPARATUS, AND APPLIANCES OPERATE SATISFACTORILY AS DESIGNED AND INTENDED; WORK SHALL INCLUDE REQUIRED REPLACEMENT, ADJUSTMENT OF SYSTEMS AND CONTROL EQUIPMENT AND ALL REQUIRED PROGRAMMING INSTALLED. PROVIDE FOR ALL WORK INDICATED ON DRAWINGS OR AS REASONABLY IMPLIED.

F. TEST ALL LINES, SYSTEMS, EQUIPMENT BEFORE THEY ARE INSULATED, PAINTED, OR CONCEALED BY CONSTRUCTION OR BACKFILLING. PROVIDE FUEL, WATER, ELECTRICITY, MATERIALS, LABOR, AND EQUIPMENT REQUIRED FOR TESTS. REPAIR OR REPLACE DEFECTS, AND MATERIALS FAILURES REVEALED BY TESTS AND THEN RETESTED UNTIL SATISFACTORY. MAKE REPAIRS WITH NEW MATERIALS.

G. PROVIDE NECESSARY MATERIALS AND ACCESSORIES FOR INSTALLATION OF FIXTURES, EQUIPMENT, ETC AS REQUIRED FOR COMPLETE AND FUNCTIONAL OPERATION AS NOTED ON DRAWINGS OR IN NOTES.

H. ACCESS PANELS SHALL BE PROVIDED WHEREVER NECESSARY TO PROVIDE ACCESS TO VALVES, JUNCTION BOXES, ETC., LOCATED IN CONCEALED SPACES.

I. ALL EQUIPMENT, FIXTURES, MATERIALS, ETC SHALL BE INSTALLED IN NEAT, PROFESSIONAL MANNER IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

J. THE CONTRACTOR SHALL CONTACT THE OWNER AND COORDINATE ALL OUTAGES 5 DAYS PRIOR TO ANY SHUT-OFF OF SERVICES.

K. PROVIDE ALL FIRE RATED MATERIAL FOR PATCH AND REPAIR FOR ALL FIRE RATED ASSEMBLIES. ALL OPENINGS SHALL BE SEALED AND CLOSED IN APPROVED MANNER. PROVIDE SLEEVE WHERE NEEDED DUE TO SCOPE OF WORK.

L. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BID. NO EXTRAS WILL BE PAID DUE TO UNANTICIPATED EXISTING CONDITIONS.

M. THE CONTRACTOR SHALL SCHEDULE AND EXECUTE ALL WORK WITH REGARD TO THE OWNER'S USE OF THE BUILDING.

N. PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.

a. REFER TO ARCHITECTURAL DRAWINGS FOR TYPICAL ROOM INTERIOR ELEVATIONS. COORDINATE EXACT DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO ROUGH-IN.

b. COORDINATE ALL WIRING DEVICE LOCATIONS SHOWN AT MILLWORK LOCATIONS WITH THE MILLWORK CONTRACTOR AND GENERAL CONTRACTOR PRIOR TO ANY ROUGH-IN OR INSTALLATION. ALL WIRING DEVICES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS AND SHALL NOT BE CONCEALED.

O. PROVIDE PULL BOXES AS REQUIRED TO PROPERLY INSTALL THE RACEWAYS AND CIRCUITS INDICATED.

P. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH ROT-PROOF PULL-TAPE, LABELED AT EACH END. ALL CONDUITS SHALL BE PROVIDED WITH PLASTIC BUSHINGS WHERE TERMINATED OPEN-ENDED.

Q. SEAL ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES AS NECESSARY TO RESTORE FIRE-RESISTANCE RATING OF ASSEMBLY. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR RATED ASSEMBLIES, FIRE STOPPING MATERIALS, AND REQUIREMENTS.

R. EACH CONTRACTOR AND SUB-CONTRACTOR OR TRADE SHALL REVIEW THE BID DOCUMENTS AS A WHOLE, INCLUDING ALL OTHER TRADES' DRAWINGS AND PROVIDE ANY MISC. ITEMS, MATERIALS, WORK, ETC. REQUIRED TO COMPLETE THE WORK AS SHOWN ON ALL BID DOCUMENTS. THIS REQUIREMENT APPLIES TO ALL TRADES. STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, EQUIPMENT VENDORS, ETC. REQUIREMENTS AND RELATED WORK ARE INDICATED THROUGHOUT THE BID DOCUMENTS AND SHALL BE REVIEWED WITH THE SPECIFIC MEP, STRUCTURAL, ARCHITECTURAL, AND EQUIPMENT DRAWINGS FOR OVERALL SCOPE OF WORK.

S. PROVIDE FINAL CONNECTION TO ALL EQUIPMENT, INCLUDING ANY CORD AND PLUG SETS FOR EQUIPMENT NOT PROVIDED WITH IT (WHETHER SPECIFICALLY NOTED OR NOT). COORDINATE ALL WORK WITH THE EQUIPMENT SUPPLIER AND OWNER; AND VERIFY ALL ROUGH-IN LOCATIONS AND REQUIREMENTS PRIOR TO ANY ROUGH-IN.

GENERAL NOTES:

AA. REFER TO ARCHITECTURAL EQUIPMENT DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT SUPPLIER.

BB. NEUTRALS SHALL NOT BE SHARED FOR ANY CIRCUIT, UNLESS SPECIFICALLY NOTED ON PLANS.

CC. WIRE SIZE INDICATED BY BRANCH CIRCUIT AT HOMERUN SHALL BE CARRIED THROUGHOUT THE CIRCUIT TO FINAL CONNECTION AT EQUIPMENT. FINAL EXTENSION OF CIRCUIT TO EQUIPMENT MAY NOT BE SHOWN FOR CLARITY BUT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR FOR FINAL CONNECTION.

DD. SUPPORTS, CONDUIT, BOXES, ETC. INSTALLED IN AREAS WITH EXPOSED STRUCTURE SHALL BE PAINTED TO MATCH ADJACENT FINISHES.

EE. PROVIDE A SEPARATE CODE SIZED GREEN EQUIPMENT GROUND CONDUCTOR IN ALL CONDUITS AND RACEWAYS CONTAINING LINE VOLTAGE CIRCUITS (120V OR HIGHER).

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GG.

HH.

II.

JJ.

KK.

LL.

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WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

Project Number
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Area Plan

Sheet Name
ELECTRICAL GENERAL NOTES, SYMBOLS AND SCHEDULES

Sheet Number
E0.00

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SECTION 26: GENERAL ELECTRICAL REQUIREMENTS:

26 1 GENERAL INSTRUCTIONS

26 1-1 GENERAL REQUIREMENTS

ALL REQUIREMENTS UNDER DIVISION 1 AND THE GENERAL AND SUPPLEMENTARY CONDITIONS OF THESE SPECIFICATIONS APPLY TO THIS SECTION AND DIVISION. WHERE THE REQUIREMENTS OF THIS SECTION AND DIVISION EXCEED THOSE OF DIVISION 1, THIS SECTION AND DIVISION TAKE PRECEDENCE. BECOME THOROUGHLY FAMILIAR WITH ALL THEIR CONTENTS AS TO REQUIREMENTS THAT AFFECT THIS DIVISION, SECTION OR BOTH. WORK REQUIRED UNDER THIS DIVISION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, AND LABOR REQUIRED TO COMPLETE THE ENTIRE ELECTRICAL SYSTEM AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS, OR REASONABLY INFERRED TO BE NECESSARY TO FACILITATE EACH SYSTEM'S FUNCTIONING AS IMPLIED BY THE DESIGN AND THE EQUIPMENT SPECIFIED.

THE SPECIFICATIONS AND DRAWINGS FOR THE PROJECT ARE COMPLEMENTARY, AND PORTIONS OF THE WORK DESCRIBED IN ONE, SHALL BE PROVIDED AS IF DESCRIBED IN BOTH. IN THE EVENT OF DISCREPANCIES, NOTIFY THE ENGINEER AND REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK INVOLVED.

DRAWINGS ARE GRAPHIC REPRESENTATIONS OF THE WORK UPON WHICH THE CONTRACT IS BASED. THEY SHOW THE MATERIALS AND THEIR RELATIONSHIP TO ONE ANOTHER, INCLUDING SIZES, SHAPES, LOCATIONS, AND CONNECTIONS. THEY ALSO CONVEY THE SCOPE OF WORK, INDICATING THE INTENDED GENERAL ARRANGEMENT OF THE EQUIPMENT, FIXTURES, OUTLETS AND CIRCUITS WITHOUT SHOWING ALL OF THE EXACT DETAILS AS TO ELEVATIONS, OFFSETS, CONTROL LINES, AND OTHER INSTALLATION REQUIREMENTS. USE THE DRAWINGS AS A GUIDE WHEN LAYING OUT THE WORK AND TO VERIFY THAT MATERIALS AND EQUIPMENT WILL FIT INTO THE DESIGNATED SPACES, AND WHICH, WHEN INSTALLED PER MANUFACTURERS' REQUIREMENTS, WILL ENSURE A COMPLETE, COORDINATED, SATISFACTORY AND PROPERLY OPERATING SYSTEM.

DRAWINGS ARE SCHEMATIC IN NATURE, SHOW THE VARIOUS COMPONENTS OF THE SYSTEMS APPROXIMATELY TO SCALE AND ATTEMPT TO INDICATE HOW THEY SHALL BE INTEGRATED WITH OTHER PARTS OF THE WORK. FIGURED DIMENSIONS TAKE PRECEDENCE TO SCALED DIMENSIONS. DETERMINE EXACT LOCATIONS BY JOB MEASUREMENTS, BY CHECKING THE REQUIREMENTS OF OTHER TRADES, AND BY REVIEWING ALL CONTRACT DOCUMENTS. CORRECT ERRORS THAT COULD HAVE BEEN AVOIDED BY PROPER CHECKING AND INSPECTION, AT NO ADDITIONAL COST TO THE OWNER.

SPECIFICATIONS DEFINE THE QUALITATIVE REQUIREMENTS FOR PRODUCTS, MATERIALS, AND WORKMANSHIP UPON WHICH THE CONTRACT IS BASED.

26 1-2 DEFINITIONS

WHENEVER USED IN THESE SPECIFICATIONS OR DRAWINGS, THE FOLLOWING TERMS SHALL HAVE THE INDICATED MEANINGS:

FURNISH: "TO SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLING, INSTALLING, AND SIMILAR OPERATIONS."

INSTALL: "TO PERFORM ALL OPERATIONS AT THE PROJECT SITE, INCLUDING, BUT NOT LIMITED TO, AND AS REQUIRED: UNLOADING, UNPACKING, ASSEMBLING, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, TESTING, COMMISSIONING, STARTING UP AND SIMILAR OPERATIONS, COMPLETE, AND READY FOR THE INTENDED USE."

PROVIDE: "TO FURNISH AND INSTALL COMPLETE, AND READY FOR THE INTENDED USE." FURNISHED BY OWNER (OR OWNER-FURNISHED) OR FURNISHED BY OTHERS: "AN ITEM FURNISHED BY THE OWNER OR UNDER OTHER DIVISIONS OR CONTRACTS, AND INSTALLED UNDER THE REQUIREMENTS OF THIS DIVISION, COMPLETE, AND READY FOR THE INTENDED USE, INCLUDING ALL ITEMS AND SERVICES INCIDENTAL TO THE WORK NECESSARY FOR PROPER INSTALLATION AND OPERATION. INCLUDE THE INSTALLATION UNDER THE WARRANTY REQUIRED BY THIS DIVISION.

ENGINEER: WHERE REFERENCED IN THIS DIVISION, "ENGINEER" IS THE ENGINEER OF RECORD AND THE DESIGN PROFESSIONAL FOR THE WORK UNDER THIS DIVISION, AND IS A CONSULTANT TO, AND AN AUTHORIZED REPRESENTATIVE OF, THE ARCHITECT, AS DEFINED IN THE GENERAL AND/OR SUPPLEMENTARY CONDITIONS. WHEN USED IN THIS DIVISION, IT MEANS INCREASED INVOLVEMENT BY, AND OBLIGATIONS TO, THE ENGINEER, IN ADDITION TO INVOLVEMENT BY, AND OBLIGATIONS TO, THE "ARCHITECT".

AHJ: THE LOCAL CODE AND/OR INSPECTION AGENCY (AUTHORITY) HAVING JURISDICTION OVER THE WORK.

NRTL: NATIONALLY RECOGNIZED TESTING LABORATORY, AS DEFINED AND LISTED BY OSHA IN 29 CFR 1910.7 (E.G., UL, ETL, CSA), AND ACCEPTABLE TO THE AHJ OVER THIS PROJECT.

HOMERUN: THAT PORTION OF AN ELECTRICAL CIRCUIT ORIGINATING AT A JUNCTION BOX, TERMINATION BOX, RECEPTACLE OR SWITCH WITH TERMINATION AT AN ELECTRICAL PANELBOARD. NOTE: WHERE MC CABLE IS UTILIZED FOR RECEPTACLE AND/OR LIGHTING BRANCH CIRCUITING LOADS, THE ORIGINATING POINT OF THE HOMERUN SHALL BE AT THE FIRST LOAD IN THE CIRCUIT OR AT A JUNCTION BOX IN AN ACCESSIBLE CEILING SPACE IMMEDIATELY ABOVE THE FIRST LOAD.

THE TERMS "APPROVED EQUAL", "EQUIVALENT", OR "EQUAL" ARE USED SYNONYMOUSLY AND SHALL MEAN "ACCEPTED BY OR ACCEPTABLE TO THE ENGINEER AS EQUIVALENT TO THE ITEM OR MANUFACTURER SPECIFIED". THE TERM "APPROVED" SHALL MEAN LABELED, LISTED, CERTIFIED, OR ALL THREE, BY AN NRTL, AND ACCEPTABLE TO THE AHJ OVER THIS PROJECT.

26 1-3 PRE-BID SITE VISIT

PERSONALLY INSPECT THE SITE OF THE PROPOSED WORK AND BECOME FULLY INFORMED OF CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. FAILURE TO DO SO WILL NOT BE CONSIDERED SUFFICIENT JUSTIFICATION TO REQUEST OR OBTAIN EXTRA COMPENSATION OVER AND ABOVE THE CONTRACT PRICE. COORDINATE SITE VISIT WITH ARCHITECT & BUILDING OWNER.

26 1-4 MATERIAL AND WORKMANSHIP

PROVIDE ALL MATERIAL AND EQUIPMENT NEW AND IN FIRST CLASS CONDITION. PROVIDE MARKINGS OR A NAMEPLATE FOR ALL MATERIAL AND EQUIPMENT IDENTIFYING THE MANUFACTURER AND PROVIDING SUFFICIENT REFERENCE TO ESTABLISH QUALITY, SIZE AND CAPACITY. ALL WORKMANSHIP SHALL BE OF THE FINEST POSSIBLE BY EXPERIENCED MECHANICS OF THE PROPER TRADE. IN GENERAL, PROVIDE THE FOLLOWING QUALITY GRADE(S) FOR ALL MATERIALS AND EQUIPMENT

COMMERCIAL SPECIFICATION GRADE

PROVIDE ALL HOISTS, SCAFFOLDS, STAGING, RUNWAYS, TOOLS, MACHINERY AND EQUIPMENT REQUIRED FOR THE PERFORMANCE OF THE ELECTRICAL WORK. STORE AND MAINTAIN MATERIAL AND EQUIPMENT IN CLEAN CONDITION, AND PROTECTED FROM WEATHER, MOISTURE, AND PHYSICAL DAMAGE.

FURNISH ONLY MATERIAL AND EQUIPMENT THAT ARE LISTED, LABELED, CERTIFIED, OR ALL THREE, BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), WHENEVER ANY LISTING OR LABELING EXISTS FOR THE TYPES OF MATERIAL AND EQUIPMENT SPECIFIED.

AT A MINIMUM, GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH:
NECA 1 (LATEST EDITION), "STANDARD PRACTICES FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION".

26 1-5 MANUFACTURERS

IN OTHER ARTICLES WHERE LISTS OF MANUFACTURERS ARE INTRODUCED, SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE MANUFACTURERS SPECIFIED.

WHERE A LIST IS PROVIDED, MANUFACTURERS ARE LISTED ALPHABETICALLY AND NOT IN ACCORDANCE WITH ANY RANKING OR PREFERENCE.

WHERE MANUFACTURERS ARE NOT LISTED, PROVIDE PRODUCTS SUBJECT TO COMPLIANCE WITH REQUIREMENTS FROM MANUFACTURERS THAT HAVE BEEN ACTIVELY INVOLVED IN MANUFACTURING THE SPECIFIED PRODUCT FOR NO LESS THAN 5 YEARS.

26 1-6 COORDINATION

COORDINATE ALL WORK WITH OTHER DIVISIONS AND TRADES SO THAT VARIOUS COMPONENTS OF THE ELECTRICAL SYSTEMS ARE INSTALLED AT THE PROPER TIME, FIT THE AVAILABLE SPACE, AND ALLOW PROPER SERVICE ACCESS TO ALL EQUIPMENT. REFER TO ALL DRAWINGS, INCLUDING, BUT NOT LIMITED TO, CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND PLUMBING, AND TO RELEVANT EQUIPMENT SUBMITTALS AND SHOP DRAWINGS TO DETERMINE THE EXTENT OF CLEAR SPACES. MAKE ALL OFFSETS REQUIRED TO CLEAR EQUIPMENT, BEAMS AND OTHER STRUCTURAL MEMBERS, AND TO FACILITATE CONCEALING RACEWAYS IN THE MANNER ANTICIPATED IN THE DESIGN. PROVIDE MATERIALS WITH TRIM THAT WILL FIT PROPERLY THE TYPES OF CEILING, WALL, OR FLOOR FINISHES ACTUALLY INSTALLED.

26 1-7 ORDINANCES, CODES, AND STANDARDS

COMPLY, AT A MINIMUM, WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS, STATE AND LOCAL BUILDING CODES, AND ALL OTHER APPLICABLE CODES AND ORDINANCES FOR PERFORMANCE, WORKMANSHIP, EQUIPMENT, AND MATERIALS. ADDITIONALLY, COMPLY WITH RULES AND REGULATIONS OF PUBLIC UTILITIES AND MUNICIPAL DEPARTMENTS AFFECTED BY CONNECTION OF SERVICES.

WHERE CONFLICTS BETWEEN VARIOUS CODES, ORDINANCES, RULES, AND REGULATIONS EXIST, COMPLY WITH THE MOST STRINGENT. WHEREVER REQUIREMENTS OF THESE SPECIFICATIONS, DRAWINGS, OR BOTH, EXCEED THOSE OF THE ABOVE ITEMS, THE REQUIREMENTS OF THESE SPECIFICATIONS, DRAWINGS, OR BOTH, SHALL GOVERN. CODE COMPLIANCE, AT A MINIMUM, IS MANDATORY. CONSTRUE NOTHING IN THESE CONSTRUCTION DOCUMENTS AS PERMITTING WORK NOT IN COMPLIANCE, AT A MINIMUM, WITH THESE CODES.

PROMPTLY BRING ALL CONFLICTS OBSERVED BETWEEN CODES, ORDINANCES, RULES, REGULATIONS, REFERENCED STANDARDS, AND THESE DOCUMENTS TO THE ENGINEER'S ATTENTION FOR FINAL RESOLUTION. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY VIOLATION OF THE LAW.

PROVIDE AND MAINTAIN ALL NECESSARY SIGNAL LIGHTS AND GUARDS FOR THE SAFETY OF THE PUBLIC. OBTAIN AND PAY FOR ALL PERMITS FOR WORK IN THIS DIVISION.

26 1-8 PROTECTION OF EQUIPMENT AND MATERIALS

STORE AND PROTECT FROM DAMAGE EQUIPMENT AND MATERIALS DELIVERED TO JOB SITE, IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. FOR MATERIALS AND EQUIPMENT SUSCEPTIBLE TO CHANGING WEATHER CONDITIONS, DAMPNESS, OR TEMPERATURE VARIATIONS, STORE INSIDE IN CONDITION SPACES. FOR MATERIALS AND EQUIPMENT NOT SUSCEPTIBLE TO THESE CONDITIONS, COVER WITH WATERPROOF, TEAR-RESISTANT, HEAVY TARP OR POLYETHYLENE PLASTIC AS REQUIRED TO PROTECT FROM PLASTER, DIRT, PAINT, WATER, OR PHYSICAL DAMAGE. EQUIPMENT AND MATERIAL THAT HAS BEEN DAMAGED BY CONSTRUCTION ACTIVITIES WILL BE REJECTED, AND CONTRACTOR SHALL FURNISH NEW EQUIPMENT AND MATERIAL OF A LIKE KIND.

PLUG OR CAP OPEN ENDS OF CONDUITS WHILE STORED AND INSTALLED DURING CONSTRUCTION WHEN NOT IN USE TO PREVENT THE ENTRANCE OF DEBRIS INTO THE SYSTEMS.

26 1-9 SUBSTITUTIONS

INCLUDE IN THE BASE BID THE PRODUCTS SPECIFICALLY NAMED IN THESE SPECIFICATIONS OR ON THE DRAWINGS. SUBMIT, IN THE FORM OF ALTERNATES, WITH BID, PRODUCTS OF ANY OTHER MANUFACTURERS FOR SIMILAR USE, PROVIDED THE DIFFERENCES IN COST, IF ANY, ARE INCLUDED FOR EACH PROPOSED ALTERNATE.

PRIOR TO THE BID DATE, SUBSTITUTIONS WILL NOT BE CONSIDERED UNLESS SUBMITTED FOR ENGINEER'S REVIEW, AT LEAST TEN CALENDAR DAYS PRIOR TO THE DATE FOR RECEIPT OF BIDS. INCLUDE THE NAME OF THE MATERIAL OR EQUIPMENT FOR WHICH IT IS TO BE SUBSTITUTED AND A COMPLETE DESCRIPTION OF THE PROPOSED SUBSTITUTE INCLUDING CUTSHEETS, PHOTOMETRIC DATA, AND ALL OTHER INFORMATION NECESSARY FOR AN EVALUATION FOR EACH SUCH REQUEST. PROVIDE FACTORY GENERATED POINT-BY-POINT CALCULATIONS FOR ALL EXTERIOR LIGHT FIXTURES (PHOTOMETRIC FILES SUPPLIED SO THE ENGINEER CAN GENERATE A POINT-BY-POINT DO NOT SUFFICE FOR THE POINT-BY-POINT CALCULATIONS). PROVIDE INTERIOR POINT-BY-POINT CALCULATIONS AT THE DISCRETION OF THE ENGINEER. SUBMIT A $100.00 REVIEW FEE TO THE ENGINEER WITH EACH SUCH POINT-BY-POINT CALCULATION FOR USE OF ELECTRONIC BASE FILES.

AFTER THE BID DATE, PROPOSALS TO SUBSTITUTE LIGHT FIXTURES FOR THOSE SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN, WILL ONLY BE CONSIDERED AS A DEDUCT. SUBMIT PROPOSED SUBSTITUTIONS SEPARATELY, IN SUBMITTAL FORM, WITH A LIST OF PROPOSED SUBSTITUTIONS TOGETHER WITH A DEDUCT PRICE FOR EACH SUBSTITUTION. THE ENGINEER WILL THEN REVIEW THE PROPOSED SUBSTITUTIONS.

THE ENGINEER WILL HAVE THE FINAL AUTHORITY AS TO WHETHER THE LIGHT FIXTURE IS AN ACCEPTABLE REPLACEMENT TO THE SPECIFIED ITEM. THE PROPOSED SUBSTITUTION MAY ALSO BE REJECTED BY THE ARCHITECT, THE ENGINEER OR THE OWNER FOR AESTHETIC REASONS IF FELT NECESSARY OR DESIRABLE. IN THE EVENT THE PROPOSED SUBSTITUTIONS HEREIN DESCRIBED ARE REJECTED, FURNISH THE SPECIFIED ITEM.

26 1-10 SUBMITTALS

ASSEMBLE AND SUBMIT FOR ENGINEER'S REVIEW, MANUFACTURERS' PRODUCT LITERATURE FOR MATERIAL AND EQUIPMENT TO BE FURNISHED, INSTALLED, OR BOTH, UNDER THIS DIVISION, INCLUDING SHOP DRAWINGS, MANUFACTURERS' PRODUCT DATA AND PERFORMANCE SHEETS, SAMPLES, AND OTHER SUBMITTALS REQUIRED BY THIS DIVISION. HIGHLIGHT, MARK, LIST OR INDICATE THE MATERIALS, PERFORMANCE CRITERIA AND ACCESSORIES THAT ARE BEING PROPOSED. PROVIDE THE NUMBER OF SUBMITTALS REQUIRED BY DIVISION 1; HOWEVER, AT A MINIMUM, SUBMIT SEVEN (7) SETS. BEFORE SUBMITTING, VERIFY THAT ALL MATERIALS AND EQUIPMENT SUBMITTED ARE MUTUALLY COMPATIBLE AND SUITABLE FOR THE INTENDED USE, FIT THE AVAILABLE SPACES, AND ALLOW AMPLE AND CODE- REQUIRED ROOM FOR ACCESS AND MAINTENANCE. SUBMITTALS SHALL CONTAIN THE FOLLOWING INFORMATION. SUBMITTALS NOT SO IDENTIFIED WILL BE RETURNED TO THE CONTRACTOR WITHOUT ACTION:

THE PROJECT NAME.

THE APPLICABLE SPECIFICATION SECTION AND PARAGRAPH.

THE SUBMITTAL DATE.

THE CONTRACTOR'S STAMP, WHICH SHALL CERTIFY THAT THE STAMPED DRAWINGS HAVE BEEN CHECKED BY THE CONTRACTOR, COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, AND HAVE BEEN COORDINATED WITH OTHER TRADES.

SUBMITTALS AND SHOP DRAWINGS SHALL NOT CONTAIN HEI'S FIRM NAME OR LOGO, NOR SHALL IT CONTAIN THE HEI'S ENGINEERS' SEAL AND SIGNATURE. THEY SHALL NOT BE COPIES OF MFECI'S WORK PRODUCT.

TRANSMIT SUBMITTALS AS EARLY AS REQUIRED TO SUPPORT THE PROJECT SCHEDULE. ALLOW FOR TWO WEEKS ENGINEER REVIEW TIME, PLUS MAILING TIME, PLUS A DUPLICATION OF THIS TIME FOR RESUBMITTALS, IF REQUIRED. TRANSMIT SUBMITTALS AS SOON AS POSSIBLE AFTER NOTICE TO PROCEED AND BEFORE CONSTRUCTION STARTS. THE ENGINEER'S SUBMITTAL REVIEWS WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN DIMENSIONS, DETAILS, SIZE OF MEMBERS, OR QUANTITIES; OR FOR OMITTING COMPONENTS OR FITTINGS; OR FOR NOT COORDINATING ITEMS WITH ACTUAL BUILDING CONDITIONS.

REFER TO DIVISION 1 FOR ACCEPTANCE OF ELECTRONIC SUBMITTALS FOR THIS PROJECT. FOR ELECTRONIC SUBMITTALS, CONTRACTOR SHALL SUBMIT THE DOCUMENTS IN ACCORDANCE WITH THE PROCEDURES SPECIFIED IN DIVISION 1. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER THAT THE SHOP DRAWINGS HAVE BEEN POSTED. IF ELECTRONIC SUBMITTAL PROCEDURES ARE NOT DEFINED IN DIVISION 1, CONTRACTOR SHALL INCLUDE THE WEBSITE, USER NAME AND PASSWORD INFORMATION NEEDED TO ACCESS THE SUBMITTALS. FOR SUBMITTALS SENT BY E-MAIL, CONTRACTOR SHALL COPY THE ARCHITECT AND ENGINEER'S DESIGNATED REPRESENTATIVES. CONTRACTOR SHALL ALLOW THE ENGINEER REVIEW TIME AS SPECIFIED ABOVE IN THE CONSTRUCTION SCHEDULE. CONTRACTOR SHALL SUBMIT ONLY THE DOCUMENTS REQUIRED TO PURCHASE THE MATERIALS AND/OR EQUIPMENT IN THE ELECTRONIC SUBMITTAL AND SHALL CLEARLY INDICATE THE MATERIALS, PERFORMANCE CRITERIA AND ACCESSORIES BEING PROPOSED. GENERAL PRODUCT CATALOG DATA NOT SPECIFICALLY NOTED TO BE PART OF THE SPECIFIED PRODUCT WILL BE REJECTED AND RETURNED WITHOUT REVIEW.

26 1-11 ELECTRONIC DRAWING FILES

IN PREPARATION OF SHOP DRAWINGS OR RECORD DRAWINGS, CONTRACTOR MAY, AS AN OPTION, OBTAIN ELECTRONIC DRAWING FILES IN AUTOCAD OR DXF FORMAT FROM THE ENGINEER FOR A SHIPPING AND HANDLING FEE OF $200 FOR A DRAWING SET UP TO 12 SHEETS AND $15 PER SHEET FOR EACH ADDITIONAL SHEET. CONTACT THE ARCHITECT FOR WRITTEN AUTHORIZATION; AND, CONTACT THE ENGINEER TO OBTAIN THE NECESSARY RELEASE AGREEMENT FORM AND TO INDICATE THE DESIRED SHIPPING METHOD AND DRAWING FORMAT. IN ADDITION TO PAYMENT, ARCHITECT'S WRITTEN AUTHORIZATION AND ENGINEER'S RELEASE AGREEMENT FORM MUST BE RECEIVED BEFORE ELECTRONIC DRAWING FILES WILL BE SENT.

26 1-12 OPERATION AND MAINTENANCE INSTRUCTIONS

SUBMIT FOR ENGINEER'S REVIEW, COPIES EACH OF OPERATIONS AND MAINTENANCE INSTRUCTION MANUALS, APPROPRIATELY BOUND INTO MANUAL FORM INCLUDING APPROVED COPIES OF THE FOLLOWING, REVISED IF NECESSARY TO SHOW SYSTEM AND EQUIPMENT AS ACTUALLY INSTALLED. PROVIDE THE NUMBER OF SUBMITTALS REQUIRED BY DIVISION 1; HOWEVER, AT A MINIMUM, SUBMIT THREE (3) SETS, AND INCLUDE, AT A MINIMUM, THE FOLLOWING INFORMATION:

MANUFACTURERS' CATALOGS AND PRODUCT DATA SHEETS

WIRING DIAGRAMS

MAINTENANCE INSTRUCTIONS

OPERATING INSTRUCTIONS

PARTS LISTS

TEST REPORTS AS DEFINED IN NETA ATS FOR THE SYSTEMS AND EQUIPMENT PROVIDED OR FURNISHED OR INSTALLED UNDER THIS CONTRACT.

NAMES, ADDRESSES, TELEPHONE NUMBERS, AND E-MAIL ADDRESSES OF LOCAL CONTACTS FOR WARRANTEE SERVICES AND SPARE PARTS.

SUBMIT MANUALS PRIOR TO REQUESTING THE FINAL PUNCH LIST AND BEFORE ANY REQUESTS FOR SUBSTANTIAL COMPLETION. ALSO PROVIDE ADEQUATE VERBAL INSTRUCTIONS OF SYSTEM OPERATIONS TO OWNER'S REPRESENTATIVE AT THE COMPLETION OF, AND BEFORE FINAL ACCEPTANCE OF, THE WORK.

26 1-13 WARRANTIES

WARRANT EACH SYSTEM AND EACH ELEMENT THEREOF AGAINST ALL DEFECTS DUE TO FAULTY WORKMANSHIP, DESIGN OR MATERIAL FOR A PERIOD OF 12 MONTHS FROM DATE OF SUBSTANTIAL COMPLETION, UNLESS SPECIFIC ITEMS ARE NOTED TO CARRY A LONGER WARRANTY IN THE CONSTRUCTION DOCUMENTS OR MANUFACTURER'S STANDARD WARRANTY EXCEEDS 12 MONTHS. REMEDY ALL DEFECTS, OCCURRING WITHIN THE WARRANTY PERIOD(S), AS STATED IN THE GENERAL CONDITIONS AND DIVISION 1.

ALSO WARRANT THE FOLLOWING ADDITIONAL ITEMS:

ALL RACEWAYS ARE FREE FROM OBSTRUCTIONS, HOLES, CRUSHING, OR BREAKS OF ANY NATURE.

ALL RACEWAY SEALS ARE EFFECTIVE.

THE ENTIRE ELECTRICAL SYSTEM IS FREE FROM ALL SHORT CIRCUITS AND UNWANTED OPEN CIRCUITS AND GROUNDS.

THE ABOVE WARRANTIES SHALL INCLUDE LABOR AND MATERIAL. MAKE REPAIRS OR REPLACEMENTS WITHOUT ANY ADDITIONAL COSTS TO THE OWNER.

PERFORM THE REMEDIAL WORK PROMPTLY, UPON WRITTEN NOTICE FROM THE ENGINEER OR OWNER.

AT THE TIME OF SUBSTANTIAL COMPLETION, DELIVER TO THE OWNER ALL WARRANTIES, IN WRITING AND PROPERLY EXECUTED, INCLUDING TERM LIMITS FOR WARRANTIES EXTENDING BEYOND THE ONE YEAR PERIOD, EACH WARRANTY INSTRUMENT BEING ADDRESSED TO THE OWNER AND STATING THE COMMENCEMENT DATE AND TERM.

26 1-14 MISCELLANEOUS REMODELING WORK

PROVIDE ALL DEMOLITION OF EXISTING ELECTRICAL SYSTEMS AND NEW ELECTRICAL SYSTEM MODIFICATIONS REQUIRED BECAUSE OF BUILDING REMODELING, AS NOTED ON THE DRAWINGS, OR NECESSARY FOR PROPER OPERATION AND NEW CONSTRUCTION. REMOVE ALL ABANDONED CABLES AND WIRING ABOVE ACCESSIBLE CEILINGS AND VENTILATION SHAFTS.

26 2 ELECTRICAL WORK

26 2-1 BUILDING OPERATION

COMPLY WITH THE SCHEDULE OF OPERATIONS AS OUTLINED IN THE ARCHITECTURAL PORTIONS OF THIS SPECIFICATION. BUILDING SHALL BE IN CONTINUOUS OPERATION. ACCOMPLISH WORK THAT REQUIRES INTERRUPTION OF BUILDING OPERATION AT A TIME WHEN THE BUILDING IS NOT IN OPERATION, AND ONLY WITH WRITTEN APPROVAL OF BUILDING OWNER AND/OR TENANT. COORDINATE INTERRUPTION OF BUILDING OPERATION WITH THE OWNER AND/OR TENANT A MINIMUM OF 7 DAYS IN ADVANCE OF WORK.

26 2-2 COINCIDENTAL DAMAGE

REPAIR ALL STREETS, SIDEWALKS, DRIVES, PAVING, WALLS, FINISHES, AND OTHER FACILITIES DAMAGED IN THE COURSE OF THIS WORK. REPAIR MATERIALS SHALL MATCH EXISTING CONSTRUCTION. ALL BACKFILLING AND REPAIRING SHALL MEET ALL REQUIREMENTS OF THE OWNER, CITY AND OTHERS HAVING JURISDICTION. REPAIR WORK SHALL BE THOROUGHLY FIRST CLASS. CONFORM TO ALL REQUIREMENTS OF DIVISION 2 OF THESE SPECIFICATIONS.

26 2-3 CUTTING AND PATCHING

FOLLOWING THE REQUIREMENTS IN DIVISION 1, CUT WALLS, FLOORS, CEILINGS, AND OTHER PORTIONS OF THE FACILITY AS REQUIRED TO PERFORM WORK UNDER THIS DIVISION. OBTAIN PERMISSION OF THE ENGINEER, OWNER, OR BOTH, BEFORE DOING ANY CUTTING. CUT ALL HOLES AS SMALL AS POSSIBLE. PATCH WALLS, FLOORS, AND OTHER PORTIONS OF THE FACILITY AS REQUIRED BY WORK UNDER THIS DIVISION. ALL PATCHING SHALL BE THOROUGHLY FIRST CLASS AND SHALL MATCH THE ORIGINAL MATERIAL AND CONSTRUCTION, INCLUDING FIRE RATINGS IF APPLICABLE.

26 2-4 ROUGH-IN

COORDINATE WITHOUT DELAY ALL ROUGHING-IN WITH OTHER DIVISIONS. CONCEAL ALL RACEWAYS EXCEPT IN UNFINISHED AREAS AND WHERE OTHERWISE INDICATED ON THE DRAWINGS.

26 2-5 SUPPORT SYSTEMS

1. STEEL SLOTTED SUPPORT SYSTEMS (SLOTTED CHANNEL): COMPLY WITH MFMA-3, FACTORY-FABRICATED COMPONENTS FOR FIELD ASSEMBLY; 12-GAUGE, 1-5/8-INCH BY 1-5/8-INCH; COOPER B-LINE, ERICO INTERNATIONAL CORPORATION, HILTI, INC., POWER-STRUT, THOMAS & BETTS CORPORATION, UNISTRUT.

FINISHES:

1. METALLIC COATINGS: HOT-DIP GALVANIZED AFTER FABRICATION AND APPLIED ACCORDING TO MFMA-3.

FIELD FABRICATION:

WHERE FIELD CUTTING OF STANDARD LENGTHS OF CHANNEL ARE REQUIRED, MAKE CUTS STRAIGHT AND PERPENDICULAR TO MANUFACTURED SURFACES.

FOR FIELD-CUT OR DAMAGED SURFACES OF COATED CHANNELS, DRESS CUT ENDS, DAMAGED SURFACES, OR BOTH, WITH AN ABRASIVE MATERIAL (E.G., FILE, GRINDING STONE, OR SIMILAR) AND CLEANSER TO REMOVE OILS, RUST, SHARP EDGES AND SHARDS.

FOR CHANNEL WITH A FACTORY-APPLIED COATING, RE-FINISH CUT EDGES WITH A COATING COMPATIBLE WITH THE FACTORY FINISH AND AS RECOMMENDED BY THE MANUFACTURER (E.G., MANUFACTURER'S TOUCH-UP PAINT OR ZINC-RICH COLD-GALVANIZING COMPOUND, AS APPLICABLE).

25 2-6 PENETRATIONS

COORDINATE SLEEVE SELECTION AND APPLICATION WITH SELECTION AND APPLICATION OF FIRE-STOPPING SPECIFIED IN DIVISION 7 SECTION "THROUGH-PENETRATION FIRESTOP SYSTEMS."

ROOFS:

COORDINATE ALL ROOF PENETRATIONS WITH ENGINEER, OWNER, AND AS APPLICABLE, THE ROOFING CONTRACTOR PROVIDING A ROOF WARRANTY.

KEEP ALL RACEWAY PENETRATIONS WITHIN MECHANICAL EQUIPMENT CURBS WHEREVER POSSIBLE. COORDINATE WITH THE MECHANICAL CONTRACTOR.

FLASH AND COUNTERFLASH ALL OPENINGS THROUGH ROOF, AND/OR PROVIDE PRE-FABRICATED MOLDED SEALS COMPATIBLE WITH THE ROOF CONSTRUCTION INSTALLED, OR AS REQUIRED BY THE ENGINEER, OWNER, OR ROOFING CONTRACTOR. ALL ROOF PENETRATIONS SHALL BE LEAKTIGHT AT THE TERMINATION OF THE WORK AND SHALL NOT VOID ANY NEW OR EXISTING ROOF WARRANTIES.

WALLS AND FLOORS:

SLEEVES FOR RACEWAYS AND CABLES

1. STEEL PIPE SLEEVES: ASTM A 53/A 53M, TYPE E, GRADE B, SCHEDULE 40, GALVANIZED STEEL, PLAIN ENDS AND DRIP RINGS.

2. CAST-IRON PIPE SLEEVES: CAST OR FABRICATED "WALL PIPE," EQUIVALENT TO DUCTILE-IRON PRESSURE PIPE, WITH PLAIN ENDS AND INTEGRAL WATERSTOP, UNLESS OTHERWISE INDICATED.

SLEEVES FOR RECTANGULAR OPENINGS: GALVANIZED SHEET STEEL WITH MINIMUM 0.138 INCH THICKNESS AND OF WIDTH AND LENGTH TO SUIT APPLICATION.

26 2-7 FIRE-STOPPING THROUGH PENETRATIONS

FIRE-RESISTANT THROUGH PENETRATION SEALANTS: TWO-PART, FOAMED-IN-PLACE, SILICONE SEALANT FORMULATED FOR USE IN THROUGH-PENETRATION FIRE-STOPPING AROUND CABLES, RACEWAYS, AND CABLE TRAY PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS. SEALANTS AND ACCESSORIES SHALL HAVE FIRE-RESISTANCE RATINGS INDICATED, AS ESTABLISHED BY TESTING IDENTICAL ASSEMBLIES IN ACCORDANCE WITH ASTM E 814, BY UNDERWRITERS' LABORATORIES, INC., OR OTHER NRTL ACCEPTABLE TO AHJ.

ACCEPTABLE MANUFACTURERS:

HILTI, INC.
3M CORP.
RECTORSEAL.
SPECIFY TECHNOLOGY INC.
UNITED STATES GYPSUM COMPANY.

SUBMITTALS

SUBMIT PRODUCT DATA, MANUFACTURER'S SPECIFICATIONS AND TECHNICAL DATA FOR EACH MATERIAL INCLUDING THE COMPOSITION AND LIMITATIONS, DOCUMENTATION OF UL FIRESTOP SYSTEMS TO BE USED AND MANUFACTURER'S INSTALLATION INSTRUCTIONS TO COMPLY WITH DIVISION 1.

MANUFACTURER'S ENGINEERING JUDGMENT IDENTIFICATION NUMBER AND DRAWING DETAILS WHEN NO UL SYSTEM IS AVAILABLE FOR AN APPLICATION. ENGINEERING JUDGMENT SHALL INCLUDE BOTH PROJECT NAME AND CONTRACTOR'S NAME WHO WILL INSTALL FIRESTOP SYSTEM AS DESCRIBED IN DRAWINGS.

SUBMIT MATERIAL SAFETY DATA SHEETS PROVIDED WITH PRODUCT DELIVERED TO JOB-SITE.

26 2-8 EQUIPMENT FURNISHED BY OTHERS

PROVIDE NECESSARY EQUIPMENT AND ACCESSORIES THAT ARE NOT PROVIDED BY THE EQUIPMENT SUPPLIER OR OWNER TO COMPLETE INSTALLATION OF EQUIPMENT FURNISHED BY OTHERS, IN LOCATIONS AS INDICATED ON THE DRAWINGS, SPECIFIED HEREIN, OR BOTH. EQUIPMENT AND ACCESSORIES NOT PROVIDED BY THE EQUIPMENT SUPPLIER MAY INCLUDE SUCH ITEMS AS FLEXIBLE CORDS AND PLUGS, AS REQUIRED FOR PROPER OPERATION OF THE COMPLETE SYSTEM, IN ACCORDANCE WITH THE MANUFACTURERS' INSTRUCTIONS.

BE RESPONSIBLE FOR CORRECT ROUGH-IN DIMENSIONS, AND VERIFY THEM WITH ENGINEER, OWNER'S REPRESENTATIVE, EQUIPMENT SUPPLIER, OR ALL THREE, PRIOR TO ROUGH-IN AND SERVICE INSTALLATIONS.

26 2-9 CLEANING

IN ADDITION TO THE REQUIREMENTS OF DIVISION 1, REMOVE FROM THE PREMISES DIRT AND REFUSE RESULTING FROM THE PERFORMANCE OF THE ELECTRICAL WORK, AS REQUIRED, TO PREVENT ACCUMULATION. COOPERATE IN MAINTAINING REASONABLY CLEAN PREMISES AT ALL TIMES. IMMEDIATELY PRIOR TO FINAL INSPECTION, MAKE A FINAL CLEANUP OF DIRT AND REFUSE RESULTING FROM THE WORK. CLEAN ALL MATERIAL AND EQUIPMENT INSTALLED UNDER THIS DIVISION. REMOVE DIRT, DUST, PLASTER, STAINS AND FOREIGN MATTER FROM ALL SURFACES. TOUCH UP AND RESTORE ALL DAMAGED FINISHES TO THEIR ORIGINAL CONDITION.

26 2-10 ADJUSTING, ALIGNING AND TESTING

ADJUST, ALIGN, AND TEST ALL ELECTRICAL EQUIPMENT ON THIS PROJECT PROVIDED UNDER THIS DIVISION AND ALL ELECTRICAL EQUIPMENT FURNISHED BY OTHERS FOR INSTALLATION OR WIRING UNDER THIS DIVISION, FOR PROPER OPERATION.

TEST ALL SYSTEMS AND EQUIPMENT ACCORDING TO THE REQUIREMENTS IN NETA ATS (LATEST EDITION) AND ALL ADDITIONAL REQUIREMENTS SPECIFIED IN FOLLOWING SECTIONS.

MAINTAIN THE FOLLOWING ON THE PROJECT PREMISES AT ALL TIMES: A TRUE RMS READING VOLTMETER, A TRUE RMS READING AMMETER, AND A MEGOHMMETER INSULATION RESISTANCE TESTER. PROVIDE TEST DATA READINGS AS REQUESTED OR AS REQUIRED BY THE ENGINEER.

26 2-11 EQUIPMENT IDENTIFICATION

PROVIDE EQUIPMENT IDENTIFICATION NAMEPLATES:

ON ALL PANELBOARDS, SWITCHES, STARTERS, DIMMERS, SWITCHES IN DISTRIBUTION PANELBOARDS AND SWITCHBOARDS.

NAMEPLATES:

ENGRAVED, CONTRASTING COLOR, THREE-LAYER, LAMINATED PLASTIC INDICATING THE NAME OF THE EQUIPMENT, LOAD, OR CIRCUIT AS DESIGNATED ON THE DRAWINGS AND IN THE SPECIFICATIONS:

FIELD-APPLIED PERMANENT EPOXY ADHESIVE, COMPATIBLE WITH THE EQUIPMENT FINISH.

ATTACHMENT METHOD SHALL BE ACCEPTABLE TO THE MANUFACTURERS OF THE EQUIPMENT TO WHICH THE NAMEPLATES ARE BEING APPLIED.

COLOR: BLACK BACKGROUND WITH WHITE LETTERS FOR NORMAL POWER

LETTER HEIGHT: 1/2-INCH MINIMUM.

26 2-12 SYSTEM START UP

PRIOR TO STARTING UP THE ELECTRICAL SYSTEMS:

1. CHECK ALL COMPONENTS AND DEVICES.

2. LUBRICATE ITEMS ACCORDINGLY.

3. TIGHTEN SCREWS AND BOLTS FOR CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A AND UL 486B.

4. ADJUST TAPS ON EACH TRANSFORMER FOR RATED SECONDARY VOLTAGE WHEN THE TRANSFORMER IS AT MINIMUM LOAD.

5. CHECK AND RECORD BUILDING'S SERVICE ENTRANCE VOLTAGE, GROUNDING CONDITIONS, GROUNDING RESISTANCE, AND PROPER PHASING.

6. REPLACE ALL BURNED-OUT LAMPS AND LAMPS USED FOR TEMPORARY CONSTRUCTION LIGHTING IN PERMANENT LIGHT FIXTURES.

7. BALANCE ALL SINGLE-PHASE LOADS AT EACH PANELBOARD, REDISTRIBUTING BRANCH CIRCUIT CONNECTIONS UNTIL BALANCE IS ACHIEVED. DO NOT TYPE UP FINAL PANELBOARD DIRECTORIES UNTIL ALL RE-BALANCING AND REDISTRIBUTION OF CIRCUITS ARE COMPLETE. TURN ON ALL LOADS IN AN ATTEMPT TO MAXIMIZE THE LOAD ON THE PANEL AND TAKE AMPERE READINGS ON EACH OF THE PHASES BEFORE REDISTRUBITNG CIRCUITS AND BALANCING THE PANEL.

8. AFTER ALL SYSTEMS HAVE BEEN INSPECTED AND ADJUSTED, CONFIRM ALL OPERATING FEATURES REQUIRED BY THE DRAWINGS AND SPECIFICATIONS AND MAKE FINAL ADJUSTMENTS AS NECESSARY.

26 2-13 EXISTING EQUIPMENT REUSE AND REMOVAL

REMOVE ALL EXISTING WIRING, LIGHT FIXTURES, EXPOSED CONDUITS AND OTHER ELECTRICAL INSTALLATIONS NOT REUSED PRIOR TO SUBSTANTIAL COMPLETION OF THE WORK.

EXISTING RACEWAYS MAY BE REUSED IF THEIR POINTS OF TERMINATIONS ARE SUITABLE; IF THEY ARE CLEAN INSIDE WITH NO EVIDENCE OF RUST OR BURRS; IF FREE FROM CRACKS, FLATTENED SECTIONS OR SHARP BENDS; AND, IF SUITABLY LOCATED TO AVOID CONFLICTS WITH OTHER TRADES OR INSTALLATIONS. CAREFULLY "FISH" ALL EXISTING CONDUITS REUSED UNDER THIS CONTRACT TO REMOVE ALL DEBRIS AND OBSTRUCTIONS, AND SWAB UNTIL ALL MOISTURE IS REMOVED.

CUT, PATCH, AND REPAIR WHERE REQUIRED FOR NEW ELECTRICAL INSTALLATIONS, AND PATCH AND REPAIR ALL SURFACE DAMAGE RESULTING FROM THIS WORK. CUT FLUSH WITH THE FLOOR AND PLUG AT BOTH ENDS, RACEWAYS STUBBED ABOVE THE FLOOR AND NOT USED AT SUBSTANTIAL COMPLETION OF THE WORK.

RELOCATE ALL EXISTING ELECTRICAL SYSTEMS REQUIRED TO BE IN OPERATION AT SUBSTANTIAL COMPLETION OF THE CONTRACT, IF REQUIRED, AS A RESULT OF WORK INCLUDED UNDER THIS CONTRACT, EVEN IF NOT SPECIFICALLY INDICATED IN THE DRAWINGS OR SPECIFICATIONS.

EXISTING SERVICE ENTRANCE CONDUCTORS AND FEEDER CONDUCTORS MAY BE REUSED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:

1. CONDUCTOR SIZES MEET OR EXCEED THE SIZES SPECIFIED ON THE DRAWINGS.

2. CONDUCTOR INSULATION IS IN GOOD OR BETTER CONDITION.

3. CONDUCTOR INSULATION IS THE CORRECT TYPE FOR THE CONDITIONS.

26 2-14 ALTERNATES

INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR AND INCIDENTAL TO THE COMPLETION OF ALL WORK UNDER EACH PARTICULAR ALTERNATE. FURNISH SEPARATE BIDS FOR EACH APPLICABLE ALTERNATE, STATING THE AMOUNT TO BE ADDED TO OR DEDUCTED FROM THE BASE BID FOR EACH ALTERNATE ACCEPTED. APPLICABLE SECTIONS OF THE BASE SPECIFICATIONS APPLY TO ALL WORK REQUIRED BY THE ALTERNATES UNLESS OTHERWISE SPECIFIED. REFER TO THE ARCHITECTURAL PORTION OF THE SPECIFICATIONS FOR THE LIST OF ALTERNATES.

SECTION 26 BASIC ELECTRICAL MATERIALS AND METHODS:

26 3 METHODS

26 3-1 RACEWAYS

METALLIC CONDUIT AND TUBING:

ELECTRICAL METALLIC TUBING, COUPLINGS AND FITTINGS (EMT): ANSI C80.3, UL 797. ONLY STEEL PRODUCTS ALLOWED. REDUCED WALL EMT IS NOT ALLOWED

FLEXIBLE METAL CONDUIT (FMC): ZINC-COATED STEEL OR ALUMINUM, UL 1. REDUCED-WALL FMC IS NOT ALLOWED

INTERMEDIATE METAL CONDUIT (IMC): HOT-DIP GALVANIZED RIGID STEEL CONDUIT: ANSI C80.6, UL 1242.

LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC): FLEXIBLE STEEL CONDUIT WITH PVC JACKET: UL 360

RIGID METAL CONDUIT (RMC): HOT-DIP GALVANIZED RIGID STEEL CONDUIT (GRS): ANSI C80.1, UL 6.

PLASTIC-COATED IMC, RMC, AND FITTINGS: NEMA RN 1, UL LISTED.

IMC AND RMC FITTINGS: NEMA FB 1; COMPATIBLE WITH CONDUIT TYPE AND MATERIAL, UL LISTED

NON-METALLIC CONDUIT AND TUBING:

RIGID NONMETALLIC CONDUIT (RNC): SCHEDULE 40 PVC, 90 DEG C RATED, NEMA TC- 2, UL 651; FITTINGS: NEMA TC 3, TC 6; UL 514, COMPATIBLE WITH CONDUIT/TUBING TYPE AND MATERIAL, UL LISTED. NON-METALLIC CONDUIT/TUBING IS ALLOWED BELOW SLAB ON GRADE ONLY.

26 3-2 RACEWAY INSTALLATION

ABOVE GROUND USE

INSTALL ALL CIRCULAR RACEWAYS CONCEALED ABOVE SUSPENDED CEILINGS OR CONCEALED IN WALLS OR FLOORS WHEREVER POSSIBLE EXCEPT WHERE OTHERWISE INDICATED.

PROVIDE GRS FOR ALL CONDUITS RUN EXPOSED TO WEATHER, OR EXPOSED TO OTHER HAZARDOUS CONDITIONS.

ALL OTHER RACEWAY MAY BE EMT WHERE APPROVED BY LOCAL CODE. USE COMPRESSION TYPE FITTINGS FOR EMT, WITH ALL FITTINGS UL LISTED FOR THE ENVIRONMENT IN WHICH THEY ARE USED.

EQUIPMENT CONNECTIONS

USE FMC FOR FINAL CONNECTION TO EACH MOTOR AND TRANSFORMER, AND TO ANY DEVICE THAT WOULD OTHERWISE TRANSMIT MOTION, VIBRATION, OR NOISE. USE LFMC WHERE EXPOSED TO LIQUIDS, VAPORS OR SUNLIGHT, AND TO CONNECT TO KITCHEN AND FOOD SERVICE EQUIPMENT. PROVIDE ALL FMC AND LFMC WITH AN INSULATED BONDING CONDUCTOR.

USE ONLY METAL RACEWAYS FOR ALL POWER WIRING FROM THE OUTPUT OF VARIABLE FREQUENCY DRIVES TO THEIR RESPECTIVE MOTORS.

GENERAL RACEWAY INSTALLATION REQUIREMENTS

INSTALL RACEWAYS PARALLEL AND PERPENDICULAR TO BUILDING LINES. INSTALL RACEWAYS TO REQUIREMENTS OF STRUCTURE AND TO REQUIREMENTS OF ALL OTHER WORK ON THE PROJECT; TO CLEAR ALL OPENINGS, DEPRESSIONS, PIPES, DUCTS, REINFORCING STEEL, AND OTHER IMMOVABLE OBSTACLES.

INSTALL RACEWAYS SET IN FORMS FOR CONCRETE STRUCTURE IN SUCH A MANNER THAT INSTALLATION WILL NOT AFFECT THE STRENGTH OF THE STRUCTURE.

EXCEPT WHERE APPROVED IN WRITING BY THE ENGINEER, INSTALL NO RACEWAY IN A SLAB-ON-GRADE. LOCATE RACEWAY BELOW GRANULAR FILL BELOW SLABS-ON-GRADE.

INSTALL RACEWAYS CONTINUOUS BETWEEN CONNECTIONS TO OUTLETS, BOXES AND CABINETS WITH A MINIMUM POSSIBLE NUMBER OF BENDS AND NOT MORE THAN THE EQUIVALENT OF FOUR 90-DEGREE BENDS BETWEEN CONNECTIONS. USE MANUFACTURED ELBOWS FOR ALL 45- AND 90-DEGREE BENDS, UNLESS APPROVED BY THE ENGINEER IN ADVANCE. MAKE OTHER BENDS SMOOTH AND EVEN AND WITHOUT FLATTENING RACEWAY OR FLAKING GALVANIZING OR ENAMEL. RADII OF BENDS SHALL BE AS LONG AS POSSIBLE AND NEVER SHORTER THAN THE CORRESPONDING TRADE ELBOW.

USE LONG RADIUS ELBOWS FOR ALL UNDERGROUND INSTALLATIONS, WHERE NECESSARY OR INDICATED.

SECURELY FASTEN RACEWAYS IN PLACE WITH APPROVED STRAPS, HANGERS AND STEEL SUPPORTS AS REQUIRED. ATTACH RACEWAY SUPPORTS TO THE BUILDING STRUCTURE. HANG SINGLE RACEWAYS FOR FEEDERS WITH MALLEABLE SPLIT RING HANGERS WITH ROD AND TURNBUCKLE SUSPENSION FROM INSERTS SPACED NOT OVER 10 FEET APART IN CONSTRUCTION ABOVE. CLAMP GROUPS OF HORIZONTAL FEEDER RACEWAYS TO STEEL CHANNELS THAT ARE SUSPENDED FROM INSERTS SPACED NOT OVER 10 FEET APART IN CONSTRUCTION ABOVE. SECURELY CLAMP VERTICAL FEEDER RACEWAYS TO STRUCTURAL STEEL MEMBERS ATTACHED TO STRUCTURE. INSTALL CABLE CLAMPS FOR SUPPORT OF VERTICAL FEEDERS WHERE REQUIRED. ADD RACEWAY SUPPORTS WITHIN 12 INCHES OF ALL BENDS, ON BOTH SIDES OF THE BENDS. DO NOT SUPPORT RACEWAYS FROM SUSPENDED CEILING COMPONENTS.

REAM RACEWAY ENDS, THOROUGHLY CLEAN RACEWAYS BEFORE INSTALLATION, AND KEEP CLEAN AFTER INSTALLATION. PLUG OR COVER OPENINGS AND BOXES AS REQUIRED TO KEEP RACEWAYS CLEAN DURING CONSTRUCTION AND FISH ALL RACEWAYS CLEAR OF OBSTRUCTIONS BEFORE PULLING CONDUCTORS WIRES. PROVIDE RACEWAYS OF AMPLE SIZE FOR PULLING OF WIRE AND NOT SMALLER THAN CODE REQUIREMENTS AND NOT LESS THAN 1/2-INCH IN SIZE, UNLESS INDICATED OTHERWISE ON DRAWINGS. HOMERUNS CONTAINING MORE THAN ONE BRANCH CIRCUIT SHALL NOT BE LESS THAN 3/4- INCH IN SIZE.

PROTECT ALL RACEWAY INSTALLATIONS AGAINST DAMAGE DURING CONSTRUCTION. REPAIR ALL RACEWAYS DAMAGED OR MOVED OUT OF LINE AFTER ROUGHING-IN TO MEET ENGINEER'S APPROVAL WITHOUT ADDITIONAL COST TO THE OWNER.

ALIGN AND INSTALL TRUE AND PLUMB ALL RACEWAY TERMINATIONS AT PANELBOARDS, SWITCHBOARDS, MOTOR CONTROL EQUIPMENT AND JUNCTION BOXES.

INSTALL APPROVED EXPANSION/DEFLECTION FITTINGS WHERE RACEWAYS PASS THROUGH (IF EMBEDDED) OR ACROSS (IF EXPOSED) EXPANSION JOINTS. ALSO WHEN USING RNC OR RAC IN EXPOSED ENVIRONMENTS IN ACCORDANCE WITH THE NEC AND EXPANSION/CONTRACTION PROPERTIES OF RNC OR RAC.

INSTALL A PULL WIRE IN EACH EMPTY RACEWAY THAT IS LEFT FOR INSTALLATION OF CONDUCTORS OR CABLES UNDER OTHER DIVISIONS OR CONTRACTS. USE POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 200-LB TENSILE STRENGTH. LEAVE AT LEAST 24 INCHES OF SLACK AT EACH END OF PULL WIRE.

MAKE ALL JOINTS AND CONNECTIONS IN A MANNER THAT WILL ENSURE MECHANICAL STRENGTH AND ELECTRICAL CONTINUITY.

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KEITH EDWIN HAMMERSCHMIDT
KANSAS
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION
01/31/2024

WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase

PERMIT SET

Project Number
24-304

Issue Date
1/31/2024

Revision No.	Description	Date Issued

Area Plan

Sheet Name
ELECTRICAL SHEET SPECIFICATIONS

Sheet Number
E0.01

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26 3-3 BUSHINGS AND LOCKNUTS

RIGIDLY TERMINATE CONDUITS ENTERING SHEET METAL ENCLOSURES TO THE ENCLOSURE WITH A BUSHING AND LOCKNUT ON THE INSIDE AND A LOCKNUT OR AN APPROVED HUB ON THE OUTSIDE. CONDUIT SHALL ENTER THE ENCLOSURE SQUARELY.

PROVIDE BUSHINGS AND LOCKNUTS MADE OF GALVANIZED MALLEABLE IRON WITH SHARP, CLEAN-CUT THREADS.

WHERE EMT ENTERS A BOX, PROVIDE APPROVED EMT COMPRESSION CONNECTORS.

USE INSULATED, GROUNDING, OR COMBINATION, BUSHINGS WHEREVER CONNECTION IS SUBJECT TO VIBRATION OR MOISTURE, WHEN REQUIRED BY NFPA 70, OR BOTH.

26 3-4 CONDUCTORS AND CABLES

CONDUCTOR MATERIAL:

ANNEALED (SOFT) COPPER COMPLYING WITH ICEA S-95-658/NEMA WC70;

TERMINATIONS: TINNED, COMPRESSION OR MECHANICAL TYPE ONLY; UL-LISTED FOR COPPER AND ALUMINUM CONDUCTORS AT 75 DEGREES C MINIMUM. CONDUCTOR INSULATION TYPES: 90-DEGREE C-RATED, TYPE THHN/THWN-2 OR XHHW-2 COMPLYING WITH ICEA S-95-658/NEMA WC70.

SIZES OF CONDUCTORS AND CABLES INDICATED OR SPECIFIED ARE IN AMERICAN WIRE GAGE (AWG - BROWN AND SHARPE).

ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS NO. 8 AWG AND LARGER: STRANDED.

ALL CONDUCTORS, NO. 10 AWG AND SMALLER: SOLID COPPER

ALL BRANCH CIRCUIT WIRING: NOT SMALLER THAN NO. 12 AWG. IF NO CONDUCTOR SIZE IS INDICATED ON THE DRAWINGS FOR A BRANCH CIRCUIT, PROVIDE CONDUCTORS AND CONDUIT SIZED PER NFPA 70 AND BASED ON THE INDICATED BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE (OCPD) RATING AND NUMBER OF POLES. WHERE NO CIRCUIT SIZE (I.E., CONDUCTORS AND OCPD) IS INDICATED ON THE DRAWINGS FOR A BRANCH CIRCUIT, PROVIDE THREE NO. 12 AWG CONDUCTORS, IN 3/4-INCH RACEWAY, AND A 20A CIRCUIT BREAKER.

CONTROL WIRING: STRANDED COPPER CONDUCTORS, 600V INSULATION, OF THE PROPER TYPE, SIZE AND NUMBER AS REQUIRED TO ACCOMPLISH SPECIFIED FUNCTION. MINIMUM SIZE: NO. 14 AWG, UNLESS NOTED OTHERWISE.

FLEXIBLE CORDS AND CABLES: STRANDED COPPER CONDUCTORS FOR ALL, UNLESS NOTED OTHERWISE.

SPECIAL PURPOSE CONDUCTORS AND CABLES, SUCH AS LOW VOLTAGE CONTROL AND SHIELDED INSTRUMENT WIRING: UNLESS INDICATED OTHERWISE, SHALL BE AS RECOMMENDED BY THE SYSTEM EQUIPMENT MANUFACTURER.

TYPE MC CABLE: 600V, UNJACKETED; ANSI E119 AND E814, UL STANDARDS 44 OR 83 (AS APPLICABLE), AND 1569, NFPA 70 ARTICLE 330; ALUMINUM OR GALVANIZED STEEL INTERLOCKED ARMOR; THHN- OR XHHW-INSULATED CONDUCTORS; COLOR CODE: ICEA METHOD 1, WITH GREEN INSULATED GROUNDING CONDUCTOR

26 3-5 INSTALLATION OF CONDUCTORS AND CABLES

INSTALL ALL WIRING IN APPROVED RACEWAY AND ENCLOSURES, EXCEPT:
- WHERE SPECIFIED OR INDICATED FOR LOW-VOLTAGE WIRING
- WHERE SPECIFIED OR INDICATED FOR DIRECT-BURIED CABLES
- WHERE TYPE MC CABLE IS INDICATED OR SPECIFIED AS ACCEPTABLE.

INSTALL ALL CONDUCTORS AND CABLE IN RACEWAYS CONTINUOUS WITHOUT TAPS OR SPLICES. SPLICE OR TAP ONLY IN APPROVED BOXES AND ENCLOSURES WITH APPROVED SOLDERLESS CONNECTORS, OR CRIMP CONNECTORS AND TERMINAL BLOCKS FOR CONTROL WIRING, AND KEEP TO THE MINIMUM REQUIRED. INSULATE ALL SPLICES, TAPS, AND JOINTS AS REQUIRED BY CODES.

ALL MATERIALS USED TO TERMINATE, SPLICE OR TAP CONDUCTORS: DESIGNED FOR, PROPERLY SIZED FOR, AND UL LISTED FOR THE SPECIFIC APPLICATION AND CONDUCTORS INVOLVED, AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, USING THE MANUFACTURER'S RECOMMENDED TOOLS.

WHERE WIRING IS INDICATED AS INSTALLED, BUT THE CONNECTION IS INDICATED "FUTURE" OR "BY OTHER DIVISION, TRADES, OR CONTRACTS", LEAVE A MINIMUM 3- FOOT "PIGTAIL" AT THE BOX, TAPE THE ENDS OF THE CONDUCTORS, AND COVER THE BOX.

IN GENERAL, THE DIRECTION OF BRANCH CIRCUIT "HOME RUN" ROUTING IS INDICATED ON THE DRAWINGS. COMPLETE WITH CIRCUIT NUMBERS AND PANELBOARD DESIGNATION. CONTINUE ALL SUCH "HOME RUN" WIRING TO THE DESIGNATED PANELBOARD, AS THOUGH "CIRCUIT RUNS" WERE INDICATED IN THEIR ENTIRETY.

COMMON OR SHARED NEUTRALS ARE NOT ALLOWED UNLESS SHOWN ON THE DRAWINGS TO BE USED OR SPECIFICALLY NOTED TO BE ALLOWED.

WHERE MULTI-WIRE BRANCH CIRCUITS (I.E., SHARED NEUTRAL) ARE ALLOWED, THEY SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT THE BRANCH CIRCUIT ORIGINATES. MULTI-POLE BREAKERS OR 3 SINGLE POLE BREAKERS WITH A HANDLE TIE ARE TWO EXAMPLES.

WHEN MULTIPLE HOME RUNS ARE COMBINED INTO A SINGLE RACEWAY SUCH THAT THE NUMBER OF CONDUCTORS EXCEEDS FOUR (CONDUCTOR COUNT IS MADE UP OF ANY COMBINATION OF PHASE AND NEUTRAL CONDUCTORS), THE FOLLOWING RESTRICTIONS APPLY, WHICH ARE IN ADDITION TO THOSE IN NFPA 70:

NORMAL OR NON-ESSENTIAL CIRCUITS.

MAXIMUM OF 16 CONDUCTORS IN A SINGLE RACEWAY. FOR UP TO EIGHT CONDUCTORS IN A RACEWAY, MINIMUM RACEWAY SIZE: 3/4-INCH. FOR GREATER THAN EIGHT CONDUCTORS, MINIMUM RACEWAY SIZE: 1-INCH. DO NOT INSTALL ANY OTHER TYPE OF CIRCUIT IN THIS RACEWAY.

THE MINIMUM WIRE SIZE FOR ALL CONDUCTORS IN THIS RACEWAY: NO. 10 AWG.

ONLY 15A AND 20A BRANCH CIRCUIT HOMERUNS MAY BE COMBINED INTO ONE RACEWAY.

GFCI CIRCUITS.

DO NOT USE MULTI-CONDUCTOR CIRCUITS, WITH A SHARED NEUTRAL, FOR ANY GFCI CIRCUIT BREAKER OR RECEPTACLE CIRCUIT.

EMERGENCY POWER CIRCUITS - INCLUDES ALL CIRCUITS COVERED UNDER ARTICLES 700, 701 AND 702.

MAXIMUM OF EIGHT CONDUCTORS IN A SINGLE RACEWAY.
MINIMUM RACEWAY SIZE: 3/4-INCH
DO NOT INSTALL ANY OTHER TYPE OF CIRCUIT IN THIS RACEWAY.

ONLY 15A AND 20A BRANCH CIRCUIT HOMERUNS MAY BE COMBINED INTO ONE RACEWAY.

FOR BRANCH CIRCUITS FED FROM GFCI CIRCUIT BREAKERS, LIMIT THE ONE-WAY CONDUCTOR LENGTH TO 100 FEET BETWEEN THE PANELBOARD AND THE MOST REMOTE RECEPTACLE OR LOAD ON THE GFCI CIRCUIT.

PROPERLY IDENTIFY ALL TERMINAL BLOCKS AND WIRE TERMINALS FOR CONTROL WIRING WITH VINYL STICK-ON MARKERS OR EQUIVALENT. PROVIDE ENGINEER WITH A LIST OF PROPOSED IDENTIFYING NUMBERS FOR REVIEW PRIOR TO INSTALLING MARKERS.

PROVIDE AN EQUIPMENT-GROUNDING CONDUCTOR, OR BONDING JUMPER, AS APPLICABLE, IN ALL FEEDERS AND BRANCH CIRCUITS, SIZED IN ACCORDANCE WITH NFPA 70 TABLES 250.66 OR 250.122, AS APPLICABLE, UNLESS INDICATED AS LARGER ON THE DRAWINGS.

WIRING SHALL HAVE INSULATION OF THE PROPER COLOR TO MATCH COLOR CODE SYSTEM IN THE TABLE BELOW UNLESS THERE IS A COLOR SYSTEM CURRENTLY IN USE BY THE FACILITY, IN WHICH CASE THE COLORS ARE TO MATCH THE EXISTING SYSTEM. IN LARGER SIZES, WHERE PROPERLY COLORED INSULATION IS NOT AVAILABLE, USE VINYL PLASTIC ELECTRICAL TAPE OF THE APPROPRIATE COLOR AROUND EACH CONDUCTOR AT ALL TERMINATION POINTS, JUNCTION AND PULL BOXES.

SYSTEM VOLTAGE	CONDUCTOR TYPE	COLOR
208Y/120	PHASE A	BLACK
	PHASE B	RED
	PHASE C	BLUE
	NEUTRAL	WHITE
	EQUIPMENT GROUND	GREEN
	ISOLATED GROUND	GREEN W/ YELLOW STRIPE
480Y/277	PHASE A	BROWN
	PHASE B	ORANGE
	PHASE C	YELLOW
	NEUTRAL	GRAY
	EQUIPMENT GROUND	GREEN

26 3-6 JUNCTION BOXES, PULL BOXES, CABINETS AND WIREWAYS

PROVIDE JUNCTION BOXES, PULL BOXES, CABINETS AND WIREWAYS WHEREVER NECESSARY FOR PROPER INSTALLATION OF VARIOUS ELECTRICAL SYSTEMS ACCORDING TO NFPA 70 AND WHERE INDICATED ON THE DRAWINGS. SIZE AS REQUIRED FOR THE SPECIFIC FUNCTION OR AS REQUIRED BY NFPA 70, WHICHEVER IS LARGER. CONSTRUCTION SHALL BE OF A NEMA DESIGN SUITABLE FOR THE ENVIRONMENT INSTALLED.

JUNCTION BOXES INSTALLED BEHIND WALL CASES, AND IN OR ON OTHER STORE FIXTURES, EXCEPT WHERE OTHERWISE SPECIFIED, SHALL BE 4-INCH SQUARE OR LARGER, WITH GALVANIZED COVERS.

HORIZONTALLY MOUNT JUNCTION BOXES UNDER CENTER FIXTURES (AND CASES). HANDY BOXES OR 4-INCH SQUARE BOXES WITH TOPS OF BOXES NOT MORE THAN 3- 1/2 INCHES ABOVE THE FLOOR. SIZE JUNCTION BOXES TO ADEQUATELY CONTAIN ALL REQUIRED CONDUCTORS AND SPLICES.

26 3-7 OUTLET BOXES

ALL OUTLETS INCLUDING LIGHT FIXTURE, SWITCH, RECEPTACLE, AND SIMILAR OUTLETS: NATIONAL ELECTRICAL, APPLETON, STEEL CITY, RACO, OR APPROVED EQUAL, GALVANIZED STEEL KNOCKOUT BOXES, SUITABLE IN DESIGN TO THE PURPOSE THEY SERVE AND THE SPACE THEY OCCUPY. SIZE AS REQUIRED FOR THE SPECIFIC FUNCTION OR AS REQUIRED BY NFPA 70, WHICHEVER IS LARGER. SET ALL OUTLET BOXES IN WALLS, COLUMNS, FLOORS, OR CEILINGS SO THEY ARE FLUSH WITH THE FINISHED SURFACE, ACCURATELY SET, AND RIGIDLY SECURED IN POSITION. PROVIDE PLASTER RINGS, EXTENSION RINGS AND/OR MASONRY RINGS AS REQUIRED FOR FLUSH MOUNTING. PROVIDE APPROVED CAST OUTLET BOXES, WITH HUBS AND WEATHERPROOF COVERS, IN ALL AREAS SUBJECT TO DAMP, WET, OR HARSH CONDITIONS.

26 3-8 OUTLET LOCATIONS

COORDINATE LOCATIONS OF OUTLET BOXES. OUTLETS ARE ONLY APPROXIMATELY LOCATED ON THE SMALL SCALE DRAWINGS. USE GREAT CARE IN THE ACTUAL LOCATION BY CONSULTING THE VARIOUS LARGE SCALE DETAILED DRAWINGS USED BY OTHER DIVISION TRADES, AND BY SECURING DEFINITE LOCATIONS FROM THE ARCHITECT

26 3-9 MOUNTING HEIGHTS

UNLESS NOTED OTHERWISE, INSTALL WIRING DEVICES AS INDICATED BELOW (NOTE: ALL DIMENSIONS ARE TO THE BOTTOM OF THE OUTLET BOX UNLESS NOTED OTHERWISE):

RECEPTACLES:

VERTICALLY ALIGNED WITH THE GROUND SLOT MOUNTED AT THE TOP: 16 INCHES ABOVE FINISHED FLOOR.

HORIZONTALLY ALIGNED, WITH NEUTRAL SLOT MOUNTED AT THE BOTTOM: 16 INCHES ABOVE FINISHED FLOOR.

FOR 36-INCH HIGH COUNTER TOPS: 44 INCHES ABOVE FINISHED FLOOR, VERTICALLY ALIGNED.

FOR 34-INCH HIGH COUNTER TOPS: 40 INCHES ABOVE FINISHED FLOOR, VERTICALLY ALIGNED.

MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS AND JANITORS CLOSETS: 44 INCHES ABOVE FINISHED FLOOR, VERTICALLY ALIGNED.

GFCI RECEPTACLES: SAME AS GENERAL.

ISOLATED GROUND RECEPTACLES: SAME AS GENERAL RECEPTACLES.

CONCRETE BLOCK WALLS: DIMENSIONS ABOVE MAY BE ADJUSTED SLIGHTLY, AS REQUIRED TO COMPENSATE FOR VARIABLE JOINT DIMENSIONS, SUCH THAT BOTTOM OR TOP OF BOXES, AS APPLICABLE, ARE AT BLOCK JOINTS.

SWITCHES:

GENERAL: 46 INCHES ABOVE FINISHED FLOOR.

ABOVE COUNTERS: SAME AS FOR RECEPTACLES.

CONCRETE BLOCK WALLS: 40 INCHES ABOVE FINISHED FLOOR (DIMENSION MAY BE ADJUSTED SLIGHTLY, AS REQUIRED TO COMPENSATE FOR VARIABLE JOINT DIMENSIONS, SUCH THAT BOTTOM OF BOXES ARE AT BLOCK JOINTS).

TELEPHONE/DATA OUTLET BOXES:

GENERAL: MATCH MOUNTING HEIGHT OF ADJACENT WIRING DEVICE LISTED ABOVE.

WALL-MOUNTED TELEPHONE: 40 INCHES ABOVE FINISHED FLOOR.

FOR OTHER THAN WIRING DEVICES, REFER TO PARAGRAPHS, ARTICLES, SECTIONS, DIVISIONS, OR DRAWINGS TO OBTAIN MOUNTING HEIGHTS FOR SPECIFIC EQUIPMENT OR SYSTEMS.

26 3-10 WIRING DEVICES

THE CATALOG NUMBERS LISTED FOR WIRING DEVICES ARE GENERALLY FOR 20A RATED DEVICES. WHERE 15A RATED DEVICES ARE INDICATED ON THE DRAWINGS OR REQUIRED FOR CIRCUIT RATING LIMITATIONS, PROVIDE WIRING DEVICES EQUIVALENT TO THOSE SPECIFIED FOR 20A, BUT RATED FOR 15A.

ALL RECEPTACLES LOCATED OUTDOORS OR IN DAMP OR WET LOCATIONS: SHALL BE LISTED AS 'WEATHER RESISTANT', DESIGNATED BY A 'WR' ON THE FACEPLATE.

PROVIDE THE FOLLOWING WIRING DEVICES WHERE SHOWN ON DRAWINGS OR REQUIRED. MINOR CHANGES RELATIVE TO THE LOCATION OF ELECTRICAL EQUIPMENT MAY BE MADE TO COMPLY WITH STRUCTURAL AND BUILDING REQUIREMENTS AS DETERMINED IN THE COURSE OF CONSTRUCTION. PROVIDE ALL WIRING DEVICES OF THE SAME MANUFACTURER AND NOT MIXED ON THE PROJECT, TO THE MAXIMUM EXTENT POSSIBLE. PROVIDE COLOR OF TOGGLES AND RECEPTACLES AS REQUESTED BY THE ENGINEER: REFER TO DETAIL SHOWING RECEPTACLES TABLE.

TYPE OF DEVICE	HUBBELL	PASS & SEYMOUR	LEVITON	COOPER
DUPLEX RECEPTACLE	BR20	CR20	CR20	CR20
ISOLATED GROUND RECEPTACLE	IG20CR	IG5362	5362-IG	IG5362
SIMPLEX RECEPTACLE	HBL 5361	5361	5261	5361
GFCI RECEPTACLE	GF20LA	2095	7899-H	VGF20
QUAD / 4-PLEX	HBL 420	420H	21254	N/A
SINGLE POLE SWITCH	DS120	CS20AC1	CSB1-20	CSB120
DOUBLE POLE SWITCH	DS220		CSB2-20	CSB220
THREE-WAY SWITCH	DS230	CS20AC3	CSB3-20	CSB320

26 3-11 SWITCH AND OUTLET COVER PLATES

SWITCH AND OUTLET PLATES COLORED, SMOOTH NYLON; BY THE SAME MANUFACTURER AS THE WIRING DEVICES, WHEREVER POSSIBLE. VERIFY DESIRED MATERIALS AND COLORS WITH ARCHITECT BEFORE INSTALLATION. SWITCH PLATES IN UNFINISHED ROOMS AND SPACES: STAMPED STEEL, CADMIUM PLATED. INSTALL GROUPS OF SWITCHES UNDER ONE GANGED-PLATE, USUALLY HORIZONTALLY; OR, WHERE REQUIRED BY DETAILS, VERTICALLY. SET ALL COVER PLATES PLUMB, PARALLEL, AND FINISHED FLUSH WITH THE WALL.

26 4 DISTRIBUTION AND CONTROL EQUIPMENT

26 4-1 LIGHTING AND APPLIANCE PANELBOARDS

PANELBOARDS: SQUARE D TYPE NQOD OR NF, AS APPLICABLE, BASED ON VOLTAGE AND AMPERE RATINGS AND REQUIRED SHORT-CIRCUIT INTERRUPTING RATINGS AS SCHEDULED ON THE DRAWINGS, OR APPROVED EQUAL BY SIEMENS, CUTLER HAMMER, OR GENERAL ELECTRIC; COMPLETE WITH BOLT-ON THERMAL MAGNETIC, MOLDED CASE CIRCUIT BREAKERS ASSEMBLED IN A DEAD-FRONT FINISHED CABINET CONTAINING A TYPEWRITTEN CARD DIRECTORY INDICATING EXACTLY WHAT EACH CIRCUIT BREAKER CONTROLS; FULLY-RATED AND WITH THE INTEGRATED SHORT CIRCUIT CURRENT RATINGS INDICATED ON THE DRAWINGS. PLUG-IN TYPE BREAKERS WILL NOT BE ACCEPTABLE. ALL TWO AND THREE POLE BREAKERS: COMMON TRIP TYPE. BREAKERS USED AS SWITCHES FOR 120V OR 277V LIGHTING CIRCUITS: APPROVED FOR THE PURPOSE AND MARKED "SWD". BREAKERS USED FOR THE PROTECTION OF HVAC AND REFRIGERATION EQUIPMENT: HACR TYPE.

26 4-2 CIRCUIT BREAKERS IN EXISTING PANELBOARDS

PROVIDE NEW CIRCUIT BREAKERS, FOR INSTALLATION IN EXISTING PANELBOARDS, OF THE SAME MANUFACTURER, TYPE AND SHORT CIRCUIT CURRENT INTERRUPTING RATINGS AS THE EXISTING PANELBOARD CIRCUIT BREAKERS.

WHEN THERE IS NOT ENOUGH ROOM IN THE EQUIPMENT TO SHOW ALL THE LEGITIMATE SERIES RATED COMBINATIONS, REFERENCE A BULLETIN SUPPLIED WITH THE PANELBOARD, PER UL 67.

26 4-3 DISCONNECT (SAFETY) SWITCHES

DISCONNECT (SAFETY) SWITCHES: SQUARE D, SIEMENS, CUTLER HAMMER, OR GENERAL ELECTRIC FUSED OR NON-FUSED (AS INDICATED ON DRAWINGS OR REQUIRED) NEMA KS1, HEAVY DUTY, EXTERNALLY OPERATED, VISIBLE-BLADE SAFETY SWITCHES; NEMA ENCLOSURE TYPE INDICATED ON THE DRAWINGS OR SUITABLE FOR THE ENVIRONMENT IN WHICH INSTALLED. BASED ON FUSIBLE SWITCH AND FUSE SIZES INDICATED, INCLUDE CLASS R, J, OR L FUSE PROVISIONS AS APPLICABLE.

WHERE INDICATED, PROVIDE FUSIBLE SWITCHES PERMANENTLY LABELED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT, WITH INTEGRAL AND SEPARATE NEUTRAL AND GROUND ASSEMBLIES, SUITABLE FOR THE SIZES OF CONDUCTORS INDICATED. DO NOT DOUBLE-LUG ANY TERMINATIONS NOT SPECIFICALLY LISTED AS SUITABLE FOR MORE THAN ONE CONDUCTOR.

PROVIDE SWITCHES WHERE NOT FURNISHED WITH THE STARTING EQUIPMENT, AT ALL OTHER POINTS REQUIRED BY NFPA 70, AND WHERE INDICATED ON THE DRAWINGS.

END OF SECTION 26 ELECTRICAL REQUIREMENTS

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01/31/2024

WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
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Revision No.	Description	Date Issued

Area Plan

Sheet Name
ELECTRICAL SHEET SPECIFICATIONS

Sheet Number
E0.02

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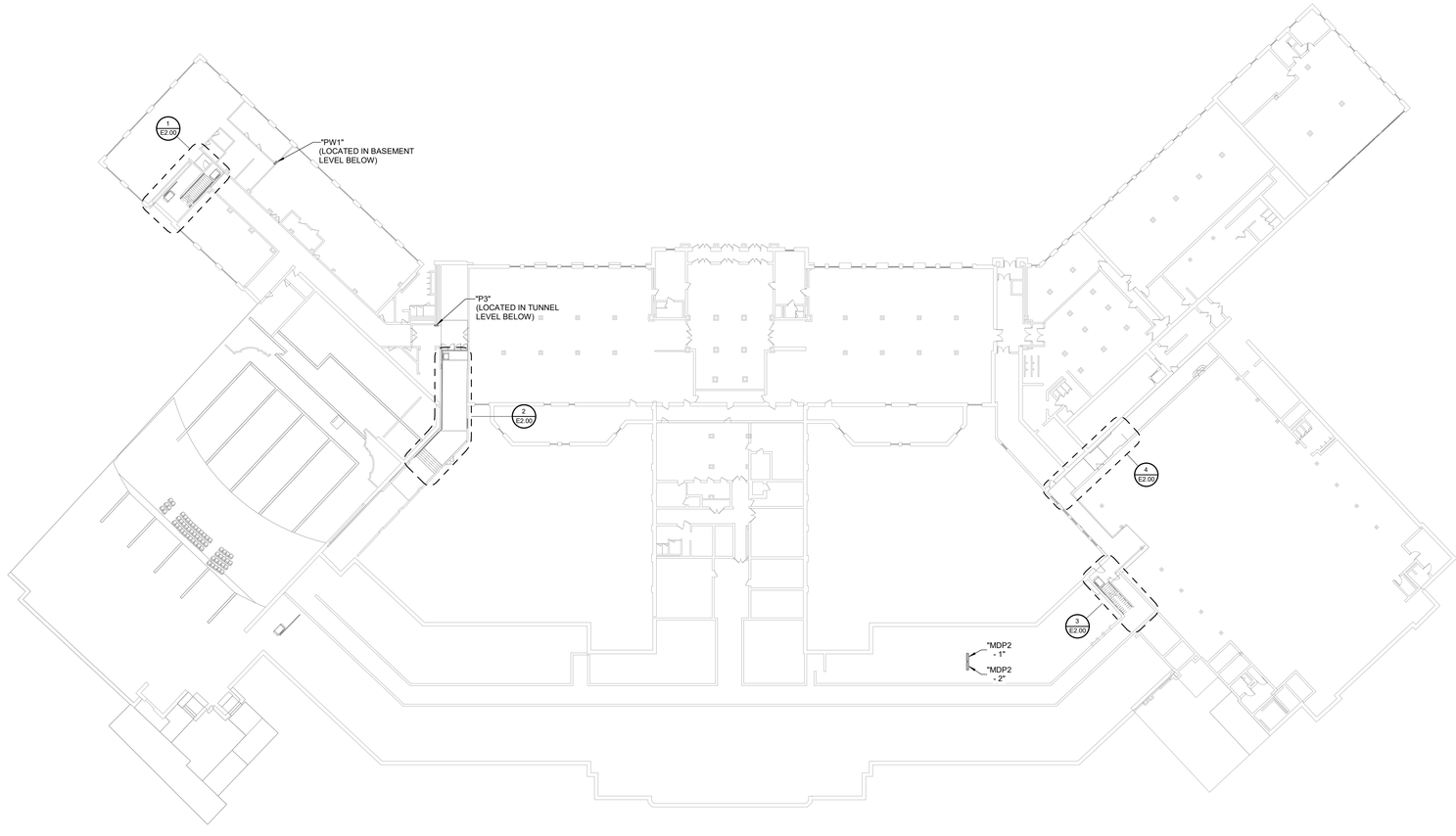
GENERAL NOTES:

REFER TO SHEET E0.00 FOR GENERAL NOTES.



1 E1.00 **LOWER LEVEL ELECTRICAL PLAN - OVERALL**

SCALE: 1/32" = 1'-0"

NORTH

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LOWER LEVEL ELECTRICAL PLAN - OVERALL

Sheet Number

E1.00

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GENERAL NOTES:

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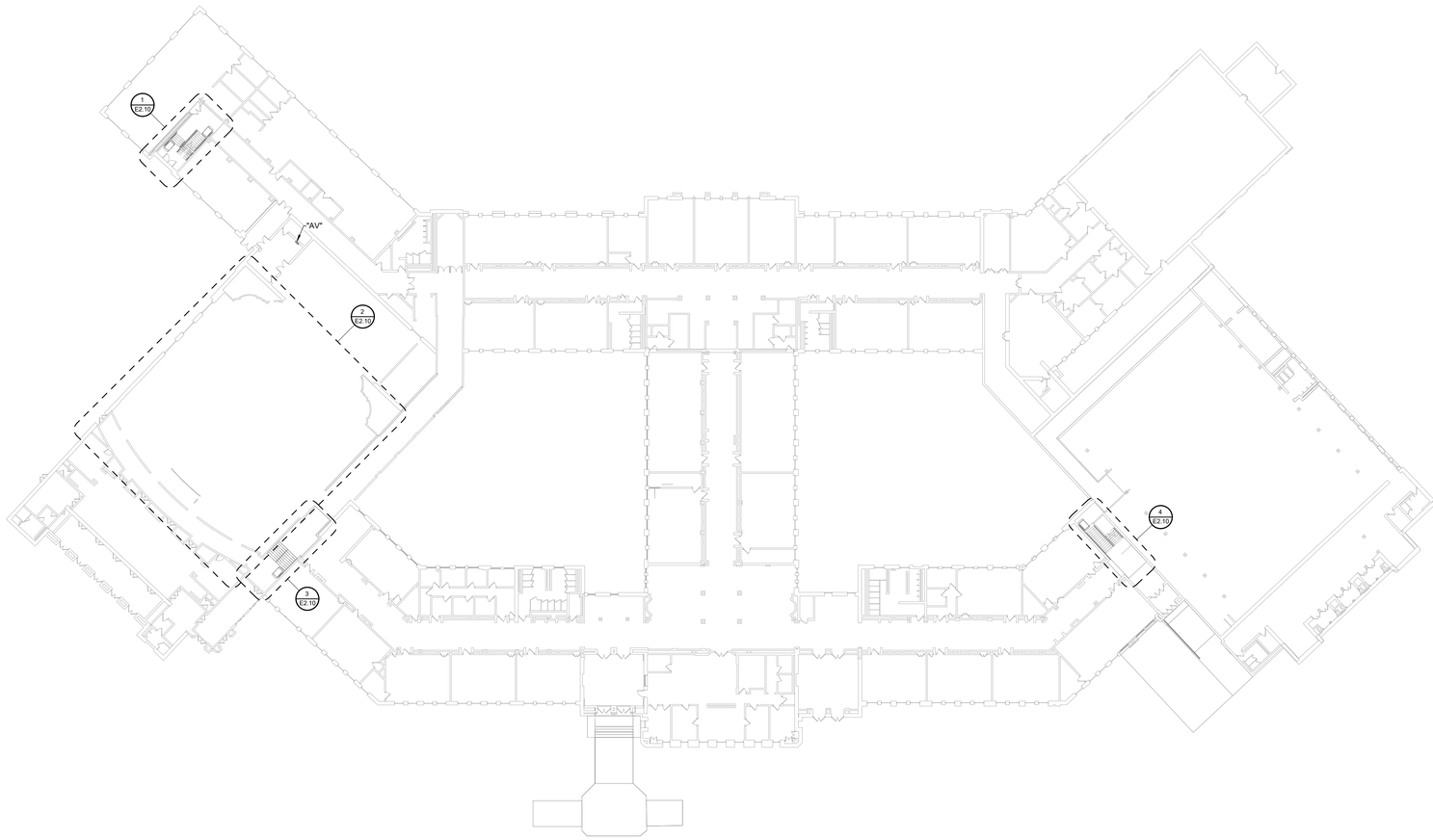

1 E1.10 **MAIN LEVEL ELECTRICAL PLAN - OVERALL**
SCALE: 1/32" = 1'-0"
NORTH

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Sheet Name
MAIN LEVEL ELECTRICAL PLAN - OVERALL

Sheet Number
E1.10

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GENERAL NOTES:

REFER TO SHEET E0.00 FOR GENERAL NOTES.

PLAN HEX NOTES:

1 INSTALL J-BOX FOR MOTORIZED LIFT AT 18" AFF AND 18"-24" FROM THE RAIL BULLNOSE. MAKE ALL REQUIRED ELECTRICAL CONNECTIONS TO LIFT. ROUTE FEEDER DOWN THROUGH EXISTING CLASSROOM WALL DOWN TO SHOP ROOM EXISTING PANEL PW1. PROVIDE NEW 20A/2P CIRCUIT BREAKER IN AVAILABLE SPACE. COORDINATE EXACT ROUTING OF CONDUITS SO THAT THERE IS NO EXPOSED CONDUITS IN HISTORIC FINISHED SPACES. ALL CONDUITS SHALL BE ROUTED CONCEALED DOWN IN EXISTING WALLS AND DOWN IN THE BASEMENT AND TUNNEL UNFINISHED AREAS.

2 INSTALL J-BOX FOR MOTORIZED LIFT AT 18" AFF AND 18"-24" FROM THE RAIL BULLNOSE. MAKE ALL REQUIRED ELECTRICAL CONNECTIONS TO LIFT. ROUTE FEEDER DOWN THROUGH EXISTING WALL DOWN TO BASEMENT TO EXISTING PANEL P3. PROVIDE NEW 20A/2P CIRCUIT BREAKER IN AVAILABLE SPACE. COORDINATE EXACT ROUTING OF CONDUITS SO THAT THERE IS NO EXPOSED CONDUITS IN HISTORIC FINISHED SPACES. ALL CONDUITS SHALL BE ROUTED CONCEALED DOWN IN EXISTING WALLS AND DOWN IN THE BASEMENT AND TUNNEL UNFINISHED AREAS.

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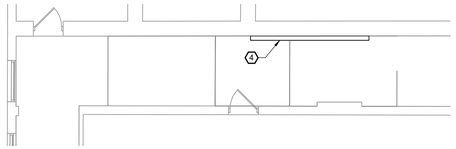
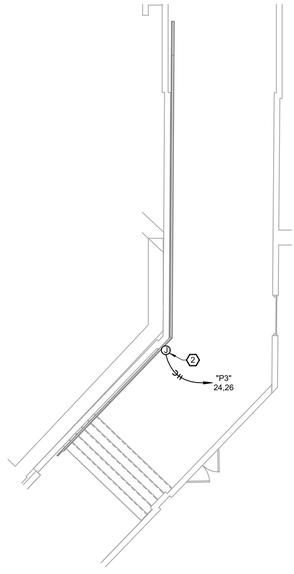
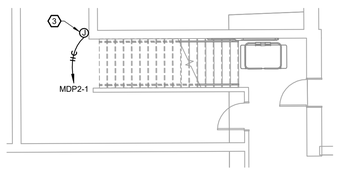
4 EXISTING BASEBOARD HEATER TO BE RELOCATED TO ACCOMMODATE ADDITIONAL FLOOR SLAB. COORDINATE EXACT HEIGHT WITH ARCHITECTURAL PLANS. EXTEND EXISTING FEEDER AND MAKE CONNECTION TO NEW LOCATION.



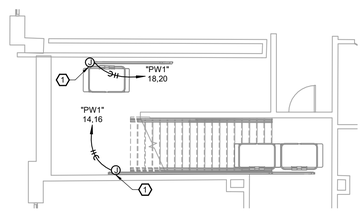
4 E2.00 **GYM RAMP ENLARGED POWER PLAN**
SCALE: NOT TO SCALE



2 E2.00 **PAC LIFT ENLARGED POWER PLAN**
SCALE: 1/8" = 1'-0"



3 E2.00 **SOUTH STAIR LOWER LEVEL POWER PLAN**
SCALE: 1/8" = 1'-0"



1 E2.00 **EAST STAIR LOWER LEVEL POWER PLAN**
SCALE: 1/8" = 1'-0"

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LOWER LEVEL ENLARGED POWER PLANS

Sheet Number
E2.00

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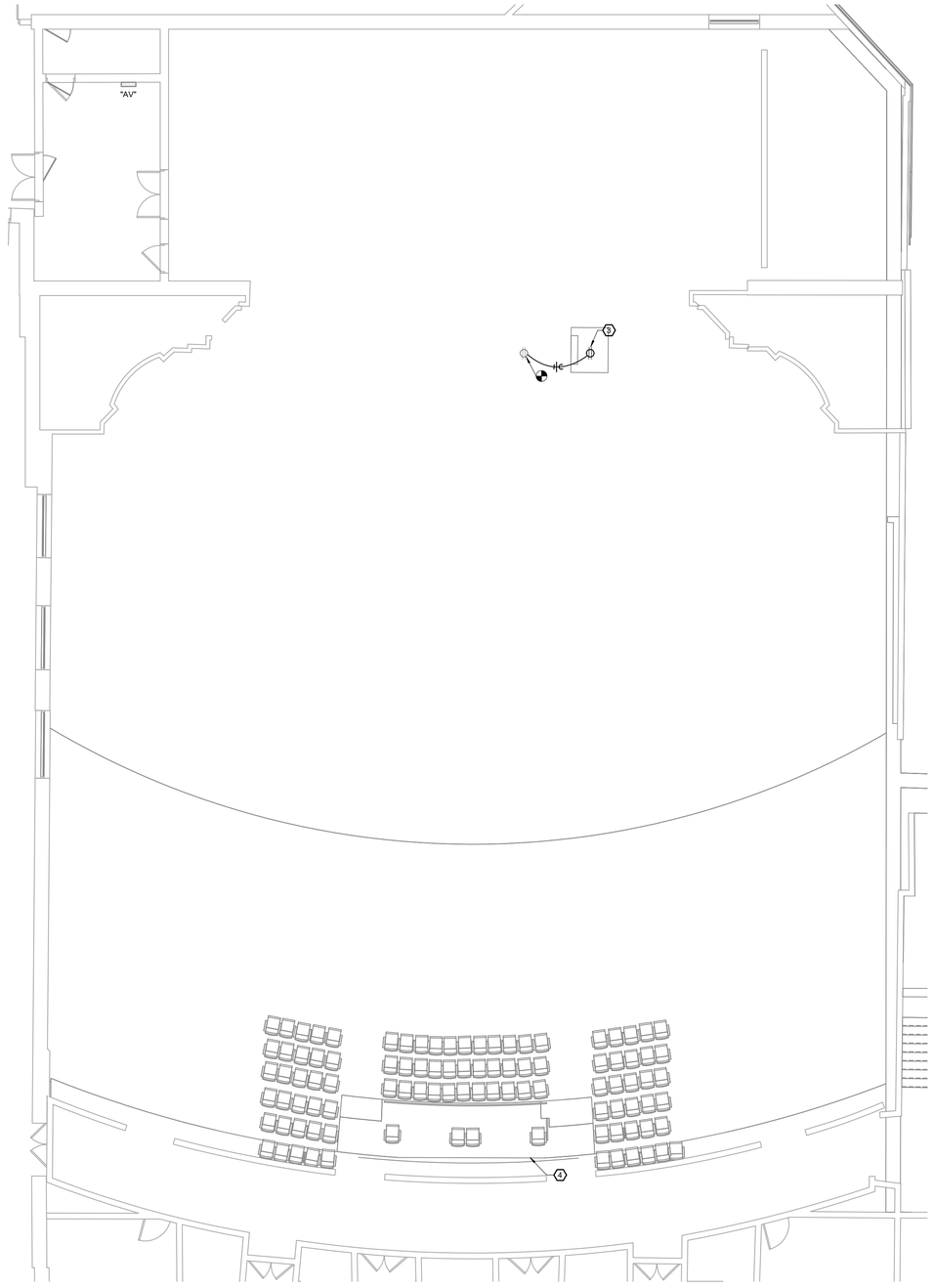
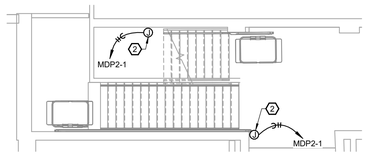


2 E2.10 PAC MAIN LEVEL POWER PLAN

SCALE: 1/8" = 1'-0"

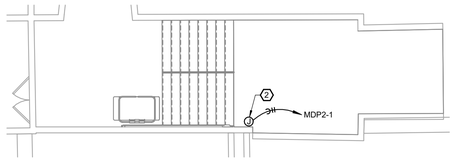
NORTH



4 E2.10 SOUTH STAIR MAIN LEVEL POWER PLAN

SCALE: NOT TO SCALE

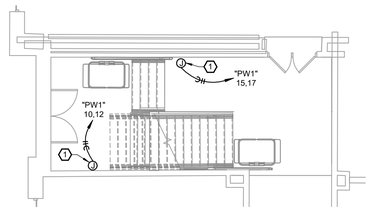
NORTH



3 E2.10 PAC ENTRY MAIN LEVEL POWER PLAN

SCALE: 1/8" = 1'-0"

NORTH



1 E2.10 EAST STAIR MAIN LEVEL POWER PLAN

SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES:

REFER TO SHEET E0.00 FOR GENERAL NOTES.

PLAN HEX NOTES:

1 INSTALL J-BOX FOR MOTORIZED LIFT AT 18" AFF AND 18"-24" FROM THE RAIL BULLNOSE. MAKE ALL REQUIRED ELECTRICAL CONNECTIONS TO LIFT. ROUTE FEEDER DOWN THROUGH EXISTING CLASSROOM WALL DOWN TO SHOP ROOM EXISTING PANEL PW1. PROVIDE NEW 20A/2P CIRCUIT BREAKER IN AVAILABLE SPACE. COORDINATE EXACT ROUTING OF CONDUITS SO THAT THERE IS NO EXPOSED CONDUITS IN HISTORIC FINISHED SPACES. ALL CONDUITS SHALL BE ROUTED CONCEALED DOWN IN EXISTING WALLS AND DOWN IN THE BASEMENT AND TUNNEL UNFINISHED AREAS.

2 INSTALL J-BOX FOR MOTORIZED LIFT AT 18" AFF AND 18"-24" FROM THE RAIL BULLNOSE. MAKE ALL REQUIRED ELECTRICAL CONNECTIONS TO LIFT. ROUTE FEEDER DOWN THROUGH EXISTING WALL DOWN TO TUNNEL AREA EXISTING PANEL MDP2. PROVIDE NEW 20A/2P CIRCUIT BREAKER IN AVAILABLE SPACE. COORDINATE EXACT ROUTING OF CONDUITS SO THAT THERE IS NO EXPOSED CONDUITS IN HISTORIC FINISHED SPACES. ALL CONDUITS SHALL BE ROUTED CONCEALED DOWN IN EXISTING WALLS AND DOWN IN THE BASEMENT AND TUNNEL UNFINISHED AREAS.

3 INSTALL RECEPTACLE IN FACE OF STAGE AND CONNECT TO EXISTING RECEPTACLE CIRCUIT.

4 EXISTING VENTS TO BE REMOVED AND PENETRATION THROUGH FLOOR TO BE CAPPED OR FILLED FOR NEW FLOOR SLAB.

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Area Plan

Sheet Name
MAIN LEVEL ENLARGED POWER PLANS

Sheet Number
E2.10

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GENERAL NOTES:

REFER TO SHEET E0.00 FOR GENERAL NOTES.

CIRCUIT BREAKER PANELBOARD SCHEDULE

PANEL NAME: "PW1"

LOCATION:
FED BY: ""
MOUNTING: SURFACE

VOLTAGE: 120/208V, 3Ph, 4W
ENCLOSURE: NEMA 1
MANUFACTURER: SQUARE D
PANEL TYPE: NQ

MAIN TYPE: MLO
BUS RATING (A): 225 A
MCB RATING (A): 150 A
MIN. AIC RATING (A): 10 kAIC

CKT	LOAD DESCRIPTION	C	W	G	CB	P	TYPE	A		B		C		TYPE	P	CB	G	W	C	LOAD DESCRIPTION	CKT
1	*EXISTING GENERAL RECEPTS.*	--	--	--	20	1	--	720	720					--	1	20	--	--	--	*EXISTING GENERAL RECEPTS.*	2
3	*EXISTING GENERAL RECEPTS.*	--	--	--	20	1	--			1080	1080			--	1	20	--	--	--	*EXISTING GENERAL RECEPTS.*	4
5	*EXISTING GENERAL RECEPTS.*	--	--	--	20	1	--					1080	1080	--	1	20	--	--	--	*EXISTING GENERAL RECEPTS.*	6
7	*EXISTING GENERAL RECEPTS.*	--	--	--	20	1	--	360	360					--	1	20	--	--	--	*EXISTING PORTABLE SAW*	8
9	*EXISTING GENERAL RECEPTS.*	--	--	--	20	1	--			1080	500				2	20	12	12		**WHEELCHAIR LIFT**	10
11	*EXISTING GENERAL RECEPTS.*	--	--	--	20	1	--					1080	500	--	--	--	--	--	--	--	12
13	*EXISTING AIR DRYER*	--	--	--	20	1	--	500	500						2	20	12	12		**WHEELCHAIR LIFT**	14
15	**WHEELCHAIR LIFT**		12	12	20	2				500	500			--	--	--	--	--	--	--	16
17	--	--	--	--	--	--	--					500	500		2	20	12	12		**WHEELCHAIR LIFT**	18
19	SPARE	--	--	--	20	1	--	0	500					--	--	--	--	--	--		20
21	SPACE	--	--	--	20	1	--			0	--			--	1	--	--	--	--	SPACE	22
23	SPACE	--	--	--	20	1	--					0	--	--	1	--	--	--	--	SPACE	24
25	SPACE	--	--	--	--	1	--	--	--					--	1	--	--	--	--	SPACE	26
27	SPACE	--	--	--	--	1	--			--	--			--	1	--	--	--	--	SPACE	28
29	SPACE	--	--	--	--	1	--					--	--	--	1	--	--	--	--	SPACE	30
31	SPACE	--	--	--	--	1	--	--	--					--	1	--	--	--	--	SPACE	32
33	SPACE	--	--	--	--	1	--			--	--			--	1	--	--	--	--	SPACE	34
35	SPACE	--	--	--	--	1	--					--	--	--	1	--	--	--	--	SPACE	36
37	SPACE	--	--	--	--	1	--	--	--					--	1	--	--	--	--	SPACE	38
39	SPACE	--	--	--	--	1	--			--	--			--	1	--	--	--	--	SPACE	40
41	SPACE	--	--	--	--	1	--					--	--	--	1	--	--	--	--	SPACE	42

CONNECTED PHASE LOAD	3660 VA	4740 VA	4740 VA
***PHASE DIVERSIFIED LOAD**	3660 VA	4740 VA	4740 VA
***PHASE DIVERSIFIED AMPS**	31 A	41 A	41 A

CALCULATED PANEL AMPS:
41 A

(*DIVERSIFIED LOADS CALCULATED PER THE NATIONAL ELECTRIC CODE.)

NOTES/ACCESSORIES:

PANEL TOTALS	
TOTAL CONNECTED LOAD:	13140 VA
TOTAL DIVERSIFIED LOAD:	13140 VA
CONTROLLING LOAD:	N/A

CIRCUIT BREAKER PANELBOARD SCHEDULE

PANEL NAME: "P3"

LOCATION:
FED BY: ""
MOUNTING: SURFACE

VOLTAGE: 120/208V, 3Ph, 4W
ENCLOSURE: NEMA 1
MANUFACTURER: SQUARE D
PANEL TYPE: NQ

MAIN TYPE: MLO
BUS RATING (A): 100 A
MCB RATING (A): 100 A
MIN. AIC RATING (A): 10 kAIC

CKT	LOAD DESCRIPTION	C	W	G	CB	P	TYPE	A		B		C		TYPE	P	CB	G	W	C	LOAD DESCRIPTION	CKT
1	EXISTING LOAD G-1	--	--	--	20	1	--	100	100					--	1	20	--	--	--	EXISTING LOAD G-2	2
3	EXISTING LOAD G-3	--	--	--	20	1	--			100	100			--	1	20	--	--	--	EXISTING LOAD G-4	4
5	EXISTING CUH	--	--	--	20	1	--					250	0	--	1	20	--	--	--	SPARE	6
7	SPARE	--	--	--	20	1	--	0	0					--	1	20	--	--	--	SPARE	8
9	SPARE	--	--	--	20	1	--			0	250			--	1	20	--	--	--	EXISTING CUH	10
11	EXISTING CUH	--	--	--	20	1	--					250	250	--	1	20	--	--	--	EXISTING CUH	12
13	EXISTING CUH	--	--	--	20	1	--	250	250					--	1	20	--	--	--	EXISTING CUH	14
15	EXISTING CUH	--	--	--	20	1	--			250	500			--	1	20	--	--	--	EXISTING VAV	16
17	EXISTING VAV	--	--	--	20	1	--					500	750	--	1	20	--	--	--	EXISTING TUNNEL LIGHTING	18
19	EXISTING CUH	--	--	--	20	1	--	250	250					--	1	20	--	--	--	EXISTING CUH	20
21	EXISTING CUH	--	--	--	20	1	--			250	250			--	1	20	--	--	--	EXISTING FC	22
23	EXISTING FC	--	--	--	20	1	--					250	500		2	20				**WHEELCHAIR LIFT**	24
25	SPARE	--	--	--	20	1	--	0	500					--	--	--	--	--	--	--	26
27	SPARE	--	--	--	20	1	--			0	0			--	1	20	--	--	--	SPARE	28
29	SPARE	--	--	--	20	1	--					0	0	--	1	20	--	--	--	SPARE	30
31	SPARE	--	--	--	20	1	--	0	0					--	1	20	--	--	--	SPARE	32
33	SPARE	--	--	--	20	1	--			0	0			--	1	20	--	--	--	SPARE	34
35	SPARE	--	--	--	20	1	--					0	0	--	1	20	--	--	--	SPARE	36
37	SPARE	--	--	--	20	1	--	0	0					--	1	20	--	--	--	SPARE	38
39	SPARE	--	--	--	20	1	--			0	0			--	1	20	--	--	--	SPARE	40
41	SPARE	--	--	--	20	1	--					0	0	--	1	20	--	--	--	SPARE	42

CONNECTED PHASE LOAD	1700 VA	1700 VA	2750 VA
***PHASE DIVERSIFIED LOAD**	1700 VA	1700 VA	2750 VA
***PHASE DIVERSIFIED AMPS**	14 A	14 A	23 A

CALCULATED PANEL AMPS:
23 A

(*DIVERSIFIED LOADS CALCULATED PER THE NATIONAL ELECTRIC CODE.)

NOTES/ACCESSORIES:
1. PROVIDE SPARE 20A, SINGLE-POLE BREAKERS IN ALL UNUSED SPACES.

PANEL TOTALS	
TOTAL CONNECTED LOAD:	6150 VA
TOTAL DIVERSIFIED LOAD:	6150 VA
CONTROLLING LOAD:	N/A

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architects building relationships

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913.362.1800

Licensed Engineer
KEITH HAMMERSCHMIDT

License
KS #25730

Cert. of Authority
E-2641
RTM ENGINEERING
CONSULTANTS

KEITH EDWIN HAMMERSCHMIDT — NOT FOR CONSTRUCTION — PROFESSIONAL ENGINEER

01/31/2024

WYANDOTTE HIGH SCHOOL RENOVATION

2501 MINNESOTA AVENUE
KANSAS CITY, KS

Project Phase
PERMIT SET

Project Number
24-304
Issue Date
1/31/2024

Revision No.	Description	Date Issued

Area Plan

Sheet Name
ELECTRICAL PANEL SCHEDULES

Sheet Number
E3.00

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