Bid
26-15

for

James Park Renovations Pathway Improvements
ADDENDUM No. 1

March 25, 2026

Any and all changes to the Bid are valid only if they are included by written addendum to all potential respondents, which will be emailed prior to the proposal due date. Each respondent must acknowledge receipt of any addenda by indicating in its proposal. Each respondent, by acknowledging receipt of addenda, is responsible for the contents of the addenda and any changes to the bid therein. Failure to acknowledge receipt of addenda may cause the submittal to be rejected. If any language or figures contained in this addendum are in conflict with the original document, this addendum shall prevail.

This addendum consists of the following:

1. Addendum No. 1 is attached and consists of a total of five-hundred twenty-three (523) pages including this cover sheet.

Please contact me at 847-866-2971 lithomas@cityofevanston.org with any further questions or comments.

Sincerely,

Linda Thomas
Purchasing Specialist

Bid No. 26-15
James Park Renovations Pathway Improvements
Addendum No. 1

March 25, 2026

This addendum forms a part of the Bid Documents for Bid # **26-15** and modifies these documents. This addendum consists of the following:

Replace Bid # 26-15 James Park Renovation (85 pages, released March 19, 2026) with the complete attached Bid # 26-15 James Park Renovations including backend Divisions and Attachments:

SPECIFICATION SECTION

DIVISION 0 – BIDDING REQUIREMENTS
RETURN ALL EXHIBITS WITH THE BID

DIVISION 1 – General Requirements
DIVISION 2 – Existing Conditions
DIVISION 3 – Concrete
DIVISION 11 – Equipment
DIVISION 12 – Furnishings
DIVISION 31 – Earthwork
DIVISION 32 – Exterior Improvements
DIVISION 33 – Utilities

ATTACHMENTS:

Drawings
Geotechnical Report
Ordinance 1-O-26, Responsible Bidder Ordinance (Insert C/ D/ F) sections that were inadvertently left out of Amended Ordinance 1-O-26
SECTION 1: Title 1, Chapter 17, "Contracts with the City," is hereby amended as follows:
(C) Local Employment Program.
(D) Minority, women, disadvantage, and Evanston business enterprise (M/W/D/EBE) goals.
(F) Contractor Debarment, Suspension, and Prohibited Contracts.
Prevailing Wages
DemandStar E-bidding Information

Clarification – Notice to Bidders:
This project is being financed, in part, with funds from the Illinois Department of Natural Resources, "Open Space Lands Acquisition & Development" (OSLAD) grant program.

Ordinance 1-O-26 Waiver Sections apply to this project, due to project funding.

SECTION 1: Title 1, Chapter 17, "Contracts with the City," is hereby amended as follows:
(B) All contracts for the purchase of goods or services
(E) Additional Requirements for Public Works Contracts

3. Apprenticeship Training Program Required
Paragraph (d) Contractors may alternatively satisfy this requirement by
5. Nearby Business Enterprises

<u>Note</u>: Acknowledgment of this Addendum is required in the Submittal.

CITY OF EVANSTON

SPECIFICATIONS AND BID DOCUMENTS
Construction Bid with Sub-Contractors

BID NUMBER: 26-15

For

James Park Renovations Pathway Improvements
March 19, 2026

BID DUE DATE:	**2:00 P.M., Tuesday, April 14, 2026**
VIRTUAL BID OPENING:	**2:15 P.M., Tuesday, April 14, 2026** **Google Meet ID:** meet.google.com/erk-vjyw-pza **Phone Number:** 617-675-4444 **PIN:** 491 020 418 0044#
BID BOND:	**5% of Contract Amount**
PERFORMANCE/MATERIAL & LABOR PAYMENT BOND:	**100% of Contract Amount**
CONTRACT PERIOD:	**Substantial Completion: November 20, 2026** **Final Completion: December 18, 2026**

ELECTRONIC BID SUBMITTAL:
Bid responses will only be accepted electronically
via E-bidding through DemandStar (WWW.DEMANDSTAR.COM)
It is highly recommended that new DemandStar users complete the account setup process prior to project due date/time.

TABLE OF CONTENTS

SPECIFICATION SECTION **PAGES**

DIVISION 0 – BIDDING REQUIREMENTS

Notice to Bidders 1
Instructions to Bidders/Requirements for Bidding 13
General Conditions 12
Insurance Requirements 1

RETURN ALL EXHIBITS WITH THE BID

Exhibit A Bid Form.....9
***Exhibit B RBO Bid Notice and Compliance Certification** **3**
***Exhibit C Local Employment Program Compliance**.....**2**
***Exhibit D City of Evanston M/W/D/EBE Policy** **1**
Exhibit E M/W/D/EBE Participation Compliance Form 2
Exhibit F M/W/D/EBE Participation Waiver Request 1
Exhibit G Construction Contractors' Assistance Organizations 1
Exhibit H Certification of Bidder Regarding Equal Employment Opportunity 1
Exhibit I Disclosure of Ownership Interests 4
Exhibit J Additional Information Sheet.....1
Exhibit K Certification of Compliance with Prevailing Wage Rate Act 1
Exhibit L Major Sub-Contractors Listing 1
Exhibit M Conflict of Interest.....1
Exhibit N Signature Form 1
Exhibit O Contractor Services Agreement Acknowledgement.....1
Exhibit O Contractor Services Agreement.....24
Exhibit P BID Bond Submittal Label 1

DIVISION 1 – General Requirements

Section 010000 Project Requirements ..... 3 pages
Section 010100 Summary of Work..... 3 pages
Section 010270 Applications for Payment..... 3 pages
Section 010450 Cutting and Patching ..... 3 pages
Section 010510 Grades Lines and Levels..... 3 pages
Section 010600 Regulatory Requirements..... 3 pages
Section 010950 Reference Standards and Definitions ..... 8 pages
Section 011050 Existing Utility Procedures..... 3 pages
Section 012000 Project Meetings..... 3 pages
Section 012100 Allowances ..... 2 pages
Section 013000 Submittals..... 9 pages
Section 013562 Erosion and Sedimentation Control..... 4 pages
Section 014000 Quality Control Services ..... 5 pages
Section 015000 Temporary Facilities ..... 4 pages
Section 015600 Temporary Environmental Controls..... 3 pages
Section 015639 Tree/Shrub Removal and Protection ..... 4 pages

Section 015800 Project Construction Sign ..... 2 pages
Section 016000 Materials and Equipment ..... 4 pages
Section 016300 Substitutions and Product Options ..... 3 pages
Section 017000 Project Closeout ..... 4 pages
Section 017100 Cleaning ..... 3 pages
Section 017200 Project Record Documents ..... 2 pages
Section 017300 Operations and Maintenance Data ..... 5 pages
Section 017400 Warrantees and Bonds ..... 2 pages

DIVISION 2 – Existing Conditions
Section 020640 – Contaminated Soil Removal and Disposal…… 5 pages
Section 024113 – Site Demolition…… 4 pages

DIVISION 3 – Concrete
Section 033000 – Cast in Place Concrete…… 13 pages

DIVISION 11 – Equipment
Section 11 6813 – Playground Equipment……45 pages

DIVISION 12 – Furnishings
Section 12 9300 – Site Furniture……12 pages

DIVISION 31 – Earthwork
Section 31 1000 – Site Clearing……5 pages
Section 31 2000 – Earth Moving…… 11 pages
Section 31 2214 – Earthwork for Sitework……9 pages
Section 31 2219 – Finish Grading ..... 8 pages
Section 31 2317 – Excavating Backfilling and Compacting for Utilities……4 pages
Section 31 2319 – Dewatering……4 pages

DIVISION 32 – Exterior Improvements
Section 32 1216 – Hot Mix Asphalt Paving ..... 5 pages
Section 32 1313 – Portland Cement Concrete Paving ..... 5 pages
Section 32 1540 – Stabilized Pathway Aggregate ..... 6 pages
Section 32 1726 – Tactile Warning Surface ..... 4 pages
Section 32 1800 – Playground Surface System ..... 6 pages
Section 32 3223 – Segmental Retaining Wall ..... 9 pages
Section 32 8000 – Irrigation…… ..... 7 pages
Section 32 9113 – Soil Preparation…..…… 17 pages
Section 32 9200 – Turf and Grasses……10 pages
Section 32 9219 – Native Grass and Forbs…… 11 pages
Section 32 9300 – Plants…… 25 pages
Section 32 9643 – Tree Transplanting ..... 9 pages

DIVISION 33 – Utilities
Section 33 4100 – Storm Utility Drainage Piping…… 7 pages

ATTACHMENTS

Drawings 39
Geotechnical Report..... 35
Ordinance 1-O-26, Responsible Bidder Ordinance……..... 20
Prevailing Wages 10
DemandStar E-bidding Information 2

***NOTE: THE SELECTED BIDDER WILL BE SUBJECT TO THE REGULATIONS CONTAINED IN CITY OF EVANSTON ORDINANCE 60-O-14 AMENDMENTS TO THE LOCAL EMPLOYMENT PROGRAM (LEP) AND ORDINANCE 1-O-26 THE RESPONSIBLE BIDDER ORDINANCE**

CITY OF EVANSTON
NOTICE TO BIDDERS

The City's Purchasing Office will receive bids until 2:00 P.M. local time Tuesday, April 14, 2026, and will be publicly read virtually via Google Meets at 2:15 P.M. Interested parties can use the following link: meet.google.com/erk-vjyw-pza or join by phone 617-675-4444 PIN: 491 020 418 0044# to access the virtual bid opening. Responses will only be accepted electronically via E-bidding through DemandStar (www.demandstar.com). Although registration is required, vendors can download solicitations and upload responses for free. Bids shall cover the following:

2026 James Park Renovations and Pathway Improvements
Bid Number: 26-15

Work on this project includes the reconstruction and expansion of the existing playground and the reconstruction of existing bike and pedestrian pathways at James Park in Evanston, Illinois.

The above item shall conform to the Invitation for Bids on file in the Purchasing Office. Parties interested in submitting a bid should contact the Purchasing Office to receive a copy of the bid or see the City's website at: https://www.cityofevanston.org/business/bids_proposals.php or DemandStar at: www.demandstar.com.

The City of Evanston (the City) in accordance with the laws of the State of Illinois, hereby notifies all Bidders that it will affirmatively ensure that the contract(s) entered into pursuant to this Notice will be awarded to the successful Bidders without discrimination on the ground of race, color, religion, sex, age, sexual orientation, marital status, disability, familial status or national origin. The State of Illinois requires, under Public Works contracts, that the general prevailing rate of wages in this locality be paid for each craft or type of worker hereunder. This requirement is in accordance with the Prevailing Wage Act (820 ILCS 130) as amended. The City of Evanston reserves the right to reject any or all submittals or to accept the submittal(s) deemed most advantageous to the City.

This project is being financed, in part, with funds from the Illinois Department of Natural Resources, "Open Space Lands Acquisition & Development" (OSLAD) grant program.

Each Bidder shall be required to submit with their bid a disclosure of ownership interest statement form in accordance with the provisions of City Code Section 1-18-1 *et seq*. Failure to submit such information will result in the disqualification of such bid.

Linda Thomas
Purchasing Specialist

INSTRUCTIONS TO BIDDERS/REQUIREMENTS FOR BIDDING
(CONTRACTS OVER $25,000)

1. ON-LINE NOTIFICATION OF SOLICITATIONS

The City is utilizing Demandstar.com (www.demandstar.com) for on-line notification purposes only for sealed bids when it is anticipated that the amount of the resulting contract will be in excess of its formal bid limit of $25,000, such as this requirement. Interested Bidders are required to submit a sealed bid to the City by the date/time indicated for this requirement on the forms provided by the City.

2. SUBMISSION OF BIDS

A. The City of Evanston no longer accepts hard copy paper submittals for any solicitation. Responses will only be accepted electronically via E-bidding through DemandStar (WWW.DEMANDSTAR.COM). Although registration is required, vendors can download solicitations and upload bid responses for free. **Please refer to attached DemandStar E-bidding documents.**

B. ANY BIDS RECEIVED AFTER THE TIME AND DATE SPECIFIED FOR THE RECEIPT OF BIDS WILL NOT BE ACCEPTED. It is the sole responsibility of the Bidder to ensure that his or her bid is delivered by the stated bid opening time. THE CITY IS NOT RESPONSIBLE FOR INCOMPLETE UPLOADED SUBMITTALS.

C. Bids will be opened on the date and time stated.

D. Any Bidder may withdraw his or her bid by letter or with proper identification by personally securing his or her bid at any time prior to the stated bid opening time. No telephone request for withdrawal of bids will be honored.

3. PREPARATION OF BIDS

The Bidder must prepare the bid on the attached bid forms. Unless otherwise stated, all blank spaces on the bid form or pages must be filled in. Either a unit price, lump sum price, or a "no-bid", as the case may be, must be stated for each and every item and must be either typed in or written in ink.

4. SIGNING OF BIDS

A. Bids which are signed for a partnership should be signed in the firm's name by all partners or in the firm's name by Attorney-in-Fact. If signed by Attorney-in-Fact, there should be attached to the bid a Power of Attorney evidencing authority to sign the bid, dated the same date as the bid and executed by all partners of the firm.

B. Bids which are signed for a corporation should have the correct corporate name thereon and signature of an authorized officer of the corporation manually written below the corporate name following words "By: "_____" title of office held by the person signing for corporation, which shall appear below signature of an officer.

C. Bids which are signed by an individual doing business under a fictitious name should be signed in the name of the individual "doing business as. _____."

D. The name of each person signing the bid shall be typed or printed below his or her signature.

5. CONSIDERATION OF BIDS

The Purchasing Specialist shall represent and act for the City in all matters pertaining to this bid and the contract in conjunction therewith.

6. WITHDRAWAL OF BIDS

Bidders may withdraw or cancel their bids at any time prior to the advertised bid opening time. After the bid opening time, no bid shall be withdrawn or canceled for a period of sixty (60) calendar days. When contract approval is required by another agency, such as the Federal Government or the State of Illinois, no bid shall be withdrawn or canceled for a period of ninety (90) calendar days.

7. ERRORS IN BIDS

Bidders are cautioned to verify their bids before submission. Negligence on the part of the respondent in preparing the bid confers no right for withdrawal or modification of the bid after it has been opened. In case of error in the extension of prices in the bid, unit prices will govern.

8. ADDENDA

A. Any and all changes to the specifications/plans are valid only if they are included by written addendum to all Bidders. Each Bidder must acknowledge receipt of any addenda by indicating on the Bid form. Each Bidder, by acknowledging receipt of any addenda, is responsible for the contents of the addenda and any changes to the bid therein. Failure to acknowledge any addenda may cause the bid to be rejected.

B. Addenda information is available over the internet at: City of Evanston Notices to Bidders or www.demandstar.com, or by contacting the Purchasing Office.

9. RESERVED RIGHTS

The City of Evanston reserves the right at any time and for any reason to cancel his or her solicitation, to accept or reject any or all bids or any portion thereof, or to accept an alternate response. The City reserves the right to waive any immaterial defect in any response. The City may seek clarification from any respondent at any time, and failure to respond within a reasonable time period, or as otherwise directed, will be cause for rejection.

10. AWARD

It is the intent of the City to award a contract to the lowest responsible Bidder meeting specifications. The City reserves the right to determine the lowest responsible Bidder on the basis of an individual item, groups of items, or in any

way determined to be in the best interest of the City. Award will be based on the following factors (where applicable): (a) adherence to all conditions and requirements of the bid specifications; (b) price; (c) qualifications of the Bidder, including past performance, financial responsibility, general reputation, experience, service capabilities, and facilities; (d) delivery or completion date; (e) product appearance, workmanship, finish, taste, feel, overall quality, and results of product testing; (f) maintenance costs and warranty provisions; and (g) repurchase or residual value.

11. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

Bidder's shall promptly notify the City of any ambiguity, inconsistency, or error that they discover upon examination of the bidding documents. Interpretations, corrections, and changes will be made by addendum. Each Bidder shall ascertain prior to submitting a bid that all addenda have been received and are acknowledged in the bid.

12. INCONSISTENCIES AND OMISSIONS

These specifications and the accompanying plans, if any, are intended to include all information necessary for the work contemplated. If, by inadvertence or otherwise, the plans or specifications omit some information necessary for that purpose, the contractor shall, nevertheless, be required to perform such work at no additional cost to the City so that the project may be completed according to the true intent and purpose of the plans and specifications.

13. CONDITIONS

Bidders are advised to become familiar with all conditions, instructions, and specifications governing his or her bid. Once the award has been made, failure to have read all the conditions, instructions and specifications of this contract shall not permit the Bidder to amend contract or to request additional compensation.

14. VERIFICATIONS OF DATA

A. It is understood and agreed that the unit quantities given in these specifications are approximate only, and the contractor shall verify these quantities before bidding as no claim shall be made against the City on, or account of, any excess or deficiency in the same.

B. The contractor shall have visited the premises and determined for itself, by actual observation, boring, test holes, or other means, the nature of all soil and water conditions (both above and below ground in the line of work) that may be encountered in all construction work under this contract. The cost of all such inspection, borings, etc. shall be borne by the contractor, and no allowance will be made for the failure of the contractor to estimate correctly the difficulties attending the execution of the work.

15. SPECIFICATIONS

Reference to brand names and numbers is meant to be descriptive, not restrictive, unless otherwise specified. Bids on equivalent items will be considered, provided

the Bidder clearly states exactly what is proposed to be furnished, including complete specifications. Unless the Bidder specifies otherwise, it is understood the Bidder is offering a referenced brand item as specified or is bidding as specified when no brand is referenced, and does not propose to furnish an "equal." The City reserves the right to determine whether a substitute offer is equivalent to, and meets the standard of quality indicated by the brand name and number.

16. SAMPLES

When samples of items are called for by the specifications, samples must be furnished free of expense, and if not destroyed in the evaluation process will be returned at the Bidder's expense upon request. Request for the return of samples must accompany the sample and must include a UPS/Fed-Ex Pickup Slip, postage, or other acceptable mode of return. Individual samples must be labeled with Bidder's name, invitation number, item reference, manufacturer's brand name and number.

17. REGULATORY COMPLIANCE

Each Bidder represents and warrants that the goods or services furnished hereunder (including all labels, packages and containers for said goods) comply with all applicable standards, rules and regulations in effect under the requirements of all Federal, State, and local laws, rules and regulations as applicable, including the Occupational Safety and Health Act as amended, with respect to design, construction, manufacture, or use for their intended purpose of said goods or services. Each Bidder must furnish a "Material Safety Data Sheet" in compliance with the Illinois Toxic Substances Disclosure to Employees Act when required.

18. PRICING

The price quoted for each item is the full purchase price, including delivery to destination, and includes all transportation and handling charges, materials or service costs, patent royalties, and all other overhead charges of every kind and nature. Unless otherwise specified, prices shall remain firm for the contract period.

19. DISCOUNTS

Prices quoted must be net after deducting all trade and quantity discounts. Where cash discounts for prompt payment are offered, the discount period shall begin with the date of receipt of a correct invoice or receipt or final acceptance of goods, whichever is later.

20. INSPECTION

Materials or equipment purchased are subject to inspection and approval at the City's destination. The City reserves the right to reject and refuse acceptance of items which are not in accordance with the instructions, specifications, drawings or data of Seller's warranty (express or implied). Rejected materials or equipment shall be removed by, or at the expense of, the Seller promptly after rejection.

21. BIDS AND PLAN DEPOSITS

A. When required on the cover sheet, all bids shall be accompanied by a bid deposit in the amount specified. Bid deposits shall be in the form of cash, a certified check, or cashier's check drawn on a responsible bank doing business in the United States and shall be made payable to the City of Evanston. Bid Bonds are also acceptable. All bids not accompanied by a bid deposit, when required, will be rejected.

B. The City will return the bid deposits of all but the 3 lowest qualified Bidders, whose deposit will be held until contract award or at the expiration of the sixty-day or ninety-day period for bid award.

C. The bid deposit of the successful Bidder will be retained until contract documents have been executed and the Contractor has submitted all the required information. Failure to comply with the terms of this specification may be cause for forfeiture of said deposit.

D. When required, plan deposits will be refunded should the plans be returned in good condition within 10 days of the bid opening.

22. DISPUTES

Any dispute concerning a question of fact arising under this bid shall be decided by the Purchasing Specialist, who shall issue a written decision to the Bidder. The decision of the Purchasing Specialist shall be final and binding.

23. CATALOGS

Each Bidder shall submit, when requested by the Purchasing Specialist, catalogs, descriptive literature, and detailed drawings, fully detailing features, designs, construction, appointments, finishes and the like not covered in the specifications, necessary to fully describe the material or work proposed to be furnished.

24. TAXES

A. Federal Excise Tax does not apply to materials purchased by the City of Evanston by virtue of Exemption Certificate No. A-208762, Illinois Retailers' Occupation Tax, Use Tax, and Municipal Retailers' Occupation Tax do not apply to materials or services purchased by the City of Evanston by virtue of Statute.

B. The City of Evanston is exempt from Illinois Sales Tax by virtue of Exemption Identification number E9998-1750.

C. The City’s federal tax ID number is 36-6005870.

25. PERMITS & FEES

All Bidders awarded a contract must secure and pay for any licenses required by the City of Evanston. Necessary building permits will be required, but all permit fees will be waived and moneys for same must not be included in any bid.

26. ROYALTIES & PATENTS

Seller must pay all royalties and license fees. Seller must defend all suits or claims

for infringement of any patent, copyright or trademark rights, and must hold the City harmless from loss on account thereof.

27. **RESPONSIBLE BIDDER POLICY**

All contractors must follow the requirements of Ordinance 1-O-26, the City's Responsible Bidder Ordinance. Ordinance 1-O-26 is attached hereto for reference. The following items are required of all contractors:

- **Local Employment Program (LEP):** Contractors must ensure that at least 15% of total on-site work hours are performed by Evanston residents and that at least one Evanston resident is hired. These obligations apply across all tiers of subcontractors and must be documented.
- **Apprenticeship Training Program:** Bidders shall submit evidence of enrollment in a U.S. Department of Labor registered Apprenticeship Training Program for each construction craft performed. These programs must have graduated at least five apprentices in each of the last five years.
- **Minimum Performance Threshold:** Named bidder must directly perform at least 25% of project services. Affiliates or subsidiaries do not count toward this percentage.
- **Commercially Useful Function:** All contractors and subcontractors must actively manage and perform contract work. Excessive subcontracting or pass-through participation may result in disqualification.
- **Subcontractor Disclosure:** Submit the name, address, and documentation for all subcontractors with bid. Each subcontractor must comply with all requirements set forth in this template.

28. **POWER OF ATTORNEY**

An Attorney-In-Fact, who signs any and all of the bond or contract bonds submitted with this bid, must file with each bond a certified and effectively dated copy of their Power of Attorney. These dates should be the same or after the date of the contract.

29. **WARRANTY**

A. The contractor warrants that all goods and services furnished to the City shall be in accordance with specifications and free from any defects of workmanship and materials: that goods furnished to the City shall be merchantable and fit for the City's described purposes, and that no governmental law, regulation, order, or rule has been violated in the manufacture or sale of such goods.

B. The contractor warrants all equipment furnished to be in acceptable condition, and to operate satisfactorily for a period of one (1) year from delivery of, or the completion of installation, whichever is latest, unless stated otherwise in the specifications, and that if a defect in workmanship and/or quality of materials are evidenced in this period, the Seller shall remit full credit, replace, or repair at City's

discretion immediately, such equipment and/or parts that are defective at no additional cost to the City.

C. The contractor warrants to the City that each item furnished hereunder, and any component part thereof, will be new and in conformity with the specifications in all respects, unless otherwise specified, and is of the best quality of its respective kind, free from faulty workmanship, materials, or design, and installed sufficiently to fulfill any operating conditions specified by the City.

D. The contractor shall repair or replace any item or component part thereof found not to be in conformity with this paragraph provided the City notified the Seller of such nonconformity within one (1) year after initial use or within eighteen (18) months after delivery, whichever occurs first. In the event Seller fails to proceed diligently to so replace or repair within a reasonable time after receipt of such notice, the City may undertake or complete such replacement or repair for Seller's account, and the seller will be responsible for any additional costs. Acceptance shall not relieve the seller of its responsibility.

30. INCURRED COSTS

The City will not be liable for any costs incurred by Bidders in replying to this invitation for bids.

31. VARIANCES

Each Bidder must state or list by reference any variations to specifications, terms and/or conditions set forth herein with its bid.

32. INDEMNIFICATION

A. The awarded Bidder/Contractor shall defend, indemnify and hold harmless the City and its officers, elected and appointed officials, agents, and employees from any and all liability, losses, or damages as a result of claims, demands, suits, actions, or proceedings of any kind or nature, including but not limited to costs, and fees, including attorney's fees, judgments or settlements, resulting from or arising out of any negligent or willful act or omission on the part of the Contractor or Contractor's sub-contractors, employees, agents or sub-contractors during the performance of this Agreement. Such indemnification shall not be limited by reason of the enumeration of any insurance coverage herein provided. This provision shall survive completion, expiration, or termination of this Agreement.

B. Nothing contained herein shall be construed as prohibiting the City, or its officers, agents, or employees, from defending through the selection and use of their own agents, attorneys, and experts, any claims, actions or suits brought against them. The Contractor shall be liable for the reasonable costs, fees, and expenses incurred in the defense of any such claims, actions, or suits. Nothing herein shall be construed as a limitation or waiver of defenses available to the City and employees and agents, including but not limited to the Illinois Local Governmental and Governmental Employees Tort Immunity Act, 745 ILCS 10/1-101 *et seq.*

C. At the City Corporation Counsel's option, Contractor must defend all suits brought upon all such Losses and must pay all costs and expenses incidental to them, but the City has the right, at its option, to participate, at its own cost, in the defense of any suit, without relieving Contractor of any of its obligations under this Agreement. Any settlement of any claim or suit related to this Project by Contractor must be made only with the prior written consent of the City Corporation Counsel, if the settlement requires any action on the part of the City.

D. To the extent permissible by law, Contractor waives any limits to the amount of its obligations to indemnify, defend, or contribute to any sums due under any Losses, including any claim by any employee of Contractor that may be subject to the Illinois Compensation Act, 820 ILCS 305/1 *et seq.* or any other related law or judicial decision, including but not limited to, *Kotecki v. Cyclops Welding Corporation,* 146 Ill. 2d 155 (1991). The City, however, does not waive any limitations it may have on its liability under the Illinois Workers Compensation Act, the Illinois Pension Code or any other statute.

E. The Contractor shall be responsible for any losses and costs to repair or remedy work performed under this Agreement resulting from or arising out of any act or omission, neglect, or misconduct in the performance of its Work or its sub-contractors' work. Acceptance of the work by the City will not relieve the Contractor of the responsibility for subsequent correction of any such error, omissions and/or negligent acts or of its liability for loss or damage resulting therefrom.

F. All provisions of this Section 32 shall survive completion, expiration, or termination of this Agreement.

33. DEFAULT

Time is of the essence as to the awarded contract and, of delivery or acceptable items or rending of services is not completed by the time promised, the City reserves the right, without liability, in addition to its other rights and remedies, to terminate the contract by notice effective when received by Seller, as to stated items not yet shipped or services not yet rendered and to purchase substitute items or services elsewhere and charge the Seller with all losses incurred. The City shall be entitled to recover its attorney's fees and expenses in any successful action by the City to enforce this contract.

34. GOVERNING LAW

This contract shall be governed by and construed according to the laws of the State of Illinois. In the event of litigation, the venue will be Cook County, Illinois.

35. EQUAL EMPLOYMENT OPPORTUNITY

A. In the event of the contractor's noncompliance with any provision of the Illinois Human Rights Act or Section 1-12-5 of the Evanston City Code, the contractor may

be declared non-responsible and therefore ineligible for future contracts or sub-contracts with the City of Evanston, and the contract may be canceled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by Statute or regulation.

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

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or ancestry, or age or physical or mental handicap that does not impair ability to work, and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization. Contractor shall comply with all requirements of City of Evanston Code Section 1-12-5.

2. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin or ancestry.

3. That, if it hires additional employees in order to perform this contract, or any portion hereof, it will determine that availability (in accordance with the Fair Employment Commission's Rules and Regulations for Public Contracts) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

4. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the contractor's obligations under the Illinois Fair Employment Practices Act and the Fair Employment Practices Commission's Rules and Regulations for Public Contracts. If any such labor organization or representative fails or refuses to cooperate with the contractor in its efforts to comply with such Act and Rules and Regulations, the contractor will promptly so notify the Illinois Fair Employment Practices Commission and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations hereunder.

5. That it will submit reports as required by the Illinois Fair Employment Practices Commission's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Fair Employment Practices Commission or the contracting agency, and in all respects comply with the Illinois Fair Employment Practices Commission's Rules and regulations for Public Contracts.

6. That it will permit access to all relevant books, records, accounts and work sites

by personnel of the contracting agency, the City Manager, the Commission and the Illinois Fair Employment Practices Commission for purposes of investigation to ascertain compliance with the Illinois Fair Employment Practices Act and the Fair Employment Practices Act and the Fair Employment Practices Commission's Rules and Regulations for Public Contract.

7. That it will include verbatim or by reference the provisions of subsections (A) through (G) of this clause in every performance sub-contract as defined in Section 2.10(b) of the Fair Employment Practices Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every such sub-contractor; and that it will also include the provisions of subsections (A), (E), (F), and (G) in every supply sub-contract as defined in Section 2.10(a) of the Fair Employment Practices Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every such sub-contractor. In the same manner as with other provisions of this contract, the contractor will be liable for compliance with applicable provisions of this clause by all its sub-contractors; and further it will promptly notify the contracting agency and the Illinois Fair Employment Practices Commission in the event any sub-contractor fails or refuses to comply therewith. In addition, no contractor will utilize any sub-contractor declared by the Fair Employment Practices Commission to be non-responsible and therefore ineligible for contracts or sub-contracts with the State of Illinois or any of its political subdivisions or municipal corporations.

36. M/W/D/EBE GOAL

The City of Evanston has a goal of awarding 25% of its contracts to Minority-Owned, Women-Owned, Disadvantaged Enterprise and Evanston-based businesses (M/W/D/EBEs). All Bidders must state the proposed involvement of M/W/D/EBEs in completing a portion of the services required by the City by completing the attached M/W/D/EBE forms. Any questions regarding M/W/D/EBE compliance should be submitted in writing to Tammi Nunez, Purchasing Manager at tnunez@cityofevanston.org.

37. LOCAL EMPLOYMENT PROGRAM REQUIREMENTS

In an effort to increase hiring of economically disadvantaged Evanston residents on certain City construction projects, the contractor shall comply with the provisions of the City of Evanston's Local Employment Program Ordinance (LEP) set forth in Section 1-17-1 (C) of the Evanston City Code. The intent of the LEP is to have Evanston residents employed at the construction site as laborers, apprentices and journeymen in such trades as electrical, HVAC, carpenters, masonry, concrete finishers, truck drivers and other construction occupations necessary for the project. Any questions regarding LEP compliance should be submitted in writing to Jessica Cooper, the Workforce Development Coordinator at jcooper@cityofevanston.org or Tammi Nunez Purchasing Manager at tnunez@cityofevanston.org.

NOTE: CITY OF EVANSTON ORDINANCE 60-O-14 AMENDMENT LOCAL EMPLOYMENT PROGRAM (LEP) available on the city website at: Ordinance 60-O-14 Amendment LEP

38. **BIDDER SUBMITAL REQUIRMENTS FOR RESPONSIBLE BIDDER ORDINANCE**

Documentation or Certification	Description
OSHA Certification	10-hour or greater OSHA safety card copies for all employees on-site
Prevailing Wage Compliance	Statement confirming 5-year compliance with the Illinois Prevailing Wage Act
Substance Abuse Program	Copy of written program per 820 ILCS 265/1
Workers' Compensation Policy	Active policy and classification documentation
UI Act Registration	IDES current registration
Corporate Status	Illinois Secretary of State Business Services record
Tax and Legal Disclosures	List of liens, judgments, or violations from the last 5 years
Business Licenses	Copies of all relevant licenses with current status
Statement of Similar Projects	Last 5 years' public works projects with references
Performance History	Public body contracts completed in the last 3 years
Subcontractor Information	Full documentation for each subcontractor
Sam.gov ID Number	ID Number to be used on projects with State or Federal Funding

If applicable, compliance documentation under:

- Davis-Bacon and Related Acts
- Employee Certification Act
- 720 ILCS 5/33-11 Anti-Bid Rigging Certification

Additional contractor responsibilities include:

- Submission of certified payrolls within five (5) working days of each pay period end
- Identification of all employees by name, address, craft, status, and hire date
- Documentation that all employees are properly classified and licensed
    - Notification within two (2) business days of any resident employee resignations or terminations
    - Replacement of Evanston resident employees within five (5) business days to avoid penalties
    - Provision of required documentation prior to any subcontractor commencing work

Failure to meet these requirements may result in penalties of up to 1% of the approved project price, and may jeopardize future eligibility for City contracts.

39. **PROJECT LABOR AGREEMENT** N**OTICE** (if required)

A Project Labor Agreement (PLA) may be required. If so, all successful bidders must become signatories to the PLA for the duration of the project. There is no requirement to affiliate with a union, and non-union bidders are fully eligible.

40. **QUESTIONS**

All questions related to this bid document should be submitted in writing to Linda Thomas, Purchasing Specialist at lithomas@cityofevanston.org with a copy to Stefanie Levine, at kboehm@cityofevanston.org Only inquiries received a minimum of seven (7) working days prior to the date set for the opening of bids, will be given any consideration.

41. **COORDINATION OF EXISTING SITE WITH DRAWINGS**

A. Before submitting a bid, bidders shall carefully examine the drawings and specifications, visit the site, and fully inform themselves as to all conditions and limitations.

B. Should a bidder find discrepancies in, or omissions from the drawings or specifications, or should be in doubt as to their meaning, the bidder should at once notify the Purchasing Specialist, who will issue necessary instructions to all bidders in the form of an addendum.

43. AFFIRMATIVE ACTION IN SUB-CONTRACTING (EXCERPT FROM RESOLUTION 59-R-73)

"Contractor agrees that he shall actively solicit bids for the sub-contracting of goods or services from qualified minority businesses. At the request of the City, Contractor shall furnish evidence of his compliance with this requirement of minority solicitation. Contractor further agrees to consider the grant of sub-contracts to said minority bidders on the basis of substantially equal bids in the light most favorable to said minority businesses. Contractor further affirms that in obtaining his performance and bid bonds, he will seek out and use companies who have records of, and/or who will make commitments to, the bonding of minority contractors on a rate basis comparable to their bonding of similar non-minority contractors. The contractor may be required to submit this evidence as part of the bid or subsequent to it."

44. COMPLIANCE WITH LAWS

A. The bidder shall at all times observe and comply with all laws, ordinances and regulations of the Federal, State, Local and City Governments, which may in any manner affect the preparation of bids or the performance of the contract.

45. QUALIFICATION OF BIDDERS

A. All bidders must be qualified in accordance with the instructions, procedures and methods set forth in this specification.

B. In awarding contract, City may take into consideration, skill, facilities, capacity, experience, ability, responsibility, previous work, financial standing of bidder, amount of work being carried on by bidder, quality and efficiency of construction equipment proposed to be furnished, period of time within which proposed equipment is furnished and delivered, necessity of prompt and efficient completion of work herein described. Inability of any bidder to meet requirements mentioned above may be cause for rejection of the bid. In addition, if the project covered by this contract is a minority set-aside project, the contractor's qualifications as a minority firm will determine the eligibility of the contractor to bid.

46. COMPETENCY OF BIDDER

A. No bid will be accepted from or contract awarded to any person, firm or corporation that is in arrears or is in default to the City of Evanston upon any debt or contract, or that is a defaulter, as surety or otherwise, upon any obligation to said City, or had failed to perform faithfully any previous contract with the City.

B. The bidder, if requested, must present within forty eight (48) hours evidence satisfactory to the Purchasing Manager of performance ability and possession of necessary facilities, pecuniary resources and adequate insurance to comply with the terms of these specifications and contract documents.

47. PREFERENCE TO CITIZENS

The Contractor shall abide by the Illinois Preference Act, 30 ILCS 570 et seq., which stipulates that whenever there is a period of excessive unemployment in Illinois, defined as any month immediately following two (2) consecutive months during which the level of unemployment in Illinois exceeds five percent (5%) as measured by the U.S. Bureau of Labor Statistics in its monthly publication of employment and unemployment figures, the Contractor shall employ only Illinois laborers unless otherwise exempted as so stated in the Act. ("Illinois laborer" means any person who has resided in Illinois for at least 30 days and intends to become or remain an Illinois resident) Other laborers may be used IF Illinois laborers are not available or are incapable of performing the particular type of work involved if so certified by the Contractor and approved by the project engineer.

GENERAL CONDITIONS

1. BASIS OF AWARD

The City of Evanston reserves the right to award a contract to a responsive and responsible Bidder(s) who submits the lowest total bid, or to reject any or all bids and bidding, when in its opinion the best interest of the City will be served by such action. The City reserves the right to consider the specified alternates in its evaluation of the bids.

2. BIDS

A. LUMP SUM BID

1. The bidder is to submit a lump sum bid for each bid line on the Bid Form which includes all costs incidental to performing the specified work. It is understood and agreed that the unit quantities given in the supporting pages are approximate only and the bidder shall verify these quantities before bidding as no claim shall be made against the City on account of any excess or deficiency in the same.

2. Unit prices given in the supporting pages shall be used by the City and the Contractor for any subsequent changes in the contract.

3. QUANTITIES

Any quantities shown on the Bid Form are estimated only for bid canvassing purposes, the City has made a good faith effort to estimate the quantity requirements for the Contract term. The City reserves the right to increase or decrease quantities ordered under this contract.

4. CONTRACT TERM

Bidder must fully complete the work within the period specified herein after award of the contract by the City.

5. NOTICE TO PROCEED/ PURCHASE ORDER/ CONTRACT

A. The City issued Purchase Order serves as the City official Notice to Proceed. No work will be allowed prior to Contractor receipt of the City issued Purchase Order.

B. Upon approval of the required bonds and insurance documents, the City will issue a Purchase Order to the Contractor for the contract amount. All Applications for Payment must reference the Purchase Order number.

C. When it is necessary to issue a Change Order that increases/decreases the contract amount, a Change Order form will be issued and a modified Purchase Order will be issued reflecting the revised contract amount.

D. When it is necessary to issue a Change Order that only increases/decreases the contract period, only a Change Order form will be issued establishing the revised

contract period.

E. Upon Award the contractor shall execute the Contractor Services Agreement.

6. PAYMENT

A. Progress payments will be made in accordance with "Applications for Payment" and "Project Closeout" sections of the specifications, less a 10% retainage for each payment, which will be held until final acceptance of the work by the City. Certification of each Application for Payment will be made by the City's representative.

B. All payments will be made in accordance with *Illinois Local Government Prompt Payment Act.*

7. DECISIONS TO WITHHOLD CERTIFICATION FOR PAYMENT

A. The City may not certify payment and may withhold payment in whole or in part, to the extent reasonably necessary to protect the City, if the quality of the work is not in accordance with the contract documents. If the City is unable to certify payment in the amount of the invoice, the City will promptly issue payment for the amount of the Work completed in accordance with the contract documents. The City may not certify payment due to any contractor negligence or contract non-compliance.
   a. Defective work not remedied
   b. Third party claims filed or reasonable evidence indicating probable filing of such claims
   c. Failure of Contractor to make payments properly to Sub-contractors for labor, materials or equipment
   d. Reasonable evidence that the work cannot be completed for the unpaid balance of the Contract Sum
   e. Damage to the City or another contractor
   f. Reasonable evidence that the work will not be completed within the Contract period and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay
   g. Persistent failure to carry out work in accordance with the Contract Documents.

8. CHANGES IN WORK

A. The City reserves the right to make changes in the plans and specifications by altering, adding to, or deducting from the work, without invalidating the contract. All such changes shall be executed under the conditions of the original contract, except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

B. No change shall be made unless a written Change Order and/or modified Purchase Order is issued by the City stating that the City has authorized the change, and no claim for an addition to the contract shall be valid unless so ordered.

C. If such changes diminish the quantity of work to be done they shall not constitute a

claim for damage or anticipated profits on the work, such increase shall be paid in one or more of the following ways:

1. by estimate and acceptance in lump sum

2. by unit prices named in the contract's bid form or subsequently agreed upon

D. Whenever the quantity of any pay item as given in the proposal shall be increased or decreased, payment shall be made on the basis of the actual quantity completed at the unit price for such pay item named in the proposal.

9. DEDUCTION FOR UNCORRECTED WORK

If the City deems it expedient to correct work damaged or not done in accordance with the contract, the difference in value, together with a fair allowance for damage shall be deducted from the contract amount due. The value of such deduction shall be determined by the City.

10. CITY'S RIGHT TO TERMINATE CONTRACT

The City reserves the right, in addition to other rights to termination, to terminate the contracts in accordance with all provisions of the executed contract.

11. LIENS

A. Neither the final payment nor any part of any retained percentages, shall become due until the contractor, if required, delivers to the City, a complete release of all liens arising out of this contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as it has knowledge or information the releases and receipts include all the labor and material for which a lien could be filed. If any lien remains unsatisfied after all payments are made the contractor shall refund to the City all moneys that the latter may be compelled to pay in discharging such a lien, including all costs and attorney's fees.

12. SEPARATE CONTRACTS

A. The City reserves the right to let other contracts in connection with this work. The contractor shall afford other contractors' reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate his or her work with theirs. If any part of the contractor's work depends on proper execution or results upon the work of any other contractor, the contractor shall inspect and promptly report to the City any defects in such work that render it unsuitable for such proper execution and results. His or her failure to so inspect and report shall constitute an acceptance of other contractor's work as fit and proper.

B. To insure the proper execution of his or her subsequent work, the contractor shall measure work already in place and shall at once report to the City any discrepancy between the executed work and the drawings which will affect his or her work.

13. PROTECTION & SAFEGUARDS

A. Unless otherwise specified, the contractor, as a part of this contract, shall provide, erect, and maintain temporary roads, fences, bracing, lights, warning signs, barricades, etc. necessary for the protection of the construction materials, adjacent property and the public.

B. The contractor shall contact all utilities which will be affected by its operations and notify the owners of the utilities of its operations and their limits within forty-eight (48) hours prior to beginning construction. The contractor shall be responsible for damage to utilities and shall, at his or her own expense, restore such property to a condition equal to that which existed before its work, as may be directed by the owners.

C. The contractor shall protect all work and unused materials of this contract from any and all damage and shall be solely responsible for the condition of such work and materials.

14. MATERIAL STORAGE

A. On-site areas may be designated for material/equipment storage. The contractor will assume all risk and liability associated with the storage of material/equipment at on-site locations.

15. CLEANING UP

A. The contractor shall at all time keep the premises free from accumulation of waste material or rubbish caused by its employees or work and at the completion of the work it shall remove all its rubbish, tools, and surplus materials from the premises, leaving the area in a neat and workmanlike condition. In case of dispute, the City may remove the rubbish and charge the cost to the contractor.

B. Contractor recognizes that proper cleanup and removal of construction debris is an important safety consideration. The Contractor shall be solely responsible for daily construction site/area cleanup and removal of all construction debris in accordance with City-approved disposal practices. Contractor shall be solely responsible for identifying and removing at its expense all hazardous material and waste which it uses and generates.

16. RESTORATION OF SITE

A. Prior to final payment, contractor shall fully restore all property disturbed or damaged during the course of this work. This includes, but is not limited to public property, (walks, curbs, roadways, trees, etc.) private property, and utilities. This shall also include removal of temporary facilities erected during the course of this contract and restoration of these areas.

B. All restoration work shall be subject to the approval of the City and shall restore the property to a condition at least equal to that existing prior to the start of this contract.

C. All restoration work of property damaged by contractor shall be accomplished at the sole expense of the contractor.

17. PREVAILING WAGE

A. Prospective Bidders shall thoroughly familiarize themselves with the provisions of the above-mentioned Act and shall prepare any and all bids/bids in strict compliance therewith.

B. **Effective September 1st - All work performed on new and existing projects must be submitted to** Illinois Department of Labor **through the certified transcript of payroll portal.** You may access the portal here: Certified Transcript of Payroll Portal

All contractors and sub-contractors on public works projects ***must submit and upload certified payrolls*** on a monthly basis to the **IDOL** online portal, provide a pdf copy to the City's project manager and business work force development coordinator, along with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate and that the contractor is aware that filing records her or she knows to be false is a Class B misdemeanor.

C. The certified payroll record must include for every worker employed on the public works project the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, number of hours worked each day, and starting and ending time of work each day. These certified payroll records are considered public records and public bodies must make these records available to the public under the Freedom of Information Act, with the exception of the employee's address, telephone number and social security number. Any contractor who fails to submit a certified payroll or knowingly files a false certified payroll is guilty of a Class B misdemeanor.

D. All certified payrolls shall be submitted in electronic format, preferably a PDF file.

E. As a condition of receiving payment, Contractor must (i) be in compliance with the Agreement, (ii) pay its employees prevailing wages when required by law (Examples of prevailing wage categories include public works, printing, janitorial, window washing, building and grounds services, site technician services, natural resource services, security guard and food services). Contractor is responsible for contacting the Illinois Dept. of Labor 217-782-1710; https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/prevailing-wage-act.aspx compliance with prevailing wage requirements), (iii) pay its suppliers and sub-contractors according to the terms of their respective contracts, and (iv) provide lien waivers to the City upon request.

18. CONTRACTOR REQUIREMENTS

A. The Contractor shall abide by and comply with all local, State and federal laws and regulations relating to contracts involving public funds and the

development/construction of public works, buildings, or facilities. The scale of wages to be paid shall be obtained from Illinois Department of Labor and posted by the Contractor in a prominent and accessible place at the project work site.

B. The Contractor certifies it has not been barred from being awarded a contract with a unit of State or local government as a result of bid rigging or bid rotating or any similar offense (720 ILCS 5/33 E-3, E-4).

C. The Contractor certifies, pursuant to the Illinois Human Rights Act (775 ILCS 5/2-105), that it has a written sexual harassment policy that includes, at a minimum, the following information: (1) the illegality of sexual harassment, (2) the definition of sexual harassment under State law, (3) a description of sexual harassment utilizing examples, (4) the Contractor's internal complaint process including penalties, (5) legal recourse, investigation and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission and directions on how to contact both; and (6) protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act.

D. The Contractor shall abide by the "Illinois Preference Act" which stipulates that whenever there is a period of excessive unemployment in Illinois, defined as any month immediately following two (2) consecutive months during which the level of unemployment in Illinois exceeds five percent (5%) as measured by the U.S. Bureau of Labor Statistics in its monthly publication of employment and unemployment figures, the Contractor shall employ only Illinois laborers unless otherwise exempted as so stated in the Act. ("Illinois laborer" means any person who has resided in Illinois for at least 30 days and intends to become or remain an Illinois resident) Other laborers may be used IF Illinois laborers are not available or are incapable of performing the particular type of work involved if so certified by the Contractor and approved by the project engineer.

19. SUB-CONTRACTORS

A. The term "sub-contract" means any agreement, arrangement or understanding, written or otherwise between a Contractor and any person (in which the parties do not stand in the relationship of an employer or an employee) for the furnishing of supplies or services or for the use of real or personal property, including lease arrangements, which, in whole or in part, is utilized in the performance of any one or more Contracts under which any portion of the Contractor's obligation under any one or more Contracts is performed, undertaken or assumed.

B. The Bidder is specifically advised that any person, firm or party, to whom it is proposed to award a sub-contract under this contract must be acceptable to the City. Approval for the proposed sub-contract Award cannot be given by the City until the proposed Sub-contractor has submitted evidence showing that it has fully complied with any reporting requirements to which it is, or was, subject.

C. The contractor, shall, within ten (10) days after award of the Contract, submit to the

City in writing, names and addresses and respective amounts of money for proposed contracts with Sub-contractors/major suppliers. The City will review and may direct the Contractor that they shall not employ any that are not acceptable as provided above.

D. The sub-contractor shall abide by and comply with all local, State and federal laws and regulations relating to contracts involving public funds and the development/construction of public works, buildings, or facilities.

20. PAYMENTS TO SUB-CONTRACTORS

A. Within seven days after the receipt of amounts paid by the City for work performed by a sub-contractor under this contract, the Contractor shall either:

1. Pay the sub-contractor for the proportionate share of the total payment received from the City attributable to the work performed by the sub-contractor under this contract; or,

2. Notify the City and sub-contractor, in writing, of his intention to withhold all or a part of the sub-contractor's payment and the reason for non-payment.

B. The Contractor shall pay interest to the sub-contractor on all amounts owed that remain unpaid beyond the seven-day period except for amounts withheld as allowed in item 2 above.

C. Unless otherwise provided under the terms of this contract, interest shall accrue at the rate of one percent per month.

D. The Contractor shall include in each of its sub-contracts a provision requiring each Sub-contractor to include or otherwise be subject to the same payment and interest requirements as set forth above with respect to each lower-tier sub-contractor.

E. The Contractor's obligation to pay an interest charge to a sub-contractor pursuant to this provision may not be construed to be an obligation of the City.

21. BOND – PERFORMANCE, MATERIAL, & LABOR

A. When required by the specifications herein, the successful Bidder or Bidders shall, within ten (10) calendar days after acceptance of the Bidder's bid by the City, furnish a performance bond for 100% of the full amount of the contract from insurance companies having not less than A+ Policyholders Rating from the most recent Alfred M. Best and Co., Inc. listing available. Certification of the insurance company's rating shall be provided prior to contract implementation and quarterly thereafter until contract completion. Should such rating fall below the required A+ level during performance of the contract, it will be the contractor's responsibility to notify the City and provide a new bond from an insurance company whose rating meets the City's requirements.

B. When required by the specifications herein, all Bidders shall submit with the bid a bid bond. A letter of credit may be furnished in lieu of a bid bond only if the following conditions are met: 1) An irrevocable letter of credit must be obtained from an accredited bank which shall include an agreement that the bank will honor a demand by the City for payment due to Plaintiff failure to complete the project. 2) An irrevocable letter of credit must be in writing and signed by an authorized representative of the bank. 3) The irrevocable letter of credit must expressly state that it is irrevocable until the bid has been awarded. 4) The letter of credit must be for the percentage specified in the bid documents.

C. The City may reject the use of an irrevocable letter of credit if the financial soundness of the issuing bank is found to be unacceptable.

D. In the event that the Bidder fails to furnish a performance bond in said period of ten (10) calendar days after acceptance of the Bidder's bid by the City, the City may withdraw its acceptance of the bid and retain the Bidder's deposit as liquidated damages and not as a penalty.

E. If the contractor has more than one project for which there is a contract with the City of Evanston the contractor shall provide a separate Performance Bond for each project.

22. INDEMNITY

A. The Contractor shall defend, indemnify and hold harmless the City and its officers, elected and appointed officials, agents, and employees from any and all liability, losses, or damages as a result of claims, demands, suits, actions, or proceedings of any kind or nature, including but not limited to costs, and fees, including attorney's fees, judgments or settlements, resulting from or arising out of any negligent or willful act or omission on the part of the Contractor or Contractor's sub-contractors, employees, agents or sub-contractors during the performance of this Agreement. Such indemnification shall not be limited by reason of the enumeration of any insurance coverage herein provided. This provision shall survive completion, expiration, or termination of this Agreement.

B. Nothing contained herein shall be construed as prohibiting the City, or its officers, agents, or employees, from defending through the selection and use of their own agents, attorneys, and experts, any claims, actions or suits brought against them. The Contractor shall be liable for the reasonable costs, fees, and expenses incurred in the defense of any such claims, actions, or suits. Nothing herein shall be construed as a limitation or waiver of defenses available to the City and employees and agents, including but not limited to the Illinois Local Governmental and Governmental Employees Tort Immunity Act, 745 ILCS 10/1-101 *et seq.*

C. At the City Corporation Counsel's option, Contractor must defend all suits brought upon all such Losses and must pay all costs and expenses incidental to them, but

the City has the right, at its option, to participate, at its own cost, in the defense of any suit, without relieving Contractor of any of its obligations under this Agreement. Any settlement of any claim or suit related to this Project by Contractor must be made only with the prior written consent of the City Corporation Counsel, if the settlement requires any action on the part of the City.

D. To the extent permissible by law, Contractor waives any limits to the amount of its obligations to indemnify, defend, or contribute to any sums due under any Losses, including any claim by any employee of Contractor that may be subject to the Illinois Workers Compensation Act, 820 ILCS 305/1 et seq. or any other related law or judicial decision, including but not limited to, Kotecki v. Cyclops Welding Corporation, 146 Ill. 2d 155 (1991). The City, however, does not waive any limitations it may have on its liability under the Illinois Worker Compensation Act, the Illinois Pension Code or any other statute.

E. The Contractor shall be responsible for any losses and costs to repair or remedy work performed under this Agreement resulting from or arising out of any act or omission, neglect, or misconduct in the performance of its Work or its sub-contractors' work. Acceptance of the work by the City will not relieve the Contractor of the responsibility for subsequent correction of any such error, omissions and/or negligent acts or of its liability for loss or damage resulting therefrom.

23. CONTRACTOR'S LIABILITY INSURANCE

A. THE CONTRACTOR SHALL NOT COMMENCE WORK UNDER THIS CONTRACT UNTIL THEY HAVE OBTAINED ALL INSURANCE REQUIRED HEREIN AND SUCH INSURANCE HAS BEEN APPROVED BY THE CITY. Nor shall the contractor allow any sub-contractor to commence work until all similar insurance required of the sub-contractor has been so obtained.

B. The City of Evanston shall be named as an additional insured on the policy of the contractor for whatever the policy limits are for the contractor, but in no event shall the Comprehensive General Liability limits be less than $3,000,000.00.

C. If the contractor has more than one project for which he has a contract with the City of Evanston there shall be separate Certificates of Insurance naming the City as an additional insured on each separate policy.

D. In the event of accidents, injuries, or unusual events, whether or not any injury occurred, the contractor shall promptly furnish the City with copies of all reports of such incidents.

E. The contractor shall furnish one (1) copy of a certificate, with the City named as an additional insured, showing the following minimum coverage with insurance company acceptable to the City.

24. PRE-CONSTRUCTION MEETING

A. A pre-construction meeting will be scheduled for the successful Contractor at a date immediately following awarding of the Contracts.

25. LIQUIDATED DAMAGES

A. The Contractor shall, and agrees to pay, per calendar day, the amount listed in the Schedule of Deductions presented in Article 108.09 of the Standard Specifications (based upon the total Contract Price) as liquidated damages for failure to meet the completion deadlines identified below:

Substantial Completion Deadline:	November 20, 2026
Final Completion Deadline:	December 18, 2026

B. Substantial Completion shall be defined as 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 that the City can occupy or utilize the work for its intended use. Substantial Completion will be certified by the issuance of a Certificate of Substantial Completion, to be issued by the City's representative, when the Contractor has satisfied the above statement.

C. Final Completion shall be defined as the stage in the progress of the work when all work on site is fully complete, including punch list work, with the exception of restoration grass establishment.

26. EXTENSION OF TIME

A. Delays due to causes beyond the control of the contractor other than such as reasonable would be expected to occur in connection with or during the performance of the work, may entitle the contractor to an extension of time for completing the work sufficient to compensate for such delay. No extension of time shall be granted, however, unless the contractor shall notify the City in writing thereof, within ten (10) days from the initiation of the delay and unless he shall, within ten (10) days after the expiration of the delay, notify the City in writing of the extension of time claimed on account thereof and then only to the extent, if any, allowed by the City.

27. DEFAULT

A. The City may, subject to the provisions of this section, by written notice of default to Contractor, terminate the whole or any part of this contract in any one of the following circumstances:

1. if the Contractor fails to perform the services within the time specified herein, or any extension thereof; or
2. if the contractor fails to perform any of the other provisions of this contract, or so fails to make progress as to endanger performance of this contract in accordance with its terms, and in either of these two circumstances does not cure failure within a period of 10 days (or such other extended period as the City may authorize in writing) after receipt of notice from the City specifying

such failure.

B. In the event the City terminates this contract in whole or in part as provided in this section, the City may procure, upon such terms and in such manner as the City may deem appropriate, services similar to those so terminated, and the Contractor will be liable to the City for any excess costs for such similar services.

C. The Contractor will not be liable for any excess of costs if acceptable evidence has been submitted to the City that the failure to perform the contract was due to causes beyond the control and without fault or negligence of the Contractor.

D. Contractors who default may not be considered for awards of future City contracts.

28. USE OF PREMISES

A. The contractor shall confine his apparatus, the storage of materials and the operations of his workers, to limits indicated by law, ordinances, permits or directions of the City.

29. DISCLOSURES AND POTENTIAL CONFLICTS OF INTEREST (30 ILCS 500/50-35)

A. The City of Evanston's Code of Ethics prohibits public officials or employees from performing or participating in an official act or action with regard to a transaction in which he has or knows he will thereafter acquire an interest for profit, without full public disclosure of such interest. This disclosure requirement extends to the spouse, children and grandchildren, and their spouses, parents and the parents of a spouse, and brothers and sisters and their spouses.

To ensure full and fair consideration of all bids, the City of Evanston requires all Bidders including owners or employees to investigate whether a potential or actual conflict of interest exists between the Bidder and the City of Evanston, its officials, and/or employees. If the Bidder discovers a potential or actual conflict of interest, the Bidder must disclose the conflict of interest in its bid, identifying the name of the City of Evanston official or employee with whom the conflict may exist, the nature of the conflict of interest, and any other relevant information. The existence of a potential or actual conflict of interest does NOT, on its own, disqualify the disclosing Bidder from consideration. Information provided by Bidders in this regard will allow the City of Evanston to take appropriate measures to ensure the fairness of the bidding process.

The City of Evanston requires all bidders to submit a certification, enclosed with this bid packet, that the bidder has conducted the appropriate investigation and disclosed all potential or actual conflicts of interest.

By submitting a bid, all Bidders acknowledge and accept that if the City of Evanston discovers an undisclosed potential or actual conflict of interest, the City

of Evanston may disqualify the Bidder and/or refer the matter to the appropriate authorities for investigation and prosecution.

INSURANCE REQUIREMENTS

TYPE OF INSURANCE	MINIMUM INSURANCE COVERAGE	
	Consequent Death	Bodily Injury and Property Damage
	Each Occurrence	Aggregate
Commercial General Liability including:	$3,000,000	$3,000,000
1. Comprehensive form		
2. Premises - Operations		
3. Explosion & Collapse Hazard		
4. Underground Hazard		
5. Products/Completed Operations Hazard		
6. Contractual Insurance – With an endorsement on the face of the certificate that it includes the "Indemnity" paragraph of the specifications.	**Insurance Certificate Must State: The City Of Evanston is Named as Additional Insured**	
7. Broad Form Property Damage - construction projects only		
8. Independent contractors		
9. Personal Injury		
Automobile Liability Owned, Non-owned or Rented	$ 1,000,000	$1,000,000
Workmen's Compensation and Occupational Diseases As required by applicable laws. Employer's Liability		$ 500,000

Thirty-day notice of cancellation required on all certificates.

EXHIBIT A – BID FORM
For
James Park Renovations

(BID #26-15)

1.01 BID TO:

THE CITY OF EVANSTON
909 Davis Street
Evanston, Illinois 60201

Hereinafter called “OWNER”.

1.02 BID FROM:

_____
(Hereinafter call "BIDDER")

_____
Address

_____
Telephone Number

_____
Fax Number

1.03 BID FOR: **JAMES PARK RENOVATIONS**

1.04 ACKNOWLEDGEMENT:

A. The Bidder, in compliance with the Invitation for Bids, having carefully examined the Drawings and Project Manual with related documents and having visited the site of the proposed Work, and being familiar with all of the existing conditions and limitations surrounding the construction of the proposed project, including the structure of the ground, subsurface conditions, the obstacles which may be encountered, local restrictions, and all other relevant matters concerning the Work to be performed, hereby PROPOSES to perform everything required to be performed, and to provide all labor, materials, necessary tools and equipment, expendable equipment, all applicable permits and taxes and fees, and provide all utility and transportation services necessary to perform and complete in a workmanlike

manner the Project in accordance with all the plans, specifications and related Contract Documents as prepared by the City of Evanston.

B. The undersigned hereby acknowledges receipt of Invitation of Bids, Instruction to Bidder, the Project Manual, Drawings, and other Contract Documents and acknowledges receipt of the following Addenda:

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

1.05 GENERAL STATEMENTS

A. The undersigned has checked all of the figures contained in this proposal and further understands that the Owner will not be responsible for any errors or omissions made therein by the undersigned.

B. It is understood that the right is reserved by the Owner to reject any or all proposals, to waive all informality in connection therewith and to award a Contract for any part of the work or the Project as a whole.

C. The undersigned declares that the person(s) signing this proposal is/are fully authorized to sign on behalf of the named firm and to fully bind the named firm to all the conditions and provisions thereof.

D. It is agreed that no person(s) or company other than the firm listed below or as otherwise indicated hereinafter has any interest whatsoever in this proposal or the Contract that may be entered into as a result thereof, and that in all respects the proposal is legal and fair, submitted in good faith, without collusion or fraud.

E. It is agreed that the undersigned has complied and/or will comply with all requirements concerning licensing and with all other local, state and national laws, and that no legal requirement has been or will be violated in making or accepting this proposal, in awarding the Contract to him, and/or in the prosecution of the Work required hereunder.

F. To be considered a bona fide offer, this proposal must be completed in full and accompanied by a bid deposit or a bid bond when required by Contract Documents or Addenda.

1.06 ALTERNATES

A. When alternate proposals are required by Contract Documents or Addenda thereto, the undersigned proposes to perform alternates for herein stated additions to or deductions from hereinbefore stated Base Bid. Additions and deductions include all modifications of Work or additional Work that the undersigned may be required to perform by reason of the acceptance of alternates.

1.07 ALLOWANCE

A. The allowance is intended to address items not able to be precisely determined prior to bidding including unforeseen conditions that are discovered during the course of construction. At the end of the project, unspent allowance shall be credited to owner via change order. See Section 01 21 00 – Allowances for additional information.

1.08 AGREEMENT

A. In submitting this Bid, the undersigned agrees:
   1. To hold this Bid open for sixty (60) days from submittal date.
   2. To enter into and execute a Contract with the Owner within ten (10) days after receiving Notice of Award from the Owner.
   3. To accomplish the work in accordance with the Contract Documents.
   4. To complete the work by the time stipulated in the General Conditions

B. The Owner reserves the right to reject any and all Bids and to waive any informalities in Bidding.

1.09 SCHEDULE

A. See General Conditions for required schedule of completion dates.

1.10 PROPOSED PRICES

A. The Bidder hereby proposes to furnish all labor, materials, equipment, transportation, construction plant and facilities necessary to complete, in a workmanlike manner and in accordance with the contract documents, the contract of work bid upon herein for compensation in accordance with the following prices:

BASE BID AMOUNT: **$**_____

ALLOWANCE (ADDITIONAL WORK – GENERAL): **$** +80,000

TOTAL BASE BID AMOUNT: **$**_____

ALTERNATE 1 – SPLASH PAD

This alternate adds an (8) zone splash pad with LED jets to the center playground area as depicted in the construction documents. The ADD/DEDUCT LUMP SUM PRICE, if awarded to the undersigned, shall be:

ALTERNATE 1 AMOUNT: **$**_____

ALTERNATE 2 – SPLASH PAD

This alternate adds a (2) zone splash pad with non-LED jets to the center playground area as depicted in the construction documents. The ADD/DEDUCT LUMP SUM PRICE, if awarded to the undersigned, shall be:

ALTERNATE 2 AMOUNT: **$_____**

ALTERNATE 3 – HILLSIDE PLANTINGS

This alternate adds the hillside soil top dressing and associated seeding area as depicted in the construction documents. The ADD/DEDUCT LUMP SUM PRICE, if awarded to the undersigned, shall be:

ALTERNATE 3 AMOUNT: **$_____**

ALTERNATE 4 – SOIL STABILIZATION

This alternate adds a structural base to select paving areas as depicted in the construction documents. The ADD/DEDUCT LUMP SUM PRICE, if awarded to the undersigned, shall be:

ALTERNATE 4 AMOUNT: **$_____**

1.11 BID SECURITY

If required by the bid documents, a scanned copy of the bid bond must be included with the bid electronic submission. The City is currently not able to accept a certified check, bank cashier's check or electronic bid bond at this time.

A. The City of Evanston Civic Center is unable to receive in person drop-off and it is closed to the public. The original bid bond must be mailed within ten (10) days after the due date, to the City of Evanston Purchasing Department, 909 Davis Street, Evanston, Illinois 60201 Attention Purchasing Manager using the USPS (certified or priority), UPS or FedEx mail options in order to have a tracking number.

B. Accompanying this electronic submittal is a scanned copy of a bank draft, bid bond, Cashier's check or Certified check as surety in the amount of not less than five percent (5%) of the Total Bid payable to the City of Evanston.

The amount of the check or draft is: $_____

If this bid is accepted and the undersigned shall fail to execute a contract and contract bond as required it is hereby agreed that the amount of the check or draft or bidder's bond substituted in lieu thereof, shall become the property of the City and shall be considered as payment of damages due to delay and other causes suffered by the City because of the failure to execute said contract and contract bond; otherwise said check or draft shall be returned to the undersigned.

In the event that one check or draft is intended to cover two or more bids, the

amount must be equal to the sum of the project proposal guarantees of the individual sections covered.

If the check or draft is placed on another project proposal, state below where it may be found, as follows: The check or draft will be found in the project proposal for: _____.

1.12 PERFORMANCE/PAYMENT BOND

The undersigned bidder agrees to provide Performance Bond and Payment Bond executed in accordance with Contract Performance Bond form furnished by and acceptable to the Owner written with _____

_____

in the amount of 100% of the Contract Sum (Total Base Bid and all accepted alternatives and adjustments) the cost of which is included in the Bid.

Cost of bond for change order is _____ percent of change order cost.

1.13 LIQUIDATED DAMAGES

The undersigned Bidder understands and agrees to the provisions stated under "LIQUIDATED DAMAGES" in the General Conditions and shall be assessed at the specified daily rate for each calendar day or partial calendar day until completion as defined herein.

1.14 MATERIAL SUBSTITUTION SHEET

The following is a schedule of substitute materials I propose to furnish on this job, with the difference in price being added to or deducted from the Base Bid. The Base Bid is understood to include only those items which are definitely specified by trade names or otherwise.

I understand that if no price difference is indicated, then the selection of materials is optional with the Owner, and approval or rejection of the substitution below will be indicated prior to signing of Contracts.

PRODUCT NAME AND/OR MANUFACTURER	ADD	DEDUCT
_____	_____	_____
_____	_____	_____
_____	_____	_____

1.15 PROPOSAL SIGNATURE (REQUIRED)

A. SOLE PROPRIETOR

Signature of Bidder: _____

SUBSCRIBED AND SWORN to before me this _____ day of_____, 20__

_____
Notary Public

Commission Expires: _____

B. PARTNERSHIP

Signature of All Partners: _____

_____
Name (typed or printed)

_____

_____
Name (typed or printed)

SUBSCRIBED AND SWORN to before me this ____ day of _____, 20___

_____ Commission Expires: _____
Notary Public

C. CORPORATION

Signature of Authorized Official: _____

Title: _____

Name above (typed or printed): _____

(If other than the president, attach a certified copy of that section of corporate by-laws or other authorization by the Corporation which permits the person to execute the offer for the Corporation.)

(Corporate Seal)
Attest: _____
Secretary

SUBSCRIBED AND SWORN to before me this ____ day of _____, 20___

_____ Commission Expires: _____
Notary Public

1.16 DISCLOSURE

A. The undersigned duly sworn deposes and says on oath that the bidder has withheld no disclosures of ownership interest and the information provided herein to the best of its knowledge is current and said undersigned has not entered into any agreement with any other bidder or prospective bidder or with any other person, firm or corporation relating to the price named in said proposal or any other proposal, nor any agreement or arrangement under which any person, firm or corporation is to refrain from bidding, nor any agreement or arrangement for any act or omission in restraint of free competition among bidders and has not disclosed to any person, firm or corporation the terms of this bid or the price named herein.

Bidder: _____

Business Address: _____

_____

Telephone Number: _____

1.17 CONTACTS

A. In the event the Evanston City Council approves this bid response, list the name, address, telephone, and fax number of the person to be contacted:

Bidder: _____

Address: _____

_____

Telephone Number: _____

Fax Number: _____

1.18 REFERENCES

A. Provide three (3) references for which your firm has completed work of a similar scope in the past.

1. Name: _____

   Address: _____

   Contact Person: _____

   Phone: _____

   Contract Value: _____

   Contract Dates: _____

2. Name: _____

   Address: _____

   Contact Person: _____

   Phone: _____

   Contract Value: _____

   Contract Dates: _____

3. Name: _____

   Address: _____

   Contact Person: _____

   Phone: _____

   Contract Value: _____

   Contract Dates: _____

EXHIBIT B

RBO COMPLIANCE CERTIFICATION

[Company Letterhead]

City of Evanston – Bid Compliance Certification

We hereby certify that [Company Name] is in full compliance with the requirements set forth under Ordinance 1-O-26, attached hereto, including but not limited to all applicable provisions under Section 1-17-1 of the Evanston City Code.

Our company has reviewed and will adhere to:

- The Local Employment Program (LEP), including the hiring of Evanston residents and achieving 15% of project hours performed by said residents.
- The Apprenticeship Training Program requirement, with attached documentation of program participation and graduation rates.
- The prohibition on excessive pass-through subcontracting; we will perform a minimum of 25% of the contracted work directly.
- All certification and documentation obligations outlined in the ordinance.

Signed: _____

Name: _____

Title: _____

Company Name: _____

Project Title: _____

Project Number: _____

Date: _____

EXHIBIT B

RBO COMPLIANCE CERTIFICATION

[Company Letterhead]

City of Evanston – Legal & Regulatory Compliance Certification.

I, [Authorized Representative Name], hereby certify that [Company Name] complies with and has provided documentation for each of the following:

- Illinois Prevailing Wage Act (past 5 years; no violations)
- Substance Abuse Prevention on Public Works Project Act (written policy included)
- Workers' Compensation Act (policy attached, correct classification)
- Unemployment Insurance Act (IDES registration included)
- Employee Classification Act
- Davis-Bacon Act (if applicable)
- Registered in Sam.Gov (if applicable)
- Unique Entity Identifier (UEI) (if applicable)
- Corporate good standing with the Illinois Secretary of State
- Illinois Department of Revenue registration
- No federal, state, or local tax liens or delinquencies within the past 5 years
- Disclosure of any violations or determinations by federal or state authorities related to contracting, safety, tax, licensing, or labor laws.

Signed: _____

Name: _____

Title: _____

Project Title: _____

Project Number: _____

Date: _____

EXHIBIT B

RBO COMPLIANCE CERTIFICATION

[Subcontractor Letterhead]

City of Evanston – Subcontractor Compliance Certification

Subcontractor Name: _____

Prime Contractor: _____

Project Title: _____

Project Number: _____

I hereby certify that [Subcontractor Name] will comply with all City of Evanston ordinance requirements applicable to public works contracts, including Local Employment Program provisions, Apprenticeship Program participation, and regulatory compliance obligations listed under Ordinance 1-O-26.

All documentation and certifications have been submitted to the prime contractor and will be furnished to the City upon request.

Signed: _____

Name: _____

Title: _____

Date: _____

EXHIBIT C

CITY OF EVANSTON
LOCAL EMPLOYMENT PROGRAM (LEP) COMPLIANCE

Effective Date January 1, 2015

City of Evanston Ordinance 60-O-14, Local Employment Program (LEP) Penalties:

Ordinance 60-O-14, Amendment to the MWDEBE/LEP revising the penalty section from a $100/per day to a 1.0% of total project value penalty can be found at: Ordinance 60-O-14 Amendment MWEDBE LEP of the Evanston City Code Section 1-17-1 (C) can be found at Municode Library. The following are excerpts from Ordinance 60-O-14, Amending City Code Section 1-17-1(C) (11): Penalty.

If the contractor or sub-contractor fails to comply: The City may impose a fine up to one percent (1.0%) of the approved project price in total. Contractors or sub-contractors that are out of compliance due to a resident termination or resignation shall immediately notify the Business Workforce Compliance Coordinator of this occurrence within two (2) business days. Subsequently, the contractor or sub-contractor shall have five (5) additional business days to replace a terminated or resigned worker with another resident.

If the contractor or sub-contractor fails to comply: If the contractor or sub-contractor fails to make the replacement or to notify the Business Workforce Compliance Coordinator of this occurrence, the offending party will also be subject to a penalty up to one percent (1.0%) of the approved project price. If the noncompliant contractor makes a good faith effort to replace the resident, the fine may be waived.

If the contractor or sub-contractor fails to comply: At the sole discretion of the City, a contractor or sub-contractor that has violated the terms of the Local Employment Program within a three-year period may be determined a non-responsible bidder and excluded from bidding on future projects for a period of not less than one year.

If the employee (LEP Evanston resident) fails to comply: At the sole discretion of the City, an employee that has been hired through the LEP may be removed from the program for a period of not less than one year for failing to adhere to program guidelines or due to termination by the contractor for cause. Such termination process will be reviewed by the Workforce Development Coordinator.

****Detailed Local Employment Program Instructions "How to Comply" can be found at: Local Employment Program Detailed Instructions**

Local Employment Program or Exhibit F Questions: City staff is available for assistance to help with compliance. Submit questions in writing to Jessica Cooper, the Workforce Development Coordinator at jcooper@cityofevanston.org or Tammi Nunez, Purchasing Manager at tnunez@cityofevanston.org.

EXHIBIT C

LOCAL EMPLOYMENT PROGRAM COMPLIANCE
CITY CODE SECTION 1-17-1(C): LOCAL EMPLOYMENT PROGRAM

I have read and understood the requirements of the City of Evanston Local Employment Program ("LEP") as set forth in City of Evanston Code Section 1-17-1(C): Local Employment Program. I intend to comply with the program as follows:

Estimated total labor cost = $ _____ 15% of total labor cost = $ _____

_____ My total bid, including all alternates, is under $250,000, and the LEP does not apply.

_____ My total bid, including all alternates, is equal to or greater than $250,000, and I already employ, and will continue to employ for the duration of the contract for which I am submitting this bid, Evanston residents (residing in zip codes 60201 or 60202) for at least 15% of all hours worked at the construction site by construction trade workers.

_____ My total bid, including all alternates, is equal to or greater than $250,000, and I will employ, for the duration of the contract for which I am submitting this bid, through use of the City of Evanston database or otherwise, Evanston residents (residing in zip codes 60201 or 60202) for at least 15% of all hours worked at the construction site by construction trade workers.

_____ My total bid, including all alternates, is equal to or greater than $250,000, and I have been unable to comply with the LEP requirements but am willing to work with the City to achieve compliance.

_____ My total bid, including all alternates, is equal to or greater than $250,000, and after having made sincere attempt to comply as noted below, I seek a waiver on a portion or all of the LEP requirements on this contract. Complete next section "Reasons for Waiver Request" below.

I UNDERSTAND THAT FAILURE TO COMPLY WITH THE LEP, REGARDLESS OF INTENT, MAY RESULT IN MAXIMUM PENALTY AS SET FORTH IN CITY CODE SECTION 1-17-1(C)(11), AS AMENDED.

WAIVER WILL BE GRANTED ONLY AFTER SINCERE ATTEMPT TO COMPLY*

REASONS FOR WAIVER REQUEST: PLEASE CHECK ALL THAT APPLY AND COMPLETE INFORMATION REQUESTED:

1. I have made sincere attempt as otherwise indicated below but have nonetheless been unable to comply.

a. I do or will employ Evanston residents for the project, but such employment amounts to ____**%** of total labor cost.

2. The nature of the job is so technical that after having made sincere attempt as otherwise indicated below, I have been unable to locate any Evanston residents qualified to perform any aspects of the work. Please describe applicable job requirements/qualifications. Attach separate sheet if necessary:

_____

_____

***THE FOLLOWING DEMONSTRATE **SINCERE ATTEMPT TO COMPLY**: PLEASE CHECK EACH BOX COMPLETED, AS APPLICABLE:

3. I have utilized the local resident database and otherwise worked with the City in attempt to hire Evanston residents in compliance with LEP on this project, and have nonetheless been unable to comply;

4. I have placed one or more ads in a local newspaper seeking to hire Evanston residents in compliance with LEP on this project, and have nonetheless been unable to comply; and

5. If I am utilizing union labor, I have contacted Chicagoland labor unions to request Evanston residents for employment in compliance with LEP on this project and have nonetheless been unable to comply.

I have read The City of Evanston, Local Employment Program (LEP) requirements as set forth in City Code Section 1-17-1(C): Local Employment Program. I understand and will comply with the LEP requirements for this project with respect to the job and/or any waiver, as applicable. **I UNDERSTAND THAT IF MY APPLICATION IS NOT COMPLETE, MY BID MUST BE REJECTED.**

SIGNED:

_____ _____ _____

Signature Printed Name and Title Date

On behalf of Company: _____

EXHIBIT D

City of Evanston M/W/D/EBE Policy

A City of Evanston goal is to provide contracting and sub-contracting opportunities to Minority Business Enterprises, Women Business Enterprises, Disadvantaged and Evanston Business Enterprises. The goal of the Minority, Women, Disadvantaged and Evanston Business Enterprise Program (M/W/D/EBE) is to assist such businesses with opportunities to grow. To assist such growth, the City's goal is to have general contractors utilize M/W/D/EBEs to perform no less than 25% of the awarded contract.

Firms bidding on projects with the City must work to meet the 25% goal or request a waiver from participation. It is advised that bidders place advertisements requesting sub-contractors and that they email or contact individual firms that would be appropriate to partner in response to the project. For samples of possible advertisements, see the City of Evanston's Business Diversity Section http://www.cityofevanston.org/business/business-diversity/ (Sample Advertisement).

If a bidder is unable to meet the required M/W/D/EBE goal, the Bidder must seek a waiver or modification of the goal on the attached forms. Bidder must include:

1. A narrative describing the Bidder's efforts to secure M/W/D/EBE participation prior to the bid opening.
2. Documentation of each of the assist agencies that were contacted, the date and individual who was contacted, and the result of the conversation (see form)
3. A letter attesting to instances where the bidder has not received inquiries/proposals from qualified M/W/D/EBEs
4. Names of owners, addresses, telephone numbers, date and time and method of contact of qualified M/W/D/EBE who submitted a proposal but was not found acceptable.
5. Names of owners, addresses, telephone numbers, date and time of contact of at least 15 qualified M/W/D/EBEs the bidder solicited for proposals for work directly related to the Bid prior to the bid opening (copies must be attached).

If a bidder is selected with a Sub-contractor listed to meet the M/W/D/EBE goal, a "monthly utilization report" will be due to the City prior to each payment being issued to the Contractor. This report will include documentation of the name of the firm hired, the type of work that firm performed, etc. Should the M/W/D/EBE not be paid according to the schedule proposed in this document, the City reserves the right to cancel the contract. Examples of this monthly form can be found on the City's website: http://www.cityofevanston.org/business/business-diversity/ (MWDEBE Monthly Utilization Report).

EXHIBIT E

M/W/D/EBE PARTICIPATION COMPLIANCE FORM

I do hereby certify that,

_____ (Name of firm) intends to participate as a Subcontractor or General Contractor on the project referenced above.

This firm is a (check only one):

_____ Minority Business Enterprise (MBE), a firm that is at least 51% managed and controlled by a minority, certified by a certifying agency within Illinois.

_____ Women's Business Enterprise (WBE), a firm that is at least 51% managed and controlled by a woman, certified by a certifying agency within Illinois.

_____ Disadvantaged Business Enterprise (DBE), a firm that is at least 51% managed and controlled by a disadvantaged, certified by a certifying agency within Illinois.

_____ Evanston Based Enterprise (EBE), a firm located in Evanston for a minimum of one year and which performs a "commercially useful function".

Total proposed price of response $_____

Amount to be performed by a M/W/D/EBE $_____

Percentage of work to be performed by a M/W/D/EBE _____%

Information on the M/W/D/EBE Utilized:

Name _____

Address _____

Phone Number _____

Signature of firm attesting to participation _____

Title and Date _____

Type of work to be performed _____

Please attach:

1. Proper certification documentation if applying as a M/W/D/EBE and check the appropriate box below. This M/W/D/EBE will be applying with documentation from:

❑ Cook County	❒ State Certification
❒ Federal Certification	❒ Women's Business Enterprise National Council
❒ City of Chicago	❒ Chicago Minority Supplier Development Council

2. Attach business license if applying as an EBE

EXHIBIT E

M/W/D/EBE UTILIZATION SUMMARY REPORT

The following Schedule accurately reflects the value of each MBE/WBE/DBE/EBE sub-agreement, the amounts of money paid to each to date, and this Pay Request. The total proposed price of response submitted is _____.

MBE/WBE/DBE/EBE FIRM NAME	FIRM TYPE (MBE/WBE/ DBE/EBE)	SERVICES PERFORMED	AMOUNT OF SUB-CONTRACT	PERCENT OF TOTAL CONTRACT AMOUNT
			$	
			$	
			$	
			$	
			$	
			$	
			$	
			$	
			$	
			$	
			$	
			$	
			$	
			$	
			$	
TOTAL			$	

EXHIBIT F

M/W/D/EBE PARTICIPATION WAIVER REQUEST

I am _____ of _____, and I have authority to
(Title) (Name of Firm)

execute this certification on behalf of the firm. I _____ do
(Name)

hereby certify that this firm seeks to waive all or part of this M/W/D/EBE partcipation goal

for the following reason(s):

(CHECK ALL THAT APPLY. SPECIFIC SUPPORTING DOCUMENTATION MUST BE ATTACHED.)

_____ 1. No M/W/D/EBEs responded to our invitation to bid.

_____ 2. An insufficient number of firms responded to our invitation to bid.

For #1 & 2, please provide a narrative describing the outreach efforts from your firm and proof of contacting at least 15 qualified M/W/D/EBEs prior to the bid opening. Also, please attach the accompanying form with notes regarding contacting the Assist Agencies.

_____ 3. No sub-contracting opportunities exist.

Please attach a written explanation of why sub-contracting is not feasible. Please provide details supporting your request.

_____ 4. M/W/D/EBE participation is impracticable.

Please attach a written explanation of why M/W/D/EBE participation is impracticable. Please provide details supporting your request.

Therefore, we request to waive _____of the 25% utilization goal for a revised goal of _____%.

Signature:_____ Date: _____
(Signature)

EXHIBIT G

Construction Contractors' Assistance Organizations ("Assist Agencies") Form

AGENCY	DATE CONTACTED	CONTACT PERSON	RESULT OF CONVERSATION
Association of Asian Construction Enterprises (AACE) 5500 Touhy Ave., Unit K Skokie, IL. 60077 Phone: 847-5259693 Perry Nakachii, President			
Black Contractors United (BCU) 400 W. 76th Street Chicago, IL 60620 Phone: 773-483-4000; Fax: 773-483-4150 Email: bcunewera@ameritech.net			
Chicago Minority Business Development Council 105 West Adams Street Chicago, Illinois 60603 Phone: 312-755-8880; Fax: 312-755-8890 Email: info@chicagomsdc.org Shelia Hill, President			
Evanston Minority Business Consortium, Inc. P.O. Box 5683 Evanston, Illinois 60204 Phone: 847-492-0177 Email: embcinc@aol.com			
Federation of Women Contractors 5650 S. Archer Avenue Chicago, Illinois 60638 Phone: 312-360-1122; Fax: 312-360-0239 Email: FWCChicago@aol.com Contact Person: Beth Doria Maureen Jung, President			
Hispanic American Construction Industry (HACIA) 901 W. Jackson, Suite 205 Chicago, IL 60607 Phone: 312-666-5910; Fax: 312-666-5692 Email: info@haciaworks.org			
Women's Business Development Ctr. 8 S. Michigan Ave, Suite 400 Chicago, Illinois 60603 Phone: 312-853-3477 X220; Fax: 312-853-0145 Email: wbdc@wbdc.org Carol Dougal, Director			

PLEASE NOTE: Use of Construction Contractor's Assistance Organization (Assist Agencies") Form and agencies are for use as a resource only. The agencies and or vendors listed are not referrals or recommendations by the City of Evanston.

EXHIBIT H

CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY (Only if Contract Exceeds $10,000)

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed sub-contractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or sub-contract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION OF BIDDER

Name and Address of Bidder (Include ZIP Code)

IRS EMPLOYER I.D. NUMBER 36-_____

1. Bidder has participated in a previous contract or sub-contract subject to the Equal Opportunity Clause. ____Yes ___No

2. Bidder has filed all compliance reports due under applicable instructions.
___Yes ___No

3. Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?
___Yes ___No

Name:_____

Title: _____

Signature: _____

Date: _____

EXHIBIT I

DISCLOSURE OF OWNERSHIP INTERESTS

City of Evanston Ordinance 15-0-78 requires all persons (APPLICANT) seeking to do business with the City to provide the following information with their bid. Every question must be answered. If the question is not applicable, answer with "NA".

APPLICANT NAME: _____

APPLICANT ADDRESS: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

APPLICANT is (**Check One**)

1. Corporation ( ) 2. Partnership ( ) 3. Sole Owner ( ) 4. Association ( )

5. Other ( ) _____

Please answer the following questions on a separate attached sheet if necessary.

SECTION I - CORPORATION

1a. Names and addresses of all Officers and Directors of Corporation.

_____

_____

_____

1b. (Answer only if corporation has 33 or more shareholders.) Names and addresses of all those shareholders owning shares equal to or in excess of 3% of the proportionate ownership interest and the percentage of shareholder interest. (Note: Corporations which submit S.E.C. form 10K may substitute that statement for the material required herein.)

_____

_____

_____

1c. (Answer only if corporation has fewer than 33 shareholders.) Names and addresses of all shareholders and percentage of interest of each herein. (Note: Corporations which submit S.E.C. form 10K may substitute that statement for the material requested herein.)

_____

_____

_____

SECTION 2 - PARTNERSHIP/ASSOCIATION/JOINT VENTURE

2a. The name, address, and percentage of interest of each partner whose interests therein, whether limited or general is equal to or in excess of 3%.

_____

_____

_____

2b. Associations: The name and address of all officers, directors, and other members with 3% or greater interest.

_____

_____

_____

SECTION 3 - TRUSTS

3a. Trust number and institution.

_____

3b. Name and address of trustee or estate administrator.

_____

_____

_____

3c. Trust or estate beneficiaries: Name, address, and percentage of interest in total entity.

_____

_____

_____

SECTION 4 - ALL APPLICANTS - ADDITIONAL DISCLOSURE

4a. Specify which, if any, interests disclosed in Section 1, 2, or 3 are being held by an agent or nominee and give the name and address of principal.

_____

_____

_____

4b. If any interest named in Section 1, 2, or 3 is being held by a "holding" corporation or other "holding" entity not an individual, state the names and addresses of all parties holding more than a 3% interest in that "holding" corporation or entity as required in 1(a), 1(b), 1(c), 2(a), and 2(b).

_____

_____

_____

4c. If "constructive control" of any interest named in Sections 1, 2, 3, or 4 is held by another party, give name and address of party with constructive control. ("Constructive control" refers to control established through voting trusts, proxies, or special terms of venture of partnership agreements.)

_____

_____

_____

I have not withheld disclosure of any interest known to me. Information provided is accurate and current.

_____ _____

Date Signature of Person Preparing Statement

_____

Title

ATTEST: _____ (Notary Seal)

Notary Public

Commission Expires: _____

EXHIBIT J

ADDITIONAL INFORMATION SHEET

Bid/Proposal Name: _____

Bid/Proposal Number #: _____

Company Name: _____

Contact Name: _____

Address: _____

City,State, Zip: _____

Telephone/FAX: #_____

E-mail: _____

Comments: _____

_____

_____

_____

_____

_____

_____

EXHIBIT K

CERTIFICATE OF COMPLIANCE
WITH PREVAILING WAGE RATE ACT

The undersigned, upon being first duly sworn, hereby certifies to the City of Evanston, Cook, County, Illinois, that all work under this contract shall comply with the Prevailing Wage Rate Act of the State of Illinois, 820 ILCS 130 *et seq*, and as amended by Public Acts 86-799 and 86-693 and our current city ordinance, with rates to be paid in effect at time work is performed. Contractors shall submit monthly certified payroll records to the city.

Name of Contractor: _____

By: _____

By: State of _____, County of _____

Subscribed and sworn to before me this _____ day of_____, _____.

Notary Public

EXHIBIT L

MAJOR SUB-CONTRACTORS LISTING

The following Tabulation of Major Sub-contractors shall be attached and made a condition of the Bid. The Bidder expressly understands and agrees to the following provisions:

A. If awarded a Contract as a result of this Bid, the major sub-contractors used in the prosecution of the work will be those listed below.

B. The following list includes all sub-contractors who will perform work representing 5% (five percent) or more of the total Base Bid.

C. The sub-contractors listed below are financially responsible and are qualified to perform the work required.

D. The sub-contractors listed below comply with the requirements of the Contract Documents.

E. Any substitutions in the sub-contractors listed below shall be requested in writing by the Contractor and must be approved in writing by the Owner. All pertinent financial, performance, insurance and other applicable information shall be submitted with the request for substitutions(s). Owner shall respond to such requests within 14 calendar days following the submission of all necessary information to the full satisfaction of the Owner.

Category	**Name of Sub-contractor**	**Address and Phone Number**

(Attach additional sheets as required)

END OF SECTION

EXHIBIT M

CONFLICT OF INTEREST

_____, hereby certifies that it has conducted an investigation into whether an actual or potential conflict of interest exists between the Bidder, its owners and employees and any official or employee of the City of Evanston.

Bidder further certifies that it has disclosed any such actual or potential conflict of interest and acknowledges if Bidder/proposer has not disclosed any actual or potential conflict of interest, the City of Evanston may disqualify the bid/proposal.

_____
(Name of Bidder/proposer if the Bidder/proposer is an Individual)
(Name of Partner if the Bidder/proposer is a Partnership)
(Name of Officer if the Bidder/proposer is a Corporation)

The above statements must be subscribed and sworn to before a notary public.
Subscribed and Sworn to this _____ day of _____, 20____

_____ (Notary Seal)
Notary Public

Commission Expires: _____

EXHIBIT N

SIGNATURE FORM
THE SECTION BELOW MUST BE COMPLETED IN FULL AND SIGNED

The undersigned hereby certifies that they have read and understand the contents of this solicitation and attached service agreements and agree to furnish at the prices shown any or all of the items above, subject to all instructions, conditions, specifications and attachments hereto. Failure to have read all the provisions of this solicitation shall not be cause to alter any resulting contract or to accept any request for additional compensation. By signing this document, the proposer hereby certifies that they are not barred from bidding on this contract as a result bid rigging or bid rotating or any similar offense (720 ILCS 5/33 E-3, E-4).

Authorized Signature: _____

Company Name: _____

Typed/Printed Name: _____

Date: _____

Title: _____

Telephone Number: _____

E-mail _____

Fax Number: _____

EXHIBIT O

Contractor Services Agreement Acknowledgement Page

The City has attached its standard contractor services agreement as an exhibit to this bid document. Identify all exceptions to the agreement that would prevent your firm from executing it**. The City shall not consider or negotiate regarding exceptions submitted at any time after the submission of the Bidder's response.** *Please check one of the following statements:*

____I have read the contractor services agreement and plan on executing the agreement without any exceptions.

_____My firm cannot execute the City's standard contractor service agreement unless the exceptions noted below or in the attached sample contractor services agreement are made.

*****Please be aware that submitting exceptions to the contract may impact the likelihood of your firm being selected to perform this work.**

List exceptions in the area below:

_____

_____

_____

_____

_____

_____

_____

_____

_____

Authorized Signature: _____ **Company Name:** _____

Typed/Printed Name and Title: _____ **Date:** _____

EXHIBIT O

CONTRACTOR SERVICES AGREEMENT

The parties referenced herein desire to enter into an agreement for professional services for

James Park Renovations

(BID #26-15)

THIS AGREEMENT (hereinafter referred to as the "Agreement") is entered into between the City of Evanston, an Illinois municipal corporation with offices located at 909 Davis Street, Evanston Illinois 60201 (hereinafter referred to as the "City"), and *[Insert Contractor name here]*, with offices located at *[Insert Contractor address here]*, (hereinafter referred to as the "Contractor"). Compensation (the "Compensation") for all basic services provided by the Contractor pursuant to the terms of this Agreement shall not exceed $*[Insert fee here]*.

Revision March 2020

TABLE OF CONTENTS

1 Services and Duties of the Contractor 4
2 Standard Certifications 7
3 Additional Services/Change Orders 10
4 Bonds 12
5 Liquidated Damages in the Event Contractor Fails to Complete the Work 13
6 The City's Responsibilities 13
7 Period of Service 13
8 Payment for Services and Reimbursements 13
9 Notice and Cure/Termination 15
10 Insurance 16
11 Indemnification 17
12 Drawings and Documents 18
13 Successors and Assigns 19
14 Force Majeure 19
15 Amendments and Modifications 19
16 Standard of Care & Warranty 20
17 Savings Clause 21
18 Non-Waiver of Rights 21
19 Entire Agreement 21
20 Governing Law 21
21 Ownership of Contract Documents 22
22 Notice 22
23 Severability 22
24 Execution of Agreement 22
25 Counterparts 22
26 Authorizations 22
27 Time of Essence 23

RECITALS

WHEREAS, the City intends to retain the services of a qualified and experienced contractor for the following:

Reconstruct and expand the playground and reconstruct bike/pedestrian pathways at James Park in accordance with the attached exhibits.

WHEREAS, this Agreement shall include the following documents which are attached hereto:

a) City of Evanston Bid 26-15, attached as Exhibit A.

b) Contractor's response to Bid 26-15, attached as Exhibit B.

c) Any sub-contractor sub-contracts related to this Agreement, attached as Exhibit C.

d) Project Fee Schedule and hourly rates, attached as Exhibit D *(if appropriate)*.

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, the parties agree as follows:

1 Services and Duties of the Contractor

1.1 The Contractor shall perform professional services and provide equipment (the "Work") in accordance with Exhibits A, B, C and D. The Contractor retains the right to control the manner of performance of the services provided for in this Agreement and is an independent contractor and not agent or an employee of the City. All employees and sub-contractors of the Contractor shall likewise not be considered to be employees of the City. Contractor is solely responsible for the means and methods of all work performed under the terms of this Agreement for this Project ("the Project"). Contractor is an independent Contractor and is solely responsible for all taxes, withholdings, and other statutory or contractual obligations of any sort, including but not limited to, Worker's Compensation Insurance. Nothing in this Agreement accords any third-party beneficiary rights whatsoever to any non-party to this Agreement that any non-party may seek to enforce. Contractor acknowledges and agrees that should Contractor or its sub-contractors provide false information, or fail to be or remain in compliance with this Agreement; the City may void this Agreement.

1.2 The Contractor warrants and states that it has read the Contract Documents, and agrees to be bound thereby, including all performance guarantees as respects Contractor's work and all indemnity and insurance requirements. Contractor further affirms that it has visited the Project site and has become familiar with all special conditions, if any, at the Project site. Contractor shall perform the Work and its obligations under this Agreement in accordance with and subject to the Contract Documents to the full extent that each such provision is applicable to the Work. Contractor shall take necessary precautions to properly protect the Work of others, if any, from damage caused by operations under this Agreement. In addition, Contractor shall protect the work during normal and adverse weather conditions until the Project is complete and accepted by the City, or until the Contractor has fully completed its work under this Agreement. Contractor's obligations include, but

are not limited to, placing and adequately maintaining at or about all locations of Project work, sufficient guards, barricades, lights, and enclosures to protect the Work.

1.3 The Contractor shall not have any public or private interest and shall not acquire directly or indirectly any such interest which conflicts in any manner with the performance of its services under this Agreement.

1.4 The Contractor shall designate, in writing, a person to act as its Project Manager for the work to be performed under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define the Contractor's policies and decisions with respect to the work covered by this Agreement.

1.5 The Contractor shall employ only persons duly licensed by the State of Illinois to perform the professional services required under this Agreement for which applicable Illinois law requires a license, subject to prior approval of the City. The Contractor shall employ only well qualified persons to perform any of the remaining services required under this Agreement, also subject to prior approval of the City. The City reserves the right to require replacement of Contractor, sub-contractor, or supplier personnel for any reason. Contractor will replace the unacceptable personnel at no charge to the City. For all solicitations or advertisements placed by or on behalf of Contractor for employees for this Project it will state that the Contractor is an Equal Opportunity Employer.

1.6 Pursuant to the Illinois Freedom of Information Act, 5 ILCS 140/7(2), records in the possession of others whom the City has contracted with to perform a governmental function are covered by the Act and subject to disclosure within limited statutory timeframes (five (5) working days with a possible five (5) working day extension). Upon notification from the City that it has received a Freedom of Information Act request that calls for records within the Contractor's control, the Contractor shall promptly provide all requested records to the City so that the City may comply with the request within the required timeframe. The City and the Contractor shall cooperate to determine what records are subject to such a request and whether or not any exemption to the disclosure of such records, or part thereof, is applicable. Contractor shall indemnify and defend the City from and against all claims arising from the City's exceptions to disclosing certain records which Contractor may designate as proprietary or confidential. Compliance by the City with an opinion or a directive from the Illinois Public Access Counselor or the Attorney General under FOIA, or with a decision or order of Court with jurisdiction over the City, shall not be a violation of this Section.

1.7 The Contractor shall obtain prior approval from the City prior to sub-contracting with any entity or person to perform any of the work required under this Agreement. The Contractor may, upon request of the City, submit to the City a draft sub-contractor agreement for City review and approval prior to the execution of such an agreement. Any previously entered into sub-contractor agreement(s) are attached as Exhibit C. If the Contractor sub-contracts any of the services to be performed under this Agreement, the sub-contractor agreement shall provide that the services to be performed under any such agreement shall not be sublet, sold, transferred, assigned or otherwise disposed of to another entity or person without the City's prior written consent. The Contractor shall be responsible for the accuracy and quality of any sub-contractor's work.

1.8 The Contractor shall cooperate fully with the City, other City contractors, other municipalities and local government officials, public utility companies, and others, as may be directed by the City. This shall include attendance at meetings, discussions and hearings as requested by the City. This cooperation shall extend to any investigation, hearings or meetings convened or instituted by OSHA relative to this Project, as necessary. Contractor shall cooperate with the City in scheduling and performing its Work to avoid conflict, delay in or interference with the work of others, if any, at the Project.

1.9 The Contractor acknowledges that it shall enforce and comply with all applicable Occupational Safety and Health Administration standards (OSHA) for this Project in effect as of the date of the execution of this Agreement, or as otherwise promulgated by OSHA in the future taking effect during the pendency of this Project. Contractor shall enforce all such standards and ensure compliance thereto as to its own agents and employees, and as to the agents and employees of any sub-contractor throughout the course of this Project. Contractor is solely responsible for enforcing and complying with all applicable safety standards and requirements on this Project, and is solely responsible for correcting any practices or procedures which do not comply with the applicable safety standards and requirements for this Project. Any Project specific safety requirements applicable to this Project must be followed by Contractor and any sub-contractor(s) on the Project. Additionally, all such safety requirements shall be made a part of any sub-contractor agreement.

1.10 The Contractor shall submit to the City a progress report each month this Agreement is in effect. The report shall include the following items:

a) A summary of the Contractor's project activities, and any sub-contractor project activities that have taken place during the invoice period;
b) A summary of the Contractor's project activities and any sub-contractor project activities, that shall take place during the next invoice period;
c) A list of outstanding items due to or from the City; and
d) A status of the Project schedule.

1.11 The Contractor shall perform the work required under this Agreement pursuant to high quality industry standards expected by the City. The Contractor shall apply for and receive all appropriate permits before performing any work in the City. The Contractor shall also provide the appropriate permit drawings for Building Permits to be issued for the Project, if said permits are obligated by the Project. The City will assist the Contractor with obtaining the appropriate building and right-of-way permits.

1.12 The Contractor shall provide drawings of record, in the following 3 electronic formats for all locations where equipment has been installed and/or work has been performed. The electronic formats required by this Section 1.12 are Auto Cad Version 2007, ArcView and PDF.

1.13 Contractor recognizes that proper cleanup and removal of construction debris is an important safety consideration. The Contractor shall be solely responsible for daily construction site/area cleanup and removal of all construction debris in accordance with City-approved disposal

practices. Contractor shall be solely responsible for identifying and removing at its expense all hazardous material and waste which it uses and generates.

1.14 To the extent that there is any conflict between a provision specified in this Agreement, with a provision specified in any of the other Contract Documents, as defined in Section 1.15, this Agreement shall control. The City and the Contractor may amend this Section 1.14 as provided by Section 15 herein.

The Contractor acknowledges and agrees that the City has no retained control over any of the Work done pursuant to this Agreement, and that the City is expressly exempt from the retained control exception as defined in the Restatement of Torts, Second, Section 414. This provision shall survive completion, expiration, or termination of this Agreement.

1.15 The Contract Documents for this Project consist of:

a) This Agreement;
b) The City's RFP/RFQ, and the plans, specifications, general conditions, drawings addenda, and modifications thereto;
c) The Contractor's response to the RFP/RFQ/Bid;
d) Other exhibits and schedules, if any, listed in this Agreement;
e) Amendments or Other Contract Documents, if any; and
f) Amendments/Modifications to this Agreement issued after execution thereof.

1.16 As a condition of receiving payment, Contractor must (i) be in compliance with the Agreement, (ii) pay its employees prevailing wages when required by law (Examples of prevailing wage categories include public works, printing, janitorial, window washing, building and grounds services, site technician services, natural resource services, security guard and food services). Contractor is responsible for contacting the Illinois Dept. of Labor 217-782-6206; http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx to ensure compliance with prevailing wage requirements), (iii) pay its suppliers and sub-contractors according to the terms of their respective contracts, and (iv) provide lien waivers to the City upon request.

2 Standard Certifications

Contractor acknowledges and agrees that compliance with this section and each subsection for the term of the Agreement is a material requirement and condition of this Agreement. By executing this Agreement, Contractor certifies compliance with this section and each subsection and is under a continuing obligation to remain in compliance and report any non-compliance.

This section, and each subsection, applies to sub-contractors used on this Agreement. Contractor shall include these Standard Certifications in any sub-contract used in the performance of the Agreement.

If this Agreement extends over multiple fiscal years, Contractor and its sub-contractors shall confirm compliance with this section in the manner and format determined by the City by the date specified by the City and in no event later than January 1 of each year that this Agreement remains in

effect.

If the City determines that any certification in this section is not applicable to this Agreement, it may be stricken, subject to sole approval by the City, without affecting the remaining subsections.

2.1 As part of each certification, Contractor acknowledges and agrees that should Contractor or its sub-contractors provide false information, or fail to be or remain in compliance with the Standard Certification requirements, one or more of the following sanctions will apply:

- the Agreement may be void by operation of law,
- the City may void the Agreement, and
- Contractor and its sub-contractors may be subject to one or more of the following: suspension, debarment, denial of payment, civil fine, or criminal penalty.

2.2 By signing this Agreement, the Contractor certifies that it has not been barred from being awarded a contract with a unit of State or local Government as a result of bid rigging or bid rotating or similar offense, nor has it made any admission of guilt of such conduct that is a matter of public record. (720 ILCS 5/33 E-3, E-4).

2.3 In the event of the Contractor's noncompliance with any provision of Section 1-12-5 of the Evanston City Code, the Illinois Human Rights Act or any other applicable law, the Consultant may be declared non-responsible and therefore ineligible for future contracts or sub-contracts with the City, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

2.4 During the term of this Agreement, the Contractor agrees as follows:

a) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, national origin or ancestry, or age or physical or mental disabilities that do not impair ability to work, and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization. Consultant shall comply with all requirements of City of Evanston Code Section 1-12-5.

b) That, in all solicitations or advertisements for employees placed by it on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, national origin, ancestry, or disability.

2.5 The Contractor certifies pursuant to the Illinois Human Rights Act (775 ILCS 5/2*105 et. seq.),* that it has a written sexual harassment policy that includes, at a minimum, the following information:

a) The illegality of sexual harassment;
b) The definition of sexual harassment under State law;
c) A description of sexual harassment utilizing examples;
d) The Contractor's internal complaint process including penalties;
e) Legal recourse, investigation and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission, and directions on how to contact both; and
f) Protection against retaliation as provided to the Department of Human Rights.

2.6 In accordance with the Steel Products Procurement Act (30 ILCS 565), Contractor certifies steel products used or supplied in the performance of a contract for public works shall be manufactured or produced in the U.S. unless the City grants an exemption.

2.7 Contractor certifies that it is properly formed and existing legal entity and as applicable has obtained an assumed name certificate from the appropriate authority, or has registered to conduct business in Illinois and is in good standing with the Illinois Secretary of State.

2.8 If Contractor, or any officer, director, partner, or other managerial agent of Contractor, has been convicted of a felony under the Sarbanes-Oxley Act of 2002, or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953, Contractor certifies at least five years have passed since the date of the conviction.

2.9 Contractor certifies that if more favorable terms are granted by Contractor to any similar governmental entity in any state in a contemporaneous agreement let under the same or similar financial terms and circumstances for comparable supplies or services, the more favorable terms will be applicable under this Agreement.

2.10 Contractor certifies that it is not delinquent in the payment of any fees, fines, damages, or debts to the City of Evanston.

2.11 The Contractor certifies that all Design Professionals performing the Work under this Agreement will ensure that the Project shall be designed in conformance with the Americans with Disabilities Act of 1990, 42 U.S.C. Section 12101, *et seq.*, and all regulations promulgated thereunder. Design Professional means any individual, sole proprietorship, firm, partnership, joint venture, corporation, professional corporation, or other entity that offers services under the Illinois Architecture Practice Act of 1989 (225 ILCS 305/), the Professional Engineering Practice Act of 1989 (225 ILCS 325/), the Structural Engineering Licensing Act of 1989 (225 ILCS 340/), or the Illinois Professional Land Surveyor Act of 1989 (225 ILCS 330/).

2.12 The Contractor shall comply with all federal, state and local laws, statutes, ordinances, rules, regulations, orders or other legal requirements now in force or which may be in force during the term of this Agreement. The Contractor shall comply with the Illinois Human Rights Act, 775 ILCS 5/1-101 *et. seq,* Title VII of the Civil Rights Act of 1964, and the Illinois Prevailing Wage Act, 820 ILCS 130/0.01 *et. seq.*

3 Additional Services/Change Orders

3.1 If the representative of the City responsible for the Project verbally requests the Contractor to perform additional services, the Contractor shall confirm in writing that the services have been requested and that such services are additional services. Failure of the City to respond to the Contractor's confirmation of said services within thirty (30) calendar days of receipt of the notice shall be deemed a rejection of, and refusal to pay for the additional services. Contractor shall not perform any additional services until City has confirmed approval of said additional services in writing. If authorized in writing by the City, the Contractor shall furnish, or obtain from others, additional services of the following types, which shall be paid for by the City as set forth in Section 9 of this Agreement:

a) Additional Services due to significant changes in scope of the Project or its design, including, but not limited to, changes in size, complexity or character of construction, or time delays for completion of work when such delays are beyond the control of the Contractor;
b) Revisions of previously approved studies, reports, design documents, drawings or specifications;
c) Preparation of detailed renderings, exhibits or scale models for the Project;
d) Investigations involving detailed consideration of operations, maintenance and overhead expenses for the preparation of rate schedules, earnings and expense statements, feasibility studies, appraisals and valuations, detailed quantity surveys of material and labor, and material audits or inventories required for certification of force account construction performed by the City;
e) Services not otherwise provided for in this Agreement.

3.2 The City may, upon written notice, and without invalidating this Agreement, require changes resulting in the revision or abandonment of work already performed by the Contractor, or require other elements of the work not originally contemplated and for which full compensation is not provided in any portion of this Agreement. Any additional services, abandonment of services which were authorized by the City, or changes in services directed by the City which result in the revision of the scope of services provided for in Exhibits A, B, C, and D that cause the total Compensation due Contractor under this Agreement to exceed $25,000 or more, or increase or decrease the contract duration by more than 30 days are subject to approval by the Evanston City Council. These actions must be addressed either in a written Change Order or in a written amendment to this Agreement approved by both parties.

3.3 Contractor acknowledges and agrees that the Public Works Construction Change Order Act, 50 ILCS 525/1 et seq. shall apply to all Change Orders for the Project. It is expressly understood and agreed to by Contractor that it shall not be entitled to any damages or Compensation from the City on account of delay or suspension of all or any part of the Work. Contractor acknowledges that delays are inherent in construction projects and Contractor assessed that risk and fully included that risk assessment within its contract sum specified in its Response to the City Bid for this Project. The City shall not compensate Contractor for work that is more difficult than the contract sum specified in its Response would reflect. Delays to minor portions of the Work will not be eligible for extensions of time.

Delays to the Project caused by labor disputes or strikes involving trades not directly related to the Project, or involving trades not affecting the Project as a whole will not be eligible for an extension of time.

The City will not grant an extension of time for a delay by the Contractor's inability to obtain materials unless the Contractor first furnishes to the City documentary proof. The proof must be provided in a timely manner in accordance with the sequence of the Contractor's operations and accepted construction schedule.

In addition to any other changes requested by City (as described in Sections 3.1 and 3.2), the Company shall be entitled to request (and the City may grant) Change Orders with respect to:

(a) The City-caused delays;
(b) Change in Law;
(c) Force Majeure Events.

The foregoing events shall entitle the Contractor to a change in the Compensation for this Project, if the Contractor demonstrates that it will unavoidably incur reasonable costs as a result thereof and the Contractor provides reasonable and detailed documentary support with respect to any such price impact.

The parties agree to reasonably confer regarding any such disputes with respect to the issuance of a Change Order.

Any payment for compensable delay will only be based upon actual costs excluding, without limitation, what damages, if any, the Contractor may have reasonably avoided. The Contractor understands that this is the sole basis for recovering delay damages and explicitly waives any right to calculate daily damages for office overhead, profit, or other purported loss.

All Contractor Change Orders authorized under this Section 3 shall be made in writing. In remitting a Change Order, the Contractor must first show in writing that:

(a) The work was outside the scope of this Agreement,
(b) The extra work was not made necessary due to any fault of Contractor;
(c) The circumstances said to necessitate the change in performance were not reasonably foreseeable at the time the Agreement was signed;
(d) The change is germane to the original Agreement; and
(e) The Change Order is in the best interest of the City and authorized by law.

Any person who fails to first obtain the City's written authorization for a Change Order commits a Class 4 felony. The written determination and the written Change Order resulting from that determination shall be preserved in the contract's file which shall be open to the public for inspection.

The City reserves all rights and causes of action, at law or equity, to seek redress against entities or persons who violate the requirements of this Section 3. By initialing below, Contractor hereby acknowledges that it is bound by this Section 3.

Contractor's Initials: _____

3.4 The Contractor is required to include the City of Evanston as a reference whenever and wherever the Contractor provides references for similar projects for a period of one (1) year from the date of Final Acceptance by the City of the Work for this Project.

4 Bonds

4.1 Before the Scheduled Construction Commencement Date, the Contractor is required to furnish unconditional performance and payment bonds in the amount of 100% of the Compensation as security for the faithful performance and completion of all the Contractor's obligations under the Contract Documents and covering the payment of all materials used in the performance of this Agreement and for all labor and services performed under this Agreement. All Bonds shall be issued on a form acceptable to the City. The bonds must be for the entire term of the Agreement. Failure to provide these bonds shall constitute a breach of Contractor's obligations under this Agreement. Each surety providing the Bonds must have a Best's rating not less than A/X and be licensed in Illinois and shall be named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 as published in the Federal Register and available on the website of the U.S. Department of the Treasury, Financial Management Service, at www.fms.treas.gov/c570/c570.html. All Bonds signed by an agent must be accompanied by a certified copy of his or her authority to act. It shall be the duty of the Contractor to advise the surety or sureties of any Change Orders that result in an increase to the Compensation and to ensure that the amounts of the Bonds are updated to reflect and cover any such increases throughout the course of the Project. The cost of such Bonds shall be included within the Compensation.

4.2 If the surety behind any Bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in the State or it ceases to meet any of the requirements of this Contract, the Contractor shall, within [5] five days thereafter, substitute another Bond of equivalent value and surety, both of which must be acceptable to the City. In addition, no further progress payments under the Agreement will be made by the City until the Contractor complies with the provisions of this Agreement. The Contractor shall furnish to the City proof of any required bonds and proof of required insurance as one of the conditions precedent to payment under the Agreement. Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment or performance of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or authorize a copy to be furnished. All surety Bonds provided for in this Section shall incorporate by reference this Agreement, and any language that may be in any such surety Bond which conflicts with the provisions of this Agreement that define the scope of the surety('s) duty(ies) shall be of no force and effect.

5 Liquidated Damages in the Event Contractor Fails to Complete the Work

5.1 The parties agree that failure of Contractor to timely complete the Work required by this Agreement constitutes a default. The parties agree that this default will result in damage and injury to City. The parties further agree, however, that actual damages incurred by City as result of such default is difficult if not impossible to ascertain with any degree of certainty or accuracy. Accordingly, the parties have negotiated and have agreed that for each calendar day after written notice is delivered to Contractor and Contractor fails to cure such default, that Contractor will pay City, as and for liquidated damages, and not as a penalty, a sum in the amount as specified in Section 108.09 of the IDOT Standard Specifications per calendar day. Contractor shall reimburse the City for all costs, expenses and fees (including, without limitation, attorneys' fees), if any, paid by the City in connection with such written demand by City. Contractor stipulates and agrees that the sums payable by Contractor under this Section are reasonable under the circumstances existing as of the execution of this Agreement. This Section 5.1 is not intended to limit any direct damages that may be recoverable by City related to the Contractor's failure to complete the Work in accordance with this Agreement. There shall be no early completion bonus if the Work is completed before the contract's deadlines. The City, at its option, may withhold liquidated damages from progress payments payable to Contractor before project completion.

6 The City's Responsibilities

6.1 The City may evaluate the Contractor's and any sub-contractor's performance (interim and final). Timeliness in meeting the Project schedule and the overall relationship with the Contractor are factors that will be considered in the Contractor's performance rating. An unfavorable performance rating may be a factor when future assignments are being considered.

6.2 The City makes no representation or warranty of any nature whatsoever as to the accuracy of information or documentation provided by the City to the Contractor which were generated or provided by third parties.

7 Period of Service

7.1 The Contractor shall commence work on the Project after supplying the City with the Contractor's performance and payment bonds and all required insurance documents before starting its Work on this Project. The City shall determine when the Contractor has completed the Work required pursuant to this Agreement, and shall determine the date of Final Acceptance. Contractor recognizes time is of the essence regarding its performance on this Project. Contractor shall continue to perform its obligations while any dispute concerning the Agreement is being resolved, unless otherwise directed by the City.

7.2 Each phase of the project shall be completed in accordance with the activities outlined in the City's Bid 26-15, Exhibit A.

8 Payment for Services and Reimbursements

8.1 Within the first five (5) business days of each month, the Contractor shall invoice the City for Work completed during the previous month. The Contractor shall provide a detailed invoice

that relates invoiced items to the Contractor's response to Bid 26-15 in both quantity and unit cost. Any discrepancies in the monthly invoice shall be promptly brought to the attention of the Contractor by the City Project Manager and efforts shall be made to promptly resolve said discrepancies between the City and Contractor. In the event the City and Contractor cannot resolve invoice discrepancies, items in dispute will be removed from the invoice and the City shall approve the remainder of the invoice. Payment will be made as soon as possible following the City Council meeting in which the item appeared on the bills list, and in accordance with all applicable laws and rules of the City of Evanston and the State of Illinois.

8.2 In the event of termination by the City of this Agreement pursuant to paragraph 9.1 after completion of any phase of the basic services, fees due the Contractor for services rendered through such phase shall constitute final payment for such services, and no further fees shall be due to the Contractor. In the event of such termination by the City during any phase of the basic services, the Contractor shall be paid for services rendered on the basis of the proportion of work completed on the phase to date of termination.

8.3 The City shall have the right to withhold payment to the Contractor due to the quality of a portion or all of the work performed hereunder which is not in accordance with the requirements of this Agreement, or which is unsatisfactory, or is due to the Contractor's failure or refusal to perform any of its obligations hereunder. Compensation in excess of the total contract amount specified in this Agreement will not be allowed unless justified in the City's sole judgment and authorized in advance as provided for in Section 3 of this Agreement. Compensation for improper performance by the Contractor is disallowed.

8.4 Upon completion of the Work performed by the Contractor, prior to the submission of a request for final payment, the City and Contractor shall perform a final acceptance test and review of the Work performed and/or equipment installed pursuant to the Agreement. A punch list of items outstanding will be jointly developed by the City and Contractor. In addition, the Contractor shall submit drawings of record for the Project for the City to approve. The Contractor shall promptly resolve all punch list items to the satisfaction of the City and shall transmit to the City in writing confirmation that all punch list items have been resolved. The City will review, and the Contractor shall modify, as necessary, any drawings of record to the satisfaction of the City. Punch list items and drawings of record must be approved by the City prior to the Contractor submitting its final invoice for payment.

8.5 The Contractor shall submit an Affidavit and a final waiver of its lien, and all final waivers of liens of any sub-contractors, suppliers, and sub-sub-contractors, if applicable, with its final invoice, stating that all obligations incurred in performance of the professional services have been paid in full. The Affidavit will also include a statement stating that the professional services were performed in compliance with the terms of the Agreement. The Affidavit and all final lien waivers shall be on a form acceptable to the City.

8.6 All Project invoices shall be sent to:

City of Evanston
Public Works Agency

909 Davis Street
Evanston, Illinois 60201

9 Notice and Cure/Termination

9.1 In furtherance of Contractor's Work on this Project, the City and the Contractor agree that the following Notice and Cure provision in this Section 9.1 shall apply during the duration of Contractor's work on this Project, in addition to the reserved rights of the City enumerated in this Agreement as follows:

5.1 Liquidated Damages;
8.3 City's right to withhold payment;
16.2 Contractor's duty to revise and correct errors; and
16.3 Contractor's duty to respond to City's notice of errors and omissions.

The City may notify Contractor of its intent to terminate this Agreement within (7) seven calendar days of issuance by the City of written notice to Contractor's Project Manager regarding defects in the Project or in Contractor's Work. The City shall specify any such nonconforming Work or defects in the Project in its notice to Contractor under this Section 9.1. Contractor will have the opportunity to cure the non-conforming Work within (7) seven calendar days after receipt of the written notice issued by the City. All such curative work done shall be performed and completed to the City's satisfaction. Nothing in this Section 9.1 shall otherwise affect the City's right to exercise its rights in Section 9.2.

9.2 The City shall have the right to terminate this Agreement upon fifteen (15) days written notice for any reason. Mailing of such notice shall be equivalent to personal notice and shall be deemed to have been given at the time of receipt.

Payments made by the City pursuant to this Agreement are subject to sufficient appropriations made by the City of Evanston City Council. In the event of termination resulting from non-appropriation or insufficient appropriation by the City Council, the City's obligations hereunder shall cease and there shall be no penalty or further payment required.

9.3 Within thirty (30) days of termination of this Agreement, the Contractor shall turn over to the City any documents, drafts, and materials, including but not limited to, outstanding work product, data, studies, test results, source documents, AutoCAD Version 2007, ArcView, PDF, Word, Excel spreadsheets, technical specifications and calculations, and any other such items specifically identified by the City related to the Work herein. Upon receipt of said items, the Contractor shall be paid for labor and expenses incurred to the date of termination as provided in Section 8.2. This Agreement is subject to termination by either party if either party is restrained by a state or federal court of competent jurisdiction from performing the provisions of this Agreement. Upon such termination, the liabilities of the parties to this Agreement shall cease, but they shall not be relieved of the duty to perform their obligations through the date of termination. No lien shall be filed by the Contractor in the event of a termination of this Agreement by the City.

9.4 If, because of death or any other occurrence, including, but not limited to, Contractor

becoming insolvent, it becomes impossible for any principal or principals of the Contractor to render the services set forth in this Agreement, neither the Contractor, nor its surviving principals shall be relieved of their obligations to complete the professional services. However, in the event of such an occurrence, the City at its own option may terminate this Agreement if it is not furnished evidence that competent professional services can still be furnished as scheduled.

9.5 In the event of an emergency or threat to the life, safety, or welfare of the citizens of the City, the City shall have the right to terminate this Agreement without prior written notice.

10 Insurance

10.1 The Contractor shall, at its own expense, secure and maintain in effect throughout the duration of this contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, employees or sub-contractors. Contractor acknowledges and agrees that if it fails to comply with all requirements of this Section 10, the City may void the Agreement.

The Contractor must give to the City Certificates of Insurance identifying the City to be an Additional Insured for all Work done pursuant to this Agreement before City staff recommends award of the contract to City Council. Any limitations or modifications on the Certificate(s) of Insurance issued to the City in compliance with this Section that conflict with the provisions of this Section 10 shall have no force and effect.

After award of the Contract to Contractor (contracts over $500,000 in value or if the project is deemed high risk) the Contractor **shall** give the City a certified copy (ies) of the insurance policy (ies) evidencing the amounts set forth in Section 10.2, and copies of the Additional Insured endorsement to such policy (ies) which name the City as an Additional Insured for all Work done pursuant to this Agreement before Contractor does any Work pursuant to this Agreement. Contractor's certificate of insurance shall contain a provision that the coverage afforded under the policy(s) will not be canceled or reduced without thirty (30) days prior written notice (hand delivered or registered mail) to the City. Contractor shall promptly forward new certificate(s) of insurance evidencing the coverage(s) required herein upon annual renewal of the subject policies.

The policies and the Additional Insured endorsement must be delivered to the City within two (2) weeks of the request. All insurance policies shall be written with insurance companies licensed or authorized to do business in the State of Illinois and having a rating of not less than A-VII according to the A.M. Best Company. Should any of the insurance policies be canceled before the expiration date, the issuing company will mail thirty (30) days written notice to the City. The Contractor shall require and verify that all sub-contractors maintain insurance meeting all of the requirements stated herein.

Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the City guaranteeing payment of losses and

related investigations, claim administration and defense expenses.

10.2 Contractor shall carry and maintain at its own cost with such companies as are reasonably acceptable to City all necessary liability insurance (which shall include as a minimum the requirements set forth below) during the term of this Agreement, for damages caused or contributed to by Contractor, and insuring Contractor against claims which may arise out of or result from Contractor's performance or failure to perform the Services hereunder:

a) Worker's compensation in statutory limits and employer's liability insurance in the amount of at least five hundred thousand dollars ($500,000);
b) Comprehensive general liability coverage which designates the City as an additional insured for not less than three million dollars ($3,000,000) combined single limit for bodily injury, death and property damage, per occurrence;
c) Comprehensive automobile liability insurance covering owned, non-owned, and leased vehicles for not less than one million dollars ($1,000,000) combined single limit for bodily injury, death, or property damage, per occurrence; and

Contractor understands that the acceptance of Certificates of Insurance, policies, and any other documents by the City in no way releases the Contractor and its sub-contractors from the requirements set forth herein.

Contractor expressly agrees to waive its rights, benefits and entitlements under the "Other Insurance" clause of its commercial general liability insurance policy as respects the City. Contractor expressly agrees that its insurance coverage is required to be primary by this Agreement, that its insurance coverage shall be on a primary and non-contributory basis, and that it and its insurance carrier are estopped from denying such coverage is primary. In the event Contractor fails to purchase or procure insurance as required above, the parties expressly agree that Contractor shall be in default under this Agreement, and that the City may recover all losses, attorney's fees and costs expended in pursuing a remedy, or reimbursement, at law or in equity, against Contractor.

11 Indemnification

11.1 The Contractor shall defend, indemnify and hold harmless the City and its officers, elected and appointed officials, agents, and employees from any and all liability, losses, or damages as a result of claims, demands, suits, actions, or proceedings of any kind or nature, including but not limited to costs, and fees, including attorney's fees, judgments or settlements, resulting from or arising out of any negligent or willful act or omission on the part of the Contractor or Contractor's sub-contractors, employees, agents or sub-contractors during the performance of this Agreement. Such indemnification shall not be limited by reason of the enumeration of any insurance coverage herein provided. This provision shall survive completion, expiration, or termination of this Agreement.

11.2 Nothing contained herein shall be construed as prohibiting the City, or its officers, agents, or employees, from defending through the selection and use of their own agents, attorneys, and experts, any claims, actions or suits brought against them. The Contractor shall be liable for the

costs, fees, and expenses incurred in the defense of any such claims, actions, or suits. Nothing herein shall be construed as a limitation or waiver of defenses available to the City and employees and agents, including but not limited to the Illinois Local Governmental and Governmental Employees Tort Immunity Act, 745 ILCS 10/1-101 *et seq.*

At the City Corporation Counsel's option, Contractor must defend all suits brought upon all such Losses and must pay all costs and expenses incidental to them, but the City has the right, at its option, to participate, at its own cost, in the defense of any suit, without relieving Contractor of any of its obligations under this Agreement. Any settlement of any claim or suit related to this Project by Contractor must be made only with the prior written consent of the City Corporation Counsel, if the settlement requires any action on the part of the City.

To the extent permissible by law, Contractor waives any limits to the amount of its obligations to indemnify, defend, or contribute to any sums due under any Losses, including any claim by any employee of Contractor that may be subject to the Illinois Workers Compensation Act, 820 ILCS 305/1 *et seq.* or any other related law or judicial decision, including but not limited to, *Kotecki v. Cyclops Welding Corporation,* 146 Ill. 2d 155 (1991). The City, however, does not waive any limitations it may have on its liability under the Illinois Workers Compensation Act, the Illinois Pension Code or any other statute.

11.3 The Contractor shall be responsible for any losses and costs to repair or remedy work performed under this Agreement resulting from or arising out of any act or omission, neglect, or misconduct in the performance of its Work or its sub-contractors' work. Acceptance of the work by the City will not relieve the Contractor of the responsibility for subsequent correction of any such error, omissions and/or negligent acts or of its liability for loss or damage resulting therefrom.

11.4 All provisions of this Section 11 shall survive completion, expiration, or termination of this Agreement.

12 Drawings and Documents

12.1 Any drawings, survey data, reports, studies, specifications, estimates, maps, plans, computations, and other documents required to be prepared by the Contractor for the Project shall be considered Works for Hire and the sole property of the City.

12.2 The Contractor and its sub-contractor shall maintain for a minimum of three (3) years after the completion of this Agreement, or for three (3) years after the termination of this Agreement, whichever comes later, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the Agreement. The Agreement and all books, records and supporting documents related to the Agreement shall be available for review and audit by the City, State of Illinois, and the federal funding entity, if applicable, and the Contractor agrees to cooperate fully with any audit conducted by the City and to provide full access to all materials. Failure to maintain the books, records and supporting documents required by this Subsection shall establish a presumption in favor of the City for recovery of any funds paid by the City under the Agreement for which adequate books, records, and supporting documentation are not available to support their purported disbursement.

13 Successors and Assigns

13.1 The City and the Contractor each bind themselves and their partners, successors, executors, administrators, and assigns to the other party of the Agreement and to the partners, successors, executors, administrators, and assigns of such other party in respect to all covenants of this Agreement. Neither the City nor the Contractor shall assign, sublet, or transfer its interest in this Agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body, which may be a party hereto, nor shall it be construed as giving any right or benefits hereunder to anyone other than the City and the Contractor.

14 Force Majeure

14.1 Whenever a period of time is provided for in this Agreement for the Contractor or the City to do or perform any act or obligation, neither party shall be liable for any delays or inability to perform if such delay is due to a cause beyond its control and without its fault or negligence including, without limitation:

a) Acts of nature;
b) Acts or failure to act on the part of any governmental authority other than the City or Contractor, including, but not limited to, enactment of laws, rules, regulations, codes or ordinances subsequent to the date of this Agreement;
c) Acts or war;
d) Acts of civil or military authority;
e) Embargoes;
f) Work stoppages, strikes, lockouts, or labor disputes;
g) Public disorders, civil violence, or disobedience;
h) Riots, blockades, sabotage, insurrection, or rebellion;
i) Epidemics or pandemics;
j) Terrorist acts;
k) Fires or explosions;
l) Nuclear accidents;
m) Earthquakes, floods, hurricanes, tornadoes, or other similar calamities;
n) Major environmental disturbances; or
o) Vandalism.

If a delay is caused by any of the *force majeure* circumstances set forth above, the time period shall be extended for only the actual amount of time said party is so delayed. Further, either party claiming a delay due to an event of *force majeure* shall give the other party written notice of such event within three (3) business days of its occurrence or it shall be deemed to be waived.

15 Amendments and Modifications

15.1 Except as otherwise provided herein, the nature and scope of Work specified in this Agreement may only be modified by a written Change Order, or a written amendment to this Agreement, approved by both parties. This Agreement may be modified or amended from time to

time provided, however, that no such amendment or modifications shall be effective unless reduced to writing and duly authorized and signed by the authorized representatives of the parties.

16 Standard of Care & Warranty

16.1 The Contractor shall perform all of the provisions of this Agreement to the satisfaction of the City. The City shall base its determination of the Contractor's fulfillment of the scope of the work in accordance with generally accepted professional standards applicable to the Work for this Project. The Contractor shall perform all of the provisions of this Agreement with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar conditions.

16.2 The Contractor shall be responsible for the accuracy of its professional services under this Agreement and shall promptly make revisions or corrections resulting from its errors, omissions, or negligent acts without additional compensation. The City's acceptance of any of the Contractor's professional services shall not relieve the Contractor of its responsibility to subsequently correct any such errors or omissions. If a Contractor has provided the City with specifications for this Project which are determined to be incorrect or which require revision during the solicitation process (including but not limited to Requests for Proposals, Requests for Qualifications, or bids), the Contractor shall make such corrections or revisions to the specifications at no cost to the City. Further, upon receipt of an invoice from the City, the Contractor shall promptly reimburse the City for the reasonable costs associated with the preparation and dissemination of said corrections or revisions to appropriate parties, including but not limited to preparation of the corrected or revised documents, and printing and distribution costs.

16.3 During the pendency of its Work on this Project, the Contractor shall respond to the City's notice of any errors or omissions within twenty-four (24) hours. The Contractor shall be required to promptly visit the Project site(s) if directed to by the City.

16.4 The Contractor shall comply with all federal, state, and local statutes, regulations, rules, ordinances, judicial decisions, and administrative rulings applicable to its performance under this Agreement.

16.5 Contractor guarantees and warrants to the City that:

a) All materials and equipment furnished under this Agreement shall be of good quality and new, unless otherwise required or permitted by the Contract Documents;
b) The Work of this Agreement shall be free from defects which are not inherent in the quality required; and
c) The Work shall comply with the requirements set forth in the Contract Documents.

This warranty and guarantee shall be for a period of one (1) year from the date of completion and Final Acceptance of the Work by the City, or as otherwise provided in the Contract Documents.

If, within the one year warranty period, after the Contractor has received a final payment

under this Agreement, any of the Work is found to be not be in accordance with the requirements of this Agreement, or where defects in materials or workmanship may appear, or be in need of repair, the Contractor shall correct non-conforming and/or defective work or materials promptly after receipt of written notice from the City. Contractor shall immediately at its own expense repair, replace, restore, or rebuild any such Work. This remedy is in addition to any other legal or equitable remedies the City may have under this Agreement or the law.

This guarantee and warranty shall not relieve Contractor of liability for latent defects, and shall be in addition to the City's rights under the law or other guarantees or warranties, express or implied.

16.6 The provisions of this Section 16 shall survive the completion, expiration or termination of this Agreement.

17 Savings Clause

17.1 If any provision of this Agreement, or the application of such provision, shall be rendered or declared invalid by a court of competent jurisdiction, or by reason of its requiring any steps, actions, or results, the remaining parts or portions of this Agreement shall remain in full force and effect.

18 Non-Waiver of Rights

18.1 No failure or delay by the City to exercise any power given to it hereunder or to insist upon strict compliance by Contractor with its obligations hereunder, nor any payment made by the City under this Agreement, shall constitute a waiver of the City's right to demand strict compliance with the terms hereof, unless such waiver is in writing and signed by the City.

19 Entire Agreement

19.1 This Agreement sets forth all the covenants, conditions and promises between the parties with regard to the subject matter set forth herein. There are no covenants, promises, agreements, conditions or understandings between the parties, either oral or written, other than those contained in this Agreement. This Agreement has been negotiated and entered into by each party with the opportunity to consult with its counsel regarding the terms therein. No portion of the Agreement shall be construed against a party due to the fact that one party drafted that particular portion as the rule of *contra proferentem* shall not apply.

20 Governing Law

20.1 This Agreement shall be construed in accordance with and subject to the laws and rules of the City of Evanston and the State of Illinois both as to interpretation and performance. Venue for any action arising out of or due to this Agreement shall be in Cook County, Illinois. The City shall not enter into binding arbitration to resolve any dispute related to this Agreement. The City does not waive tort immunity by entering into this Agreement.

21 Ownership of Contract Documents

21.1 Contractor is specifically prohibited from using in any form or medium, the name or logo of the City for public advertisement, unless expressly granted written permission by the City. Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with this Project is not to be construed as publication in derogation of the City's reserved rights.

22 Notice

22.1 Any notice required to be given by this Agreement shall be deemed sufficient if made in writing and sent by certified mail, return receipt requested, or by personal service, to the persons and addresses indicated below or to such other addresses as either party hereto shall notify the other party of in writing pursuant to the provisions of this Subsection:

City of Evanston Project Manager, Bid 26-15
909 Davis Street
Evanston, Illinois 60201

if to the Contractor:

_____
_____
_____

22.2 Mailing of such notice as and when provided above shall be equivalent to personal notice and shall be deemed to have been given at the time of mailing.

23 Severability

23.1 Except as otherwise provided herein, the invalidity or unenforceability of any particular provision, or part thereof, of this Agreement shall not affect the other provisions, and this Agreement shall continue in all respects as if such invalid or unenforceable provision had not been contained herein.

24 Execution of Agreement

24.1 This Agreement shall be signed last by the City Manager.

25 Counterparts

25.1 For convenience, this Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original.

26 Authorizations

26.1 The Contractor's authorized representatives who have executed this Agreement

warrant that they have been lawfully authorized by the Contractor's board of directors or its bylaws to execute this Agreement on its behalf. The City Manager affirms that he/she has been lawfully authorized to execute this Agreement. The Contractor and the City shall deliver upon request to each other copies of all articles of incorporation, bylaws, resolutions, ordinances, or other documents which evidence their legal authority to execute this Agreement on behalf of their respective parties.

27 Time of Essence

27.1 Time is of the essence with respect to each provision hereof in which time is a factor.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their duly authorized representatives. The effective date of this Agreement will be the date this Agreement is signed by the City Manager.

CONTRACTOR

By: _____

Name: _____

Its: _____

Date: _____

CITY OF EVANSTON

By: _____
Luke Stowe
Its: City Manager Date: _____

Approved as to form:

By: _____
Alexandra B. Ruggie
Its: Corporation Counsel

Revision: April 2021

EXHIBIT P

BID BOND SUBMITTAL LABEL

CUT AND ATTACH LABEL ON OUTSIDE OF SEALED BID BOND SUBMITTAL

✂----------

BID SUBMITTAL NUMBER: _____

BID SUBMITTAL NAME: _____

_____

BID SUBMITTAL DUE DATE/TIME: _____

COMPANY NAME: _____

COMPANY ADDRESS: _____

COMPANY TELEPHONE #: _____

✂----------

If required by the bid documents, a scanned copy of the bid bond must be included with the bid electronic submission. The city is currently not able to accept a certified check, bank cashier's check or electronic bid bond at this time.

The original bid bond (in the amount of 5% of the original bid amount) must be mailed within ten (10) days after the bid due date, to the City of Evanston Purchasing Department, 909 Davis Street, Evanston, Illinois 60201 Attention Purchasing Manager using the USPS (certified or priority), UPS or FedEx mail options in order to have a tracking number; which sum shall be forfeited in case the successful bidder fails to enter into a binding contract and provide a properly executed contract and surety bond within 15 days after the date the contract is awarded by the City.

SECTION 01 00 00

PROJECT REQUIREMENTS

PART 1 – GENERAL

1.1 GENERAL NOTE

A. The following requirements are a component part of all contract divisions and form a part of each specification section in so far as they may be in any way applicable thereto.

1.2 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this section.

1.3 SCHEDULE OF DRAWINGS

A. The following drawings form a component part of all contract documents for this project.

Title of the Drawings:

Sheet No.	Drawing Title
--	COVER SHEET
G-01	JAMES PARK LOCATION PLAN AND NOTES
G-02	GENERAL NOTES – MWRD
R-01	REGIONAL DEMOLITION PLAN
R-02	PATHWAY DEMOLITION PLAN
R-03	PATHWAY DEMOLITION PLAN
R-04	PATHWAY DEMOLITION PLAN
R-05	FIELD HOUSE DEMOLITION PLAN
DR-01	FIELD HOUSE UTILITY PLAN
DR-02	DRAINAGE AREAS
C-01	REGIONAL SITE PLAN
C-02	PATHWAY SITE PLAN
C-03	PATHWAY SITE PLAN
C-04	PATHWAY SITE PLAN
C-05	FIELD HOUSE SITE PLAN
C-05.1	FIELD HOUSE DIMENSION PLAN
C-05.2	FIELD HOUSE GRADING PLAN
C-05.3	PLAYGROUND LAYOUT PLAN
C-06	SPLASH PAD ALTERNATE 1
C-06.1	SPLASH PAD ALTERNATE 2
IR-01	IRRIGATION PLAN
IR-02	IRRIGATION PLAN CONT.
PP-01	WEST PATH PROFILE
PP-02	EAST PATH PROFILE
PP-03	EAST PATH PROFILE CONT.
P-01	SOILS PLAN
P-02	PLANTING PLAN - TREES
P-02.1	PLANTING PLAN - SHRUB AND HERBACEOUS
P-02.2	PLANTING PLAN - HILLSIDE ALTERNATE 3
D-01	DETAILS
D-02	DETAILS
D-03	DETAILS
D-04	DETAILS
D-05	DETAILS

D-06	DETAILS
S-0	STRUCTURAL – GENERAL NOTES
S-1	STRUCURAL – RETAINING WALL PLAN AND ELEVATION
S-2	STRUCTURAL – STRUCTURAL BASE ALTERNATE 4
X-01	WEST PATH CROSS SECTIONS
X-02	EAST PATH CROSS SECTIONS

1.4 PROJECT SUMMARY

A. Work on this project includes improvements to James Park. Base bid improvements include an expanded children's playground, multi-use trail, pavements, grading and storm drainage, site amenities and landscaping. Alternate bid improvements include a splashpad.

1.5 SPECIAL PROCEDURES AND REQUIREMENTS

A. Fire Protection

1. Regulations: The Contractor shall comply with all federal, state and local fire regulations.
2. Fires: The Contractor shall prohibit the lighting of fires about the premises and use due diligence to see that such prohibition is enforced. Debris and waste materials shall not be burned at the construction site but shall be promptly removed to prevent the accumulation of combustibles on the site.
3. Smoking: Smoking shall be restricted to designated exterior locations. The Contractor shall furnish and post "NO SMOKING" signs at appropriate locations throughout the site where operations are conducted.
4. Flammables: Gasoline and other fuels shall be kept and handled from National Board of Fire underwriter's approved safety cans and shall be stored away from hazardous work areas.

B. Limit of Contractor's Operations

1. Work Areas: Work areas shall be confined to the limits of the construction site. The allotment of work areas within the site to Subcontractors shall be made by the Contractor. The general scheme of operations, work area assignments and use of the job site shall be subject to the Owner's approval.
2. Site Access: Uncontrolled or unrestricted site access will not be permitted for materials, debris or equipment. All access routes and methods shall be controlled by the Contractor so as to minimize the disruption of the Owner's operations and shall be subject to approval by the Owner. Walks, roads and other existing site features used in moving materials shall be properly protected to prevent damage thereto.

C. Hoists, Scaffolds and Ladders

1. Hoists: The Contractor shall furnish, erect, operate and maintain suitable hoisting equipment as may be necessary for constructing the work. Material hoists shall be constructed and maintained in accordance with all applicable federal, state and local laws, regulations and ordinances. Location of hoists shall be subject to approval by the Owner's representative.
2. Scaffolds and Ladders: The Contractor shall furnish, erect, maintain and move all scaffold and ladders required for his work. Scaffolds shall be constructed and maintained in accordance with all applicable federal, state and local laws,

regulations and ordinances. Scaffolds and ladders shall be promptly removed after their purpose has been served.

D. Documentation of Existing Conditions

1. Before starting any work, the Contractor shall examine the site to be worked on and the grounds in the staging area and areas adjacent to the site that will be worked on for any existing damage. The Contractor should notify the City's representative of any damage found immediately. The City will photograph and note any existing damage that has been brought to his attention by the Contractor. After the Work has been completed the City will inspect the area used by the Contractor. If any damage is found that was not reported previously, this damage would be considered to have been done by the Contractor. The cost to repair said damage shall be solely borne by the Contractor.

1.6 TEMPORARY CONSTRUCTION FACILITIES

A. The following temporary utilities and facilities on the construction site shall be provided by the party indicated below:

ITEM	PROVIDER
Telephone	General Contractor
Electricity	General Contractor
Water	General Contractor
Toilets	General Contractor
Parking spaces for Contractor vehicles	Within job site only
Parking spaces for workmen	Within job site and adjacent parking lot
Storage areas & facilities	Limited unsecured space within job site
Temporary heat	General Contractor
Job-site trailers & offices	General Contractor

PART 2 – PRODUCTS
(NOT APPLICABLE)

PART 3 – EXECUTION
(NOT APPLICABLE)

END OF SECTION 01 00 00

SECTION 01 01 00

SUMMARY OF WORK

PART 1 – GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. The Project Manual and accompanying drawings are intended to cover the work necessary to construct the various headings of work as described in detail herein.

B. The work to be performed under this contract shall consist of the furnishing of all materials, equipment, supplies, labor and transportation, and performing all work as required to strictly conform to the provisions of the specifications, schedules and drawings, all of which are made a part herein, together with such detail drawings as may be furnished by the Owner from time to time during the prosecution of the work in amplification of said drawings and specifications.

1.2 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this section.

1.3 CONTRACT ORGANIZATION

A. This Construction Project is organized under a single contract between the Owner and the Contractor. The Contractor is responsible for all plans and specification sections as presented in this project manual.

1.4 WORK SEQUENCE

A. All work and sequence of operations shall be as scheduled in conjunction with all subcontractors, and the Owner in such a manner as not to hinder or delay any other contractors in the progress of their work, and to an end that will expedite the work to completion at the earliest possible date.

B. Both Contractor and Subcontractor shall cooperate to execute their work as scheduled to minimize the delays to each other and to cause the least inconvenience to the Owner and the public.

1.5 CONTRACTORS' USE OF PREMISES

A. The Contract shall limit his use of the premises for work and for storage to allow for:
   1. Work by other contractors
   2. Owner occupancy
   3. Public use

B. Coordinate the use of the premises under direction of the Owner. Stage work so as to avoid disruption to Owner's operation.

C. Assume full responsibility for the protection and safekeeping of products under this Contract, which are stored at the project site or on the Contractor's property.

D. Move any stored products, under Contractor's control, which interfere with operation of the Owner or separate contractor.

E. Obtain and pay for the use of additional storage or work areas needed for operations.

1.6 OWNER OCCUPANCY

A. The City and the public will occupy all areas of the park during execution of the work except areas enclosed by the contractor's construction fence. Contractor shall not impede public access to the park during construction and shall provide protective measures such as barricades, signage and temporary access points as needed throughout construction to ensure public safety and facilitate public park use.

B. Contractor shall not utilize or prevent access to any existing utility easement areas during the entire construction period.

1.7 LINES, LEVELS AND LAYOUT OF WORK

A. The Contractor shall establish and guarantee all lines, levels, etc. called for on the drawings, including the lines, levels, etc. of all Subcontractors.

1.8 DESCRIPTION OF SITE

A. James Park is a 41-acre public park located just south of Oakton Street and west of Dodge Avenue in Evanston, Illinois. The park consists of a children's playground, pathways, basketball court, pickleball courts, soccer fields, baseball/softball fields, multiuse trail, field house, sled hill, parking lots, entry drive, community gardens, Levy Senior Center, site amenities and landscaping.

1.9 WORK HOURS

A. Work hours are 7:00 am to 7:00 pm, Monday through Friday and 8:00 am to 5:00 pm on Saturday. No work is allowed on Sundays. Access to the site will not be allowed outside of normal work hours.

1.10 CONTRACTOR'S DUTIES

A. Except as specifically noted, provide and pay for:

1. Labor, materials and equipment.
2. Tools, construction equipment and machinery
3. Water, heat, and utilities required for construction or the Contractor's operations.
4. Other facilities and services necessary for proper execution and completion of work, including traffic control and temporary work.

B. Promptly submit written notice to the Architect of any observed variance of the Contract Documents from legal requirements. It is not the Contractor's responsibility to make certain that the Drawings and Specifications comply with codes and regulations.

1. Appropriate modifications to the Contract Documents will adjust the necessary changes.
2. The Contractor shall assume responsibility for work known to be contrary to such requirements, and performed without such notice.

C. Enforce strict discipline and good order among employees. Do not employ on work:

1. Unfit persons
2. Persons not skilled in assigned task

D. Existing Conditions

1. The Contractor shall be responsible for obtaining and verifying all dimensions. Any dimension give in the Drawings referring to existing construction were taken from the original construction documents and are provided for information only.
2. Where conditions are uncovered that are not anticipated by the Drawings and Specifications, the Contractor shall notify the Engineer and Owner's Representative immediately, before any modification or other work is initiated.

PART 2 – PRODUCTS
(NOT APPLICABLE)

PART 3 – EXECUTION
(NOT APPLICABLE)

END OF SECTION 01 01 00

SECTION 01 02 70

APPLICATIONS FOR PAYMENT

PART 1 – GENERAL

1.1 SUMMARY

A. Contractor shall comply with procedures described in this Section when applying for progress payments and final payment under the Contract.

1.2 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

B. Payments upon Substantial Completion and Completion of the Work are described in Section 01 70 00 – PROJECT CLOSEOUT.

C. The Owner's approval of applications for progress payment and final payment may be contingent upon the Owner's approval of status of Project Record Documents as described in Section 01 72 00 – PROJECT RECORD DOCUMENTS of these Specifications.

1.3 QUALITY ASSURANCE

A. Prior to start of construction, secure the Owner's approval of the schedule of values required to be submitted as specified below.

B. During progress of the Work, modify the schedule of values as approved by the Owner to reflect changes in the Contract Sum due to Change Orders or other modifications of the Contract.

C. All requests for payment shall be based on the approved Schedule of Values for the project.

D. All modifications to the contract shall be based on the approved Schedule of Values for the project.

1.4 SCHEDULE OF VALUES

A. Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:

a. Contractor's construction schedule.
b. Application for Payment forms.
c. List of subcontractors.
d. Schedule of alternates.
e. List of products.
f. List of principal suppliers and fabricators.

g. Schedule of submittals.

2. Submit the Schedule of Values to the Owner at the earliest feasible date, but in no case later than seven (7) days before the date scheduled for submittal of the initial Application for Payment.

B. If applicable, the format and content of the Schedule of Values shall match the project's unit pricing. The Contractor is strongly encouraged to utilize spreadsheet software for preparation of all pay applications.

1. Include the following Project identification on the Schedule of Values:

a. Project name and location.
b. Purchase order number.
c. Contractor's name and address.
d. Date of submittal.

2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:

a. Itemized description.
b. Related Specification Section
c. Name of subcontractor.
d. Name of manufacturer or fabricator.
e. Name of supplier.
f. Change Orders (numbers) that have affected value.
g. Dollar value.
h. Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent.

3. For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
4. Show line items for indirect costs and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including its total cost and proportionate share of general overhead and profit margin.
5. Update and resubmit the Schedule of Values when Change Orders result in a change in the Contract Sum.

1.5 PROCEDURES

A. Informal submittal

1. Make informal submittal of request for payment by filling in, with erasable pencil, pertinent portions of AIA Document G702, "Application and Certification for Payment," plus continuation sheet or sheets of AIA Document G703.
2. Make this preliminary submittal to the Architect and Owner in accordance with the Owner's payment schedule.
3. Revise the informal submittal of the request for payment as directed by the Owner, initialing all copies.

B. Formal submittal

1. Make formal submittal of request for payment by filling in the agreed data, by typewriter or neat lettering in ink, on AIA Document G702, “Application and Certification for Payment,” plus continuation sheet(s) of AIA Document G703.
2. Sign and notarize the Application and Certificate for Payment.
3. Reference Purchase Order number on Application for Payment
4. Secure and file with submittal progress waivers for all materials incorporated into and labor and equipment employed on the work before payment requests are processed.

    a. Initial payment will be processed without progress waivers. Subsequent requests will require progress waivers for previous payment.

5. Submit the original of the Application and Certificate for Payment and the continuation sheet or sheets to the Architect and Owner for approval.
6. The Architect and Owner will compare the formal submittal with the approved informal submittal and, when approved, will sign the Application and Certificate for Payment, will make and distribute required copies. The Owner will disburse directly to the Contractor the amount certified less retainage in accordance with 30 ILCS 550/1.
7. Approved formal submittals must be received by the Owner in accordance with the Owner’s payment schedule.
8. Certified payroll records must be submitted along with the formal submittal as described in the General Conditions.

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 02 70

SECTION 01 04 50

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section establishes general requirements pertaining to cutting (including excavation), fitting and patching of the Work required.

1.2 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

B. Execute cutting (including excavation), filling or patching of work, required to:

1. Make several parts fit properly.
2. Uncover work to provide for installation of ill-timed work.
3. Remove and replace defective work.
4. Remove and replace work not conforming to the Contract requirements.
5. Remove samples of installed work as specified for testing.
6. Install specified work in existing construction.

C. In addition to Contract requirements, upon written instruction of the Owner:

1. Uncover work to provide for observation of covered work.
2. Remove samples of installed materials for testing.
3. Remove work to provide for alteration of existing work.

D. Do not cut or alter work of another contractor without written consent of the Owner.

1.3 SUBMITTALS

A. Prior to cutting which affects structural safety of Project, or work of another contractor, submit written notice to the Owner requesting consent to proceed with cutting.

B. Include the following:

1. Project identification.
2. Description of affected work.
3. Necessity for cutting.
4. Effect on other work and on structural integrity of Project.
5. Description of proposed work. Designate:

    a. Scope of cutting and patching.
    b. Contractor and trades to execute the work.
    c. Products proposed to be used.
    d. Extent of refinishing.

6. Alternatives to cutting and patching.
7. Designation of party responsible for cost of cutting and patching.

C. Prior to cutting and patching done by instruction of Owner, submit cost estimate.

D. Should conditions of work or schedule indicate change of materials or methods, submit recommendations to the Owner, including:

1. Conditions indicating change.
2. Recommendation for alternative materials or methods.
3. Submittals as required for substitutions.

E. Submit written notice to the Owner, designating time the work will be uncovered to provide for observation.

1.4 PAYMENT FOR COSTS

A. Costs caused by ill-timed or defective work, or work not conforming to Contract Documents: Party responsible for ill-timed, rejected or non-conforming work.

B. Work done on instruction of the Owner (by Change Order), other than defective or non-conforming work shall be paid for by the Owner.

1.5 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

2.1 MATERIALS

A. For replacement of work removed, comply with Specifications for type of work to be performed.

PART 3 - EXECUTION

3.1 INSPECTION

A. Inspect existing conditions of work, including elements subject to movement or damage during:
1. Cutting and patching.
2. Excavating and backfilling

B. After uncovering work, inspect conditions affecting installation of new products.

3.2 PREPARATION

A. Prior to cutting:
1. Provide shoring, bracing and support as required to maintain structural integrity of project.
2. Provide protection for other portions of the project.
3. Provide protection from the elements.

3.3 PERFORMANCE

A. Execute fitting and adjustment or provide finished installation to comply with specified tolerances and finishes.

B. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs and new work.

C. Execute excavating and backfilling by methods which will prevent damage to other work, and will prevent settlement.

D. Restore work which has been cut or removed; install new products to provide complete work in accordance with contract requirements.

E. Refinish entire surfaces as necessary to provide an even finish.
   1. Continuous surfaces: to nearest intersection (s).
   2. Assembly: entire refinishing.

END OF SECTION

SECTION 01 05 10

GRADES, LINES AND LEVELS

PART 1 – GENERAL

1.1 SUMMARY

A. Provide such field engineering services as are required for proper completion of the Work including, but not necessarily limited to:

1. Establishing and maintaining grades, lines and levels;
2. Structural design of shores, forms and similar items provided by the Contractor as part of the means and methods of establishing and maintaining grades lines and levels.

1.2 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 OWNER WILL FURNISH

A. A topographic map of the site as part of the Construction Documents, providing the following locations, dimensions and data:

1. Grades, contours and lines of pavements and ground conditions.
2. Above ground utility locations.
3. Trees and vegetation.

1.4 SUBMITTALS

A. Submit a record of Work performed and record survey data as required under provisions of Section 01 30 00 – SUBMITTALS and Section 01 72 00 – PROJECT RECORD DOCUMENTS.

B. Comply with pertinent provisions of Section 01 30 00 – SUBMITTALS.

C. Upon written request of the Owner, submit:

1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.
2. Documentation verifying accuracy of field engineering work.
3. Certification, signed by the contractor's retained field engineer, certifying that elevations and locations of improvements are in conformance or nonconformance with requirements of the Contract Documents.

1.5 CONSTRUCTION SURVEYS

A. The Contractor shall employ a land surveyor, registered in the state of Illinois and acceptable to the Owner for verification of existing conditions and for layout of its own work including all lines, elevations and measurements of all site improvements, utilities and other work executed by it under the Contract.

B. The Contractor shall immediately upon entering the site for purpose of beginning work locate general reference points and take such action as is necessary to prevent their destruction. The Contractor must exercise proper precaution to verify figures on the drawings before laying out work and will be held responsible for any error resulting from its failure to exercise such precaution.

C. The Contractor shall make provision to preserve property line stakes, benchmarks or datum points. If any are lost, displaced or disturbed through neglect of the Contractor, its agents, or employees, the Contractor shall pay the cost of restoration.

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify layout information shown on the Drawings, in relation to the plans before proceeding to layout the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.

B. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points, or requirements to relocate reference points because of necessary changes in grades or locations.

1. Promptly replace lost or destroyed project control points. Base replacements on original survey control points.
2. Establish and maintain a minimum of two permanent benchmarks on the site or reference to data established by survey control points.
3. Record benchmark locations with horizontal and vertical data on Project Record Documents.

C. The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site-work, investigate and verify the existence and location of underground utilities and other construction.

D. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas and water service piping.

3.2 PERFORMANCE

A. Working from lines and levels established by the plans, establish benchmarks and markers to set lines and levels as needed to properly locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.

B. Advise entities engaged in construction activities, of marked lines and levels provided for their use.

C. As construction proceeds, check every major element for line, level and plumb.

D. Maintain a surveyor's log of control and other survey work. Make this log available at the job site for reference.

E. Record deviations from required lines and levels and advise the Owner when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.

F. On completion of any work requiring field engineering services, prepare a certified survey showing dimensions, locations, angles and elevations of construction and site-work. Deliver this certified survey to the Owner in hardcopy and electronic format (AutoCAD).

G. Locate and layout site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes and invert elevations by instrumentation and similar appropriate means.

H. Furnish information necessary to adjust, move or relocate existing structures, utility poles, lines, services or other appurtenances located in or affected by construction. Coordinate with local authorities having jurisdiction.

END OF SECTION 01 05 10

SECTION 01 06 00

REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

A. Contractors shall comply with all laws, rules and regulations governing the Work.

1. When Contractor observes that Contract Documents are in variance with specified codes, notify the Owner in writing immediately. The Owner will issue all changes in accord with the General Conditions.

2. When Contractor performs any Work knowing or having reason to know that the Work is contrary to such laws, rules and regulations and fails to so notify the Owner, the Contractor shall pay all costs arising therefrom. However, it will not be the Contractor's primary responsibility to make certain that the Contract Documents are in accord with such laws, rules and regulations.

1.2 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 DEFINITIONS AND ABBREVIATIONS

A. Definitions

1. "Codes" means rules, regulations or statutory requirements of government agencies.
2. "Standards" means requirements set by authorities, custom or general consent and establish accepted criteria.

B. Abbreviations

1.	ADA	Americans with Disabilities Act
2.	AGCI	Associated General Contractors in Illinois
3.	ANSI	American National Standards Institute
4.	ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
5.	ASTM	American Society of Testing and Materials
7.	COE	City of Evanston
8.	CPSC	Consumer Product Safety Commission (Federal)
9.	FM	Factory Mutual Engineering Corp.

9.	IBC	Internation Building Code
10.	IDOL	Illinois Department of Labor
11.	IDOT	Illinois Department of Transportation
12.	IDPH	Illinois Department of Public Health
13.	IEPA	Illinois Environmental Protection Agency
14.	IECC	Internation Energy Conservation Code
14.	ISPE	Illinois Society of Professional Engineers
15.	NFPA	National Fire Protection Association
16.	SFM	Office of State Fire Marshall
17.	UL	Underwriters Laboratories, Inc.

1.4 QUALITY ASSURANCE

A. Contractor shall:

1. Ensure that copies of specified codes and standards are readily available to Contractor's personnel. Copies are available at Contractor's expense from source or publisher.
2. Ensure that Contractor's personnel are familiar with workmanship and installation requirements of specified codes and standards.

1.5 REFERENCE SPECIFICATIONS

A. The Specifications referred to herein shall be interpreted to mean the following and shall include all addenda, changes to, etc. Reference to Engineer shall mean Owner.

1. "Standard Specifications" – The Illinois Department of Transportation's (IDOT's) "Standard Specifications for Road and Bridge Construction", latest edition.
2. "Supplemental Specifications" – IDOT's "Supplemental Specifications and Recurring Special Provisions", latest edition.
3. "Traffic Specifications" – IDOT's "Standard Specifications for Traffic Control Items", latest edition.
4. "Standard Sewer Specifications" – The "Standard Specifications for Water and Sewer Main Construction in Illinois", latest edition.

1.6 REGULATORY REQUIREMENTS

A. Source and requirements:

1. EBA: "Environmental Barriers Act" Illinois Accessibility Code

2. ADA: Americans with Disabilities Act
3. ISPC: Illinois State Plumbing Code, current edition
4. IEPA: (current editions at date of bidding documents)

a. Air Pollution Standards
b. Noise Pollution Standards
c. Water Pollution Standards
d. Public Water Supplies
e. Solid Waste Standards
f. Illinois Recommended Standards for Sewage Work

5. Illinois Purchasing Act, as amended (Illinois Compiled Statutes, 30 ILCS 505/1 et seq)

6. OSFM:

a. Gasoline and Volatile Oils (Illinois Compiled Statutes, 430 ILCS 15/0.01 et seq)
b. Liquefied Petroleum Gases (Illinois Compiled Statutes, 430 ILCS 5/0.01 et seq)
c. Liquefied Petroleum Gas Containers (Illinois Compiled Statutes, 430 ILCS 10/0.01 et seq)
d. Boiler and Pressure Vessel Safety Act and Rules and Regulations (Illinois Compiled Statutes, 430 ILCS 75/1 et seq)
e. Illinois Rules and Regulations for Fire Prevention and Safety, as amended 24 December 1973.

7. CODES:

a. City of Evanston “City Ordinances” and “Building Code”, current editions.
b. Work not covered by above codes: Use NFPA National Fire Codes, current edition.

B. The Owner may reference other codes or standards throughout the Project Manual when deemed appropriate for proper compliance with regulatory requirements.

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 06 00

SECTION 01 09 50

REFERENCE STANDARDS AND DEFINITIONS

PART 1 – GENERAL

1.1 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.2 DEFINITIONS

A. General: basic contract definitions are included in the General Conditions.

B. Indicated: the term “indicated” refers to graphic representations, notes or schedules on the Drawings, other paragraphs or schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as “shown,” “noted,” “scheduled” and “specified” are used, it is to help the reader locate the reference; no limitation on location is intended.

C. Directed: terms such as “directed,” requested,” “authorized,” “selected,” “approved,” “required” and “permitted” mean “directed by the Owner,” “requested by the Owner” and similar phrases.

D. Approve: the term “approved,” where used in conjunction with the Owner action on the Contractor’s submittals, applications and requests, is limited to the Owner’s duties and responsibilities as stated in the General Conditions.

E. Regulation: the term “regulations” includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the Work.

F. Furnish: the term “furnish” is used to mean “supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation and similar operations.”

G. Install: the term “install” is used to describe operations at project site including the actual “unloading, unpacking, assembly, installation, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.”

H. Provide: the term “provide” means “to furnish and install, complete and ready for the intended use.

I. Installer: an “installer” is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor or sub-subcontractor, for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect

as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: where the date of issue of a referenced standard is not specified, comply with the standard in effect as of date of Contract Documents.

C. Conflicting Requirements: where compliance with two or more standards is specified, and the standards establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different, but apparently equal, and uncertainties to the Owner for a decision before proceeding.

1. Minimum Quality or Quantity Levels: the quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum, as appropriate for the context of the requirements. Refer uncertainties to the Owner for a decision before proceeding.

D. Copies of Standards: each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.
2. Although copies of standards needed for enforcement of requirements may be included as part of required submittals, the Owner reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.

E. Abbreviations and Names: trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries. The following acronyms or abbreviations as referenced in Contract Documents are defined to mean the associated names. Names and addresses are subject to change and are believed to be but are not assured to be accurate and up to date as of date of Contract Documents.

AA	Aluminum Assoc. 900 19th St, NW, Suite 300 Washington, DC 20006 (202) 862-5100	AAMA	American Architectural Manufacturer's Assoc. 1540 E. Dundee Rd, Suite 310 Palatine, IL 60067 (708) 202-1350	AAN	American Assoc. of Nurserymen 1250 Eye St, NW, Suite 500 Washington, DC 20005 (202) 789-2900
AASHTO	American Assoc. of State Highway and Transportation Officials	ACI	American Concrete Institute PO Box 19150 Detroit, MI 48219-	ACIL	American Council of Independent Laboratories 1725 K St, NW

	444 N. Capitol St, Suite 225 Washington, DC 20001 (202) 624-5800		0150 (313) 532-2600		Washington, DC 20006 (202) 887-5872
ACPA	American Concrete Pipe Assoc. 8320 Old Courthouse Rd. Vienna, VA 22180 (703) 821-1990	AGA	American Gas Assoc. 1515 Wilson Blvd. Arlington, VA 22209 (703) 841-8400	AHA	American Hardboard Assoc. 520 N. Hicks Rd. Palatine, IL 60067-3609 (708) 934-8800
AI	Asphalt Institute Research Park Drive PO Box 14052 Lexington, KY 40512-4052 (606) 288-4960	AIA	American Institute of Architects 1735 New York Ave, NW Washington, DC 20006 (202) 626-7300	A.I.A.	American Insurance Assoc. 1130Connecticut Ave, NW Washington, DC 20036 (202) 828-7100
AISC	American Institute of Steel Construction 1 E. Wacker Dr, Suite 3100 Chicago, Il 60601-2001 (312) 670-2400	AISI	American Iron and Steel Institute 1101 17th St. NW, Suite 1300 Washington, DC 20005-2701 (202) 452-7100	AITC	American Institute of Timber Construction 11818 SE Mill Plain Blvd, Ste.415 Vancouver, WA 98684-5092 (206) 254-9132
ALI	Associated Laboratories 641 S. Vermont St. Palatine, IL 60067 (708) 358-7400	ALSC	American Lumber Standards Committee PO Box 210 Germantown, MD 20874 (301) 972-1700	ANSI	American National Standards Institute 11 W. 42nd Street New York, NY 10036 (212) 354-3300
AOSA	Assoc. of Official Seed Analysts C/o Jim Lair Illinois Dept. of Agriculture Seed Lab Box 19281 Springfield, IL 62794 (217) 782-7655	APA	American Plywood Assoc. PO Box 11700 Tacoma, WA 98411 (206) 565-6600	API	American Petroleum Institute 1220 L St, NW Washington, DC 20005 (202) 682-8000
ASC	Adhesive and Sealant Council 1627 K Street, NW, Suite 1000 Washington, DC 20006 (202) 452-1500	ASHRAE	American Society of Heating, Refrigerating and Air-conditioning Engineers, Inc. 1791 Tullie Circle, NE Atlanta GA 30329-2305	ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASPE	American Society of Plumbing Engineers 3617 Thousand Oaks Blvd, Suite 210 Westlake, CA 91362 (805) 495-7120	ASSE	American Society of Sanitary Engineers PO Box 40362 Bay Village, OH 44140	ASTM	American Society for Testing and Materials 1916 Race St Philadelphia, PA 19103 (215) 299-5400

			(216) 835-3040		
AWI	Architectural Woodwork Institute 2310 S. Walter Reed Dr. Arlington, VA 22206 (703) 671-9100	AWPA	American Wood Preservers Assoc. PO Box 286 Woodstock, MD 21163 (410) 465-3169	AWPB	American Wood Preservers Bureau PO Box 5283 Springfield, VA 22150 (703) 339-6660
AWS	American Welding Society PO Box 351040 550 LeJeune Road, NW Miami, FL 33135 (305) 443-9353	AWWA	American Water Works Assoc. 6666 W Quincy Ave Denver, CO 80235 (303) 794-7711	BANC	Brick Assoc. of North Carolina PO Box 13290 Greensboro, NC 27415 (919) 273-5566
BHMA	Builders Hardware Manufacturers Assoc. 355 Lexington Ave, 17th Floor New York, NY 10017 (212) 661-4261	BIA	Brick Institute of America 11490 Commerce Park Dr. Suite 300 Reston, VA 22091 (703) 620-0010	CISPI	Cast Iron Soil Pipe Institute 5959 Shallowford Rd, Ste 419 Chattanooga, TN 37421 (615) 892-0137
CRSI	Concrete Reinforcing Steel Institute 933 Plumb Grove Rd. Schaumburg, IL 60195 (708) 517-1200	EJMA	Expansion Joint Manufacturers Assoc. 25 N. Broadway Tarrytown, NY 10591 (914) 332-0040	ETL	ETL Testing Laboratories Inc. PO Box 2040 Route 11, Industrial Park Cortland, NY 13045 (607) 753-6711
HMA	Hardwood Manufacturers Assoc. 2831 Airways Blvd., Ste 205, Bldg. B Memphis, TN 38132 (901) 346-2222	HPMA	Hardwood Plywood Manufacturers Assoc. 1825 Michael Farraday Dr PO Box 2789 Reston, VA 22090-2789 (703) 435-2900	ICEA	Insulated Cable Engineers Assoc. Inc. PO Box 440 South Yarmouth, MA 02664 (617) 394-4424
IEEE	Institute of Electrical and Electronic Engineers 345 E. 47th Street New York, NY 10017 (212) 705-7900	IESNA	Illuminating Engineering Society of North America 345 E 47th Street New York, NY 10017 (212) 705-7926	ILI	Indiana Limestone Institute of America Stone City Bank Bldg, Ste 400 Bedford, IN 47421 (812) 275-4426
IMSA	International Municipal Signal Assoc. PO Box 539 1115 N. Main Street Newark, NY 14513 (315) 331-2182	IRI	Industrial Risk Insurers 85 Woodland St Hartford, CT 06102 (203) 520-7300	LPI	Lightning Protection Institute PO Box 1029 Woodstock, IL 60098 (815) 337-0277
MBMA	Metal Building Manufacturers Assoc. 1230 Keith Building	MCAA	Mechanical Contractors Assoc. of America	NAAMM	National Assoc. of Architectural Metal Manufacturers

	Cleveland, OH 44115-2180		5410 Grosvenor Lane, Ste 120 Bethesda, MD 20814 (301) 897-0770		600 S. Federal St, Ste 400 Chicago, IL 60605 (312) 922-6222
NAPA	National Asphalt Pavement Assoc. Calvert Building, Suite 620 6811 Kenilworth Ave. Riverdale, MD 20737 (301) 779-4880	NAPF	National Assoc. of Plastic Fabricators (Now DLPA)	NBGQA	National Building Granite Quarries Assoc. PO Box 482 Barre, VT 05641 (802) 476-3115
NBHA	National Builders hardware Assoc. (Now DHI)	NCMA	National Concrete Masonry Assoc. 2302 Horse Pen Rd PO Box 781 Herndon, VA 22070-3406 (703) 435-4900	NEC	National Electric Code (Now NfiPA)
NECA	National Electrical Contractors Assoc. 7315 Wisconsin Ave Bethesda, MD 20814 (301) 657-3110	NEMA	National Electrical Manufacturers Assoc. 2101 L St, NW, Ste 300 Washington, DC 20037 (202) 457-8400	NFiPA	National Fire Protection Assoc. 1 Batterymarch Park Quincy, MA 02269 (617) 770-3000
NFoPA	National Forest Products Assoc. 1250 Connecticut Ave, NW, Suite 200 Washington DC 20036 (202) 463-2700	NHLA	National Hardwood Lumber Assoc. PO Box 34518 Memphis, TN 38184 (901) 377-1818	NLGA	National Lumber Grades Authority 1055 W Hastings St. Ste 260 Vancouver, British Columbia Canada V6E 2H1 (604) 687-2171
NPA	National Particleboard Assoc. 18928 Premiere Court Gaithersburg, MD 20879-1569 (301) 670-0604	NPCA	National Paint and Coatings Assoc. 1500 Rhode Island Ave, NW Washington, DC 20005 (202) 462-6272	NSF	National Sanitation Foundation PO Box 1468 3475 Plymouth Rd Ann Arbor, MI 48106 (313) 769-8010
NWMA	National Woodwork Manufacturers Assoc. (Now NWWDA)	PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077-4321 (847) 966-6200	PCI	Prestressed Concrete Institute 175 W Jackson Blvd Chicago, IL 60604-9773 (312) 786-0300
PDI	Plumbing and Drainage Institute C/o Saul Baker 1106 W. 77th Street, South Dr. Indianapolis, IN 4626	RIS	Redwood Inspection Service 405 Enfrente Dr, Suite 300 Novato, CA 94949 (415) 382-0662	RMA	Rubber Manufacturers Assoc. 1400 K St, NW Washington, DC 20005 (202) 682-4800

	(317) 251-6970				
SHLMA	Southern Hardwood Lumber Manufacturers Assoc. (Now HMA)	SJI	Steel Joist Institute Suite A 1205 48th Ave North Myrtle Beach, SC 29577	SPIB	Southern Pine Inspection Bureau 4709 Scenic Highway Pensacola, FL 32504 (904) 434-2611
SSPC	Steel Structures Painting Council 4400 Fifth Ave. Pittsburgh, PA 15213 (412) 268-3327	SSPMA	Sump and Sewage Pump Manufacturers Assoc. 560 W Washington St, Ste 301 Chicago IL, 60606 (312) 332-4146	TPI	Truss Plate Institute 583 D'Onofrio Drive Suite 200 Madison, WI 53719
UL	Underwriters Laboratories 333 Pfingsten Rd. Northbrook, IL 60062 (847) 272-8800	WCLIB	West Coast Lumber Inspection Bureau PO Box 23145 Portland, OR 97223 (503) 639-0651	WIC	Woodwork Institute of California PO Box 11428 Fresno, CA 93773 (209) 233-9035
WRI	Wire Reinforcement Institute 1101 Connecticut Ave, NW Washington, DC 20036-4303 (703) 790-9790	WWPA	Western Wood Products Assoc. 522 SW 5th Ave, Yeon Bldg. Portland,OR 97204-2122 (503) 224-3930	W.W.P.A.	Woven Wire Products Assoc. 2515 N. Nordica Ave. Chicago, IL 60635 (312) 637-1359

F. Federal Government Agencies: names and titles of federal government standard or specification producing agencies are often abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard or specification producing agencies of the federal government. Names and addresses are subject to change; they are believed to be but are not assured to be accurate and up to date as of the date of the Contract Documents.

CE	Corps of Engineers (US Dept of the Army) Chief of Engineers – Referral Washington, DC 20314 (202) 272-0660	CFR	Code of Federal Regulations Available from the Government Printing Office N. Capitol St between G and H St, NW Washington, DC 20402 (202) 783-3238 (Material is usually first published in the Federal Register)	CPSC	Consumer Product Safety Commission 5401 Westbard Ave, Room 700 Washington, DC 20816 (800) 638-2772
CS	Commercial Standard (US Dept of Commerce)	DOC	Department of Commerce 14th St and	DOT	Department of Transportation 400 7th St, SW

	Government Printing Office Washington, DC 20402 (202) 377-2000		Constitution Ave, NW Washington, DC 20230 (202) 377-2000		Washington, DC 20590 (202) 366-4000
EPA	Environmental Protection Agency 401 M St, SW Washington, DC 20460 (202) 382-2090	FAA	Federal Aviation Administration (US Dept of Transportation) 800 Independence Ave, SW Washington, DC 20590 (202) 366-4000	FCC	Federal Communications Commission 1919 M St, NW Washington, DC 20554 (202) 632-7000
FHA	Federal Housing Administration (US Dept of Housing and Urban Development) Director Manufactured Housing and Construction Standards Division 451 7th St, SW, Room 9158 Washington, DC 20201 (202) 755-5210	FS	Federal Specification (from GSA) Supt. Of Documents, Government Printing Office 7th and D St, SW Washington, DC 20234 (202) 472-2205 or 472-2140	GSA	General Services Administration F St and 18th St, NW Washington, DC 20405 (202) 472-1082
MIL	Military Standardization Documents (US Dept of Defense) Naval Publications and Forms Center 5801 Tabor Ave Philadelphia, PA 19120	NIST	National Institute of Standards and Technology (US Dept of Commerce) Gaithersburg, MD 20899 (301) 975-2000	OSHA	Occupational Safety and Health Administration (US Dept of Labor) Government Printing Office Washington, DC 20402 (202) 523-6091
PS	Product Standard of NBS National Institute of Standards and (DOC) Technology Standards Management Program A 625 Administration Gaithersburg, MD 20899 (202) 783-3238	USDA	US Dept of Agriculture Independence Ave btwn. 12th and 14th St, SW Washington, DC 20250 (202) 447-8732	USPS	US Postal Service 475 L'Enfant Plaza, SW Washington, DC 20260 (202) 268-2000

1.4 GOVERNING REGULATIONS/AUTHORITIES

A. The Owner has contacted authorities having jurisdiction where necessary to obtain information necessary for preparation of Contract Documents; that information may or

may not be of significance to the Contractor. Contact authorities having jurisdiction directly for information and decisions having a bearing on the Work.

B. Copies of Regulations: Obtain copies of the applicable regulations and retain at the Project site, available for reference by parties who have a reasonable need for such reference.

1.5 SUBMITTALS

A. Permits, Licenses and Certificates: for the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional, settlements, notices, receipts for fee payments, judgements and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 09 50

SECTION 01 10 50

EXISTING UTILITY PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

A. Perform the work associated with existing utilities, including removal, relocation, interruption and protection, meeting requirements of this section.

1.2 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this section.

1.3 GENERAL

A. Notification: before beginning any work, the Contractor shall notify all utility companies, public and private as applicable and any other party owning, operating or maintaining utility facilities on or in vicinity of project site in accordance with notification procedures of each utility company or any other party.

B. Protection:

1. Before beginning any work, the Contractor shall investigate and inform himself of locations and extent of all utilities on and in vicinity of project site which may be encountered in performing the work and shall take suitable care to protect and prevent damage and cessation of operation to such utilities from his operations.
2. When performing adjacent to existing sewers, drains, water and gas lines; electric, telephone or telegraph conduit or cable; pole lines or poles, or other utility facilities, equipment or structures, which are to remain in operation, contractor shall maintain such utility facilities, equipment and structures in place and protect from damage and cessation of operation and shall cooperate with applicable utility company and any other party owning, operating or maintaining such utility facilities, equipment or structures.
3. Methods of protection shall be subject to approval of utility company and any other party owning, operating or maintaining such utility, equipment or structure.

C. Damages:

1. Should existing utilities which are to remain in operation be damaged during construction operations, the Contractor shall immediately notify utility company, Owner and any other party owning, operating or maintaining such utility.
2. The Contractor shall be responsible for and shall repair or replace at the Contractor’s expense, as applicable, damages to any such utility facilities, equipment or structures caused by his acts, whether negligent or otherwise, or his omission to act, whether negligent or otherwise, and shall leave such utility facilities, equipment or structures in as good condition as existed prior to commencement of his operations as approved by utility company and any other party owning, operating or maintaining such utility. In addition, the Contractor shall be responsible for any damages or liability which the Owner may be held liable. Materials and methods of repair or replacement shall be subject to

approval of utility company and other party owning, operating or maintaining such utility.

3. However, any such utility equipment or structures damaged as a result of any act, or omission to act, of the Contractor, may, at option of applicable utility company and any other party owning, operating or maintaining such utility facilities, equipment or structures damaged, be repaired or replaced by such applicable utility company or other party. In such event cost of repairs or replacement shall be the responsibility of the Contractor at no addition to the Contract Sum.

1.4 PROCEDURES

A. Locations:

1. Request all utility companies and any other party owning, operating or maintaining utility facilities on or in vicinity of project site as applicable, to locate or stakeout locations, extent, alignment and elevation of such utility facilities.
2. Approximate locations and extent of known existing utility facilities, equipment and structures may be determined by examining documents of utility companies and any other party owning, operating or maintaining such utility facilities, and available information documents and Drawings for the work.
3. Should uncharted or incorrectly charted existing utility facilities, equipment and structures be encountered during performance of the Work, consult utility companies and other party owning, operating or maintaining such utility facilities for directions.
4. After such utilities have been uncovered and their actual locations and extent determined, the Owner will furnish additional Drawings, if relocation is required, subject to approval of utility companies and any other parties owning, operating or maintaining such utility facilities.
5. Submit record drawings showing locations and extent discrepancies of utilities those indicated in available reference documents or Drawings for the Work, regardless of cause of location or extent discrepancy, meeting, requirements of the general conditions.

B. Scheduling:

1. General: existing utilities shall not be disturbed until utility companies and any other party owning, operating or maintaining such utility facilities and users of such utilities have been notified in accordance with notification procedure of such utility companies or any other parties. Contractor shall conduct work so that utility may be removed, relocated or supported during construction operations and maintained in service until the work to be provided under Contract is completed.
2. Any existing utility should be relocated only as approved by utility companies and any other parties owning, operating or maintaining such utility facilities. Contractor shall cooperate with utility companies and any other parties in performance of this work.
3. Interruptions: when Contractor desires to take an existing utility service out of operation, notify Owner at least 72 hours in advance of such time and obtain written permission of utility company or other parties owning, operating or maintaining such utility facilities prior to interrupting service. Interruption of service shall be kept to an absolute minimum.

    a. Utility company and any or other parties owning, operating or maintaining such utility facilities shall have right to require Contractor to perform work which requires such interruptions in stages and during non-standard

working hours to reduce time of each interruption, at no addition to Contract Sum.

b. When necessary, provide acceptable temporary utility services during such interruptions, before taking utility service out of operation, at no addition to Contract Sum.

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

(NOT APPLICABLE)

END OF SECTION 011050

SECTION 01 20 00

PROJECT MEETINGS

PART 1 – GENERAL

1.1 SUMMARY

A. This section specifies administrative and procedural requirements for project meetings including but not limited to:

1. Pre-construction Conference
2. Pre-installation Conferences
3. Coordination Meetings
4. Progress Meetings

B. Construction schedules are specified in Section 01 30 00 – SUBMITTALS.

1.2 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 PRE-CONSTRUCTION CONFERENCE

A. The Owner shall schedule a pre-construction conference and organizational meeting at the Project site or other convenient location no later than 15 days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.

B. Attendees: The Owner, the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conduct matters relating to the Work.

C. Agenda: Discuss items of significance that could affect progress including such topics as:

1. Tentative construction schedule
2. Critical Work sequencing
3. Designation of responsible personnel
4. Procedures for processing field decisions and Change Orders
5. Procedures for processing Applications for Payment
6. Distribution of Contract Documents
7. Submittal of Shop Drawings, Product Data and Samples
8. Preparation of record documents
9. Use of the premises
10. Office, Work and storage areas
11. Equipment deliveries and priorities
12. Safety procedures
13. First aid
14. Security
15. Housekeeping
16. Construction activity policies and working hours

17. MBE/WBE/EBE and LEP requirements
18. Coordination with affected utilities and governing jurisdictions

1.4 PRE-INSTALLATION CONFERENCE

A. Conduct a pre-installation conference at the site before each construction activity that requires coordination with other construction. The installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Owner of scheduled meeting dates.

B. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for:

1. Contract Documents
2. Options
3. Related Change Orders
4. Purchases
5. Deliveries
6. Shop Drawings, Product Data and quality control samples
7. Possible conflicts
8. Compatibility problems
9. Time schedules
10. Weather limitations
11. Manufacturer’s recommendations
12. Compatibility of materials
13. Acceptability of substrates
14. Temporary facilities
15. Space and access limitations
16. Governing regulations
17. Safety
18. Inspection and testing requirements
19. Required performance results
20. Recording requirements
21. Protection

C. Record significant discussions and agreements and disagreements of each conference, along with the approved schedule. Distribute the record of the meeting to everyone concerned, promptly, including the Owner.

D. Do not proceed if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

1.5 PROGRESS MEETINGS

A. Conduct progress meetings at the Project site at regularly scheduled intervals. Notify the Owner of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment requests.

B. Attendees: in addition to the Owner, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.

C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the Project.

D. Contractor's Construction Schedule: review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time, ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Period.

E. Review the present and future needs of each entity present, including such items as:

1. Interface requirements
2. Time
3. Sequences
4. Deliveries
5. Off-site fabrication problems
6. Access
7. Site utilization
8. Temporary facilities and services
9. Hours of Work
10. Hazards and risks
11. Housekeeping
12. Quality and Work standards
13. Change Orders
14. Documentation of information for payment requests.

F. Reporting: no later than three (3) days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

G. Schedule Updating: revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 20 00

SECTION 01 21 00

ALLOWANCES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

B. Other provisions concerning Allowances also may be stated in other Sections of these Specifications.

1.2 SUMMARY

A. The allowance is general and is to be used to provide adequate budget and bonding to cover items not able to be precisely determined by the Owner prior to bidding including any unforeseen conditions that are discovered. Allow within the proposed Total Base Bid Amount the amounts described in this Section.

B. Allowance work shall be pre-approved prior to the start of and during the Construction with Proposals documenting the work to be performed, with clearly stated not-to-exceed costs and step by step method of procedures for the proposed work stated. Proposals must be submitted and accepted by the Owner prior to starting any allowance work. After discovering an unforeseen condition, the contractor shall submit a Proposal that includes a report summarizing the found condition. The Consultant and Owner will view the unforeseen condition to determine if the work will be authorized. Allowance work shall only be authorized by written Allowance Authorization. Under no circumstances shall the Contractor move forward with the work in question nor shall the contractor expend allowance without an approved Allowance Authorization.

1.3 ALLOWANCE RESPONSIBILITIES

A. Consultant Responsibilities:

1. Consult with Contractor in consideration and selection of products, suppliers and installers.
2. Select products or services in consultation with Owner.
3. Review method of procedure and costs documented on Proposals submitted by the Contractor and transmit Owner’s decision to Contractor. Owner approved Allowance Authorizations are required prior to proceeding with Allowance Work.
4. Review, recommend and transmit Allowance Authorization to Owner for approval.
5. Transmit Owner’s decision to the Contractor.

B. Contractor’s Responsibilities:

1. Assist Consultant in selection of products, suppliers and installers.
2. Obtain proposals from suppliers and installers and offer recommendations and review of proposals submitted. Transmit to Consultant on Proposal forms, attaching all supporting documentation. Include any bond cost adjustments with the proposal. Include scheduling information and assessment of impact of other work.

3. On notification of selection by Consultant, execute purchase agreement with designated supplier and installer.
4. Arrange for and process shop drawings, product data and samples. Arrange for delivery.
5. Promptly inspect products upon delivery for completeness, damage and defects. Submit claims for transportation damage.
6. Document thoroughly all costs related to the work.
7. Provide the Consultant with fully documented Proposals detailing all allowance work to be performed.

1.4 ALLOWANCE DOCUMENTATION

A. All work covered by Allowances must be thoroughly documented as follows:

1. Upon encountering any field conditions which is not as shown in Construction Documents, the Contractor shall immediately notify the Consultant and develop a written Proposal detailing any additional work required. Proposals shall include a report summarizing the found condition to the Consultant. Contractor work initiated without submitting a completed Proposal and obtaining the Owner's written approval by Allowance Authorization is performed entirely at Contractor's own risk and cost, regardless of any prior verbal approval.
2. The Consultant shall review the Proposal and provide the Owner with a written recommendation regarding the proposed work.
3. The Owner shall review the Contractor's Proposal and the Consultant's recommendation and, if appropriate, provide written approval via Allowance Authorization for use of the Allowance.

1.5 SCHEDULE OF ALLOWANCES

Allowance (General): $80,000.00

1.6 ALLOWANCE EXCLUSIONS

A. General

1. Additional costs related to improper scheduling, sequencing or coordination will not be covered within the Allowance, as determined solely by the Owner.

B. Existing Building Component Exclusions

1. All work required to protect existing building surfaces and components is included in the Base Bid and will not be covered within the Allowance.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION 01 21 00

SECTION 01 30 00

SUBMITTALS

PART 1 – GENERAL

1.01 SUMMARY

A. This section specifies administrative and procedural requirements for submittals required for performance of the Work, including:

1. Contractor's construction schedule
2. Submittal schedule
3. Daily construction reports
4. Shop Drawings
5. Product Data
6. Samples

B. Administrative Submittals: refer to other Division 0 and 1 sections and other Contract Documents for requirements for administrative submittals. Such submittals include but are not limited to:

1. Permits
2. Applications for payment
3. Performance and payment bonds
4. Insurance certificates
5. List of subcontractors

C. The Schedule of Values submittal is included in Section 01 02 70 – APPLICATION FOR PAYMENT.

1.02 RELATED WORK

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.03 SUBMITTAL PROCEDURES

A. Coordination: coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.

a. The Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

3. Processing: allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for re-submittals.

    a. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Owner will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
    b. If an intermediate submittal is necessary, process the same as the initial submittal.
    c. Allow two weeks for re-processing each submittal.
    d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Owner sufficiently in advance of the Work to permit processing.

B. Submittal Preparation: place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

1. Provide a space approximately 4” x 5” on the label or beside the title block on Shop Drawings to record the Contractor’s review and approval markings and the action taken.
2. Include the following information on the label for processing and recording action taken.

    a. Project name
    b. Date
    c. Name and address of Owner
    d. Name and address of Contractor
    e. Name and address of subcontractor
    f. Name and address of supplier
    g. Name of manufacturer
    h. Number and title of appropriate Specification Section
    i. Drawing number and detail reference, as appropriate

C. Submittal Transmittal: package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Owner using a transmittal form. Submittals received from sources other that the Contractor will be returned without action.

1. On the transmittal record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor’s certification that information complies with Contract Document requirements.
2. Transmittal Form: use AIA Document G 810.

1.04 CONTRACTOR’S CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: prepare a fully developed, horizontal bar-chart type Contractor’s construction schedule. Submit within 30 days of the date established for “Commencement of the Work”.

1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the “Schedule of Values”.

2. Within each time bar indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
3. Prepare a schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.
4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the Work.
5. Coordinate the Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress report, payment requests and other schedules.
6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for Owner's procedures necessary for certification of Substantial Completion.

B. Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by requirements for phased completion to permit Work by separate Contractors and partial occupancy by the Owner prior to Substantial Completion.

C. Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.

D. Area Separations: Provide a separate time bar to identify each major construction area for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities.

E. Cost Correlation: At the head of the schedule, provide a two item cost correlation line, indicating "pre-calculated" and "actual" costs. On the line show dollar-volume of Work performed as of the dates used for preparation of payment requests.

1. Refer to Section 01 02 70 - APPLICATION FOR PAYMENT for cost reporting and payment procedures.

F. Distribution: Following response to the initial submittal, print and distribute copies to the Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

G. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.05 SUBMITTAL SCHEDULE

A. After development and acceptance of the Contractor's construction schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for establishment of the Contractor's construction schedule.

1. Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products as well as the Contractor's construction schedule.
2. Prepare the schedule in chronological order; include submittals required during the first 90 days of construction. Provide the following information:

    1. Scheduled date for the first submittal.
    2. Related Section number.
    3. Submittal category.
    4. Name of subcontractor.
    5. Description of the part of the Work covered.
    6. Scheduled date for resubmittal.
    7. Scheduled date of the Owner’s final release or approval.

B. Distribution: Following response to initial submittal, print and distribute copies to the Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office

    1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

C. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.06 DAILY CONSTRUCTION REPORTS

A. Prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Owner at weekly intervals:

    1. List of subcontractors at the site.
    2. Approximate count of personnel at the site.
    3. High and low temperatures, general weather conditions.
    4. Accidents and unusual events.
    5. Meetings and significant decisions.
    6. Stoppages, delays, shortages, losses.
    7. Meter readings and similar recordings.
    8. Emergency procedures.
    9. Orders and requests of governing authorities.
    10. Change Orders received, implemented.
    11. Services connected, disconnected.
    12. Equipment or system tests and start-ups.
    13. Partial Completions, occupancies.
    14. Substantial Completions authorized.

1.07 SHOP DRAWINGS

A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

1. Dimensions.
2. Identification of products and materials included.
3. Compliance with specified standards.
4. Notation of coordination requirements.
5. Notation of dimensions established by field measurement.
6. Sheet Size: Except for templates, patterns and similar full- size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 36" x 48".
7. Submit one correctable translucent reproducible print and three blue- or black-line print for the Owner's review; the reproducible print will be returned.

C. One of the prints returned shall be marked-up and maintained as a "Record Document".

D. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

E. Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.

1. Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

1.08 PRODUCT DATA

A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

a. Manufacturer's printed recommendations.
b. Compliance with recognized trade association standards.
c. Compliance with recognized testing agency standards.
d. Application of testing agency labels and seals.
e. Notation of dimensions verified by field measurement.
f. Notation of coordination requirements.

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

3. Preliminary Submittal: Submit a preliminary single-copy of Product Data where selection of options is required.

4. Submittals: Submit 2 copies of each required submittal; submit 4 copies where required for maintenance manuals. The Owner will retain one, and will return the other marked with action taken and corrections or modifications required.

a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

5. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

    a. Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession.
    b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.09 SAMPLES

A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.

1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Owner's Sample. Include the following:

    a. Generic description of the Sample.
    b. Sample source.
    c. Product name or name of manufacturer.
    d. Compliance with recognized standards.
    e. Availability and delivery time.

2. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

    a. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.
    b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.
    c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.

3. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.

    a. Preliminary submittals will be reviewed and returned with the Owner's mark indicating selection and other action.

4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken.

5. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.

a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
b. Sample sets may be used to obtain final acceptance of the construction associated with each set.

B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

C. Mock ups specified in individual Sections are special types of Samples. Mock ups are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.

D. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.10 CONTRACTOR'S RESPONSIBILITIES

A. Review shop drawings, product data and samples prior to submission.

B. Verify:

1. Field dimensions
2. Field construction criteria
3. Catalog numbers and similar data

C. Coordinate each submittal with requirements of Work and of Contract Documents.

D. Contractor's responsibility for errors and omissions in submittals is not relieved by Owner's review of submittals.

E. Contractor's responsibility for deviations in submittals from Contract Document requirements is not relieved by Owner's review of submittals.

F. Notify Owner in writing at time of submission, of deviations in submittals from contract requirements.

G. Do not begin any work which requires submittals without having Owner's stamp and initials or signature indicating review.

H. After Owner’s review, make response required by Owner, stamp and distribute copies.

1.11 SUBMISSION REQUIREMENTS

A. Make all submissions within 35 business days after date of Notice to Proceed.

B. Submit number of copies of shop drawings, project data and samples which Contractor requires for distribution plus 3 copies which will be retained by the Owner.

C. Submit number of samples specified in each of specification sections.

D. Accompany submittals with transmittal letter, in duplicate, containing:

1. Date
2. Project title and number

3. Contractor's name and address
4. The number of each shop drawing, product datum and sample submitted
5. Notification of deviations from contract
6. Other pertinent data

E. Submittals shall include:

1. Date and revision dates
2. Project title and number
3. Names of:

   a. Contractor
   b. Subcontractor
   c. Supplier
   d. Manufacturer
   e. Separate detailer when pertinent

4. Identification of product or material
5. Relation to adjacent structure or material
6. Field dimensions, clearly identified as such
7. Specification Section and page number
8. Applicable standards, such as ASTM number or federal specification
9. Identification of deviation(s) from Contract Documents
10. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements, and compliance with Contract.

1.12 RESUBMISSION REQUIREMENTS

A. Shop drawings:

Revise initial drawings as required and resubmit as specified for initial submittal. Indicate on drawings all changes which have been made other than those requested by Owner.

B. Product Data and Samples:

Submit new datum and samples as required for initial submittal.

C. Make all resubmittals within 10 business days after date on Owner's stamp.

1.13 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

A. Distribute copies of shop drawings and project datum which carry Owner's stamp:

1. Contractor's file
2. Job site file
3. Record documents file
4. Subcontractors
5. Supplier
6. Fabricator

B. Distribute samples as directed.

1.14 OWNER'S ACTION

A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Owner will review each submittal, mark to indicate action taken, and return promptly.

1. Compliance with specified characteristics is the Contractor's responsibility.

B. Action Stamp: The Owner will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:

1. Final Unrestricted Release: Where submittals are marked "Furnish as Submitted," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
2. Final-But-Restricted Release: When submittals are marked "Furnish as Corrected," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
3. Returned for Resubmittal: When submittal is marked "Revise and Resubmit", do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
4. Returned, Improper Submittal: When submittal is marked "Rejected" do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication delivery or other activity. The submittal does not conform with project requirements. Prepare a new submittal without delay.
5. Do not permit submittals marked "Rejected, Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.
6. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required".

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 30 00

SECTION 01 35 62

EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Erosion and Sedimentation Control Program for the Project.

1.2 SUBMITTALS

A. Erosion and Sediment Control Plan

1. Submit erosion and sediment control drawings specific to the site within ten (10) days of Notice To Proceed (NTP). Show locations, types and details of erosion and sediment control features and construction.
2. Show the schedule of implementation coordinated with the construction schedule.
3. Include a narrative describing the program and maintenance.

B. Product Data

1. Silt Fence Geotextile Filter Fabric
2. Filter Baskets

C. Documentation Log

1. Provide weekly inspection logs of inspection and maintenance of all erosion control procedures.

a. Include additional inspections for rainfalls over ½".

2. Provide photographs during construction illustrating implementation of erosion control measures and on-going repairs/maintenance to these measures. At minimum photographs should be documented for:

a. Before Construction
b. During Construction
c. After Construction

1.3 QUALITY ASSURANCE

A. Requirements: Create and implement an Erosion and Sedimentation Control plan, specific to the site, which conforms to the erosion and sedimentation requirements of the 2003 United States Environmental Protection Agency (EPA) Construction General Permit, OR local erosion and sedimentation control standards and codes, whichever is more stringent. The Construction General Permit outlines the provisions necessary to comply with Phase I and Phase II Of the National Pollution Discharge Elimination (NPDES) program.

B. Objectives:

1. Prevent loss of soil during construction by storm water runoff and/or wind erosion, including protecting stock pits for reuse.

2. Prevent sedimentation of storm sewer or receiving streams.
3. Prevent polluting the air with dust and particulate matter.

PART 2 - PRODUCTS

2.1 Silt Fence:

A. Geotextile Filter Fabric: A nonwoven fabric consisting of previous sheets of propylene, nylon, polyester, or ethylene yarn. Certify material by manufacturer to meet the following requirements. Pre-assembled silt fencing may be substituted if it meets the above requirements.

Property	Test Method	Requirements
Minimum Tensile Strength	ASTM D4632	90 lb
Maximum Elongation at 45 lb	ASTM D4632	50% Max
Apparent Opening Size	ASTM D4751	AOS<60 mm
Minimum Permittivity	ASTM D4491	$1x10^{-2}$ SEC^{-1}
Ultraviolet Exposure Strength Retention	ASTM D4355	70% @ 500h

B. Posts: Wood or steel and a minimum 5 ft long. Wood posts shall be at least 4 in. dia. Or nominal 2 x 2 in. Steel posts shall be round, or “U”, “T”, or “C” shaped with a minimum weight of 1.33 lb/ft and projections for fastening wire to fence. Wire Staples: 9 gage and minimum 1 in. long.

2.2 INLET FILTER

A. FILTER BASKETS

1. CATCH –ALL (or equal)
   As manufactured by:

   METRO DETROIT

   Price and Company, Inc.

   29165 Wall Street

   Wixom, MI 48393-3525

   Toll Free: 866.960.4300

   Local T: 248.596.4300

   F: 248.596.4301

   E: geopro@priceandcompany.com

2.3 CONSTRUCTION ENTRANCE

A. Aggregate size: CA-1 or CA-4

B. Geotextile fabric: shall meet the requirements of specification 592 Geotextile table 1 or 2, class I, II or IV of the Illinois Urban Manual.

2.4 TEMPORARY SEEDING PLANTS

A. Shall be selected from the following:

TEMPORARY SEEDING SPECIES, RATES AND DATES

Species	Lbs/Acre	Lbs/1000 sf	Seeding dates
Oats	90	2	Early spring-July 1
Cereal Rye	90	2	Early spring-Sept. 30
Wheat	90	2	Early spring-Sept. 30
Perennial Ryegrass	25	0.6	Early spring-Sept. 30

PART 3 - EXECUTION

3.1 GENERAL

A. Do not start operations until the erosion and sediment control plan has been submitted and features and in place.

B. Comply with “Quality Assurance” provisions of these specifications and the erosion and sediment control plan.

C. Schedule the Work in start to finish phases to minimize exposing the site to erosion.

D. Install erosion and sediment control features before site disturbance begins and immediately after new inlets are installed.

E. Do not allow storm water to flow into excavations and disturbed areas.

F. Do not discharge water into sanitary sewers, watercourses or offsite.

G. Do not discharge water-containing sediment in accordance with “Quality Assurance” requirements and as presented in the erosion and sediment control plan submittal or a maximum retained as 30 milligrams of sediment per liter of water. Conduct continuous monitoring of sediment.

H. Maintain sediment control features. Inspect weekly and after every rain. Repair damaged bales, end runs and undercutting beneath bales. Repair breaks in diversion dams and damage down streams of the break. Replace damaged and deteriorated filter fabric and fences. Remove sediment which deposits fill 1/3 of the fabric surface area.

I. Do not allow sediment to flow into vegetated areas.

J. Retain all sediment on the site. Provide temporary stone roadways at exits from the site to ensure mud run-off of tires before exiting.

K. Utilize the sizes of equipment appropriate to the task to minimize exhaust, noise and vibration.

L. Mist or provide other means to keep dust from being scattered to the air.

M. All sediment that gets onto public right-of-way must be removed immediately.

N. During dewatering operations, water will be pumped into sediment basins or silt traps. Dewatering directly to field tiles or storm sewer is prohibited.

O. Stockpile must be kept covered and watered for dust control.

INSTALLATION/APPLICATION/ERECTION

P. General: Control surface water runoff on-site and provide temporary soil stabilization measures as required to prevent erosion of soil by action of water. Protect storm sewers adjacent to work site from sedimentation by installation of erosion and sediment control measures. Provide, as a first step in construction operations, barriers, and other measures intended to deter erosion and transport of sediment associated with construction activities before construction starts or as it progresses.

Q. Silt Fences: Space posts 6 ft maximum for non-reinforced or 10 ft maximum for reinforced and securely install with at least 2 feet of post in the ground. Excavate trench approximately 4 in. wide and 4 in. deep along line of posts and upslope side of posts using wire staples, tie wires, or hog rings. Extend wire and fence into trench a minimum of 4 in. Attach geo-textile filter fabric directly to posts and wire reinforcement fence as required by wire, staples, or other means. Install filter fabric in a manner such that fabric height above grade is 2 to 3 ft. Do not staple fabric to trees. Do not use fabric with defects or other damage. For manholes, the filter fabric can be placed around the lid and secured by the lid weight.

R. Construction Entrance: Construct with minimum dimensions of 14’ wide, 70’ length and 6” thickness of CA-1 or CA-4. Filter fabric shall be used under the aggregate to minimize the migration of stone into the underlying soil by heavy vehicle loads. See plans for location.

S. Temporary Seeding: Remove large rocks or other debris that may interfere with seedbed preparation or seeding operations. Prepare seedbed of 3 to 4 inches loose soil. If rainfall has caused the surface to become sealed or crusted, loosen, by suitable method, it just prior to seeding. Where pH is below 5.5 and seeding will not take place within 30 days, apply one and one half to two tons per acre of finely ground agricultural limestone. Seeding shall be evenly applied with a cyclone seeder, drill, culti-packer seeder or hydroseeder. Small grains shall be planted no more than one inch deep. Grasses shall be planted no more than one half inch deep.

END OF SECTION

SECTION 01 40 00

QUALITY CONTROL SERVICES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for quality control services.

B. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Owner.

C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.

1. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.
2. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.
3. Requirements for the Contractor to provide quality control services required by the Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 RESPONSIBILITIES

A. The Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the Owner's responsibility, or are provided by another identified entity; these services include those specified to be performed by an independent agency and not by the Contractor. Costs for these services shall be included in the Contract Sum.

1. The Owner will select and the Contractor shall employ and pay an independent agency, to perform specified quality control services.

a. Where the Owner has engaged a testing agency or other entity for testing and inspection of a part of the Work, and the Contractor is also required to engage an entity for the same or related element, the

Contractor shall not employ the entity engaged by the Owner, unless otherwise agreed in writing with the Owner.

2. Re-testing: The Contractor is responsible for re-testing where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.

    a. Cost of re-testing construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.

3. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:

    a. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
    b. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
    c. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
    d. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
    e. Security and protection of samples and test equipment at the Project site.

B. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Owner and Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.

1. The agency shall notify the Owner and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.
3. The agency shall not perform any duties of the Contractor.

C. Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1. The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

1.4 SUBMITTALS

A. The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Owner, in duplicate, and a copy to the Contractor.

1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

2. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

    a. Date of issue.
    b. Project title and number.
    c. Name, address and telephone number of testing agency.
    d. Dates and locations of samples and tests or inspections.
    e. Names of individuals making the inspection or test.
    f. Designation of the Work and test method.
    g. Identification of product and Specification Section.
    h. Complete inspection or test data.
    i. Test results and an interpretations of test results.
    j. Ambient conditions at the time of sample-taking and testing.
    k. Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
    l. Name and signature of laboratory inspector.
    m. Recommendations on re-testing.

1.5 QUALITY ASSURANCE

A. Qualification for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.

1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State of Illinois.

B. Meet basic requirements of ASTM E329 Standard of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel Used in Construction."

C. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of National Bureau of Standards during most recent tour of inspection; with memorandum of remedies of all deficiencies reported by inspection.

D. Testing Equipment:

1. Calibrated at maximum 12-month intervals by devices of accuracy traceable to either:

    a. National Bureau of Standards
    b. Accepted values of natural physical constants.

2. Submit copy of certificate of calibration, made by accredited calibration agency.

1.6 LABORATORY DUTIES: LIMITS OF AUTHORITY

A. Cooperate with Owner and Contractor; provide qualified personnel promptly on notice.

B. Perform specified inspections, sampling and testing of materials and construction methods.

1. Comply with specified Standards: ASTM, other recognized authorities, and as specified.

2. Ascertain compliance with Contract requirements.

C. Promptly notify Owner and Contractor of irregularities or deficiencies of work which are observed during performance of services.

D. Promptly submit 5 copies of reports of inspections and tests to Owner including:

1. Date issued
2. Project title and number
3. Testing Laboratory name and address
4. Name and signature of Inspector
5. Date of inspection and sampling
6. Record of temperature and weather
7. Date of test
8. Identification of product and Specification Section
9. Location in project
10. Type of inspection or test
11. Observations regarding compliance with Contract Documents

E. Perform additional services as required by Owner.

F. Laboratory is not authorized to:

1. Release, revoke, alter or enlarge on, Contract requirements.
2. Approve or accept any portion of work.
3. Perform any duties of the Contractor.

1.7 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with Laboratory personnel, provide access to work, to manufacturer's operations.

B. Provide Laboratory, preliminary representative samples of materials for testing, in required quantities.

C. Furnish copies of mill test reports.

D. Furnish casual labor and facilities:

1. To provide access to work to be tested.
2. To obtain and handle samples at site.
3. To facilitate inspections and tests.
4. For Laboratory's exclusive use for storage and curing of test samples.

E. Notify Laboratory sufficiently in advance of operations to allow for personnel assignment of test scheduling.

F. Employ, and pay for, services of a separate, equally qualified, Independent Testing Laboratory to perform additional inspections, sampling and testing required.

1. For Contractor's convenience.
2. When initial tests indicate work does not comply with Contract.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."

B. Protect construction exposed by or for quality control services, and protect repaired construction.

C. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION 01 40 00

SECTION 01 50 00

TEMPORARY FACILITIES

PART 1 - GENERAL

1.1 SUMMARY

A. This section specifies administrative and procedural requirements for temporary services and facilities, including utilities, construction and support facilities, and security and protection.

1. Contractor shall be solely responsible for adequacy of temporary facilities, including design and engineering thereof.

B. Construction and support facilities required include but are not limited to:

1. Temporary roadway paving and/or steel plates.
2. Field offices and/or storage sheds.
3. Sanitary facilities, including toilets and drinking water.
4. Dewatering facilities and drains.
5. Temporary enclosures.
6. Waste disposal services.
7. Rodent and pest control.
8. Construction aids and miscellaneous general services and facilities.

C. Security and protection facilities and services required include but are not limited to:

1. Barricades, warning signs and lights.
2. Enclosure fences.
3. Environmental protection.

1.2 RELATED WORK

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 QUALITY ASSURANCE

A. Regulations: comply with local codes and ordinances of governing authorities having jurisdiction.

B. Standards: contractor determines and complies with applicable standards for temporary and construction facilities.

C. Inspections: arrange for authorities having jurisdiction to inspect and test each utility before use. Obtain required certification and permits.

1.4 PROJECT CONDITIONS

A. Conditions of use: keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Do not overload temporary services or facilities, or permit them to interfere with construction progress. Do not allow hazardous, dangerous or unsanitary conditions or public nuisances to develop or persist on the site.

B. Easements: obtain necessary easements for temporary facilities when required.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. General: provide new materials and equipment or undamaged previously used materials and equipment in serviceable condition. Provide materials and equipment suitable for the use intended.

B. Water: provide potable water approved by local health authorities.

C. First aid supplies: comply with governing regulations.

D. Fire extinguishers: provide hand-carried, portable UL-rated, class “A” fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable UL-rated, class “ABC” dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.

1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

E. Work zone traffic control: comply with IDOT 701 and 702.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Locate facilities where they will best serve the Project and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY INSTALLATION

A. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

3.3 TEMPORARY CONSTRUCTION AND SUPPORT FACILITY INSTALLATION

A. Storage and fabrication sheds (optional): install storage and fabrication sheds, sized, furnished and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces on the site.

B. Sanitary facilities: comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities. Install where facilities will best serve the Project’s needs.

1. Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material.

2. Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility. Provide covered waste containers for used material.

C. Temporary enclosures: provide temporary enclosure for protection of construction in progress and completed from exposure, foul weather, other construction operations and similar activities.

1. Where heat is needed, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and materials drying or curing requirements to avoid dangerous conditions and effects.

D. Temporary signs: prepare and install signs to inform the public and persons seeking entrance to the Project. Support on the posts or framing of preservative treated wood or steel. Do not permit installation of unauthorized signs.

E. Collection of disposal of waste: collect waste from project site daily. Comply with requirements of NFPA 241 for removal of combustible waste materials and debris. Enforce requirements strictly. Do not hold materials more than seven days during normal weather and three days when the temperature is expected to rise above 80 degrees Fahrenheit. Handle hazardous, dangerous or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

3.4 SHORING, BRACING AND UNDERPINNING (as required)

A. Provide shoring and bracing necessary to protect existing buildings, streets, walkways, utilities and other improvements and excavation against loss of ground or caving embankments. Maintain shoring and bracing. Remove temporary shoring and bracing when no longer required.

B. Whenever shoring is required, locate the system to clear permanent construction and to permit forming and finishing of concrete surfaces. Provide shoring system, adequately anchored and braced to resist earth and hydrostatic pressures.

C. Shoring systems retaining earth on which the support or stability of existing structure is dependent must be left in place at completion of work.

D. Maintain bracing until structural elements are rebraced by other bracing or until permanent construction is able to withstand lateral earth and hydrostatic pressures.

E. Remove sheeting, shoring and bracing in stages to avoid disturbance to underlying soils and damage to structures, pavements, facilities and utilities.

F. Repair or replace as acceptable by Owner, adjacent work damaged or displaced through the installation or removal of shoring and bracing work.

3.5 SECURITY AND PROTECTION FACILITIES

A. Barricades, warning signs and lights: Comply with IDOT 701,702 and local code requirements. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

B. Environmental protection: provide environmental protection as outlined in Section 01 56 00 – TEMPORARY ENVIRONMENTAL CONTROLS.

C. Site security to be provided by the Contractor as required.

3.6 OPERATION, TERMINATION AND REMOVAL

A. Supervision: enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

B. Maintenance: maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour a day basis where required to achieve indicated results and to avoid the possibility of damage.

C. Termination and removal: remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

D. Materials and facilities that constitute temporary facilities are the property of the Contractor.

END OF SECTION 01 50 00

SECTION 01 56 00

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Contractors shall:

1. Provide controls over environmental conditions at the construction site and related areas under the Contractor's control.
2. Remove physical evidence of temporary controls at completion of work or as directed.

1.2 RELATED WORK

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 QUALITY CONTROL

A. Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control - "Green Book"

1.4 DUST CONTROL

A. Provide dust control materials to minimize dust from construction operations. Prevent air-borne dust from dispersing into the atmosphere.

B. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:

1. Locations of dust-control partitions at each phase of work.
2. HVAC system isolation schematic drawing.
3. Location of proposed air-filtration system discharge.
4. Waste-handling procedures.
5. Other dust-control measures.

1.5 WATER CONTROL

A. Control surface water to prevent damage to the project, the site or adjoining properties.

1. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels, and other construction areas; direct drainage to proper runoff.

B. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface water.

C. Dispose of drainage water in a manner to prevent flooding, erosion sitting or runoff of silt or sediment or other damage to all portions of the site or to adjoining areas.

1.6 RODENT CONTROL

A. Provide rodent control to prevent infestation of construction or storage areas.

1. Use methods and materials, which will not adversely affect conditions at the site or on adjoining properties.
2. Maintain site in clean condition.

a. Dispose of garbage and debris.
b. Do not keep items on site which attract rodents.

3. When the use of rodenticides is deemed necessary, submit a copy of proposed program to the Owner. Clearly indicate:

a. Areas to be treated.
b. Rodenticides to be used, with copy of manufacturer's current printed instructions.
c. Pollution preventative measures to be employed.
d. Illinois licensed pesticides applicator.

1.7 DEBRIS CONTROL

A. Maintain all areas under Contractor's control free of extraneous debris.

B. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking areas or along access roads and haul routes.

1. Provide containers specified in SECTION 01 71 00 - CLEANING for deposit of debris.
2. Prohibit overloading of trucks to prevent spillages on access and haul routes.

a. Provide daily inspection of traffic areas to enforce requirements.

C. Schedule collection and disposal of debris is specified in SECTION 01 71 00 - CLEANING.

1. Provide additional collections and disposals of debris whenever regular schedule is inadequate to prevent accumulation.

1.8 POLLUTION CONTROL

A. Prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.

B. Provide equipment and personnel, perform emergency measures to contain all spillages, and to remove contaminated soils or liquids. Excavate and dispose of all contaminated earth off-site. Replace with suitable compacted fill and topsoil.

C. Take special measures to prevent harmful substances from entering public waters or spilling onto the ground. Prevent disposal of wastes, effluents, chemicals or other such substances adjacent to streams, or in sanitary or storm sewers, including waste from portable toilets.

D. Provide systems for control of atmospheric pollutants.

1. Prevent toxic concentrations of chemicals.

2. Prevent harmful dispersal of pollutants into the atmosphere.

1.9 EROSION CONTROL

A. Plan and execute construction and earthwork in a manner to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.

1. Minimize the areas of bare soil exposed at one time.
2. Provide temporary control measures such as berms, dikes and drains.
3. Provide temporary control measures to prevent silting or runoff of silt or sediment from site.

B. Construct fills and waste areas by selective placement to eliminate surface silts or clays which will erode.

C. Periodically inspect earthwork to detect evidence of the start of erosion. Apply corrective measures to control erosion.

PART 2 - PRODUCTS

(NOT APPLICABLE)

PART 3 - EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 56 00

SECTION 015639

TREE/SHRUB REMOVAL AND PROTECTION

Tree and Shrub Removal and Damage

Trees and shrubs identified for removal are designated on the Drawings. It is not anticipated that any other trees or shrubs will need to be removed for performance of the Work. Should the Contractor recommend removing additional trees or shrubs, the Contractor shall notify the Owner for approval prior to removing any trees or shrubs. To receive permission for removal of trees or shrubs, the Contractor must demonstrate that there is no other practicable way to complete the Work, including auguring or hand-excavation. Contractor shall work with the Engineer to seek a tree preservation permit or review for any excavation that will occur within 25 feet of any public or private tree. Permit fees are waived.

Owner recognizes that some tree branches will need to be pruned to provide clearance for construction equipment. However, the Contractor shall secure the express permission of the City Arborist to trim specific overhanging branches of trees. All tree trimming, pruning, and repair of wound surfaces shall be performed by a licensed arborist approved by the Owner and will be within standards generally recognized as best practice by industry professionals. The Owner will provide appropriate staff to observe tree trimming operations. The Contractor shall provide at least 72-hour notice to the Owner of trimming operations. No trimming shall be done unless Owner's staff is available to observe trimming. Trimming shall be performed to the satisfaction of Owner's staff. The Contractor shall provide proper tree guards to protect trees from damage due to construction equipment and operations.

Trees and shrubs damaged due to construction operations or removed without approval shall be replaced, at Contractor's expense, with trees or shrubs of like species and size, to a maximum trunk size of 2-inches diameter as directed by the City Arborist. If trees larger than 6-inches in diameter are irreparably damaged or destroyed, the Contractor shall replace these trees with trees 2-inches in diameter per City's mitigation formula, and with a species chosen by the City Arborist. In addition to these replacements, the Contractor shall be subject to fees, penalties, and fines for tree damage as indicated in the City's Tree Canopy Preservation Policy. Tree trimming, pruning, repair of wound surfaces, removal of trees and shrubs requested by Contractor, replacement of trees and shrubs irreparably damaged, and mitigation costs and/or penalties for damage, shall be incidental to the items of work to which they pertain.

Tree Protection

Contractors are advised that it is the express intent of the City of Evanston to minimize trimming of and other impacts to trees in the work areas and to vigorously protect the health and quality of the urban forest on both public and private property. The equipment and methods used to perform any and all portions of the work must be the size and nature that results in the least disruption to the existing environment. The City of Evanston reserves the right to limit the size of the equipment used on the project.

The Contractor shall at all times demonstrate to the satisfaction of the City of Evanston that suitable precautions and due diligence are being observed to protect the natural and improved features of the area. Special and continuing attention will be paid to the maintenance of tree protection fencing and the appropriate observance of tree protection areas as delineated by the fencing.

To ensure compliance with the City of Evanston's intent to minimize area disturbances, the following procedures and actions will be followed: When the City arborist determines that a tree is improperly protected, the Contractor shall be notified. If the contractor fails to rectify the deficiency immediately, the Engineer will impose a daily monetary deduction for each 24-hour period (or portion thereof} the deficiency exists. This time period will begin with the time of notification to the Contractor and end with the Engineer's acceptance of the corrections. The cost of the daily deduction will be $250 per occurrence per calendar day. In addition, the Contractor will be liable and responsible for any and all corrective and remedial actions required to restore the area or item to comparable pre-project conditions as well as any additional fines and fees as stated in these specifications, including a potential penalty of $500 per occurrence per calendar day for failure to provide restoration that meet's the City Arborist's approval.

Care of Existing Plant Material

If construction is planned within the critical root zone of existing plant material, root pruning and plant care will be required, as hereinafter specified. All pruning shall be performed by a certified arborist approved by the City and with appropriate qualifications.

The Contractor shall be responsible for taking measures to minimize damage to any part of public and private trees, including limbs, trunks, and roots at each work site. All such measures shall be included in the base bid contract price.

A. Earth Saw Cut of Tree Roots (Tree Root Pruning)
   1. Whenever the proposed excavation falls within the drip-line of a tree, the contractor shall:
      a. Root prune 6-inches behind and parallel to the proposed edge of excavation a neat, clean vertical cut to a depth of 24 inches through all the affected tree roots. Any roots encountered at a greater depth shall be neatly sawcut at no additional cost.
      b. Root prune to a maximum width of 4 inches using a "Vermeer" wheel matching the following criteria. The root pruner wheel shall be 60" diameter (188" circumference) carrying 28 pair (56 total) stump cutter teeth with tooth spacing at 6.7" on center. The cutting depth shall be 24" and shall utilize a 65hp tractor. Trenching machines will not be permitted.
      c. Exercise care not to cut any existing utilities.
      d. The Engineer or City Arborist will mark locations where earth saw cutting of tree roots is required in the field.
   2. All root pruning cuts shall be immediately backfilled with material side cast from the earth- sawing procedure, so that the ground surface is even and no tripping potential exists.
   3. All root pruning work is to be performed through the services of a certified arborist approved by the City Arborist.

B. Temporary Fence
   1. The Contractor shall erect a temporary fence around all trees within the construction area to establish a "tree protection zone", as established by City Arborist, before any work begins or any material is delivered to the jobsite. No work is to be performed (other than root pruning), materials stored, or vehicles driven or parked within the "tree protection zone" at any time during construction.

2. The exact location and establishment of the “tree protection zone” fence shall be approved by the City Arborist prior to setting the fence. The fence shall be 48 inches high, plastic poly-type or any other type of highly visible barrier in an open-weave type pattern with large openings. The type, color and pattern of the fence shall be approved by the Engineer prior to erection. This fence shall be properly maintained in an upright manner and shall remain up until final restoration, unless the Engineer directs removal otherwise. Tree fence shall be supported using T-Post style fence posts at a maximum of 8' spacing. T- posts must be at least six feet in length, two feet of which must be set in the ground. The fence shall be attached to posts and secured with a minimum of three nylon locking ties per post. Utilizing rebar as a fence post will not be permitted.
3. Fence shall be installed at the tree protection zone of the tree or at a minimum of 8 feet from the center of the tree.
4. Parking or maneuvering of machinery, stockpiling of materials or any other use will not be allowed upon unpaved areas within 10 feet of the trunk of trees designated to be protected.
5. Construction area is defined as all areas within 10 feet of any excavation.
6. All work within the “tree protection zone” shall have prior approval of the City Arborist. All slopes and other areas not re-graded should be avoided so that unnecessary damage is not done to the existing turf, tree root system, or ground cover.
7. The grade within the “tree protection zone” shall not be changed unless approved by the Engineer prior to making said changes or performing the work.
8. U-shaped, non-uniform, or other fencing around multiple trees is permitted and encouraged as approved by the City arborist or Engineer.
9. If excavation is within 5 feet of the trunk of the tree such that protection fencing is not possible, Contractor shall protect the trunk using boards, as detailed below.
10. Tree protective fencing to remain in place for entirety of construction. Any temporary removal for any reason, will alert City’s arborist.

C. Tree Trunk Protection

When temporary fencing cannot be installed as noted above, the Contractor shall provide 2 in. by 8 in. by 8 ft. boards banded continuously around each trunk to prevent scarring of trees shown on the plans or designated by the Engineer. For multi-stem trees, saplings, and shrubs to be protected within the area of construction, temporary fencing may be used for trunk protection

D. Tree Pruning

Tree pruning shall consist of pruning branches to protect the health of the tree, protect the canopy from damage, maintain the structural integrity of the tree, to ensure public safety, and to preserve the aesthetic qualities of the urban forest, or as directed by the City Arborist of Engineer. All pruning shall be done according to the current ANSI A300 (part 1) pruning standard. Trees selected for pruning will be cleaned of dead, diseased, or broken branches, thinned appropriately to reduce density of branches, raised to provide vertical clearance for pedestrian and vehicular traffic, and if warranted by species tolerance and specimen needs limbs will be reduced to promote a central leader and good structure. Pruning to provide clearance will be allowed up to 14 feet above pavement or park features. If additional clearance is needed a request in writing shall be submitted to the City Arborist. All branch pruning to American elm and oak trees

will be done between when the trees are dormant. Dormancy is generally between November and March but will vary by year and will be defined the City Arborist.

END OF SECTION 01 56 39

SECTION 01580

PROJECT CONSTRUCTION SIGN

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Contractor shall:

1. Fabricate, install and remove two (2) project construction signs as described herein.

1.2 RELATED WORK

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 PROJECT CONSTRUCTION SIGN CONTENT

A. Sign shall have the following information included on it:

1. Name of project
2. City of Evanston name and logo
3. Rendered plan view of the project
5. Elected officials (Mayor and Ward Councilmember)
6. Description of scope of work
7. Estimated completion date
8. Contract amount
9. Funding sources
10. General contractor's name
11. Contact information for questions

1.4 LOCATION

A. The contractor shall submit a plan of the proposed project construction sign location to the Owner for approval.

PART 2 - PRODUCTS

2.1 SIGN MATERIALS

A. Owner will supply layout example, data and information to be included on sign. Contractor shall submit draft layout of sign for approval by the Owner prior to sign fabrication. Sign layout shall be submitted prior to pre-construction meeting. Sign shall be installed as soon as possible following pre-construction meeting and prior to commencement of the work.

B. Size: 4 feet x 8 feet x ¾ inch A/C plywood or equal. Good side of plywood shall be used for sign.

C. Mounting: Signs shall be securely mounted on two or three 4" x 4" pressure treated wood posts so that bottom of sign is 4 feet above grade. Contractor shall be responsible for embedment and mounting details to securely install posts and mount signs to posts. Contractor shall provide bracing as necessary to secure posts.

D. If sign board is not flat, Contractor shall provide back framing to bring sign board into flat condition. Back framing shall be securely attached to posts and shall be painted to match posts.

E. Posts and back of signs shall be painted white.

F. Sign faces shall be professionally prepared, either computer generated on weather resistant materials and applied to plywood signboard or painted directly on signboard surface using weather resistant signage paint materials.

G. Lettering style shall be block letters or other lettering approved by the Owner.

PART 3 - EXECUTION

3.1 INSTALLATION OF SUPPORTS

A. Set pole-type supports into excavations:

1. Depth: Minimum 4 ft.
2. Plumb poles, backfill, tamp earth around poles.

B. Braced-framing:

1. Drive stakes, size determined by loading, minimum depth: 2'-6".
2. Secure framing members to stakes, cut tops of stakes to even line, flush with framing members

3.2 MAINTENANCE

A. Repair damages to structure, framing or sign.

B. Repaint surfaces, lettering, and logotypes that show severe weathering.

C. Maintain signs and supports in neat, clean condition.

3.3 REMOVAL

A. At conclusion of project, sign and posts shall be removed by Contractor and legally disposed.

B. Return grounds to condition as found prior to installation of sign. Resulting voids created by sign removal shall be completely backfilled with compacted earth, 9” of topsoil and sod to match finished grade.

END OF SECTION 01580

SECTION 01 60 00

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

B. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section 01 30 00 - SUBMITTALS.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 DEFINITIONS

A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms such are self-explanatory and have well recognized meanings in the construction industry.

1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
2. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.

1.4 QUALITY ASSURANCE

A. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.

1. When specified products are available only from sources that do not or cannot produce a quantity adequate to complete project requirements in a timely manner, consult with the Owner for a determination of the most important product qualities before proceeding. Qualities may include attributes relating to visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources that produce products that possess these qualities, to the fullest extent possible.

B. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1. The Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of subcontractors.
2. If a dispute arises between the general Contractor and subcontractors over concurrently selectable, but incompatible products, the Owner will determine

which products shall be retained and which are incompatible and must be replaced.

C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view.

1. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.

D. Manufacturer’s Instructions

1. When contract documents specify that installation shall comply with manufacturer’s printed instructions, obtain and distribute copies of such instructions to all parties involved in the installation, including the Owner.
2. Maintain one set of complete instructions with the Project Record Documents at the job site during installation and until completion.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.
1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, or theft.
3. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
4. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.
5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
7. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

B. Arrange for transportation and deliveries of materials and equipment in accord with approved current construction schedules and in ample time to facilitate inspection prior to installation.

C. Coordinate deliveries to avoid conflict with work and conditions at site:

1. Work of other contractors or Owner, or their use of premises.
2. Limitations of storage space.
3. Availability of equipment and personnel for handling products.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation.

1. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Comply with size, make, type and quality specified.
4. Manufactured and fabricated products:

    a. Design, fabricate and assemble in accord with best engineering and shop practices.
    b. Manufacture like parts of duplicate units to standard interchangeable sizes.
    c. Two or more items of the same kind shall be identical from the same manufacturer.
    d. All system parts shall be from the same manufacturer to the greatest extent practical.
    e. Adhere to equipment capacities, sizes and dimensions shown or specified unless variations are specifically approved by Change Order.

B. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:

1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.
2. Semi-proprietary Specification Requirements: Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted.

    a. Where products or manufacturers are specified by name, accompanied by the term "or equal," or "or approved equal" comply with the Contract's provisions concerning "substitutions" to obtain approval for use of an unnamed product.

3. Non-Proprietary Specifications: When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
4. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
5. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.

    a. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.

6. Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.
7. Visual Matching: Where Specifications require matching an established Sample, the Owner's decision will be final on whether a proposed product matches satisfactorily.

    a. Where no product available within the specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category, or for noncompliance with specified requirements.

8. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Owner will select the color, pattern and texture from the product line selected.

C. Deliver products in undamaged condition in original containers or packaging, with identifying labels intact and legible.

D. Clearly mark partial deliveries of component parts or assemblies or equipment to permit easy identification of parts and to facilitate assembly.

E. Immediately on delivery, inspect shipment to assure:

1. Product complies with contract documents and Owner
2. Quantities are correct.
3. Containers and packages are intact and labels are legible.
4. Products are properly protected and undamaged.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS:

A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

B. Provide equipment and personnel to handle products and equipment, including those furnished by the Owner. Prevent damage to products or packaging.

C. Provide additional protection during handling to prevent scraping, marring or otherwise damaging products, equipment or surrounding surfaces.

D. Handle products and equipment in manner to prevent bending or overstressing.

E. Lift packages, equipment or components only at designated lift points.

END OF SECTION 01 60 00

SECTION 01 63 00

SUBSTITUTIONS AND PRODUCT OPTIONS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base all bids on providing all products exactly as specified.

B. For products specified only by reference or performance standards, select any product which meets or exceeds standards, by any manufacturer, subject to the Owner's approval.

C. For products specified by naming several products or manufacturers, select any product and manufacturer named.

1.2 RELATED WORK

A. Drawings and general provisions of Contract, including General and Supplementary Conditions, Special Provisions and all other Divisions of the Project Manual, apply to this Section.

1.3 SUBSTITUTIONS, BIDDER/CONTRACTOR OPTIONS

A. Prior to Bid Opening: The Owner will consider written requests to amend the bidding documents to add products not specified provided such requests are received at least 10 calendar days prior to bid opening date. Requests received after that time will not be considered. When a request is approved, the Owner will issue an appropriate addendum not less than three (3) calendar days prior to bid opening date.

B. With Bid: A bidder may propose substitutions with his bid by completing the Product Substitution List in the Bid Form, subject to the provisions stated thereon. The Owner will review Proposed Product Substitution List of low bidder and recommend approval or rejection by the Owner prior to award of contract.

C. After Award of Contract: No substitutions will be considered after Notice of Award except under one or more of the following conditions:

1. Substitution required for compliance with final interpretations of code requirement or insurance regulations.
2. Unavailability of specified products, through no fault of the Contractor.
3. Subsequent information discloses inability of specified product to perform properly or to fit in designated space.
4. Manufacturer/fabricator refusal to certify or guarantee performance of specified product as specified.
5. When a substitution would be substantially to Owner's best interest.

1.4 SUBSTITUTION REQUIREMENTS

A. Submit three (3) copies of each request for substitution. Include in request:

1. Complete date substantiating compliance of proposed substitution with contract documents.

2. For products:

    a. Product identification, including manufacturer's name and address.
    b. Manufacturer's literature:

        1) Product description
        2) Performance and test data
        3) Reference standards

    c. Samples
    d. Name and address of similar projects on which product was used and dates of installation.

3. For construction methods:

    a. Detailed description of proposed method.
    b. Drawings illustrating methods.

4. Itemized comparison of proposed substitution with product or method specified.
5. Data relating to changes in construction schedule.
6. Identify:

    a. Changes or coordination required.
    b. Other contracts affected.

7. Accurate cost data on proposed substitution in comparison with product or method specified.

B. In making request for substitution, bidder/contractor represents:

1. He has personally investigated proposed product or method and determined that it is equal or superior in all respects to that specified.
2. He will provide the same guarantee for substitution as for product or method specified.
3. He will coordinate installation of accepted substitutions into the work, making all changes for work to be complete in all respects.
4. Cost data is complete and includes all related costs under his contract, but excludes:

    a. Owner's redesign.
    b. Administrative costs of Owner.
    c. Costs under separate contracts.

5. He will pay all additional costs and expenses for Owner and other contractors.

C. Substitutions will not be considered when:

1. They are indicated or implied on shop drawings or product data submittals without formal request submitted in accordance with this Section.
2. Acceptance will require substantial revision of contract documents.

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 63 00

SECTION 01 70 00

PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Substantial completion, final completion, closeout submittals, and application for final payment.

B. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:

1. Inspection procedures.
2. Project record document submittal.
3. Operating and maintenance manual submittal.
4. Submittal of warranties.
5. Final cleaning.
6. Final payment.

1.2 RELATED WORK

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 SUBSTANTIAL COMPLETION

A. When the Contractor considers the work substantially complete, Contractor shall submit written declaration to the Owner that the work, or designated portion thereof, is substantially complete. Include list of items to be completed or corrected.

B. Owner and Contractor will make an inspection within seven days after receipt of certification.

C. Should the Owner consider that the work is substantially complete:

1. The Owner will prepare and issue a Certificate of Substantial Completion, containing:

a. Date of Substantial Completion.
b. Punch list of items to be completed or corrected.
c. The time within which Contractor shall complete or correct work of listed items. All punch list items must be completed within 30 days of substantial completion.
d. Date and time Owner will assume possession of work or designated portion thereof.
e. Responsibilities of Owner and Contractor for:

(1.) Insurance
(2.) Utilities
(3.) Operation of mechanical, electrical and other systems.
(4.) Maintenance and cleaning.
(5.) Security

f. Signatures of Owner and Contractor

D. Should the Owner consider that work is not substantially completed:

1. The Owner shall immediately notify Contractor, in writing, stating reasons.
2. The Contractor shall complete work and send a second written notice to Owner, certifying that project, or designated portion of project, is substantially complete.
3 The Owner will re-inspect work.

1.4 FINAL INSPECTION

A. When the Contractor considers the work complete, the Contractor shall submit written declaration to the Owner that the work is complete. Contractor shall submit written certification that:

1. Contract documents have been reviewed.
2. Project has been inspected for compliance with contract.
3. Work has been completed in accord with contract.
4. Equipment and systems have been tested in the Owner's presence and are operational.
5. Project is completed, ready for final inspection.

B. The Owner will make final inspection within seven days after receipt of certification.

C. Should the Owner consider that work is finally complete in accord with Contract Document requirements, he shall request contractor to make project closeout submittals.

D. Should the Owner consider that work is not finally complete:

1. The Owner shall notify the Contractor, in writing, stating reasons.
2. The Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice to the Owner certifying that the work is complete.
3. The Owner will re-inspect work.

1.6 CLOSEOUT SUBMITTALS

A. Project Record Documents: In accordance with requirements of SECTION 01 72 00 - PROJECT RECORD DOCUMENTS.

B. Deliver evidence of compliance with requirements of governing authorities.

C. Deliver Certificate of Insurance for products and completed operations. Certificate shall include a evidence that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days prior notice has been given to the Contractor. Contractor shall include a written statement that Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents.

D. Evidence of payments, release of liens

1. Consent of Surety to Final Payment.
2. Other data establishing payment or satisfaction of obligations including receipts, Contractor's releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and form as required by the City.

3. Separate releases of waivers of liens for subcontractors, suppliers and others with lien rights against property of Owner together with list of those parties.
4. Paid utility bills, if any.
5. An affidavit that payrolls, bills for materials and equipment and other indebtedness connected to the work for which the City or the City's property might be responsible or encumbered (less any amounts withheld by City) have been paid or otherwise satisfied.

1.7 INSTRUCTION

A. Instruct Owner's personnel in operation of all systems, mechanical, electrical and other equipment.

1.8 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit final statement of accounting to Owner.

B. Statement shall reflect all adjustments.

1. Original contract sum.
2. Additions and deductions resulting from:

    a. Previous change orders.
    b. Cash allowances.
    c. Unit prices.
    d. Other adjustments.
    e. Deductions for uncorrected work.
    f. Deductions for re-inspection payments.

3. Total contract sum, as adjusted.
4. Previous payments.
5. Sum remaining due.

C. The Owner will prepare final change order, reflecting approved adjustments to contract sum not previously made by change orders.

1.9 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit final application in accord with requirements of Conditions of Contract.

1.10 FINAL CERTIFICATE FOR PAYMENT

A. The Owner will issue final certificate in accord with provisions of Conditions of contract.

B. Should final completion be materially delayed through no fault of the Contractor, the Owner may issue a Semi-Final Certificate of Payment, in accord with provisions of Conditions of Contract.

PART 2 – PRODUCTS

(NOT APPLICABLE)

PART 3 – EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 70 00

SECTION 01 71 00

CLEANING

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Contractor shall maintain premises and public properties free from accumulations of waste, debris, and rubbish, caused by construction operations.

B. At completion of work, Contractor shall remove waste materials, rubbish, tools, equipment, machinery and surplus materials, clean all sight-exposed surfaces and leave project clean and ready for occupancy.

1.2 RELATED WORK

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 SAFETY REQUIREMENTS

A. Standards: Maintain project in accord with following safety and insurance standards.

1. Occupational Safety and Health Administration (OSHA).

B. Hazards Control:

1. Store volatile wastes in covered metal containers and remove from premises daily.
2. Prevent accumulation of wastes which create hazardous conditions.
3. Provide adequate ventilation during use of volatile or noxious substances.

C. Conduct cleaning and disposal operations to comply with Federal, State and local ordinances and anti-pollution laws.

1. Do not burn or bury debris, rubbish or other waste materials on project site.
2. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains.
3. Do not dispose of wastes into streams or waterways.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Select and use all cleaning materials and equipment with care to avoid scratching, marring, defacing, staining or discoloring surfaces cleaned.

B. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.1 DURING CONSTRUCTION

A. Execute cleaning to ensure that grounds and public properties are maintained free from accumulations of waste materials and rubbish. Public right-of-way shall be kept free of dirt and debris at all times.

B. Wet down materials and rubbish to lay dust and to prevent blowing dust.

C. At reasonable intervals during progress of work, clean site and public properties, and dispose of waste materials, debris and rubbish.

D. Provide on-site metal containers for collection of waste materials, debris and rubbish.

E. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.

F. Handle waste materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.

G. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

3.2 FINAL CLEANING

A. General: Provide final cleaning operations when indicated. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer’s instructions.

B. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces.

C. Clean the Project site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste materials, litter and foreign substances. Sweep paved areas broom clean. Remove petro-chemical spills, stains and other foreign deposits. Rake grounds that are neither planted nor paved, to a smooth even-textured surface.

1. Remove tools, construction equipment, machinery and surplus material from the site.
2. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
3. Remove debris and surface dust from limited access spaces.
4. Remove labels that are not permanent labels.
5. Touch-up and otherwise repair and restore marred exposed finishes and surfaces. Replace finishes and surfaces that can not be satisfactorily repaired or restored, or that show evidence of repair or restoration. Do not paint over “UL” and similar labels, including mechanical and electrical name plates.
6. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
7. Leave the Project clean and ready for occupancy.

E. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.

F. Broom clean paved surfaces; rake clean other surfaces on grounds.

G. Maintain cleaning until project, or designated portion thereof, is occupied by Owner.

END OF SECTION 01 71 00

SECTION 01 72 00

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Maintenance of Documents

B. Contractor shall:

1. At project site, maintain one (1) copy of:

(a.) Contract drawings.
(b.) Project Manual.
(c.) Interpretations and supplemental instructions.
(d.) Addenda.
(e.) Reviewed, approved shop drawings and product data.
(f.) Other modifications to contract.
(g.) Field test records.
(h.) All schedules.
(i.) Correspondence file.
(j.) Change Orders

2. Provide files and racks for document storage.
3. File documents in format in accord with Project Manual Table of Contents.
4. Maintain documents in clean, dry, legible condition.
5. Do not use record documents for field construction purposes.
6. Make documents available at all times for inspection by Owner.
7. Furnish one (1) additional as-built record set of contract documents at the completion of the project. This set is not to be the set kept and updated periodically at the job site, but a clean set free of extraneous markings, notations, and erasures showing on a record of final conditions. Provide as-built record set in both PDF and AutoCAD formats.

1.2 RELATED REQUIREMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 MARKING DEVICES

A. Provide ballpoint pens, red color.

1.4 RECORDING

A. Label each document "PROJECT RECORD DOCUMENTS" in 2" high printed letters.

B. Keep record documents current, updated not less often than monthly.

C. Do not permanently conceal any work until specified information has been recorded.

D. Contract drawings: Legibly mark to record actual construction:

1. Depths of various elements of foundation in relation to adjacent ground elevations.
2. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
3. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
4. Field changes of dimension and detail.
5. Changes made by change order.
6. Details not on original contract drawings.

E. Specifications and addenda: Legibly mark-up each section to record:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by change order or field order.
3. Other matters not originally specified.

F. Shop drawings: Maintain as record documents; legibly annotate drawings to record changes made after review.

1.5 SUBMITTAL

A. At completion of project, deliver record documents to Owner.

B. Accompany submittal with transmittal letter, in duplicate, containing:

1. Date.
2. Project title and number.
3. Contractor's name and address.
4. Title and number of each record document.
5. Certification that each document submitted is complete and accurate.
6. Signature of contractor, or his authorized representative.

PART 2 - PRODUCTS

(NOT APPLICABLE)

PART 3 - EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 72 00

SECTION 01 73 00

OPERATING AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Contractor shall:

1. Compile product data and related information appropriate for Owner's maintenance and operation of products and equipment provided under the Contract.
2. Instruct Owner's personnel in operation and maintenance of products, equipment and systems.

1.2 RELATED REQUIREMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 QUALITY ASSURANCE

A. Maintenance Manual Preparation: In preparation of Maintenance Manuals, use personnel thoroughly trained and experienced in operation and maintenance of the equipment or system involved.

1. Where written instructions are required, use personnel skilled in technical writing to the extent necessary for communication of essential data.
2. Where Drawings or diagrams are required, use draftsmen capable of preparing Drawings clearly in an understandable format.

B. Instructions for the Owner's Personnel: For instruction of the Owner's operating and maintenance personnel, use experienced instructors thoroughly trained and experienced in the operation and maintenance of the equipment or system involved.

1.4 SUBMITTALS

A. Form: Manufacturer's standard product or equipment data of same type and form furnished to manufacturer's maintenance personnel.

B. Provide sturdy manila or kraft envelope, properly labelled, of sufficient size to contain all submittals.

C. Submit one copy of data in final form at least fifteen days before final inspection. This copy will be returned within fifteen days after final inspection, with comments.

1. After final inspection make corrections or modifications to comply with the Owner's comments. Submit the specified number of copies of each approved manual to the Owner within fifteen days of receipt of the Owner's comments.

D. Form of Submittal: Prepare operating and maintenance manuals in the form of an instructional manual for use by the Owner's operating personnel. Organize into suitable

sets of manageable size. Where possible, assemble instructions for similar equipment into a single binder.

E. Binders: For each manual, provide heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, in thickness necessary to accommodate contents, sized to receive 8-1/2" by 11" paper. Provide a clear plastic sleeve on the spine, to hold labels describing the contents. Provide pockets in the covers to receive folded sheets.

F. Text Material: Where written material is required as part of the manual use the manufacturer's standard printed material, or if it is not available, specially prepared data, neatly typewritten, on 8-1/2" by 11", 20 pound white bond paper.

G. Drawings: Where drawings or diagrams are required as part of the manual, provide reinforced punched binder tabs on the drawings and bind in with the text.

1.5 MANUAL CONTENT

A. Neatly typewritten table of contents for each volume, arranged in systematic order. Follow Project Manual format.

B. In each manual include information specified in the individual Specification Section, and the following information for each major component of equipment and its controls:

1. General system or equipment description.
2. Design factors and assumptions.
3. Copies of applicable Shop Drawings and Product Data.
4. System or equipment identification, including:

    a. Name of manufacturer.
    b. Model number.
    c. Serial number of each component.

5. Operating instructions.
6. Emergency instructions.
7. Wiring diagrams.
8. Inspection and test procedures.
9. Maintenance procedures and schedules.
10. Precautions against improper use and maintenance.
11. Copies of warranties.
12. Repair instructions including spare parts listing.
13. Sources of required maintenance materials and related services.
14. Manual Index.
15. Contractor, name of responsible principal, address and telephone number
16. List with each product, the name, address and telephone number of:

    a. Subcontractor
    b. Maintenance contractor, as appropriate.
    c. Identify area of responsibility of each
    d. Local supply source for parts and replacement.

C. Organize each manual into separate Sections for each piece of related equipment. As a minimum each manual shall contain a title page, a table of contents, copies of Product Data, supplemented by drawings and written text, and copies of each warranty, bond and service Contract issued.

D. General Information: Provide a general information Section immediately following the Table of Contents, listing each product included in the manual, identified by product

name. Under each product, list the name, address, and telephone number of the Subcontractor or installer, and the maintenance contractor. Clearly delineate the extent of responsibility of each of these entities. In addition, list a local source for replacement parts and equipment.

E. Product Data: Where manufacturer's standard printed data is included in the manuals, include only sheets that are pertinent to the part or product installed. Mark each sheet to identify each part or product included in the installation. Where more than one item in a tabular format is included, identify each item, using appropriate references from the Contract Documents. Identify data that is applicable to the installation and delete references to information that is not applicable.

F. Written Text: Where manufacturer's standard printed data is not available, and information is necessary for proper operation and maintenance of equipment or systems, or it is necessary to provide additional information to supplement data included in the manual, prepare written text to provide necessary information. Organize the text in a consistent format under separate headings for different procedures. Where necessary, provide a logical sequence of instruction for each operating or maintenance procedure.

G. Drawings: Provide specially prepared drawings where necessary to supplement manufacturer's printed data to illustrate the relationship of component parts of equipment or systems, or to provide control or flow diagrams. Coordinate these drawings with information contained in Project Record Drawings to assure correct illustration of the completed installation.

H. Do not use original Project Record Documents as part of the Operating and Maintenance Manuals.

I. Warranties, Bonds and Service Contracts: Provide a copy of each warranty, bond or service contract in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to be followed in the event of product failure. List circumstances and conditions that would affect validity of the warranty or bond.

1. Contractor, name of responsible principal, address and telephone number.
2. List of each product specified to be included, indexed to volume content.
3. List with each product, the name, address and telephone number of:

    a. Subcontractor.
    b. Maintenance contractor, as appropriate.
    c. Identify area of responsibility of each.
    d. Local supply source for parts and replacement.

J. Product Data:

1. Include only sheets pertinent to specific product.
2. Annotate each sheet to:

    a. Clearly identify specific product or part installed.
    b. Clearly identify data applicable to installation.
    c. Delete references to inapplicable installation.

K. Drawings:

1. Supplement product data with drawings to clearly illustrate relationship of component parts of equipment and systems and control and flow diagrams.

2. Coordinate drawings with information in Product Record Documents to assure correct illustration of completed installation.
3. Do not use Project Record Documents as maintenance drawings.

L. Written text to supplement product data for particular installation:

1. Organize in consistent format under separate headings for different procedures.
2. Provide logical sequence of instructions for each procedure.

M. Copy of each warranty, bond and service contract issued.

1. Provide information sheet for Owner personnel. Give:

a. Proper procedures in event of failure.
b. Instances which might affect validity of warranties or bonds.

1.6 MANUAL FOR MATERIALS AND FINISHES

A. Submit two (2) copies of complete manual in final form.

B. Refer to individual Specification Sections for additional requirements on care and maintenance of materials and finishes.

C. Content for products, applied materials and finishes:

1. Manufacturer's data, giving full information on products.

a. Catalog number, size, composition.
b. Color and texture designations.
c. Information for re-ordering special-manufactured products.

2. Instructions for care and maintenance.

a. Manufacturer's recommendations for types of cleaning agents and methods.
b. Cautions against cleaning agents and methods detrimental to product.
c. Recommended cleaning and maintenance schedule.

D. Moisture-Protection and Weather-Exposed Products: Provide complete manufacturer's data with instructions on inspection, maintenance and repair of products exposed to the weather or designed for moisture-protection purposes.

E. Manufacturer's Data: Provide manufacturer's data giving detailed information, including the following, as applicable:

1. Applicable standards.
2. Chemical composition.
3. Installation details.
4. Inspection procedures.
5. Maintenance information.
6. Repair procedures.

PART 2 - PRODUCTS

(NOT APPLICABLE)

PART 3 - EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 73 00

SECTION 01 74 00

WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.

1. Warranties for the Work and products and installations of each Contractor shall be one (1) year unless specified otherwise on the Drawings or in the individual Sections of Divisions 2 through 16.

B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and Contractors required to countersign special warranties with the Contractor.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.3 WARRANTY REQUIREMENTS

A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requires of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights or remedies.

1. Rejection of Warranties: The Owner reserves the rights to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

E. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the

Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

F. For specific warranty requirements related to landscape materials, refer to the applicable Section.

1.4 SUBMITTALS

A. Submit written warranties to the Owner prior to the date certified for Substantial Completion. If the Owner's Certificate of Substantial Completion designates a commencement date for warranties other that the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner.

1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner within fifteen days of completion of that designated portion of the Work.

B. Form of Submittal: At Final Completion, compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, Subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

C. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the project title or name, and the name of the Contractor.
3. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS

(NOT APPLICABLE)

PART 3 - EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 74 00

SECTION 02 06 40

CONTAMINATED SOIL REMOVAL AND DISPOSAL

PART 1 - GENERAL

1.01 SUMMARY

A. Related Documents: all terms and conditions of the Contract apply to this section.

B. Work included: this specification is for the permitting, excavation, loading, hauling and manifesting of any contaminated soil present on site. The Contractor shall perform the work under this section in accordance with all local, county, City of Evanston, IEPA, USEPA, OSFM and OSHA regulations and shall perform the following:

1. Obtain a waste stream authorization for the special waste disposal at an approved landfill and/or treatment facility.
2. Prepare manifest forms prior to starting any excavation activities.
3. Excavate special waste to the extent outlined in the specifications and contract documents.
4. Stockpile contaminated soil on site prior to disposal as required by applicable regulations.
5. Load contaminated soil into licensed special waste trucks and dispose of at the approved landfill/treatment facility.
6. Perform ambient air monitoring for the above activities as required by applicable regulations.

C. All existing soils at James Park shall be classified as special non-hazardous waste. Contractors shall include pricing for any and all soils that must be removed from this site during the course of construction in accordance with this specification, IDOT Standard Specification Section 669 and applicable law.

1.02 DEFINITIONS

A. IDOT: Illinois Department of Transportation

B. IEPA: Illinois Environmental Protection Agency

C. Hazardous Waste: means any waste that poses a substantial danger immediately or over a period of time to humans, plants or animals. A waste is classified as hazardous if it exhibits any of the following characteristics: 1) ignitability, 2) corrosivity, 3) reactivity, or 4) toxicity and as defined in Section 721.103 of Title 35 of the Illinois Administrative Code.

D. Manifest: means the form provided or prescribed by the IEPA and used for identifying name, quality, routing and destination of special waste during its transportation from point of generation to the point of disposal, treatment or storage.

E. MSDS: means Material Safety Data Sheet, required by OSHA for any substances which are toxic, caustic or otherwise hazardous to workers.

F. Remediation Area: means any area on site where contaminated soil is present.

G. Special Waste: means any industrial process waste or pollution control waste, except as may be determined pursuant to Section 22.9 of the Illinois Environmental Protection Act.

1.03 SUBMITTALS

A. The Contractor shall provide the Owner with copies of the following submittals:

1. Contractor's Site Health and Safety Plan, IDOT Section 669
2. Contractor's Site Contamination Operation Plan, IDOT Section 669
3. Contractor's Erosion Control Plan, IDOT Section 669
4. Proof of OSHA training in compliance with the Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) for applicable workers.
5. Operating licenses and permits for each proposed transporter. Details of haul routes from site to the disposal facilities.
6. Copies of all daily reports, State certified transport manifests and weight tickets must be submitted to the Owner with ten (10) working days of off-site disposal.
7. Air sampling data collected during the course of the Work, including OSHA compliance monitoring.

B. Submittal Review: review of submittals or any comments made do not relieve the Contractor from compliance with the requirements of the drawings and specifications. The purpose of this check is to review for general conformance with the design concept of the project and general compliance with the information given in the contract documents. The Contractor is responsible for confirming and correlating all quantities and dimensions, electing techniques of construction, coordinating the Work and performing the Work in a safe and satisfactory manner.

1.04 NOTIFICATIONS

A. The Contractor shall notify the Owner no less than forty-eight (48) business hours prior to excavating, loading and transporting contaminated soils.

1.05 RECORD KEEPING

A. The Contractor shall provide the Owner with documentation of labor, equipment, materials and laboratory analysis used for the removal and disposal of contaminated soils.

PART 2 - PRODUCTS

2.01 REMOVAL AND DISPOSAL OF CONTAMINATED SOILS

A. The Contractor shall furnish all necessary means, products, tools and equipment required to fulfill the scope of work described in the Specifications and Drawings for this Project.

PART 3 - EXECUTION

3.01 PERMITTING

A. The Contractor shall obtain a waste stream authorization from a licensed landfill/disposal facility. Contractor shall submit copies of the landfill/treatment facility waste stream authorization form to the Owner for review and approval and securing Owner signature.

B. Haulers for transportation of non-hazardous special waste shall hold a current valid hauling permit pursuant to Title 35 of the Illinois Administrative Code (IAC) Parts 723 and 809, respectively.

3.02 MATERIAL SAMPLING AND MONITORING

A. The Contractor shall collect sufficient amounts of representative soil from the Remediation Area for analysis by an independent laboratory to obtain a waste stream

authorization from the landfill/treatment facility. The Contractor is responsible for acquisition of the required disposal permits and payment of all landfill fees.

B. The Contractor shall submit the soil samples to the laboratory and pay for the cost of analyzing the constituents required by the disposal facility.

C. The Contractor shall immediately notify the Owner if contaminated materials are encountered on-site.

D. The Contractor shall perform and pay for ambient air monitoring as required by IDOT and to evaluate the appropriate level of worker personal protective equipment. Air monitoring shall be performed as often as required to ensure the safety of both workers and the public.

E. All material sampling and monitoring activities shall be performed by an environmental engineer licensed in the State of Illinois and shall meet or exceed all regulatory standards and/or requirements. The contractor shall include all costs for these services in their base bid price.

3.03 EXCAVATION

A. If contaminated soil is identified on-site, the Contractor shall perform the following:

1. In mass grading and/or paved areas, the Contractor shall excavate contaminated soil to the depth required for the construction of final grades, paved surfaces and foundations.
2. In the proposed new underground utility areas, the Contractor shall excavate contaminated soil to the extent required to install the new underground utility.

B. Excavation shall be performed in accordance with OSHA requirements and guidelines.

C. All workers in the vicinity of the contaminated soil area must have completed 40-hours Hazardous Waste Site Workers OSHA Training in accordance with 29 CFR 1910.120.

3.04 DECONTAMINATION

A. The Contractor shall remove soil, dust, rocks, etc from the exterior of trucks, trailers or other heavy equipment leaving the site.

B. The Contractor shall clean the tractor-trailers or trucks which are loaded with materials for disposal by removing clinging soil and rocks from the exterior of the tractor-trailers or trucks.

C. The Contractor shall not allow equipment or trucks to leave the site with water leaking or mud dripping or caked to the equipment or trucks.

D. The Contractor shall clean excavation equipment (tools, shovels, backhoes, etc) with a jet washer or steam cleaner after completing excavation work in the contaminated soil areas and prior to start working in the clean soil areas.

3.05 STOCKPILING

A. The Contractor may stockpile contaminated soil on site for a maximum of five (5) working days. The Contractor shall be responsible for keeping the contaminated soil separated from the clean soil. If the contaminated soil comes in contact with the clean soil, the Contractor shall dispose of the clean soil as contaminated soil at his own expense.

B. Stockpile contaminated soil on 6-mil polyethylene visqueen. The location of the stockpile area shall be coordinated with the Owner. The Contractor shall keep contaminated soils covered with 6-mil polyethylene visqueen until subsequent loading, transportation and disposal. Provide a 12” to 18” berm around the stockpile(s).

3.06 LOADING

A. The contractor shall load contaminated soils directly from the Remediation Area or from temporary stockpiles into hauling trucks for subsequent transportation and disposal.

3.07 TRANSPORTATION

A. Contaminated soil shall be transported by a licensed special waste hauler in the State of Illinois.

B. The Contractor shall provide, complete and sign manifests required for transportation and disposal of the contaminated soils.

3.08 DISPOSAL

A. The Contractor shall provide copies of weight tickets from the landfill to the Owner.

B. The Contractor shall provide copies of completed manifests executed by the transporter and the landfill to the Owner.

3.09 BACKFILL

A. Topsoil and Fill Material Data

1. The Contractor shall provide to the Owner the location(s) and name(s) of topsoil and clean fill sources from which backfill materials are to be obtained for the project, approximate quantities obtained at each site, depth at which soil was taken and indicate whether crops had grown on site(s).

B. Soil Testing

1. The Contractor shall submit the following information to the Owner for every source of backfill material:

a. A report defining the current and historic uses of the clean soil source material to determine if the potential for any source contamination is present.
b. Laboratory analysis of in-situ soil to be used on site to determine that all constituents meet the applicable objectives. The source location should be surveyed and sampled at a frequency of one (1) sample per 1,000 cubic yards if there is a known or suspected source of contamination. The analyses shall be performed to the acceptable method detection limits for each chemical. At a minimum, the source soil should be sampled for the Target Compound List, found in Title 35 Illinois Administrative Code 740, Appendix A, using the applicable EPA SW 846 methods. If historical records indicated that potential sources of contamination do not exist, one (1) sample will be collected and analyzed to characterize the clean soil source material.
c. A summary of the sample collection and data analysis. The report should include a tabulation of sampling results compared to applicable Tier 1 remediation objectives for residential properties.

C. The Contractor shall not backfill excavation areas without approval of the Owner. If the Contractor backfills the excavation area without obtaining approval from the Owner, the backfill materials shall be excavated, if required, at the Contractor's expense.

3.10 DUST CONTROL

A. The Contractor shall control dust by all necessary means, including but not limited to covering trucks, stockpiles and open materials, watering haul roads, sweeping paved roads and limiting the speed of all on-site vehicles.

3.11 QUALITY CONTROL

A. Visual inspection and damage repairs shall be made daily by the Contractor and/or as directed by the Owner or designated representative to assure that erosion, drainage and containment control measures are functioning properly.

END OF SECTION 02 06 40

SECTION 02 41 13
SITE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes site demolition as indicated on the drawings and required for installation of new work required for completion of the project and as specified.

1.2 DEFINITIONS

A. Remove and Dispose: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction, where indicated, and deliver them to Owner ready for reuse.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 SUBMITTALS

A. Schedule of Site Demolition Activities: Indicate the following:

1. For purposes of Owner’s information only, sequence of site demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Locations of proposed dust- and noise-control temporary partitions and means of egress.

B. Pre-demolition Photographs or Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by site demolition operations.

1.4 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning site demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Standards: Comply with ANSI A10.6 and NFPA 241.

1.5 PROJECT CONDITIONS

A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

B. Notify Owner of discrepancies between existing conditions and Drawings before proceeding with site demolition.

C. Hazardous Materials: Start operation under this section only after hazardous materials have been removed in accordance with related sections.

1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner.

D. Storage or sale of removed items or materials on-site is not permitted.

E. Utility Service: Maintain existing utilities required to remain in service and protect them against damage during site demolition operations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of site demolition required.

C. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs and preconstruction videotapes.

D. Perform surveys as the Work progresses to detect hazards resulting from site demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during site demolition operations.

B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be demolished.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct site demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

3.4 SITE DEMOLITION, GENERAL

A. General: 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:

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
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.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during site demolition. Items may be removed to a suitable, protected storage location during site demolition and cleaned and reinstalled in their original locations after site demolition operations are complete.

3.5 SITE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove concrete between saw cuts.

B. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

3.6 MANAGEMENT OF DEMOLISHED MATERIALS

A. Separate recyclable demolished materials from other demolished materials to the maximum extent possible. Separate recyclable materials by type.

1. Provide containers or other storage method for controlling recyclable materials until they are removed from Project site.
2. Stockpile processed material on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from demolition area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Transport demolished materials off Owner’s property and legally dispose of all materials in accordance with authorities having jurisdiction.

B. Remove from the site and legally dispose of non-recyclable debris, rubbish, and other materials resulting from demolition operations in accordance with authorities having jurisdiction.

C. Burning: Do not burn demolished materials.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by site demolition operations. Return adjacent areas to condition existing before site demolition operations began.

END OF SECTION 02 41 13

SECTION 03 30 00
CAST-IN-PLACE-CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Concrete foundation walls.
   2. Concrete reinforcement.
   3. Joint devices associated with concrete work.
   4. Concrete curing.

1.3 REFERENCE STANDARDS

A. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials; 2010 (Reapproved 2015).

B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).

C. ACI 211.2 Standard Practice for Selecting Proportions for Structural Lightweight Concrete; 1998 (Reapproved 2004).

D. ACI 301 Specifications for Structural Concrete; 2016.

E. ACI 302.1R - Guide to Concrete Floor and Slab Construction; 2015.

F. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).

G. ACI 305.1 - Specification for Hot Weather Concreting; 2014.

H. ACI 306.1 - Standard Specification for Cold Weather Concreting; 1998.

I. ACI 308.1 - Specification for Curing Concrete; 2011.

J. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2017).

K. ACI 347R - Guide to Formwork for Concrete; 2014.

L. ACI SP-66 6 ACI Detailing Manual; 2004.

M. ASTM A615/A625M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2016.

N. ASTM A775/A775M - Standard Specification for Epoxy-Coated Steel Reinforcing Bars; 2017.

O. ASTM A884/A884M - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement; 2014.

P. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2017.

Q. ASTM C172/C172M - Standard Practice for Sampling Freshly Mixed Concrete; 2014a.

R. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field; 2017.

S. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2017b.

T. ASTM C42/C42M - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete; 2016.

U. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2017a.

V. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2015a.

W. ASTM C150/C150M - Standard Specification for Portland Cement; 2017.

X. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete; 2016.

Y. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2016.

Z. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2011.

AA. AASTM C330/C330M - Standard Specification for Lightweight Aggregates for Structural Concrete; 2017a.

BB. AASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2017.

CC. AASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2015.

DD. AASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2014.

EE. AASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete; 2016.

FF. AASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 2013.

GG. AASTM C1116/C1116M - Standard Specification for Fiber-Reinforced Concrete; 2010a (Reapproved 2015).

HH. AASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction; 2004a (Reapproved 2013).

II. AASTM D3963/D3963M - Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Steel Reinforcing Bars; 2015.

JJ. AASTM E1155 - Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers; 2014.

KK. AASTM E1155M - Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers (Metric); 2014.

LL. AASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2011 (Reapproved 2017).

MM. ACRSI (DA4) - Manual of Standard Practice; 2009.

NN. ANSF 61 - Drinking Water System Components - Health Effects; 2017.

OO. ANSF 372 - Drinking Water System Components - Lead Content; 2016.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Conduct a preinstallation meeting at least one week prior to the start of the work of this section.
   1. Ensure required submittals have been provided with sufficient time for review prior to scheduling the Preinstallation Meeting.
   2. Review the detailed requirements for preparing the concrete design mixes and to review the drawings and specifications for this work.
   3. Require attendance by all affected installers, including but not limited to:

      a. Contractor’s Superintendent
      b. Laboratory responsible for the concrete design mix.
      c. Laboratory responsible for the field quality control.
      d. Concrete subcontractor
      e. Other affected Subcontractors
      f. Owner

   4. Record minutes and distribute copies within 5 days after meeting to participants as well as those affected by decisions made.

1.5 SUBMITTALS

A. See Section 01 30 00 for submittal procedures.

B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.

C. Mix Design: Submit proposed concrete mix design.
   1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.

D. Steel Reinforcement Shop Drawings: Submit details of fabrication, bending, and placement, prepared according to ACI SP-66. Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement. Include special reinforcement required for openings through concrete structures.

E. Formwork Shop Drawings: Indicate pertinent dimensions, materials, bracing, and arrangement of joints and ties.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of the type specified and with minimum three years of documented experience and a record of successful in-service performance.

B. Manufacturer Qualifications: Company specializing in manufacturing ready-mixed concrete products complying with ASTM C94/C94M.

C. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

D. Source Limitations: Obtain each type or class of cementitious materials of the same brand from the same manufacturer's plan, each aggregate from one source, and each admixture from the same manufacturer.

E. Perform work of this section in accordance with ACI 301 and ACI 318.

F. Comply with ACI 305.1 when concreting during hot weather.

G. Comply with ACI 306.1 when concreting during cold weather.

PART 2 - PRODUCTS

2.1 FORMWORK

A. Formwork Design and Construction: Comply with guidelines of ACI 347R to provide formwork that will produce concrete complying with tolerances of ACI 117.

1. Provide concrete forms, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.

2. Design and construct to provide resultant concrete that conforms to design with respect to shape, lines, and dimensions.
3. Chamfer outside corners of beams, joists, columns, and walls.

B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.

1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.

a. Medium-density overlay, Class 1, or better, mill-release agent treated and edge sealed.

b. Structural 1, B-B, or better, mill oiled and edge sealed.
c. B-B (Concrete Form), Class 1, or better, mill oiled and edge sealed.

2. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.
3. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches of concrete surface.

C. Form Ties: Removable or snap-off type, galvanized metal or plastic, fixed length, cone type, with waterproofing washer, free of defects that could leave holes larger than 1 inch in concrete surface.

D. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bugholes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory bonding of coatings to be applied.

1. Provide form-release agent with rust inhibitor for steel form-facing materials.

2.2 REINFORCEMENT MATERIALS

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).

1. Type: Deformed billet-steel bars.
2. Finish: Unfinished, unless otherwise indicated.
3. Finish: Epoxy coated in accordance with ASTM A775/A775M where indicated.

B. Steel Welded Wire Reinforcement (WWR): Class A epoxy coated, deformed type, ASTM A884/A884M.

1. Form: Flat Sheets.
2. WWR Style: As indicated on drawings.

C. Steel Welded Wire Reinforcement (WWR): Plain type, ASTM A1064/A1064M.

1. Form: Flat Sheets.
2. WWR Style: As indicated on drawings.

D. Reinforcement Accessories:

1. Tie Wire: Annealed, minimum 16 gage, 0.0508 inch.
2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
3. Provide stainless steel, galvanized, plastic, or plastic coated steel components for placement within 1-1/2 inches of weathering surfaces.
4. Epoxy Repair Coating: Liquid, two-part, epoxy repair coating; compatible with epoxy coating on reinforcement and complying with ASTM A775/A775M.

2.3 CONCRETE MATERIALS

A. Cement: ASTM C150/C150M, Type I - Normal Portland type. Type III cement may be used in lieu of Type I at Contractor's option, when acceptable to the Architect/Engineer of Record.

1. Acquire cement for entire project from same source.

B. Fine and Coarse Aggregates: ASTM C33/C33M.

1. Acquire aggregates for entire project from same source.
2. Class: Severe weathering region, but not less than 3S.
3. Nominal Maximum Aggregate Size: 3/4 inch, unless otherwise indicated.

C. Lightweight Aggregate: ASTM C330/C330M.

1. Nominal Maximum Aggregate Size: 3/4 inch, unless otherwise indicated.

D. Fly Ash: ASTM C618, Class C or F.

E. Water: Potable: ASTM C94/C94M

F. Structural Fiber Reinforcement: ASTM C1116/C1116M.

1. Fiber Type: Carbon Steel Fiber; Type 1, cold drawn wire.
2. Fiber Length: 1.5 inch, nominal.
3. Manufacturers:

a. Dramix: Bekaert Corporation.
b. Zorex; Novocon International, Inc.
c. Fibercon; Fibercon International, Inc.

4. Provide admixtures as recommended by steel fiber manufacturer without increasing specified water-cementitious material ratio.

2.4 ADMIXTURES

A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

B. Air Entrainment Admixture: ASTM C260/C260M.

C. High Range Water Reducing Admixture: ASTM C494/C494M Type F.

D. Water Reducing Admixture: ASTM C494/C494M Type A.

2.5 BONDING AND JOINTING PRODUCTS

A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.

B. Self- Expanding Strip Waterstops: Bentonite or other hydrophilic material, complying with NSF 61 and NSF 372.

1. Configuration: Rectangular or trapezoidal strip.
2. Size: As indicated on drawings; in longest lengths practicable.
3. Manufacturers:
   a. Volclay Waterstop-RX; Colloid Environmental Technologies Co.
   b. Conseal CS-231; Concrete Sealants Inc.

c. Swellseal, Joint; De Neef Construction Chemicals (U.S.) Inc.
d. Hydrotite; Greenstreak
e. Mirastop: Mirafi Moisture Protection, Div. of Royal Ten Cate (U.S.), Inc
f. Adeka Ultra Seal; Mitsubishi International Corporation
g. Superstop; Progress Unlimited Inc

C. Slab Isolation Joint Filler: 1/2 inch thick, height equal to slab thickness, with removable top section that will form 1/2 inch deep sealant pocket after removal.

1. Material: ASTM D1752 cork or self-expanding cork (Type III).

2.6 CURING MATERIALS

A. Curing Compound, Non-dissipating: Liquid, membrane-forming, clear, non-yellowing acrylic; complying with ASTM C309, Type 1, Class B.

1. Vehicle: Water-based.

B. Moisture- Retaining Sheet: ASTM C171.

1. Polyethylene film, clear, minimum nominal thickness of 4 mil, 0.004 inch.
2. White- burlap-polyethylene sheet, weighing not less than 3.8 ounces per square yard.

C. Water: Potable, not detrimental to concrete.

2.7 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

B. Proportioning Structural Lightweight Concrete: Comply with ACI 211.2 recommendations.

1. Replace as much Portland cement as possible with fly ash, ground granulated blast furnace slag, silica fume, or rice hull ash as is consistent with ACI recommendations.

C. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.

1. For trial mixtures method, employ independent testing agency acceptable to Owner for preparing and reporting proposed mix designs.

D. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.

E. Fiber Reinforcement: Add to mix at rate recommended by manufacturer, but not more than 25 pounds per cubic yard.

F. Normal Weight Concrete for Footings and Foundation Walls, and Interior Slab-on-Grade:

1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch, unless noted otherwise
2. Fly Ash Content: Maximum 25 percent of cementitious materials by weight.
3. Water--Cement Ratio: Maximum 44 percent by weight.

4. Total Air Content: For exterior exposed concrete: 6 percent (plus 1 or minus 1.5 percent), determined in accordance with ASTM C173/C173M. Do not air entrain trowel finished interior floors.
5. Maximum Slump: 4 inches.

2.8 REINFORCEMENT FABRICATION

A. Fabricate concrete reinforcing in accordance with CRSI (DA4) - Manual of Standard Practice.

B. Welding of reinforcement is not permitted.

C. Fabricate and handle epoxy-coated reinforcing in accordance with ASTM D3963/D3963M.

D. Locate reinforcing splices not indicated on drawings at point of minimum stress.

E. Unacceptable Materials: Reinforcement with any of the following defects will not be permitted in the Work:

1. Bar lengths, depths or bends exceeding specified fabrication tolerances.
2. Bends or kinks not indicated on the Drawings or final Shop Drawings
3. Bars with reduced cross section due to excessive corrosion or other cause.
4. Bars with damaged corrosion resistive coating (if specified).

2.9 MIXING

A. On Project Site: Mix in drum type batch mixer, complying with ASTM C685/C685M. Mix each batch not less than 1-1/2 minutes and not more than 5 minutes.

1. Colored Concrete: Add pigments in strict accordance with manufacturer's instructions to achieve consistent color from batch to batch.
2. Fiber Reinforcement: Batch and mix as recommended by manufacturer for specific project conditions.

B. Transit Mixers: Comply with ASTM C94/C94M, and ASTM C1116/C1116M and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 90 minutes to 75 minutes; when air temperature is above 90 def F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.2 PREPARATION

A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.

B. Verify that forms are clean and free of rust before applying release agent.

C. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.

D. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.

1. Use latex bonding agent only for non-load-bearing applications.

E. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert epoxy-coated steel dowels and pack solid with non-shrink grout.

3.3 ERECTION OF FORMWORK

A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.

B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads.

C. Construct formwork to maintain tolerances required by ACI 117, unless otherwise indicated.

D. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.

E. Provide formed openings where required for items to be embedded in passing through concrete work.

F. Align joints and make watertight. Keep form joints to a minimum.

G. Apply form release agent on formwork in accordance with manufacturer's recommendations.

1. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings that are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

3.4 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

A. Fabricate and handle epoxy-coated reinforcing in accordance with ASTM D3963/D3963M.

B. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

C. Install welded wire reinforcement in maximum possible lengths and offset end laps in both directions. Splice laps with tie wire.

D. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

E. Use epoxy-coated steel wire ties to fasten epoxy-coated reinforcement. Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D3963/D3963M.

F. Install accessories in accordance with manufacturer's instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.

G. Install waterstops in accordance with manufacturer's instructions, so they are continuous without displacing reinforcement.

H. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.

I. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints will not be apparent in exposed concrete surfaces.

3.5 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R.

B. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

C. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.

D. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.

E. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.6 FORM REMOVAL

A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.

C. Store removed forms to prevent damage to form materials or to fresh concrete. Discard damaged forms.

3.7 CONCRETE FINISHING

A. Repair surface defects, including tie holes, immediately after removing formwork.

B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.

C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:

1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.

2. Grout Cleaned Finish: Wet areas to be cleaned and apply grout mixture by brush or spray; scrub immediately to remove excess grout. After drying, rub vigorously with clean burlap, and keep moist for 36 hours.
3. Cork Floated Finish: Immediately after form removal, apply grout with trowel or firm rubber float; compress grout with low-speed grinder, and apply final texture with cork float.

D. Curbs Provide monolithic finish to curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

E. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1:100 nominal.

3.8 CURING AND PROTECTION

A. Comply with ACI 308.1. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

1. Normal concrete: Not less than seven days.

C. Formed Surfaces: Cure by moist curing with forms in place for full curing period.

D. Surfaces Not in Contact with Forms:
1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than seven days by water ponding, water-fog spray, or saturated burlap.

2. Final Curing: Begin after initial curing but before surface is dry.

a. Moisture- Retaining Sheet: Lap strips not less than 3 inches and seal with waterproof tape or adhesive; secure at edges.
b. Curing Compound: Apply in two coats at right angles, using application rate recommended by manufacturer.

3.9 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 01 40 00.

B. Provide free access to concrete operations at project site and cooperate with appointed firm.

C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.

D. Tests of concrete and concrete materials may be performed at any time to ensure conformance with specified requirements.

E. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C172/C172M shall be performed according to the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mix exceeding 5 cubic yards, but less than 25 cubic yards, plus one set for each additional 50 cubic yards or fraction thereof.

    a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mix, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

F. Slump: ASTM C143/C143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change.

G. Air Content: ASTM C173/C173M for structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.

H. Concrete Temperature: ASTM A1064/A1064M; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each composite sample.

I. Unit Weight: ASTM C567/C567M, fresh unit weight of structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.

J. Compression Test Specimens: ASTM C31/C31M; cast and laboratory cure one set of five standard cylinder specimens for each composite sample.

K. Compressive--Strength Tests: ASTM C39/C39M

1. Test two specimens at 7 days, two at 28 days and one at 56 days if 28-day compressive strength has not yet been obtained.
2. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at age indicated.

L. Strength of each concrete mix will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength, and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

M. Test results shall be reported in writing to Owner, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-and 28-day tests.

N. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as required by Owner. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42/C42M or by other methods as required by Owner.

O. Detective Work: Concrete work which does not conform to the specified requirements, including strength, tolerances, and finishes, shall be corrected at the Contractor’s expense without extension of time. The Contractor shall also be responsible for the cost of corrections to any other work affected by or resulting from corrections to the concrete work.

3.10 DEFECTIVE CONCRETE

A. Test Results: The testing agency shall report test results in writing to Owner and Contractor within 48 hours of test.

B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

C. Repair or replacement of defective concrete will be determined by the Owner. The cost of additional testing shall be borne by Contractor when defective concrete is identified.

END OF SECTION 03 30 00

SECTION 11 68 00

PLAYGROUND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

B. Playground equipment and associated signage. Furnish all labor and materials and equipment required to install the play equipment as indicated on the drawings or specified herein. The work shall include any incidentals to provide a finished job.

1.3 DEFINITIONS

A. IPEMA: International Play Equipment Manufacturers Association.

B. Play Event: A piece of playground equipment that supports one or more play activities.

C. Use Zone: Area under and around a play event within which the ground surfacing must meet fall impact attenuation requirements of ASTM F1292 when tested at the fall height specified for the play event.

D. Fall Height: Vertical distance between the finished elevation of the designated play surface and the finished elevation of the protective surfacing beneath it, as defined in ASTM F1487.

E. Protective Surfacing: Resilient ground surfacing. The characteristics of the protective surfacing are based on the fall height of the playground equipment. Changes in either the surfacing or the fall height, particularly reducing the resilience of the protective surfacing or increasing the fall height, will reduce safety-related performance.

F. Subgrade: Surface of the ground on which the protective surfacing is installed; the subbase for the protective surfacing is installed over the subgrade.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a meeting one week before starting earthwork for playground to discuss coordination between various installers.

1. Ensure required submittals have been provided with sufficient time for review prior to scheduling the Preinstallation Meeting.
2. Review the detailed requirements for the work of this section and to review the drawings and specifications for this work
3. Require attendance by all affected installers including but not limited to

a. Contractor's Superintendent

b. Installer
c. Manufacturer/Fabricator Representative
d. Other affected Subcontractors
e. Owner

4. Record minutes and distribute copies within 5 days after meeting to participants as well as those affected by decisions made.

1.5 EQUIPMENT PRE-PURCHASE

A. The City is separately purchasing play equipment from BCI Burke Company, LLC – purchase of this equipment should NOT be included in the contractor's bid price. Refer to section 2.4 for the list of equipment to be purchased by City.

B. Once the bid is awarded and the construction contract is executed, responsibility for the purchase will be assigned to the contractor who will then fully manage all aspects of the procurement from that time forward including arranging for delivery, verification of equipment received, storage on or off-site of equipment, installation of equipment, post-installation manufacturer inspection for ASTM compliance, etc. Direct payment to BCI Burke Company, LLC for the equipment will be made by the City once the contractor verifies all material are received and undamaged.

1.6 SUBMITTALS

A. See Section 01 30 00 for submittal procedures.

B. Product Data: For manufactured equipment, provide manufacturer's product data showing materials of construction, compliance with specified standards, installation procedures, safety limitations, and the number of users permitted.

C. Delegated-Design Submittal: For all Project specific "fabricated" Structures including foundations and all associated materials and components. Submittal to include, shop drawings and analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

D. Shop Drawings: For each type of playground equipment.

1. Include plans, elevations, sections, and attachment details.

a. Manufacturer approved drawings may be submitted when complete systems are provided by specified manufacturer.

2. Include fall heights and use zones for playground equipment, coordinated with the critical-height values of protective surfacing specified in Section 32 18 00 "Playground Surface System".

E. Samples: For each item that a color must be selected, provide color chart showing full range of colors and finishes and material sample.

F. Maintenance Data: Provide manufacturer's recommended maintenance instructions and list of replaceable parts for each equipment item, with address and phone number of source of supply.

G. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

H. Test Reports: Provide evidence of IPEMA certification for playground products.

I. Certifications:

1. Manufacturer is ISO 9001:2008 certified (quality assurance processes)
2. Manufacturer is ISO 14001:2004 certified (environmentally responsible processes)
3. IPEMA (International Play Equipment Manufacturers Association) third party certification for conformance to ASTM F1487-17.
4. Statement from manufacturer that products meet current safety and accessibility requirements.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Manufacturer is ISO 9001:2008 certified (quality assurance processes)
2. Manufacturer is ISO 14001:2004 certified (environmentally responsible processes)
3. Standard products are IPEMA (International Play Equipment Manufacturers Association) third party certified for conformance to ASTM F1487-17.

B. Installer Qualifications: The Contractor installing the equipment must be experienced in the installation of play equipment with personnel, facilities, and equipment adequate for the work specified and shall, within 48 hours of a request, produce written proof of such.

C. Sample Installations: Contractor shall upon request produce a list of at least 20 other projects where similar work, from same manufacturer, has been performed and could be reviewed.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver, handle, and store equipment to project site in accordance with manufacturer's recommendations.

B. Store materials in a dry, covered area, elevated above grade.

1.9 WARRANTY

A. See Section 01 74 00 for additional warranty requirements.

B. Installers Guarantee: The Contractor shall warranty that all work performed under this section shall be free from any defects in materials and workmanship. Upon notice in writing from the Owner within one year of Preliminary Acceptance of the project, the Contractor shall, at no additional cost to the Owner, make the necessary repairs or replacements of the defective work in question. During this period of guarantee, the Owner shall perform normal maintenance and cleaning of the play area equipment.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers:

1. BCI Burke Company, LLC, 512 Harrison Street, North Fond du Lac, WI 54937. Locally represented by Play Illinois, LLC, 310 N. Grant Street, Westmont, IL 60559, 844-222-9990.

2.2 PLAYGROUND EQUIPMENT - GENERAL

A. Design Assumptions: Because the safety of the playground depends on strict conformance to the design criteria, this information is provided for Contractor's information. Equipment design/component selection is based on specific needs of the physical constraints of the site, and public input. Design requirements include:

1. Play value
2. Capacity
3. Footprint
4. Color availability
5. Visual density and appearance
6. Age appropriateness
7. Height/Size
8. Sensory stimulation
9. Accessibility/usability for those with special needs.
10. If deviations from specified dimensions, especially fall heights, is required, obtain approval prior to proceeding; follow approval request procedure as specified for substitutions.

B. Mount equipment on concrete footings, unless otherwise indicated.

1. Playground protective surfacing constitutes a resilient layer installed over a subbase (non-resilient) that is installed over subgrade; top of footings and anchorage devices is to be covered by full depth of resilient portion of protective surfacing.
2. Protective Surfacing Depth: As indicated on drawings.
3. Provide supports as required to mount equipment at proper height above finish and sub-grades to allow installation of sufficient depth of protective surfacing; portion of support below top of surfacing must conform to specified requirements for equipment.
4. Paint portion of support that is intended to be installed below top surface of protective surfacing a different color, or mark in other permanent way, so that installers and maintainers of protective surfacing can easily determine whether sufficient depth has been installed.

C. Provide permanent label for each equipment item stating age group that equipment was designed for, manufacturer identification, and warning labels in accordance with ASTM F1487.

D. Conform to ASTM F1487 and CPSC Pub. No. 325; provide equipment conforming to specific requirements for relevant age group(s).

E. Provide components having factory-drilled holes; do not use components with extra holes that will not be filled by hardware or covered by other components.

2.3 MATERIALS:

A. All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all steel parts by the use of time-tested coatings such as zinc plating, galvanizing, ProShield® finish, TenderTuff™ coating, etc. Colors shall be specified.

B. Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless-steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications). All primary fasteners shall include a locking patch type material that

will meet the minimum torque requirements of IFI-125. Manufacturer to provide special tools for pinned tamperproof fasteners.

C. Decks: All decks shall be of modular design and have 5/16" diameter holes on the standing surface. There shall be minimum of (4) slots in each face to accommodate face mounting of components. Decks shall be manufactured from a single piece of low carbon 12 GA (.105") sheet steel conforming to ASTM specification A-1011. The sheet shall be perforated with a return flange on the perimeter to provide the reinforcement necessary to ensure structural integrity. There shall be no unsupported area larger than 3.5 square feet. The unit shall then be TenderTuff-coated brown or gray only. Decks shall be designed so that all sides are flush with the outside edge of the supporting posts.

D. Rotationally Molded Polyethylene Parts: These parts shall be molded using prime compounded linear low-density polyethylene with a tensile strength of 2500 psi per ASTM D638 and with color and UV-stabilizing additives. Wall thickness varies by product from .187" (3/16") to .312" (5/16"). Eleven standard colors available.

E. Permalene® Parts: These parts shall be manufactured from 3/4" high-density polyethylene that has been specially formulated for optimum UV stability and color retention. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638. Five standard solid colors are available. Some Permalene® parts are available in a two-color product with (2) .100" thick exterior layers over a .550" interior core of black. Ten standard two-color options available.

F. Recycled Permalene® Parts: These parts shall be manufactured from 3/4" high-density polyethylene that has been specially formulated for optimum UV stability and color retention. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638. Available in a three-layer product with (2) .100" thick colored exterior layers over a .550" thick 100% recycled Black interior core. Eleven standard color options available.

G. Hardware Packages: All shipments shall include individual component-specific hardware packages. Each hardware package shall be labeled with the part number, description, a component diagram showing the appropriate component, package weight, a bar code linking the hardware package to the job number, assembler's name, date and time the package was assembled, work center number, and work order number.

H. Installation Documentation: All shipments shall include a notebook or packet of order-specific, step-by-step instructions for assembly of each component, including equipment assembly diagrams, estimated hours for assembly, footing dimensions, concrete quantity for direct bury components, fall height information, area required information and detailed material specifications.

2.4 COMPONENTS

A. See attached equipment list provided by BCI Burke Company LLC.

PART 3 - EXECUTION

3.1 VERIFICATION OF CONDITIONS

A. Verify that playground equipment footings have been installed in proper locations and at proper elevations.

B. Verify location of underground utilities and facilities in playground area; damage to underground utilities and facilities will be repaired at Contractor's expense.

3.2 EXAMINATION

A. Examine the area and conditions of the site. Verify safety zones of all equipment before setting posts in concrete footing.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 PREPARATION

A. Stake location of playground elements, including Use Zone perimeters, perimeter of protective surfacing, access and egress points, hard surfaces, walls, fences, and structures, and planting locations.

B. Stake layout of entire Use Zone perimeter before starting any work and before subbase under resilient surfacing is laid.

1. Verify that Use Zone perimeters do not overlap hard surfaces, whether currently installed or not.
2. Verify that Use Zones are free of obstructions that would extend into resilient portion of protective surfacing.
3. If conflicts or obstructions exist, notify Owner.
4. Do not proceed until revised drawings have been provided, showing corrected layout, and obstructions have been removed.

3.4 INSTALLATION:

A. Coordinate work with preparation for and installation of protective surfacing specified in Section 32 18 00; install protective surfacing after playground equipment installation.

B. Install concrete footings with top surface a minimum of 1/2 inch below required subgrade elevation.

C. Install in accordance with CPSC Pub. No. 325, ASTM F1487, manufacturer's instructions, and requirements of authorities having jurisdiction (AHJ).

D. Anchor equipment securely below bottom elevation of resilient surfacing layer.

E. Install without sharp points, edges or protrusions, entanglement hazards, pinch, crush, or shear points.

F. Do not modify play events on site without written approval of manufacturer.

G. Install required signage if not factory-installed.

3.5 FIELD QUALITY CONTROL

A. Obtain the services of the equipment manufacturer's field representative to review the finished installation for compliance with specified requirements and with design criteria; submit report of field review and make any/all required corrections before opening playground for public use.

B. Repair or replace rejected work until compliance is achieved.

3.6 CLEANING

A. Restore adjacent existing areas that have been damaged from the construction.

B. Clean playground equipment of construction materials, dirt, stains, filings, and blemishes due to shipment or installation; clean in accordance with manufacturer's instructions, using cleaning agents as recommended by manufacturer.

C. Clean playground area of excess construction materials, debris, and waste.

D. Remove excess and waste material and dispose of off-site in accordance with requirements of authorities having jurisdiction.

3.7 PROTECTION

A. Protect installed products until Date of Preliminary Acceptance.

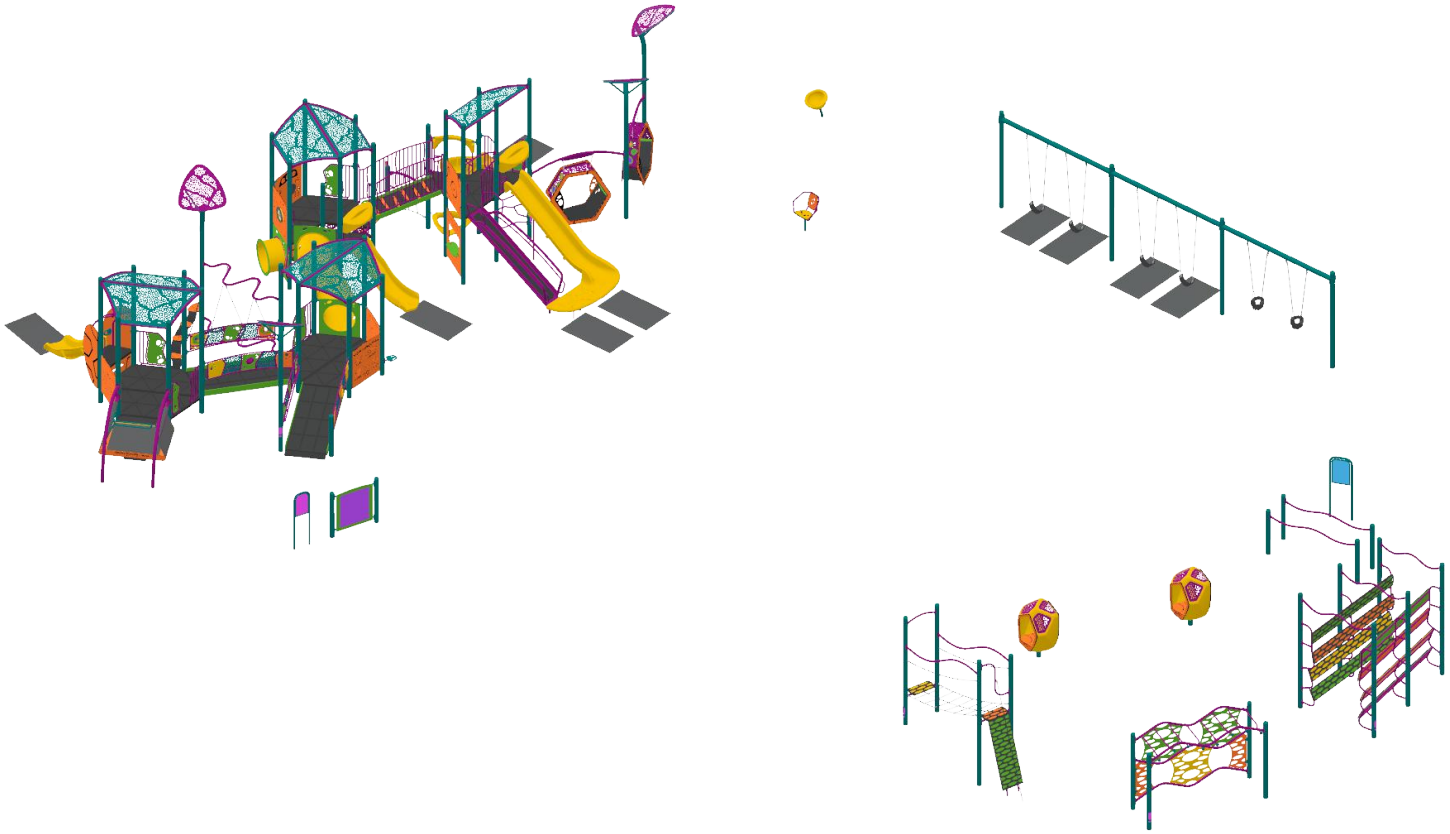
B. Replace damaged products before Date of Preliminary Acceptance.

END OF SECTION 11 68 00

Burke
PLAY THAT MOVES YOU.
BCIBURKE.COM • 800.266.1250

JAMES PARK PLAYGROUND

Dodge Avenue and Mulford Street | Evanston, IL 60202



Play Illinois, LLC
310 N Grant Street | Westmont, IL 60559 | 844-222-9990

PLAY ILLINOIS
PARK & PLAYGROUND SOLUTIONS

March 3, 2026

Kenon Boehm
City of Evanston
909 Davis St
Evanston, IL 60201

Dear Kenon Boehm:

Play Illinois, LLC is delighted to provide City of Evanston with this playground equipment proposal.

This design was developed with your specific needs in mind, and we look forward to discussing this project further with you to ensure your complete satisfaction. Play Illinois, LLC is confident that this proposal will satisfy City of Evanston's functional, environmental, and safety requirements -- and most importantly -- bring joy and excitement to the children and families directly benefiting from your new playground.

You have our personal commitment to support this project and your organization in every manner possible, and we look forward to developing a long-standing relationship with City of Evanston. We appreciate your consideration and value this opportunity to earn your business.

Sincerely,

Colin MacLean
Sales Representative

Play Illinois, LLC
310 N Grant Street
Westmont, IL 60559
www.playil.com
www.bciburke.com

Phone: 844-222-9990
Fax: -
Email: colin@playil.com

COOPERATIVE PURCHASING OPTIONS

PLAYGROUNDS WITHOUT ALL THE PAPERWORK

Purchasing with contracts may sound intimidating, but getting your community playspace doesn't need to be a painful process of writing specifications, issuing RFP's and jumping through hoops – it can be simplified – we promise! As you continue planning for your new playground, review the Purchasing Contracts offered through our partners.

EQUALIS GROUP

Equalis is an innovative cooperative purchasing organization that believes in the power of partnership and that when you work together you achieve more. The basic premise of the Equalis cooperative purchasing organization is to leverage the combined buying power of all members for better pricing and favorable contract terms. Equalis Group uses the lead agency model for competitively bid contracts, provides our participants the savings they expect and offers efficiencies and peace of mind within the procurement process. It is our mission to continuously improve the measurable and meaningful impact of cooperative services for everyone throughout the supply chain.

GOVMVMT

GOVMVMT is a non-profit group purchasing organization that meets the highest industry standards while putting the public's interest at the forefront of everything they do. Each one of GOVMVMT's first-class suppliers has consciously joined their mission to create the most credible, ethical, and public agency-focused non-profit cooperative purchasing program in the country.

GSA

Federal parks, child development programs, military bases and other agencies are a major priority for BCI Burke, and agencies can purchase Burke playgrounds through Burke's GSA contract for installation virtually anywhere in the world.

OMNIA PARTNERS

OMNIA Partners, Public Sector (Subsidiary National IPA) is the largest and most experienced organization in purchasing and supply chain management. Comprised of participants and suppliers in the public sector, we bring together industry-leading buying power and world-class suppliers to offer an extensive portfolio of competitively solicited and publicly awarded contracts and partnerships. OMNIA Partners is proud to offer more value and resources to state and local government, higher education, K-12 education and non-profits.

SOURCEWELL

As a leader in cooperative purchasing, Sourcewell is passionate about helping members fulfill their public service missions. Sourcewell builds strong relationships with members and vendors to develop practical solutions together.

The easiest way to Join Our Movement is to call your local Representative at 800.266.1250 or v**isit bciburke.com/rep**. Our passion is bringing play to communities like yours and we can't wait to help you get started!

equalis GROUP

GSA Contract Holder
Contract 47QSMA20D08NL | 47QSMA20D08NM

GOVMVMT

OMNIA PARTNERS

Sourcewell
Awarded Contract
Contract # 010521-BUR







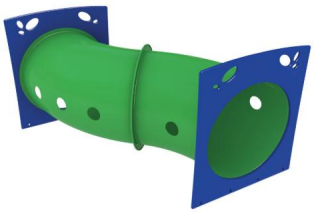
FEATURED PLAY EVENTS



Twisting Traverse
Climbers provide several developmental benefits to children, building upper body strength along with boosting balance and coordination while they play.



Leaf Seat
Events and accessories improve children's balance and coordination, help them build body strength and provide extra sensory experiences.



OFFSET TUNNEL
Our tubes & tunnels excite children's sense of exploration and adventure while improving gross motor skills and body strength.

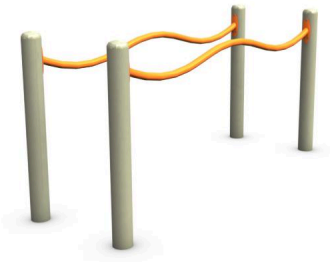
FEATURED PLAY EVENTS



CRESCENT SPINNER PANEL
Create the perfect play area for children with Burke's Interactive Play Panels. The play panels encourage exploration, interaction and develop fine-motor skills for children with all abilities.



Rock 'N' Roll Slide
This exclusive slide adds excitement to your playgrounds. It features 'Burke Built™' quality, and the double-wall compounded plastic construction means it is stronger and will last longer.



Jungle Pipeline
Anything goes as you cross the Jungle Pipeline! Swing through or use your shoulders to support you while balancing on your hands and working your way across.

FEATURED PLAY EVENTS



KidForce Spinner
The KidForce Spinner provides an exciting motion element on any playground. Using their own weight and momentum, children can spin these unique seats in 360° circle.

DESIGN SUMMARY

Play Illinois, LLC is very pleased to present this Proposal for consideration for the James Park Playground located in Evanston. BCI Burke Company, LLC has been providing recreational playground equipment for over 100 years and has developed the right mix of world-class capabilities to meet the initial and continuing needs of City of Evanston. We believe our proposal will meet or exceed your project's requirements and will deliver the greatest value to you.

The following is a summary of some of the key elements of our Proposal:

- Project Name: James Park Playground
- Project Number: 129-204494-10
- User Capacity: 187
- Age Groups: 2 to 12, 13Plus
- Dimensions: 122' 10" x 100' 1"
- Designer: Margaret Dechant

Play Illinois, LLC has developed a custom playground configuration based on the requirements as they have been presented for the James Park Playground playground project. Our custom design will provide a safe and affordable playground environment that is aesthetically pleasing, full of fun for all users and uniquely satisfies your specific requirements. In addition, proposal # 129-204494-10 has been designed with a focus on safety, and is fully compliant with ASTM F1487 and CPSC playground safety standards.

We invite you to review this proposal for the James Park Playground project and to contact us with any questions that you may have.

Thank you in advance for giving us the opportunity to make this project a success.

SERIES Burke Basics | Fitness | Nucleus | Intensity

GROUP:
Structure|Fitness|Communication Panel|Freestanding

DESIGNED FOR AGES:
2 to 12, 13+

PLEASE NOTE: ALTHOUGH ALL ATTEMPS HAVE BEEN MADE TO PROVIDE AN ACCURATE SITE IT MAY NOT TRULY REPRESENT THE AREA WHERE THIS PLAYGROUND LAYOUT IS TO BE PLACED. UNLESS OTHERWISE NOTED THE PLAY AREA IS ASSUMED TO BE LEVEL.

James Park Playground
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

SITE PLAN VIEW

OVERALL BOUNDING OF USE ZONES
Area: 12283.5 sq.ft.
Perimeter: 445.6 ft.
STRUCTURE SIZE: 100' 1"x122' 10"
POST SIZE(S): 5"

**The space requirements shown here are to ASTM standards. Requirements for other standards may be different.

PLAYGROUND ACCESSIBILITY (Provided/Required)

TOTAL EVENTS	ELEVATED EVENTS	TRANSFER ACCESSIBLE EVENTS	RAMP ACCESSIBLE EVENTS	GROUND EVENTS	TYPES OF GROUND EVENTS
44	23 / 12	15 / 6	7 / 6	21 / 8	8 / 4

The use and layout of play components identified in this plan conform to the CPSC guildelines. U.S. CPSC recommends the separation of age groups in playground layouts.

Warning: Accessible safety surfacing material is required beneath and around this equipment that is compliant with ASTM, CPSC, and ADAAG requirements.

BCI BURKE COMPANY, LLC | PO BOX 549 FOND DU LAC, WI 54936-0549 | 920.921.9220 | BCIBURKE.COM

SERIES Nucleus | Intensity

SITE PLAN VIEW

GROUP:
Structure

DESIGNED FOR AGES:
2 to 12

James Park Playground
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

BCI BURKE COMPANY, LLC | PO BOX 549 FOND DU LAC, WI 54936-0549 | 920.921.9220 | BCIBURKE.COM

OVERALL BOUNDING OF USE ZONES
Area: 12283.5 sq.ft.
Perimeter: 445.6 ft.
STRUCTURE SIZE: 60' 1"x122' 10"
POST SIZE(S): 6"

**The space requirements shown here are to ASTM standards. Requirements for other standards may be different.

PLAYGROUND ACCESSIBILITY (Provided/Required)

TOTAL EVENTS	ELEVATED EVENTS	TRANSFER ACCESSIBLE EVENTS	RAMP ACCESSIBLE EVENTS	GROUND EVENTS	TYPES OF GROUND EVENTS
44	23 / 12	15 / 6	7 / 6	21 / 8	8 / 4

The use and layout of play components identified in this plan conform to the CPSC guildelines. U.S. CPSC recommends the separation of age groups in playground layouts.

Warning: Accessible safety surfacing material is required beneath and around this equipment that is compliant with ASTM, CPSC, and ADAAG requirements.

SERIES Fitness | Nucleus | Burke Basics

SITE PLAN VIEW

GROUP:
Fitness

DESIGNED FOR AGES:
13+

James Park Playground
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

OVERALL BOUNDING OF USE ZONES
Area: 12283.5 sq.ft.
Perimeter: 445.6 ft.
STRUCTURE SIZE: 50' 1"x122' 10"
POST SIZE(S): 6"

**The space requirements shown here are to ASTM standards. Requirements for other standards may be different.

PLAYGROUND ACCESSIBILITY (Provided/Required)

TOTAL EVENTS	ELEVATED EVENTS	TRANSFER ACCESSIBLE EVENTS	RAMP ACCESSIBLE EVENTS	GROUND EVENTS	TYPES OF GROUND EVENTS
44	23 / 12	15 / 6	7 / 6	21 / 8	8 / 4

The use and layout of play components identified in this plan conform to the CPSC guildelines. U.S. CPSC recommends the separation of age groups in playground layouts.

Warning: Accessible safety surfacing material is required beneath and around this equipment that is compliant with ASTM, CPSC, and ADAAG requirements.

SERIES Nucleus

GROUP:
Communication Panel

DESIGNED FOR AGES:
2 to 12

James Park Playground
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

SITE PLAN VIEW

OVERALL BOUNDING OF USE ZONES
Area: 12283.5 sq.ft.
Perimeter: 445.6 ft.
STRUCTURE SIZE: 60' 1"x122' 10"
POST SIZE(S): 6"

**The space requirements shown here are to ASTM standards. Requirements for other standards may be different.

PLAYGROUND ACCESSIBILITY (Provided/Required)

TOTAL EVENTS	ELEVATED EVENTS	TRANSFER ACCESSIBLE EVENTS	RAMP ACCESSIBLE EVENTS	GROUND EVENTS	TYPES OF GROUND EVENTS
44	23 / 12	15 / 6	7 / 6	21 / 8	8 / 4

The use and layout of play components identified in this plan conform to the CPSC guildelines. U.S. CPSC recommends the separation of age groups in playground layouts.

Warning: Accessible safety surfacing material is required beneath and around this equipment that is compliant with ASTM, CPSC, and ADAAG requirements.

BCI BURKE COMPANY, LLC | PO BOX 549 FOND DU LAC, WI 54936-0549 | 920.921.9220 | BCIBURKE.COM

SERIES Burke Basics

GROUP:
Freestanding

DESIGNED FOR AGES:
2 to 12

James Park Playground
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

BCI BURKE COMPANY, LLC | PO BOX 549 FOND DU LAC, WI 54936-0549 | 920.921.9220 | BCIBURKE.COM

SITE PLAN VIEW

OVERALL BOUNDING OF USE ZONES
Area: 12283.5 sq.ft.
Perimeter: 445.6 ft.
STRUCTURE SIZE: 60' 1"x122' 10"
POST SIZE(S): 6"

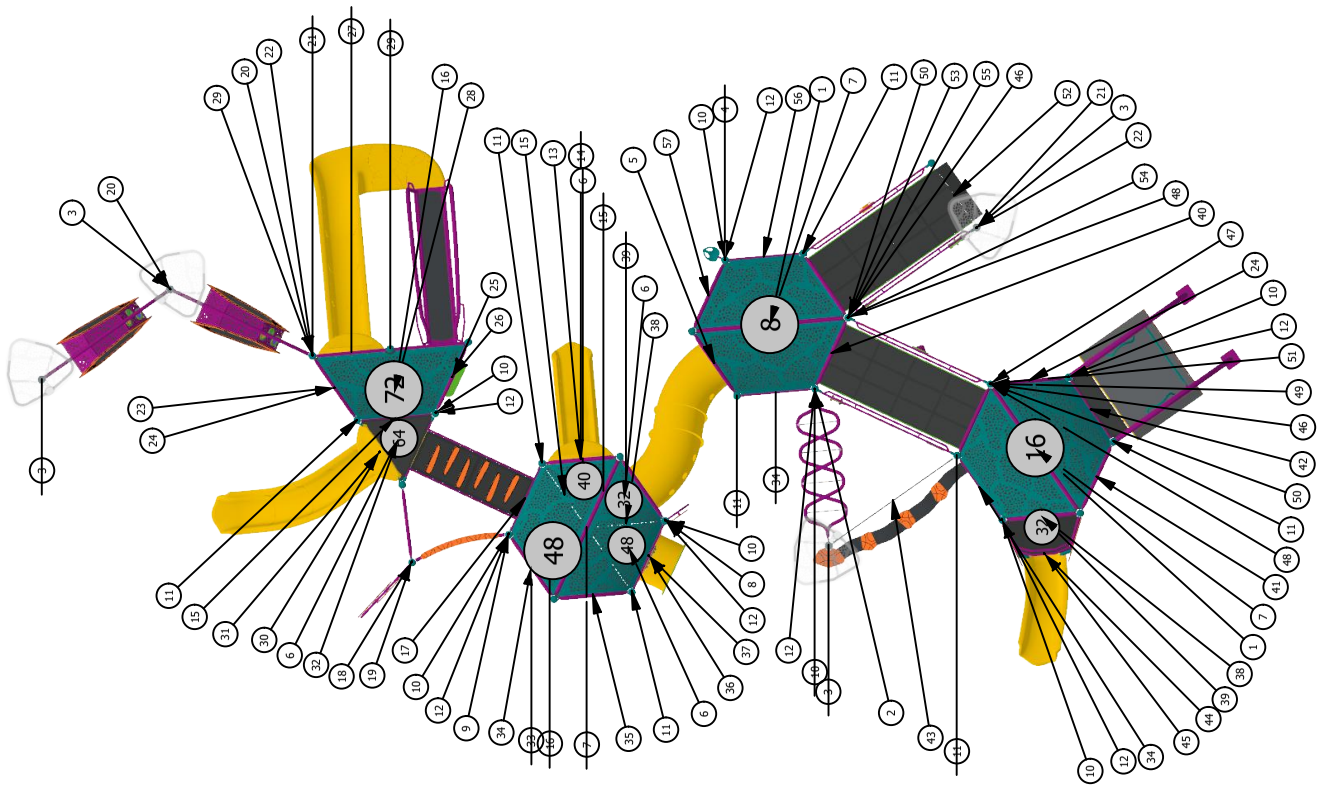
**The space requirements shown here are to ASTM standards. Requirements for other standards may be different.

PLAYGROUND ACCESSIBILITY (Provided/Required)

TOTAL EVENTS	ELEVATED EVENTS	TRANSFER ACCESSIBLE EVENTS	RAMP ACCESSIBLE EVENTS	GROUND EVENTS	TYPES OF GROUND EVENTS
44	23 / 12	15 / 6	7 / 6	21 / 8	8 / 4

The use and layout of play components identified in this plan conform to the CPSC guildelines. U.S. CPSC recommends the separation of age groups in playground layouts.

Warning: Accessible safety surfacing material is required beneath and around this equipment that is compliant with ASTM, CPSC, and ADAAG requirements.



SERIES Nucleus | Intensity		COMPONENT VIEW
GROUP: Structure **DESIGNED FOR AGES:** 2 to 12	**James Park Playground** Evanston, IL 60202 Burke PLAY THAT MOVES YOU.	03/03/2026 **Play Illinois, LLC** **129-204494-10** Designer: Margaret Dechant

SERIES Nucleus | Intensity

COMPONENT VIEW

GROUP:
Structure

DESIGNED FOR AGES:
2 to 12

James Park Playground
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

03/03/2026

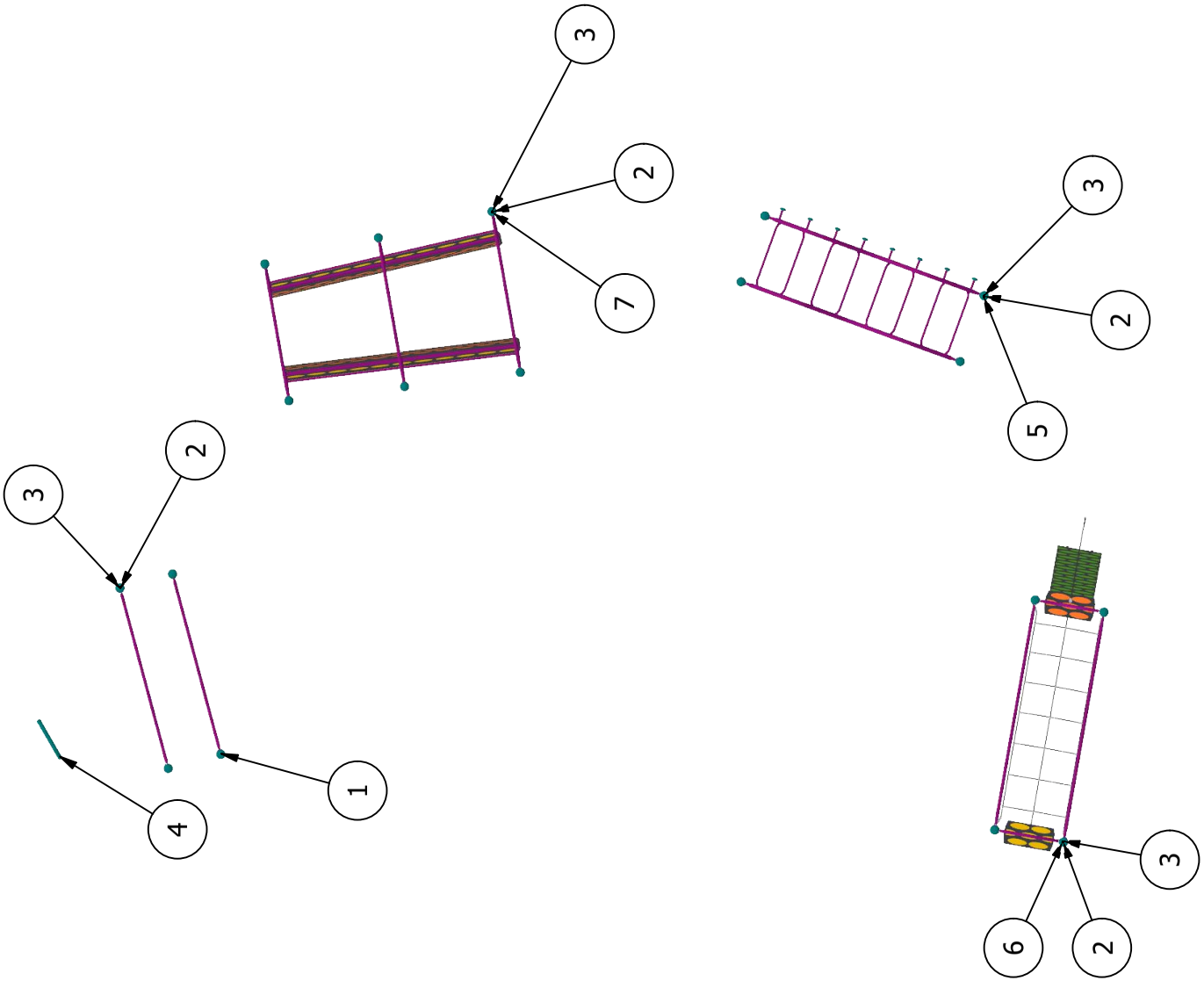
Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

BCI BURKE COMPANY, LLC | PO BOX 549 FOND DU LAC, WI 54936-0549 | 920.921.9220 | BCIBURKE.COM

ITEM	COMP.	DESCRIPTION
1	270-0131	HEXAGONAL PLATFORM S5P
2	370-0815	TWISTING TRAVERSE 2-5
3	470-0019	SOLIS
4	470-0387	SINGLE LEAF SEAT
5	570-1506	TUNNEL, 24" OFFSET
6	270-0129	TRIANGLE PLATFORM
7	470-0014	EVOLUTION HEX ROOF
8	570-2705	SPINNER CRESCENT PANEL
9	370-1739	LIL NOVO BALANCE BEAM POST TOPOST
10	470-0006	EVOLUTION BOTTOM ROOF SUPPORT, SINGLE
11	470-0008	EVOLUTION SIDE ROOF SUPPORT, LEFT
12	470-0009	EVOLUTION SIDE ROOF SUPPORT, RIGHT
13	470-0659	ROCK'N ROLL SLIDE, 40" - 48" W/O HOOD
14	470-0967	SLIDE HOOD, LOW SIDE WALL
15	270-0009	8" CLOSURE PLATE, ELLIPSE
16	270-0132	HALF HEXAGON PLATFORM
17	370-0210	TERREX CLIMBER
18	370-1621	TAKTIKS, SHORT ROPE WALL
19	370-1764	NATUREPLAY WOODLAND CLIMBER
20	470-0979	NICHE CAPSULE
21	670-1000	METAL STRUCTURE ID LABEL
22	670-0212	METAL 2-12 WARNING LABEL
23	370-0865	TREE BRANCH CLIMBER 72"
24	270-0120	EVOLUTION UNITARY ENCLOSURE
25	570-1862	COG WHEEL PANEL
26	570-0620	BURKE MART PANEL BELOW PLATFORM 72"-112"
27	470-0966	360 LOOP, 72"
28	470-0978	EVOLUTION HALF HEX ROOF,W/CENTER POST
29	470-0003	EVOLUTION TOP ROOF SUPPORT, SINGLE
30	470-1020	VIPER R 64
31	470-0805	SLIDE HOOD, HIGH SIDE WALL
32	570-1884	TRIGON SPOT
33	370-1664	SHASTA CLIMBER, 40"-48"
34	270-0122	EVOLUTION OFFSET ENCLOSURE
35	570-2666	CAR PANEL
36	570-1863	RAIN WHEEL PANEL
37	570-0071	BIVY TUNNEL
38	270-0300	ABSTRACT PLATFORM LADDER 16"
39	370-0016	GRAB BAR ASSEMBLY
40	270-0124	SENSORY RAIL 8" RISE RAMP
41	570-0811	BRAILLE PANEL
42	570-2762	INNOVA ROCKER
43	370-0097	PATHWAY LINK, DECK TO POST,RIGHT
44	470-0132	INTENSITY SLIDE PLATFORM
45	470-0991	VIPER R 32
46	570-0104	SENSORY RAIL TOP PANEL
47	570-0110	BELL SENSORY EVENT, LEFT
48	570-0106	SENSORY RAIL LOWER PANEL
49	570-0107	CHROMA SENSORY EVENT, TOP
50	570-0105	SENSORY RAIL MIDDLE PANEL
51	570-0122	RAINDROPS SENSORY EVENT, LOWER
52	270-0125	SENSORY RAIL 8" RISE ENTRANCE RAMP
53	570-0114	HYPNO SENSORY EVENT, TOP
54	570-0125	GROOVY SENSORY EVENT, LOWER
55	570-0118	MELODY SENSORY EVENT, MIDDLE
56	570-0848	SIGNING 2-SIDED PLAY PANEL
57	570-2662	CRAZY MAZE 2-SIDED PLAY PANEL

ITEM	COMP.	DESCRIPTION
1	370-0859	JUNGLE PIPELINE
2	670-1000	METAL STRUCTURE ID LABEL
3	670-0013	METAL 13+ WARNING LABEL
4	580-1302	FS SIGN, CUSTOM/CUSTOM
5	370-0858	DOOR KNOB JAM
6	370-1607	SUMMIT BRIDGE
7	370-1606	WALL CLINGER



SERIES Fitness | Nucleus | Burke Basics

COMPONENT VIEW

GROUP:
Fitness

DESIGNED FOR AGES:
13+

James Park Playground
Evanston, IL 60202

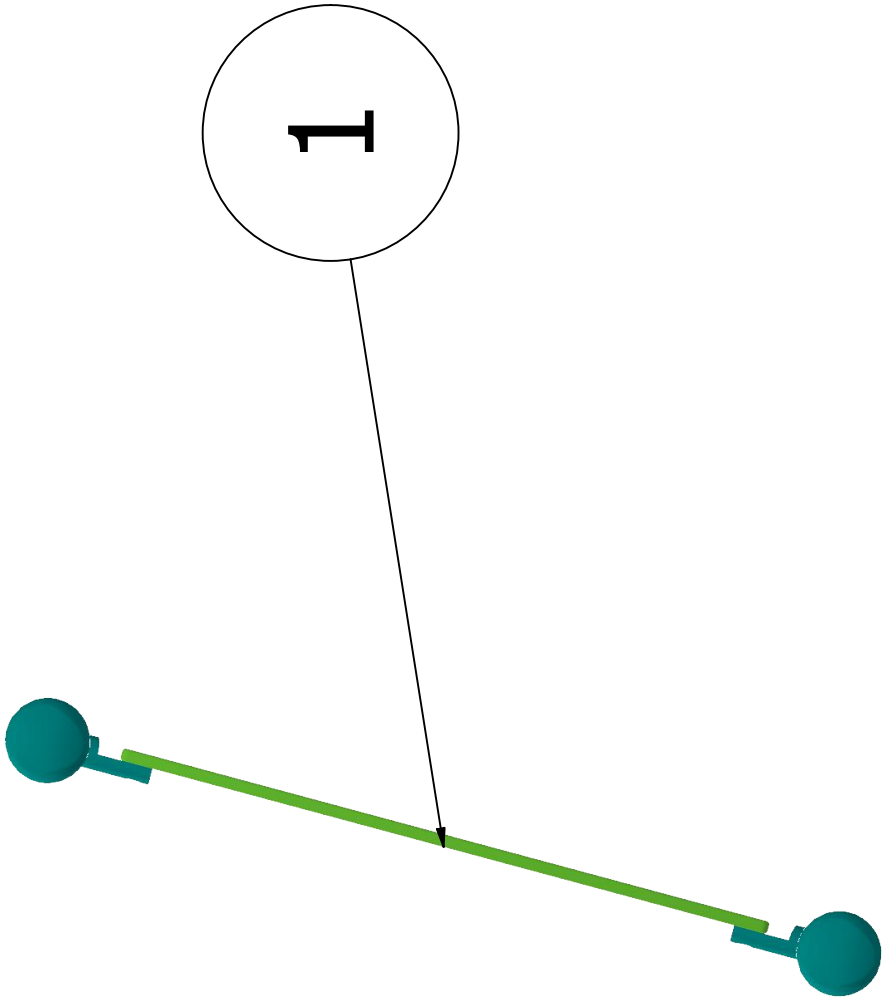
Burke
PLAY THAT MOVES YOU.

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

ITEM	COMP.	DESCRIPTION
1	570-2636	FULL COLOR CUSTOM CURVED 41 36 X 31 BELOW PLATFORM



SERIES Nucleus

COMPONENT VIEW

GROUP:
Communication Panel

DESIGNED FOR AGES:
2 to 12

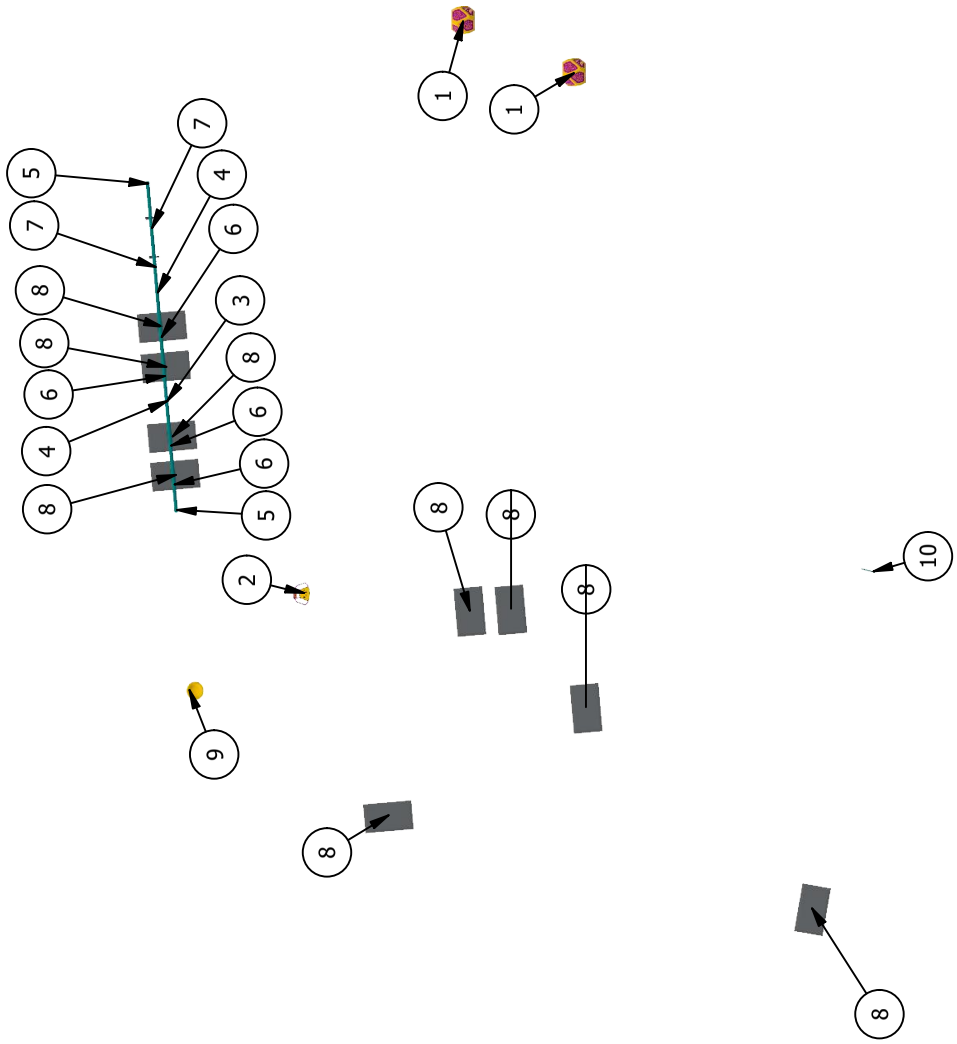
James Park Playground
Evanston, IL 60202

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

ITEM	COMP.	DESCRIPTION
1	560-0073	NIDO SPINNER
2	560-2735	ARO SPINNING CHAIR
3	550-0201	SINGLE POST SWING ASSEMBLY 5" OD
4	550-0202	SINGLE POST SWING ADD-ON 5" OD
5	550-0008 -END	SWING BEAM HALF CLAMP
6	550-0111	BELT SEAT, 8' SINGLE, STD CHAIN
7	550-0099	TOT SEAT, 7' & 8' SINGLE, STD CHAIN
8	046-0536	PLAYMAT 3' X 5' X 2"
9	560-2573	KIDFORCE SPINNER
10	580-1398	WELCOME SIGN, AGES 2-12



SERIES Burke Basics

COMPONENT VIEW

GROUP:
Freestanding

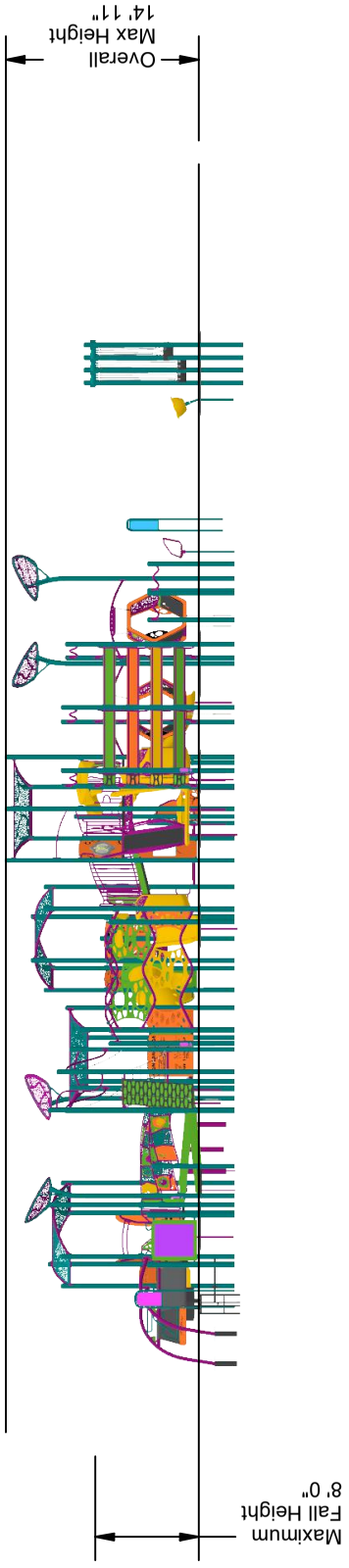
DESIGNED FOR AGES:
2 to 12

James Park Playground
Evanston, IL 60202

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant



SERIES	Burke Basics | Fitness | Nucleus | Intensity	ELEVATION VIEW
GROUP: Structure|Fitness|Communication Panel|Freestanding **DESIGNED FOR AGES:** 2 to 12, 13+	**James Park Playground** Evanston, IL 60202 Burke PLAY THAT MOVES YOU.	03/03/2026 **Play Illinois, LLC** **129-204494-10** Designer: Margaret Dechant

SERIES Nucleus | Intensity

GROUP:
Structure

DESIGNED FOR AGES:
2 to 12

James Park Playground
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

ELEVATION VIEW

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

BCI BURKE COMPANY, LLC | PO BOX 549 FOND DU LAC, WI 54936-0549 | 920.921.9220 | BCIBURKE.COM

SERIES Fitness | Nucleus | Burke Basics

ELEVATION VIEW

GROUP:
Fitness

DESIGNED FOR AGES:
13+

James Park Playground
Evanston, IL 60202

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

BCI BURKE COMPANY, LLC | PO BOX 549 FOND DU LAC, WI 54936-0549 | 920.921.9220 | BCIBURKE.COM

SERIES Nucleus

GROUP:
Communication Panel

DESIGNED FOR AGES:
2 to 12

James Park Playground
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

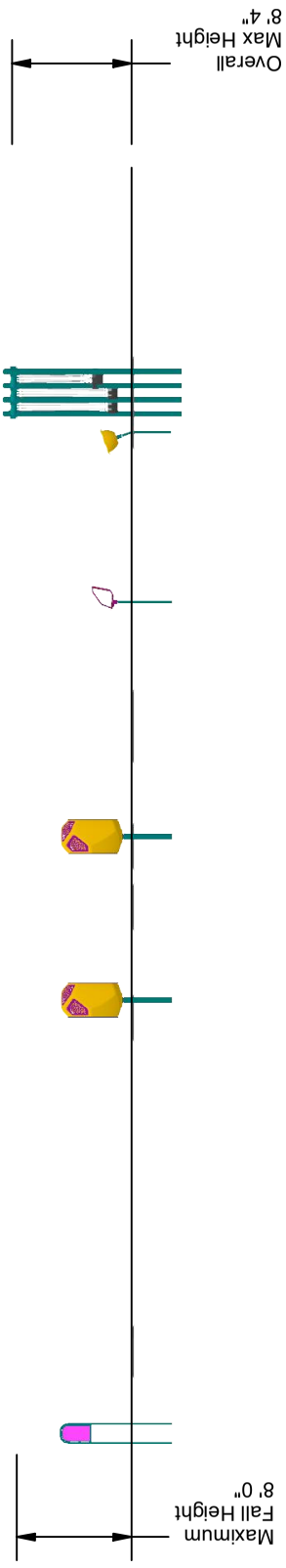
ELEVATION VIEW

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant

BCI BURKE COMPANY, LLC | PO BOX 549 FOND DU LAC, WI 54936-0549 | 920.921.9220 | BCIBURKE.COM



SERIES Burke Basics

ELEVATION VIEW

GROUP:
Freestanding

DESIGNED FOR AGES:
2 to 12

James Park Playground

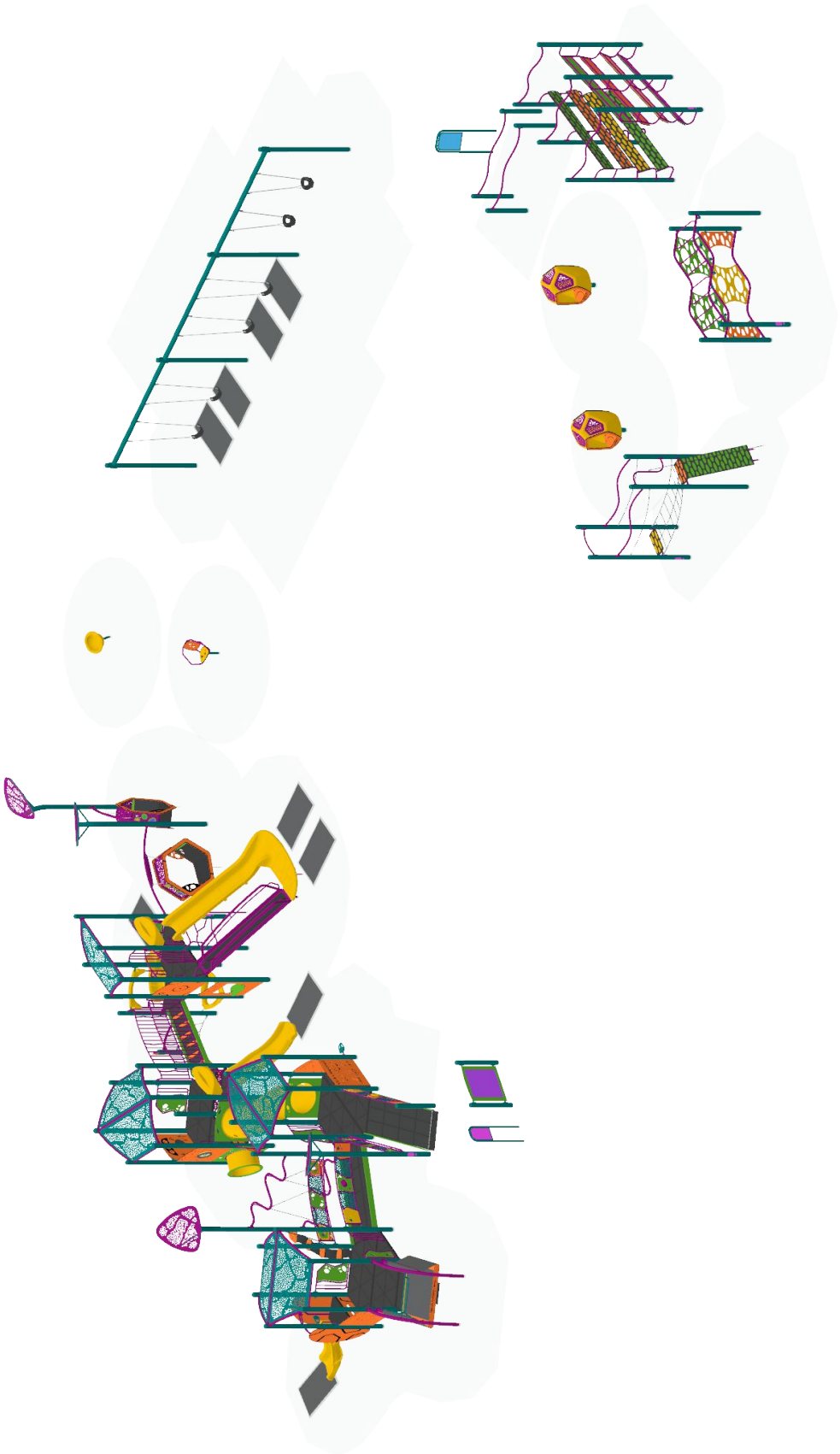
Evanston, IL 60202

03/03/2026

Play Illinois, LLC

129-204494-10

Designer: Margaret Dechant



SERIES Burke Basics | Fitness | Nucleus | Intensity

ISOMETRIC VIEW

GROUP:
Structure|Fitness|Communication Panel|Freestanding

DESIGNED FOR AGES:
2 to 12, 13+

James Park Playground

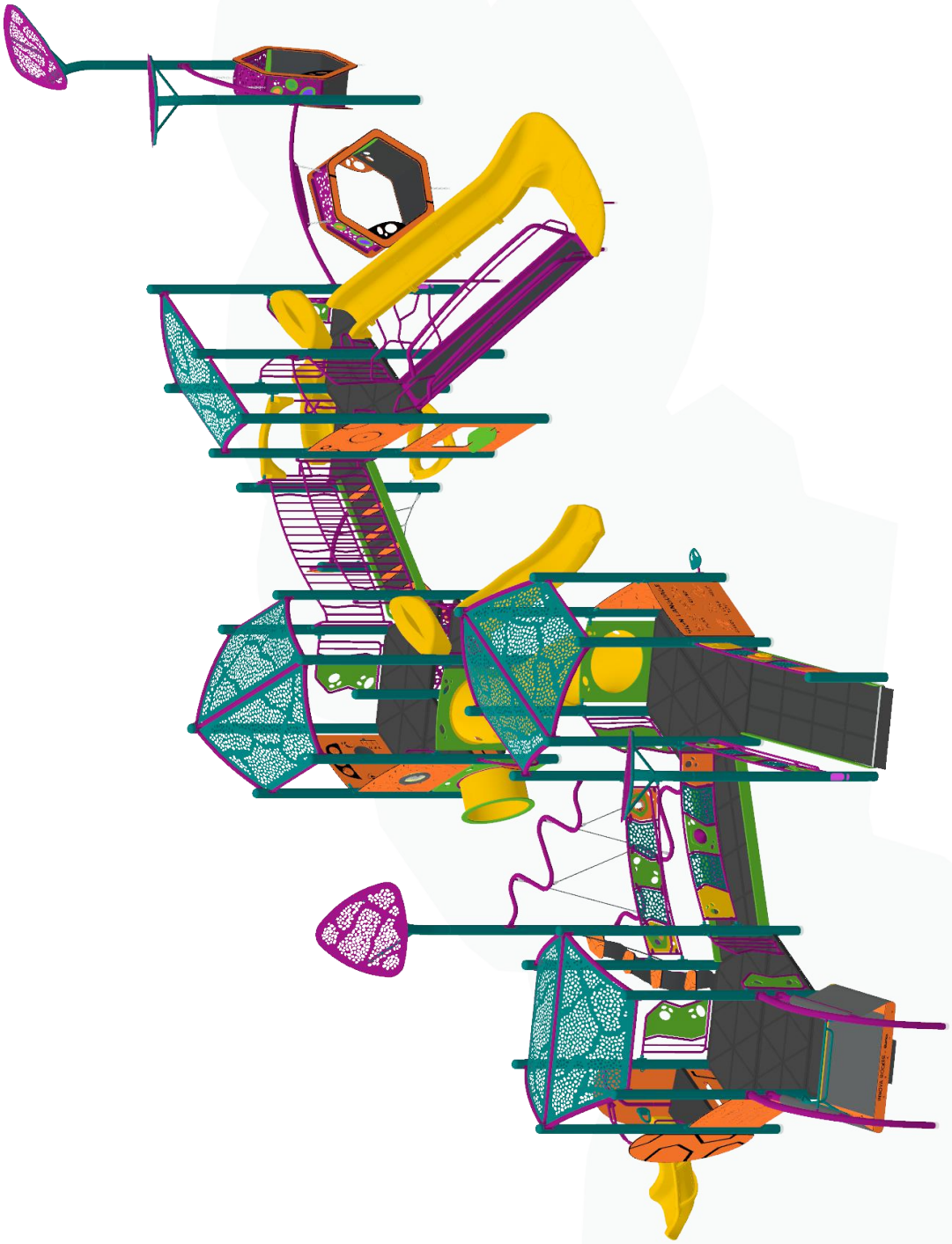
Evanston, IL 60202

03/03/2026

Play Illinois, LLC

129-204494-10

Designer: Margaret Dechant



SERIES Nucleus | Intensity

ISOMETRIC VIEW

GROUP:
Structure

DESIGNED FOR AGES:
2 to 12

James Park Playground

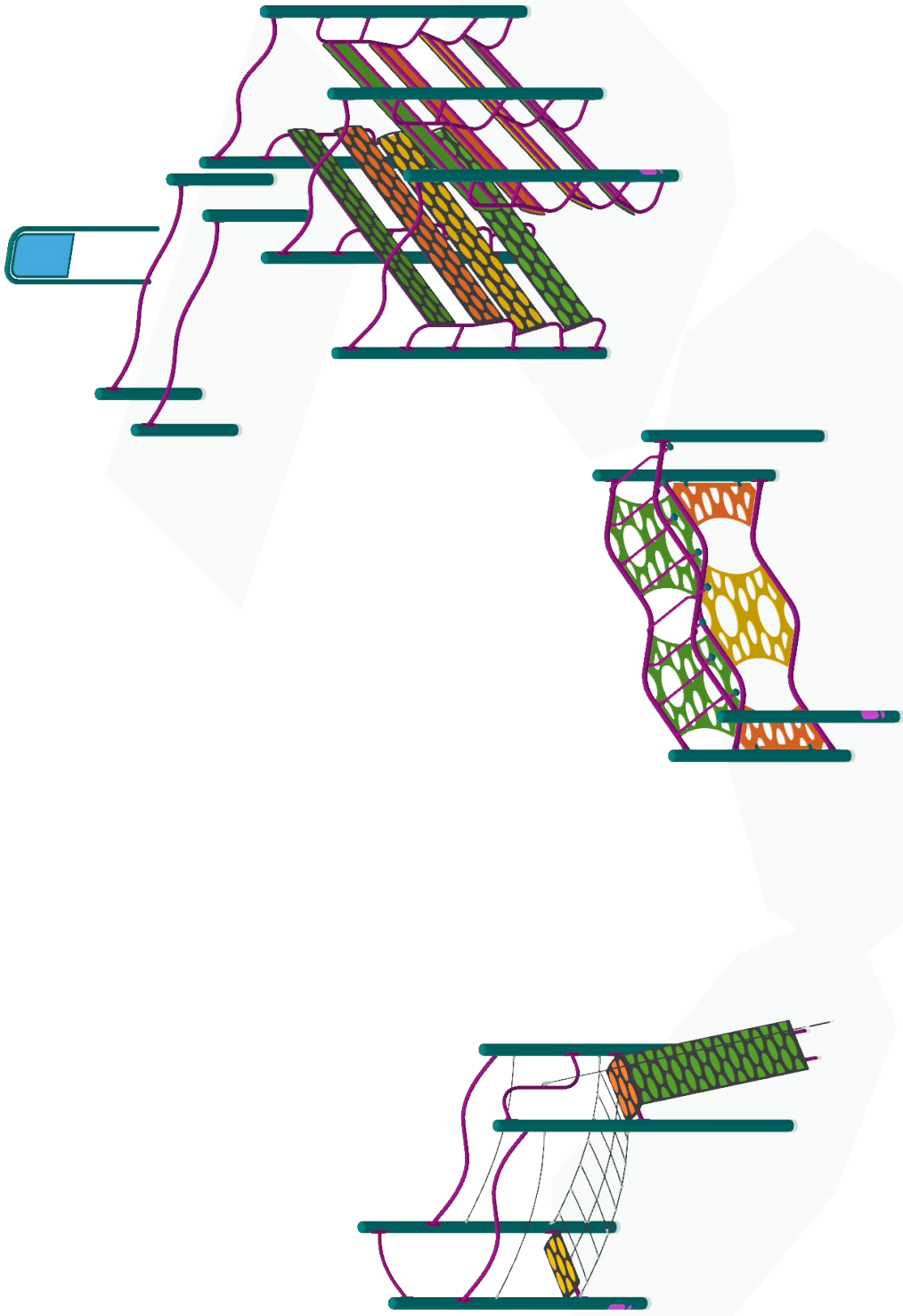
Evanston, IL 60202

03/03/2026

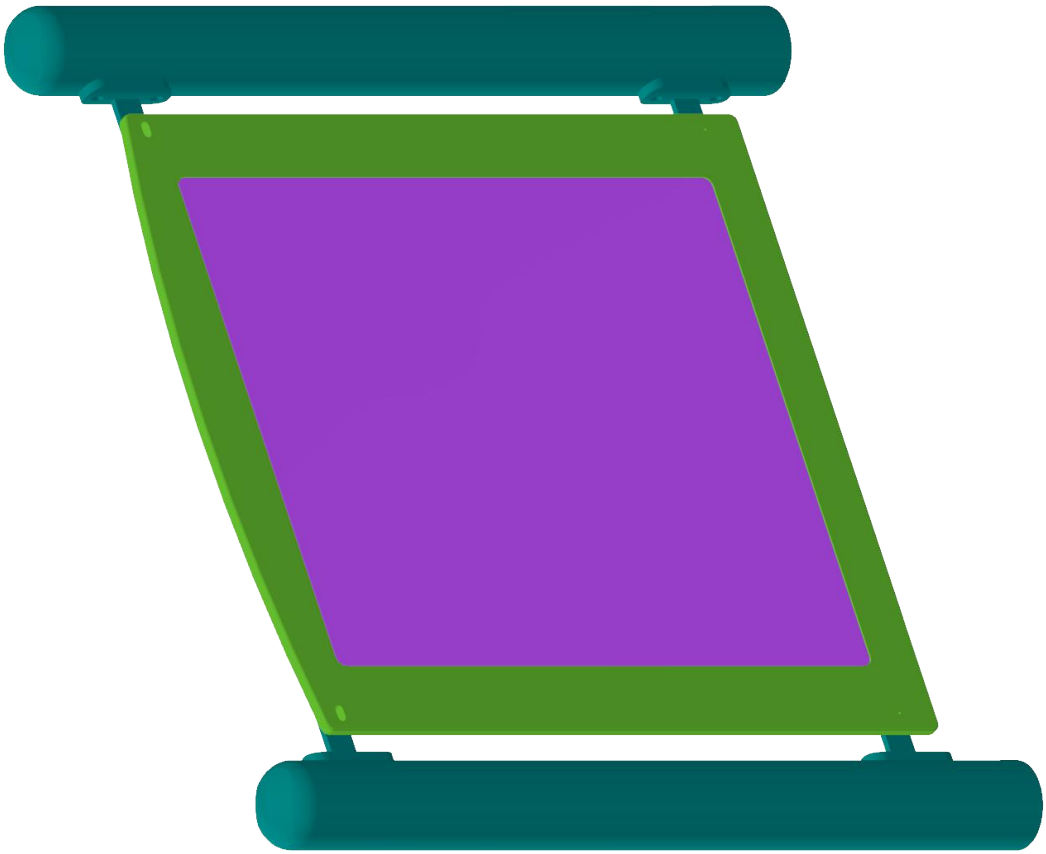
Play Illinois, LLC

129-204494-10

Designer: Margaret Dechant



SERIES	Fitness | Nucleus | Burke Basics	ISOMETRIC VIEW
GROUP: Fitness	**James Park Playground**	03/03/2026
DESIGNED FOR AGES: 13+	Evanston, IL 60202	**Play Illinois, LLC**
	Burke PLAY THAT MOVES YOU.	**129-204494-10**
		Designer: Margaret Dechant



SERIES Nucleus

ISOMETRIC VIEW

GROUP:
Communication Panel

DESIGNED FOR AGES:
2 to 12

James Park Playground

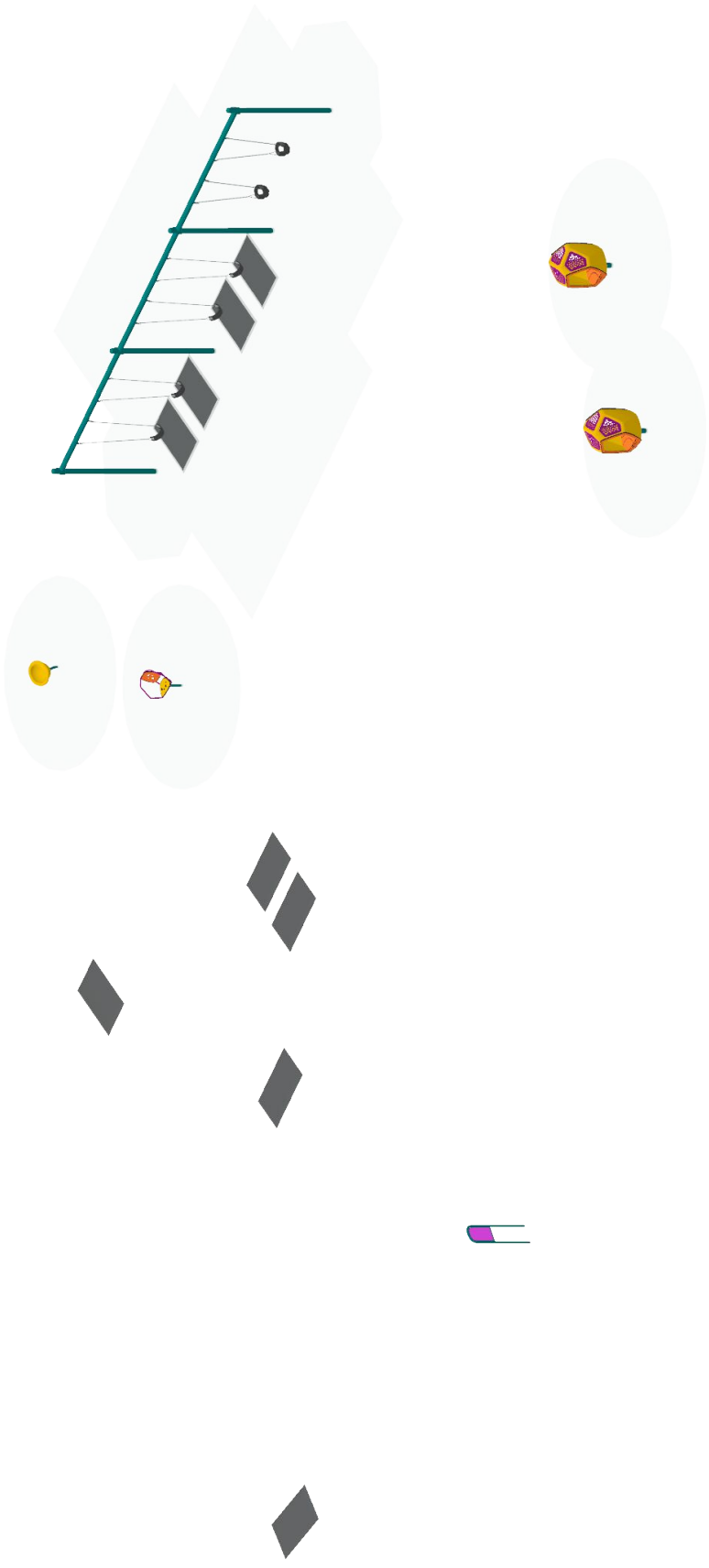
Evanston, IL 60202

Burke
PLAY THAT MOVES YOU.

03/03/2026

Play Illinois, LLC
129-204494-10

Designer: Margaret Dechant



SERIES Burke Basics		ISOMETRIC VIEW
GROUP: Freestanding **DESIGNED FOR AGES:** 2 to 12	**James Park Playground** Evanston, IL 60202 Burke PLAY THAT MOVES YOU.	03/03/2026 **Play Illinois, LLC** **129-204494-10** Designer: Margaret Dechant

PROPOSAL 129-204494-10 | 3/3/2026 | 2026 PRICING

The play components identified in this proposal are IPEMA certified. The use and layout of these components conform to the requirements of ASTM F1487 and CPSC. To verify product certification, visit www.ipema.org.

The space requirements shown in this proposal are to ASTM standards. Requirements for other standards may be different.

Structure

Intensity

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
370-0815	TWISTING TRAVERSE 2-5	1	5	5	100	100
370-1621	TAKTIKS, SHORT ROPE WALL	1	1	1	26	26

Nucleus

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
072-0500-124C	5" OD X 124" CAPPED POST	1	0	0	65	65
072-0500-144C	5" OD X 144" CAPPED POST	4	0	0	76	304
072-0500-148C	5" OD X 148" CAPPED POST	1	0	0	78	78
072-0500-156C	5" OD X 156" CAPPED POST	2	0	0	82	164
072-0500-160C	5" OD X 160" CAPPED POST	4	0	0	84	336
072-0500-172C	5" OD X 172" CAPPED POST	2	0	0	90	180
072-0500-176C	5" OD X 176" CAPPED POST	4	0	0	92	368
072-0500-188C	5" OD X 188" CAPPED POST	2	0	0	99	198
072-0500-196C	5" OD X 196" CAPPED POST	2	0	0	103	206
072-0500-212C	5" OD X 212" CAPPED POST	3	0	0	111	333
072-0500-76C	5" OD X 76" CAPPED POST	1	0	0	40	40
072-0500-80C	5" OD X 80" CAPPED POST	1	0	0	42	42
072-0502-144S	5" OD X 144" SWAGED POST	2	0	0	76	152
072-0502-156S	5" OD X 156" SWAGED POST	2	0	0	82	164
270-0009	8" CLOSURE PLATE, ELLIPSE	3	0	0	8	24
270-0120	EVOLUTION UNITARY ENCLOSURE	2	0	0	34	68
270-0122	EVOLUTION OFFSET ENCLOSURE	3	0	0	34	102
270-0124	SENSORY RAIL 8" RISE RAMP	1	21	21	406	406
270-0125	SENSORY RAIL 8" RISE ENTRANCE RAMP	1	0	0	440	440
270-0129	TRIANGLE PLATFORM	4	2	8	48	192
270-0131	HEXAGONAL PLATFORM S5P	2	12	24	287	574
270-0132	HALF HEXAGON PLATFORM	2	6	12	144	288
270-0300	ABSTRACT PLATFORM LADDER 16"	2	1	2	17	34
370-0016	GRAB BAR ASSEMBLY	2	0	0	6	12
370-0097	PATHWAY LINK, DECK TO POST,RIGHT	1	9	9	144	144
370-0210	TERREX CLIMBER	1	12	12	326	326
370-0865	TREE BRANCH CLIMBER 72"	1	4	4	33	33

JAMES PARK PLAYGROUND

Dodge Avenue and Mulford Street | Evanston, IL 60202

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
370-1664	SHASTA CLIMBER, 40"-48"	1	2	2	20	20
370-1739	LIL NOVO BALANCE BEAM POST TOPOST	1	3	3	31	31
370-1764	NATUREPLAY WOODLAND CLIMBER	1	2	2	59	59
470-0003	EVOLUTION TOP ROOF SUPPORT, SINGLE	2	0	0	13	26
470-0006	EVOLUTION BOTTOM ROOF SUPPORT, SINGLE	7	0	0	13	91
470-0008	EVOLUTION SIDE ROOF SUPPORT, LEFT	7	0	0	16	112
470-0009	EVOLUTION SIDE ROOF SUPPORT, RIGHT	7	0	0	16	112
470-0014	EVOLUTION HEX ROOF	3	0	0	145	435
470-0019	SOLIS	4	0	0	92	368
470-0132	INTENSITY SLIDE PLATFORM	1	2	2	183	183
470-0387	SINGLE LEAF SEAT	1	1	1	7	7
470-0659	ROCK'N ROLL SLIDE, 40" - 48" W/O HOOD	1	1	1	71	71
470-0805	SLIDE HOOD, HIGH SIDE WALL	1	0	0	32	32
470-0966	360 LOOP, 72"	1	6	6	557	557
470-0967	SLIDE HOOD, LOW SIDE WALL	1	0	0	37	37
470-0978	EVOLUTION HALF HEX ROOF,W/ CENTER POST	1	0	0	53	53
470-0979	NICHE CAPSULE	2	4	8	206	412
470-0991	VIPER R 32	1	2	2	77	77
470-1020	VIPER R 64	1	2	2	128	128
570-0071	BIVY TUNNEL	1	1	1	72	72
570-0104	SENSORY RAIL TOP PANEL	2	0	0	7	14
570-0105	SENSORY RAIL MIDDLE PANEL	2	0	0	7	14
570-0106	SENSORY RAIL LOWER PANEL	2	0	0	8	16
570-0107	CHROMA SENSORY EVENT, TOP	1	0	0	13	13
570-0110	BELL SENSORY EVENT, LEFT	1	0	0	24	24
570-0114	HYPNO SENSORY EVENT, TOP	1	0	0	19	19
570-0118	MELODY SENSORY EVENT, MIDDLE	1	0	0	20	20
570-0122	RAINDROPS SENSORY EVENT, LOWER	1	0	0	24	24
570-0125	GROOVY SENSORY EVENT, LOWER	1	0	0	26	26
570-0620	BURKE MART PANEL BELOW PLATFORM 72"-112"	1	4	4	54	54
570-0811	BRAILLE PANEL	1	4	4	55	55
570-0848	SIGNING 2-SIDED PLAY PANEL	1	2	2	44	44
570-1506	TUNNEL, 24" OFFSET	1	4	4	144	144
570-1862	COG WHEEL PANEL	1	2	2	63	63
570-1863	RAIN WHEEL PANEL	1	2	2	59	59
570-1884	TRIGON SPOT	1	1	1	31	31
570-2662	CRAZY MAZE 2-SIDED PLAY PANEL	1	2	2	44	44
570-2666	CAR PANEL	1	2	2	53	53
570-2705	SPINNER CRESCENT PANEL	1	1	1	17	17

OUR MISSION IS TO BRING
PLAY THAT MOVES YOU®
TO COMMUNITIES AROUND
THE WORLD

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
570-2762	INNOVA ROCKER	1	14	14	703	703
670-0212	METAL 2-12 WARNING LABEL	2	0	0	1	2
670-1000	METAL STRUCTURE ID LABEL	2	0	0	1	2

Total User Capacity: 166
Total Weight: 9,723 lbs
Total Price: $168,841

Fitness

Burke Basics

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
580-1302	FS SIGN, CUSTOM/CUSTOM	1	0	0	44	44

Fitness

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
370-0858	DOOR KNOB JAM	1	3	3	325	325
370-0859	JUNGLE PIPELINE	1	1	1	37	37
370-1606	WALL CLINGER	1	2	2	1,032	1,032
370-1607	SUMMIT BRIDGE	1	3	3	274	274

Nucleus

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
072-0500-116C	5" OD X 116" CAPPED POST	4	0	0	61	244
072-0500-152C	5" OD X 152" CAPPED POST	2	0	0	80	160
072-0500-156C	5" OD X 156" CAPPED POST	2	0	0	82	164
072-0500-160C	5" OD X 160" CAPPED POST	4	0	0	84	336
072-0500-164C	5" OD X 164" CAPPED POST	1	0	0	86	86
072-0500-172C	5" OD X 172" CAPPED POST	1	0	0	90	90
072-0500-80C	5" OD X 80" CAPPED POST	4	0	0	42	168
670-0013	METAL 13+ WARNING LABEL	4	0	0	1	4
670-1000	METAL STRUCTURE ID LABEL	4	0	0	1	4

Total User Capacity: 9
Total Weight: 2,968 lbs
Total Price: $67,954

Communication Panel

Nucleus

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
072-0500-80C	5" OD X 80" CAPPED POST	2	0	0	42	84
570-2636	FULL COLOR CUSTOM CURVED 41 36 X 31 BELOW PLATFORM	1	0	0	49	49

OUR MISSION IS TO BRING
PLAY THAT MOVES YOU®
TO COMMUNITIES AROUND
THE WORLD

JAMES PARK PLAYGROUND

Dodge Avenue and Mulford Street | Evanston, IL 60202

Total User Capacity: 0
Total Weight: 133 lbs
Total Price: $2,778

Freestanding

Burke Basics

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
046-0536	PLAYMAT 3' X 5' X 2"	9	0	0	136	1,224
550-0099	TOT SEAT, 7' & 8' SINGLE, STD CHAIN	2	1	2	12	24
550-0111	BELT SEAT, 8' SINGLE, STD CHAIN	4	1	4	10	40
550-0201	SINGLE POST SWING ASSEMBLY 5" OD	1	0	0	247	247
550-0202	SINGLE POST SWING ADD-ON 5" OD	2	0	0	160	320
560-0073	NIDO SPINNER	2	2	4	185	370
560-2573	KIDFORCE SPINNER	1	1	1	43	43
560-2735	ARO SPINNING CHAIR	1	1	1	42	42
580-1398	WELCOME SIGN, AGES 2-12	1	0	0	45	45

Total User Capacity: 12
Total Weight: 2,355 lbs
Total Price: $19,911

Special Notes:
Prices do not include freight, unloading, material storage, site excavation/preparation, removal of existing equipment, removal of excess soil from footing holes, site security, safety surfacing, installation, or sales tax (if applicable). Prices are based on standard colors per CURRENT YEAR BCI Burke Catalog. Custom colors, where available, would be an extra charge. **Pricing is valid for 30 days from the date of this proposal.**

OUR MISSION IS TO BRING
PLAY THAT MOVES YOU®
TO COMMUNITIES AROUND
THE WORLD

PROPOSAL 129-204494-10 | 3/3/2026 | 2026 PRICING

COLOR SELECTION LIST | Default Color Option

GROUP 1 (Structure)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 2 (Fitness)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 3 (Communication Panel)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 4 (Freestanding)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

OUR MISSION IS TO BRING
PLAY THAT MOVES YOU®
TO COMMUNITIES AROUND
THE WORLD

PROPOSAL 129-204494-10 | 3/3/2026 | 2026 PRICING

COLOR SELECTION LIST | fuchsia-macaw

GROUP 1 (Structure)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 2 (Fitness)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 3 (Communication Panel)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 4 (Freestanding)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

PROPOSAL 129-204494-10 | 3/3/2026 | 2026 PRICING

COLOR SELECTION LIST | fuchsia-macaw

GROUP 1 (Structure)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 2 (Fitness)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 3 (Communication Panel)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 4 (Freestanding)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

JAMES PARK PLAYGROUND

Dodge Avenue and Mulford Street | Evanston, IL 60202

PROPOSAL 129-204494-10 | 3/3/2026 | 2026 PRICING

COLOR SELECTION LIST | macaw-fuchsia-balanced

GROUP 1 (Structure)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 2 (Fitness)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 3 (Communication Panel)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 4 (Freestanding)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

OUR MISSION IS TO BRING
PLAY THAT MOVES YOU®
TO COMMUNITIES AROUND
THE WORLD

JAMES PARK PLAYGROUND

Dodge Avenue and Mulford Street | Evanston, IL 60202

PROPOSAL 129-204494-10 | 3/3/2026 | 2026 PRICING

COLOR SELECTION LIST | macaw-fuchsia-balanced

GROUP 1 (Structure)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 2 (Fitness)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 3 (Communication Panel)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

GROUP 4 (Freestanding)

Accessory:	Fuchsia
HDPE 1 Color:	Lime
HDPE 2 Color:	Orange-Black-Orange
Platform:	Gray
Post:	Aqua
Rotomold Plastic:	Yellow

OUR MISSION IS TO BRING
PLAY THAT MOVES YOU®
TO COMMUNITIES AROUND
THE WORLD

COLORS THAT MOVE YOU

POWDER COAT PAINT



PLATFORMS



SOLIS HUE TOPPERS



TRADITIONAL SERIES SITE AMENITIES



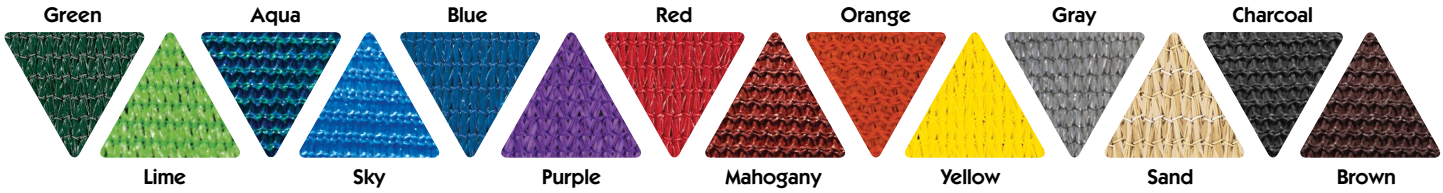
ROCKIT CLIMBERS



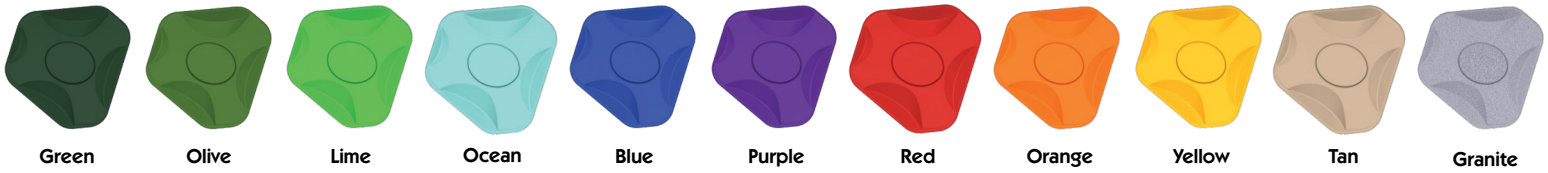
HDPE PLASTIC PANELS



SHADE CANOPIES



ROTOMOLD PLASTIC



VISIT BCIBURKE.COM/COLOR TO CUSTOMIZE YOUR PLAYGROUND COLORS!

BURKE GENERATIONS WARRANTY®

BCI Burke Company, LLC ("Burke") warrants that all standard products are warranted to be free from defects in materials and workmanship, under normal use and service, for a period of one (1) year from the date of shipment.

We stand behind our products.

In addition, the following products are warranted, under normal use and service from the date of shipment as follows:

- One Hundred (100) Year Limited Warranty on aluminum and steel upright posts (including Nucleus®, Nucleus Evolution®, Nucleus Aspire®, Intensity®, Level X®, Synergy®, Synergy Imagination® & 4ME®) against structural failure due to corrosion, deterioration or workmanship.
- One Hundred (100) Year Limited Warranty on KoreKonnect® Clamp Castings against structural failure due to corrosion, deterioration or workmanship.
- One Hundred (100) Year Limited Warranty on Hardware (nuts, bolts, washers).
- One Hundred (100) Year Limited Warranty on bolt-through and direct-bolt fastening and clamp systems (Synergy®, Intensity®, Nucleus®).
- Twenty-Five (25) Year Limited Warranty on spring assemblies and aluminum cast animals.
- Fifteen (15) Year Limited Warranty on structure platforms and decks, metal roofs, table tops, bench tops, railings and barriers against structural failure due to materials or workmanship.
- Fifteen (15) Year Limited Warranty on all plastic components against structural failure due to materials or workmanship.
- Ten (10) Year Limited Warranty on ShadePlay® Canopies fabric, threads, and cables against degradation, cracking or material breakdown resulting from ultra-violet exposure, natural deterioration or manufacturing defects. This warranty is limited to the design loads as stated in the specifications.
- Ten (10) Year Limited Warranty on NaturePlay® Boulders and GFRC products against structural failure due to natural deterioration or workmanship. Natural wear, which may occur with any concrete product with age, is excluded from this warranty.
- Ten (10) Year Limited Warranty on Full Color Custom Signage against manufacturing defects that cause delamination or degradation of the sign. Full Color Custom Signs also carry a two (2) year warranty against premature fading of the print and graphics on the signs.
- Five (5) Year Limited Warranty on Nucleus®, Intensity®, and RopeVenture® cables against premature wear due to natural deterioration or manufacturing defects. Determination of premature wear will be at the manufacturer's discretion.
- Five (5) Year Limited Warranty on rubber belt material against premature wear due to natural deterioration or manufacturing defects. Determination of premature wear will be at the manufacturer's discretion.
- Five (5) Year Limited Warranty on moving parts, including swing components, against structural failure due to materials or workmanship.
- Five (5) Year Limited Warranty on PlayEnsemble® cables and mallets against defects in materials and workmanship.
- Three (3) Year Limited Warranty on electronic panel speakers, sound chips and circuit boards against electronic failure caused by manufacturing defects.

The warranty stated above is valid only if the equipment is erected in conformity with the layout plan and/or installation instructions furnished by BCI Burke Company, LLC using approved parts; have been maintained and inspected in accordance with BCI Burke Company, LLC instructions. Burke's liability and your exclusive remedy hereunder will be limited to repair or replacement of those parts found in Burke's reasonable judgment to be defective. Any claim made within the above stated warranty periods must be made promptly after discovery of the defect. A part is covered only for the original warranty period of the applicable part. Replacement parts carry the applicable warranty from the date of shipment of the replacement from Burke. After the expiration of the warranty period, you must pay for all parts, transportation and service charges.

Burke reserves the right to accept or reject any claim in whole or in part. Burke will not accept the return of any product without its prior written approval. Burke will assume transportation charges for shipment of the returned product if it is returned in strict compliance with Burke's written instructions.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IF THE FOREGOING DISCLAIMER OF ADDITIONAL WARRANTIES IS NOT GIVEN FULL FORCE AND EFFECT, ANY RESULTING ADDITIONAL WARRANTY SHALL BE LIMITED IN DURATION TO THE EXPRESS WARRANTIES AND BE OTHERWISE SUBJECT TO AND LIMITED BY THE TERMS OF BURKE'S PRODUCT WARRANTY. SOME STATES DO NOT ALLOW THE EXCLUSION OF CERTAIN IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

Warranty Exclusions: The above stated warranties do not cover: "cosmetic" defects, such as scratches, dents, marring, or fading; damage due to incorrect installation, vandalism, misuse, accident, wear and tear from normal use, exposure to extreme weather; immersion in salt or chlorine water, unauthorized repair or modification, abnormal use, lack of maintenance, or other cause not within Burke's control; and

Limitation of Remedies: Burke is not liable for consequential or incidental damages, including but not limited to labor costs or lost profits resulting from the use of or inability to use the products or from the products being incorporated in or becoming a component of any other product. If, after a reasonable number of repeated efforts, Burke is unable to repair or replace a defective or nonconforming product, Burke shall have the option to accept return of the product, or part thereof, if such does not substantially impair its value, and return the purchase price as the buyer's entire and exclusive remedy. Without limiting the generality of the foregoing, Burke will not be responsible for labor costs involved in the removal of products or the installation of replacement products. Some states do not allow the exclusion of incidental damages, so the above exclusion may not apply to you.

The environment near a saltwater coast can be extremely corrosive. Some corrosion and/or deterioration is considered "normal wear" in this environment. Product installed within 500 yards of a saltwater shoreline will only be covered for half the period of the standard product warranty, up to a maximum of five years, for defects caused by corrosion. Products installed in direct contact with saltwater or that are subjected to salt spray are not covered by the standard warranty for any defects caused by corrosion.

Contact your local Burke Representative for warranty information regarding Burke Turf® and Burke Tile products.

Terms of Sale

Pricing: Prices published in this catalog are in USD, are approximate and do not include shipping & handling, surfacing, installation nor applicable taxes. All prices are subject to change without notice. Contact your Burke representative for current pricing. Payments are to be made in USD.

Weights: Weights are approximate and may vary with actual orders.

Installation: All equipment is shipped unassembled. For a list of factory-certified installers in your area, please contact your Burke representative.

Specifications: Product specifications in this catalog were correct at the time of publication. However, product improvements are ongoing at Burke, and we reserve the right to change or discontinue specifications without notice.

Loss or Damage in Transit: A signed bill of lading is our receipt from a carrier that our shipment to you was complete and in good condition upon arrival. Before you sign, please check the Bill of Lading carefully when the shipment arrives to make sure nothing is missing and there are no damages. Once the shipment leaves our plant, we are no longer responsible for any damage, loss or shortage.

For more information regarding the warranty, call Customer Service at 920-921-9220 or 800-356-2070. **01/2025**

SECTION 12 93 00

SITE FURNISHINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Bench – With Back
2. Bench – Without Back
3. Picnic Table - ADA
4. Trash/ Recycling Receptacle
5. Bike Rack
6. Grill
7. Coal Receptacle
8. Tree Grates

B. Related Requirements:

1. Section 03 30 00 -Cast-in-Place Concrete
2. Section 31 22 14 - Earthwork for Sitework

1.3 REFERENCE STANDARDS

A. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2015a.

B. ASTM A312/A312M - Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes; 2017.

C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.

1.4 PRE-INSTALLATION MEETING

A. Pre-installation Meeting: Conduct meeting at Project Site, Manufacturer’s Facility of Fabricator’s Shop. Confirm with Owner and Landscape Architect 14 days prior to conference. At a minimum review the following:

1. Ensure required submittals have been provided with sufficient time for review prior to scheduling the Preinstallation Meeting.
2. Review the detailed requirements for the work of this section and to review the drawings and specifications for this work

3. Require attendance by all affected installers including but not limited to:

    a. Contractor's superintendent.
    b. Installer
    c. Manufacturer/Fabricator Representative
    d. Other affected Subcontractors
    e. Architect/Engineer of Record
    f. Owner Representative

4. Record minutes and distribute copies within 5 days after meeting to participants as well as Landscape Architect, Architect/Engineer of Record, Owner and those affected by decisions made.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Manufacturer’s Product Literature and Specification Data.
2. Manufacturer’s written instructions for recommended maintenance practices.
3. Color and finish samples for verification and selection.
4. Written manufacturer’s warranty.
5. Product liability insurance certificate with project owner as certificate holder.
6. MSDS for items in Part 2 “Products.”

B. Samples: For each exposed product and for each color and texture specified.

C. Samples for Initial Selection: For units with factory-applied finishes.

D. Samples for Verification: For each type of exposed finish, not less than 6-inch- (152-mm-) long linear components and 4-inch- (102-mm-) square sheet components.

E. Product Schedule: For site furnishings, use same designations indicated on Drawings.

F. Shop Drawings: Prepared by or under the supervision of a qualified professional, detailing fabrication and assembly.

1. Submit shop drawings within a reasonable time so as not to delay the start of material fabrication and installation.
2. Submit shop drawings per above allowing a minimum review time of 10 business days for review and response. Per above, also allow enough time for revisions and resubmittal where reasonably predictable.
3. Shop drawings shall show the proposed layout identifying all components and details based on field verified conditions and measurements.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer, Fabricator, and Manufacturer.

B. Material Certificates: For site furnishings manufactured with preservative-treated wood.

1. Indicate type of preservative used and net amount of preservative retained. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

C. Maintenance Instructions.

D. Warranty: Written manufacturer's warranty.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: From Installer including a recommended maintenance plan with procedures for inspection and care during a calendar year. Submit before start of required warranty and maintenance periods

1.8 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Benches and Tables: Provide attic stock equivalent to 20% of total slat material.
2. Trash and Recycling Receptacle Inner Containers: Five full-size units for each size and type indicated, but no fewer than two units.

1.9 QUALITY ASSURANCE

A. Contractor shall establish and maintain a quality assurance program for the purposes of managing the quality of the work. Quality assurance program shall consist of plans, procedures and organizational design necessary to ensure that work of this Section meets the prescriptive and performance requirements specified. The Quality Control, Source Quality Control and Site Quality Control provisions specified elsewhere in this Section shall form part of the Quality Assurance Program.

B. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of Authorities Having Jurisdiction for all work included in this section.

1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

C. Codes and Standards: Conform work to all applicable codes and standards.

D. Manufacturer Qualifications: Provide manufacturer qualifications as follows:

1. Submit a list of ten completed installations. For each installation provide: name and type of facility; its location; the date of installation; name and telephone number of contact at the facility familiar with the installation.
2. Submit qualifications of manufacturer.
3. Submit manufacturer's quality control program.
4. Submit example of Material Warranty and any other applicable warranties.

E. Installer Qualifications: Provide installer qualifications as follows:

1. Submit a list of ten completed installations. For each installation provide: name and type of facility; its location; the date of installation; name and telephone number of contact at the facility familiar with the installation.
2. Submit resumes and/or qualifications of installation manager(s).
3. Submit installation quality control program.

1.10 SEQUENCING AND SCHEDULING

A. General: Prior to the start of Work, prepare a detailed schedule of the work for coordination with other trades.

B. Schedule all utility installations prior to beginning work in this section.

1.11 DELIVERY, STORAGE AND HANDLING

A. Deliver packaged products in an undamaged condition in original containers, displaying manufacturer's labels, along with instructions for handling, storing, unpacking, protecting, and installing.

B. Deliver and store materials in manufacturer's original containers, with seals unbroken and identification labels intact until time of use.

C. Deliver products to achieve the shortest duration of storage time as practicable.

D. Deliver all chemical products in original, unopened containers with original labels intact and legible, which state the guaranteed chemical analysis. Store all chemicals in weather protected enclosure.

E. Comply with manufacturer's written instructions for delivery, storage, and handling, and as required to prevent damage to products and work during construction.

F. Store products and materials in a neat and orderly manner. Maintain clear aisles and access to work areas. Protect stored products from theft and damage. Store products above ground in weathertight, ventilated packaging or enclosures.

G. Store materials under cover and protected from weather and contact with damp or wet surfaces. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

H. Store liquids in tightly closed containers protected from freezing.

I. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.

J. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Do not move or handle materials when they are wet or frozen.

K. Accompany each delivery of bulk materials with appropriate certificates.

1.12 FIELD CONDITIONS

A. 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:

1. Notify Owner and Architect not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Owner and Architect's written permission.

B. Field Measurements: Verify actual locations of all site elements and other construction contiguous with the work of this section prior to fabrication and/or installation.

C. The work shall not occur in the presence of standing water, mud, snow, or frozen subgrade conditions. Work shall not occur while precipitation is occurring or during excessive winds, or when temperatures are outside the limits specified in this specification. Work completed during these conditions will be rejected.

D. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

E. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds.

F. Hot-Weather Requirements: Comply with hot-weather construction requirements.

1.13 EXCAVATING AND GRADING AROUND UTILITIES

A. Contractor shall carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging.

B. Determine location of underground utilities and perform work in a manner that will avoid damage. Hand excavate as required. Maintain grade stakes set by others until parties concerned mutually agree upon removal.

C. Notification of the utility locate services is required for all Excavation and grading deeper than 12 inches: The Contractor is responsible for knowing the location and avoiding utilities that are not covered by the local utility locator service.

1.14 WARRANTY

A. When warranties are required, verify with Owner's counsel that warranties stated in this article are not less than remedies available to Owner under prevailing local laws.

B. Special Warranty: Manufacturer agrees to repair or replace components that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Deterioration of finishes beyond normal weathering and wear.
b. Separation or delamination of materials and components.

C. Verify available warranties and warranty periods for units and components.

D. Warranty Period: One year from date of Substantial Completion

1.15 MAINTENANCE SERVICE

A. Contractor to provide standard industry maintenance on all scope items herein until Final Acceptance.

PART 2 - PRODUCTS

2.1 BENCH – WITH BACK

A. Manufacturer: DuMor, Locally sourced by Nutoys Leisure Products, Tel: 800 526 6197; E: play@nutoys4fun.com

B. Model: 165-60PL-CENTER ARMREST

C. Frame Material: Solid cast aluminum – Black satin powder coat

D. Seat:

1. Material: Recycled Plastic
2. Color: Cedar

3. Overall Height: 32”
4. Overall Width: 73”
5. Overall Depth: 27”
6. Arms: Side and Center arm

    a. Arm Material: Solid cast aluminum

7. Weight: 281lbs.

E. Mounting: Surface mount

2.2 BENCH – WITHOUT BACK

A. Manufacturer: DuMor, Locally sourced by Nutoys Leisure Products, Tel: 800 526 6197; E: play@nutoys4fun.com

B. Model: 166-60PL-CENTER ARMREST

C. Frame Material: Solid cast aluminum – Black satin powder coat

D. Seat:

1. Material: Recycled Plastic
2. Color: Cedar

3. Overall Height: 32”
4. Overall Width: 73”
5. Overall Depth: 27”

6. Arms: Side and Center arm

    a. Arm Material: Solid cast aluminum

E. Mounting: Surface mount

2.3 PICNIC TABLE – ADA

A. Manufacturer: Pilot Rock, Sourced by RJ Thomas Mfg. Co., Tel: 800 762 5002; E: pilotrock@rjthomas.com

B. Model: WXT/G-8CA

C. Frame Material: Steel frame

D. Table Top:
1. Material: Expanded Steel
2. Color: to be selected by Owner from manufacturer's standard catalog
3. Seat Height: 18"
4. Overall Height: 30"
5. Overall Length: 96"
6. Surface Shape: Rectangle
7. Weight: 284lbs.

E. Accessibility:

1. All tables to be ADA, refer to plan for locations

2.4 TRASH/RECYCLING RECEPTACLE

A. Manufacturer: Clean River, www.cleanriver.com

B. Model: Promenade Dome Top | PD,
1. #PD35-2

C. Support Frames: Steel; welded.

D. Trash Receptacles:

1. Capacity 70-gallon
2. Dimensions: 42"w x 19"d x 47.25"h

E. Material Finish: Raven Black and Marine Blue and Storm Gray Housing

F. Opening Shapes: 12.5"x5.5" Rectangle(Trash) & 9"x2"x5" Saturn(Recycling)

G. Labels: Trash to read "LANDFILL", Recycling to read "RECYCLING"

H. Customization: Large poster on doors (poster on door to be furnished by COE)

I. Mounting: Surface Anchors

2.5 BIKE RACK

A. Madrax (Supplied by Graber Manufacturing), 1080 Uniek Dr, Waunakee, WI 53597, Ph. N: (608) 849-1080

B. Type/Model No.: UX200-IG, Surface mount, 2” square tubing

C. Description: Galvanized Steel, Powder Coated Black

2.6 GRILL

A. Manufacturer: DuMor, Locally sourced by Nutoys Leisure Products, Tel: 800 526 6197; E: play@nutoys4fun.com

B. Model 21-00, in ground mount, black color.

2.7 COA RECEPTACLE

A. Reinforced concrete pipe with bell top, 18” diameter with stenciled letters, see plans for more information.

2.8 TREE GRATE

1. Neenah Enterprises, Inc., 2121 Brooks Ave, Neenah, WI 54956, Ph. No: (866) 830-5074
2. Type/Model: R-8712 Square Tree Grate & Frame
3. Size: 5’ square
4. Description: Cast Gray Iron ASTM A-48, Class 35B
5. Finish: Not Painted

2.9 MATERIALS

A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; free of surface blemishes and complying with the following:

1. Rolled or Cold-Finished Bars, Rods, and Wire: ASTM B 211 (ASTM B 211M).
2. Extruded Bars, Rods, Wire, Profiles, and Tubes: ASTM B 221 (ASTM B 221M).
3. Structural Pipe and Tube: ASTM B 429/B 429M.
4. Sheet and Plate: ASTM B 209 (ASTM B 209M).
5. Castings: ASTM B 26/B 26M.

B. Steel and Iron: Free of surface blemishes and complying with the following:

1. Plates, Shapes, and Bars: ASTM A 36/A 36M.
2. Steel Pipe: Standard-weight steel pipe complying with ASTM A 53/A 53M, or electric-resistance-welded pipe complying with ASTM A 135/A 135M.
3. Tubing: Cold-formed steel tubing complying with ASTM A 500/A 500M.
4. Mechanical Tubing: Cold-rolled, electric-resistance-welded carbon or alloy steel tubing complying with ASTM A 513/A 513M, or steel tubing fabricated from steel complying with ASTM A 1011/A 1011M and complying with dimensional tolerances in ASTM A 500/A 500M; zinc coated internally and externally.
5. Sheet: Commercial steel sheet complying with ASTM A 1011/A 1011M.

6. Perforated Metal: From steel sheet not less than 0.090-inch (2.3-mm) thickness; manufacturer's standard perforation pattern.

7. Expanded Metal: Carbon-steel sheets, deburred after expansion, and complying with ASTM F 1267.
8. Malleable-Iron Castings: ASTM A 47/A 47M, grade as recommended by fabricator for type of use intended.
9. Gray-Iron Castings: ASTM A 48/A 48M, Class 200.

C. Stainless Steel: Free of surface blemishes and complying with the following:

1. Sheet, Strip, Plate, and Flat Bars: ASTM A 666.
2. Pipe: Schedule 40 steel pipe complying with ASTM A 312/A 312M.
3. Tubing: ASTM A 554.

D. Anchors, Fasteners, Fittings, and Hardware: Stainless steel, commercial quality, tamperproof, vandal and theft resistant, concealed, recessed, and capped or plugged.

1. Angle Anchors: For inconspicuously bolting legs of site furnishings to on or below-grade substrate.
2. Antitheft Hold-Down Brackets: For securing site furnishings to substrate.

E. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M; recommended in writing by manufacturer, for exterior applications.

F. Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound; resistant to erosion from water exposure without needing protection by a sealer or waterproof coating; recommended in writing by manufacturer, for exterior applications.

G. Galvanizing: Where indicated for steel and iron components, provide the following protective zinc coating applied to components after fabrication:

1. Zinc-Coated Tubing: External, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq. ft. (0.27 kg/sq. m) of zinc after welding, a chromate conversion coating, and a clear, polymer film. Internal, same as external or consisting of 81 percent zinc pigmented coating, not less than 0.3 mil (0.0076 mm) thick.
2. Hot-Dip Galvanizing: According to ASTM A 123/A 123M, ASTM A 153/A 153M, or ASTM A 924/A 924M.

2.10 FABRICATION

A. Metal Components: Form to required shapes and sizes with true, consistent curves, lines, and angles. Separate metals from dissimilar materials to prevent electrolytic action.

B. Welded Connections: Weld connections continuously. Weld solid members with full-length, full-penetration welds and hollow members with full-circumference welds. At exposed connections, finish surfaces smooth and blended, so no roughness or unevenness shows after finishing and welded surface matches contours of adjoining surfaces.

C. Pipes and Tubes: Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of handrail and railing components.

D. Preservative-Treated Wood Components: Complete fabrication of treated items before treatment if possible. If cut after treatment, apply field treatment complying with AWPA M4 to cut surfaces.

E. Exposed Surfaces: Polished, sanded, or otherwise finished; all surfaces smooth, free of burrs, barbs, splinters, and sharpness; all edges and ends rolled, rounded, or capped.

F. Factory Assembly: Factory assemble components to greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

2.11 GENERAL FINISH REQUIREMENTS

A. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.12 ALUMINUM FINISHES

A. Powder-Coat Finish: Manufacturer's standard polyester powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

2.13 STEEL AND GALVANIZED-STEEL FINISHES

A. Powder-Coat Finish: Manufacturer's standard polyester, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

B. PVC Finish: Manufacturer's standard, UV-light stabilized, mold-resistant, slip-resistant, matte-textured, dipped or sprayed-on, PVC-plastisol finish, with flame retardant added; complying with coating manufacturer's written instructions for pretreatment, application, and minimum dry film thickness.

2.14 STAINLESS-STEEL FINISHES

A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.

1. Run directional finishes with long dimension of each piece.
2. Directional Satin Finish: No 4.
3. Dull Satin Finish: No. 6.

PART 3 - EXECUTION

3.1 INSPECTION

A. Prior to installation examine site to confirm that existing conditions are satisfactory for the work of this section to proceed.

B. Confirm that the subgrade is at the proper elevation and compacted as required. Subgrade elevations shall slope toward the under drain lines as shown on the drawings.

C. Confirm that no adverse drainage conditions are present.

D. Confirm that no conditions are present which are detrimental to plant growth.

E. Confirm that utility work has been completed per the drawings.

F. If unsatisfactory conditions are encountered, notify the Landscape Architect immediately to determine corrective action prior to proceeding.

3.2 COORDINATION WITH OTHER WORK

A. The Contractor is responsible for investigating, and being aware of, the work requirements of their sub-contractors and other contractors. The Contractor shall coordinate with all other work that may impact the completion of the work herein.

B. Prior to the start of work, prepare a detailed schedule of the work for coordination with other trades.

3.3 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.4 INSTALLATION

A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.

B. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.

C. Install site furnishings level, plumb, true, and securely anchored at locations indicated on Drawings.

D. Post Setting: Set cast-in support posts in concrete footing with smooth top, shaped to shed water. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at correct angle and are aligned and at correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

E. Posts Set into Voids in Concrete: Form or core-drill holes for installing posts in concrete to depth recommended in writing by manufacturer of site furnishings and 3/4 inch (19 mm) larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions, with top smoothed and shaped to shed water.

F. Pipe Sleeves: Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout mixed and placed to comply with anchoring material manufacturer's written instructions, with top smoothed and shaped to shed water.

3.5 GRADE AND ELEVATION CONTROL

A. Provide grade and elevation control during installation of the work of this section. Utilize grade stakes, surveying equipment, and other means and methods to assure that grades and contours conform to the grades indicated on the plans.

3.6 CLEANING

A. The contractor should clean the job site and remove any excess materials. Coordinate with Owner for storage locations for any Attic Stock materials where applicable.

3.7 PROTECTION

A. Contractor shall furnish and install construction fence around new installations to prevent access. Fencing shall be maintained in place for a minimum of 48 hours after completion of installation, or as directed by the Landscape Architect. Drying period may take longer due to weather conditions.

B. Contractor shall notify Landscape Architect that landscape irrigation shall be restricted near installations until applicable drying period is complete. Standing water on installations shall be restricted at all times.

END OF SECTION 12 93 00

SECTION 31 10 00 – SITE CLEARING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above-and below-grade site improvements.
6. Disconnecting, capping or sealing, and removing site utilities.
7. Temporary erosion- and sedimentation-control measures.

1.03 DEFINITIONS

A. Subsoil: All soil beneath the topsoil layer of the soil profile and typified by the lack of organic matter and soil organisms.

B. 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.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is zone where plant roots grow.

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. It appearance is generally friable, previous, 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, and other non-soil 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 defined by a circle concentric with each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated.

G. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.04 MATERIALS 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 become Contractor's property and shall be removed from Project site.

1.05 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.

1. Use sufficiently detailed photographs or videotape.
2. 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.

1.06 QUALITY ASSURANCE

A. Preinstallation Conference: Conduct conference at Project Site.

1.07 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.

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

B. Improvements of Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner’s property will be obtained by Owner before award of Contract.

1. Do not proceed with work on adjoining property until directed by Architect.

C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner’s premises.

D. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.

E. Do not commence site clearing operations until temporary erosion- and sedimentation- control and plant-protection measures are in place.

F. The following practices are prohibited within protection zones:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

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

2.01 MATERIALS

A. Satisfactory Soil Materials: Requirements for satisfactory soil material are specified in the Division 31 Section “Earth Moving.”

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.01 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 or to be relocated. Flag each tree trunk at 54 inches above the ground.

C. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.02 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 protections zones.

C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.

D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.03 TREE AND PLANT PROTECTION AREA

A. General: Protect trees and plants remaining on-site according to requirements in Division 01 Section “Temporary Tree and Plant Protection.”

B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.

3.04 EXISTING UTILITIES

A. Locate, identify disconnect, and seal or cap utilities indicated to be removed.

1. Arrange with utility companies to shut off indicated utilities.

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:

1. Notify Architect not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Architect's written permission.

D. Excavate for and remove underground utilities indicated to be removed.

3.05 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.

1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated .
2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
3. Use only methods for grubbing within protection zones.
4. Chips removed tree branches and dispose of off-site.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

3.06 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to whether depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.

1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches diameter; trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil away from edge excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

1. Limit height of topsoil stockpiles to 72 inches.
2. Do not stockpile topsoil within protection zones.
3. Dispose of surplus topsoil. Surplus is that which exceeds quantity indicated to be stockpiled or reused.
4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

3.07 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. 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.
2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antitrust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.08 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil materials, 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 project work.

END OF SECTION 31 10 00

SECTION 31 20 00

EARTH MOVING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Preparing subgrades for slabs-on-grade, walks, pavements, turfs and grasses and plants.
2. Excavating and backfilling for buildings and structures.
3. Drainage course for concrete slabs-on-grade.
4. Subbase course for concrete walks and pavements.
5. Subbase course and base course for asphalt paving.
6. Subsurface drainage backfill for walls and trenches.
7. Excavating and backfilling trenches for utilities and pits for buried utility structures.

1.03 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for uses as fill or backfill.

E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions are directed by Architect.
2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Rock material in beds, ledges unstratisfied masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. for bulk excavation or ¾ cu. yd. for footing, trench, and pit

excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:

1. Excavation of Footings, Trenches, and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch wide, maximum, short-tip-radius rock bucket; rated at not less than 138-hp flywheel power with bucket-curling force of not less than 28,700 lbf and stick-crowd force of not less than 18, 400 lbf with extra-long reach boom; measured according to SAE J-1179.
2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 230-hp flywheel power and developing a minimum of 47, 992-lbf breakout force with a general-purpose bare bucket; measured according to SAE J-732.

I. Rock: Rock material in beds, ledges unstratisfied masses, conglomerate deposits, and boulders of rock material ¾ cu. yd. or more in volume that exceed a standard penetration resistance of 100 blows 2 inches when tested by geotechnical agency, according to ASTM D 1586.

J. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electric appurtenances, or other man-made stationary features constructed above or below the ground surface.

K. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

L. 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.

M. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.04 SUBMIITALS

A. Product Data: For each type of the following manufactured products required:

1. Geotextiles.
2. Controlled low-strength material, including design mixture.
3. Warning tapes.

B. Samples for Verification: For the following products, in sizes indicated below:

1. Geotextile: 12 by 12 inches.
2. Warning Tape: 12 inches long; of each color.

C. Qualification Data: For qualified testing agency.

D. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:

1. Classification according to ASTM D 2487.
2. Laboratory compaction curve according to ASTM D 698.

E. Pre-excavation Photographs and 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.

1.05 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.

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

1. Do not proceed with work on adjoining property until directed by Architect.

C. Utility Locator Service: Notify utility locator service 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.

E. Do not commence earth moving operations until plant-protection measures specified in Division 01 Section "Temporary Tree and Plant Protection" are in place.

F. The following practices are prohibited within protection zones:

1. Storage of construction material, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

G. Do not direct vehicle or equipment exhaust towards protection zones.

H. Prohibit heat sources, flame, ignition sources, and smoking within or near protection zones.

PART 2 - PRODUCTS

2.01 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 D 2487, 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 D 2487, or a combination of these groups.

1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1–½ inch sieve and not more than 12 percent passing a No. 200 sieve.

E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone,

and natural sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing of No. 200 sieve.

F. Base Course: Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

G. Bedding Course: Naturally and artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 8 sieve.

H. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.

I. Filler Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 4 sieve.

J. Sand: ASTM C 33, fine aggregate.

K. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.02 GEOTEXTILES

A. Subsurface Drainage Geotextiles: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2, AASHTO M 288.
2. Grab Tensile Strength: 157 lbf; ASTM D 4632.
3. Sewn Seam Strength: 142 lbf; ASTM D 4632.
4. Tear Strength: 56 lbf; ASTM D 4632.
5. Puncture Strength: 56 lbf; ASTM D 4533.
6. Apparent Opening Size: No 40 sieve, maximum ASTM D 4751.
7. Permittivity: 0.5 per second, minimum ASTM D 4491.
8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.03 ACCESSORIES

A. 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:

1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.01 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.

3.02 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding areas.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

1. 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.

3.03 EXPLOSIVES

A. Explosives: Do not use explosives.

3.04 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and surfaces 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.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:

a. 24 inches outside of concrete forms other than footings.

b. 12 inches outside of concrete forms at footings.

c. 6 inches outside of minimum required dimensions of concrete cast against grade.

d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.

e. 6 inches beneath bottom of concrete slabs-on-grade.

f. 6 inches beneath pipe in trenches, and the greater of 24 inches than pipe or 42 inches wide.

B. Classified Excavation: Excavate to subgrade elevations. Material to be excavated will be classified as earth and rock. Do not excavate rock until it has been classified and cross sectioned by Architect.

1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.

a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.

2. Rock excavation includes removal and disposal of rock. Remove rock to lines and subgrade elevations indicated to permit installation of permanent construction without exceeding the following dimensions:
    a. 24 inches outside of concrete forms other than footings.
    b. 12 inches outside of concrete forms at footings.
    c. 6 inches outside of minimum required dimensions of concrete cast against grade.
    d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing.
    e. 6 inches beneath bottom of concrete slabs-on-grade.
    f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.

3.05 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus1 inch if applicable, extend excavations a sufficient distance from structure for placing and removing concrete formwork, for installing services and other construction, and for inspections.
    1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
    2. Pile Foundations: Stop excavations 6 to 12 inches above bottom of pile cap before piles are placed. After piles have been driven, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.
    3. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended as bearing surfaces.

B. Excavations at Edges of Tree-and Plant-Protection Zones:
    1. Excavate by hand to indicated lines, cross sections, elevations, and subgrades. Use narrow-time spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
    2. Cut and protect roots according to requirements in Division 01 Section “Temporary Tree and Plant Protection.”

3.06 EXCAVATION FOR WALKS PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.07 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.
    1. 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.
    1. Clearance: 12 inches each side of pipe or conduit.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of

pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

1. For pipes and conduit less than 6 inches in nominal diameter, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
2. For pipes and conduit 6 inches or larger nominal diameter, shape bottom of trench depressions with tamped sand backfill.
3. For flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support conduit on an undisturbed subgrade.
4. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

D. Trench Bottoms: Excavate trenches 4 inches deeper than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.

1. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

E. Trenches in Tree- and Plant-Protection Zones:

1. Hand-excavate to indicate line, cross sections, elevations, and subgrade. Use narrow-tine spading forks to comb soils and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.
3. Cut and protect roots according to requirements in Division 01 Section “Temporary Tree and Plant Protection.”

3.08 SUBGRADE INSPECTION

A. Notify Architect when excavations have reached required subgrade.

B. If Architect determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof-roll subgrade below the building slabs and pavements with a pneumatic-tired equipment to identify soft packets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Architect, and replace with compacted backfill or fill as directed.

D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.09 UNAUTHORIZED AUTHORIZATION

A. Fill unauthorized excavation under foundations or walls footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Architect.

1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Architect.

3.10 STORAGE OF SOILS 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.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.11 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.12 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. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Division 03 Section "Cast-in-Place Concrete."

D. Trenches under Roadways: Provide 4-inch- thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase course.

E. Backfill voids with satisfactory soil while removing shoring and bracing.

F. Place and compact initial backfill of subbase material, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.

1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

G. Place and compact final backfill of satisfactory soil to final subgrade elevation.

H. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.13 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 layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.

2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under building slabs, use engineered fill.
5. Under footings and foundations, use engineered fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 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 not less than the following percentages of maximum dry unit weight according to ASTM D 698:

1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
3. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.16 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.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Turf or Unpaved Areas: Plus or minus 1 inch.
2. Walks: Plus or minus 1 inch.
3. Pavements: Plus or minus 1/2 inch.

C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.17 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:

1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
2. Place base course material over subbase course under hot-mix asphalt pavement.
3. Shape subbase course and base course to required crown elevations and cross-slope grades.
4. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
5. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
6. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.18 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

A. Place drainage course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:

1. Install subdrainage geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
2. Place drainage course 6 inches or less in compacted thickness in a single layer.
3. Place drainage course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
4. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.19 FIELD QUALITY CONTROL

A. Special Inspections: Contractor will engage a qualified special inspector to perform the following special inspections:

1. Determine prior to placement of fill that site has been prepared in compliance with requirements.
2. Determine that fill material and maximum lift thickness comply with requirements.
3. Determine, at the required frequency, that in-place density of compacted fill complies with requirements.

B. Testing Agency: Contractor 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. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.

E. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:

1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq. ft. or less of paved area or building slab, but in no case fewer than three tests.
2. Foundation Wall Backfill: At each compacted backfill layer, at least one test for every 100 feet or less of wall length, but no fewer than two tests.
3. Trench Backfill: At each compacted initial and final backfill layer, at least one test for every 150 feet or less of trench length, but no fewer than two tests.

F. 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.

3.20 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. 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.

1. Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.21 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 31 20 00

SECTION 31 22 14

EARTHWORK FOR SITEWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes earthwork required to complete the Project except as specified in related work.

1.2 SUBMITTALS

A. Samples

1. Submit 10 lb samples of each material to be used. Identify source, type (use) of each material and gradation. Forward to testing agency packed tightly in containers to prevent contamination. Submit copy of transmittal to Owner.

B. Submit invoices and delivery tickets indicating the amount and type of off-site materials delivered.

C. Submit sediment and erosion plan, specific to the site that complies with EPA 832/R-92-005 “Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices”.

1.3 QUALITY ASSURANCE

A. Codes and Standards: Perform Work in compliance with applicable requirements of governing authorities having jurisdiction.

B. Soil Testing and Inspection Service:

1. The Contractor will engage and pay for as part of the base bid price a soil testing and inspection service, to include testing soil materials proposed for use in the Work and initial quality control testing during earthwork operations.
2. Furnish soil survey for satisfactory soil materials and samples of soil materials to the testing service.

1.4 PROJECT CONDITIONS

A. Traffic: Conduct operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction.

B. Protection of Existing Improvements:

1. Provide barricades, coverings, or other types of protection necessary to prevent damage to existing improvements to remain in place.
2. Restore damaged improvements to their original condition, as acceptable to the Owner.

C. Protection of Existing Vegetation: provide in accordance of “Temporary Tree and Plant Protection”

D. Improvements on Public Property: Obtain authority for performing removal and alteration Work on public property.

E. Existing Utilities:

1. Locate existing underground utilities in the areas of Work before starting earthwork operations. If utilities are to remain in place, provide adequate means of protection during earthwork operations.
2. Contact JULIE (800-892-0123) to verify locations of existing underground utilities before starting earthwork.
3. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the Owner immediately for directions as to procedure.
4. Cooperate with the Owner and public and private utility companies in keeping their respective services and facilities in operation.
5. Demolish and completely remove from the site underground utilities indicated to be removed. Coordinate with local utility companies for shutoff of services if lines are active.

F. Use of Explosives: The use of explosives shall not be permitted.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General Fill: Provide soil materials conforming to ASTM D2487 soil groups GW, GR, GM, SW, SP or SM or a combination that are free of debris, waste, frozen materials, vegetable, organic and other deleterious matter and having maximum particle size of 2" in all dimensions

B. Select Fill: Clean natural or crushed stone or gravel conforming to State of Illinois, Department of Transportation Gradation CA 6.

C. Underbed Material: Naturally or artificially graded mixture of natural or crushed stone or gravel conforming to State of Illinois, Department of Transportation Specifications for Gradation CA 8, or CA 7.

D. Use Contractor supplied off-site material except that general fill may be from excavation if found acceptable by the Contractor’s testing service. Provide all materials required to complete the Work in the Contract.

2.2 ACCESSORIES

A. Drainage Fabric: Non-woven geotextile, specifically manufactured as a drainage geotextile; made from polyolefins, polyesters, or polyamides; and with the following minimum properties determined according to ASTM D 4759 and referenced standard test methods:

1. Grab Tensile Strength: 110 lbf (490 N); ASTM D 4632.
2. Tear Strength: 40 lbf (178 N); ASTM D 4533.
3. Puncture Resistance: 50 lbf (222 N); ASTM D 4833.
4. Water Flow Rate: 150 gpm per sq. ft. (100 L/s per sq. m); ASTM D 4491.
5. Apparent Opening Size: No. 50 (0.3 mm); ASTM D 4751.

B. Separation Fabric: Woven geotextile, specifically manufactured for use as a separation geotextile; made from polyolefins, polyesters, or polyamides; and with the following minimum properties determined according to ASTM D 4759 and referenced standard test methods:

1. Grab Tensile Strength: 200 lbf (890 N); ASTM D 4632.
2. Tear Strength: 75 lbf (333 N); ASTM D 4533.
3. Puncture Resistance: 90 lbf (400 N); ASTM D 4833.
4. Water Flow Rate: 4 gpm per sq. ft. (2.7 L/s per sq. m); ASTM D 4491.
5. Apparent Opening Size: No. 30 (0.6 mm); ASTM D 4751.

C. 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:

D. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, minimum 6 inches and 4 mils thick, continuously inscribed with a description of 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:

1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 TEMPORARY EROSION CONTROL

A. Before mobilizing and starting Work on the site, institute, expand as necessary, and maintain throughout the project a sediment and erosion control system that complies with EPA 832/R-92-005 and as required by authorities having jurisdiction.

B. Control erosion and sediment damage to roadways, adjacent properties and water resources through the use of basins, ditch checks, temporary ditches, mulch barriers, mulches, grasses, silt filter fences, hay or straw bales, aggregate barriers, inlet and pipe protection and other appropriate means.

C. Remove and legally dispose of debris resulting from the project when no longer required in accordance with authorities having jurisdiction.

3.2 CLEARING

A. General:

1. Remove vegetation, improvements, or obstructions that interfere with installation of new construction. Removal includes new and old stumps and their roots.
2. Carefully and cleanly cut roots and branches of vegetation to be left standing, where such roots and branches obstruct new construction.
3. Comply with the environmental protection and safety requirements of all authorities having jurisdiction. Keep dust to a minimum. Maintain streets free of mud, dirt and debris.

B. Topsoil Removal:

1. Topsoil is defined as friable clay loam surface soil found in a depth of not less than 4". Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones, and other objects, and without weeds, roots, and other objectionable material.
2. Strip topsoil to whatever depths encountered, and in such manner so as to prevent intermingling with the underlying subsoil or other objectionable material. Remove heavy growths of grass from areas before stripping.
3. Where vegetation is to be left standing, stop topsoil stripping a sufficient distance from such vegetation to prevent damage to the main root system.
4. Stockpile top soil in storage piles for reuse or remove from the site. Furnish acceptable topsoil at no cost to Owner. Construct storage piles to freely drain surface water. Cover storage piles if required to prevent windblown dust.

C. Removal of Improvements:

1. Remove improvements that interfere with construction.
2. Cap and remove abandoned underground piping or conduit.
3. Where uncharted or incorrectly charted below grade improvements are discovered, obtain approval of Owner before removal.

3.3 EXCAVATION

A. General:

1. Excavation consists of the removal and disposal of materials encountered when establishing the required grade elevations. Such excavation is unclassified regardless of the materials encountered and all materials to be dispose of in accordance with authorities having jurisdiction.
2. Unauthorized excavation consists of removal of materials beyond indicated or required elevations. Replace unauthorized excavation by backfilling and compacting as specified for select fill at no cost to Owner.
3. Excavate under pavements as required to comply with cross sections, elevations and grades.
4. Excavate elsewhere as required to establish new finish grades, allowing not less than 4" for topsoiling.

B. Dewatering:

1. Prior to commencing work, the Contractor shall provide a storm water management plan. This plan shall stipulate provisions for dewatering, pumping, collection, temporary storage, and discharge or disposal of storm water , perched water and other liquids, contaminated and/or uncontaminated, at the site so as to facilitate soil removal and minimize disposal costs for contaminated fluids.
2. Do not allow water to accumulate in excavations. Remove water from excavations to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to the stability of subgrades and foundations. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey the water away from the site.
3. Convey water removed from excavations and rainwater to collecting or run-off areas acceptable to authorities having jurisdiction. Do not use trench excavations for site utilities as temporary drainage ditches.

C. Stability of Excavations:

1. Slope the side of excavations to comply with local codes and authorities having jurisdiction and maintain same. Secure, shore, and brace where sloping is not possible either because of space restrictions or stability of material excavated.
2. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

D. Shoring and Bracing:

1. Provide shoring and bracing to comply with local codes and authorities having jurisdiction.
2. Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross braces, in good serviceable conditions.
3. Maintain shoring and bracing in excavations regardless of the time period excavations will be open. Carry down shoring and bracing as the excavation progresses.

E. Material Storage: Stockpile excavated materials classified as satisfactory soil material onsite as applicable for backfill or fill. Place, grade and shape stockpiles for proper drainage.

F. Excavation for Structures:

1. Excavate to the subgrade elevations required within a tolerance of plus or minus 0.10' to balance, and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction required, and for inspection.
2. Take care not to disturb the bottom of the excavation. Excavate by hand to final grade just before concrete is placed. Trim bottoms to the required lines and grades to leave a solid base to receive concrete.

G. Excavation for Pavements: Cut the surface under pavements to comply with cross sections, elevations and grades.

H. Removal of Unsatisfactory Soil Materials:

1. Excavate unsatisfactory soil materials encountered that extend below the required elevations, to the additional depth established by the Contractor’s testing service and approved by Owner.
2. If excavated unsatisfactory materials are to be removed from the property, all such materials shall be disposed of in accordance with authorities having jurisdiction.
3. Such additional excavation, provided it is not due to the fault or neglect of the Contractor, will be measured and paid for as a change in the Work if approved by Owner.

I. Closing Abandoned Underground Utilities: Close open ends of abandoned underground utilities, which are to remain permanently, and with sufficiently strong closures to withstand pressures which may result after closing.

J. Cold Weather Protection: Protect excavation bottoms against freezing when the atmospheric temperature is less than 35 degrees F. Maintain excavation free of water, ice and snow.

3.4 COMPACTION

A. General: Control soil compaction during construction, providing the minimum percentage of density specified.

B. Percentage of Maximum Density Requirements: Provide not less than the following percentages of density of soil material compacted at + 2% optimum moisture content, for the actual density of each layer of soil material-in-place:

1. Compact top 12" of subgrade and each layer of backfill or fill material to 95% maximum density (ASTM D 1557).

C. Moisture Control:

1. Where the subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to the surface of subgrade, or layer of soil material, to prevent free water appearing on the surface during or subsequent to compaction operations.
2. Remove and replace, to scarify and air dry, soil material that is too wet to permit compaction to specified density.

3.5 BACKFILL AND FILL

A. Prior to Backfill Placement: Backfill excavations as promptly as the Work permits, but not until completion of the following:

1. Review of construction below finish grade.
2. Code required inspection, testing, approval, and recording locations of underground utilities.
3. Removal of concrete formwork.
4. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.
5. Removal of trash and debris.
6. Permanent or temporary horizontal bracing is in place on horizontally supported walls.

B. Ground Surface Preparation:

1. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow, strip, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material bonds with existing surface.
2. When the existing ground surface has a density less than that specified under "Compaction" for the particular area classification, break up the ground surface, pulverize, bring moisture condition to the optimum moisture content, and compact to the required depth and percentage of maximum density.

C. Placement and Compaction:

1. Place backfill and fill materials to required grades in layers not more than 8" in loose depth for materials compacted by heavy compaction equipment and not more than 4" in loose depth for materials compacted by hand operated tampers. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the soil material. Compact each layer to the required percentage of density.
2. Place backfill and fill materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.
3. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
4. Backfill and fill under pavements as required to comply with cross sections, elevations and grades shown.

a. Use select fill material. Use of existing onsite native soil and general fills to bring site to proposed subgrade elevation must be approved by the onsite testing agency, and Owner.

5. Backfill and fill elsewhere as required to establish new finished grades, allowing not less than 4" for top soiling using select fill except below 3-foot, general fill may be used.

3.6 GRADING

A. General: Uniformly grade the area, including adjacent transition areas. Smooth finished surfaces within specified tolerances, compact with uniform levels or slopes between elevation points, or between such points and existing grades.

B. Grassed Areas: Finish areas to receive topsoil to within not more than 0.10' above or below the required subgrade elevations, compacted as specified, and free from irregular surface changes.

C. Walks: Shape the surface of areas under walks to line, grade and cross section, with the finish surface not more than 0.00' above or 0.10' below the required subgrade elevation, compacted as specified, and graded to prevent ponding of water after rains.

D. Pavements: Shape the surface of the areas under pavement to line, grade and cross section, with the finish surface not more than 1/4" above or below the required subgrade elevation, compacted as specified, and graded to prevent ponding of water after rains.

3.7 FIELD QUALITY CONTROL

A. Quality Control Testing During Construction:

1. The Contractor's testing service must inspect and approve sub-grades and fill layers before further construction work is performed thereon.
2. If, in the opinion of the Contractor's testing service, based on reports of the testing service and inspection, the subgrade or fills which have been placed are below the specified density, additional compaction and testing shall be required until satisfactory results are obtained at no additional cost to Owner. In such event, retesting shall be paid by the Contractor at no additional cost to Owner.

B. The Contractor will engage and pay for within the base bid price a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during earthwork operations.

C. Contractor’s Responsibilities

1. Notify onsite testing agency sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.
2. Coordinate personnel; provide access to Work, to manufacturer’s operations.
3. Provide preliminary representative samples of materials to be tested, in required quantities.
4. Furnish casual labor and facilities to provide access to Work to be tested to obtain and handle samples at the site to facilitate inspections and tests, and storage and curing of tests.
5. Arrange with laboratory, pay for, all samples and tests required.

D. Tests for Proposed Soil Materials:

1. Test soil materials proposed for use in the Work and promptly submit test result reports. Soil samples shall be provided by Contractor.
2. Provide one optimum moisture-maximum density curve for each type of cohesive soil. Determine maximum densities in accordance with ASTM D 1557.
3. Determine the suitability of materials to be used as fill and backfill.
4. Perform a mechanical analysis (AASHO T88), plasticity index (AASHO T91), and frost susceptibility analysis.

E. Compaction Testing:

1. Inspect, test, and approve each lift of fill and backfill before next lift is placed. Test in accordance with ASTM D1556 or ASTM D2167 as appropriate.
2. Field density tests may be performed by the nuclear method in accordance with ASTM D 6938. The calibration curves shall be periodically checked and adjusted to correlate to tests performed using ASTM D1556 or ASTM D2167. Calibration of nuclear density testing device shall be in accordance with ASTM D7759.
3. If field tests are performed using nuclear methods, the inspection and testing agency shall make calibration checks on both density and moisture gauges at beginning of work, on each different type of material encountered, and at intervals as specified by the equipment manufacturer.
4. Take a field density test for each 2,000 sq. ft. of backfill and fill under slabs and pavements.
5. Take a field density test at 50 foot intervals along utility trench backfill under slabs and pavements.

F. Submittals: Submit copies of the following reports:

1. Report and certification of granular fill and drainage fill.
2. Test reports on fill and backfill material.
3. Field density test reports.
4. One optimum moisture-maximum density curve for each type of soil encountered.
5. Report of actual unconfined compressive strength and/or results of plate bearing tests of each strata tested.
6. Other tests' and materials' certificates, as required.

3.8 MAINTENANCE AND RESTORATION

A. Protection of Graded Areas:

1. Protect newly graded areas from traffic and erosion, and keep free of trash and debris and growth of weeds.
2. Repair and reestablish grades in settled, eroded, and rutted areas to the specified tolerances.

B. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather scarifies the surface, reshape, and compact to the required density prior to further construction.

C. Restoration: Restore all areas affected by construction both on and off Owner's property to original condition.

3.9 DISPOSAL OF EXCESS AND WASTE MATERIALS

A. Burning is not permitted on the Owner's property.

B. Remove waste materials, excess excavated materials, excavated materials classified as unsatisfactory soil material from the Owner's property and legally dispose of all materials.

END OF SECTION 31 22 14

SECTION 31 22 19

FINISH GRADING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. This Section applies to the final subgrade preparation, placement of Soil Mixes and amending of in-place (In-Situ) soil. Sections 32 91 00 – 32 91 50 for testing, soil mix components and preparation, amendments, and hauling apply.

1.02 SUMMARY

A. This Section includes the following:

1. Preparation of subgrade soils in planting areas for each specified soil mix and type.
    a. Includes ripping of subgrade and in situ soils, and debris removal.
2. Placement of Soil Mix (‘s) and Amendments.
3. Fine Grading of Turfgrass and Planting Area Soil Surfaces.

1.03 REFERENCES

A. ASTM- ASTM International: D 1557 - Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.

B. EPA – Environmental Protection Agency:

1. Method 8015.
2. Method 8020.

C. SSSA – Soil Science Society of America, Inc.

1. Methods of Soil Analysis Part 1 – Physical and Mineralogical Methods, 1986.
2. Methods of Soil Analysis Part 3 – Chemical Methods, 1996.

D. USDA – United States Department of Agriculture:

1. Texture Triangle Classification.
2. Handbook No. 60.

1.04 DEFINITIONS

A. Acceptance, Acceptable, or Accepted: Acceptance by the Landscape Architect in writing.

B. Aesthetic Acceptance of Grades: Acceptance by the Landscape Architect in writing of the aesthetic correctness of the contours. Aesthetic acceptance does not address whether areas drain properly, are at the correct elevations, or whether the soil has been compacted properly.

C. Backfill: Soil material or controlled low-strength material used to fill an excavation.

D. Debris or Deleterious Materials: Elements including, but not limited to, concrete, concrete masonry, wood, excavated rock and rock fragments, rubble, overburden soils, abandoned utility structures, trash, refuse and litter.

E. Excessive Compaction: Planting area soil or soil compaction greater than 75 percent maximum dry density as determined by ASTM D 1557.

F. Finished Grades: The required final soil surface elevations and contours indicated on the Drawings.

G. Planting Soil Mix: A specified profile of soil system components, such as, soil, sand and compost homogeneously blended to produce a specified planting soil mix.

H. 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.

I. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or soil materials.

J. 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 soil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

K. Transition Layer: The specified planting soil mix for a planting area is homogeneously blended into the existing (ripped) native soil substrate to create a “transition” layer between the subgrade and specified planting soil mix. Transition layers vary pending specified soil mix for each planting area.

L. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.05 SUBMITTALS

A. Equipment Data: Submit descriptive information with ground pressure load data for each proposed item of equipment to be used. Equipment data will be evaluated for compost mix compaction potential. All equipment used in placing the compost shall have a ground pressure level of 4.5 psi or lower.

1. Large earth moving equipment (D4, D6 dozers) must have rubberized base tracks with low ground pressure.

2. Equipment with metal cleats will not be permitted.

1.06 QUALITY ASSURANCE

A. Qualifications:

1. Installation and mixing foreman on the job shall be competent English-speaking supervisor(s), experienced in planting soil preparation for lawn and planting installations. Supervisor shall remain on the site during the entire installation process.

2. Perform work with personnel totally familiar with planting and lawn soil preparation and planting installations under the supervision of a foreman experienced with landscape work.

3. Testing Laboratory: Experienced person (s) employed by public or private testing laboratory, qualified and capable of performing tests, making soil recommendations, and issuing reports as specified. The Testing Laboratory shall submit a Statement of Qualifications regarding the specified testing. The Testing Laboratory shall be as approved by the Landscape Architect.

4. It shall be the responsibility of the Contractor to see that the specifications are being adhered to. Failure of the Landscape Architect to immediately reject unsatisfactory workmanship or to notify the Contractor of his/her deviation from the specifications shall not relieve the Contractor of his/her responsibility to repair and/or replace unsatisfactory work.

B. Pre-Installation Conferences: Person(s) responsible for soil preparation and mixes of this Section shall attend Pre-Installation Conference(s) to coordinate with work of other sections.

C. Testing and Inspection Service: A qualified independent geotechnical testing and inspection laboratory shall perform soil testing and inspection services under the supervision of a registered professional engineer during earthwork and finish grading operations. Testing and inspection general requirements shall be in accordance with Section 01 40 00 - Quality Requirements.

D. The Landscape Architect reserves the right to inspect and test grading operations at any time and as deemed necessary for verification of conformance to specification requirements. Any subsurface or grading conditions not meeting the requirements of the Specifications to be corrected by the Contractor before continuing with any further operation of the project and at no cost to the project.

1.07 PROJECT CONDITIONS

A. Examination: Promptly notify Landscape Architect of unexpected subsurface conditions. Discontinue work until notification to resume work is provided by the Landscape Architect.

B. Environmental Requirements:

1. Do not work soil when moisture content is so great that excessive compaction will occur, nor when it is so dry that dust will from in the air or that clods will not break readily.
2. Apply water, if necessary, to bring soil to optimum moisture content for fine grading operations.
3. Do not perform fine grading work when subgrade and/or soil is muddy or frozen.

C. Existing Conditions:

1. Locate existing underground utilities in areas of work. If utilities are indicated to remain in place, provide adequate means of support and protection during fine grading operations.
2. If uncharted, or incorrectly charted, piping, or other utilities are encountered during the Work, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
3. Do not interrupt existing utilities serving facilities occupied by Owner or others, during occupied hours, except when permitted in writing by Construction Manager and then only after acceptable temporary utility services have been provided.
4. Provide minimum 48-hour notice to Owner and receive written notice to proceed before interrupting any utility.
5. Contact the Local Utilities Protection Service before commencement.

1.08 SEQUENCING

A. Soil Placement: In order to prevent excessive soil compaction, avoid placing soil in areas subject to construction vehicle and equipment traffic. Coordinate work of this section with other project work as contained in all other Sections of the project specifications.

PART 2 - PRODUCTS

2.01 SOILS

A. Refer to Sections 32 91 00 through 32 91 50 for Soil Mixes.

PART 3 - EXECUTION

3.01 FIELD ENGINEERING

A. General:

1. Provide all layout work required. Establish extent of fine grading by area and elevation; designate and identify datum elevation and project engineering reference points. Set required lines, levels, and elevations.

2. Provide as many grade stakes and string lines as required to achieve smooth finish grades acceptable to the Landscape Architect. Mark each stake to indicate design finished grade indicated.

B. Swale Flow Lines, Bottom of Slopes, Top of slopes and Grade breaks: Install grade stakes at maximum 20 feet on center.

C. High Points and Low Points: Install grade stakes at high points and low points including top of berms, catch basins and area drain rims.

3.02 EXAMINATION

A. Examine areas and conditions under which work is to be performed. Obtain and examine the records and drawings of adjacent work and of existing utilities and their connections for conditions which may affect the work under this Section.

B. Verify all work requiring access through or adjacent to areas where each planting soil mix is to be placed has been completed and no further access will be required. If access will be required, this must be coordinated with the Contractor.

C. Confirm subgrade is clear of all construction debris, trash, rubble, and any foreign material. If fuels, oils, concrete washout silts or other material harmful to plants have been spilled into the subgrade material, excavate the soil sufficiently to remove the harmful material. Fill any over excavation with approved fill and compact to the required subgrade compaction.

D. Confirm subgrade is at the proper elevation, parallel to the finished grade and compacted as shown on the drawings.

E. Verify that conditions are suitable to receive Work and that no defects or errors are present which would cause defective installation of products or cause latent defects in workmanship and function.

F. Excessive Compaction: Verify subgrade in planting area is not excessively compacted.

G. Soil Preparation: Verify off-site soil preparation is complete and ready for transporting to site.

H. Notify Landscape Architect of any unacceptable sub-grade conditions. Do not start the installation of the soil mix until sub-grade conditions have been corrected.

3.03 PREPARATION

A. Review soil analysis testing results and requirements needed for each specified soil mix and amendment. Testing Agency recommendations may vary and require the contractor to provide additional testing or preparations prior to placement of soil mix.

B. Protection of Existing Conditions:

1. Protect structures, utilities, sidewalks, pavements, irrigation systems, paving, plant materials, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by fine grading operations.

2. Provide barricades, fences, or other barriers to protect existing conditions to remain from damage during construction.

3. Use every possible precaution to prevent excessive compaction of planting area soil within or adjacent to the areas of Work.

4. Do not store material or equipment, permit burning, or operate or park equipment under the branches of existing trees to remain.

5. Submit written notification of conditions damaged during construction immediately to the Owner’s Representative.

C. Assure all grass and weed growth has been extinguished prior to placing the specified soil mix as indicated on the drawings. Respray areas still exhibiting grass, weed, or other plant growth.

Follow manufacturer's recommendation for allowing grass and weed control to properly kill vegetation prior to amending soils.

D. De-compact sub-grade soils by soil ripping.

1. Prior to placing each specified soil mix or, rip areas to receive the specified soil on the same day soil mix is placed.
2. Rip subgrade to a depth of 6 inches. Place ripping tines at 18 inches on center.
3. Make second ripping pass in the direction 90 degrees to the direction of the first ripping pass.
4. Do not rip closer than 24 inches to installed underground utility lines and structures.
5. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so soil material will bond with existing material.
6. Once the subgrade is ripped, only equipment with a ground pressure not to exceed 4.5 p.s.i. shall be used, ex. padded, wide-tracked LGP rated dozers and/or excavators, small to medium tractors with turf tires, etc.

E. Transition Layer:

1. Uniformly place 3 inches or as designated by the drawings, the specified soil over the ripped areas. Using mechanical equipment, blend the specified soil into the ripped subgrade approx. 2-4 inches in depth or as designated on the drawings.
2. Do not place final lifts of specified soil until the Transition Layer has been blended.
3. Remove any debris (see Definitions) greater than 1 inch in diameter or 2 inches in length that has been worked to the surface of the transition zone.
4. Tree Root Protection
    a. All work infringing on root systems of existing plant material shall be reviewed and approved by the Landscape Architect prior to beginning work.
    b. Protect tree root systems from damage adjacent to soil work where ripping is required.
    c. Soil ripping may not be conducted when existing roots are in the immediate vicinity. All work infringing on root systems of existing plant material shall be reviewed and approved by the Landscape Architect prior to beginning work.
    d. Where tree roots are present within the designated soils zone, carefully blend native soils with the Compost using hand tools.

F. Uniformly moisten or aerate Transition Layer before compaction to within 2 percent of optimum moisture content.

3.04 PLACEMENT OF SOIL MIXES

A. Verify proper placement and blending of Transitions Layer has been completed.

B. Lightly scarify Transition Layer prior to placing the specified soil mix.

C. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

D. Remove and replace or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

E. Verify placement locations and depths for each specified soil mix and type.

F. Place the specified planting soil or mix in 6-inch lifts over the Transition Layer to the depths specified on the drawings.

G. Carefully settle soils to eliminate air pockets and to minimize future settling. Lightly scarify previously placed lift surfaces prior to placing subsequent lifts.

H. Compact each lift by applying enough water to achieve optimum moisture allowing consolidation and locking of soil particles.

1. A vibratory plate compactor, or other suitable method, shall be used to achieve greater than 80 to 85 percent maximum dry density as determined by the Standard Proctor Test ASTM D698-12. Moisture content and compaction shall be verified using ASTM D6938-15.

2. After any additional settlement has occurred, restore areas to finished grade prior to additional work within the area commencing.

I. For Lawn Areas, roll the whole surface of lawn bed with a hand roller weighing approximately one hundred pounds (100 lb.) per foot (12") of roller width. Fill all depressions caused by compaction operations with additional soil and re-grade. Lightly roll and rake until the surface presents a smooth, even, uniform in finish and to grade.

J. Backfill for Trees: Unless noted otherwise or approved in writing by Landscape Architect, the excavated tree pit soil **is not** acceptable backfill material for trees. Remove excavated soil from site and use specified soil mix in this section. Install as specified in Section 32 93 00 "Plants" and per drawing details. Placing, shoring, or anchoring is the responsibility of the Contractor as shown on the drawings.

K. Protect areas where soil has been placed and prepared against construction activity with site protection fence.

3.05 FINISH GRADING

A. Perform grading within contract limits, including adjacent transition areas, to new elevations, levels, profiles, and contours indicated. Provide subgrade surfaces parallel to finished surface grades. Provide uniform levels and slopes between new elevations and existing grades.

B. General:

1. Uniformly grade areas to a smooth uniform surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

2. Provide a smooth transition between adjacent existing grades and new grades.

3. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

4. Slope finish grades to drain surface water away from buildings, walks, paving, and other structures unless indicated otherwise.

5. Slope finish grades to drain surface water to drainage swales, catch basins, area drains, or trench drains as shown on the Drawings.

6. Grade soil surface smooth to be free of high and low areas which will inhibit surface drainage.

7. Grade the soil surface at the edges of lawn areas, along paving areas, and curbs to an elevation 1 inch below the finished surface of adjacent paving and curbs, unless indicated otherwise.

8. Hand-rake soil surface using screed boards, string lines, and laser levels to achieve smooth surfaces acceptable to the Landscape Architect.

C. Equipment: Use equipment and hand tools of appropriate size and type to achieve the profiles, and a smooth soil surface free of high areas, depressions, equipment tracks, and excessive compaction.

D. Depressions and Loose Material: Fill any depressions and remove loose material to finish surface true to line and grade, presenting a smooth and unyielding surface.

E. Excessive Compaction:

1. Take precautions to prevent finished graded surfaces from becoming excessively compacted.
2. Protect finished graded surfaces from excessive compaction from vehicular, equipment, and foot traffic by laying down planks, plywood, or other accepted protective devices.
3. Do not store or stockpile materials on finished graded surfaces.
4. Mechanically loosen excessively compacted soil areas to full depth.

3.06 TOLERANCES

A. Planting Areas:

1. Grade soil surface to within 0.05-foot of grades indicated on the Drawings, except bring soil surface grades along paving, curbs, and other structures to within 0.01-foot of grades indicated on the Drawings.
2. Transition soil surface grades along paving, curbs, and other structures to areas of less strict tolerance over a 5-foot distance.

B. Allowances: Make proper allowances for settlement.

3.07 ADJUSTING

A. Soil Finished Grade:

1. Provide allowance for 32 hours of adjustment grading work with a 4-person hand-grading crew to smooth and shape the soil surfaces using hand rakes, shovels, and other hand tools.
2. After the soil surface elevations have been graded to be within the specified tolerances, perform adjustment grading Work under the direction of the Landscape Architect in the field.
3. Do not rely on adjustment grading to bring finished grade elevations to within specified tolerances.

3.08 FIELD QUALITY CONTROL

A. Aesthetic Acceptance of Grades:

1. Upon completion of finish grading Work, schedule a review by the Landscape Architect to obtain aesthetic acceptance.
2. Provide 3 days advance written notification.
3. Do not commence seeding, sodding, or other planting Work until receiving aesthetic acceptance in writing.

B. Test for Excessive Compaction:

1. Where excessive compaction is suspected by Landscape Architect, have a Geotechnical Engineer perform nuclear density field tests.
2. Correct excessively compacted soil areas to the depth of the excessive compaction by means and methods acceptable to the Landscape Architect prior to installing plant material.

3.09 PROTECTION

A. Protecting Fine Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.

B. 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.

C. Scarify or remove and replace soil material to depth as directed by Soils Engineer; reshape and recompact.

D. Repair erosion that occurs before and during plant or lawn installation.

E. During construction, maintain temporary soil erosion and sedimentation control measures in place. Inspect, repair, and replace damaged or missing items as work progresses.

3.10 DISPOSAL AND CLEAN UP

A. Promptly remove soil and debris created by soil work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Legally dispose of off-site all refuse and debris from these operations. Do not dump or burn materials on site.

C. Maintain the site in an orderly condition during the progress of the Work. Continuously and promptly remove excess waste materials; keep lawn areas, walks, and roads clear. Store materials and equipment where directed. Promptly remove equipment, surplus materials, and debris and trash resulting from operations under this Contract upon completion and prior to initial acceptance or Work. Leave the site in a neat, order condition “broom clean”.

END OF SECTION 31 22 19

SECTION 31 23 17

EXCAVATING, BACKFILLING, AND COMPACTING FOR UTILITIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the following:

1. Excavation for - trenches for electric and sewer lines to public utility.
2. Compacted bed and compacted fill over utilities to subgrade elevations.
3. Compaction.

1.2 SUBMITTALS

A. Submit samples in accordance with General Conditions of contract and Division 01 Sections.

B. Submit 10 lb. sample of each type of fill to testing agency, in separate airtight containers.

1.3 TESTS

A. Tests and analysis of fill materials will be performed in accord with ASTM D1557 and with General Conditions.

1.4 REFERENCES

A. ASTM C136, - Sieve Analysis of Fine and Coarse Aggregates.

B. ASTM D1556, - Density of Soil in place by Sand-Cone Method.

C. ASTM D1557, - Tests for Moisture-Density Relationship of Soils and Soil-Aggregate Mixtures Using 10 lb. Rammer and 18-inch Drop.

D. Illinois Department of Transportation (IDOT):

1. IDOT Specifications for Road and Bridge Construction, latest edition, including all addenda.

1.5 PROTECTION

A. Protect excavations by shoring, bracing, sheet piling, underpinning or other methods or prevent cave-in or loose soil from falling into excavation.

B. Underpin adjacent structures which may be damaged by excavation work, including service utilities and pipe chases.

C. Notify Owner immediately of unexpected subsurface conditions. Confirm notification in writing. Discontinue work until Owner issues written notification to resume work.

D. Protect bottom of excavations and soil adjacent to and beneath foundations from frost.

E. Grade excavation tip perimeter to prevent surface water runoff into excavation.

PART 2 - PRODUCTS

2.1 MATERIALS

A. In accordance with the soil report the Contractor's testing agency representative shall determine if the excavated material is suitable for backfill. The suitable trench excavated material shall be used for trench backfill.

B. Granular Fill Type A:

1. Material for granular fill shall be CA-11 or CA-13 in compliance with IDOT Specifications for Road and Bridge Construction, latest edition, including all addenda.

2. Bedding Material: Material for bedding shall be CA-11 in compliance with IDOT Specifications for Road and Bridge Construction, latest edition, including all addenda.

C. Fill Material Type D: Fill material shall be cohesive soil obtained from on-site required excavations and approved by the Contractor’s testing agency representative as suitable backfill material in accordance with ASTM D 2487, Uniform Soils Classification System 1 and 703.5. It shall be used to backfill excavations where the excavated material is unsuitable for backfill.

D. Fill Material Type E: Fill under landscaped areas shall be free from alkali and salt and shall be obtained from on-site required excavations when conforming to the specifications. This fill shall be approved by the Contractor's testing agency representative as suitable material.

E. Fill Material Type X: Off-site borrow material shall comply to soil types GP, GW, SC and CL in accordance with ASTM D 2487, Uniform Soils Classification. It shall be used where needed under structural slabs, roads, pavement and landscaped areas.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify stockpiled fill to be reused as approved in writing by Owner.

B. Verify and confirm in writing that areas to be backfilled are free of debris, snow, ice or water, and surfaces are not frozen.

3.2 PREPARATION

A. Identify specified lines, levels, contours and data.

B. Compact subgrade surfaces to density specified for backfill materials.

3.3 EXCAVATION

A. Cut trenches wide enough to enable utility installation and allow inspection.

B. Hand trim excavation and leave free of loose matter. Hand trim for bell and spigot pipe joints.

C. Excavation shall not interfere with normal 45 degree bearing splay of foundations.

D. Sides, walls or faces of all trenches shall be sloped and maintained in a safe manner and in the required condition until completion of backfilling. Excavations shall be braced or sloped in

compliance to the latest Occupational Safety and Health Administration (OSHA) requirements or as instructed by the testing agency on-site representative.

E. Locate and retain reusable excavated materials away from the edge of excavation.

3.4 BACKFILLING

A. Support pipes, and conduits during placement and compaction of bedding fill.

B. Backfill trenches to contours and elevations shown. Backfill systematically, as early as possible to allow maximum time for natural settlement. Do not backfill over porous, wet or spongy subgrade surfaces.

C. Place compact fill materials in continuous layers as specified in Section "Earthwork for Sitework".

D. Use a placement method that will not disturb or damage utilities in trenches, perimeter drainage.

E. Maintain optimum moisture content of backfill materials, determined by laboratory analysis, to obtain specified compaction density.

3.5 FILL TYPES AND COMPACTION

A. Compact all fill and backfill to specified values based on Modified Proctor Test in accordance with Section "Earthwork for Sitework".

3.6 QUALITY CONTROL

A. Quality Control Testing During Construction: An independent inspection and testing agency employed by the Contractor shall inspect and approve each subgrade and fill layer before further backfill and fill work is performed.

1. The inspection and testing agency shall perform laboratory density tests in accordance with ASTM D 1557.
2. Field density tests shall be in accordance with ASTM D1556 or ASTM D2167 as appropriate.
3. Field density tests may be performed by the nuclear method in accordance with ASTM D 6938. The calibration curves shall be periodically checked and adjusted to correlate to tests performed using ASTM D 1556. Calibration of nuclear density testing device shall be in accordance with ASTM D7759.
4. If field tests are performed using nuclear methods, the inspection and testing agency shall make calibration checks on both density and moisture gauges at beginning of work, on each different type of material encountered, and at intervals as specified by the equipment manufacturer.
5. If, in the opinion of the Contractor’s testing agency representative, based on the inspection and testing agency reports and inspections, subgrade or fills have been placed by specified density, the Contractor shall perform additional compaction and retesting until specified density contractor to pay for all retesting work.
6. The Contractor shall assist the inspection and testing agency by providing access to the excavation and fill areas, and by removing loose materials from compacted soil layers prior to testing.

3.7 REMOVAL AND DISPOSAL

A. Remove surplus backfill materials and materials unsuitable for backfill from the site and legally dispose of offsite according to authorities having jurisdiction.

END OF SECTION 31 23 17

SECTION 31 23 19 – DEWATERING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes construction dewatering.

B. Related Sections:

1. Section 31 20 00 "Earth Moving" for excavating, backfilling, site grading, and for site utilities.

1.03 PERFORMANCE REQUIREMENTS

A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of ground water and permit excavation and construction to proceed on dry, stable subgrades.

1. Delegated Design: Design dewatering system, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

2. Continuously monitor and maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, that excavation does not flood, and that damage to subgrades and permanent structures is prevented.

3. Prevent surface water from entering excavations by grading, dikes, or other means.

4. Accomplish dewatering without damaging existing buildings, structures, and site improvements adjacent to excavation.

5. Remove dewatering system when no longer required for construction.

1.04 SUBMITTALS

A. Shop Drawings: For dewatering system. Show arrangement, locations, and details of wells and well points; locations of risers, headers, filters, pumps, power units, and discharge lines; and means of discharge, control of sediment, and disposal of water.

1. Include layouts of piezometers and flow-measuring devices for monitoring performance of dewatering system.

2. Include a written plan for dewatering operations including control procedures to be adopted if dewatering problems arise.

B. Delegated-Design Submittal: For dewatering system indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

C. Qualification Data: For qualified Installer, land surveyor and professional engineer.

D. Field quality-control reports.

E. Other Informational Submittals:

1. Photographs or Videotape: Show existing conditions of adjoining construction and site

improvements that might be misconstrued as damage caused by dewatering operations.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer that has specialized in design of dewatering systems and dewatering work.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning dewatering. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to dewatering including, but not limited to, the following:

a. Inspection and discussion of condition of site to be dewatered including coordination with temporary erosion control measures and temporary controls and protections.

b. Geotechnical report.

c. Proposed site clearing and excavations.

d. Existing utilities and subsurface conditions.

e. Coordination for interruption, shutoff, capping, and continuation of utility services.

f. Construction schedule. Verify availability of Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

g. Testing and monitoring of dewatering system.

1.06 PROJECT CONDITIONS

A. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:

1. Notify Architect no fewer than two days in advance of proposed interruption of utility.

2. Do not proceed with interruption of utility without Architect's written permission.

B. Survey Work: Engage a qualified land surveyor or professional engineer to survey adjacent existing buildings, structures, and site improvements, establishing exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.

1. During dewatering, regularly resurvey benchmarks, maintaining an accurate log of surveyed elevations for comparison with original elevations. Promptly notify Architect if changes in elevations occur or if cracks, sags, or other damage is evident in adjacent construction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.

1. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding site and surrounding area.

2. Protect subgrades and foundation soils from softening and damage by rain or water

accumulation.

B. Install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

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

C. Provide temporary grading to facilitate dewatering and control of surface water.

D. Monitor dewatering systems continuously.

E. Promptly repair damages to adjacent facilities caused by dewatering.

Protect and maintain temporary erosion and sedimentation controls.

3.02 INSTALLATION

A. Install dewatering system utilizing wells, well points, or similar methods complete with pump equipment, standby power and pumps, filter material gradation, valves, appurtenances, water disposal, and surface-water controls.

1. Space well points or wells at intervals required to provide sufficient dewatering.

2. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.

B. Before excavating below ground-water level, place system into operation to lower water to specified levels. Operate system continuously until drains, sewers, and structures have been constructed and fill materials have been placed or until dewatering is no longer required.

C. Provide an adequate system to lower and control ground water to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Install sufficient dewatering equipment to drain water-bearing strata above and below bottom of foundations, drains, sewers, and other excavations.

1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.

D. Reduce hydrostatic head in water-bearing strata below subgrade elevations of foundations, drains, sewers, and other excavations.

1. Maintain piezometric water level a minimum of 24 inches below surface of excavation.

E. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.

F. Provide standby equipment on site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, restore damaged structures and foundation soils at no additional expense to Owner.

1. Remove dewatering system from Project site on completion of dewatering. Plug or fill well holes with sand or cut off and cap wells a minimum of 36 inches below overlying construction.

G. Damages: Promptly repair damages to adjacent facilities caused by dewatering operations.

3.03 FIELD QUALITY CONTROL

A. Observation Wells: Provide, take measurements, and maintain at least the minimum number of observation wells or piezometers indicated; additional observation wells may be required by authorities having jurisdiction.

   1. Observe and record daily elevation of ground water and piezometric water levels in observation wells.

   2. Repair or replace, within 24 hours, observation wells that become inactive, damaged, or destroyed. In areas where observation wells are not functioning properly, suspend construction activities until reliable observations can be made. Add or remove water from observation-well risers to demonstrate that observation wells are functioning properly.

   3. Fill observation wells, remove piezometers, and fill holes when dewatering is completed.

B. Provide continual observation to ensure that subsurface soils are not being removed by the dewatering operation.

END OF SECTION 31 23 19

SECTION 32 12 16

HOT MIX ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes hot mix asphalt paving as shown on the Drawings and as specified herein.

1.2 SUBMITTALS

A. Product Data: For each type of product specified. Include technical data and tested physical and performance properties.

B. Job-Mix Designs: For each job mix proposed for the Work.

1. Job-mix design documentation shall include the amount of RAP material, by percentage of total mix, to be utilized.
2. Job-mix design documentation shall clearly indicate source/origin of RAP material.

C. Qualification Data: For IDOT qualified manufacturer and Installer.

D. Material Certificates: For each paving material, from manufacturer.

E. Material Test Reports: For each paving material and mix.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of Illinois Department of Transportation (IDOT) construction guides and manuals as described, specified, and illustrated in the current edition of the "Standard Specifications for Road and Bridge Construction," including Supplemental Specifications and Recurring Special Provisions, latest editions and updates for asphalt paving work. Hereafter these documents are referenced as the "IDOT Standard Specifications, (IDOT SSRBC)".

1. Measurement and payment provisions and safety program submittals included in IDOT Standard Specifications do not apply to this Section.

B. Manufacturer Qualifications: Hot mix asphalt manufacturer shall have valid and current IDOT approvals for materials and work specified.

C. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to hot-mix asphalt paving including, but not limited to, the following:

a. Review proposed sources of paving materials, including capabilities and location of plant that will manufacture hot-mix asphalt.
b. Review condition of subgrade and preparatory work.
c. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.
d. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

1.4 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. Temperatures are to be taken in the shade, away from exposed pavement and stone aggregate fill and other artificial heat sources.

1. Prime Coat: Minimum surface temperature of 60 deg F.
2. Slurry Coat: Comply with weather limitations in ASTM D 3910.
3. Asphalt Base Course: Minimum surface temperature of 40 deg F and rising at time of placement.
4. Asphalt Binder Course: Minimum surface temperature of 40 deg F and rising at time of placement.
5. Asphalt Surface Course: Minimum surface temperature of 60 deg F at time of placement.

PART 2 - PRODUCTS

2.1 PAVING MATERIALS

A. Granular Base Course: Complying with requirements of IDOT Standard Specifications, Section 311, for type B base course with gradation CA-6 crushed stone.

B. Hot Mix Asphalt Binders, Surface Courses and Materials: Complying with IDOT Standard Specifications, Section 1030, Class I.

1. Existing Pathways:

a. See drawings.

2. New Pathways:

a. See Drawings.

3. Reclaimed Asphalt Pavement (RAP): RAP, complying with IDOT Standard Specifications, may be used only when approved in writing by the Engineer of Record prior to starting the Work.

a. No more than 25% of the proposed asphalt mix is allowed to be RAP material.
b. RAP material shall be free of contamination, including, but not limited to, dirt, sand, brick, debris, concrete, sheet asphalt, sealant materials, and clean stone.

2.2 AUXILIARY MATERIALS

A. Sand: ASTM D 1073, Grade Nos. 2 or 3.

B. Paving Geotextile: AASHTO M 288, nonwoven polypropylene; resistant to chemical attack, rot, and mildew; and specifically designed for paving applications.

C. Joint Sealant: ASTM D 6690, Type II or III, hot-applied, single-component, polymer-modified bituminous sealant.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that subgrade is dry and in suitable condition to begin paving.

B. Proceed with paving only after unsatisfactory conditions have been corrected.

C. Commencement of asphalt paving work will be an indication of the acceptance of sub-grade and the Contractor will be held responsible for the satisfactory execution and results of the finished work.

3.2 SURFACE PREPARATION

A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Verify that prepared subgrade is ready to receive paving.

B. Subgrade: Shall comply with requirements of IDOT Standard Specifications, Section 301. Subgrade shall be proof-rolled in accordance with Division 31 Section "Earthwork for Sitework".

C. Tack Coat: Apply uniformly to existing pavement surfaces at a rate of 0.05 - 0.10 gal./sq. yd.

1. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
2. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
3. Prohibit traffic across tack coat for period not less than that required by manufacturer.

D. Prime Coat: Apply uniformly over surface of compacted unbound-aggregate base course at a rate of 0.25 - 0.50 gal. / sq. yd. Apply enough material to penetrate and seal but not flood surface. Allow prime coat to cure fully.

1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.
2. Protect primed substrate from damage until ready to receive paving.

3.3 HOT-MIX ASPHALT PLACING

A. Machine place hot-mix asphalt paving on prepared surfaces, spread uniformly, and strike off, in accordance with IDOT Standard Specifications, Sections 406 and 407. 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.

1. Place hot-mix asphalt base course in number of lifts and thicknesses indicated.
2. Place hot-mix asphalt surface coat in single lift.
3. Spread mix at minimum temperature of 250 deg F.
4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes unless otherwise indicated.
5. 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.

1. 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.

3.4 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. Joints between successive days' work shall be constructed to ensure thorough and continuous bond between the newly and previously placed paving.

1. Clean contact surfaces and apply tack coat to joints.
2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
3. Offset transverse joints, in successive courses, a minimum of 24 inches.

4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to the Asphalt Institute MS-22, "Construction of Hot-Mix Asphalt Pavements," for both "Ending a Lane" and "Resumption of Paving Operations."
5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
6. Compact asphalt at joints to a density within two percent (2%) of specified course density.

3.5 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.

1. 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:

1. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 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. Frames of subsurface structures:

1. Coat surfaces of new and existing frames with oil to prevent bond with asphalt paving.
2. Set cover rings to be flush with finish surface and surround with a ring of compacted asphaltic concrete to one inch below top of frame. Adjust as required to meet paving.
3. Provide temporary covers over openings until completion of rolling operations

H. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and sufficiently hardened, as determined by the Project Engineer.

I. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.6 INSTALLATION TOLERANCES

A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:

1. Base Course: Plus or minus 1/2-inch.
2. Binder Course: Plus or minus 1/4-inch.
3. 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 long straightedge applied transversely or longitudinally to paved areas:

1. Base Course: 1/2-inch.
2. Binder Course: Plus or minus 1/4-inch.
3. Surface Course: 1/8-inch.
4. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4-inch.

3.7 FIELD QUALITY CONTROL

A. Testing Agency: The Contractor will engage a qualified testing agency to perform proof roll of subgrade and compaction testing of granular base prior to pavement placement and all tests and inspections as needed.

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 D 979.

1. 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.
2. In-place density of compacted pavement will be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.
    a. Take one core sample for every 1,000 square yards or less of installed pavement, with no fewer than three (3) core samples taken.
    b. 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 and/or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.8 DISPOSAL

A. Except for material indicated to be recycled, all rubbish and debris resulting from the Work of this Section must be collected, removed from the site, and disposed of legally in an approved landfill.

END OF SECTION 32 12 16

SECTION 32 13 13

PORTLAND CEMENT CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes Portland cement concrete paving required to complete the project.

1.2 SUBMITTALS

A. Laboratory Test Reports: Submit 2 copies of laboratory test reports to concrete materials and mix design tests.

B. Delivery Tickets: Submit copies of delivery tickets for each load of concrete delivered to the site.

C. Product Data: Submit copies of manufacturer's specifications with application and installation instructions for proprietary materials and items upon request.

1.3 QUALITY ASSURANCE

A. Perform work in accord with the current IDOT Standard Specifications for Road and Bridge Construction.

B. Obtain materials from same source throughout.

C. Regulatory Requirements:

1. Illinois Steel Products Procurement Act as amended (Illinois Revised Statues, Ch. 48, par. 1901 et. seq.).

D. Concrete Testing Service:

1. The Contractor will employ a separate testing laboratory to perform initial field quality control testing.
2. Materials and installed Work may require testing and retesting at any time during the progress of the Work. Allow free access to material stockpiles and facilities at all times. Retesting of rejected materials and installed Work shall be done at the Contractor's expense.
3. Three concrete test cylinders shall be taken for every 75 or less cu. yds. of each class of concrete placed each day.
4. One additional test cylinder shall be taken during cold weather and be cured on site under same conditions as concrete it represents.
5. One slump test shall be taken for each set of test cylinders taken.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

A. Comply with IDOT SSRBC, Article 803.04.

2.2 REINFORCEMENT

A. Reinforcing steel: ASTM A 615: Grade 60, epoxy coated.

B. Welded steel wire fabric: Plain type, ASTM A 185; rolls; epoxy coated.

C. Tie wire: Annealed steel, minimum 16 gauge size.

D. Dowels: ASTM A 615; Grade 40, plain steel, epoxy coated.

2.3 ACCESSORIES

A. Curing compound: Comply with IDOT SSRBC, Article 718.04. Also see Part 3.09 Curing.

B. Liquid surface sealer. ASTM D 3405.

C. Preformed joint filler: ASTM D 1751.

2.4 ADMIXTURES

A. Air entrainment admixture: Comply with ASTM C 260.

B. Chemical admixture: Comply with ASTM C 94.

2.5 CONCRETE MIX

A. Mix concrete in accordance with IDOT SSRBC, Section 1020, for Class PV Type III Concrete. Also mix in accordance with Section 1020.11.

B. Provide concrete for paving of the following characteristics:

1. Compressive strength:

a. At 3 days: 3500 psi.

C. Use accelerating admixtures in cold weather only with Landscape Architect prior written approval. Use of admixtures will not relax cold weather placement requirements.

D. Add air entraining agent to concrete mix for concrete work subject to freeze/thaw cycling and exposed to exterior.

PART 3 - EXECUTION

3.1 SUBGRADE PREPARATION

A. Prepare in accordance with IDOT SSRBC, Section 301.

1. Proof roll areas under drives and parking areas.

B. Provide additional fill for soft spots and hollows.

C. Level and Compact subgrade, to receive granular base for concrete work, to 95% Modified Proctor Density.

3.2 CONCRETE PLACING

A. Place all paving concrete in accordance with IDOT SSRBC, Section 420.

B. Place concrete for sidewalks in accordance with IDOT SSRBC, Section 424.

C. Cure concrete in accordance with IDOT SSRBC, Section 420.

3.3 INSPECTION

A. The Testing Laboratory shall verify that the compacted base is ready to support paving and imposed loads.

B. Verify gradients and elevations of base are correct.

C. Start of installation constitutes acceptance of existing conditions.

3.4 PREPARATION

A. Moisten base to minimize absorption of water from fresh concrete.

B. Notify Landscape Architect minimum 48 hours before start of concreting operations.

3.5 FORMING

A. Place and secure forms to correct location, dimensions and profile.

B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.

C. Place joint fillers vertical in position, in straight lines. Secure to formwork during concrete placement.

3.6 REINFORCEMENT

A. Place reinforcement at mid-height of slabs-on-grade.

B. Interrupt reinforcement at contraction and expansion joints.

C. Place reinforcement to achieve slab and curb alignment as detailed.

D. Provide dowelled joints at interruptions of concrete with one end of dowel set in capped sleeve to allow longitudinal movement.

3.7 FORMED JOINTS

A. Place expansion, control and contraction joints as shown on the drawings. Align curb, gutter and sidewalk joints.

B. All expansion joints in concrete paving, sidewalk paving, and curb shall be sealed per IDOT SSRBC.

C. Place joint filler between paving components and building (s) or other appurtenances. Recess top of filler 1/2 inch for sealer placement.

D. Provide scored, joints at 5 feet intervals of sidewalk except where otherwise shown.

3.8 CURING

A. Curing and protection shall be as outlined in IDOT Section 1022. Color lithochrome color wax matching the colored concrete as manufactured by L.M. Schofield Company or approved equal, and applied in accordance with the manufacturer's written instructions; or white pigmented curing compound as outlined in IDOT Section 1022 are the preferred curing methods. White-opaque polyethylene film shall not be accepted as a curing method.

3.9 FINISHING

A. Area paving: Light broom, radiused and trowel joint edges, wood float.

B. Sidewalk paving: Light broom, radiused and trowel joints edges, wood float.

C. Curbs and gutters: Light broom.

D. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's current printed instructions.

3.10 PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessive hot or cold temperatures and mechanical injury. Maintain protection until accepted.

3.11 FIELD QUALITY CONTROL

A. Maintain record of placed concrete items. Record date, location of pour, quantity, air temperature and test samples taken.

B. Initial Testing: The Contractor will employ a separate testing laboratory to perform field quality control testing.

C. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate the specified concrete strengths and other characteristics have not been attained in the structure, as directed by the Landscape Architect. The Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.

D. Formed Concrete Dimensional Tolerances:

1. Formed concrete having any dimension smaller or greater than required, and outside the specified tolerance limits, will be considered deficient in strength and subject to additional testing as herein specified.
2. Formed concrete having any dimension greater than required will be rejected if the appearance or function of the structure is adversely affected, or if the larger dimensions interfere with other construction. Repair, or remove and replace rejected concrete as required to meet the construction conditions. When permitted, accomplish the removal of excessive material in a manner to maintain the strength of the section without affecting function and appearance.
3. Construction for ADAAG accessible walks, pavement surfaces, and areas shall have tolerance limits in accordance with local and federal regulations (whichever is more stringent).

E. Defective Work: Concrete work which does not conform to the specified requirements, including strength, tolerances, and finishes, shall be corrected at the Contractor's expense,

without extension of time therefore. The Contractor shall also be responsible for the cost of corrections to any other work affected by or resulting from corrections to the concrete work.

END OF SECTION 32 13 13

SECTION 32 15 40

STABILIZED PATHWAY AGGREGATE

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes materials and execution information for construction with aggregate with Organic-Lock binder for foot traffic applications.

B. Related Work:

Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Divisions of the Project Manual, apply to this Section.

1.2 REFERENCES

A. ASTM C136 / C136M – 14, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates, ASTM International, West Conshohocken, PA, 2014, www.astm.org

B. ASTM D2419 – 14, Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregates, ASTM International, West Conshohocken, PA, 2014, www.astm.org

C. ASTM F1951 – 14, Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment, ASTM International, West Conshohocken, PA, 2014, www.astm.org

1.3 SUBMITTALS

A. Submit in accordance with Section 01 30 00 - Submittal Procedures:

1. 1 quart sample of base course.
2. 1 quart sample of crushed aggregate material sourced from an authorized Organic-Lock Dealer.
3. Manufacturer's Material Safety Data Sheet.

1.4 SITE CONDITIONS

A. Ensure that the subgrade and base are properly graded and compacted to required specifications.

B. Do not install the Organic-Lock Stabilized Aggregate during rain. Rain within 3-5 days after installation will increase curing time.

C. Protect all nearby surfaces, plants, and structures from possible contamination from materials or damage by equipment.

D. It is not recommended to install when temperatures are below 40 degrees Fahrenheit (5 degrees Celsius).

1.5 TEST PLOT

A. Install 16 square feet minimum of stabilized crushed aggregate paving including base course, at location approved by Owner.

B. Allow Owner to view test plot before proceeding with rest of stabilized crushed aggregate paving.

C. Approved mock-up may remain as part of completed Work.

1.6 PRE-CONSTRUCTION

A. Contractor to attend a virtual pre-construction meeting led by Organic-Lock to review installation best practices and project expectations.

B. Pre-construction meeting to take place at a minimum one week prior to installation.

1.7 DELIVERY, HANDLING, AND STORAGE

A. Delivery:

Delivery of Organic-Lock pre-blended with aggregate is available from select dealers worldwide. Contact your closest dealer or the manufacturer for more information.

B. Storage:

Protect stabilized crushed aggregate mix from contamination. Store undercover. If the blended and hydrated aggregate is sitting for long periods of time (longer than 48 hours), or when subject to rainfall, it needs to be turned with a skid steerer or loader to ensure consistent moisture content throughout prior to installation.

Verify hydration level with snowball test before installation. For any questions regarding storage, contact the manufacturer or local dealer.

PART 2: PRODUCTS

2.1 MANUFACTURERS

A. Organic-Lock for Organic-Lock Stabilized Aggregate provided by:

Kafka Granite, LLC 550
State Highway 153
Mosinee, WI 54455
800-852-7415
info@kafkagranite.com
www.kafkagranite.com

2.2 MATERIALS

A. Organic-Lock Stabilized Aggregate

1. Standard Pathway Mix, color shall be American Heritage Granite.
2. Crushed Aggregate Material
    a. Consisting of sound, angular, durable particles.
    b. Gradation, in accordance with ASTM C136:

Optimal Gradation		
Sieve	Sieve Size (mm)	Percent Passing
4	4.75	80% - 100%
8	2.36	65% - 90%
16	1.18	40% - 65%
30	0.6	25% - 55%
50	0.3	15% - 35%
100	0.15	10% - 20%
200	0.075	5% - 15%

B. Aggregate Base

1. Aggregate base shall be natural aggregate conforming to Standard Specifications, Grade CA-6, Type B.

PART 3: EXECUTION

3.1 PREPARATION

1. Prepare the Subgrade

    Excavate the area to the depth required so that finish grade can be established as noted on plans.

    Compact the subgrade to 95% Modified Proctor Density.

2. Prepare the Base

Depth of base shall be as indicated on the plans.

Compact the subgrade to 95% Modified Proctor Density using a single or double drum static roller or vibratory compactor.

3.2 WATERSHED MANAGEMENT

Crowns and/or cross-slopes must be incorporated into the compacted base material.

If the slope is 2% or lower, a crown should be incorporated into the pathway. If the slope is greater than 2%, incorporate a cross-slope.

3.3 SPREADING

The use of a paving machine is highly recommended for large projects to evenly spread Organic-Lock Stabilized Aggregate at the specified depth. It's recommended to screed the material to ensure the depth is consistent for smaller projects or projects with tight areas.

Spread the loose and uncompacted Organic-Lock Stabilized Aggregate over the compacted base material.

Typically, a lift of 4 inches of loose, pre-wet Organic-Lock Stabilized Aggregate will compact to the required 3-inch depth for Foot-Traffic Pathways.

3.4 COMPACTION

Make passes using a 1-ton double or single static drum roller, or equivalent. A Foot-Traffic Pathway will typically require one lift, compacted to 3 inches.

Compaction will vary with different aggregates due to particle shape and size. Expected compaction is 20-25%, less if using paving machinery. This level of compaction needs to be monitored as early as possible (starting during the test plot) to determine the actual degree of compaction. It is better to put down too much material and to remove it from the top than to put down too little and add a layer later.

Compact until no further deflection occurs during rolling.

Note: Vibratory compaction is acceptable for the base material but generally not suitable for Organic-Lock Stabilized Aggregate as it risks disassociating the bonds of the stabilized aggregate or allowing the fines and moisture to migrate to the surface, causing the surface to take on a smooth, concrete-like appearance.

Organic-Lock Stabilized Aggregates should be compacted using a single or double drum static roller wherever possible. For tight spaces that are not accessible by drum rollers, a hand tamper is recommended. However, in certain circumstances, a vibratory or plate tamper can be used where the installer deems it to be more effective as hand-tamping over large spaces will create inconsistent results.

Provided the moisture content of the Organic-Lock Stabilized Aggregate is adequate, additional hydration should not be necessary. On dry, sunny days, however, the surface layer may start to dry out while installing, in which case, a light misting would be appropriate to prevent surface cracks from appearing during compaction. Refer to Organic-Lock installation guideline video https://www.kafkagranite.com/blog/kafka-granite-organic-lock-stabilized- pathway-mix-installation/ for more information.

3.5 COMPLETING INSTALLATION

Apply a light spray to the surface of the material to give a clean appearance. Apply water until the water begins to run-off.

Do not allow any traffic on the newly installed pathway until fully cured, a minimum of 24-72 hours.

3.6 REPAIRS AND PROTECTION

Excavate the damaged area and scarify exposed Organic-Lock Stabilized Aggregate.

Source the replacement material from a Licensed Organic-Lock Stabilized Aggregate Dealer. Apply the material to the excavated area and compact.

Allow the newly installed Organic-Lock Stabilized Aggregate to cure, but not completely dry out.

Re-compact the material (3.4), ensuring that the final grade and crown are maintained.

END OF SECTION

SECTION 32 17 26

TACTILE WARNING SURFACING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. ADA Tactile Paving

B. Related Requirements:

1. Section 32 13 13 "Concrete Paving" for concrete walkways serving as substrates for tactile warning surfacing.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Initial Selection: For each type of exposed finish requiring color selection.

C. Samples for Verification: For each type of tactile warning surface, in manufacturer's standard sizes unless otherwise indicated, showing edge condition, truncated-dome pattern, texture, color, and cross section; with fasteners and anchors.

D. Shop drawings are required for products specified showing fabrication details, composite structural system, tile surface profile, fastener and anchor locations, plans of tile placement including joints, and material to be used as well as outlining installation materials and procedure.

1.03 CLOSEOUT SUBMITTALS

A. Maintenance Data: For tactile warning surfacing, to include in maintenance manuals.

1.04 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.05 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.06 PROJECT CONDITIONS

A. Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by frost or freezing.

B. Weather Limitations for Adhesive Application:

1. Apply adhesive only when ambient temperature is above 50 deg F and when temperature has not been below 35 deg F for 12 hours immediately before application. Do not apply when substrate is wet or contains excess moisture.

C. Weather Limitations for Mortar and Grout:

1. Cold-Weather Requirements: Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

2. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602. Provide artificial shade and windbreaks, and use cooled materials as required. Do not apply mortar to substrates with temperatures of 100 deg F and higher.
    a. When ambient temperature exceeds 100 deg F, or when wind velocity exceeds 8 mph and ambient temperature exceeds 90 deg F, set unit pavers within 1 minute of spreading setting-bed mortar.

1.07 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of tactile warning surfaces that fail in materials or workmanship within specified warranty period.
    1. Failures include, but are not limited to, the following:
        a. Deterioration of finishes beyond normal weathering and wear.
        b. Separation or delamination of materials and components.
    2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 TACTILE WARNING SURFACING, GENERAL

A. Accessibility Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities for tactile warning surfaces.
    1. For tactile warning surfaces composed of multiple units, provide units that when installed provide consistent side-to-side and end-to-end dome spacing that complies with requirements.
B. Source Limitations: Obtain each type of tactile warning surfacing, joint material, anchor, and fastener from single source with resources to provide materials and products of consistent quality in appearance and physical properties.

2.02 DETECTABLE WARNING TILES

A. Cast-in-Place Detectable Warning Tiles: Accessible truncated-dome detectable warning tiles configured for setting flush in new concrete walkway surfaces, with slip-resistant surface treatment on domes and field of tile.
    1. Manufacturers: Subject to compliance with requirements, provide products by the following:
        a. Tuftile – Ph. No.: (888) 960-8897
    2. Material: 10-gauge galvanized steel.
        a. The Vitrified Polymer Composite (VPC) Cast in Place Detectable/Tactile Warning Surface tile specified is based on Armor Tile as distributed under license by Engineered Plastics Inc. (1-800-682-2525). Existing engineered and field-tested products, which have been in successful service for a period of three (3) years are subject to compliance with requirements, may be incorporated in the work and shall meet or exceed the specified test criteria and characteristics.
    3. Color: Red Brick
    4. Shapes and Sizes:
        a. Rectangular panel, 24 by 48 inches.

5. Dome Spacing and Configuration: Manufacturer's standard compliant spacing, in manufacturer's standard pattern.
6. Mounting:
    a. Permanently embedded detectable warning tile wet-set into freshly poured concrete.

B. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of tactile warning surfaces, noncorrosive and compatible with each material joined, and complying with the following:
1. Furnish Type 316 stainless-steel fasteners for exterior use.
2. Fastener Heads: For nonstructural connections, use flathead or oval countersunk screws and bolts with tamper-resistant heads, colored to match tile.

C. Adhesive: As recommended by manufacturer for adhering tactile warning surfacing unit to pavement.

D. Sealant: As recommended by manufacturer for sealing perimeter of tactile warning surfacing unit.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that pavement is in suitable condition to begin installation according to manufacturer's written instructions. Verify that installation of tactile warning surfacing will comply with accessibility requirements upon completion.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION OF DETECTABLE WARNING TILES

A. Cast-in-Place Detectable Warning Tiles:
1. Concrete Paving Installation: Comply with installation requirements in Section 32 13 13 "Concrete Paving." Mix, place, and finish concrete to conditions complying with detectable warning tile manufacturer's written requirements for satisfactory embedment of tile.
2. Set each detectable warning tile accurately and firmly in place and completely seat tile back and embedments in wet concrete by tamping or vibrating. If necessary, temporarily apply weight to tiles to ensure full contact with concrete.
3. Set surface of tile flush with surrounding concrete and adjacent tiles, with variations between tiles and between concrete and tiles not exceeding plus or minus 1/8 inch from flush.
4. Protect exposed surfaces of installed tiles from contact with wet concrete. Complete finishing of concrete paving surrounding tiles. Remove concrete from tile surfaces.
5. Clean tiles using methods recommended in writing by manufacturer.

3.03 INSTALLATION OF DETECTABLE WARNING MATS

A. Lay out detectable warning mats as indicated and mark concrete pavement at edges of mats.

B. Prepare existing paving surface by grinding and cleaning as recommended by manufacturer.

C. Apply adhesive to back of mat in amounts and pattern recommended by manufacturer and set mat in place. Firmly seat mat in adhesive bed, eliminating air pockets and establishing full adhesion to pavement. If necessary, temporarily apply weight to mat to ensure full contact with adhesive.

D. Install anchor devices through face of mat and into pavement using anchors located as recommended by manufacturer. Set heads of anchors flush with mat surface.

E. Mask mat perimeter and adjacent concrete and apply sealant in continuous bead around perimeter of mat.

F. Remove masking, adhesive, excess sealant, and soil from exposed surfaces of detectable warning mat and surrounding concrete pavement using cleaning agents recommended in writing by manufacturer.

G. Protect installed mat from traffic until adhesive has set.

3.04 CLEANING AND PROTECTION

A. Remove and replace tactile warning surfacing that is broken or damaged or does not comply with requirements in this Section. Remove in complete sections from joint to joint unless otherwise approved by Landscape Architect. Replace using tactile warning surfacing installation methods acceptable to Landscape Architect.

B. Protect tactile warning surfacing from damage and maintain free of stains, discoloration, dirt, and other foreign material.

END OF SECTION 32 17 26

SECTION 32 18 00 - PLAYGROUND SURFACE SYSTEM

WOOD FIBER PLAY SURFACING

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes the following:

1. Engineered wood fiber surface.

1.02 DEFINITIONS

A. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325, this means "the fall height below which a life-threatening head injury would not be expected to occur."

B. Critical Fall Height: According to ASTM F 1487, "the vertical distance between a designated play surface and the protective surfacing beneath it."

C. Use Zone: According to ASTM F 1487, "the area beneath and immediately adjacent to a play structure that is designated for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment."

D. EWF: Engineered Wood Fiber.

E. ASTM: American Society for Testing and Materials

F. CPSC: Consumer Product Safety Council.

G. ADA: Americans with Disabilities Act.

H. IPEMA: International Play Equipment Manufacturers Association.

1.03 PERFORMANCE REQUIREMENTS

A. IPEMA Certified; rated for fall heights.

B. Use zones, clearances and reach ranges will comply with ASTM F1487, sections 8, 9 and 10.

C. Impact Attenuation: According to ASTM F 1292.

1. Must show G-max values of less than 155G for 8-inch system, or 120G for 12-inch system at 12’ drop heights.

2. HIC values of less than 1,000 for both new and 12-year-old material.

D. Accessibility of Surface Systems: According to ASTM F 1951.

E. Minimum Characteristics for Organic Loose-Fill Surfaces: According to ASTM F 2075.

F. Flammability: According to ASTM D 2859

G. Manufacturers 20-year Warranty against loss of resiliency, lifetime warranty of geo-fabric material.

1.04 SUBMITTALS

A. Product Data: For each type of product indicated, including installation instructions, applicable ASTM results and IPEMA Certificates of Compliance. Material manufactured from recycled material will not be acceptable.

B. Shop Drawings: Show the following:

1. Installation details for curbs, edging, mat locations and accessories.
2. Location of drainage accessories.
3. Extent of each type of play surface with play equipment and critical dimensions indicated.

C. Samples for Verification: For each type of playground surface system indicated.
1. Minimum 1-quartloose-fill surface sealed in a container.
2. Minimum 12-by-12-inch sample of geosynthetic fabric.
3. Minimum 6-by-6-inch sample of drainage panel module.

D. Qualification Data:
1. For installer

E. Material Test Reports: For the following from a qualified testing agency, indicating compliance with requirements:
1. EWF loose fill surface
2. Provide test results on letterhead of the independent testing laboratory.

F. Material & Liability Insurance Certificates: For each playground surface system product, signed by manufacturers.

G. Field quality-control test reports.

H. Maintenance Data: For playground surface system to include in maintenance manuals.

I. Warranty: As specified in this Section.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
1. Contractor Qualifications: Employ only experienced Contractors (Installers) skilled in the successful installation of the specified materials and assemblies on similar projects for a minimum of three (3) years.

B. Testing Agency Qualifications: An independent agency qualified according to ANSI Z34.1 for testing indicated.

C. Source Limitations: Obtain playground surface system materials, including primers and binders, and wear mats, through one source from a single manufacturer.
1. Provide secondary materials including adhesives, primers, geosynthetics, and repair materials of type and from source recommended by manufacturer of playground surface system materials.

1.06 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit playground surface system installation to be performed according to manufacturers' written instructions and warranty requirements.

1.07 DELIVERY, STORAGE & HANDLING

A. Delivery: Deliver materials to site in manufacturer’s original, unopened containers and packing, with labels clearly identifying product name and manufacturer. Deliver EWF playground surfacing to site in bulk.

B. Storage: Store materials in a clean, dry area in accordance with manufacturer's instructions. Store EWF playground surfacing to prevent contamination.

C. Handling: Protect materials during handling and installation to prevent damage. Handle EWF playground surfacing to prevent contamination.

1.08 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of playground surface system that fails in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
    a. Reduction in impact attenuation.
    b. Deterioration of surface and other materials beyond normal weathering.
    c. Geotextile fabric against deterioration and decay.
2. Warranty Period:
    a. Engineered Wood fiber play surface for 10 years from date of Contract Completion.
    b. Playground surfacing wear mats 5 years from date of Contract Completion.

1.09 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. EWF: Engineered wood fiber in bags; 10% of amount installed, but no fewer than 3 bags.
2. Wear mats: 10% of amount installed, but no fewer than two units.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENT

A. Impact Attenuation: Critical fall height tested according to ASTM F1292.

B. Accessibility Standard: Minimum surfacing performance according to ASTM F1951.

2.02 SAFETY SURFACE MANUFACTURER

A. Manufactures and Type

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings by:

    The Fibar Group LLC
    80 Business Park Drive, Suite 300
    Armonk, NY 10504-1705
    P: (800) 342-2721
    info@Fibar.com

B. Or comparable product by one of the following:

1. GameTime; GT Impax Fiber.
2. New England Playground Surfacing; Playground Safety Fiber.
3. Sof'Fall Incorporated; Sof'Fall.
4. Zeager Bros., Inc.; WoodCarpet

2.03 ENGINEERED WOOD FIBER SURFACE

A. Engineered Wood Fibers: Random-sized wood fibers, in manufacturer's standard fiber size, recently harvested and debarked North American hardwoods containing no bark, leaves, twigs, or foreign or toxic materials according to ASTM F 2075; graded according to manufacturer's standard specification for material consistency for playground surfaces and for accessibility according to ASTM F 1951; IPEMA certified for conformance to ASTM F1292-99.

1. Engineered Wood Fiber
    a. Shredded wood fiber consisting of randomly sized pieces.
        1) Recycled from wood mills and truss plants.
        2) Does not exceed 2 inches in length.
        3) Contains no more than 15% fines to aid in compaction.
        4) Depth of material – 12”.
        5) Critical Fall Height: 10’
2. Drainage System: Fibar System 200.
    a. FibarDrain
        1) Drainage matrix that channels water away from playground.
        2) Minimum flow rate of 10 gpm/ft.
        3) Needle-punched 100% non-woven geotextile sleeve encasing a monofilament nylon mesh.
        4) Laid out on 6’-0” centers in the direction of the grade.
    b. FibarFelt
        1) Needle-punched 100% non-woven geotextile fabric that separates the Engineered Wood Fiber from soil below.
        2) Cover sub-grade and drainage matrix area to ensure proper drainage.
        3) Overlap seams by 3 inches.
    c. Refer to Civil Engineering drawings for locations and general site information.
3. Accessory Items:
    a. #67 Angular drainage stone.
        1) 3-inch depth over bottom layer of FibarFelt geotextile fabric.
    b. Concrete Edge Restraints
        1) Refer to drawings for locations.
        2) Specification Section 32 13 13 Concrete Paving applies.

2.04 WEAR MATS

A. Wear mats shall be provided by City for contractor installation through BCI Burke Company, LLC.

PART 3 - EXECUTION

3.01 PREPARATION

A. General: Prepare substrates to receive surfacing products according to playground surface system manufacturer's written instructions. Verify that substrates are sound and without high spots, ridges, holes, and depressions.

B. Verify under-drain system has been properly installed in accordance with manufacturer’s requirements.

3.02 INSTALLATION, GENERAL

A. General: Comply with playground surface system manufacturer's written installation instructions. Install playground surface system over area and in thickness indicated.

B. Excavate area to proper depth, based on Critical Fall Heights. Review shop drawings and confirm with Landscape Architect the Critical Fall Height zones and depths prior to excavation.

3.03 INSTALLATION OF ENGINEERED WOOD FIBER SURFACE SYSTEMS

A. Provide minimum 1% downward grade to ensure proper drainage to FibarDrain Strip.

B. Remove all roots, stones and vegetation.

C. Accurately grade and firmly compact entire area, especially where fill materials have been utilized.

1. Review areas with Landscape Architect where tree protection is required to minimize compaction and exposure of roots.

D. Excavate trench 2” wide x 6” deep, perpendicular to grade at lowest point of playground area.

E. Install FibarDrain and connect low end of strip to storm drain or similar device to remove collected water.

F. Install playground equipment.

G. Install retaining curb or edge restraint.

H. Install FibarDrain strips at 6’ centers in direction of grade.

I. Cover sub-grade and drainage trench with FibarFelt.

1. Allowing 3” overlap at all seams.

2. Slit to fit around footings of equipment.

3. Overlap all slits with either next piece of FibarFelt or scrap piece, to ensure complete coverage.

J. Install FibarMat wear mats either on FibarFelt, in middle of Fibar Wood Fiber or on top of system.

K. Permanently mark, with paint or other type of permanent marker, all the legs of the playground equipment with the compacted system design depth.

L. Spread Fibar® Wood Fiber using a Bobcat, small front-end loader or our Express Blower Trucks.

1. Care should be taken when driving over FibarDrain.

2. Do not make sharp turns on FibarFelt or FibarDrain.

M. Install all materials delivered.

1. Additional materials are supplied to account for natural compaction.

2. Material may be several inches high, until it compacts.

3. Feather edges to make smooth transition to grade or border.

N. Hand spread and rake for smooth, finished surface.

O. After two weeks of active use, surface should be raked again.

P. Consumer Product Safety Commission (CPSC) and ASTM recommends Use Zones of at least 6 feet around all equipment, except:

1. Swings – Use zone equal to 2 times the height of top rail is needed in front and behind swings.

2. Slides – Use zone equal to height of slide plus 4 feet, extending a minimum of 6 feet, in front of slide exits.

3.04 WEAR MAT INSTALLATION

A. Install wear mats at all slide exits and beneath each swing bay as indicated in the drawings. Set wear mats 6” below finished surface of engineered wood fiber surfacing.

3.05 FIELD QUALITY CONTROL

A. Inspect the playground and verify that playground equipment use zones, clearances, and reach ranges comply with applicable ASTM F1487 requirements.

END OF SECTION 32 18 00

SECTION 32 32 23

SEGMENTAL RETAINING WALL

PART 1 – GENERAL

1.01 SUMMARY

A. The work covered by this section includes the furnishing of all labor, materials, equipment, inspection and construction of a modular concrete Segmental Retaining Wall ("SRW") including drainage system and geosynthetic reinforcement. The work included in this section consists of, but is not limited, to the following:

1. Excavation and foundation soil preparation.
2. Furnish and placement of the Leveling Base.
3. Furnish and placement of the Drainage system.
4. Furnish and placement of Geotextile Fabric.
5. Furnish and placement of SRW units.
6. Furnish and placement of Geosynthetic Reinforcement.
7. Furnish, placement, and compaction of Backfill and Drainage Aggregates
8. Furnish final grading.

1.02 REFERENCES

A. ASTM International, latest edition:

Segmental Retaining Wall Units

1. C 33, Standard Specification for Concrete Aggregates
2. C140, Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
3. C979, Standard Specification for Pigments for Integrally Colored Concrete.
4. C1372, Standard Specification for Dry-Cast Segmental Retaining Wall Units

Aggregate Materials

1. C33, Standard Specification for Concrete Aggregates
2. D448, Standard Classification for Sizes of Aggregate for Road and Bridge Construction
3. D2940, Standard Specification for Graded Aggregate Material for Bases or Subbases for Highways or Airports

Geotextile Fabric

1. D4491, Standard Test Methods for Water Permeability of Geotextiles by Permittivity
2. D4751, Standard Test Method for Determining Apparent Opening Size of a Geotextile

Soils

1. D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3))
2. D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)

Drainage Pipe

1. D3034, Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe
2. F667, Standard Specification for Large Diameter Corrugated Polyethylene (PE) Pipe and Fittings

1.03 SUBMITTALS

A. Segmental Retaining Wall:

1. Samples for verification: Three representative full-size samples of SRW. Thickness, color and finish that indicate the range of color variation and texture expected upon project completion.
2. Accepted samples become the standard of acceptance for the product produced.
3. Test results from an independent testing laboratory for compliance of concrete pavers with ASTM C1372.
4. Manufacturer's catalog product data, installation instructions, and material safety data sheets for the safe handling of the specified materials and products.

B. Adhesive and Sealant:
1. Provide manufacturer's technical data sheets indication the physical properties and performance.
2. Test results from an independent testing laboratory indicating the product strength.

C. Geotextile Fabric
1. Provide product data sheets.
2. Provide three representative samples 6in by 6in.

D. Geosynthetic Reinforcement (Geogrid):
1. Provide product data sheets.
2. Provide three representative samples 8in by 12in.

E. Wall Installation Contractor:
1. Job references from a minimum of three projects similar in size and complexity. Provide Owner/Client/General Contractor names, postal address, phone, fax, and email address.

1.04 QUALITY ASSURANCE

A. Utilize a Manufacturer having at least ten years of experience manufacturing concrete SRW on projects of similar nature or project size.

B: Source Limitations:
1. Obtain SRW from one source location with the resources to provide products of consistent quality in appearance and physical properties.
2. Obtain Drainage Aggregate and Backfill Aggregate from one source.
3. Obtain only natural Base and Subbase Aggregates quarried from an approved supplier. Recycled Crushed Concrete Base and Crushed Concrete Subbase Aggregates are not acceptable.

C. SRW Contractor Qualifications:
1. Utilize an installer having successfully completed SRW installation similar in design, material, and extent indicated on this project.

D. Mockups:
1. Install a 5 linear foot x 2 foot tall SRW.
2. Use this area to determine installation tolerances. This area will serve as the standard by which the workmanship will be judged.
3. Subject to acceptance by owner, mock-up may be retained as part of finished work.
4. If mock-up is not retained, remove and dispose legally.

1.05 DELIVERY, STORAGE & HANDLING

A. In accordance with Conditions of the Contract and Division 1 Product Requirement Section.

B. Deliver SRW in manufacturer's original, unopened and undamaged container packaging with identification labels intact.
1. Coordinate delivery and SRW schedule to minimize interference with other construction activities.
2. Unload SRW at job site in such a manner that no damage occurs to the product or adjacent surfaces.
3. Store materials in accordance with manufacturer's recommendations and in a manner to prevent damage.

1.06 PROJECT/SITE CONDITIONS

A. Environmental Requirements:
   1. Install Leveling Base Aggregates only over unfrozen and dry subgrade soils.
   2. Install Universal Base Units only when temperature is above 32 degrees Fahrenheit (0 degrees Celsius).
   3. Install SRW on Universal Base Units only over unfrozen and dry subgrade soils.

B. Weather Limitations:
   1. Install only when no heavy rain or snowfalls are forecast within 24 hours.

1.07 SRW OVERAGE AND ATTIC STOCK

A. Provide a minimum of 5% additional material for overage to be used during construction.

B. Contractor to provide 50 face feet of each product and size used to owner for maintenance and repair. Furnish SRW from the same production run as installed materials.

C. Manufacture to supply maintenance and reinstatement manuals for SRW units.

PART 2 PRODUCTS

2.01 SEGMENTAL RETAINING WALL ("SRW") AND COPING

A. Basis-of-Design Product: SRW modular, solid, dry-cast concrete blocks based on:

   1. Unilock:
      a. Siena Edge
   2. As manufactured by:
      Unilock
      Uxbridge MA, Brewster NY, Rittman OH, Brighton MI, Aurora IL, Marengo IL, Elkhorn WI, Ayr ON, Georgetown ON, Pickering ON, Gormley ON

      Contact: Chicago- Brad Swanson – brad.swanson@unilock.com 630-742-4168
   3. The specified products establish minimum requirements that substitutions must meet to be considered acceptable.
      a. To obtain acceptance of unspecified products, submit written requests as outlined in Section 01 63 00.

B. Product requirements:
   1. SRW: Siena Edge
      a. Color: Midnight Charcoal
   2. SRW Coping: Siena Edge
      a. Color: Midnight Charcoal

C. Provide SRW meeting the requirements set forth in ASTM C1372.

D. Provide SRW meeting the physical properties listed below as tested using ASTM C140:
   1. Dimensional tolerance shall be +/- 3 mm (1/8 in.) for height, width, and length.
   2. The minimum 28-day compressive strength of 35 MPa (5000 psi).
   3. The maximum moisture absorption shall be 1.0 kN/cubic m (6.5 lbs/cubic ft).

E. Provide SRW utilizing an integral shear key connection with offset to create:
   1. Near vertical wall

F. Accept only pigments in concrete pavers conforming to ASTM C 979.
   Note: ACI Report No. 212.3R provides guidance on the use of pigments.

2.03 LEVELING BASE AGGREGATE

A. Provide non-frost susceptible, well-graded, compacted angular gravel-sand mixture (GW as per ASTM D2487) Leveling Base conforming to ASTM D 2940 and gradation requirements as presented in Table 1.

TABLE 1
LEVELING BASE AGGREGATE
GRADATION REQUIREMENTS

ASTM D 2940	
Sieve Size	**Percent Passing**
2 in (50 mm)	100
1-1/2 in (37.5 mm)	95 to 100
3/4 in (19 mm)	70 to 92
3/8 in (9.5 mm)	50 to 70
No. 4 (4.75 mm)	35 to 55
No. 30 (600 µm)	12 to 25
No. 200 (75 µm)	0 to 8*

* In order to prevent damage by frost heaving, it may be necessary to limit the percentages of material passing the No. 200 sieve to less than shown in the tables.

2.04 BACKFILL AGGREGATE

A. Provide Base Aggregate materials conforming to ASTM D 2940 and gradation requirements as presented in Table 2.

TABLE 2
BACKFILL AGGREGATE
GRADATION REQUIREMENTS

ASTM D 2940	
Sieve Size	**Percent Passing**
2 in (50 mm)	100
1-1/2 in (37.5 mm)	95 to 100
3/4 in (19 mm)	70 to 92
3/8 in (9.5 mm)	50 to 70
No. 4 (4.75 mm)	35 to 55
No. 30 (600 µm)	12 to 25
No. 200 (75 µm)	0 to 8*

* In order to prevent damage by frost heaving, it may be necessary to limit the percentages of material passing the No. 200 sieve to less than shown in the tables.

2.05 DRAINAGE AGGREGATE FILL

A. Provide Drainage Aggregate materials conforming to ASTM C 33 and gradation requirements of ASTM D 448 No. 8 as presented in Table 3.

TABLE 3
DRAINAGE AGGREGATE
GRADATION REQUIREMENTS

ASTM No. 8	
Sieve Size	**Percent Passing**
½ in (12.5 mm)	100
3/8 in (9.5 mm)	85 to 100
No. 4 (4.75 mm)	10 to 30
No. 8 (2.36 mm)	0 to 10
No. 16 (1.18 mm)	0 to 5

2.06 UNDERDRAINAGE PIPE

A. Provide a minimum 100 mm (4 inches) Underdrainage Pipe using:
   1. Perforated corrugated high density polyethylene (HDPE) meeting ASTM F667.
   2. Perforated polyvinyl chloride (PVC) pipe meeting ASTM D3034.

B. Protect with Geotextile Fabric to prevent the migration of soil particles into the Underdrainage Pipe.

2.07 GEOTEXTILE FABRIC

A. Provide Geotextile material conforming to the following performance characteristics, measured per the test methods referenced:
   1. 4 oz., nonwoven needle punched geotextile composed of 100% polypropylene staple fibers that are inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.
   2. Grab Tensile Strength: ASTM D 4632: 115 lbs.
   3. Grab Tensile Elongation: ASTM D 4632: 50%
   4. Trapezoidal Tear: ASTM D4533: 50 lbs.
   5. Puncture: ASTM D4833: 65 lbs.
   6. Apparent Opening Size: ASTM D 4751: 0.212 mm, 70 U.S. Sieve
   7. Permittivity: ASTM D 4491: 2.0 sec -1
   8. Flow Rate: ASTM D 4491: 140 gal/min/s.f.

Geotextile Fabric meeting these requirements include:
   1. Carthage Mills – FX-40HS
   2. U.S. Fabrics – US 115NW
   3. Mirafi – 140N

2.08 GEOSYNTHETIC REINFORCEMENT

A. Provide Geosynthetic Reinforcement as supplied by Unilock:
Uxbridge MA, Brewster NY, Rittman OH, Brighton MI, Aurora IL, Marengo IL, Elkhorn WI, Ayr ON, Georgetown ON, Pickering ON, Gormley ON

Contact: Chicago- Brad Swanson – brad.swanson@unilock.com 630-742-4168
   1. Stratagrid SGU 60
   2. Stratagrid SGU 100
   3. Gator Grid 30-30
   4. Gator Grid 50-50

2.09 CONCRETE ADHESIVE

A. Provide a Concrete Adhesive manufactured by the following:
   1. LePage:

a. Product Type: PL Premium Polyurethane construction adhesive
b. LePage PL 9000 Heavy Duty construction adhesive

2. Alliance:
   a. Product Type: Gator Glue XP Polyurethane construction adhesive
3. Unilock Concrete Adhesive
4. PolyBind XP Polyurethane Adhesive

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas indicated to receive SRW for compliance with requirements for installation tolerances and other conditions affecting performance for the following items:
   1. Verify that subgrade preparation, compacted density and elevations conform to minimum specified requirements.
   2. Verify all site services are located outside of SRW construction area unless otherwise noted.
   3. Verify that the Base Aggregate material, thickness, compacted density, surface tolerances and elevations conform to specified requirements.
   4. Verify the Leveling Base Aggregate horizontal alignment conforms to the SRW alignment.
   5. Provide written density test results for soil subgrade, Base Aggregate materials to the Owner, General Contractor and SRW installation subcontractor.
   6. Verify that the subgrade soil is free from standing water.
   7. Verify the SRW structure or excavation limits are within property boundaries and do not cross into adjacent properties unless approved prior to construction.
   8. Verify the SRW drainage system delivers outflow to approved location.
   9. Verify the SRW and associated excavation remains outside of the loading influence of other adjacent structures and ensure stability of excavations and conformance with applicable regulations.

B. Geotechnical Inspection.
   1. Verify soil parameters and groundwater conditions are acceptable for SRW.
   2. Verify subgrade Bearing Capacity meets or exceeds values required for area to receive SRW.
   3. Identify groundwater conditions and/or other water source prior to SRW installation. Note additional water sources such as seepage from the cut embankment.
   4. Ensure that surface water runoff and/or other sources of water are being controlled during construction and directed away from the SRW to a functioning drain.

C. Proceed with installation only after unsatisfactory conditions have been corrected.
   1. Beginning of Universal Base Units signifies acceptance of the subgrade soil elevations.

3.02 CONSTRUCTION TOLERANCES

A. Installation of SRW facia shall be within all the following acceptable tolerances:
   1. Vertical Control: +/- 1.25 inches over a 10 ft distance
   2. Horizontal Control: Straight lines: +/- 1.25 inches over a 10 ft distance
   3. Rotation of the SRW face: Maximum 2.0 degrees from established SRW plan batter or +/-10.0% from total established horizontal setback
   4. Bulging: +/- 1.25 inch over a 10 ft distance

3.03 CONSTRUCTION

A. SITE PREPARATION
   1. Comply with all current Federal, Provincial/State, and local regulations for execution of the work, including local building codes and excavation regulations. Provide excavation support as required to maintain stability of the area during

excavation and SRW construction and to protect existing structures, utilities, landscape features, property, or improvements.

2. Prior to grading or excavation of the site, confirm the location of the SRW and all underground features, including utility locations within the area of construction. Ensure surrounding structures are protected from effects of SRW excavation.
3. Coordinate installation of underground utilities with SRW installation.
4. Control surface water drainage and prevent inundation of the SRW construction area during the construction process.
5. Excavate the foundation soil to the required grades. Trim the subgrade to within 0 to ½ in. (0 to 13mm) of the specified grades. Do not deviate the surface of the prepared subgrade by more than 3/8 in. (10mm) from the bottom edge of a 39 in. (1m) straight edge laid in any direction.
6. Excavated the native soils to the lines and grades indicated in cut situations. Document and remove from the site.
7. Prevent excavated soils being reused onsite from contamination or overly saturate the stockpiled fill material.
8. Prevent damage to underdrain pipes, overflow pipes, observation wells, or inlets and other drainage appurtenances during installation. Report all damage immediately.
9. Compact soil subgrade uniformly to at least 95 percent of Standard Proctor Density per ASTM D 698. Stabilization of the subgrade and/or base material may be necessary with weak or saturated subgrade soils.
10. Do not proceed with further SRW construction, under any circumstances, until the subgrade has been inspected.

Note: Base compaction of the subgrade soil on the recommendations of the Design Engineer. Inspect subgrade preparations, elevations and conduct density tests for conformance to specifications.

B. GEOTEXTILE FABRIC
   1. Provide separation geotextile on bottom and sides of prepared soil subgrade. Secure in place to prevent wrinkling or folding from equipment tires and tracks.
   2. Overlap ends and edges a minimum of 18 in. (450 mm) in the direction of drainage.

C. LEVELING BASE AGGREGATE
   1. Spread Leveling Base aggregate in areas indicated for SRW in accordance with horizontal and vertical alignments.
   2. Compact the Leveling Base Aggregate material with at least two passes per lift using a vibratory plate compactor applying a minimum of 4,000lbs.(18kN) over compacted subgrade soil material. Compact to at least 98 percent Standard Proctor Density as per ASTM D 698.
   3. Tolerance: Do not exceed the specified surface grade of the compacted Base Aggregate material more than ±3/8 in. (10 mm) over a 10 ft. (3 m) long straightedge laid in any direction.

D. UNIVERSAL BASE UNIT
   1. Place Universal Base Unit on Leveling Base Aggregate.
   2. Level units in all directions. Do not pitch.

E. INSTALLATION OF SEGMENTAL RETAINING WALL UNITS
   1. Place the SRW bottom row in the middle of the Leveling Base. Ensure the SRW Units are aligned properly, leveled from side to side and front to back, and in complete contact with the Leveling Base.
   2. Interconnect the SRW shear key creating the specified batter of the SRW face.
   3. Sweep the SRW top clean before placing additional courses to ensure that no dirt, concrete, or other foreign materials become lodged between successive lifts.
      a. Place Geosynthetic Reinforcement as required.
   4. Offset SRW units to create a running bond pattern with the edge of all units being approximately aligned with the middle of the unit in the course below it. Place cut

SRW half units to ensure the vertical line between adjacent SRW units remains within the middle third of the SRW unit below.

5. Provide Drainage and Backfill Aggregate once three courses above grade have been placed. Backfill with additional aggregates after a maximum of three courses of SRW units have been placed above the previous Backfill and Drainage Aggregate level.
6. Verify no gaps are formed between successive lists affection performance and correct before proceeding with additional lists.
7. Ensure SRW Units and Geosynthetic Reinforcement are not damaged during handling and placement.
8. Prevent heavy equipment, for compaction, fill placement or other, within 1 meter (3 ft.) from back of the SRW Units.

F. DRAINAGE SYSTEM

1. Place the Geotextile Fabric against the back of the first SRW Unit, over the prepared foundation soil extending towards the back of the excavation, up the excavation face and eventually over the top of the Drainage Fill to the back of the SRW Units near the top of the wall. Overlap Geotextile minimum of 300 mm (1 ft.) and shingle down the face of the excavation in order to prevent the migration.
2. Provide Underdrainage Pipe in accordance with the overall drainage plan for the site. Slope Underdrainage Pipe to ensure gravity flow of water from the Backfill Aggregate. Connect Underdrainage Pipe at a storm sewer catch basin or daylight along slope at an elevation lower than lowest point of pipe within Backfill Aggregate mass, every 15 m (50 feet) maximum.
3. Install chimney or blanket drains if other sources of water are discovered during excavation or anticipated.
4. Fill and cover the Underdrainage pipe and trench with Drainage Aggregate and Geotextile fabric.

G. DRAINAGE FILL

1. Provide Drainage Fill between the back of wall and Backfill Aggregate.
2. Place a minimum width of 300 mm (1 ft.) and separated from other soils using the specified Geotextile Fabric.
3. Place Drainage Fill behind the SRW facing in maximum lifts of 150 mm (6 inches) and compacted to a minimum density of 95% Standard Proctor.

H. BACKFILL AGGREGATE

1. Provide Backfill Aggregate behind SRW and Drainage Fill with a maximum lift thickness of 150 mm (6 inches) and compacted to a minimum density of 95% Standard Proctor Maximum Dry Density (ASTM D698) at a moisture content from 2% below to 2% above optimum.
2. Slope the last lift of Backfill Aggregate away from the SRW facing to rapidly direct runoff away from the SRW at the end of each day's operation. Prevent surface runoff from adjacent areas to enter the SRW construction area.

I. GEOSYNTHETIC REINFORCEMENT

1. Verify type and primary strength direction of the Geosynthetic Reinforcement.
2. Sweep the top of the SRW Units to ensure the SRW Units are clean and free of debris.
3. Cut Geosynthetic Reinforcement in sheets to the length shown in the Construction Documents.
4. Place Geosynthetic Reinforcement sheets horizontally with the primary strength direction perpendicular to the SRW face and adjacent sheets without overlapping and without gaps between them.
5. Ensure each Geosynthetic Reinforcement layer corresponds with the correct elevations and Drainage Fill is level to prevent voids.
6. Place the Geosynthetic Reinforcement over the compacted Backfill Aggregate and the SRW Units with the outside edge extending over the shear key of the SRW Unit to within 25 mm (1 in.) of the front facing unit.

7. Carefully place subsequent SRW Units on top of the lower course to ensure that no pieces of concrete are chipped off and become lodged between courses. Ensure the Geosynthetic Reinforcement is in complete contact with the top and bottom surfaces of the successive SRW courses.
8. Pull Geosynthetic Reinforcement taut away from SRW Units during Backfill Aggregate placement. Provide Geosynthetic Reinforcement anchoring pins or staples to ensure that there are no wrinkles or slackness prior to Backfill Aggregate placement. Ensure Geosynthetic Reinforcement lays flat when pulled back perpendicular to the back of the SRW.
9. Prevent construction equipment from operating directly on top of the Geosynthetic Reinforcement until a minimum thickness of 150 mm (6 inches) of Reinforcement Fill has been placed.
10. Prevent heavy equipment from within 1 meter (3. Ft.) of the back of the SRW Units.

J. RETAINED FILL
1. Provide compacted Retained Fill behind the Backfill Aggregate or Drainage Fill in maximum lift thickness of 150 mm (6 inches).

K. SECURE COPING
1. Sweep the last SRW course clean of all debris.
2. Secure SRW Coping to SRW Units with two 10 mm (3/8 inch) beads of Concrete Adhesive positioned 50mm (2 inches) in front and behind the groove of the last course of SRW Units.

L. FINISHING SRW
1. Finish grading above SRW to direct surface runoff water away. Grade a swale above the SRW sloping away from back of the wall. Establish final grading immediately to ensure and protect the Backfill Aggregate from water infiltration.
2. Prevent additional structures (fences, handrails, vehicular guardrails, buildings, pools/ponds, etc.) or changes to grading/loading (increased height, slopes, parking areas, changes in proximity to water flow, etc.), other than those shown in the Construction Documents, from being installed.
3. Prevent landscaping activities within the Reinforcement Fill to ensure:
   a. The Geosynthetic Reinforcement is not damaged by excavation for the root ball
   b. The SRW is not subjected to any additional load from plants or trees.

3.04 REPAIRING AND CLEANING

A. Remove and replace SRW Coping Units that are chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment and with no evidence of replacement.

B. Cleaning: Remove excess dirt, debris, stains, grit, etc. from exposed SRW Units; wash and scrub clean.
1. Clean SRW Units in accordance with the manufacturer’s written recommendations.

3.05 PROTECTION

A. Protect completed work from damage due to subsequent construction activity on the site.

END OF SECTION

SECTION 32 8 00

IRRIGATION SYSTEMS

PART 1 - GENERAL

1.01 GENERAL

A. Contractor shall be responsible for design and installation of complete “turn-key” irrigation system.

B. Contractor shall modify the existing irrigation system at James Park as needed to accommodate site modifications identified on the plans.

C. Areas of landscaping to be provided with irrigation are indicated on the plans.

D. Areas are zoned for water supply, electrical service, pumps and controllers. Contractor shall provide layout and design coordinated with the landscape requirements of planting types and locations. Systems design shall include individually programmable sub-zones tailored to the watering requirements of each major plant type or group and controlled from each zone controller.

E. Location of Sprinklers and Devices: Make allowances and adjustments as necessary to avoid plantings and obstructions such as signs and light standards. Coordinate final layout with Landscaping Contractor.

1.02 SUBMITTALS

A. Contractor shall review drawings including existing and proposed utility plans and landscape areas designated for irrigation. Contractor shall provide shop drawings for review and approval. Shop drawings shall indicate the type, size and location of all proposed irrigation system components to achieve full coverage of the landscape areas.

B. Irrigation systems shall be designed in accordance with all applicable codes and ordinances and best practices for irrigation design.

C. Upon final acceptance of the irrigation system, contractor shall provide as built drawings and operations manuals for the system components.

Minimum Water Coverage: Not less than 100 percent for all athletic field turf areas

D. Components and Installation: Capable of producing piping systems with the following minimum working pressure ratings except where indicated otherwise.

1. Pressure Piping: 150 psig (1035 kPa).
2. Circuit and Drain Piping: 100 psig (690 kPa).

1.03 QUALITY ASSURANCE

A. Qualifications

1. The Irrigation Contractor shall be a company specializing in irrigation system installation. Demonstrated recent experience in projects of similar scope and size will be required.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

2. Pressure Regulators:
   a. Bermad.
   b. Cla-Val Co.
   c. Wilkins Regulator Div., Zurn Industries, Inc.
3. Gate Valves for Underground Installation:
   a. Kennedy Valve Div., McWane, Inc.
   b. Nibco.

c. Stockham Valves & Fittings, Inc.

4. Corporation Stops for Underground Installation:
   a. Ford Meter Box Co., Inc.
   b. Hays Div., Romac Industries.
   c. A.Y. McDonald Mfg. Co.
   d. Mueller Co., Grinnell Corp.
5. Valves for Aboveground and Pit Installation:
   a. Grinnell Supply Sales Co., Grinnell Corp.
   b. Milwaukee Valve Co., Inc.
   c. Nibco, Inc.
   d. Hammond Valve Div., Prairie Manufacturing Corp.
6. Automatic Control Valves:
   a. Rain Bird Sprinkler Mfg. Corp.
   b. Toro Co.
   c. Weather-matic Sprinkler Div., Telsco Industries.
7. Control Valve Boxes:
   a. Ametek by Plymouth Products Div., AMETEK.
   b. Carson Industries, Inc.
   c. Quazite Div., Morrison Molded Fiber Glass Co.
8. Quick Couplers:
   a. Rain Bird Sprinkler Mfg. Corp.
   b. Toro Co.
   c. Weather-matic Sprinkler Div., Telsco Industries.
9. Sprinklers:
   a. Hunter Industries
   b. Toro Co.
10. Emitters, Drip Tubes, and Devices:
    a. Rain Bird Sprinkler Mfg. Corp.
    b. Toro Co.
12. Water Hammer Arresters:
    a. Josam Co.
    b. Jay R. Smith Mfg. Co. Div., Smith Industries, Inc.
    c. Wade Div., Tyler Pipe Subsid., Tyler Corp.
    d. Zurn Hydromechanics Div., Zurn Industries, Inc.

2.02 PIPES AND TUBES

A. Copper Tube: ASTM B 88 (ASTM B 88M), Type K water tube, annealed and drawn tempers, with plain ends.

B. Polyvinyl Chloride (PVC) Plastic Pipe: ASTM D 2241; PVC 1120, SDR 21, 200 psig minimum pressure rating, with plain ends.

C. Polyvinyl Chloride (PVC) Plastic Pipe: ASTM D 2241; PVC 1120, SDR 26, 160 psig minimum pressure rating, with plain ends.

2.03 PIPE AND TUBE FITTINGS

A. Copper Tube Fittings: ASME B16.22, wrought copper or cast-brass, solder-joint, pressure type.

B. Copper Unions: ASME B16.18, cast-copper-alloy body, hexagonal stock, with ball-and-socket joint, metal-to-metal seating surfaces, and solder-joint, threaded or solder-joint, and threaded ends conforming to ASME B1.20.1.

C. Cast-Bronze Flanges: ASME B16.24, Class 150, raised ground face, bolt holes spot faced.

D. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D 2464, Schedule 80, threaded.

E. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D 2467, Schedule 80, socket-type.

F. Polyvinyl Chloride (PVC) Plastic Pipe Fittings: ASTM D 2466, Schedule 40, socket-type.

G. Dielectric Fittings: Assembly or fitting with insulating material isolating joined dissimilar metals to prevent galvanic action and to stop corrosion. These devices are a

combination of copper alloy and ferrous metal; threaded- and solder-end types, matching piping system materials.

H. Dielectric Unions: Factory-fabricated, union assembly, designed for 250 psig minimum working pressure at 180 deg F. Include insulating material isolating dissimilar metals and ends with inside threads according to ASME B1.20.1.

I. Dielectric Flanges: Factory-fabricated, companion-flange assembly for 150 psig or 300 psig minimum pressure to suit system pressures.

J. Transition Fittings: Manufactured assembly or fitting, with pressure rating at least equal to that of system and with ends compatible to piping where fitting is to be installed.

2.04 JOINING MATERIALS

A. Solvent Cement: ASTM F 656 primer and ASTM D 2564 solvent cement in color other than orange.

B. Solder: ASTM B 32, Alloys Sn95 and E.

C. Gaskets and Fasteners for Metal and Metal-to-Plastic Flanged Joints: ASME B16.21, nonmetallic, asbestos-free, flat, 1/8-inch thickness gaskets and ASME B18.2.1, carbon steel bolts, nuts, and washers.

D. Gaskets for Plastic Flanged Joints: Materials recommended by plastic pipe and fittings manufacturer.

2.06 PRESSURE REGULATORS

A. Description: ASSE 1003, single-seated, direct-operated-type water pressure regulators, rated for initial working pressure of 150 psig minimum, with size, flow rate, and inlet and outlet pressures indicated. Include integral factory-installed or separate field-installed Y-pattern strainer that is compatible with unit for size and capacity.

1. 2 Inches and Smaller: Bronze body with threaded ends.
2. 2-1/2 Inches and Larger: Cast-iron body with flanged ends. Provide AWWA C550, interior protective epoxy coating, for regulators with a cast-iron body.
3. Interior Components: Corrosion-resistant materials.

2.07 VALVES

A. General: Valves are for general-duty and underground applications.

B. Nonrising Stem Gate Valves 3 Inches and Larger: AWWA C500, cast-iron double disc, bronze disc and seat rings or AWWA C509, resilient seated; bronze stem, cast-iron, or ductile-iron body and bonnet, stem nut, 200 psig working pressure; and ends that fit NPS dimension, PVC pipe. Include elastomeric gaskets.

C. Plastic Valves: Polyvinyl chloride (PVC) plastic, with 150 psig minimum pressure rating, ends compatible with piping where valve is to be installed, and stem nut.

D. Valve Boxes:

1. Cast-iron box with top section and cover with lettering "WATER," bottom section with base to fit over valve and barrel approximately 5 inches in diameter, and adjustable cast-iron extension of length required for depth of bury of valve.
2. Provide steel tee-handle shutoff rod with each valve box. Include tee-handle, shutoff rod with one pointed end, stem of length to operate valve, and end fitting valve operating nut.

E. Bronze, Nonrising Stem Gate Valves, 2 Inches (50 mm) and Smaller: MSS SP-80, Type 1, solid wedge; nonrising, copper-silicon-alloy stem; Class 125, body and screw bonnet of ASTM B 62 cast bronze, with threaded or solder-joint ends. Include polytetrafluoroethylene (PTFE)-impregnated packing, brass packing gland, and malleable-iron handwheel.

F. Zone Control Valves: Zone control valves shall be globe pattern, diaphragm type with 24 volt electric solenoid operator. Valve bodies shall be of a noncorrosive material compatible with the piping system, trim shall be stainless steel.

G. Quick Coupling Valves: Quick coupling valves shall be provided to allow hose connections for special uses. Each quick coupling valve shall be housed in a valve box and shall be a two-piece unit of heavy duty brass construction with stainless steel valve spring and trim, rubber cover, and a swivel hose ell accessory.

2.08 CONTROL VALVES

A. Description: Manufacturer's standard control valves for circuits, of type and size indicated, and as follows:
   1. Automatic Control Valves: Diaphragm-type, normally closed, with manual flow adjustment, and operated by 24-volt-a.c. solenoid.
   2. Automatic Drain Valves: Designed to open for drainage when line pressure drops below 3 psig.

B. Control Valve Boxes:
   1. Polyethylene (PE), acrylonitrile-butadiene-styrene (ABS), fiberglass, polymer concrete, or precast concrete box and cover. Size as required for application.
   2. Drainage Backfill: Cleaned gravel or crushed stone, graded from 3 inches maximum to 3/4 inch minimum.

2.09 SLEEVES

A. All distribution piping routed under walks and drives, and all other paved areas shall be in ductile iron pipe sleeves conforming to USA Standard A21.51.

2.10 SPRINKLERS

A. Fixed spray, pressure compensating, pop-up sprinklers of noncorrosive material with stainless steel spring as manufactured by:
   1. Toro Company, 640 Series.

2.12 LOW VOLTAGE CONTROL WIRING

A. UL 493, solid copper conductor, insulated cable, suitable for direct burial.
   1. Feeder Circuit Cables: Type UF, No. 12 AWG minimum, between building and controllers.
   2. Low-Voltage, Branch Circuit Cables: Type UF, No. 14 AWG minimum, between controllers and automatic control valves. Jacket color is other than feeder-circuit-cable jacket color. Furnish cables with jackets of different colors for multiple cable installation in same trench.
   3. Splicing Materials: Pressure-sensitive thermoplastic tape and other materials required to make specified connections.

2.14 WATER HAMMER ARRESTERS

A. Water Hammer Arresters: ASME A112.26.1M, ASSE 1010, or PDI WH-201, bellows or piston type with pressurized cushioning chamber. Sizes are based on water-supply fixture units, ASME A112.26.1M sizes "A" through "F" and PDI WH-201 sizes "A" through "F."

2.15 PRESSURE GAGES

A. Pressure Gages: ASME B40.1, 4-1/2-inch (115mm) diameter dial, with dial range of 2 times system operating pressure and bottom outlet.

2.16 CONCRETE BASES

A. Concrete: Portland cement mix, 3500 psi.
   1. Cement: ASTM C 150, Type I.
   2. Fine Aggregate: ASTM C 33, sand.
   3. Coarse Aggregate: ASTM C 33, crushed gravel.
   4. Water: Potable.

B. Reinforcement: Steel conforming to the following:
   1. Fabric: ASTM A 185, welded wire fabric, plain.
   2. Reinforcement Bars: ASTM A 615, Grade 60, deformed.

2.17 IDENTIFICATION

A. Arrange for detectable warning tapes made of solid blue film with metallic core and continuously printed black-letter caption "CAUTION--WATER LINE BURIED BELOW."

PART 3 - EXECUTION

3.01 GENERAL

A. The Contractor shall be responsible for full and complete coverage of all irrigated areas and shall make any necessary minor adjustments at no additional cost to the Owner.

B. Install all equipment, valving, and devices in strict accordance with manufacturer's recommendations.
C. Install all systems and equipment true and plumb with all building components.
D. Coordinate sequence of work and installation with all trades and contractors.
E. Replace all damaged work with new as acceptable to the Owner.
F. Water piping shall pitch slightly toward the drain valves.
G. Make allowance throughout for expansion and contraction of piping.
H. No water pipe shall be less than 1/2 inch.
I. All water lines shall be valved as shown on the drawings.

3.02 INSTALLATION OF PIPE AND EQUIPMENT

A. Install sprinkler system after site grading has been completed.
B. Trenching:
   1. Hand trench around roots to pipe grade when roots of 2 inches diameter or greater are encountered. Make width of trench 4 inches minimum or 1-1/2 times diameter of pipe, whichever is wider. Backfill and hand tamp over excavation. When rock is encountered, excavate 4 inches deeper and backfill with silty sand or well-grade sand to pipe grade. Keep trenches free of obstructions and debris that would damage pipe. Do not mix subsoil with topsoil. Bore under existing concrete walks, drives and other obstacles at depth conforming to bottom of adjacent trenches. Install pipe sleeve, two pipe diameters larger than sprinkler pipe, to fill bore.
   2. Trenches shall be made wide enough to allow a minimum of 6 inches between parallel pipe lines. Trenches for pipe lines shall be made of sufficient depths to provide the minimum cover from finish grade as follows:
      a. 12 inches minimum cover over main lines.
      b. 10 inches minimum cover over lateral lines to heads.
   3. Maintain all warning signs, shoring barricades, flares, and red lanterns as required by the City of Evanston.
C. Pipe Line Assembly:
   1. Plastic pipe and fittings shall be solvent welded using solvents and methods as recommended by manufacturer of the pipe, except where screwed connections are required. Pipe and fittings shall be thoroughly cleaned of dirt, dust, and moisture before applying solvent with a nonsynthetic bristle brush.
   2. Pipe may be assembled and welded on the surface. Snake pipe from side to side of trench bottom to allow for expansion and contraction.
   3. Make all connections between plastic pipe and metal valves or steel pipe with threaded fittings using plastic male adapters.
   4. Maintain minimum slope of 6 inches per 100 feet down in direction of drain valves.
D. Sprinkler Heads: Install all sprinklers on swing joint risers consistent with industry standards.
E. Valves:
   1. Manual Valves: Install in a valve box extending from grade to below valve body, with a minimum of 4 inches cover measured from finish grade to top of valve stem.
   2. Automatic Valves: Plumb valve in a valve box extending from grade to below valve body, with minimum of 4-inch cover measured from grade to top of valve. Install automatic valves beside sprinkler heads with a valve box.
   3. Drain Valves: Entire system shall be manually or automatically drainable. Equip low point of each underground line with drain valve draining into an excavation containing gravel. Cover gravel with building paper. Backfill with excavated material and 6 inches of topsoil.
F. Control Wire and Conduit:
   1. Bury wires beside pipe in same trench. Provide conduit where wires run under paving. Wires shall be number tagged at key locations along main to facilitate

service. Provide one control circuit for each zone and a circuit to control sprinkler system.

2. Provide a 12-inch loop of wire at each valve where controls are connected.
3. Splices: Make electrical splices waterproof.

3.03 FLUSHING AND TESTING:

A. After piping, risers, and valves are in place and connected, but prior to installation of sprinkler heads, quick coupler assemblies and valves, flush piping system under a full head of water. Maintain flushing for 3 minutes.

B. Cap or plug all openings as soon as lines have been installed to prevent the entrance of materials that would obstruct the pipe. Leave in place until removal is necessary for completion of installation.

C. Upon completion of the testing, the Contractor shall complete assembly and adjust sprinkler heads for proper distribution.

D. Hydrostatic Test:

1. Duration: During pressure test, maintain a hydrostatic pressure of 150 psi without pumping for a period of one hour with an allowable pressure drop of 5 psi before backfilling system.
2. Leaks: Correct any leaks. Make necessary corrections to stop leakage.
3. Retest system twice until pressure can be maintained for duration of test.

E. Operation Test:

1. At conclusion of pressure test, install sprinkler heads, quick coupling assemblies, and hose valves, and test entire system for operation under normal operating pressure.
2. Acceptance: Operation test is acceptable if system operates through at least one complete cycle for areas to be sprinkled.

F. Controller Charts: After as-built drawings are approved by the Owner, prepare controller charts. Provide three (3) charts for each controller supplied. Indicated in chart area controlled by automatic controller. The chart is a reduced drawing of actual as-built system that will fit the maximum dimensions inside controller housing. Use black line print for chart and a different pastel or transparent color to indicate each station area of coverage. After chart is completed and approved for final acceptance, seal one chart between two 20-mil pieces of clear plastic and secure to the inside of the controller cabinet, provide one copy for the Owner's records and one copy to the Engineer.

3.04 ADJUSTMENTS

A. After grading, seeding, and rolling of planted areas, adjust sprinkler heads flush with finished grade. Make adjustments by providing new nipples of proper length or by use of heads having an approved device, integral with head, which will permit adjustment in height of head without changing piping.

B. The Contractor shall provide the Owner with assistance in varying the irrigation schedules for the differing requirements of new plantings throughout the first and second growing seasons.

3.05 IDENTIFICATION INSTALLATION

A. Install continuous plastic underground warning tape during back-filling of trench for underground irrigation system piping. Locate 6 to 8 inches below finished grade, directly over piping.

3.06 BACKFILL AND COMPACTING

A. After system is operating and required tests and inspections have been made, backfill excavations and trenches with clean median planting soil mix.

B. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to minimum 90 percent density.

C. Compact trenches in areas to be planted by thoroughly flooding the backfill. Jetting process may be used in those areas.

D. Dress off all areas to finish grades.

3.07 CLEANUP

A. Remove from the site all debris resulting from work of this section.

END OF SECTION 32 80 00

SECTION 32 91 13

SOIL PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes planting soils and layered soil assemblies specified by composition of the mixes.

B. Related Requirements:

1. Section 32 92 00 “Turf and Grasses.”

2. Section 32 93 00 "Plants" for trees, shrubs, ground covers, and other plants as well as border edgings and mow strips.

1.3 DEFINITIONS

A. AAPFCO: Association of American Plant Food Control Officials.

B. Backfill: The earth used to replace or the act of replacing earth in an excavation. This can be amended or unamended soil as indicated.

C. CEC: Cation exchange capacity.

D. Compost: The product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth.

E. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.

F. Imported Soil: Soil that is transported to Project site for use.

G. Layered Soil Assembly: A designed series of planting soils, layered on each other, that together produce an environment for plant growth.

H. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.

I. NAPT: North American Proficiency Testing Program. An SSSA program to assist soil-, plant-, and water-testing laboratories through interlaboratory sample exchanges and statistical evaluation of analytical data.

J. Organic Matter: The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."

K. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

L. RCRA Metals: Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.

M. SSSA: Soil Science Society of America.

N. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

O. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.

P. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.

Q. USCC: U.S. Composting Council.

1.4 REFERENCES

A. The following specifications and standards of the organizations and documents listed in this paragraph form a part of the Specification to the extent required by the references thereto. In the event that the requirements of the following referenced standards and specification conflict with this specification section the requirements of this specification shall prevail. In the event that the requirements of any of the following referenced standards and specifications conflict with each other the more stringent requirement shall prevail.

1. ASTM: American Society of Testing Materials cited section numbers.
2. U.S. Department of Agriculture, Natural Resources Conservation Service, 2003. National Soil Survey Handbook, title 430-VI. Available Online.
3. US Composting Council *www.compostingcouncil.org*
4. Methods *of Soil Analysis*, as published by the Soil Science Society of America (http://www.soils.org/).
5. Up by Roots: healthy soils and trees in the built environment. 2008. J. Urban. International Society of Arboriculture, Champaign, IL.

1.5 PRE-INSTALLATION MEETINGS

A. Pre-installation Meeting: Conduct meeting at Project Site. Confirm with Owner and Landscape Architect 14 days prior to conference. At a minimum review the following:
   1. Ensure required submittals have been provided with sufficient time for review prior to scheduling the Preinstallation Meeting.
   2. Review the detailed requirements for the work of this section and to review the drawings and specifications for this work
   3. Require attendance by all affected installers including but not limited to:

a. Contractor's superintendent.
b. Installer
c. Manufacturer/Fabricator Representative
d. Other affected Subcontractors
e. Architect/Engineer of Record
f. Owner Representative

4. Record minutes and distribute copies within 5 days after meeting to participants as well as Landscape Architect, Architect/Engineer of Record, Owner and those affected by decisions made.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Manufacturer’s written instructions for recommended maintenance practices.
2. Include recommendations for application and use.
3. Include test data substantiating that products comply with requirements.
4. Include sieve analyses for aggregate materials.
5. Material Certificates: For each type of imported soil and soil amendment and fertilizer before delivery to the site, according to the following:

a. Manufacturer's qualified testing agency's certified analysis of standard products.
b. Analysis of fertilizers, by a qualified testing agency, made according to AAPFCO methods for testing and labeling and according to AAPFCO's SUIP #25.
c. Analysis of nonstandard materials, by a qualified testing agency, made according to SSSA methods, where applicable.

B. Soil testing for Imported and Existing Topsoil, existing site soil to be modified as Planting Soil and Planting Soil Mixes and associated amendments.

1. Topsoil, existing site soil and Planting Soil Mix testing: Submit soil test analysis report for each sample of Topsoil, existing site soil and Planting Soil from an approved soil-testing laboratory and where indicated in Part 2.

C. Samples: For each bulk-supplied material, 1-quart (1-L) volume of each in sealed containers labeled with content, source, and date obtained. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of composition, color, and texture.

1. Submit samples a minimum of 4 weeks prior to the anticipated date of the start of soil installation.
2. Samples of all Soil and Soil amendments if required shall be submitted at the same time as the particle size and physical analysis of that material.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer, Fabricator, Manufacturer and Testing agency.

B. Preconstruction Test Reports: For preconstruction soil analyses specified in "Preconstruction Testing" Article.

C. Source quality-control test reports.

A. Field quality-control and special inspection reports.

B. Maintenance Instructions.

C. Warranty: Written manufacturer's warranty.

1.8 CLOSEOUT SUBMITTALS

A. Maintenance Data: From Installer including a recommended maintenance plan with procedures for inspection and care during a calendar year. Submit before start of required warranty and maintenance periods

1.9 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of Authorities Having Jurisdiction for all work included in this section.

B. Codes and Standards: Conform work to all applicable codes and standards.

C. Manufacturer Qualifications: Provide manufacturer qualifications as follows:

1. Submit a list of ten completed installations. For each installation provide: name and type of facility; its location; the date of installation; name and telephone number of contact at the facility familiar with the installation.
2. Submit qualifications of manufacturer.
3. Submit manufacturer's quality control program.
4. Submit example of Material Warranty and any other applicable warranties.

D. Installer Qualifications: The installer shall be a firm having at least 5 years of successful experience of a scope similar to that required for the Work, including the preparation, mixing and installation of custom planting. The installer of the work in Section: Planting, shall be the same firm installing the work in this section.

1. The bidders list for work under this section shall be approved by the Landscape Architect.
2. Installer Field Supervision: When any Planting Soil work is in progress, installer shall maintain, on site, an experienced full-time supervisor who can communicate in English with the Landscape Architect.
3. Installer's field supervisor shall have a minimum of five years of experience as a field supervisor installing soil, and shall be trained and proficient in the use of field surveying equipment to establish grades.
4. The installer's crew shall be experienced in the installation of Planting Soil, plantings, and irrigation (where applicable) and interpretation of planting plans, soil installation plans, and irrigation plans (where applicable).
5. Submit references of past projects, employee training certifications that support that the Contractors meets all of the above installer qualifications and applicable licensures.

E. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plant nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.

1. Multiple Laboratories: At Contractor's option, work may be divided among qualified testing laboratories specializing in physical testing, chemical testing, and fertility testing.

F. All delivered and installed Planting Soil shall conform to the approved sample color, texture and approved test analysis.

1. The Landscape Architect may request samples of the delivered or installed soil be tested for analysis to confirm the Planting Soil conforms to the approved material.
2. All testing shall be performed by the same soil lab that performed the original Planting Soil testing.
3. Testing results shall be within 10% plus or minus of the values measured in the approved Planting Soil Mixes.
4. Any Planting Soil that fails to meet the above criteria, if requested by the Landscape Architect, shall be removed and new soil installed.

G. Soil compaction testing: following installation or modification of soil, test soil compaction with a penetrometer.

1. Maintain at the site at all times a soil cone penetrometer with pressure dial and a soil moisture meter to check soil compaction and soil moisture.
2. Prior to testing the soil with the penetrometer check the soil moisture and penetrometer readings in the mockup soils. Penetrometer readings are impacted by soil moisture and excessively wet of dry soils will read significantly lower or higher than soils at optimum moisture.
3. The penetrometer readings shall be within 20% plus or minus of the readings in the approved mockup when at similar moisture levels.

1.10 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction soil analyses and analysis on related components.

1. Notify Landscape Architect seven days in advance of the dates and times when laboratory samples will be taken.

B. Preconstruction Soil Analyses: For each unamended soil type, perform testing on soil samples and furnish soil analysis and a written report containing soil-amendment and fertilizer recommendations by a qualified testing agency performing the testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles.

1. Have testing agency identify and label samples and test reports according to sample collection and labeling requirements.

1.11 SOIL-SAMPLING REQUIREMENTS

A. General: Extract soil samples according to requirements in this article.

B. Sample Collection and Labeling: Have samples taken and labeled by Contractor in presence of Landscape Architect or state-certified, -licensed, or -registered soil scientist under the direction of the testing agency.

1. Number and Location of Samples: Minimum of three representative soil samples from varied locations for each soil to be used or amended for landscaping purposes.
2. Procedures and Depth of Samples: According to USDA-NRCS's "Field Book for Describing and Sampling Soils."

3. Division of Samples: Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records.
4. Labeling: Label each sample with the date, location keyed to a site plan or other location system, visible soil condition, and sampling depth.

1.12 TESTING REQUIREMENTS

A. General: Perform tests on soil samples according to requirements in this article.

B. Physical Testing:

1. Soil Texture: Soil-particle, size-distribution analysis by one of the following methods according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods":

   a. Sieving Method: Report sand-gradation percentages for very coarse, coarse, medium, fine, and very fine sand; and fragment-gradation (gravel) percentages for fine, medium, and coarse fragments; according to USDA sand and fragment sizes.
   b. Hydrometer Method: Report percentages of sand, silt, and clay.

2. Total Porosity: Calculate using particle density and bulk density according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
3. Water Retention: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
4. Saturated Hydraulic Conductivity: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods"; at 85% compaction according to ASTM D 698 (Standard Proctor).

C. Chemical Testing:

1. CEC: Analysis by sodium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."
2. Clay Mineralogy: Analysis and estimated percentage of expandable clay minerals using CEC by ammonium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 1- Physical and Mineralogical Methods."

3. Metals Hazardous to Human Health: Test for presence and quantities of RCRA metals including aluminum, arsenic, barium, copper, cadmium, chromium, cobalt, lead, lithium, and vanadium. If RCRA metals are present, include recommendations for corrective action.

4. Phytotoxicity: Test for plant-available concentrations of phytotoxic minerals including aluminum, arsenic, barium, cadmium, chlorides, chromium, cobalt, copper, lead, lithium, mercury, nickel, selenium, silver, sodium, strontium, tin, titanium, vanadium, and zinc.

D. Fertility Testing: Soil-fertility analysis according to standard laboratory protocol of SSSA NAPT NCR-13, including the following:

1. Percentage of organic matter.
2. CEC, calcium percent of CEC, and magnesium percent of CEC.
3. Soil reaction (acidity/alkalinity pH value).
4. Buffered acidity or alkalinity.
5. Nitrogen ppm.
6. Phosphorous ppm.

7. Potassium ppm.
8. Manganese ppm.
9. Manganese-availability ppm.
10. Zinc ppm.
11. Zinc availability ppm.
12. Copper ppm.
13. Sodium ppm and sodium absorption ratio.
14. Soluble-salts ppm.
15. Presence and quantities of problem materials including salts and metals cited in the Standard protocol. If such problem materials are present, provide additional recommendations for corrective action.
16. Other deleterious materials, including their characteristics and content of each.

E. Organic-Matter Content: Analysis using loss-by-ignition method according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."

F. Recommendations: Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated to produce satisfactory planting soil suitable for healthy, viable plants indicated. Include, at a minimum, recommendations for nitrogen, phosphorous, and potassium fertilization, and for micronutrients.

1. Fertilizers and Soil Amendment Rates: State recommendations in weight per 1000 sq. ft. (100 sq. m) for 6-inch (150-mm)depth of soil.

2. Soil Reaction: State the recommended liming rates for raising pH or sulfur for lowering pH according to the buffered acidity or buffered alkalinity in weight per 1000 sq. ft. (100 sq. m) for 6-inch (150-mm)depth of soil.

1.13 DELIVERY, STORAGE, AND HANDLING

A. Deliver packaged products in an undamaged condition in original containers, displaying manufacturer's labels, along with instructions for handling, storing, unpacking, protecting, and installing.

B. Deliver and store materials in manufacturer's original containers, with seals unbroken and identification labels intact until time of use.

C. Deliver products to achieve the shortest duration of storage time as practicable.

D. Deliver all chemical products in original, unopened containers with original labels intact and legible, which state the guaranteed chemical analysis. Store all chemicals in weather protected enclosure.

E. Comply with manufacturer's written instructions for delivery, storage, and handling, and as required to prevent damage to products and work during construction.

F. Store products and materials in a neat and orderly manner. Maintain clear aisles and access to work areas. Protect stored products from theft and damage. Store products above ground in weathertight, ventilated packaging or enclosures.

G. Store materials under cover and protected from weather and contact with damp or wet surfaces. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

H. Store liquids in tightly closed containers protected from freezing.

I. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.

J. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk materials with appropriate certificates.

K. Weather: Do not mix, deliver, place or grade soils when frozen or with moisture above field capacity.

L. Protect soil and soil stockpiles, including the stockpiles at the soil blender's yard, from wind, rain and washing that can erode soil or separate fines and coarse material, and contamination by chemicals, dust and debris that may be detrimental to plants or soil drainage. Cover stockpiles with plastic sheeting or fabric at the end of each workday.

M. All manufactured packaged products and material shall be delivered to the site in unopened containers and stored in a dry enclosed space suitable for the material and meeting all environmental regulations. Biological additives shall be protected from extreme cold and heat. All products shall be freshly manufactured and dated for the year in which the products are to be used.

N. Deliver all chemical amendments in original, unopened containers with original labels intact and legible, which state the guaranteed chemical analysis. Store all chemicals in weather protected enclosure.

O. Bulk material: Coordinate delivery and storage with Landscape Architect and confine materials to neat piles in areas acceptable to Landscape Architect.

1.14 FIELD CONDITIONS

A. It is the responsibility of the Contractor to be aware of all surface and subsurface conditions, and to notify the Landscape Architect, in writing, of any circumstances that would negatively impact the health of plantings. Do not proceed with work until unsatisfactory conditions have been corrected.

1. Should subsurface drainage or soil conditions be encountered which would be detrimental to growth or survival of plant material, the Contractor shall notify the Landscape Architect in writing, stating the conditions and submit a proposal covering cost of corrections. If the Contractor fails to notify the Landscape Architect of such conditions, he/she shall remain responsible for plant material under the warrantee clause of the specifications.
2. This specification requires that all Planting Soil and Irrigation (if applicable) work be completed and accepted prior to the installation of any plants.

B. Field Measurements: Verify actual locations of all site elements and other construction contiguous with the work of this section prior to fabrication and/or installation.

C. The work shall not occur in the presence of standing water, mud, snow, or frozen subgrade conditions. Work shall not occur while precipitation is occurring or during excessive winds, or when temperatures are outside the limits specified in this specification. Work completed during these conditions will be rejected.

D. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

E. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by frost or freezing.

F. Hot-Weather Requirements: Comply with hot-weather construction requirements.

1.15 EXCAVATING AND GRADING AROUND UTILITIES

A. Contractor shall carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging.

B. Determine location of underground utilities and perform work in a manner that will avoid damage. Hand excavate as required. Maintain grade stakes set by others until parties concerned mutually agree upon removal.

C. Notification of the utility locate services is required for all Excavation and grading deeper than 12 inches: The Contractor is responsible for knowing the location and avoiding utilities that are not covered by the local utility locator service.

1.16 MAINTENANCE SERVICE

A. Contractor to provide standard industry maintenance on all scope items herein until Final Acceptance.

PART 2 - PRODUCTS

2.1 PLANTING SOILS GENERAL

A. General definition: Existing Soil or mixes of Existing Soil or Imported Topsoil, Coarse Sand, Expanded Shale, Pine Bark Fines, and/or Compost to make a new soil that meets the project goals for the indicated planting area. These will vary in Mix components and proportions as recommended by the Soils Consultant.

B. In the event that harvesting of Existing Soil does not produce sufficient material, provide topsoil, and soil mixes that are similar to the specified soil.

2.2 IMPORTED TOPSOIL

A. Imported Topsoil definition: Fertile, friable soil containing less than 5% total volume of the combination of debris including subsoil, refuse, roots larger than 1 inch diameter, heavy or stiff clay, stones larger than 2 inches in diameter, noxious seeds, sticks, brush, litter, or any

substances deleterious to plant growth. The percent (%) of the above objects shall be controlled by source selection not by screening the soil.

B. Topsoil shall be suitable for the germination of seeds and the support of vegetative growth. Imported Topsoil shall not contain weed seeds in quantities that cause noticeable weed infestations in the final planting beds. Imported Topsoil shall meet the following physical and chemical criteria:

1. Soil texture: USDA loam, sandy clay loam or sandy loam with clay content between 15 and 40%. And a combined clay/silt content of no more than 75%.
2. pH value shall be between 5.5 and 7.5.
3. Percent organic matter (OM): 2.0-8.0%, by dry weight.
4. Soluble salt level: Less than 2 mmho/cm.
5. Soil chemistry suitable for growing the plants specified.
6. Imported Topsoil shall not contain quack-grass rhizomes, Agropyron Repens, and the nut-like tubers of nutgrass, *Cyperus Esculentus,* and all other primary noxious weeds seeds in quantities that cause noticeable weed infestations in the final planting beds.

C. Imported Topsoil shall be a harvested soil from fields or development sites. The organic content and particle size distribution shall be the result of natural soil formation. Manufactured soils where Coarse Sand, Composted organic material or chemical additives has been added to the soil to meet the requirements of this specification section shall not be acceptable. Retained soil peds shall be the same color on the inside as is visible on the outside.

2.3 COMPOST

A. Compost: Organic blended material, composted for a minimum of 9 months and at temperatures sufficient to break down all woody fibers, seeds and leaf structures, free of toxic materials at levels that are harmful to plants or humans. Source material shall be yard waste trimmings blended with other plant or manure based material designed to produce Compost high in fungal material.

1. Compost shall be commercially prepared Compost and meet US Compost Council STA/TMECC criteria.
2. Compost shall comply with the following parameters:

a. pH: 5.5 - 8.0.
b. Soil salt (electrical conductivity): maximum 5 dS/m (mmhos/cm).
c. Moisture content %, wet weight basis: 30 – 60.
d. Particle size, dry weight basis: 98% pass through 3/4 inch screen or smear.
e. Stability carbon dioxide evolution rate: mg CO_2-C/ g OM/ day < 2.
f. Solvita maturity test: > 6.
g. Physical contaminants (inerts), %, dry weight basis: <1%.
h. Chemical contaminants, mg/kg (ppm): meet or exceed US EPA Class A standard, 40CFR § 503.13, Tables 1 and 3 levels.
i. Biological contaminants select pathogens fecal coliform bacteria, or salmonella, meet or exceed US EPA Class A standard, 40 CFR § 503.32(a) level requirements.

2.4 FERTILIZER AMENDMENTS

A. Fertilizer for planting shall be organic, slow release fertilizer with a salt index of 25 or less. The majority of the nutrient elements are from organic sources. Final fertilizer selections shall be based on the soil testing and recommendations of the Soils Consultant.

2.5 LIME

A. ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:

1. Class: Class T, with a minimum 99 percent passing through No. 8 (2.36-mm) sieve and a minimum 75 percent passing through No. 60 (0.25-mm) sieve.
2. Provide lime in form of dolomitic limestone.

2.6 SOIL MOISTURE

A. Volumetric soil moisture level, in both the Planting Soil and the root balls of all plants, prior to, during and after planting shall be above permanent wilt point and below field capacity for each type of soil texture within the following ranges.

Soil texture	Permanent wilting point	Field capacity
Sand, Loamy sand, Sandy loam	5-8%	12-18%
Loam, Sandy clay, Sandy clay loam	14-25%	27-36%
Clay loam, Silt loam	11-22%	31-36%
Silty clay, Silty clay loam	22-27%	38-41%

1. Note the above chart is not applicable to soils with Light Weight Aggregate. Ranges of appropriate soil moisture for these soils shall be developed once the soils are in place and can be tested with the moisture meter.
2. Contractor to test for soil moisture content prior to installation.

PART 3 - EXECUTION

3.1 GENERAL

A. Place planting soil and fertilizers according to requirements Section.

B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.

C. Proceed with placement only after unsatisfactory conditions have been corrected.

3.2 EXAMINATION

A. Prior to installation of Planting Soil, examine site to confirm that existing conditions are satisfactory for the work of this section to proceed.

1. Confirm that the subgrade is at the proper elevation and compacted as required. Subgrade elevations shall slope toward the under drain lines as shown on the drawings.
2. Confirm that surface all areas of the to be filled with Planting Soil are free of construction debris, refuse, compressible or biodegradable materials, stones greater than 2 inches diameter, soil crusting films of silt or clay that reduces or stops drainage from the Planting Soil into the subsoil; and/or standing water. Remove unsuitable material from the site.
3. Confirm that no adverse drainage conditions are present.
4. Confirm that no conditions are present which are detrimental to plant growth.
5. Confirm that utility work has been completed per the drawings.
6. Confirm that irrigation work, which is shown to be installed below prepared soil levels, has been completed.

B. If unsatisfactory conditions are encountered, notify the Landscape Architect immediately to determine corrective action before proceeding.

3.3 COORDINATION WITH PROJECT WORK

A. The Contractor is responsible for investigating, and being aware of, the work requirements of their sub-contractors and other contractors. The Contractor shall coordinate with all other work that may impact the completion of the work herein.

B. The Contractor shall coordinate with all other work that may impact the completion of the work.

C. Prior to the start of work, prepare a detailed schedule of the work for coordination with other trades.

D. Coordinate the relocation of any irrigation lines, heads or the conduits of other utility lines that are in conflict with tree locations. Root balls shall not be altered to fit around lines. Notify the Landscape Architect of any conflicts encountered.

3.4 PREPARATION OF UNAMENDED, ON-SITE SOIL BEFORE AMENDING

A. Excavation: Excavate soil from designated area(s) and stockpile until amended. Maintain all required angles of repose of the adjacent materials as shown on the drawings or as required by this specification. Do not over excavate compacted subgrades of adjacent pavement or structures. Maintain a supporting 1:1 side slope of compacted subgrade material along the edges of all paving and structures where the bottom of the paving or structure is above the bottom elevation of the excavated planting area.

B. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.

C. Unsuitable Materials: Clean soil to contain a maximum of 8 percent by dry weight of stones, roots, plants, sod, clay lumps, and pockets of coarse sand.

D. Screening: Pass unamended soil through a 2-inch (50-mm) sieve to remove large materials.

3.5 PLANTING SOIL AND PLANTING SOIL MIX INSTALLATION

A. Prior to installing any Planting Soil from stockpiles or Planting Soil Mixes blended off site, the Landscape Architect shall approve the condition of the subgrade and the previously installed subgrade preparation and the installation of subsurface drainage.

B. Phase work such that equipment to deliver or grade soil does not have to operate over previously installed Planting Soil. Work in rows of lifts the width of the extension of the bucket on the loader. Install all lifts in one row before proceeding to the next. Work out from the furthest part of each bed from the soil delivery point to the edge of the each bed area.

C. Where possible place large trees first and fill Planting Soil around the root ball.

D. Installing soil with soil or mulch blowers or soil slingers shall not be permitted due to the over mixing and soil ped breakdown cause by this type of equipment.

E. Where travel over installed soil is unavoidable, limit paths of traffic to reduce the impact of compaction in Planting Soil. Each time equipment passes over the installed soil it shall reverse out of the area along the same path with the teeth of the bucket dropped to scarify the soil. Comply with the paragraph “Compaction Reduction” (section 3.9) in the event that soil becomes over compacted.

F. The depths and grades shown on the drawings are the final grades after settlement and shrinkage of the organic material. The Contractor shall install the Planting Soil at a higher level to anticipate this reduction of Planting Soil volume. A minimum settlement of approximately 10 - 15% of the soil depth is expected. All grade increases are assumed to be as measured prior to addition of surface Compost till layer, mulch, or sod.

3.6 BLENDING PLANTING SOIL IN PLACE

A. General: Mix amendments with in-place, unamended soil to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.

B. Preparation: Till unamended, existing soil in planting areas to a minimum depth of 6 inches (150 mm). Remove stones larger than 2-inch (50-mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

C. Mixing: Apply soil amendments, except compost, and fertilizer, if required, evenly on surface, and thoroughly blend them into full depth of unamended, in-place soil to produce planting soil.

1. Mix lime and sulfur with dry soil before mixing fertilizer.
2. Mix fertilizer with planting soil no more than seven days before planting.
3. Blended soil to be per the Soil Consultant recommendations.

D. Compaction: Compact blended planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D 698 except where a different compaction value is indicated on Drawings.

E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.7 APPLYING COMPOST TO SURFACE OF PLANTING SOIL

A. Application: Apply compost component of planting-soil mix to surface of in-place planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet. After Planting Soil Mixes are installed in planting bed areas noted on the drawing and just prior to the installation of shrub or groundcover plantings, spread 2 - 3 inches of Compost over the beds and roto till into the top 4 - 6 inches of the Planting Soil.

B. Finish Grading: Grade surface to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.8 INSTALLATION OF FERTILIZER AMENDMENTS

A. Following the installation of each soil and prior to fine grading and installation of the Compost till layer, apply fertilizer additives as directed by the Soils Consultant, and appropriate to the soil and specific plants to be installed.

B. Types, application rates and methods of application shall be approved by the Soils Consultant prior to any applications.

3.9 COMPACTION REQUIREMENTS FOR INSTALLED OR MODIFIED PLANTING SOIL

A. Compact installed Planting Soil to the compaction rates indicated and using the methods approved for the soil mockup. Compact each soil lift as the soil is installed.

B. Existing soil that is modified by tilling, ripping or fracturing shall have a density to the depth of the modification, after completion of the loosening, such that the penetrometer reads approximately 75 to 250 psi at soil moisture approximately the mid-point between wilting point and field capacity. This will be approximately between 75 and 82% of maximum dry density standard proctor.

C. Installed Planting Soil Mix and re-spread existing soil shall have a soil density through the required depth of the installed layers of soil, such that the penetrometer reads approximately 75 to 250 psi at soil moisture approximately the mid-point between wilt point and field capacity. This will be approximately between 75 and 82% of maximum dry density standard proctor.

D. Planting Soil compaction shall be tested at each lift using a penetrometer calibrated to the mockup soil and its moisture level. The same penetrometer and moisture meter used for the testing of the mockup shall be used to test installed soil throughout the work.

E. Maintain moisture conditions within the Planting Soil during installation or modification to allow for satisfactory compaction. Suspend operations if the Planting Soil becomes wet. Apply water if the soil is overly dry.

F. Provide adequate equipment to achieve consistent and uniform compaction of the Planting Soils. Use the smallest equipment that can reasonably perform the task of spreading and compaction. Use the same equipment and methods of compaction used to construct the Planting Soil mockup.

G. Do not pass motorized equipment over previously installed and compacted soil except as authorized below.

1. Light weight equipment such as trenching machines or motorized wheel barrows are permitted to pass over finished soil work.
2. If work after the installation and compaction of soil compacts the soil to levels greater than the above requirements, follow the requirements of the paragraph "Over Compaction Reduction" below.

3.10 OVER COMPACTION REDUCTION

A. Any soil that becomes compacted to a density greater than the specified density shall be dug up and reinstalled. This requirement includes compaction caused by other subcontractors after the Planting Soil is installed and approved.

B. Surface rototilling shall not be considered adequate to reduce over compaction at levels 6 inches or greater below finished grade.

3.11 MOISTURE SENSORE LEVELS

A. Moisture Sensor Level: Moisture Sensor Level: The Contractor shall confirm the soil moisture levels with a moisture meter (Digital Soil Moisture Meter, DSMM500 by General Specialty Tools and Instruments, or approved equivalent). If moisture is found to be too low, the planting holes shall be filled with water and allowed to drain before starting any planting operations. If the moisture is too high, suspend planting operations until the soil moisture drains to below field capacity.

3.12 FINE GRADING

A. The Landscape Architect shall approve all rough grading prior to the installation of organic matter, fine grading, planting, and mulching.

B. Grade the finish surface of all planted areas to meet the grades shown on the drawings, allowing the finished grades to remain higher (10 – 15% of depth of soil modification) than the grades on the grading plan, as defined in paragraph Planting Soil Installation, to anticipate settlement over the first year.

C. Utilize hand equipment or small garden tractors with rakes or buckets with teeth for fine grading to keep surface rough without further compaction. Do not use the bottom of a loader bucket that will cause the finished grade the smooth and or slightly compress.

D. Provide for positive drainage from all areas toward the existing inlets, drainage structures and or the edges of planting beds. Adjust grades as directed to reflect actual constructed field conditions of paving, wall and inlet elevations. Notify the Landscape Architect in the event that conditions make it impossible to achieve positive drainage.

E. Provide smooth, rounded transitions between slopes of different gradients and direction. Modify the grade so that the finish grade before adding mulch and after settlement is one or two inches below all paving surfaces or as directed by the drawings.

F. Fill all dips and remove any bumps in the overall plane of the slope. The tolerance for dips and bumps in shrub and ground cover planting areas shall be a 2 inches deviation from the plane in 10 feet. The tolerance for dips and bumps in lawn areas shall be a 1 inch deviation from the plane in 10 feet.

3.13 GRADE AND ELEVATION CONTROL

A. Provide grade and elevation control during installation of Planting Soil. Utilize grade stakes, surveying equipment, and other means and methods to assure that grades and contours conform to the grades indicated on the plans.

3.14 INSTALLATION TOLERANCES

A. Final soil installation after planting should be within 1/2 inch of grades shown on the grading plan.

3.15 REPAIR AND REPLACEMENT

A. General: Repair or replace that is damaged by construction operations, in a manner approved by Landscape Architect.

3.16 PROTECTION

A. Protection Zone: Identify protection zones according to Section 015639 "Temporary Tree and Plant Protection."

B. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Vehicle traffic.
4. Foot traffic.
5. Erection of sheds or structures.
6. Impoundment of water.
7. Excavation or other digging unless otherwise indicated.

C. If planting soil or subgrade is overcompacted, disturbed, or contaminated by foreign or deleterious materials or liquids, remove the planting soil and contamination; Planting Soil shall be loosened or replaced at no expense to the Owner.

1. Till and restore grades to all soil that has been driven over or compacted during the installation of plants.
2. Where modified existing soil has become contaminated and needs to be replaced, provide imported soil that is of similar composition, depth and density as the soil that was removed.

3.17 CLEANING

A. The contractor should clean the job site and remove any excess materials. Coordinate with Owner for storage locations for any Attic Stock materials where applicable.

B. During installation, keep the site free of trash, pavements reasonably clean and work area in an orderly condition at the end of each day. Remove trash and debris in containers from the site no less than once a week.

1. Immediately clean up any spilled or tracked soil, fuel, oil, trash or debris deposited by the Contractor from all surfaces within the project or on public right of ways and neighboring property.

C. Once installation is complete, wash all soil from pavements and other structures. Ensure that mulch is confined to planting beds and that all tags and flagging tape are removed from the site. The Landscape Architect seals are to remain on the trees and removed at the end of the warranty period.

1. Make all repairs to grades, ruts, and damage to the work or other work at the site.
2. Remove and dispose of all excess Planting Soil, subsoil, mulch, plants, packaging, and other material brought to the site by the Contractor.

3.18 FINAL ACCEPTANCE / SOIL SETTLEMENT

A. At the end of the plant warrantee and maintenance period per Section 32 93 00 “Plants”, the Landscape Architect shall inspect the soil installation work and establish that all provisions of the contract are complete and the work is satisfactory.

1. Restore any soil settlement and or erosion areas to the grades shown on the drawings. When restoring soil grades remove and plants and mulch and add soil before restoring the planting. Do not add soil over the root balls of plants or on top of mulch.

B. Failure to pass inspection: If the work fails to pass final inspection, any subsequent inspections must be rescheduled as per above. The cost to the Owner for additional inspections will be charged to the Contractor at the prevailing hourly rate of the inspector.

END OF SECTION 32 91 13

SECTION 32 92 00

TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Seeding
2. Fertilizing
3. Erosion Control Materials

B. Related Requirements:

1. Section 329300 "Plants" for trees, shrubs, ground covers, and other plants as well as border edgings and mow strips.
2. Section 329113 “Soil Preparation” for planting soil.

1.3 DEFINITIONS

A. Finish Grade: Elevation of finished surface of planting soil.

B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.

C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 32 91 13 "Soil Preparation" and drawing designations for planting soils.

E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

F. Weeds: Includes Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

1.4 REFERENCE STANDARDS

A. ASTM C602 - Standard Specification for Agricultural Liming Materials; 2013a.

1.5 PREINSTALLATION MEETINGS

A. Pre-installation Meeting: Conduct meeting at Project Site. Confirm with Owner and Landscape Architect 14 days prior to conference. At a minimum review the following:

1. Ensure required submittals have been provided with sufficient time for review prior to scheduling the Preinstallation Meeting.
2. Review the detailed requirements for the work of this section and to review the drawings and specifications for this work
3. Require attendance by all affected installers including but not limited to:

    a. Contractor's superintendent.
    b. Installer
    c. Manufacturer
    d. Other affected Subcontractors
    e. Architect/Engineer of Record
    f. Owner Representative

4. Record minutes and distribute copies within 5 days after meeting to participants as well as Landscape Architect, Architect/Engineer of Record, Owner and those affected by decisions made.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer, Fabricator, Manufacturer and Testing agency.

B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

C. Product Certificates: For fertilizers, from manufacturer.

D. Warranty: Written Manufacturer’s warranty

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: Include maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.

1.8 QUALITY ASSURANCE

A. Comply with State and Federal laws with respect to inspection for plant diseases and insect infestation.

B. Manufacturer Qualifications: Provide manufacturer qualifications as follows:

1. Submit a list of ten completed installations. For each installation provide: name and type of facility; its location; the date of installation; name and telephone number of contact at the facility familiar with the installation.
2. Submit qualifications of manufacturer.
3. Submit manufacturer’s quality control program.
4. Submit example of Material Warranty and any other applicable warranties.

C. Investigate sources of supply and confirm they can supply materials in quantity, variety, and quality noted and specified before submitting bid.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Protect materials against weather-related damage or other injuries occurring during transit and job storage in such manner that their effectiveness will not be impaired.

B. Deliver fertilizer to site in unopened, original containers, each bearing name and address of manufacturer, name brand, or trademark, and manufacturer's guaranteed analysis. Do not use fertilizer which becomes caked or otherwise damaged. Do not expose fertilizer to weather prior to delivery on site and after delivery until used. Protect fertilizer and do not store in direct contact with ground.

C. Deliver products to achieve the shortest duration of storage time as practicable.

D. Protect and maintain during transit or storage on-site as necessary to ensure vigorous growth after placement.

E. Inform Landscape architect 24 hours in advance of laying of seed. Each shipment shall be accompanied by an invoice from vendor giving quantity and certifying that seed received meets requirements as contained in these specifications, together with analysis of seed. Provide copy of invoice to Architect/Engineer of Record upon delivery of seed.

F. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.

1.10 PROJECT CONDITIONS

A. Planting Season for Seed Installation: March 15 to June 15 OR August 15 to November 15.

1. Weather conditions within season shall govern actual planting periods.
2. Seasons may be extended upon approval by Landscape Architect, however, such time extensions shall not change Contractor's responsibility for establishing healthy appearing and vigorous growing turf.

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

1.11 MAINTENANCE SERVICE

A. Contractor to provide standard industry maintenance on all scope items herein until Final Acceptance.

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.

B. Seed Species:

1. Quality: State-certified seed of grass species as listed below for solar exposure.
2. Quality: Seed of grass species as listed below for solar exposure, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed:
3. Sun and Partial Shade: Proportioned by weight as follows:

    a. 50 percent Kentucky bluegrass (Poa pratensis).
    b. 30 percent chewings red fescue (Festuca rubra variety).
    c. 10 percent perennial ryegrass (Lolium perenne).
    d. 10 percent redtop (Agrostis alba).

4. Shade: Proportioned by weight as follows:

    a. 50 percent chewings red fescue (Festuca rubra variety).
    b. 35 percent rough bluegrass (Poa trivialis).
    c. 15 percent redtop (Agrostis alba).

C. Topsoil: Type indicated and as specified in Section 32 91 13 “Soil Preparation.”

D. Fertilizer: Prior To Seeding (6-24-24); recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, to the following proportions:

1. Nitrogen: 6 percent.

    a. One-quarter of nitrogen shall be in form of nitrates, one-quarter in form of ammonia salts, and one-half in form of organic nitrogen.

2. Phosphoric Acid: 24 percent.

    a. Available phosphoric acid shall be derived from super-phosphate having minimum guaranteed analysis of 20% available phosphate or bone meal.

3. Soluble Potash: 24 percent.

    a. Potash shall be in form of sulphate of potash.

4. Make up balance of fertilizer of nonharmful materials normally present in such product and free from dust, sticks, sand, stone or other harmful debris.

E. Fertilizer: After Seeding (18-5-9); recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, to the following proportions:

1. Nitrogen: 18 percent.
2. Phosphoric Acid: 5 percent.
3. Soluble Potash: 9 percent.

F. Limestone: ASTM C602, class T agricultural limestone containing a minimum 80% total carbonates, by weight. Limestone shall be graded within following limits: 99% passing Sieve Size No 8; 75 % passing Sieve Size No 60.

G. Aluminum Sulfate: Commercial grade, unadulterated and delivered in containers with material and manufacturer, names and weight of contents.

H. Water: Clean, fresh and free of substances or matter that could inhibit vigorous growth of grass. Existing water supply from hose bibs at the project building may be used for all planting operations. Provide hose and equipment necessary for proper watering of plant material.

2.2 MULCHES

A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

B. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.

C. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.

D. The use of plastic netting is prohibited.

2.3 EROSION-CONTROL MATERIALS

A. Erosion-Control Fiber Mesh: Biodegradable burlap or spun-coir mesh, a minimum of 0.92 lb/sq. yd. (0.5 kg/sq. m), with 50 to 65 percent open area. Include manufacturer's recommended steel wire staples, 6 inches (150 mm) long.

B. Erosion-Control Mats: Cellular, nonbiodegradable slope-stabilization mats designed to isolate and contain small areas of soil over steeply sloped surface, of 6-inch (150-mm) nominal mat thickness. Include manufacturer's recommended anchorage system for slope conditions.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify location of underground utilities with appropriate sources. Contact J.U.L.I.E. at least 48 hours before commencing with construction. Repair damaged utilities.

B. Verify that prepared soil base is ready to receive the work of this section. Do not begin site preparation until boulders, debris, and similar materials have been removed; depressions and ruts filled; and entire area has been shaped, trimmed and finished uniformly to lines, grades, and cross-sections shown on drawings.

C. Confirm that no adverse drainage conditions are present.

D. Proceed only after unsatisfactory conditions have been corrected. Commencement of work in this section will be an indication of the acceptance of sub-grade and the Contractor will be held responsible for the satisfactory execution and results of the finished work.

3.2 PREPARATION

A. Protect existing property and improvements within this site and adjacent property.

1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
2. Protect grade stakes set by others until directed to remove them.

B. Place topsoil to a depth of 6 inches beneath lawn areas. Compact each lift to the extent necessary to prevent settlement.

C. Finish Grading:

1. Provide smooth continual grades without dips and pockets where water may stand.
2. Correct surface irregularities produced by preceding operations or by any other cause.
3. Finish grades and earth mounds shall be approved by Landscape Architect prior to lawn construction.

D. Tilling:

1. Prepare areas to depth of approximately 3 in. by disking, harrowing or other approved means.
2. Areas shown on drawings which are too small to make these operations practicable shall receive special scarification prior to final tilling.
3. Continue tilling until soil condition is suitable for lawn construction.
4. After completion of tilling operations, clear surface of stones, stumps, roots, brush, wire, grade stakes, construction materials, and other objects which hinder planting, installation, and maintenance operations.

E. Keep adjacent paved areas clean.

3.3 FERTILIZING

A. Apply fertilizer per manufacturer instructions.

B. Apply after smooth raking of topsoil and prior to installation of seed.

C. Apply fertilizer with mechanical spreader no more than 48 hours before hydroseeding. Spread uniformly in two passes at right angles to each other.

D. Mix thoroughly into upper 2 inches of topsoil by disking, harrowing or other methods which produce similar results.

E. Lightly water to aid the dissipation of fertilizer.

3.4 PREPARATION FOR EROSION CONTROL MATERIALS

A. For erosion-control mats, install planting soil in two lifts, with second lift equal to thickness of erosion-control mats. Install erosion-control mat and fasten as recommended by material manufacturer.

B. Fill cells of erosion-control mat with planting soil and compact before planting.

C. For erosion-control blanket or mesh, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.

D. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.5 HYDROSEEDING

A. Hydroseeding: Mix specified seed, slow-release fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.

1. Mix slurry with fiber-mulch manufacturer's recommended tackifier.
2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1500-lb/acre (15.6-kg/92.9 sq. m) dry weight, and seed component is deposited at not less than the specified seed-sowing rate.
3. Spray-apply slurry uniformly to all areas to be seeded in a two-step process. Apply first slurry coat at a rate so that mulch component is deposited at not less than 500-lb/acre (5.2-kg/92.9 sq. m) dry weight, and seed component is deposited at not less than the specified seed-sowing rate. Apply slurry cover coat of fiber mulch (hydromulching) at a rate of 1000 lb/acre (10.4 kg/92.9 sq. m).

B. Protect seeded areas with slopes exceeding 1:4 with erosion-control blankets and 1:6 with erosion-control fiber mesh installed and stapled according to manufacturer's written instructions.

C. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre (42 kg/92.9 sq. m) to form a continuous blanket 1-1/2 inches (38 mm) in loose thickness over seeded areas. Spread by hand, blower, or other suitable equipment.

1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
2. Bond straw mulch by spraying with asphalt emulsion at a rate of 10 to 13 gal./1000 sq. ft. (38 to 49 L/92.9 sq. m). Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.

D. Protect seeded areas from hot, dry weather or drying winds by applying planting soil within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch (4.8 mm), and roll surface smooth.

3.6 TURF RENOVATION

A. Renovate existing turf where indicated.

B. Renovate turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.

1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
2. Install new planting soil as required.

C. Remove lawn and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.

D. Remove topsoil containing foreign materials, such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.

E. Mow, dethatch, core aerate, and rake existing turf.

F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.

G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.

H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches (150 mm).

I. Apply soil amendments and initial fertilizer required for establishing new turf and mix thoroughly into top 4 inches (100 mm) of existing soil. Install new planting soil to fill low spots and meet finish grades.

1. Soil Amendment(s): according to requirements of Section 329113 "Soil Preparation."
2. Initial Fertilizer: Slow-release fertilizer applied according to manufacturer's recommendations.

J. Apply seed and protect with straw mulch or sod as required for new turf.

K. Water newly planted areas and keep moist until new turf is established.

L. Turf establishment is responsibility of contractor. Establishment to a minimum of 90% coverage.

3.7 TURF MAINTENANCE

A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.

1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches (100 mm).

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
2. Water turf with fine spray at a minimum rate of 2 inch (50 mm) per week during establishment unless rainfall precipitation is adequate.

C. Mowing: The contractor shall cut grass starting when the grass becomes 3-inches high, and once a week thereafter, or as often as necessary to maintain the grass height at 3”, without removing more than 1/3 of the leaf blade at any cutting.

1. Included in the cutting of grass shall be the cutting and trimming required around trees, drainage structures, curbs and all areas that grass abuts, as required or directed by the engineer.
2. The contractor shall maintain a height of not less than 3 inches.
3. The contractor shall be responsible for at least three cuttings prior to final inspection.

D. Turf Postfertilization: Apply slow-release fertilizer after initial mowing and when grass is dry.

1. Use fertilizer that provides actual nitrogen of at least 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) to turf area.

3.8 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Landscape Architect:

1. Satisfactory Seeded Turf: 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. (0.92 sq. m) and bare spots not exceeding 5 by 5 inches (125 by 125 mm).

B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

3.9 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established. “NEWLY SEEDED” or other appropriate approved warning placards shall be posted until all work under the contract is completed and accepted.

D. Remove nondegradable erosion-control measures after grass establishment period.

3.10 MAINTENANCE

A. Water will be supplied by the Contractor. If water is not available on site, the contractor shall supply water from his own source at no extra expense to the Owner. The contractor shall furnish the hose and proper equipment for watering purposes.

B. Mow grass at regular intervals to maintain at a maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at any one mowing.

C. Neatly trim edges and hand clip where necessary.

D. Immediately remove clippings after mowing and trimming.

E. Water to prevent grass and soil from drying out.

F. Fertilize after completion of second mowing with 15 lbs of active ingredients per 1,000 sq ft. Use mechanical spreader to spread uniformly in two passes at right angles to each other.

G. Immediately replace lawn to areas that show deterioration or bare spots.

H. Protect seeded areas with warning signs during maintenance period.

I. Repair damage created by operations prior to Preliminary Acceptance.

J. Final Acceptance will be granted upon conformance with following:

1. Turf shall be reasonably free from weeds, diseases, or other visible imperfections.

2. Turf shall display uniform color, quality, and 95% coverage.
3. Performed three mowings.
4. Performed fertilizing operation after mowing.

END OF SECTION 32 92 00

SECTION 32 92 19

NATIVE GRASSES AND FORBS

PART 1 - GENERAL

1.01 SUMMARY

A. Work shall include all labor, materials, and equipment necessary to complete the final seed bed preparation to the existing soil in-place as shown on the drawings and the installation of various seed mixes specified herein, including but not necessarily limited to the following:

B. Section Includes:

1. Native prairie grass and forb seeding
2. Maintenance

1.02 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

B. Base Mix: Homogenously blended mix of the specified topsoil and the specified sand which is then used for mixing with the specified organic amendment to create various Planting Mixes.

C. Compost: An organic material that has been aerobically composted and stabilized from feedstocks such as green waste (yard debris) or other suitable organic materials.

D. Finish Grade: Elevation of finished surface of planting soil.

E. Growing Season: Calculated by the average number of days between the last frost in spring and the first severe frost in autumn. Ohio: End of April through mid Oct. = +/- 170 days.

F. Manufactured Planting Soil Mix: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce a planting soil mix.

G. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

H. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. Soil preparations vary. See Sections 329100 through 329140 – Planting Prep and Soils for soil preparation and drawing designations for planting soils.

I. Pure Live Seed (PLS): The percentage of purity, germination and dormant seeds used to determine actual application rate of bulk material per acre.

J. Sand: a naturally occurring material that has been processed to remove coarse gravel, silt and clay and sized to meet the specifications.

K. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

L. Subsoil: All soil beneath the topsoil layer of the soil profile and typified by the lack of organic matter and soil organisms.

M. 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.

1.03 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site prior to beginning seedbed preparations. Construction Manager, Owner and Landscape Architect should be notified at least one week prior to the intended meeting date.

B. Determine prairie installation schedule and installation procedures that are seasonally appropriate. See “Scheduling” article below.

1.04 INFORMATIONAL SUBMITTALS

A. Qualification Data: For landscape Installer.

1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.

2. Qualification data for native seed installer: Proof of experience in successful prairie installations is required as a part of the bid submittal. This statement of contractor’s qualifications shall include project summaries and resumes of field installation personnel who will be working on the project.

3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.

4. Personnel Certifications: Installer's personnel assigned to the Work shall have certification in one of the following categories from the Professional Landcare Network:

a. Certified Landscape Technician - Exterior, with installation or maintenance.

B. Certification of Native Grass Seed: Documentation from seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, seed source ecoregion, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include proof of PLS testing and adjustment of seed weights to provide pure live seed specified and the year of production and date of packaging.

1. Certification of each seed mixture for plugs. Include identification of source and name and telephone number of supplier.

C. Planting Schedule: Indicating anticipated planting dates.

D. Product Certificates: For fertilizers, from manufacturer.

1.05 CLOSEOUT SUBMITTALS

A. Maintenance Instructions: Recommended procedures to be undertaken by Owner for maintenance of prairie installation during a calendar year, for a total of 3 years after planting. Submit before expiration of required contractor maintenance period.

B. Warranty period site visit record: If the client assumes maintenance responsibilities during the warranty period per the specifications, the Contractor is to submit a written record to the Landscape Architect of his/her observations visits, citing any problems, potential problems, and any recommended corrective actions needed by the client. Refer to Part 3 for Maintenance responsibilities.

C. As-built planting drawings.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful prairie and meadow grass establishment.

1. Professional Membership: Installer shall be a member in good standing of either the National Association of Landscape Professionals, or the American Nursery and Landscape Association.

2. Specialized Installer Experience: Min. 5 years' experience actively and directly managing, developing, and installing native prairie and meadow plant installation areas. Contractor/Subcontractor must be able to list or show five (5) projects where native prairie and/or meadow areas were developed, installed, or restored by the Contractor.
    a. Installer's Field Supervision: The installer shall provide an on-site supervisor experienced in native planting.
3. Personnel Certifications: Installer's field supervisor shall have certification in one of the following categories from the National Association of Landscape Professionals:
    a. Landscape Industry Certified Technician - Exterior.
    b. Landscape Industry Certified Lawn Care Manager.
    c. Landscape Industry Certified Lawn Care Technician.
4. Pesticide Applicator: State licensed, commercial.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways, and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk materials with appropriate certificates.

1.08 SCHEDULING

A. Planting Restrictions: Plant during one of the following periods. Methods of installation will vary according to the time of year. Coordinate schedule with project manager.

1. Winter Seeding is preferred (November 15 through February 15): Seed must be protected from displacement due to water and wind erosion.
2. Spring Seeding (April 1 through June 15): Seeding during this period is allowable but germination of a portion of the seed may not occur until the following season due to lack of cold stratification to break seed dormancy. If spring seeding occurs, the contractor shall provide one additional calendar year of maintenance at no additional cost to the Owner.

1.09 FIELD CONDITIONS

A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

B. Work notification: Notify the Landscape Architect at least seven working days before installation of lawn materials.

C. Restrict traffic from grass areas until grass is established. Erect temporary signs and barriers as required.

D. Provide necessary hose and watering equipment as required to maintain sufficient ground moisture during cover crop germination and establishment (approx. 6-8 weeks).

1.10 WARRANTY

A. Warranty Period: Warrant that grasses shall be in a healthy and flourishing condition of active growth at the end of the growing season after the date of Final Acceptance.

B. Conditions: Established turf that is free of dead or dying patches and shows vigorous growth of foliage of normal density, size, and color.

C. Delays: Delays in completion of planting operations which extend the planting and/or acceptance of Substantial Completion into the next planting season shall extend the Warranty period accordingly.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS

A. The Contractor shall provide and install the seeds and plants specified, in quantities and/or at the rate specified and mixed in the proportions specified. Seeds shall be free of species not included in the specifications. All plant materials, shipments and deliveries shall comply with federal, state, and local requirements governing the inspection, shipping, selling, and handling of plant stock. Plant materials shall be inspected, as may be required, for injurious insects, plant diseases and plant pests with inspection certificates, or copies, accompanying each shipment and/or delivery. The name and location of the source of plant materials shall be included with plant labels.

B. Installation of Seeds: The Contractor shall install seed during the fall, as specified by the Owner's Representative and as shown in the drawings. The location of specified seed matrices may be adjusted in the field by the Owner's Representative. All areas will be seeded with a broadcast seeder at the rates specified. Sow seed with approved sowing equipment at the rate (pounds per acre) shown on the drawings or specifications. Sow 1/2 the seed in one direction and sow the remainder at right angles to the first sowing. When seeding by hand or broadcast seeder, cover seed uniformly to a maximum depth of 0-1/4 inch and cover with specified jute matting where indicated on the drawings.

2.02 NATIVE GRASS SEED REQUIREMENTS

A. General Requirements: All seeds shall be true to botanical name and be of wild ecotype; no plant hybrids or cultivars shall be accepted.

1. Owner's Representative must approve substitutions in advance. Substitutions must meet the following requirements:

    a. Local genotype seed shall be used whenever possible due to its adaptation to local soil and climate. Native seed shall be obtained from sources within the same EPA Level III Ecoregion as the project site. If the desired species are not available from the same ecoregion, seek materials from an adjacent region. Provide documentation.

    b. Substituted species shall not make up more than 5% by weight of any matrix; and substituted species shall not lower application rates below those indicated.

2. Within thirty days after the Contract is executed, a written description of the seed providing the percentage by weight for each species shall be submitted to Owner's Representative for approval. The description shall also include the name and location of the seed supplier; origin of each species or lot; and a statement of the purity and germination of each species. This information shall also be included on all seed package labels.

3. Seed amounts shall be specified as PLS (pure live seed). Actual amounts used on the project will vary with the actual percent of PLS of the seed lot. Seed supplied to the site shall have documentation from seed vendor for each seed mixture stating the botanical and common name, seed source ecoregion, percentage by weight of each species and proof of PLS testing and adjustment of the seed weights to provide the amount of pure live seed

specified.

4. Seeds shall be packed and handled in an appropriate manner to provide protection against damage. Seed shall be appropriately stored to preserve viability and at a temperature less than 65°F and at 25% humidity.
5. The Owner's Representative reserves the right to inspect all seeds before they are mixed.
6. The Owner's Representative reserves the right to inspect and reject damaged or otherwise unacceptable seeds after delivery. The Contractor at its expense shall replace damaged or otherwise unacceptable seeds.
7. All native seed shall be refrigerated at 40 degrees Fahrenheit for at least 90 days prior to installation.

B. Forbs Requirements: Seed mixes shall be mixed according to bulk weight. Seed mixes shall be approved by the Owner's Representative. Seed counts indicated per acre mean the total of pure live seed (PLS). The contractor shall provide for testing of seed not supplied with purity and germination data at its expense by a testing facility approved by the Owner's Representative. The test date shall be within 9 months of the planting date.

C. All seed shall have its source of origin within the states of Ohio, Kentucky, Indiana, Illinois, Iowa, Wisconsin, Minnesota, Pennsylvania, or other approved local regional source.

D. Rates indicated are pure live seed only. All seed shall be de-fluffed to be free of all chaff, inert matter and weed seed. Coverage over the seedbed shall be a minimum of 40 seeds per square foot of seeded area. The Owners Representative shall be notified of the date of the scheduled seeding to inspect and verify compliance with coverage requirements.

E. Seed Carrier: Inert material, sharp clean sand, or perlite.

F. Cover Crop: All native seed mixes shall be applied with annual rye and seed oats as a cover crop. Under no circumstances shall the site be stabilized with winter rye, grain rye, or winter wheat. These plants produce toxins that inhibit prairie seed germination.

1. Custom seed mixes as described on plans with 30 lbs. per acre of a cover crop:
   a. Jan 1 – Aug. 1: Grain Oats
   b. Aug. 1 – Jan. 1: Grain Rye

2.03 NATIVE GRASS SEED SOURCES

A. Certified Seed: All native seed must be of wild ecotype as provided by an approved local source. Any requests for an approved equal shall be submitted for approval at or before the pre-bid meeting. Provide seed from one of the following companies:

1. Basis of Design – Supplier:

   Pizzo Native Plant Nursery
   10729 Pine Road
   Leland, IL 60531
   (815) 981-8000

   a. Dry-bottom Detention Basin Mix: 30 lbs. / acre.
   b. Low Profile Prairie Mix: 24.4 lbs. / acre

2.04 FERTILIZERS

A. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.05 MULCHES

A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

B. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.

1. Hydroseeding native grasses is prohibited.

2. Cover crop may be hydroseeded with mulch.

C. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.

D. Asphalt Emulsion: ASTM D977, Grade SS-1; nontoxic and free of plant-growth or germination inhibitors.

2.06 ACCESSORIES

A. “Mitigation Do Not Disturb” Signs: 6” by 18” aluminum signs mounted at 5’ above finish grade on square 12-gauge galvanized steel sign posts.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.

B. Verify that the finish grade compaction has been measured and corrected and that the seedbed is sufficiently firm. If walking compacts soil over ½ inch, the site shall be culti-packed. See Section 31 22 19 - Finish Grading for bed preparation.

C. Hydrology shall be established prior to installation. Verify that a stable water level has been established in the wetland.

D. Verify that the surrounding uplands have been stabilized with the specified permanent seed mix and erosion material.

E. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.

F. Uniformly moisten excessively dry soil that is not workable, or which is dusty.

G. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.

2. Protect grade stakes set by others until directed to remove them.

B. Install 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.

3.03 NATIVE GRASS SEEDBED PREPARATION

A. The seedbed for native grasses and forbs must be weed-free to the greatest extent possible at the time of installation. To minimize competition from annual and perennial weeds, measures not normally employed for turfgrass establishment shall be employed. Seedbed preparation for native grass plantings shall include the following:

1. Preparation for Vegetated Sites: Four weeks (30 days) prior to installation, existing grass and weeds shall be weeded manually with root systems removed.
2. Preparation for Graded Sites: It is extremely important to avoid soil compaction as much as possible. Construction access shall be routed around all planting areas and repeat passes over the same area shall be limited during grading, topsoil application and decompaction work. Equipment having low unit pressure ground contact shall be utilized whenever possible.
    a. Weed Elimination – Topsoil or planting mix shall be inspected to ensure soil substrate is free of weed seeds and seedlings.
    b. Prior to planting, the entire seedbed for native grass and forb establishment shall be tilled to a depth of not less than 3” expose weed seeds and eliminate vegetative thatch.
    c. Upon completion of tilling operation, fine grade the seeding area to a loose and uniform surface. Remove all stones and debris larger than 2” in diameter.
    d. Allow weeds to germinate and grow, when weeds are 2-3” tall, manual weed to remove all vegetation and root growth.
    e. 14 days following the last wedding, shallow till to 1” depth. DO NOT TILL DEEPER THAN 1”- tilling deeper will introduce more weed seeds into the seedbed. Fine grade to eliminate all surface irregularities and furrows and to create a smooth seedbed. Seed immediately- see “APPLICATION” below.
3. Roll or culti-pack soils before sowing, if sowing on a newly graded soil.

B. Refer to soil specifications specific to native seeding areas and Section 31 19 22 – Final Grading to confirm soil amendment, preparation, grading and compaction requirements.

1. Final responsibilities and acceptable tolerances of compaction, grade, and preparation of the seed beds within the designated “Native” seeding areas to be determined at the preconstruction meeting.

3.04 APPLICATION OF FERTILIZER

A. Fertilizers and conditioners shall be applied at the following rates:

1. Fertilizer – Apply at rates according to soil analysis testing reports.

B. Mixing with planting soil:

1. Fertilizer and conditioners shall be spread over the entire lawn areas at the application rates indicated above.

3.05 SEEDING PROCEDURES

A. Seeding operations shall not occur if the soil is wet and muddy and shall be postponed until soil moisture is appropriate for the seeding operation. Bare-soil seedbeds shall be well prepared and free of clods greater than 3” in diameter. If crusting from rainfall has occurred, re-scarification is required. Scarification may not be required if drill seeding is to occur.

B. Sow seeds with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.

    1. Hydro-seeding of native prairie grasses is not permitted.

C. Seeding of the native grass and nurse crop blend shall be done immediately following fine grading of the seedbed when the soil surface is loose and friable. The seed blend may be applied by hand provided that each species is distributed evenly, and firm seed is established.

    1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.

    2. Drill Seeding shall be used for graded soil with slopes of 4:1 or less. A rangeland-type no-till drill designed to plant native grasses and forbs may be used in bare soils, although this equipment is specifically designed to plant through existing vegetation that has been applied with herbicide. Cultipacking or rolling before seeding may be required to prevent seed placement depths exceeding ¼ inch.

        a. Follow Manufacturer’s directions for calibration of the boxes.

        b. Keep Seed mixes separated within the three seed boxes.

            1) Grain Box for Cover Crop Mixes.

            2) Fluff Box for Prairie Grasses Fluff Box for Prairie Grasses Mixes and must be always half-full to operate properly.

            3) Small Seed Box for Forbs and Sedge Mixes.

        c. Never plant more than 1/4” deep, seed shall be visible on surface for successful seeding.

        d. When drilling on bare ground, remove every other tube leading from the small seed box to drop half the seed on the surface.

    3. Hand Broadcast Seeding and Mechanical Broadcast Seeding: Broadcast Seeding shall be used on graded soil of 4:1 slope or steeper, all wetlands and stream channels, and areas that the Drill Seeder cannot reach.

        a. Apply seed by Hand crank seeder for native seed available from Truax.

        b. Apply the seed uniformly over the surface using a combination seeder/cultipacker unit such as a Brillon or Truax Trillion seeder.

        c. A cone seeder or other similar broadcasting equipment may also be used if the seed mix does not contain fluffy seeds in amounts sufficient to prevent free flowing without plugging.

        d. Seed shall be mixed with a 4-part dry potting mix made from vermiculite and perlite for broadcasting.

        e. Seed shall then be pressed into the surface using a cultipacker or roller.

D. All seeding equipment, whether broadcast or drill, shall be calibrated to deliver the seed at the rates and proportions specified in the plans.

E. Equipment shall be operated in such a manner as to ensure complete coverage.

F. Lightly drag or harrow the seedbed, after application of the native seed blend, to incorporate the seed to a depth of 1/8th to 1/4” deep.

G. Use a culti-pack type machine to seed or use a lawn roller immediately after seeding to obtain satisfactory seed/soil contact. Roll lightly, and water with fine spray.

H. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch, and roll surface smooth.

I. Water newly planted areas and keep moist until Cover Crops are established.

3.06 SEEDING RATES

A. Native Mixes: Refer to Section 2.03 “Native Grass Seed Sources”.

B. Cover Crop: Refer to Section 2.02 “Native Grass Seed Requirements”.

3.07 SIGNAGE

A. Install metal “Mitigation Do Not Disturb” signs every 100 lineal feet surrounding the mitigation zone.

3.08 PERFORMANCE STANDARDS AND FINAL ACCEPTANCE

A. Performance Standard: Within 60 days the following condition must be met: At least 90% of the seeded area shall be vegetated with cover crop and native species from the seed mix by June 1 following winter seeding (November 1st through February 28th) or within 60 days of seeding if planted outside this period.

B. Substantial Completion: At the end of one full growing season (+/- 170 days) the following conditions must be met:

1. Vegetated Coverage: 90% of each seeded area shall be vegetated with specified native species or cover crop species. There shall be no single area of bare ground greater than 9 sq. ft. (3’ x 3’).

2. Presence of Natives: At least 50% of the native species specified must be present as live plants.

3. Abundance of Natives: At least 25% of the vegetated cover shall be native species of the permanent matrix.

C. Final Acceptance and Warranty Period: At the end of two full growing seasons, the following conditions must be met:

1. Vegetated Coverage: 100% of the seeded area shall be vegetated with the specified native species or cover crop species.

2. Presence of Natives: At least 80% of the specified native species must be present as live plants.

3. Abundance of Natives: At least 75% of the vegetated cover shall be native species of the permanent matrix.

D. If the contract period extends past two growing seasons, area coverage of native species shall be at least 80% at the end of three full growing seasons. At any time during the contract period no more than 10% (by area cover) of the seeded area shall be dominated by aggressive exotic species such as red clover (Trifolium spp.), white or yellow sweet clover (Melilotus spp.), Canada Thistle (Cirsium arvense), Tall Fescue (Festuca elatior), Reed Canary Grass *(Phalaris arundinacea),* Purple Loosestrife *(Lythrum salicaria), and* Common Reed *(Phragmites australis).* Bush Honeysuckle *(Lonicera spp.)*, Garlic Mustard *(Alliaria petiolata)*, Purple Wintercreeper *(Euonymus fortunei),* Japanese Honeysuckle *(Lonicera japonica,* Johnson Grass (Sorghum halepense), Multiflora Rose (Rosa Multiflora), Autumn Olive (Elaeagnus umbellata), Oriental Bittersweet (Celastrus orbiculatus), and Japanese Knotweed (*Polygonum cuspidatum*). Bull

Thistle – *Cirsium vulgare, Q*ueen Anne's Lace - *Daucus carota, C*anadian Goldenrod – *Solidago Canadensis,* Teasel – *Dipscaus spp.,* ect.

E. The contractor shall be responsible for supplemental seedings in accordance with the specifications and with input from a restoration ecologist if necessary. Losses due to animal depredation, extremes in weather or precipitation or lack of water control shall not be covered under this warranty.

F. Survival percentages shall be established by sampling of one square meter quadrats located at regular intervals along transects. The number of quadrats shall be as needed to sample a minimum of 0.2% of the total planting area in each planting zone, and there shall be at least one randomly located transect in each planting zone. The sampling plan shall be reviewed and approved by the project manager in the field.

3.09 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by installation work. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after established.

3.10 MAINTENANCE

A. Maintenance by Contractor:

1. A Maintenance Bond is required for through "Final Acceptance".

2. Maintenance begins upon the Landscape Architect's acceptance of "Substantial Completion" of the Native Grasses and Forbs scope of work.

B. Maintenance by Owner: Begins after "Final Acceptance".

C. Contractor Responsibilities during the Maintenance Period shall include but not limited to:

1. Watering, weeding, mowing, trimming, replanting, and performing other operations as required to establish a healthy, viable prairie. Roll, regrade, and replant bare or eroded areas and remulch. Provide materials and installation the same as those used in the original installation.

2. Controlling exotic and invasive species, and any other factor that may contribute to the failure of the natural area establishment.

3. Providing the equivalent of 1 inch of water per week for the first 6 to 8 weeks.

4. Providing supervisors and crew who are experienced with identification of both native and non-native plants.

5. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and prairie damaged or lost in areas of subsidence.

6. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.

D. Watering: Install and maintain temporary piping, hoses, and prairie-watering equipment to convey water from sources and to keep prairie uniformly moist.

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.

2. Water prairie with fine spray at a minimum rate of 1/2 inch per week for six weeks after planting unless rainfall precipitation is adequate.

3.11 OBSERVATION AND ACCEPTANCE

A. Beneficial Occupancy: the acknowledgement by the Owner and Landscape Architect that the landscape work defined by plans and specifications is substantially complete. The Landscape Architect shall provide the Contractor with a written punch list indicating items to be corrected or completed by the contractor within a two-week period from notification:

   1. Site review is requested by the Contractor when he/she believes that the landscape installation meets all the requirements of the plans and specifications.

B. Final Acceptance: the date of final acceptance shall be when the Landscape Architect verifies that all the items on the punch list have been completed and / or corrected by the Contractor.

   1. Warranty does not commence until acceptance by the Owner.

3.12 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

D. Remove nondegradable erosion-control measures after grass establishment period.

3.13 MAINTENANCE SERVICE

A. Prairie Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Prairie Maintenance" Article. Begin maintenance immediately after each area is planted and continue until an acceptable prairie is established, but for not less than maintenance period below.

   1. Maintenance Period: through “Final Completion”.

END OF SECTION 32 92 00

SECTION 32 93 00

PLANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY INCLUDES

A. Section Includes:

1. New trees, plants, and ground cover.
2. Mulch and Fertilizer.
3. Maintenance.
4. Tree Pruning.

B. Related Requirements:

1. Section 01 56 39 "Tree/Shrub Removal and Protection" for protecting, trimming, pruning, repairing, and replacing existing trees to remain that interfere with, or are affected by, execution of the Work.
2. Section 32 91 13 “Soil Preparation” for related soil profiles.
3. Section 32 92 00 "Turf and Grasses" for turf (lawn) and meadow planting, hydroseeding, and erosion-control materials.

1.3 DEFINITIONS

A. Backfill: The earth used to replace or the act of replacing earth in an excavation.

B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with a ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.

C. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required.

D. Bare-Root Stock: Plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than the minimum root spread according to ANSI Z60.1 for type and size of plant required.

E. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.

F. Fabric Bag-Grown Stock: Healthy, vigorous, well-rooted plants established and grown in-ground in a porous fabric bag with well-established root system reaching sides of fabric bag. Fabric bag

size is not less than diameter, depth, and volume required by ANSI Z60.1 for type and size of plant.

G. Finish Grade: Elevation of finished surface of planting soil.

H. Natural Disaster: The term “Natural Disaster” shall be defined as any event that is unpredictable and uncontrollable by the Landscape Architect, Owner, or Contractor. Any predictable and preventable event made known to the Contractor prior to installation shall not be defined as a Natural Disaster.

I. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.

J. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

K. Planting Area: Areas to be planted.

L. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 32 91 13 "Soil Preparation" for drawing designations for planting soils.

M. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

N. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

O. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.

P. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

Q. Supplemental Planting Aids: Any and all supportive measures employed to ensure that installed plant material meets the requirements outlined in this specification at the end of the guarantee period.

R. Weeds: Any plant life not specified or scheduled.

S. Plants: Living trees, plants, and ground cover specified in this Section, and described in ANSI Z60.1.

1.4 REFERENCE STANDARDS

A. ANSI/AHIA Z60.1 - American National Standard for Nursery Stock; 2014.

B. ANSI/AHIA Z60.1 - American National Standard for Nursery Stock; 2014.

1.5 COORDINATION

A. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.

1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

1.6 PREINSTALLATION MEETINGS

A. Pre-installation Meeting: Conduct meeting at Project Site. Confirm with Owner and Landscape Architect 14 days prior to conference. At a minimum review the following:

1. Ensure required submittals have been provided with sufficient time for review prior to scheduling the Preinstallation Meeting.
2. Review the detailed requirements for the work of this section and to review the drawings and specifications for this work.

a. Maintenance procedures for surrounding streets, walks, paving and site amenities.
b. Procedures for work on public property.
c. Plant locations and procedures for adjustment.

3. Require attendance by all affected installers including but not limited to:

a. Contractor's superintendent.
b. Installer
c. Manufacturer
d. Other affected Subcontractors
e. Architect/Engineer of Record
f. Owner Representative

4. Record minutes and distribute copies within 5 days after meeting to participants as well as Landscape Architect, Architect/Engineer of Record, Owner and those affected by decisions made.

1.7 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Manufacturer’s Product Literature and Specification Data.
2. Manufacturer’s written instructions for recommended maintenance practices.
3. Written manufacturer’s warranty.
4. Product liability insurance certificate with project owner as certificate holder.
5. MSDS for items in Part 2 “Products.”
6. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
7. Plant Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to Project. Contractor to provide photographs of both individual plants and the block of plants if species quantity is more than one (1) of the same size. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph in addition to a human figure. Where applicable also provide an image of each species and size showing root mass. For species where more than 20 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each

photograph with the full scientific name of the plant, plant size, and name of the growing nursery.

8. Tree Tagging: Contractor or nursery shall locate all trees and tag them with a seal. Contractor is to photograph each individual tree and provide each image with the seal number, variety, size, and nursery location labeled on the image. No trees shall be accepted unless they have a seal from the contractor or landscape architect.

    a. In addition to review of plant material photographs, Landscape Architect may inspect and tag plant material at nursery. Such inspection shall be in addition to inspection at job site.

9. Tagging Log: Contractor shall keep a log detailing information for each tagged tree. Such information shall include the source nursery where the material is tagged, location within nursery, size of trees, tag or seal numbers, colors of flagging tape (if applicable), canopy height, spread, and branching height. Provide submittal before beginning construction.

B. Samples for Verification: For each of the following:

1. Mulch: 1-quart (1-L) volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
2. Slow-Release, Tree-Watering Device: One unit of each size required.

1.8 INFORMATIONAL SUBMITTALS

A. Qualification Data: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

B. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:

1. Manufacturer's certified analysis of standard products.
2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.

C. Percolation Test: After the Contractor has performed percolation tests the Contractor shall submit a log of the percolation rates, with a plan outlining the locations of each test pit before planting trees. Provide submittal before beginning construction.

D. Site Visit Record: After each site visit during the guarantee period, the Contractor shall submit a written record of the visit, including any problems, potential problems, and any recommended corrective action.

E. Source quality-control test reports.

F. Field quality-control and special inspection reports.

G. Maintenance Instructions.

1.9 QUALITY ASSURANCE

A. Investigate sources of supply and confirm they can supply plants specified on plant list in sizes, variety, and quality noted and specified. Failure to take this precaution will not relieve

responsibility for furnishing and installing plant material in accordance with Contract requirements. Substitutions may be permitted only upon submission of written proof that specified plant is not obtainable locally. Such substitution may be made upon written authorization by Architect/Engineer of Record.

B. Installer Qualifications: Company specializing in installing and planting the plants specified with 5 years experience successfully completing projects of a similar size and value.

1. Perform planting by personnel familiar with accepted landscape planting procedures. A qualified foreman, with a minimum of 5 years experience installing plant material is to be on-site during planting procedures.

C. Plant Material: All plants shall be obtained from reputable nurseries, licensed by the State of Illinois and approved by the Landscape Architect.

D. Product Substitutions:

1. Products proposed for substitution shall be submitted to the Landscape Architect for approval. Only Approved substitutions for specified products shall be acceptable.
2. Contractor and Manufacturer of substitute material shall submit written guarantee that substitute product(s) matches specified product in every way.
3. The contractor shall be held solely and completely liable for any construction failure resulting from the use of materials unspecified or unapproved by the Landscape Architect.
4. The contractor shall be held solely and completely liable for any construction failure resulting from the use of materials approved by the Client or Owner, without the knowledge of the Architect and/or Landscape Architect.

E. Unavailability of Plant Material:

1. Substitutions must be approved by the Landscape Architect.
2. In the event that the Landscape Contractor cannot find the specified plant material, the Landscape Architect may require that the Landscape Contractor find the plant material using a plant broker.
3. The Contractor shall be held solely and completely liable for any failure resulting from the use of plant materials unspecified or unapproved by the Landscape Architect. At the Landscape Architect's discretion, the Contractor may be asked to remove unspecified or unapproved plant material and replace with Landscape Architect approved plant material.

F. Rejection of Plant Material:

1. The Landscape Architect has the right to reject any and all plant material that does not conform to the requirements of this specification.
2. Evidence of damage to plant material, which destroys the natural character of the plant, shall be cause for rejection.
3. When a plant has been rejected, remove it from the area of the work and replace it with one of the required size and quality. Replacement plant material shall be approved by Landscape Architect, as documented in Part 1-General, 1.4 Quality Assurance, B. Selection of Plant Material. The Contractor shall bear the total cost of replacing rejected plant material.

4. Any plant that has the following characteristics shall be cause for rejection:

a. Any tree that has a canopy with 50% or more dead limbs.

b. Any tree that has dead limbs that, when removed, will result in the loss of 30% or more of the structure and form of the canopy of the tree.
c. Any tree that is of a species that characteristically has a dominant central leader, and if the leader is dead, when removed the tree will not have a form consistent with the species.
d. The plant material does not meet Landscape Architect's expectations based upon the photographs.

5. Any tree that has open wounds (not completely healed over) that penetrates the bark to the wood on trunks or major limbs the removal of which would result in the loss of 30% or more of the structure and form of the tree.

1.10 REGULATORY REQUIREMENTS

A. Comply with State of Illinois and federal laws with respect to inspection of all plants for plant diseases and insect infestation. Submit an inspection certificate, required by law to this effect, with each shipment.

1.11 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk materials with appropriate certificates.

C. Deliver bare-root stock plants within 36 hours of digging. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting. Transport in covered, temperature-controlled vehicles, and keep plants cool and protected from sun and wind at all times.

D. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

E. Handle planting stock by root ball.

F. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F (16 to 18 deg C) until planting.

G. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.

1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

H. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

I. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1. Heel-in bare-root stock. Soak roots that are in less than moist condition in water for two hours. Reject plants with dry roots.
2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
3. Do not remove container-grown stock from containers before time of planting.
4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.
5. Plants shall not remain unplanted for longer than 3 days.
6. Set trees and plants in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other means acceptable to the Landscape Architect for retaining moisture.
7. The duration, method, and location of storage of plant materials shall be subject to the approval of the Landscape Architect.
8. Provide proper spacing for trees, such that the stockpiled plant material has full access to light and air. Take all precautions to prevent defoliation of stockpiled material.
9. Plant material subject to improper storage procedures shall be rejected.
10. Contractor shall determine if there is sufficient space available to properly stockpile plant material at the time of bidding.

J. Take precautions in accordance with best trade practices to ensure arrival of plant material at job site in good condition and without injury. Cover plants to prevent drying, transit disease or injury.

K. Deliver fertilizer to site in original, unopened containers bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark, and conformance to state law.

L. Each shipment shall be accompanied by invoice showing sizes and varieties of plants included in each shipment. Provide copy of invoice to Architect/Engineer of Record upon delivery of plant material.

1. Upon delivery and before planting request inspection of plants by Architect/Engineer of Record.
2. Notify Architect/Engineer of Record, a minimum of 24 hours before delivery of plant material.
3. Failure to notify Architect/Engineer of Record in advance, in order to arrange proper scheduling may result in loss of time or removal of plant or plants not installed as specified or directed.
4. Inspection and approval is for quality, size, and variety only, and in no way impairs right of rejection for failure to meet other requirements during progress of Work.
5. Contractor shall be present during required inspection or as may be required by Architect/Engineer of Record.

M. Protect roots of plant material from drying or other possible injury.

N. Water plants as necessary until planted.

O. Store fertilizer, humus, and spray materials in weatherproof storage areas and in such manner that their effectiveness will not be impaired.

P. On-Site Staging and / or Storage

1. With prior approval by the Owner's representative, plant material may be staged or stored on-site in an approved location.
2. The Contractor assumes all responsibility for vandalism, damage and/or theft of stored plant material and shall replace all vandalized, damaged or stolen plant material at no additional cost to the Owner.
3. Plant material with large root balls are to be positioned and braced in such a way as to prevent tipping or other movement that could result in damage to the root ball(s) and/or create a hazardous condition persons.
4. Where necessary, the foliage of stored plant material is to be rinsed periodically to remove harmful construction dust as required to maintain plant health.

1.12 FIELD CONDITIONS

A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.

B. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. Spring Planting: From time soil becomes workable to June 15. Fall Planting: September 1 to November 15. Plant evergreen shrub plantings no later than November 1, and evergreen tree plantings no later than October 15.
2. Summer Season: July 1 through August 31. Planting shall be considered unseasonable and shall require approval by Landscape Architect. Approval to plant under such conditions shall in no way relieve Contractor from guarantee provisions of these specifications.
3. Container Plants: Planting season designated above may be extended for container grown plants when approved by Landscape Architect.

C. Planting shall only be performed when weather and soil conditions are suitable for planting the materials specified in accordance with locally accepted practice. Install plant materials during the planting time as described below unless otherwise directed by the Landscape Architect. Planting shall not occur if soil profiles or frozen or if there is a risk of frost. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. Evergreen Trees: April 1 – July 1 and September 1 - November 1
2. Evergreen Shrubs: April 1 – July 1 and September 1 - November 1
3. Deciduous Trees: April 1 – July 1 and September 1 - November 1
4. Deciduous Shrubs: April 1 – July 1 and September 1 - November 1
5. Vines: April 1 – July 1 and September 1 - November 1
6. Ornamental Grasses: April 1 – July 1 and September 1 - November 1
7. Perennials: April 1 – July 1 and September 1 - November 1
8. Groundcover: April 1 – July 1 and September 1 - November 1
9. Bulbs: October 1 - December 1
10. Container Plants: Planting season designated above may be extended for container grown plants as approved by LA

D. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

1.13 EXCAVATING AND GRADING AROUND UTILITIES

A. Contractor shall carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging.

B. Determine location of underground utilities and perform work in a manner that will avoid damage. Hand excavate as required. Maintain grade stakes set by others until parties concerned mutually agree upon removal.

C. Notification of the utility locate services is required for all Excavation and grading deeper than 12 inches: The Contractor is responsible for knowing the location and avoiding utilities that are not covered by the local utility locator service.

1.14 WARRANTY

A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
b. Structural failures including plantings falling or blowing over.
c. Faulty performance of products.
d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

2. Warranty Periods: From date of Substantial Completion.

a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
b. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.
c. Annuals: Three months.

3. Include the following remedial actions as a minimum:

a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.
d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

PART 2 - PRODUCTS

2.1 PLANTS

A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning, grown in climatic conditions similar to those in locality of the work. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch (19 mm) in diameter; or with stem girdling roots are unacceptable.
2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.

C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

D. Labeling: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant.

E. If formal arrangements or consecutive order of plants is indicated on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

F. Annuals and Biennials: Provide healthy, disease-free plants of species and variety shown or listed, with well-established root systems reaching to sides of the container to maintain a firm ball, but not with excessive root growth encircling the container. Provide only plants that are acclimated to outdoor conditions before delivery.

G. Provide nursery grown plant material. Provide plants grown within same hardiness zone as project site or have been acclimated to conditions of same hardiness zone for minimum of two growing seasons. Hardiness zones shall conform to "Zones of Plant Hardiness" as provided by U.S. Department of Agriculture.

H. Unless specifically noted otherwise, provide plants of selected specimen quality, have normal habit of growth and be sound, healthy, vigorous plants with well-developed root systems, free of disease, insect pests, their eggs or larvae, and injuries.

I. Do not prune before delivery. Prune only at time of planting.

J. Plants shall be freshly dug or container-grown. No heeled-in plants or plants for cold storage will be accepted, except as otherwise specified, unless Contractor makes such request in writing and plants are inspected and approved.

K. Plant Size and Species:

1. Measure plants when branches are in their normal position. Height and spread refer to plant's main body and not from branch tip to branch tip.
2. Take caliper measurement at point on trunk 6 inches above natural ground line for trees up to 4 inches in caliper and at point 12 inches above natural ground line for trees 4 inches and over in caliper.
3. If range of size is given, no plant shall be less than minimum size and not less than 50% of plants shall be as large as upper half of range specified.
4. Measurements specified are minimum size acceptable and are measurements after pruning, where pruning is required. Plants meeting measurements specified, but not producing normal balance between height and spread, are not acceptable.
5. Shrubs shall be matched specimens from single block source.
6. Plants shall be true to species and variety and shall conform to measurement specified in Plant List except that plants larger than specified may be used if approved by Architect/Engineer of Record. Use of such plants shall not result in increase in Contract price. If larger plants are approved, increase ball of earth in proportion to size of plant.
7. Where plants larger than specified have been submitted in writing for approval and approved in writing by Architect/Engineer of Record, Contractor shall assume responsibility of guarantee for plant in size as planted.

L. Balled and Burlapped Plants (Designated B&B):

1. Dig plants with firm natural balls of earth of diameter indicated below and of sufficient depth to encompass fibrous and feeding root system necessary for full recovery of plant.
2. Plants having balls broken or cracked during delivery or at time of planting will be rejected.
3. For Evergreen trees, trunk diameter shall be used to determine minimum required ball dimensions. Minimum ball dimensions shall be those as specified for single stem trees.
4. Diameter at top of each ball shall be diameter specified above and diameter at bottom of each ball shall not be less than 70% of specified top diameter. Top and bottom sources shall be parallel.
5. Ball shall be of specified depth at points perpendicular to bottom of ball.
6. Balls greater than 30 inches diameter shall be drum-laced.
7. Architect/Engineer of Record may reject any plant specified as balled and burlapped which fails to conform, in the Architect/Engineer of Record's opinion, to balling requirements set forth herein.

M. Container or Pot Grown Plants:

1. Container grown plants shall have heavy fibrous root system, or well developed taproot, that has been developed by proper horticultural practice including transplanting and root pruning.
2. Root system shall have developed sufficiently long for new fibrous roots to develop so root mass will retain its shape and hold together when removed from container.
3. In no case should container strangle or girdle natural growth of plant.
4. Groundcovers in containers pots shall have the minimum number of runners and length of runners in accordance with ANSI/AHIA Z60.1.
5. Diameter of spread shall determine inside diameter of pot in which they shall be grown for at least 3 months prior to delivery.
6. Plant container sizes shall conform to ANSI/AHIA Z60.1.

N. Deciduous (Shade and Ornamental Trees):

1. Tree plantings shall be free of branches equivalent to 1/2 of tree height or so that crown of tree is in proportion to trunk as tree grows.

a. Trees with ascending branches may be branched 1 foot or more below branch heights as listed.

2. Provide trees of specimen quality.

O. Evergreen Trees/Shrubs:

1. Provide evergreen trees of specimen quality.
2. Provide evergreen shrubs of specimen quality.
3. Columnar plants:

a. Provide columnar plants of specimen quality.

P. Deciduous Shrubs:

1. Provide deciduous shrubs of specimen quality.

Q. Perennial, Biennials, Prairie Forbes, and Grasses:

1. Perennial, biennials, prairie forbs, and grasses specified as "container" or "pot" shall be provided as container grown plants, or shall be provided with firm natural balls of earth with diameter and depth in accordance with American Standard for Nursery Stock for size specified on Plant List.
2. Ship balled plants in open-air boxes or crates that will minimize handling of each plant prior to installation. Do not plant balled plants if ball is cracked or broken either before or during process of planting.

2.2 FERTILIZERS

A. Planting Tablets: Tightly compressed chip-type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.

1. Size: 10-gram tablets.
2. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.

2.3 MULCHES

A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:

1. Type: Shredded hardwood bark mulch
2. Size Range: 60% shall range between 1 inch and 3 inches in length; remaining 40% shall not exceed 1-1/2 inches
3. Color: Natural.
4. Installation Depth: 3 inches.

2.4 TREE WATERING DEVICES

A. Slow-Release Watering Device: Standard product manufactured for drip irrigation of plants and emptying its water contents over one to two weeks; manufactured from UV-light-stabilized nylon-reinforced polyethylene sheet, PVC, or HDPE plastic.
1. Color: green.

2.5 ACCESSORIES

A. Wood Pressure-Preservative Treatment: AWPA U1, Use Category UC4a; acceptable to authorities having jurisdiction, and containing no arsenic or chromium.

B. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.

C. Drainage material: Free draining aggregate meeting the requirements of IDOT CA7 and having a pH of 5.5 - 7. Comply with the requirements of Section 32 91 15 Soil Preparation.

D. Filter fabric: Nonbiodegradable, needle-punched, non-woven, water permeable, 100% continuous polypropylene or polyester fabric, 3 oz. per sq. yd. minimum, designed for drainage applications without clogging or piping. Capable of withstanding backfilling and compacting operations without tearing or deforming.

E. Wrapping Materials: Burlap, Non-synthetic, biodegradable.

F. Stakes: Softwood lumber, pointed end.

G. Mycorrhizal Fungi: Dry, granular inoculant containing at least 5300 spores per lb (0.45 kg) of vesicular-arbuscular mycorrhizal fungi and 95 million spores per lb (0.45 kg) of ectomycorrhizal fungi, 33 percent hydrogel, and a maximum of 5.5 percent inert material.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
3. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
4. Uniformly moisten excessively dry soil that is not workable, or which is dusty.

B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

C. Verify that prepared subsoil is ready to receive work.

D. Do not install plantings where depth of soil over underground construction, obstructions or rock is insufficient to accommodate roots or where pockets in rock or impervious soil will require drainage. Where such conditions encountered in excavation planting areas and where stone, boulders or other obstruction cannot be broke or removed by hand methods and where trees to be planted found under overhead wires, bring to the attention of the Architect/Engineer of Record. Alternate locations for planting may be designated by Architect/Engineer of Record.

E. Remove rock or other underground construction and drain planting areas only when approved by Architect/Engineer of Record.

F. Verify location of underground utilities with appropriate sources prior to construction. Contact J.U.L.I.E. at least 48 hours before commencing with construction operations. Repair damaged utilities.

G. Conflicts with utilities shall be called to the Architect/Engineer of Record's attention before proceeding with work. Alternate locations for planting may be designated by Architect/Engineer of Record.

H. Confirm that utility work has been completed per the drawings.

I. Examine the sub-grade for evidence of compaction. Examine rubble conditions as to extent shown on Soil Borings, observe the conditions under which work is to be performed, and notify Landscape Architect in writing of any unsatisfactory conditions.

J. Percolation Test: Contractor is mandated to perform percolation tests to determine the permeability of the sub-grade. For every 5-15 trees and shrubs in a general area, excavate a 12” diameter x 12” deep test pit. Fill each pit with water and allow water to percolate out. Test pits shall be roped off at all times and filled in when test is complete. If water does not percolate out over a 12-hour period, contact Landscape Architect. Although only one tree percolation test is required for every 15 trees, the Landscape Contractor is still responsible for ensuring that every tree drains properly.

K. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.

B. Install 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.

C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Architect's acceptance of layout before excavating or planting. Make minor adjustments as required. Provide 48 hours’ notice for approval. Contractor to be present during approval. Make adjustments in locations and outlines as required. In event that pits or areas for planting are prepared and backfilled with topsoil to grade prior to commencement of lawn operations, mark so they can be readily located when work of planting proceeds.

D. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.

E. Cover surrounding turf (if existing) in manner to protect turfed areas that are to be trucked or hauled over and upon which soil is to be temporarily stocked.

F. Maintain at least one stockpile of topsoil for backfilling plants during planting operations.

3.3 TOPSOIL/FINISH GRADING

A. Place topsoil during dry weather and on dry unfrozen subgrade. Do not place or work topsoil in frozen or muddy condition.

B. Remove vegetable matter and foreign non-organic material from topsoil while spreading.

C. Establish final grade as shown on drawings. Grades not otherwise indicated are uniform levels or slopes between points where elevations are given or between such points and existing finished grades.

D. Where drawings show existing grades of landscaped areas not to be changed remove enough material to allow placement of 18in. of new topsoil and 6 inches of drainage material beneath shrub plantings and 24 inches of topsoil minimum beneath tree plantings, unless existing topsoil to required depth is undisturbed and of equal or better quality than specified herein. In latter case, existing topsoil may be left in place and use only enough new topsoil to bring these areas up to grade.

3.4 PLANTING AREA ESTABLISHMENT

A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation."

B. Placing Planting Soil: Place and mix planting soil in-place over exposed subgrade.

C. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

D. Application of Mycorrhizal Fungi: At time directed by Architect, broadcast dry product uniformly over prepared soil at application rate according to manufacturer's written recommendations.

3.5 EXCAVATION FOR TREES AND SHRUBS

A. Planting Pits and Trenches: Excavate circular planting pits.

1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
2. Excavate approximately three times as wide as ball diameter for balled and burlapped, balled and potted, container-grown and fabric bag-grown stock.
3. Excavate at least 12 inches (300 mm) wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
4. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
5. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
6. Maintain angles of repose of adjacent materials to ensure stability. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
7. Maintain supervision of excavations during working hours.
8. Keep excavations covered or otherwise protected when unattended by Installer's personnel.
9. If drain tile is indicated on Drawings or required under planting areas, excavate to top of porous backfill over tile.

B. Backfill Soil: Subsoil and topsoil removed from excavations may not be used as backfill soil unless otherwise indicated.

C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

1. Hardpan Layer: Drill 6-inch- (150-mm-) diameter holes, 24 inches (600 mm) apart, into free-draining strata or to a depth of 10 feet (3 m), whichever is less, and backfill with free-draining material.

D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.

E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

F. Remove excess soil materials from site in accordance with environmental specifications.

3.6 TREE, SHRUB, AND VINE PLANTING

A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.

B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

C. Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare 2 inches (50 mm) above adjacent finish grades unless otherwise noted or unless root balls are to be placed under sod profiles.

1. Backfill: Planting soil.
2. After placing some backfill around root ball to stabilize plant, carefully pull down 1/3 of burlap, rope, and wire baskets from tops of root balls and from sides. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
3. Backfill around root ball in 12-inch layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Place planting soil supplements equally distributed around each planting pit when pit is approximately one-half filled or per Manufacturer’s instructions.

    a. Quantity: Per Manufacturer instructions.

5. Continue backfilling process. Water again after placing and tamping final layer of soil.
6. Remove nursery plant identification tags.

D. Balled and Potted and Container-Grown Stock: Set each plant plumb and in center of planting pit or trench with root flare 2 inches (50 mm) above adjacent finish grades.

1. Backfill: Planting soil.
2. Carefully remove root ball from container without damaging root ball or plant.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. Roots that are encircling ball shall be cut to prevent girdling and promote root spread and growth.
4. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.

5. Place planting soil supplements equally distributed around each planting pit when pit is approximately one-half filled or per Manufacturer's instructions.

    a. Quantity: Per Manufacturer instructions.

6. If growing medium is comprised of 75% or more of peat, perlite, sand or like material other than soil, pull visible roots away from container medium so as to leave roots partially exposed.
7. Continue backfilling process. Water again after placing and tamping final layer of soil.
8. Remove nursery plant identification tags.

E. Fabric Bag-Grown Stock: Set each plant plumb and in center of planting pit or trench with root flare 2 inches (50 mm) above adjacent finish grades.

1. Backfill: Planting soil.
2. Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Place planting soil supplements equally distributed around each planting pit when pit is approximately one-half filled or per Manufacturer's instructions.

    a. Quantity: Per Manufacturer instructions.

5. Continue backfilling process. Water again after placing and tamping final layer of soil.
6. Remove nursery plant identification tags.

F. Bare-Root Stock: Set and support each plant in center of planting pit or trench with root flare 2 inches (50 mm) above adjacent finish grade.

1. Backfill: Planting soil.
2. Spread roots without tangling or turning toward surface. Plumb before backfilling and maintain plumb while working.
3. Carefully work backfill in layers around roots by hand. Bring roots into close contact with the soil.
4. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
5. Place planting soil supplements equally distributed around each planting pit when pit is approximately one-half filled or per Manufacturer's instructions.

    a. Quantity: Per Manufacturer instructions.

6. Continue backfilling process. Water again after placing and tamping final layer of soil.
7. Remove nursery plant identification tags.

G. Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.7 MECHANIZED TREE-SPADE PLANTING

A. Trees may be planted with an approved mechanized tree spade at the designated locations. Do not use tree spade to move trees larger than the maximum size allowed for a similar field-grown, balled-and-burlapped root-ball diameter according to ANSI Z60.1, or larger than

manufacturer's maximum size recommendation for the tree spade being used, whichever is smaller.

B. Use the same tree spade to excavate the planting hole as will be used to extract and transport the tree.

C. When extracting the tree, center the trunk within the tree spade and move tree with a solid ball of earth.

D. Cut exposed roots cleanly during transplanting operations.

E. Plant trees following procedures in "Tree, Shrub, and Vine Planting" Article.

F. Where possible, orient the tree in the same direction as in its original location.

3.8 TREE, SHRUB, AND VINE PRUNING

A. Pruning of trees and shrubs is to be performed by Certified Arborists only, unless otherwise approved in advance by the project manager. Prune as directed by Landscape Architect until Final Acceptance.

B. All plant material shall be inspected regularly, during the performance of other maintenance duties, to determine the need for pruning to remove dead, weak, damaged, or diseased wood, and rubbing or overlapping branches.

C. Pruning shall be done with clean, sharp hand pruners or pruning saws. The use of hatchets, axes, shovels or other implements not specifically designed for pruning is prohibited. The use of hedge shears shall be prohibited except for the pruning of specified hedges.

D. All cuts shall be clean and done with properly sharpened tools. When diseased material is pruned, tools shall be properly disinfected before further use.

E. Make cuts flush and clean avoiding injury to branch bark ridge or branch collar leaving no stubs.

F. For cuts greater than 3/4 in. in diameter and bruises or scars on bark, trace injured cambium back to living tissue and remove. Smooth and shape wounds so as not to retain water.

G. Prune flowering trees only to remove dead or damaged branches. Do not remove leader.

H. All debris generated from pruning operations is to be properly disposed of, off Owner Property, at the end of each work day.

I. Trees:

1. Trees are to be pruned only as necessary to remove:

    a. Dead or injured twigs, branches and/or limbs
    b. Watersprouts and other undesirable adventitious growth arising from the trunk or branches
    c. Sucker shoots and other undesirable basal sprouts. Basal sprouts are to be cut cleanly below the soil line; cut stubs are to be covered with soil to prevent resprouting.

2. Pruning shall be done in such a manner as not to change the natural shape or habit of the tree.

3. All cuts shall be made so as to produce a small collar, but leave no stubs. Cuts shall be made in such a manner as to preclude the tearing, stripping or other damage to adjacent bark, limbs or branches.
4. Cuts shall be made back to a bud, branch or main trunk. Collar cuts shall be made at tree trunks.
5. Limbs over 2” diameter shall be removed with three cuts. The first cut is to undercut by sawing through one-third of the limb. This shall not be more than one foot from the trunk. The second cut is an uppercut one to two inches from the first cut, away from the trunk, on the top of the branch, continued until the branch falls. The third cut shall be to remove the stub with an appropriate flush cut at the trunk.

J. Shrubs:

1. Shrubs are to be pruned as necessary to remove dead and/or injured twigs, branches and limbs. Pruning shall be done in such a manner as not to change the natural shape or habit of the shrub.
2. Shrubs to be renewal pruned will receive such pruning once annually at the optimum time of year for the individual shrub species, generally immediately following flowering; the method of renewal pruning and the percentage of material removed shall be appropriate for the individual shrub species.
3. When pruning shrubs, the natural shape of the plant is to be maintained at all times. No shearing of shrubs will be permitted except for plantings designated as hedges.

K. Hedges:

1. Hedges are to be sheared as often as necessary during the growing season to maintain a clean, crisp appearance.
2. During hedge work, all weed or volunteer plants growing in or through hedge plantings are to be removed cleanly at the base; shearing to height along with the hedge will not be acceptable.

L. Herbaceous plant material:

1. Annuals and perennials shall be continuously dead-headed to maintain the planting spaces and/or promote flowering or plant growth.
2. Herbaceous plant material shall be cut or pruned back, in the method appropriate to the type of plant material and specific landscape intent, to promote dense, compact growth and optimal flowering.
3. Groundcover plantings are to be pruned as necessary to remove dead and/or injured twigs, branches and/or stems, and to keep the plants within the area of planting and from overrunning adjacent plantings.
4. Prior to the start of spring growth, all dead and/or dried stems, seed-heads, etc. from the previous winter are to be cut back and removed.
5. In fall, cut back perennials and ornamental grasses as necessary, with the exception of those to remain for winter interest.

3.9 STAKING, GUYING AND TYING:

A. Staking or guying of woody plant material: Woody plant material is only to be staked or guyed when out of plumb due to settling, wind damage, etc. or at the direction of the Owner Representative.

B. Staking and tying of herbaceous plant material:

1. Herbaceous plant material is to be staked and tied as necessary to keep plants upright and promote optimal plant health, growth and flowering.
2. Materials

    a. Stakes are to be natural bamboo or other approved material, of sufficient thickness to adequately support the material being staked.
    b. Tying material is to be natural twine or other approved material of inconspicuous color.

3. Installation and maintenance:

    a. Stakes are to be installed as inconspicuously as possible. The final height is to be no taller than the material being staked; stakes are not to be visible above the adjacent plant material, once the material has achieved its final height.
    b. Stakes are to be installed closely enough to each other to ensure that the tied material maintains a natural habit; the amount of material gathered into each tied area is to be no more than necessary. Staking of large groups of plants en masse will not be permitted.
    c. Ties are to be installed as inconspicuously as possible.
    d. Plant material is to be staked before becoming top-heavy or over-grown.
    e. Stakes and ties are to be maintained intact as long as necessary to achieve the desired effect. When necessary, or as directed, stakes and tying materials are to be completely removed and disposed of appropriately.

3.10 EDGING OF BEDS AND TREE RINGS

A. All tree rings and planting beds which border on lawn or turf areas are to be edged as necessary to maintain a clean, crisp appearance.

B. Edging is to be accomplished by hand with an edging hand-tool, or by using a rotating or vibrating blade power driven machine which produces a maximum 2” deep x 2” wide trench at the transition edge.

C. Edging machines which produce a cut deeper than 2” are not acceptable. The use of shovels as edging tools is not acceptable.

D. Final depth of all cut edges, whether done by hand or machine, is to be no more than 2”.

E. All debris generated by edging activities is to be removed from adjacent surfaces.

3.11 PLACING SOIL IN PLANTERS

A. Place a layer of drainage gravel at least 4 inches (100 mm) thick in bottom of planter unless otherwise noted. Cover bottom with filter fabric and wrap filter fabric 6 inches (150 mm) up on all sides unless otherwise noted. Duct tape along the entire top edge of the filter fabric, to secure the filter fabric against the sides during the soil-filling process unless otherwise noted.

B. Fill planter with planting soil. Place soil in lightly compacted layers to an elevation of 1-1/2 inches (38 mm) below top of planter, allowing natural settlement.

3.12 ORNAMENTAL AND NATIVE GRASS PLANTING

A. Remove plants from containers by inverting container, taking care not to damage plant material; or by cutting root mass with a knife on 4-sides to a depth of 1/2-inch (12.7-mm) and cut the

bottom of root mass in same manner in an ‘X’ pattern. Loosen up root systems of container-grown plants.

B. Do not allow root tips to become damaged from exposure to air; keep growing root tips moist and covered. Plant as quickly as possible upon removal from containers.

C. Do not set plants too high or too low; plant so that plant crowns are just slightly above soil level. Thoroughly water plants upon planting, and maintain through substantial completion.

3.13 PERENNIAL PLANTING

A. Prepare planting beds for mass plant areas to achieve a slight crown. Loosen planting bed soil to a depth of 4- to 6-inches (101.6- to 152.5-mm).

B. Remove plants from containers by inverting container, taking care not to damage plant material. Split biodegradable containers. Loosen up root systems of container-grown plants.

C. Do not allow root tips to become damaged from exposure to air; keep growing root tips moist and covered. Plant as quickly as possible upon removal from containers.

D. Set plants in prepared beds so that plant crowns are just slightly above planting soil level. Thoroughly water plants upon planting, and maintain through substantial completion.

3.14 GROUND COVER PLANTING

A. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated on Drawings in even rows with triangular spacing unless noted otherwise.

B. Use planting soil for backfill.

C. Dig holes large enough to allow spreading of roots.

D. For rooted cutting plants supplied in flats, plant each in a manner that minimally disturbs the root system but to a depth not less than two nodes.

E. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.

F. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

G. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.15 PLANTING AREA MULCHING

A. Mulch backfilled surfaces of planting areas and other areas indicated.

1. Trees and Treelike Shrubs in Turf Areas: Apply mulch ring with minimum 36-inch (900-mm) radius around trunks or stems. Do not place mulch within 6 inches (150 mm) of trunks or stems. Do not mulch trees scheduled to be placed under sod profile.
2. Mulch in Planting Areas: Apply mulch over whole surface of planting area, and finish 1/2" below level with adjacent finish grades. Do not place mulch within 6 inches (150 mm) of tree and shrub trunks or stems.
3. Leafy stems of groundcover or vines shall not be buried under mulch material.

4. Plant material requiring differing depths of mulch which are present in one planting bed shall be mulched to each plant type's required depth; transitions between areas of differing depths of mulch shall be accomplished as smoothly as possible.

B. "Volcano" mulching, the practice of heaping mulch against the stems or trunks of plant material, is strictly forbidden. Plant material with bark or trunk damage due to this practice will be replaced by the Contractor, at his expense.

C. When adding mulch to existing tree rings or planting beds, old, decomposed mulch is to be removed as necessary to maintain the original soil grade; decomposed mulch shall not be allowed to build up so as to result in additional soil covering the plant roots.

D. In no case shall mulch come in contact with any part of trunk or root flare. There should be a minimum 6" offset from flare to mulch.

E. Excess mulch shall be removed and disposed of off-site. Contractor shall not over-mulch planting beds with excess mulch.

3.16 WATERING

A. General

1. Contractor shall provide sufficient, appropriate and on-going watering as necessary to ensure the health and vigor of all plant material.
2. On-site water will be supplied by the Owner for watering purposes where available. If on-site water is not available, it shall be the responsibility of the Contractor to provide water from his own source at no expense to the Owner. The Contractor shall furnish hoses and other watering equipment as required for watering.
3. Contractor shall have the necessary city permits in order to obtain water from city hydrants.
4. Watering equipment shall be of a type that will prevent or preclude damage to the plant materials and/or the finished surface of the planting beds.
5. Water shall be applied to beds and plant material in such a way as to prevent damage to or flooding of the areas being watered and/or adjacent surfaces.

B. Watering Rates

1. The following rates shall be applied by the Contractor to all plantings unless rainfall for that week's period is greater than 1/2" or as otherwise determined by the Landscape Architect.

    a. Shade trees are to receive 50 gallons of water per tree per week.
    b. Ornamental trees are to receive 40 gallons of water per tree per week.
    c. Shrubs 18 inches and greater in size are to be watered to a depth of 12" per week.
    d. Shrubs less than 18 inches in size are to receive enough water to thoroughly wet the entire depth of the root ball once per week.
    e. Annuals, perennials, ornamental grasses and other herbaceous plant materials are to be watered to a depth of 6", once per week minimum.

2. If specific plantings require more (or less) frequent watering to ensure proper root establishment and to maintain the health and vigor of the plants, the Contractor's watering schedule must be adjusted accordingly.
3. Written documentation of watering schedule shall be supplied to the Owner.

C. Availability of On-Site Water

1. Sites without on-site water

a. Contractor shall bring or tank-in water for sites without an on-site water supply and furnish all labor and equipment, including hoses and sprinklers, that may be necessary to water plant materials.
b. Water required to be brought in tanks from off site to meet plant material maintenance requirements must be from an uncontaminated source.

2. Sites with on-site water: Contractor shall furnish all labor and equipment, including hoses and sprinklers, that may be necessary to water plant materials from an on-site water system.

D. Installing Slow-Release Watering Device

1. Provide one device for each tree.
2. Place device on top of the mulch at base of tree stem and fill with water according to manufacturer's written instructions.
3. Where “gator bag” watering devices are used, they are not to remain in place over the winter months and must be removed by November 15; if the plant material is still under warranty, they must be reinstalled by April 1.

3.17 PLANT MAINTENANCE

A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.

B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.

C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible as the use of pesticides is prohibited. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

D. Irrigate sufficiently to saturate root system and prevent soil from drying out.

E. Remove dead or broken branches and treat pruned areas or other wounds.

F. Neatly trim plants where necessary.

G. Immediately remove clippings after trimming.

H. Control growth of weeds:

1. For the purposes of this contract, a weed is defined as any growing plant not intentionally planted or seeded (or allowed to seed) in a planting bed or elsewhere within the scope of work.
2. Any weed one inch or taller, and/or which is clearly visible, within a planted area is to be removed immediately. Removal is to include the roots as well as top growth.
3. Weeds shall be removed mechanically or by hand.

4. As weeds are removed, excess soil is to be shaken off the roots and returned to the planting bed.
5. Woody weeds/weed trees growing in or through shrub or hedge plantings are to be removed cleanly at the base with either a pruning saw or pruners. Herbaceous weeds growing in or through shrub or hedge plantings are to be pulled from the roots. Shearing weeds “to height” during pruning operations will not be acceptable.
6. Use of pre-emergent herbicides and other chemical herbicide is permitted with the prior approval of the Owner Representative.
7. All debris generated from weeding operations is to be properly disposed of, off Owner Property, at the end of each work day.

I. Replace mulch when deteriorated.

J. Maintain wrappings, guys, turnbuckles, and stakes. Adjust turnbuckles to keep guy wires tight. Repair or replace accessories when required.

K. Maintain plant material until Substantial Completion at no extra cost to Owner. This includes not only plant material but also sodded areas as described in Section 32 92 23 - Sodding.

L. Maintenance begins immediately after each plant is installed and shall include watering, necessary cultivation, weeding, pruning, disease and insect pest control, protective spraying, resetting of plants to proper grades or upright position, restoration of damaged planting saucers, and any other procedure consistent with good horticultural practice necessary to ensure normal, vigorous, and healthy growth of work.

M. Final Acceptance will be granted upon conformance with following:

1. Plant material shall conform to drawings with respect to quantity, quality, size, species, and location, except those items accepted or revised in field by Architect/Engineer of Record.
2. Plant material shall be in healthy condition as defined under guarantee requirements below.
3. Items shall appear to be in general conformance with specifications.

3.18 CLEANING AND PROTECTION

A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

C. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

D. After installation and before Substantial Completion remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

E. At time of Substantial Completion, verify that tree-watering devices are in good working order and leave them in place. Replace improperly functioning devices.

3.19 GUARANTEE

A. Contractor shall guarantee for period of one year from the date of Preliminary Acceptance, replacement of plants which have died, or are in distressed/dying condition, or which have failed to flourish in such manner that their usefulness or appearance has been impaired. Replace any tree with dead main leader or crown that is 25% or more dead.

1. Exclusions: Contractor shall not be liable for replacement cost of plants damaged by deicing compounds, fertilizers, pesticides or other materials not specified in Contract Documents or not applied by the landscaper, by relocating or removal by others, by acts of God, or by vandalism, and losses due to curtailment of water by local authorities.

B. Inspection of Owner's Maintenance Operations:

1. During guarantee period, Contractor shall, from time to time, inspect watering, cultivation, and other maintenance operations carried on by the Owner with respect to such work, and promptly report to Owner any methods, practices or operations considered unsatisfactory and not in accord with interests or good horticultural practices.
2. Failure of Contractor to so inspect or report shall be construed as an acceptance of Owner's maintenance operations, and Contractor shall not thereafter claim or assert that any defects which may later develop are result of such methods or practices or operations.

3.20 REPLACEMENTS

A. Plants which die or require replacement for other reasons during one-year guarantee period shall be replaced as soon as possible during following acceptable planting seasons:

1. Spring Replacement Season: All plants - when ground becomes workable to June 15.
2. Fall Replacement Season:

a. Deciduous plants - September 1 to November 15.
b. Evergreen plants - September 1 to November 1.

B. Procedure:

1. Dispose of plants off-site in legal manner.
2. Replacements shall be of same size and species as original plant unless otherwise approved by Architect/Engineer of Record.
3. Replacements shall be supplied and installed in accordance with specifications.

a. Additional one-year guarantee for replacement plants shall begin on date of final acceptance of plant material by Architect/Engineer of Record as documented in field report.

4. Replacement and Damages:

a. Decisions of Architect/Engineer of Record for required replacements shall be conclusive and binding upon Contractor**.**
b. Contractor shall be responsible for repairing damage to property also caused by defective workmanship and materials.

END OF SECTION 32 93 00

SECTION 32 96 43

TREE TRANSPLANTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Contract Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes requirements for furnishing all labor, equipment, and materials required to transplant trees from the site to new locations on the site, and restore tree excavation area as directed by the Owner.

B. Related Work:
1. Division 01 Section “Tree Retention and Protection”.
2. Division 31 Section “Earth Moving”.
3. Division 32 Section “Turf and Grasses”.

1.3 DEFINITIONS

A. General: See definitions in ANSI A300 (Part 6) and in ANSI Z60.1 pertaining to field-grown trees, except as otherwise defined in this Section.

B. Caliper: Caliper of a trunk as measured by a diameter tape at a height six-inches (6”) above the root flare for trees up to, and including, four-inch (4”) size at this height; and as measured at a height of twelve-inches (12”) above the root flare for trees larger than four-inch (4”) size.

C. Diameter Breast Height (DBH): Diameter of a trunk as measured by a diameter tape at a height 54-inches (54”) above the ground line for trees with caliper of six-inches (6”) or greater as measured at a height of twelve-inches (12”) above the root flare. Per ANSI Z60 American Standard for Nursery Stock.

D. Root-Ball Depth: Measured from bottom of trunk flare to the bottom of root ball.

E. Root-Ball Width: Measured horizontally across the root ball with an approximately circular form or the least dimension for non-round root balls, centered around the trunk within a 10% Root tolerance according to ANSI Z60.1.

F. Root Flare: Also called “trunk flare”. The area at the base of the tree's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

1.4 SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Verification: For each of the following:
1. Proprietary Root-Ball-Stabilization Device: One unit.
2. Slow-Release Watering Device: One unit of each size required.

C. Pruning Schedule: Written schedule prepared by a certified arborist detailing scope and extent of pruning each tree in preparation for and subsequent to transplanting.
   1. Species and size of plant.
   2. Location on site plan. Include City site identification number for each.
   3. Reason for pruning.
   4. Preparatory Pruning: Time schedule and description of preparatory pruning to be performed.
      a. Indicate time in months preceding the extraction of the tree.
      b. Indicate diameter of root ball and depth of root pruning for each tree.
   5. Description of root and crown pruning during and subsequent to transplanting.
   6. Description of maintenance following pruning.

D. Qualification Data: For qualified tree-service firm and arborist.

E. Certification: From qualified arborist, certifying that transplanted trees have been protected during construction and that trees were promptly and properly treated. Maintenance Recommendations: From arborist, recommended procedures to be established by Owner for care and protection of trees after completing the Work.
   1. Submit before completing the Work.

F. Existing Conditions: Documentation of existing trees indicated to be transplanted, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.
   1. Use sufficiently detailed color photographs or video recordings. Color shall accurately depict hue condition of foliage and bark.
   2. Include drawings and notations to indicate specific wounds and damage conditions of each tree designated to be transplanted.

G. Tree-Transplanting Program: Submit before work begins.

H. Sample Warranties: For special warranties. See below for requirements.

I. Tree-maintenance reports. See below for requirements.

1.5 QUALITY CONTROL

A. Preinstallation Conference: Conduct conference at project site**.**
   1. Review methods and procedures related to transplanting work include, but are not limited to, the following:
      a. Construction schedule. Verify availability of materials, personnel, equipment, and unimpeded access needed to make progress and avoid delays.
      b. Tree and plant protection.
      c. Tree maintenance.
      d. Arborist's responsibilities.

B. Tree-Service Firm Qualifications: An experienced landscaping contractor or tree-moving firm that has successfully completed transplanting work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.
   1. Arborist Qualifications: Arborist with at least 10 years of experience in the Chicagoland area, currently certified by the International Society of Arboriculture (ISA).

C. Tree-Transplanting Program: Prepare a written plan by a Certified Arborist for transplanting trees for the whole Project, including each phase or process, tree maintenance, and protection of surrounding area and materials during operations. Describe in detail the materials, methods, and equipment to be used for each phase of the transplanting work.

1. Include transplanting times appropriate for each species at the Project location unless otherwise indicated on Contract Drawings or directed by the Owner
2. Include a transplanting schedule for each species to be transplanted, coordinated with the Project schedule.
3. Include site plans clearly marked to show tree-moving routes from extraction to planting locations. Indicate proposed equipment, weight, and turning radii.
4. Show details of temporary protective barriers where needed.
5. Include diagrams showing clearances to utility lines and other encumbrances along route.
6. Include care and maintenance provisions, and eventual removal of tree stabilization.

D. Pruning work must be determined and completed by a licensed arborist according to standards established by the American National Standards Institute: ANSI A300, part 1.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.

B. Bulk Materials:
1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or trees.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery with appropriate certificates.

C. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees in such a manner as to destroy their natural shape or cause damage.

D. Completely cover canopy when transporting trees.

E. Handle trees by root ball not by trunk. Do not drop trees.

F. Move trees after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after moving, set trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1.7 SITE CONDITIONS

A. Transplanting operations shall be conducted under favorable weather conditions and during the tree’s dormant period (November 1 to March 31), unless otherwise approved by the Owner.

B. Weather Limitations: Proceed with transplanting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Do not transplant during excessively wet or frozen conditions, or overly hot, dry and/or windy conditions. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

C. At least seventy-two (72) hours prior to beginning transplanting work, the Contractor shall contact JULIE for location of respective underground utilities and City of Evanston’s Division of Fleet and Facilities Management and Parks and Recreation Department location of park utilities and irrigation system. No transplanting shall occur until all utilities have been located.

1.8 DAMAGE TO SITE CONDITIONS

A. Damage to lawns, natural areas, pavements, irrigation systems, underground utilities and other improvements shall be repaired by the Contractor at no additional cost to the City.
   1. Coordination with Turf Areas (Lawns): Perform transplanting before planting turf areas unless otherwise indicated or otherwise approved by Owner.
   2. Coordination with Planting Beds: Perform transplanting before planting bedded areas unless otherwise indicated.

1.9 WARRANTY

A. Installer's Special Warranty: Tree-service firm agrees to repair or replace trees and related materials that fail within specified Warranty Period.

   1. Failures include, but are not limited to, the following:
      a. Death and unsatisfactory growth except for defects resulting from vandalism lack of adequate maintenance, neglect by City staff, or incidents that are beyond the Contractor's control.
         1) Death and unsatisfactory growth is defined as more than twenty-five percent (25%) dead, dead or declining central leader, or in an unhealthy condition or failure to meet general performance requirements at end of the Warranty Period.
      b. Structural failures including tree(s) falling or blowing over, split branches or snapped tops.
      c. Faulty performance of materials and devices related to tree plantings including tree stabilization and watering equipment.

   2. Warranty Period from Date of Substantial Completion:
      a. Trees: One (1) year.

   3. Include the following remedial actions as a minimum
      a. Remove dead trees and trees with unsatisfactory growth at end of warranty period; replace when directed.
      b. A limit of one replacement of each tree will be required except for losses or replacements due to failure to comply with requirements.
         1) The monetary value of a transplanted tree which needs to be replaced following transplanting, as determined by the Owner, due to damage and/or die-back will be determined using Guide for Plant Appraisals, by the Council of Tree and Landscape Appraisers (CLTA), latest edition. Contractor will be responsible for the monetary reimbursement to the City for this amount.
      c. Replace materials and devices related to tree plantings.
      d. Provide extended warranty for period equal to original warranty period, for replaced trees.

PART 2 - PRODUCTS

2.1 TREES TO BE TRANSPLANTED

A. Trees to be transplanted shall be indicated on the Contract Drawings.

2.2 WATER

A. Water shall be potable and supplied by Contractor at planting time and throughout the contract period until Substantial Completion. Water shall contain no substances harmful to plant life.

2.3 PLANTING MATERIALS

A. Backfill Soil: Excavated soil mixed with planting soil conditioner of suitable moisture content and granular texture for placing and compacting in planting pit around tree, and free of stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth.
   1. Mixture: Well-blended mix of two parts excavated soil to one-part soil conditioner.
   2. Soil Conditioner: Well-composted material as specified in Section 329113 "Soil Preparation”.

2.4 TREE-STABILIZATION MATERIALS

A. Trunk-Stabilization Materials:

   1. Upright and Guy Stakes: Rough-sawn, sound, new softwood with specified wood preservative treatment by pressure process, free of knots, holes, cross grain, and other defects, 2-inch (2”) diameter by length indicated, pointed at one end.
   2. Wood Deadmen: Timbers measuring eight inches (8”) in diameter and forty-eight inches (48”) long, treated with specified wood preservative treatment by pressure process.
   3. Guys and Tie Wires: ASTM A 641/A 641M, Class 1, #14 galvanized-steel wire, two-strand, twisted.
   4. Guy Springs: Submit manufacturer’s product information for approval.
   5. Tree-Tie Webbing: UV-resistant nylon webbing with brass grommets, size as indicated.
   6. Flags: One-half-inch (1/2”) diameter PVC pipe, length as indicated.

2.5 MISCELLANEOUS PRODUCTS

A. Organic mulch, free from disease pathogens, weeds, chemicals, and other deleterious materials and suitable as a top dressing of trees and shrubs, consisting of chipped bark and/or wood material not larger than four-inches (4”) in length and half inch (1/2”) in width. Submit 1.0 cubic foot sample for approval. Mulch is to be weed-free.

B. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.

C. Burlap: Non-synthetic, biodegradable.

PART 3 - EXECUTION

3.1 GENERAL

A. Proposed locations for trees to be transplanted shall be as shown on Contract Drawings.

3.2 EXAMINATION

A. Examine areas where the Work of this Section will be performed for compliance with requirements and conditions affecting installation and performance.

   1. Verify that no foreign or deleterious material or liquid such as, but not limited to, paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within the work area.
   2. Verify that final grades are completed in accordance with the drawings.

B. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross transplanting areas.

C. For the record, prepare written report, endorsed by the arborist, listing conditions detrimental to transplanting work and tree protection and health.

D. Proceed with transplanting only after unsatisfactory conditions have been corrected and approval to proceed given by Owner.

3.3 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, other facilities, turf areas, and other plants and planting areas from damage caused by transplanting operations. Repair damage to site elements noted above that result from construction activities at no additional cost to City.

B. Utility Locator Service: Notify utility locator service before beginning excavation. All utilities are to be marked and a hard-copy diagram of utility locations from the utilities locator service given to Owner prior to excavation.

C. Locate and clearly identify trees for transplanting.

D. Lay out individual transplant locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Owner's acceptance of layout before transplanting. Make minor adjustments as required.

E. Dig pits immediately prior to moving plants to their respective locations for planting to ensure that they will not be unnecessarily exposed to drying elements or to physical damage.
   1. Circular pits with vertical sides hard-trimmed shall be excavated with tree spade to a depth such that tree, when planted, will sit two-inches (2") to three-inches (3") above surrounding grade.
   2. Sides of pit shall be scarified or roughened by hand to eliminate glazing.
   3. The planting pit shall be prepared per ANSI A300 part 64.4.4.

F. It is not anticipated that planting shall be done where the depth of soil over rock or other underground obstructions is insufficient to accommodate the roots or where pockets in rock or impervious soil will require drainage. If such conditions are encountered in the excavation of planting areas, and if the stone, boulders or other underground obstructions cannot be broken and removed by hand methods in the course of digging plant pits of the usual size, other locations for the planting may be designated by Owner. Removal of rock or other underground obstructions and relocation of plant materials shall be done only as directed by the Owner. If changes in the location of the work or if the removal of rock or other obstructions, other than existing underground utilities, involves additional work, the Contractor shall notify the Owner for approval prior to proceeding.

G. Seepage: Notify Owner if subsoil conditions evidence unexpected water seepage into tree-planting pits.

H. Drainage: Fill planting pit half full of water and time the infiltration rate of the soil. If the drainage rate is less than 1-inch per hour, notify Owner to determine need for subsurface drainage.

I. The Contractor shall dispose of excess excavated planting pit material off site. All soils excavated from James Park shall be considered special non-hazardous waste and disposed of

in accordance with Section 02 06 40. If additional soil materials are needed to fill and compact the holes created by moving the trees, those areas shall be filled with topsoil.

3.4 SIZE OF TREE SPADE

A. The size of the mechanical tree spade to be used for transplanting shall be reviewed and approved by the Owner. A tree spade shall be 12-inches (12”) (minimum) in size for every 1-inch of tree caliper. Minimum size spade shall be 48-inches (48”).

3.5 TRANSPLANTING TREES

A. General: Coordinate the transplanting of trees with the Owner. The Contractor’s Consulting Arborist shall be present to supervise.

B. Orientation Marking: Mark the north side of each tree with non-permanent paint before extracting.

C. Out-of-Season Planting: If planting before or after the in-season period for tree transplant, provide a minimum root-ball diameter of twenty-inches (20”) for each-inch of tree caliper being transplanted.

D. Root-Ball Depth: As determined by the arborist for each species and size of tree and for site conditions at original and planting locations.

E. Extracting with Tree Spade: Obtain Owner’s approval to use tree spade for tree transplanting.
1. Use the same tree spade to extract the tree as will be used to transport and plant the tree
2. Do not use tree spade to move trees larger than the manufacturer's maximum size recommendation for the tree spade being used.
3. When extracting the tree, center the trunk within the tree spade and move tree with a solid ball of earth.

3.6 SETTING TREES

A. Planting Standard: Perform planting according to ANSI A300 (Part 6) unless otherwise indicated.

B. Relocate trees to be transplanted within one working day to locations approved by the Owner.

C. Before planting, verify that root flare is visible at top of root ball. If root flare is not visible, carefully remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements and planting hole depth is appropriate.

D. Ensure that root flare is visible after planting.

E. Orientation: Position the tree so that its north side, marked before extracting, is facing north in its new location.

F. Trees shall be planted in pits to such a depth that the root flare at the plant after settlement will be two-inches (2”) above that at which the plant is currently growing. Trees shall be planted upright with trunks plumb and faced areas as described in the “Orientation” article above.

G. Till a two foot (2’) radius to a depth of 6” outside of root ball or as directed by the Owner after transplanting to have loosened soil for new roots to establish.

H. A saucer shall be formed extending twenty-four inches (24”) beyond edge of individual planting pit to cover tilled area.

I. Slopes: When planting on slopes, set the tree so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

J. Trees shall be thoroughly watered immediately after planting.

3.7 TREE STABILIZATION

A. Trunk Stabilization by Staking and Guying: Install trunk stabilization as follows unless otherwise indicated on Contract Drawings or directed by the Owner.

1. Site-Fabricated Staking Method: Stake transplanted trees sized up to four-inch (4”) caliper. Install number of stakes as indicated.
   a. Retain options for compression springs in subparagraphs below to provide more line flexibility than turnbuckles.
   b. Drive stakes into undisturbed grade outside tree pit soil transition zone as indicated. Avoid penetrating root balls or root masses.
   c. Securely attach specified wire to stakes.
   d. Support trees with specified wire and tree tie webbing from the tree trunk to each stake. Allow one to two inches (1” to 2”) of slack to avoid rigid restraint of the tree.
   e. Attach thirty-six (36”) long by one-half-inch (1/2”) diameter PVC pipe flagging to each wire.

2. Site-Fabricated Guying Method: Guy transplanted trees greater than four-inch (4”) caliper. Install no fewer than three (3) guys spaced equally around tree.
   a. For trees over four-inches (4”) to six-inches (6”) caliper, securely attach guys to specified anchor thirty-inches (30”) long, driven into undisturbed soil outside tree pit as indicated. Avoid penetrating root balls or root masses.
   b. Install one (1) compression spring approved by Owner in each guy assembly.
   c. For trees larger than six-inches (6”) in caliper, anchor guys to wood deadmen buried at least thirty-six (36”)-inches below grade.
   d. Support trees with specified wire and tree tie webbing at contact points with tree trunk and reaching to specified anchor. Allow enough slack to avoid rigid restraint of tree.
   e. Attach thirty-six (36”) long x one-half-inch (1/2”) diameter PVC pipe flagging to each wire.

3.8 MULCHING

A. Organic Mulch: Apply three-inch (3”) average thickness of organic mulch extending twenty-four inches (24”) beyond edge of individual planting pit to cover tilled area, and finish level with adjacent finish grades. Do not place mulch within three-inches (3”) of trunks or stems.

3.9 MAINTENANCE OF TRANSPLANTED TREES

A. Transplanted trees shall be protected and maintained by the Contractor until Substantial Completion, after which the City will assume responsibility for the maintenance.

B. Maintenance shall include watering, weeding, cultivating, mulching, removal of dead branches, resetting plants to proper grade or upright position and restoration of tree planting saucers and other necessary operations.

C. Apply treatments as required to keep tree materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.
   1. Pesticide Application: Apply pesticides and other chemical products and biological control agents as directed and approved by the Owner. Coordinate applications with City's operations and others in proximity to the Work. Notify the Owner before each application is performed.

D. Pruning work shall be completed in accordance with standards established by the American National Standards Institute and the International Society of Arboriculture.

3.10 REPAIR AND REPLACEMENT

A. General: Repair or replace transplanted trees and other plants indicated to remain or be relocated that are damaged by construction operations, in a manner recommended by the arborist and approved by Owner, and with 1.10.A.3 of this Section.
   1. Submit details of proposed pruning and repairs.
   2. Perform repairs of damaged trunks, branches, and roots within 24 hours according to arborist's written instructions.
   3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Owner, and per 1.10.A.3 of this Section

3.11 CLEANUP AND PROTECTION

A. During transplanting, keep adjacent paving and construction clean and work area in an orderly condition.

B. Protect trees from damage due to transplanting operations and operations of other contractors and trades. Maintain protection during transplanting and maintenance periods. Treat, repair, or replace damaged plantings.

C. After planting and before Substantial Completion, remove tags, markings, tie tape, labels, wire, burlap, and other debris from transplanted trees, planting areas, and Project site.

3.12 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Except for materials indicated to be recycled, remove surplus soil, excess excavated material, waste materials, displaced plants, trash, and debris, and legally dispose of them off City’s property.

END OF SECTION 32 96 43

SECTION 33 41 00

STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Pipe and fittings.
2. Catch basins.
3. Inlets.
4. Manholes.
5. Cleanouts.

B. Related Sections:

1. 31 20 00 "Earth Moving" for utility trench preparation.

1.03 SUBMITTALS

A. Product Data: For each type of product indicated. Provide data on pipe materials, pipe fittings and accessories. Provide shop drawings for catch basins, manholes, trench drains and appurtenances.

B. Shop Drawings:

1. Catch basins, Inlets and Manholes: Include plans, elevations, sections, details, frames, covers, and grates per manufacturer.

C. Coordination Drawings: Show pipe sizes, locations, and elevations. Show other piping in same trench and clearances from storm drainage system piping. Indicate interface and spatial relationship between manholes, piping, and proximate structures.

D. Profile Drawings: Show system piping in elevation. Draw profiles at horizontal scale of not less than 1 inch equals 50 feet and vertical scale of not less than 1 inch equals 5 feet. Indicate manholes and piping. Show types, sizes, materials, and elevations of other utilities crossing system piping.

E. Field quality-control reports.

1.04 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 catch basins, manholes and slot drains according to manufacturer's written rigging instructions.

1.05 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:

1. Notify Architect no fewer than two days in advance of proposed interruption of service.
2. Do not proceed with interruption of service without Architect's written permission.

PART 2 - PRODUCTS

2.01 PIPE APPLICATIONS FOR UNDERGROUND STORM SEWERS

A. Polyvinyl Chloride Pipe (PVC):

1. PVC pipe shall be SDR 26 in conformance with ASTM D 3034 for 6-inch to 15-inch pipe or ASTM F-679 for 18-inch or larger pipe, with push-on joints with elastomeric gaskets.

B. Ductile Iron Pipe (DIP):

1. DIP pipe used for sewers shall be Class 50 in conformance with ANSI A 21.51 for pipe and ANSI A-21.11 for joints.

C. Corrugated High-Density Polyethylene Pipe (HDPE):

1. HDPE pipe shall be Advanced Drainage Systems (ADS) N-12 ST 1B (soiltight) Pipe.

2.02 FITTINGS

A. Sewer wyes shall be made of the same material as the main-line piping, shall comply with the appropriate provisions of the Standard Specifications for Water & Sewer Main Construction in Illinois and shall be encased in granular bedding as a minimum.

B. Saddles will only be allowed if the main line piping has a 12-inch diameter or greater. If a connection is to be made where there is no wye and the piping is smaller that 12-inches, a section of pipe shall be removed and a wye inserted with mission couplings and new sections of pipe as needed.

C. Mission couplings shall conform to ASTM C-425. They shall be made of stainless steel with an interior rubber collar and shall have take-up clamps to fit the appropriate outer diameter of the pipe being used. The take-up clamps shall be properly tightened, the sewer shall be tested by the exfiltration method and, after the connection passes, the entire connection shall be encased in granular fill to a minimum of 6-inches all around.

D. Gaskets: Gaskets for push-on joints shall conform to ASTM F-477.

E. Plugs shall be specifically manufactured for the pipelines in which they are to be installed. The plug shall be constructed of a material approved by the City of Evanston and shall provide a permanent watertight installation without permanently sealing the joint.

2.03 CATCH BASINS

A. Precast Concrete Catch Basins: ASTM C 478, precast reinforced concrete.

1. Base Section: 6 inch minimum thickness for floor slab and 4 inch minimum thickness for walls and base riser section, and having a separate base slab or base section with integral floor.
2. Riser Sections: 4 inch minimum thickness, 48 inch diameter, and lengths to provide depth indicated.
3. Top Section: Eccentric cone type, unless concentric cone or flat slab top type is indicated. Top of cone to match grade rings.
4. Grade Rings: 2 or 3 reinforced concrete rings, of 8 to 13 inches total thickness and match

24 inch diameter frame and cover.

5. Gaskets: ASTM C 443, rubber.
6. Steps: Omit steps.
7. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.
8. Channel and Bench: Concrete.

B. Cast in Place Catch Basins:

1. Bottom, Walls, and Top: Reinforced concrete.
2. Channel and Bench: Concrete.
3. Steps: Cast into sidewall at 16 inch intervals.

C. Catch Basin Steps:

1. Material: Ductile iron
2. Wide enough for an adult to place both feet on one step and designed to prevent lateral slippage off the step.

D. Catch Basin Frames and Grates: ASTM A 536 Grade 60 40 18, heavy duty, ductile iron, 24 inch inside diameter by 7 to 9 inch riser with 4 inch minimum width flange, and 26 inch diameter flat grate having small square or short slotted drainage openings.

2.04 TRACER WIRE

A. Tracer wire shall be #10 AWG solid copper conductor with 45 mil HDPE insulated jacket. Jacket color shall comply with ANSI Standard Z535 as reflected in the American Public Work Association Uniform Color Code.

B. Conductor shall be annealed copper (soft drawn). Conductor shall meet or exceed all applicable ASTM specifications including ASTM B3 - Standard Specification for Soft or Annealed Cooper Wire and ASTM B-170 Standard Specification for Oxygen-Free Electrolytic Copper. Conductor shall comply with all applicable requirements of the National Electrical Code

C. Insulation shall be high density, high molecular weight, polyethylene (HDPE). Insulation shall meet or exceed all applicable ASTM specifications including ASTM D1248 - Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable and ASTM D1238 – Standard Specification for Test Methods for Melt Flow Rates of Thermoplastics by Extrusion Plastometer.

2.05 TRACER WIRE CONNECTORS

A. Tracer wire connectors shall be lockable type specifically manufactured for use in underground tracer wire installations.

B. Connectors shall be dielectric silicon filled to seal out moisture and prevent corrosion.

C. Connectors shall be designed to receive 10 AWG tracer wire and shall be rated for 600 volts.

D. Non-locking, friction fit, twist-on or taped connectors are not acceptable. Twisting of copper wiring is not acceptable.

2.06 INLETS

A. All inlets provided shall be in accordance with the guidelines set forth by the City of Evanston.

B. Manufacturer: Advanced Drainage System (ADS)

1. Basin: Nyloplast Drain Basin and Inline Drain system, diameter to match pipe size as shown

on the Contract Drawings.

2. Grate in Lawn Areas: Standard ductile iron grate with light-duty load rating, diameter to match pipe size as shown on the Contract Drawings.

2.07 CLEANOUT

A. Cleanouts shall be Nyloplast Drainage Systems Inline Drains as supplied by ADS or approved equal.

B. Cleanout covers shall be solid lid, ductile iron with locking device.

C. Adapters and accessories shall be of the size and type as recommended by the manufacturer of the pipe underdrain.

2.08 MANHOLES

A. Precast Concrete Manholes: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for rubber gasket joints.

1. Ballast: Increase thickness of precast concrete sections or add concrete to base section, as required to prevent floatation.

2. Base Section: 6-inch (150-mm) minimum thickness for floor slab and 4-inch (100-mm) minimum thickness for walls and base riser section, and having a separate base slab or base section with integral floor.

3. Riser Sections: 4-inch (100-mm) minimum thickness, 48-inch (1220-mm) diameter, and lengths to provide depth indicated.

4. Top Section: Eccentric cone type, unless concentric cone or flat-slab-top type is indicated. Top of cone of size that matches grade rings.

5. Gaskets: ASTM C 443 (ASTM C 443M), rubber.

6. Grade Rings: Include 2 reinforced-concrete rings, of 6- to 8-inch (152- to 229-mm) total thickness, that match a 24-inch- (610-mm-) diameter frame and cover.

7. Steps: Omit steps.

8. Pipe Connectors: ASTM C 923 (ASTM C 923M), resilient, of size required, for each pipe connecting to base section.

9. Precast subsurface structures shall be rated to accommodate AASHTO HS-20 loading.

B. Manhole Frames and Covers: ASTM A-48, Class 35B, gray cast iron. Equip on-site manhole covers with lock-bolt or approved locking mechanism device. Include indented top design with lettering cast into cover:

1. Storm Drainage Piping Systems: Raised flush letters per current code.

2. Install ADA [American Disabilities Act] approved grates for catch basins located within pedestrian path of travel.

3. Pipe Connectors: ASTM C 923 (ASTM C 923M), resilient, of size required, for each pipe connecting to base section.

4. Precast subsurface structures shall be rated to accommodate AASHTO HS-20 loading.

PART 3 - EXECUTION

3.01 PREPARATION OF FOUNDATION FOR BURIED STORM SEWERAGE SYSTEMS

A. Grade trench bottom to provide a smooth, firm, stable, and rock free foundation, throughout the length of the pipe.

B. Remove unstable, soft, and unsuitable materials at the surface upon which pipes are to be laid, and backfill with clean sand or pea gravel to indicated level.

C. Shape bottom of trench to fit bottom of pipe. Fill unevenness with tamped sand backfill. Dig bell holes at each pipe joint to relieve the bells of all loads and to ensure continuous bearing of the pipe barrel on the foundation.

3.02 INSTALLATION

A. Installation shall meet or exceed all applicable federal, state and local requirements, referenced standards and conform to codes and ordinances of authorities having jurisdiction.

B. All installation shall be in accordance with manufacturer’s published recommendations.

C. General Locations and Arrangements: Drawings (plans and details) indicate the general location and arrangement of the underground storm sewerage system piping. Location and arrangement of piping layout take into account many design considerations. Install the piping as indicated, to the extent practical.

D. Maximum spacing between storm drain manholes or inlets shall be 300 feet.

E. Install piping beginning at low point of systems, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings in accordance with manufacturer's recommendations for use of lubricants, cements, and other installation requirements. Maintain swab or drag in line and pull past each joint as it is completed.

F. Use manholes or catch basins for changes in direction, except where a fitting is indicated. Use fittings for branch connections, except where direct tap into existing sewer is indicated.

G. Use proper size increasers, reducers, and couplings, where different size or material of pipes and fittings are connected. Reduction of the size of piping in the direction of flow is prohibited.

H. Install piping pitched down in direction of flow, at minimum slope of 1 percent, except where indicated otherwise.

I. Extend storm sewerage system piping to connect to building storm drains, of sizes and in locations indicated.

J. Tunneling: Install pipe under streets or other obstructions that cannot be disturbed, by tunneling, jacking, or a combination of both.

3.03 CATCH BASINS AND MANHOLES

A. Install complete with accessories, as indicated.

B. Set tops of frames and covers flush with finish surface where occurring in pavement or concrete pads.

C. Place precast sections as indicated and install according to ASTM C 891.

1. Provide rubber joint gaskets complying with ASTM C 443 at joints of sections.

2. Apply bituminous mastic coating at joints of sections.

3.04 CLEANOUTS

A. Install cleanouts and extension from sewer pipe to cleanout at grade as indicated. Set cleanout frame and cover in concrete block 18 by 18 by 12 inches deep, except where location is in concrete paving. Set top of cleanout 1 inch above surrounding earth grade or flush with grade when installed in paving.

3.05 CLOSING ABANDONED STORM SEWERAGE SYSTEM

A. Close open ends of abandoned underground piping that is indicated to remain in place. Provide sufficiently strong closures to withstand hydrostatic or earth pressure that may result after ends of abandoned utilities have been closed.

Close open ends of concrete or masonry utilities with not less than 8 inch thick masonry bulkheads.

3.06 INSTALLATION OF IDENTIFICATION

A. Install continuous warning wire during back filling of trench for underground water service piping. Locate 6 to 8 inches below finished grade, directly over piping.

3.07 TRACER WIRE

A. Tracer wire shall be color coded to match utility. Colors utilized on the Urbana-Champaign Campus include red for electric; yellow for natural gas, compressed air and steam; green for storm and sanitary sewer; orange for communications; blue for potable water and purple for non-potable and chilled water.

B. Tracer wire shall be provided full length for all buried utilities including natural gas, steam, chilled water, compressed air, water, non-potable water and other utilities as indicated on Construction Documents.

C. Tracer wire shall be installed straight parallel to pipe. Tracer wire shall be installed in manner that prevents distortion of signal. Tracer wires shall not be crossed. Wires shall not be looped upon themselves. Multiple active wires shall not be installed in close proximity to one another.

D. Tracer wire shall be provided in conjunction with all methods of utility installation including open trench and directional drilling.

E. Open trench method

1. Tracer wire shall be placed a minimum of 8 inches above buried natural gas piping and nonmetallic piping for any service. For other utility piping systems tracer wire shall be laid directly upon pipe and attached at 8-10 ft. intervals with non-conductive tape. Additional attachment shall be provided at offsets and fittings in piping system. Tracer wire shall be placed carefully and great care shall be exercised during backfilling operations to maintain physical integrity and position relative to piping.

2. Splices in tracer wire shall be kept to an absolute minimum. When splices are necessary they shall be made with tracer wire connectors as specified above. Other splicing methods not allowed.

F. Directional drilling method

1. Two tracer wires shall be provided with one wire as backup.

2. Tracer wires shall be pulled through bore hole in conjunction with utility pipe. Wires shall be located on opposite sides of utility pipe.

3. Tracer wire spices are not allowed in drilled sections.

G. Tracer wires shall be interconnected at intersections of mainlines and branches utilizing single three-way connector at each point of connection.

H. At a minimum, a terminal box shall be provided at each building utility service entrance and shall

be located above piping within 5 ft. of point of entry into building.

I. Terminal boxes shall be located no greater than 1,000 linear feet of developed pipe length apart.

J. Terminal boxes shall not be located in streets, drives, parking lots or other areas subject to vehicular traffic. Terminal boxes shall not be located in areas where access to box is impeded.

K. Terminal boxes shall be installed flush with finished grade and centered in grade level concrete pad. Concrete pad shall be 18” by 18” minimum and shall be 6” thick.

L. PVC pipe riser shall be firmly attached to bottom of terminal box housing and extended downward to an elevation approximately 12” above piping. Riser shall serve as a vertical conduit for guiding tracer wires into bottom of terminal box.

M. Care shall be taken to extend tracer wire from utility pipe to terminal box in an orderly manner as backfill is placed.

N. End of each tracer wire shall be properly landed on dedicated terminal within terminal box and securely tightened. 12-18” excess length shall be provided for each wire within box. Each terminal shall be clearly identified with permanent label. Where tracer wires for multiple utilities are terminated care shall be taken to ensure accuracy of identification at both ends.

O. Final testing of each tracer wire shall be performed after backfill is complete and terminal boxes have been permanently installed and wires terminated. Test shall be witnessed by AE and Owner. It may be advisable for Contractor to perform preliminary test(s) during utility installation prior to final backfill and restoration. Testing shall be accomplished using typical low frequency line tracing equipment. Continuity testing in lieu of actual line tracing is not acceptable.

END OF SECTION 33 41 00

2026 JAMES PARK RENOVATIONS

300 DODGE AVENUE, EVANSTON, IL 60202

(BID #26-15)

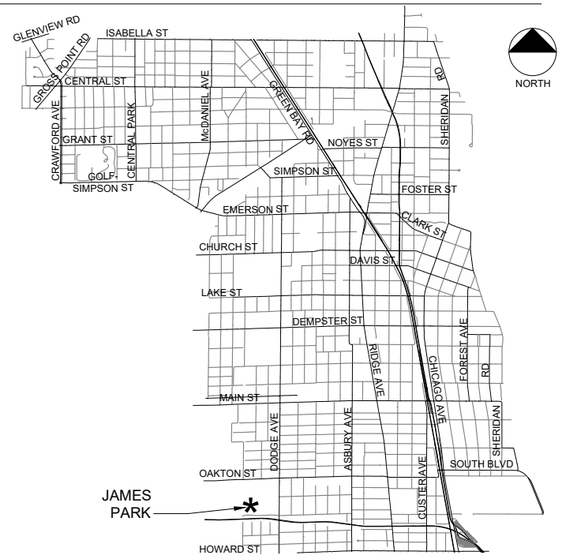
OWNER

CITY OF EVANSTON
PUBLIC WORKS AGENCY
CONTACT: KENON BOEHM
909 DAVIS STREET
EVANSTON, ILLINOIS 60201
224-296-4453 (PHONE)
kboehm@cityofevanston.org

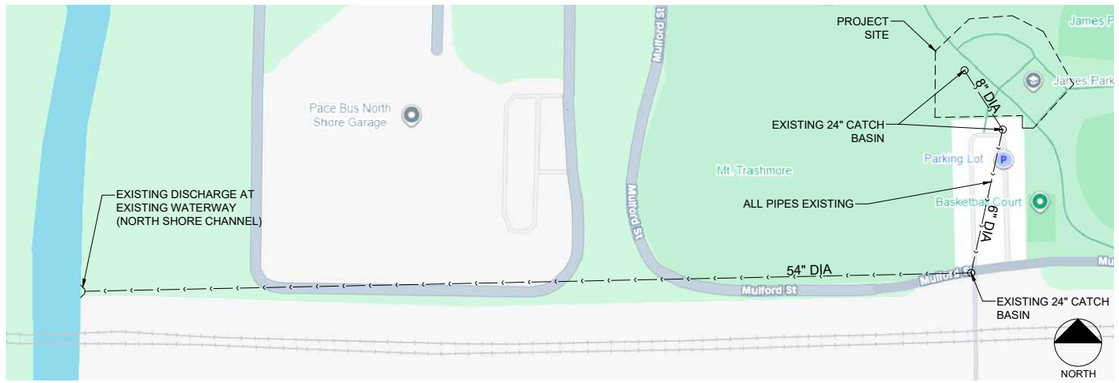
NOTE

THE EXACT LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES FOR UTILITY LOCATION CALL J.U.L.I.E. 1-800-892-0123, CITY OF EVANSTON UTILITIES DIVISION 847-866-2945, AND CITY OF EVANSTON FACILITIES MANAGEMENT DIVISION 847-448-8181.

LOCATION MAP



SEWER ROUTING MAP



Contact the Metropolitan Water Reclamation District of Greater Chicago 2 days before starting work.

P (708) 588-4055
E WMOJobStart@mwrd.org

DRAINAGE CERTIFICATION:

STORMWATER FLOWS AND VELOCITIES WILL NOT INCREASE EITHER UPSTREAM OR DOWNSTREAM AS A RESULT OF THE PROPOSED DEVELOPMENT.

INDEX OF DRAWINGS

DRAWING NO.	DRAWING TITLE
---	COVER SHEET
G-01	JAMES PARK LOCATION PLAN AND NOTES
G-02	GENERAL NOTES - MWRD
R-01	REGIONAL DEMOLITION PLAN
R-02	PATHWAY DEMOLITION PLAN
R-03	PATHWAY DEMOLITION PLAN
R-04	PATHWAY DEMOLITION & TRANSPLANT PLAN
R-05	FIELD HOUSE DEMOLITION & TRANSPLANT PLAN
DR-01	FIELD HOUSE UTILITY PLAN
DR-02	DRAINAGE AREAS
C-01	REGIONAL SITE PLAN
C-02	PATHWAY SITE PLAN
C-03	PATHWAY SITE PLAN
C-04	PATHWAY SITE PLAN
C-05	FIELD HOUSE SITE PLAN
C-05.1	FIELD HOUSE DIMENSION PLAN
C-05.2	FIELD HOUSE GRADING PLAN
C-05.3	PLAYGROUND LAYOUT PLAN
C-06	SPLASH PAD ALTERNATE 1
C-06.1	SPLASH PAD ALTERNATE 2
IR-01	IRRIGATION PLAN
IR-02	IRRIGATION PLAN CONT.
PP-01	WEST PATH PROFILE
PP-02	EAST PATH PROFILE
PP-03	EAST PATH PROFILE CONT.
P-01	SOILS PLAN
P-02	PLANTING PLAN - TREES
P-02.1	PLANTING PLAN - SHRUB AND HERBACEOUS
P-02.2	PLANTING PLAN - HILLSIDE ALTERNATE 3
D-01	DETAILS
D-02	DETAILS
D-03	DETAILS
D-04	DETAILS
D-05	DETAILS
D-06	DETAILS
S-0	STRUCTURAL - GENERAL NOTES
X-01	STRUCTURAL - RETAINING WALL PLAN AND ELEVATION
X-02	STRUCTURAL - STRUCTURAL BASE ALTERNATE 4
	WEST PATH CROSS SECTIONS
	EAST PATH CROSS SECTIONS

City of Evanston

City of Evanston

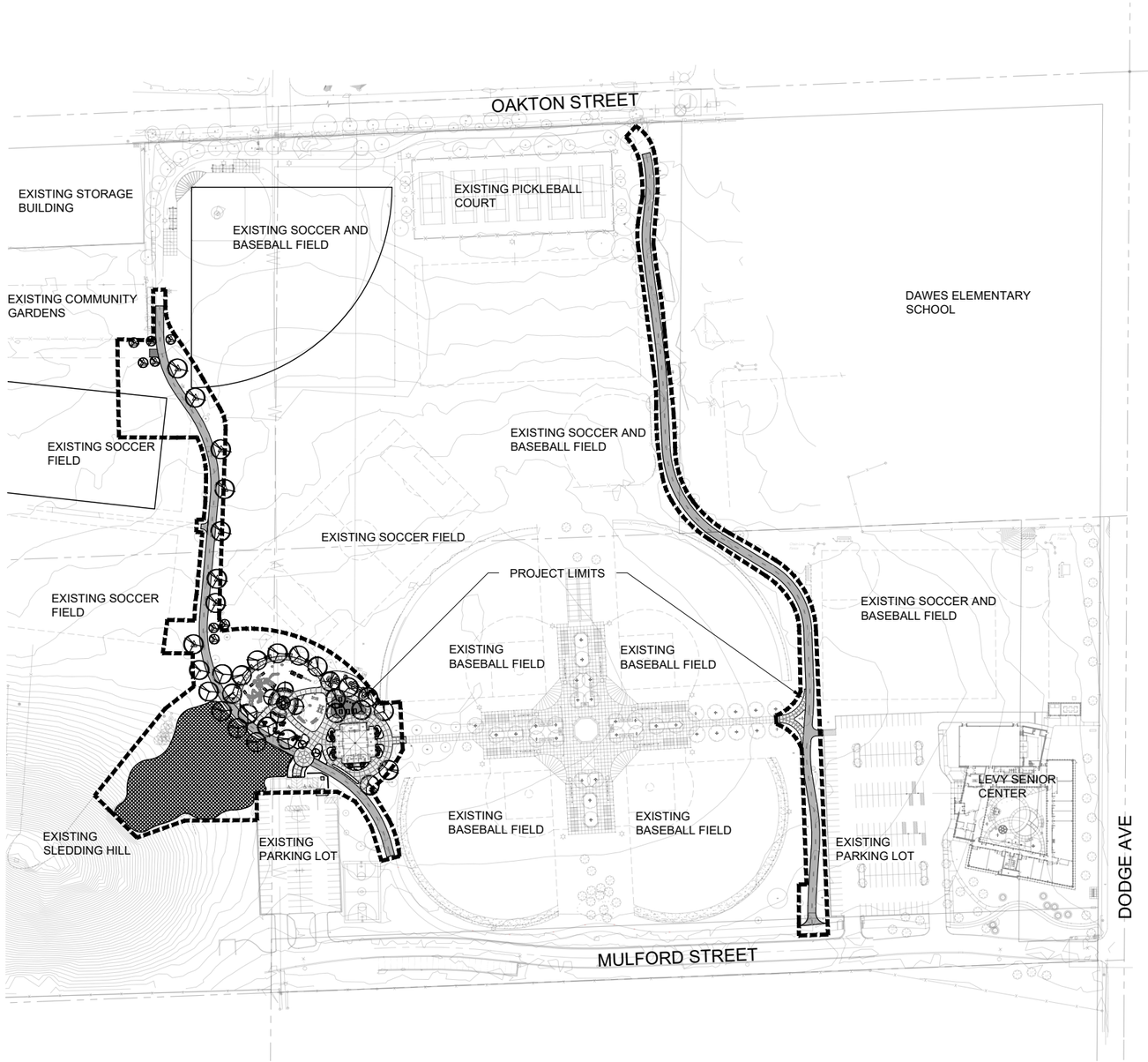
Public Works Agency

GENERAL NOTES

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES. THE LOCATION OF PUBLIC AND PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND THE CITY DOES NOT GUARANTEE THEIR ACCURACY. THE CONTRACTOR WILL BE REQUIRED TO ASCERTAIN THE EXACT LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL EXISTING UTILITIES SO THAT THEIR FACILITIES MAY BE LOCATED AND ADJUSTED OR MOVED.
2. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR MUST CALL "J.U.L.I.E" AT 1-800-892-0123 AND CITY OF EVANSTON FACILITIES MANAGEMENT AT 847-866-2916 FOR FIELD LOCATIONS OF BURIED UTILITIES. A MINIMUM OF 48 HOUR NOTICE IS REQUIRED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ABOVE AND BELOW GROUND UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE UTILITY PROVIDER. THIS WORK SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.
4. DURING CONSTRUCTION, THE CONTRACTOR IS REQUIRED, AT THEIR SOLE EXPENSE, TO HAVE AVAILABLE A WATER TRUCK OR SIMILAR EQUIPMENT TO CONTROL DUST. IF NECESSARY, THE CONTRACTOR SHALL BE REQUIRED TO CONTROL DUST DURING NON-WORKING HOURS.
5. ALL EXCESS MATERIALS (CONCRETE, PIPING, EXCAVATED SOILS, SURPLUS MATERIALS, ETC.) SHALL BE LEGALLY DISPOSED OF OUTSIDE THE LIMITS OF THE PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SELECT DUMP SITES AND OBTAIN PERMISSION AND ALL NECESSARY PERMITS.
6. THE CONTRACTOR SHALL GIVE NOTICES AND COMPLY WITH APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ALL PUBLIC AUTHORITIES BEARING ON SAFETY OF PERSONS OR PROPERTY OR THEIR PROTECTION FROM DAMAGE, INJURY OR LOSS.
7. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH ANY OTHER PROJECTS WITHIN THE AREA THAT ARE UNDER CONSTRUCTION AT THE SAME TIME.
8. JAMES PARK IS A FORMER LANDFILL. AS A RESULT ALL EXCAVATED SOILS SHALL BE CONSIDERED SPECIAL NON-HAZARDOUS WASTE. THE CONTRACT SHALL HANDLE AND DISPOSE OF EXCAVATED SOILS AS DETAILED IN THE SPECIFICATIONS. ALL COSTS FOR SOIL EXCAVATION, STOCKPILING, LOADING, TRUCKING, DISPOSAL, AND THE LIKE SHALL BE INCLUDED IN THE BASE BID PRICE.

EROSION CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES WILL BE INSTALLED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATION. ALL CONSTRUCTION ACTIVITIES WILL BE IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM STORM WATER PERMITS ILR10 AND ILR40.
2. THE CONTRACTOR SHALL SUBMIT A DETAILED EROSION CONTROL SCHEDULE FOR APPROVAL.
3. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE FUNCTIONAL BEFORE THE PROJECT SITE IS OTHERWISE DISTURBED.
4. ALL DISTURBED AREAS SHALL BE SEEDED AS SOON AS PRACTICAL AFTER CONSTRUCTION ACTIVITIES IN THOSE AREAS HAVE CONCLUDED. ALL ERODIBLE/BARE AREAS SHALL BE SEEDED EVERY SEVEN (7) DAYS WITH TEMPORARY EROSION CONTROL SEEDING. IF A TOPSOIL STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN THREE (3) DAYS, EROSION CONTROL MEASURES WILL BE PROVIDED.
5. STOCKPILES AND MATERIAL STORAGE ARE PROHIBITED IN SPECIAL MANAGEMENT AREAS INCLUDING WETLANDS, WETLAND BUFFERS, AND FLOOD PLAINS. LOCATION OF STOCKPILE MUST BE APPROVED BY THE ENGINEER AND HAVE PROPER EROSION CONTROL MEASURES.
6. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED TO THE SATISFACTION OF THE CITY.
7. WHEN TEMPORARY DRAINAGE IS ESTABLISHED, EROSION CONTROL MEASURES SHALL BE REQUIRED.
8. ACCESS DRIVES, PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH AND VEHICLE WASH DOWN FACILITIES SHALL BE PROVIDED TO PREVENT SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED BEFORE THE END OF EACH WORKDAY AND AS NEEDED OR OTHERWISE DIRECTED BY THE CITY.
9. CLEANING OF VEHICLES AND EQUIPMENT, INCLUDING CONCRETE MIXERS, SHALL BE PERFORMED IN A MANNER TO REDUCE THE AMOUNTS OF POLLUTANTS TRIBUTARY TO STORM SEWERS AND OPEN WATERS TO THE MAXIMUM EXTENT PRACTICAL.
10. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTION RUNOFF. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
11. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL SYSTEMS WHEN THE HEIGHT OF SEDIMENT EXCEEDS ONE-HALF OF THE HEIGHT OF THE FILTER DEVICE.
12. ALL EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE AND UNTIL PERMANENT SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATIONAL.
13. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.
14. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES PERIODICALLY AND WITHIN 24 HOURS OF ANY STORM EXCEEDING $\frac{1}{2}$ INCH PRECIPITATION. DAMAGED OR INEFFECTIVE EROSION CONTROL MEASURES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR WITHIN 24 HOURS. EROSION CONTROL SYSTEMS REPLACED DUE TO SEDIMENT LOADING WILL BE INCLUDED IN THE BASE BID PRICE.
15. THE COST OF REMOVING SEDIMENT OR REPAIRING EROSION CONTROL SYSTEMS SHALL BE INCLUDED IN THE BASE BID PRICE.



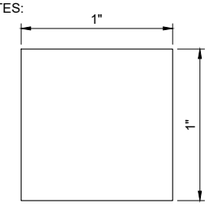
City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 200'-0"

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

LOCATION PLAN AND NOTES

SHEET NO.

G-01

A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
   - STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   - STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY AND WATER MAIN CONSTRUCTION;
   - CITY OF EVANSTON MUNICIPAL CODE;
   - THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
   - IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055 OR SEND EMAIL NOTIFICATION WITH PROJECT NAME, LOCATION, AND PERMIT NUMBER TO WMOJOBSTART@MWRD.ORG).
2. THE CITY OF EVANSTON ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS 579.70=0 FT. CITY OF EVANSTON DATUM, 589.70=0.00; CCD=579.88.
2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.
5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.
6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.
8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.
9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.
10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.
2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.
3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).
5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
VITRIFIED CLAY PIPE	ASTM C-700	ASTM C-425
REINFORCED CONCRETE SEWER PIPE	ASTM C-76	ASTM C-443
CAST IRON SOIL PIPE	ASTM A-74	ASTM C-564
DUCTILE IRON PIPE	ANSI A21.51	ANSI A21.11
POLYVINYL CHLORIDE (PVC) PIPE		
6-INCH TO 15-INCH DIAMETER SDR 26	ASTM D-3034	ASTM D-3212
18-INCH TO 27-INCH DIAMETER F/DY=46	ASTM F-679	ASTM D-3212
HIGH DENSITY POLYETHYLENE (HDPE)	ASTM D-3350 ASTM D-3035	ASTM D-3261,F-2620(HEAT FUSION) ASTM D-3212,F-477 (GASKETED)
WATER MAIN QUALITY PVC		
4-INCH TO 36-INCH	ASTM D-2241	ASTM D-3139
4-INCH TO 12-INCH	AWWA C900	ASTM D-3139
14-INCH TO 48-INCH	AWWA C905	ASTM D-3139

THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
POLYPROPYLENE (PP) PIPE		
12-INCH TO 24-INCH DOUBLE WALL	ASTM F-2738	D-3212, F-477
30-INCH TO 60-INCH TRIPLE WALL	ASTM F-2764	D-3212, F-477

8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE ¾" TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NO LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.
10. MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS ALL BE BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.
11. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
    - 11.a. A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SHEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE SADDLE OF HUB-TEE SADDLE.
    - 11.b. REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
    - 11.c. WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.
12. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATERMAIN, THE SEWER SHALL BE CONSTRUCTED TO WATERMAIN STANDARDS OR IT SHALL BE INCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE
15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THE CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.
16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.
17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.
18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCE SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMET CONTROL

1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.
3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
   - 5.1. UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
   - 5.2. ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTED SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.
9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.
10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.
11. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.
12. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).
13. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
14. SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.
15. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.
16. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.
17. THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER ARE FOR GREEN INFRASTRUCTURE PRACTICES.
18. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGED TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM
20. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.
21. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.
22. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.
23. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECT BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

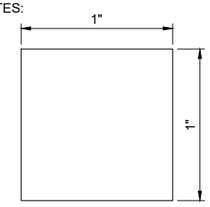
City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE:

REVISIONS:

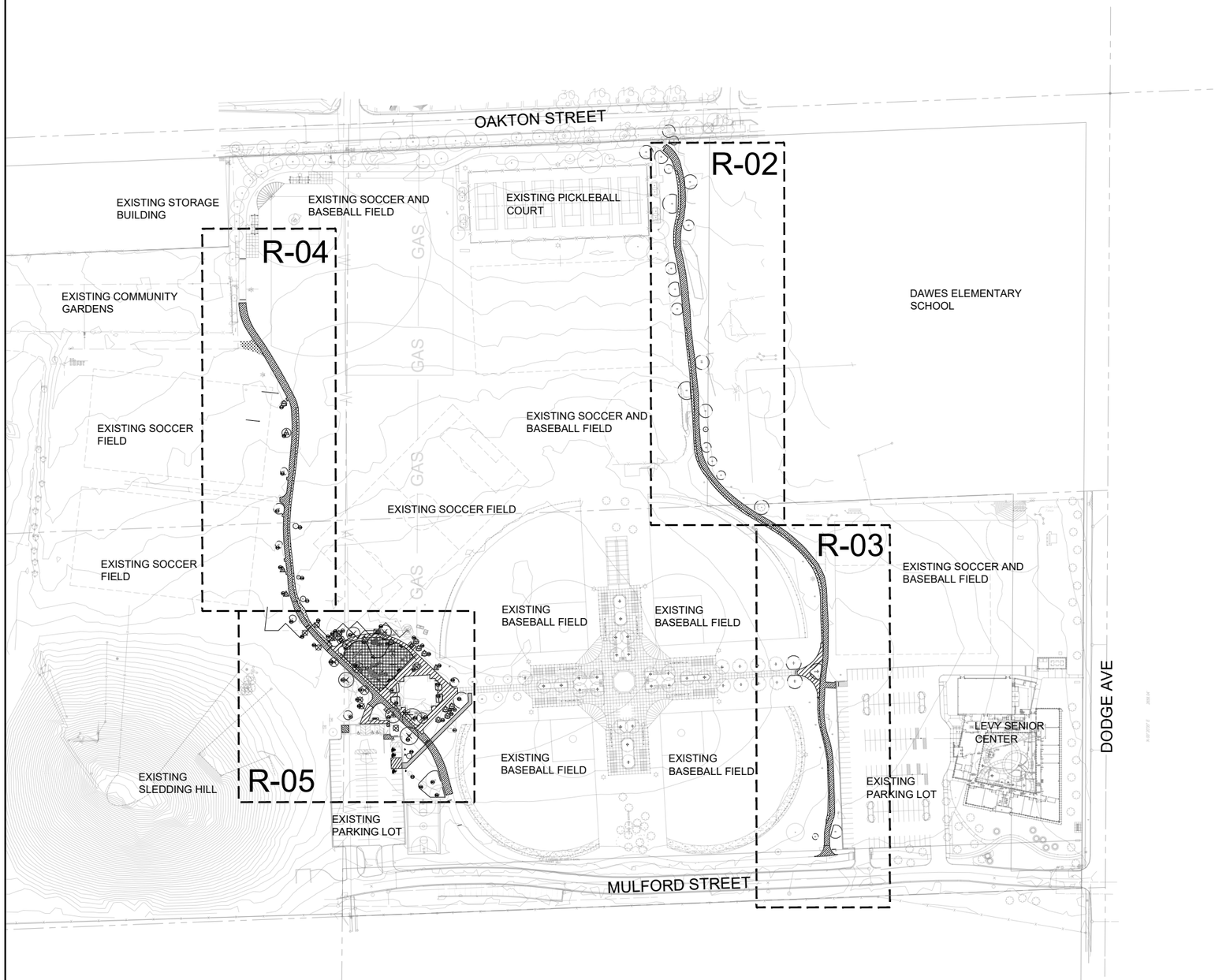
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

MWRD NOTES

SHEET NO.

G-02



DEMOLITION NOTES

1. BEFORE ANY EXCAVATION, CALL J.U.L.I.E. AT 1-800-892-0123 AND THE CITY OF EVANSTON'S FACILITIES MANAGEMENT DIVISION AT 847-866-2974 TO LOCATE EXISTING UTILITIES ON SITE. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE LOCATIONS OF ALL BURIED UTILITIES IN THE AREAS OF WORK BEFORE STARTING OPERATIONS. THE CONTRACTOR SHALL BE LIABLE FOR COST OF REPAIRING OR REPLACING ANY BURIED CONDUITS, CABLES OR PIPING DAMAGED DURING THE INSTALLATION OF THIS WORK.
2. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER SITE FEATURES TO REMAIN FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUTS AND OTHER HAZARDS CREATED BY SITE IMPROVEMENT OPERATIONS.
3. CONTRACTOR SHALL CAREFULLY MAINTAIN PRESENT GRADE AT BASE OF ALL EXISTING TREES TO REMAIN AND PREVENT ANY DISTURBANCE OF EXISTING TREES. CONTRACTOR TO PROTECT EXISTING TREES TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, BRUISING OF BARK AND SMOTHERING TREES BY STOCKPILING EXCAVATION AND CONSTRUCTION MATERIALS WITHIN THE DRIP LINE.
4. CONTRACTOR SHALL RESTORE ALL AREAS OF REMOVALS AND DISTURBED AREAS WITH TOPSOIL AND SEED.
5. CONTRACTOR AT ALL TIMES SHALL KEEP THE SITE CLEAR OF RUBBISH AND DEBRIS. ALL PAVEMENT AND DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF LEGALLY.
6. CONTRACTOR SHALL REMOVE EVERYTHING NECESSARY TO COMPLETE CONSTRUCTION INCLUDING ALL NECESSARY CLEARING AND GRUBBING. LABELS ARE FOR CONVENIENCE ONLY. THE CONTRACTOR SHALL VERIFY REMOVALS PRIOR TO SUBMITTING A BID FOR WORK ON THIS PROJECT.
7. SAWCUT ALL PAVEMENTS AND/OR CURB AND GUTTERS AT EDGES OF AREAS SCHEDULED FOR REMOVAL. COST FOR SAWCUTTING SHALL BE INCIDENTAL TO THE CONTRACT.
8. CONTRACTOR SHALL RESTORE ANY PAVEMENTS DAMAGED DURING THE WORK TO PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST.
9. CONTRACTOR SHALL MEET THE IDOT STANDARD 701801-06 AT ALL AREAS WHERE THE MULTIUSE PATH IS CLOSED FOR CONSTRUCTION. CONTRACTOR SHALL INSTALL "SIDEWALK CLOSED AHEAD" SIGNS IN LIEU OF "SIDEWALK CLOSED USE OTHER SIDE" SIGNS.

NORTH

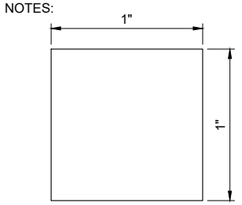
City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 200'-0"

REVISIONS:

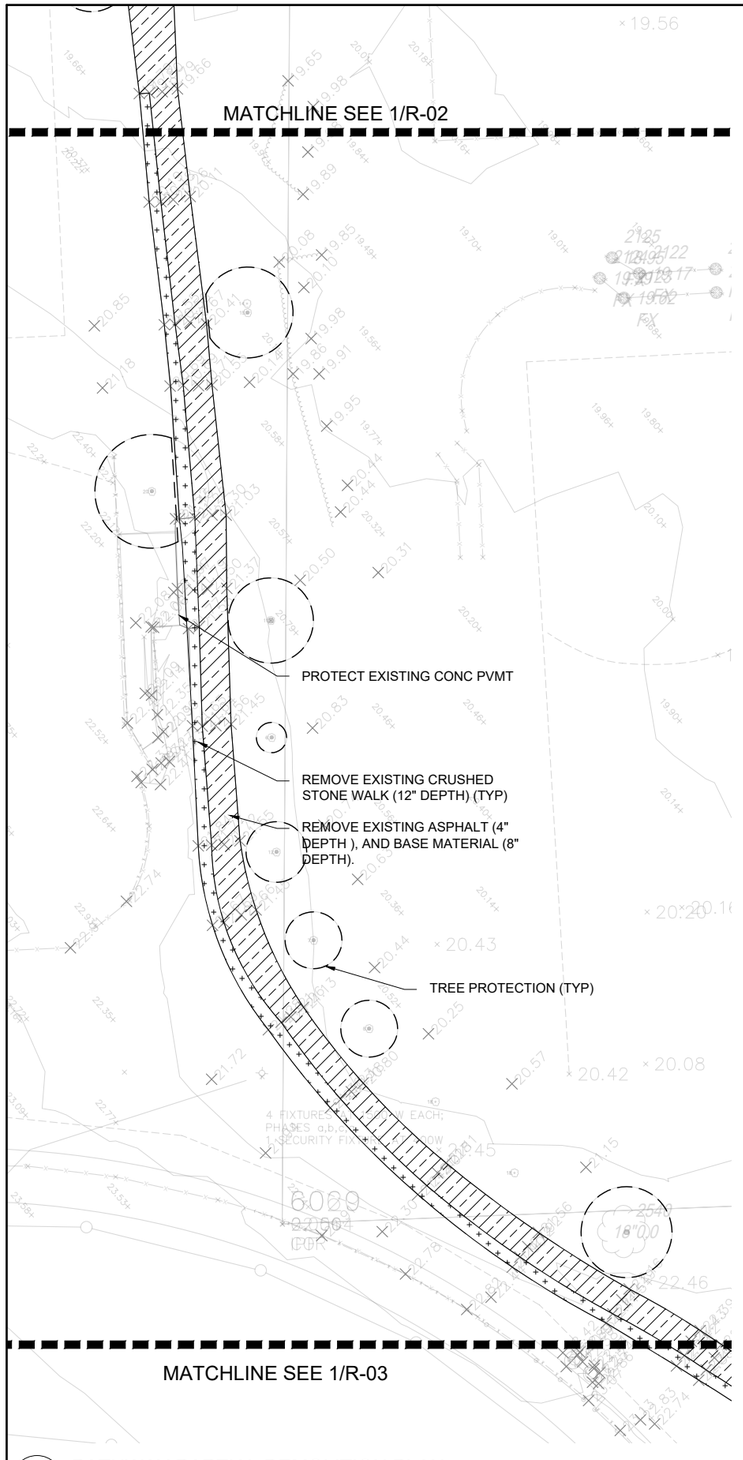
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

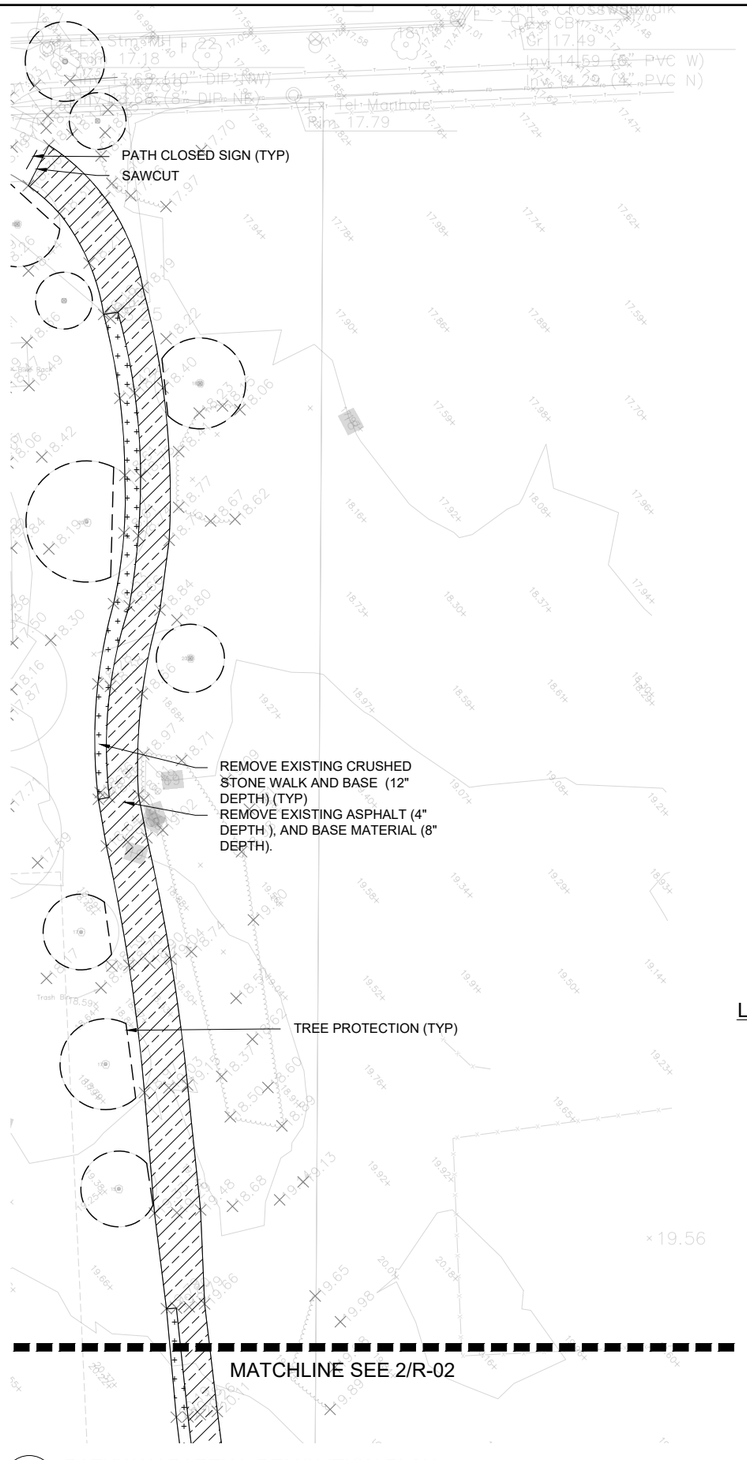
REGIONAL DEMOLITION PLAN

SHEET NO.

R-01



2 PATHWAY PARTIAL DEMOLITION PLAN



1 PATHWAY PARTIAL DEMOLITION PLAN

LEGEND

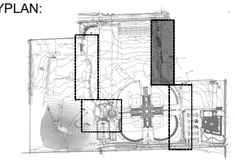
- 8' H CL CONSTRUCTION FENCE (DRIVEN POSTS)
- TREE PROTECTION FENCE (TO BE PLACED AT DRIPLINE)
- REMOVAL ITEM
- REMOVAL AREA - CONCRETE TO 9" DEPTH
- REMOVAL AREA - ASPHALT TO 12" DEPTH
- REMOVAL AREA - CRUSHED STONE PATH TO 12" DEPTH
- REMOVAL AREA - PLAYGROUND

NORTH

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

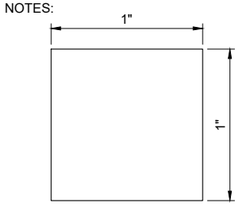
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

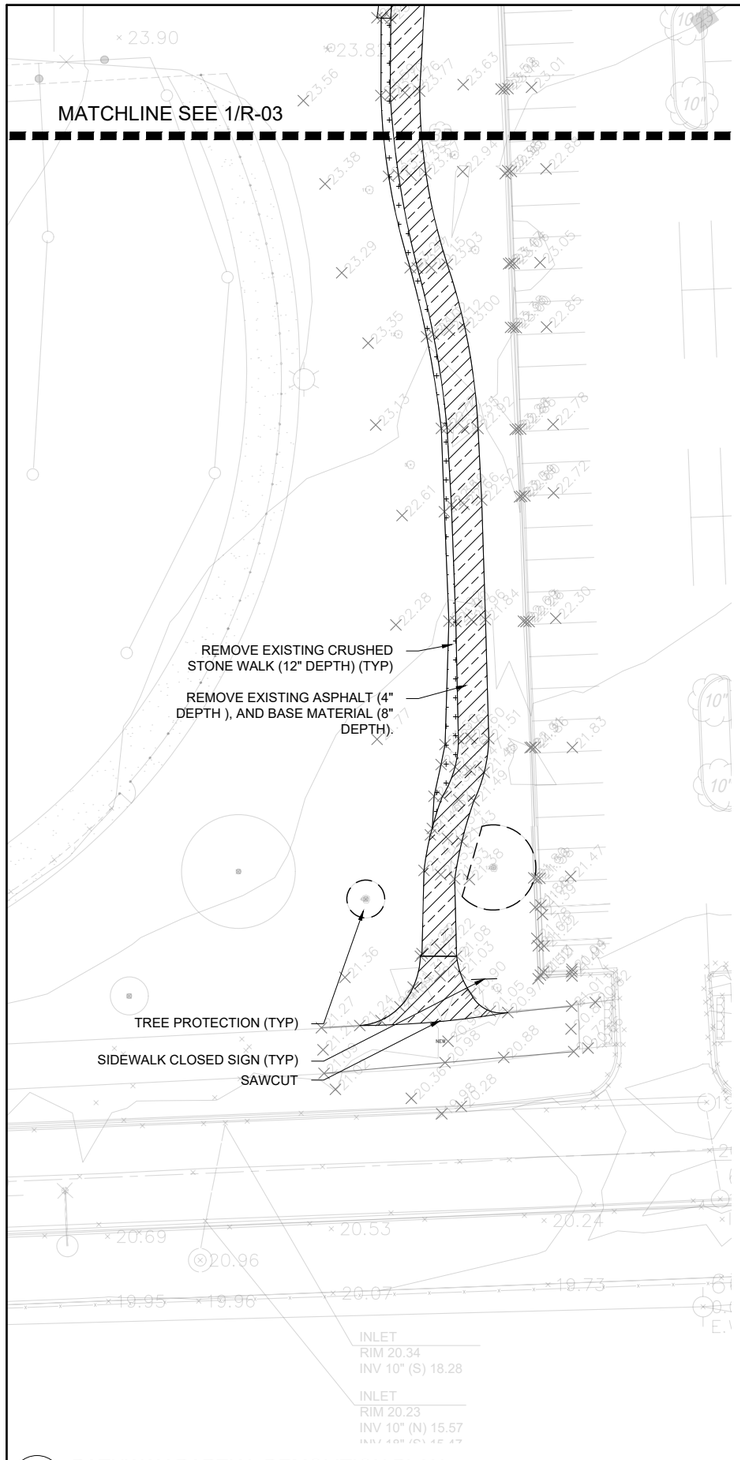
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

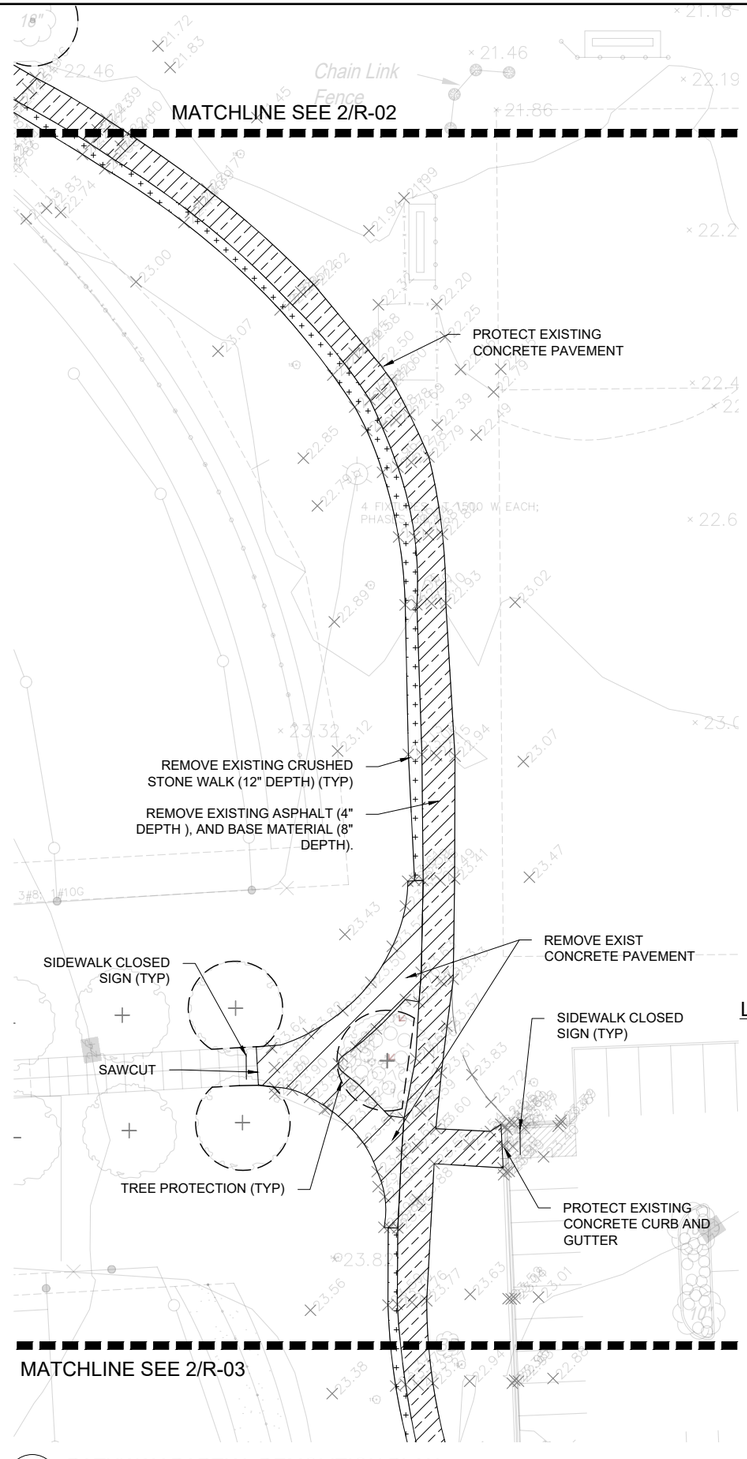
PATHWAY DEMOLITION PLAN

SHEET NO.

R-02



2 PATHWAY PARTIAL DEMOLITION PLAN



1 PATHWAY PARTIAL DEMOLITION PLAN

LEGEND

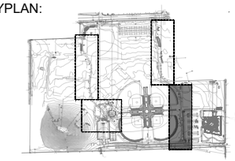
- 8' H CL CONSTRUCTION FENCE (DRIVEN POSTS)
- TREE PROTECTION FENCE (TO BE PLACED AT DRIPLINE)
- REMOVAL ITEM
- REMOVAL AREA - CONCRETE TO FULL DEPTH
- REMOVAL AREA - ASPHALT TO 12" DEPTH
- REMOVAL AREA - CRUSHED STONE PATH TO 12" DEPTH
- REMOVAL AREA - PLAYGROUND

NORTH

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

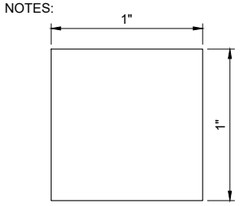
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

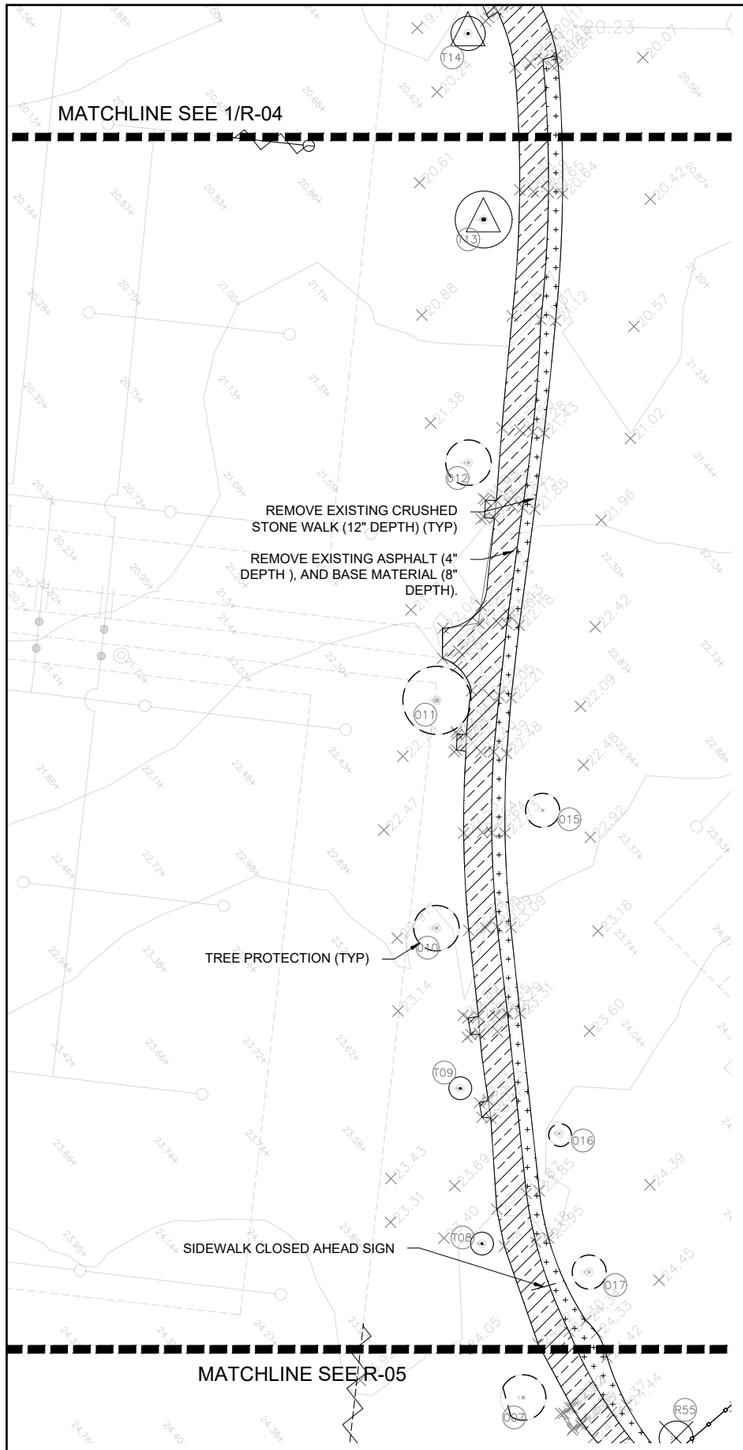
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

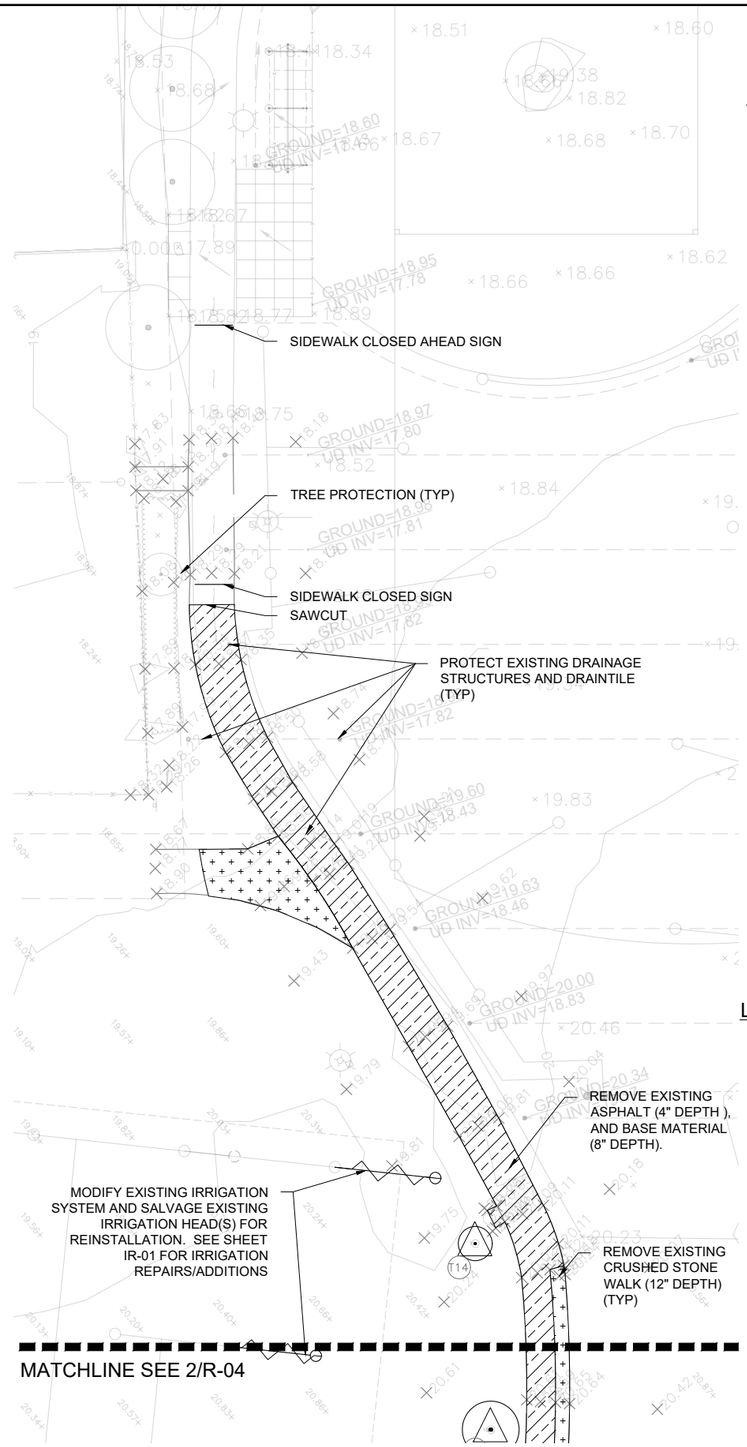
PATHWAY DEMOLITION PLAN

SHEET NO.

R-03



2 PATHWAY PARTIAL DEMOLITION PLAN



1 PATHWAY PARTIAL DEMOLITION PLAN

TREE TRANSPLANTS

KEY	BOTANICAL NAME	SIZE	CONDITION
T13	GLEDITSIA TRIACANTHOS INERMIS	6"	GOOD
T14	GLEDITSIA TRIACANTHOS INERMIS	5"	FAIR

GENERAL NOTES - TREE TRANSPLANTING

1. PRIOR TO TRANSPLANTING TREES, CONTRACTOR TO HAVE OLD PATHWAY FOOTPRINT EXCAVATED TO FULL DEPTH.
2. NEW PATHWAY STAKEOUT COMPLETED WITH ALL PROPOSED ELEVATIONS TO ALLOW FOR SUCCESSFUL TREE TRANSPLANT LOCATION AND ELEVATIONS.
3. ALL TREES TO BE DUG VIA 90" TREE SPADE AND DIRECT PLANTED IN THE SAME DAY.
4. ALL TREES TO RECEIVE GATOR BAGS AND TYPICAL MULCH RINGS PER DETAIL. WATERING TO BE RESPONSIBILITY OF CONTRACTOR. QTY OF WATER TO BE DETERMINED BASED UPON MEASURED DBH.
5. ALL TRANSPLANTS TO RECEIVE TREE PROTECTIVE FENCING FOLLOWING FINAL PLANTING.

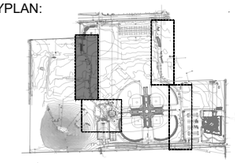
LEGEND

- 8' H CL CONSTRUCTION FENCE (DRIVEN POSTS)
- TREE PROTECTION FENCE (TO BE PLACED AT DRIPLINE)
- TRANSPLANT ITEM
- REMOVAL ITEM
- REMOVAL AREA - CONCRETE TO 9" DEPTH
- REMOVAL AREA - ASPHALT TO 12" DEPTH
- REMOVAL AREA - CRUSHED STONE PATH TO 12" DEPTH
- REMOVAL AREA - PLAYGROUND
- REMOVAL ITEM - IRRIGATION

NORTH

City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

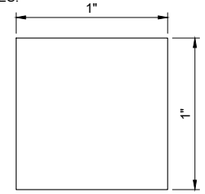
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

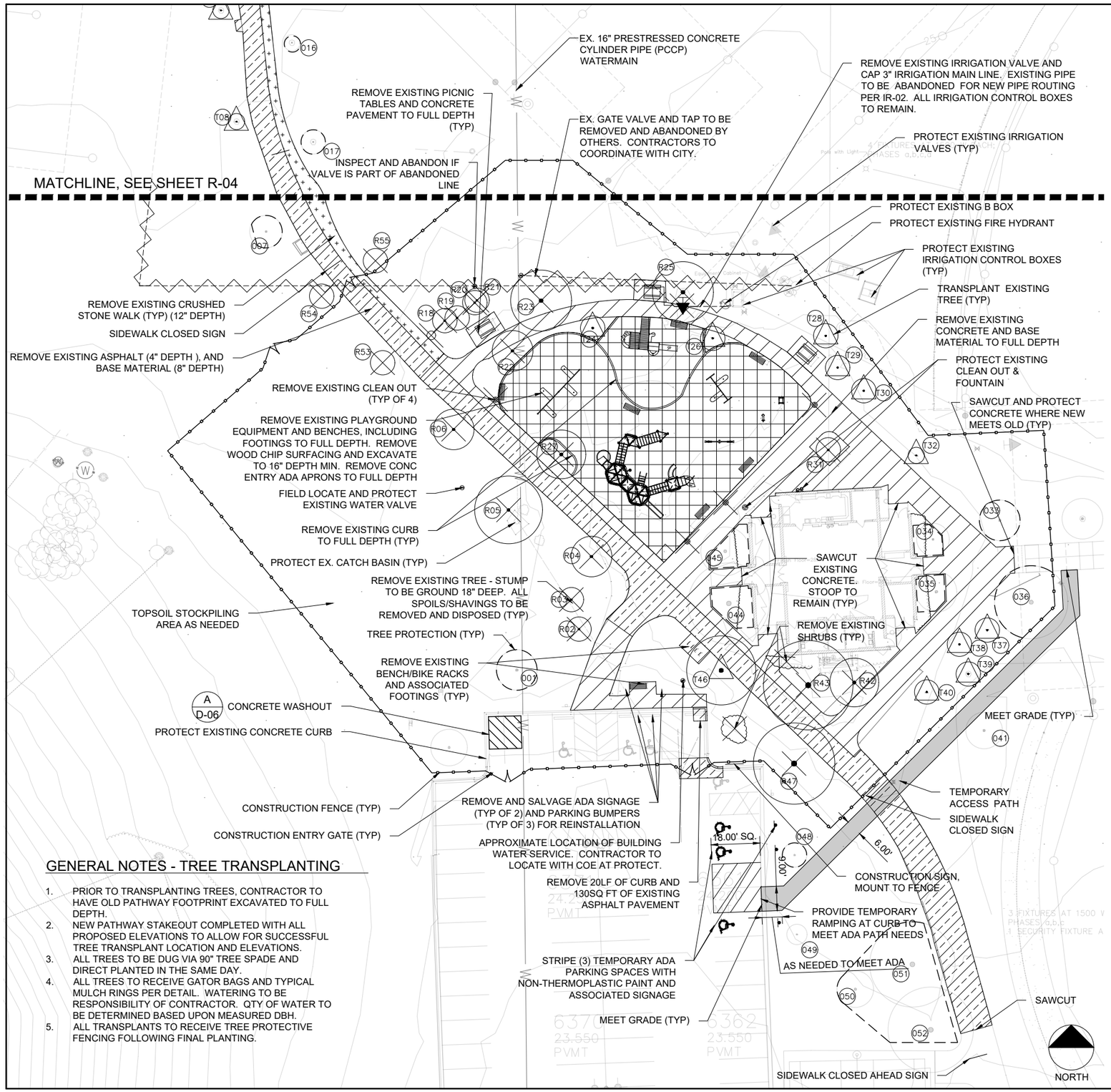
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

PATHWAY DEMOLITION

SHEET NO.

R-04



GENERAL NOTES - TREE TRANSPLANTING

1. PRIOR TO TRANSPLANTING TREES, CONTRACTOR TO HAVE OLD PATHWAY FOOTPRINT EXCAVATED TO FULL DEPTH.
2. NEW PATHWAY STAKEOUT COMPLETED WITH ALL PROPOSED ELEVATIONS TO ALLOW FOR SUCCESSFUL TREE TRANSPLANT LOCATION AND ELEVATIONS.
3. ALL TREES TO BE DUG VIA 90" TREE SPADE AND DIRECT PLANTED IN THE SAME DAY.
4. ALL TREES TO RECEIVE GATOR BAGS AND TYPICAL MULCH RINGS PER DETAIL. WATERING TO BE RESPONSIBILITY OF CONTRACTOR. QTY OF WATER TO BE DETERMINED BASED UPON MEASURED DBH.
5. ALL TRANSPLANTS TO RECEIVE TREE PROTECTIVE FENCING FOLLOWING FINAL PLANTING.

TREE REMOVALS

KEY	BOTANICAL NAME	SIZE	CONDITION
R02	MALUS SPP.	4"	GOOD
R03	MALUS SPP.	5"	GOOD
R04	CELTIS OCCIDENTALIS	8"	FAIR
R05	CELTIS OCCIDENTALIS	10"	GOOD
R06	CELTIS OCCIDENTALIS	10"	GOOD
R18	SYRINGA RETICULATA	2"	FAIR
R19	SYRINGA RETICULATA	2"	FAIR
R20	SYRINGA RETICULATA	2"	FAIR
R21	SYRINGA RETICULATA	2"	FAIR
R22	ACER RUBRUM	8"	FAIR
R23	CELTIS OCCIDENTALIS	10"	FAIR
R25	CELTIS OCCIDENTALIS	11"	FAIR
R31	OSTRYA VIRGINIANA	4"	FAIR
R42	CELTIS OCCIDENTALIS	10"	GOOD
R43	CELTIS OCCIDENTALIS	11"	GOOD
R47	CELTIS OCCIDENTALIS	10"	GOOD
R53	CERCIS CANADENSIS	3"	FAIR
R54	BETULA POPULIFOLIA 'WHITESPIRE'	3"	FAIR
R55	CERCIS CANADENSIS	3"	FAIR

TREE TRANSPLANTS

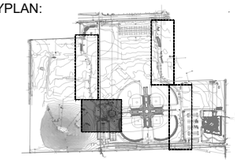
KEY	BOTANICAL NAME	SIZE	CONDITION
T24	BETULA NIGRA	3"	FAIR
T26	BETULA NIGRA	3"	FAIR
T28	MALUS SPP.	4"	FAIR
T29	MALUS SPP.	5"	FAIR
T30	MALUS SPP.	5"	GOOD
T32	CELTIS OCCIDENTALIS	3"	FAIR
T37	MALUS SPP.	5"	FAIR
T38	MALUS SPP.	5"	FAIR
T39	MALUS SPP.	5"	FAIR
T40	GINKGO BILOBA	4"	FAIR
T46	GINKGO BILOBA	8"	VERY GOOD

LEGEND

- 8' H CL CONSTRUCTION FENCE (DRIVEN POSTS)
- TREE PROTECTION FENCE (TO BE PLACED AT DRIPLINE)
- TRANSPLANT ITEM
- REMOVAL ITEM
- REMOVAL AREA - CONCRETE TO FULL DEPTH
- REMOVAL AREA - ASPHALT TO 12" DEPTH
- REMOVAL AREA - CRUSHED STONE PATH TO 12" DEPTH
- REMOVAL AREA - PLAYGROUND
- 6' WIDE TEMPORARY PATH - 4" COMPACTED LIMESTONE FINE PATH ON TOP OF EXISTING GRASS WITH MAX. CROSS SLOPE OF 1.5%. POTENTIAL DIGGING TO ACHIEVE CROSS SLOPE
- REMOVAL ITEM

City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

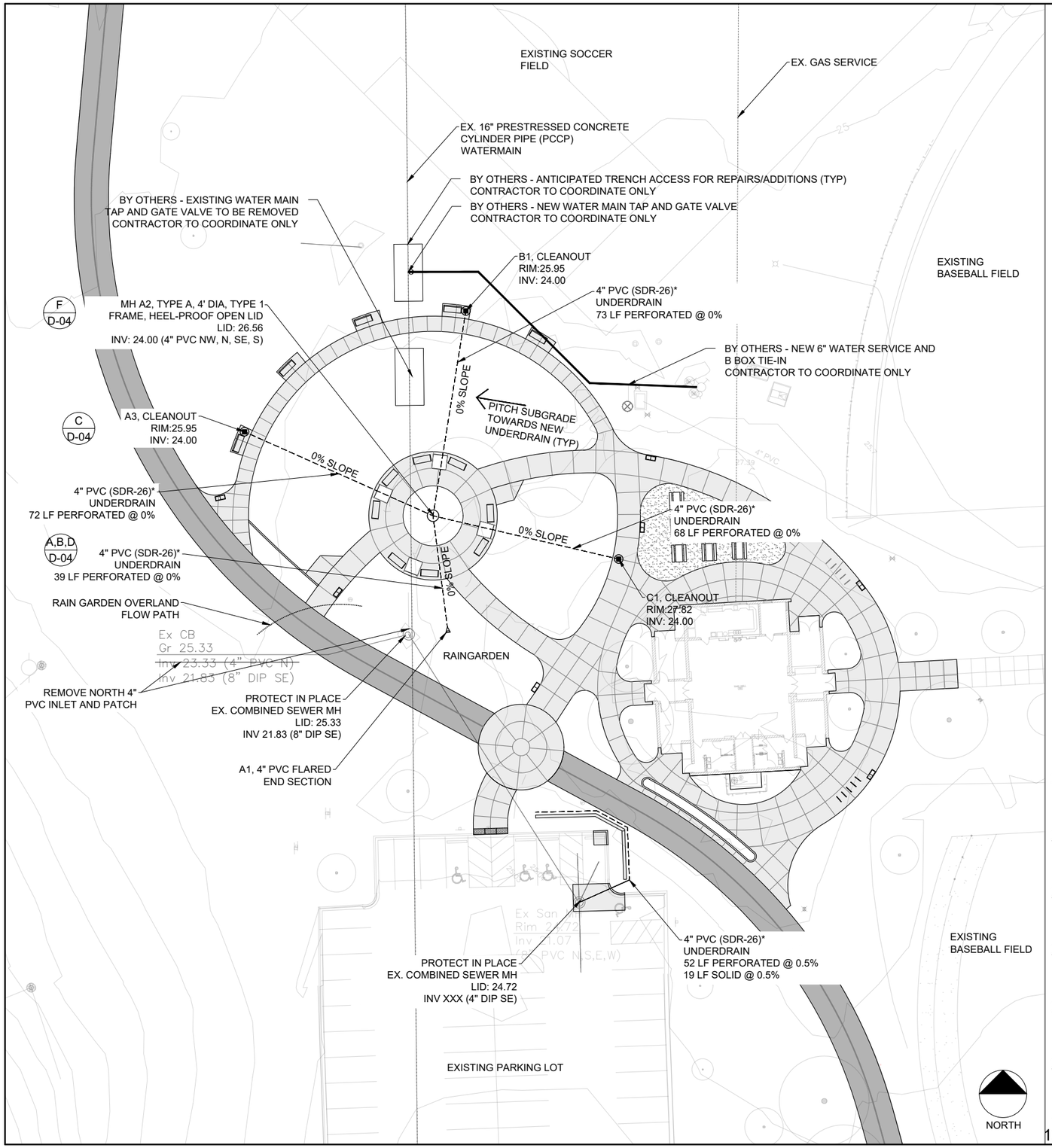
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

FIELD HOUSE DEMOLITION PLAN

SHEET NO.

R-05



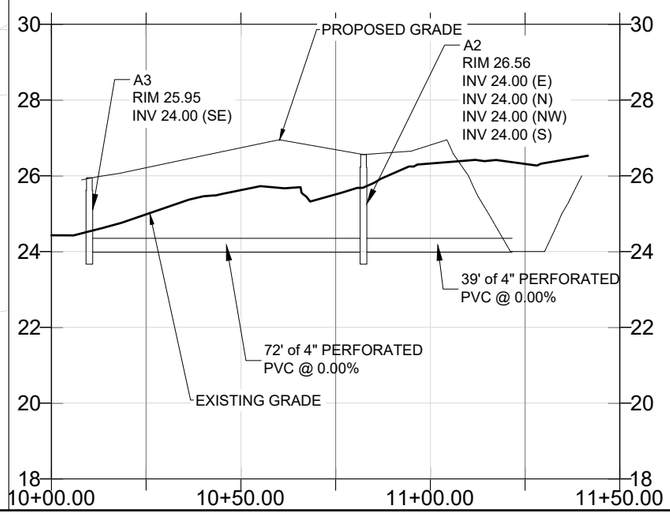
NOTES

1. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
2. FIELD STAKING AND LAYOUT SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR. LAYOUT ALL CONSTRUCTION LINES AND VERIFY WITH THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING ANY CONSTRUCTION WORK.
3. IN THE EVENT THAT DISCREPANCIES ARISE BETWEEN WHAT IS SHOWN ON THE DRAWINGS AND ACTUAL FIELD CONDITIONS, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY FOR RESOLUTION.
4. UNLESS OTHERWISE NOTED, ALL PVC PIPE TO BE INSTALLED AT 0% SLOPE.
5. THESE CONSTRUCTION DRAWINGS HAVE BEEN CREATED WITH AUTOCAD SOFTWARE USING SITE BENCHMARKS AND A SITE COORDINATE SYSTEM BASED ON THE PROVIDED SURVEY FILE. AN ELECTRONIC COPY OF THE DRAWING FILES, SUITABLE FOR DOWNLOADING INTO SURVEY SOFTWARE WILL BE PROVIDED FOR CONSTRUCTION LAYOUT.
6. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES ON WHICH THE WORK IS BEING DONE CLEAR OF RUBBISH AND DEBRIS.
7. DO NOT INTERFERE WITH USE OF ADJACENT BUILDINGS, PARKING LOTS, STREETS OR ALLEYS.
8. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
9. REFERENCE DETAIL SHEETS D-03 & D-04 & D-05

LEGEND

- SOLID PIPE (SDR-26)*
- PERFORATED PIPE (SDR-26)*
- DOUBLE ROW SILT FENCE

*ALL PVC PIPE AND UNDERDRAIN SHALL BE WATER MAIN QUALITY AND SHALL CONFORM TO AWWA C900 AND NSF 61 STANDARDS.



City of Evanston

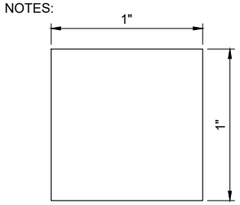
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

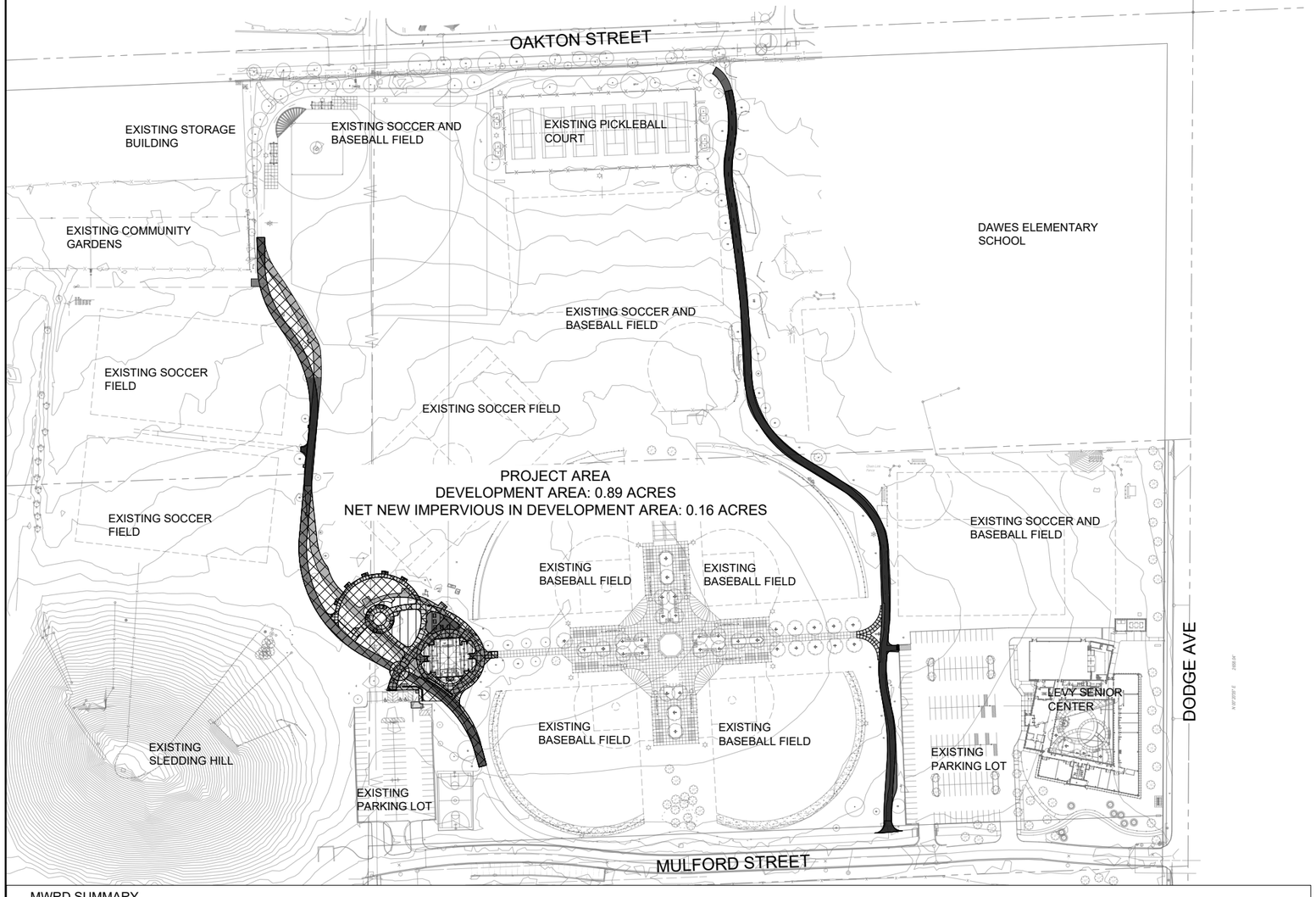
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

FIELD HOUSE UTILITY PLAN

SHEET NO.

DR-01



MWRD SUMMARY

LEGEND:

PROJECT LIMITS:

DEVELOPMENT AREA:

MAINTENANCE AREA:

NON-QUALIFYING DEVELOPMENT AREA:

SUMMARY:

TOTAL PROPERTY OWNERSHIP= 45.59 ACRES

TOTAL DEVELOPMENT AREA= 0.89 ACRES
NEW NET IMPERVIOUS AREA OF DEVELOPMENT: 0.16 ACRES

MAINTENANCE AREA: 0.45 ACRES

DRAINAGE SUMMARY:

TOTAL TRIBUTARY AREA: 0.45 ACRES
IMPERVIOUS TRIBUTARY AREA: 0.21 ACRES

TIME OF CONCENTRATION: 10 MINUTES

COMPOSITE RUNOFF COEFFICIENT: 94

MAINTENANCE PLAN

THE OWNER OF THE JAMES PARK DEVELOPMENT, WITH FACILITIES AS SHOWN ON THIS SHEET, SHALL ASSUME RESPONSIBILITY FOR THE FOLLOWING PERPETUAL MAINTENANCE ACTIVITIES:

1. GENERAL
REGULAR INSPECTIONS AND ROUTINE MAINTENANCE OF GENERAL AREAS SHALL BE PERFORMED ON A MONTHLY OR AS-NEEDED BASES. SPECIFIC ITEMS OF CONCERN INCLUDE:

____ LITTER AND DEBRIS SHALL BE CONTROLLED
____ LANDSCAPED AREAS SHALL BE MAINTAINED WITH REGULAR MOWING AND RESTORED WITH APPROPRIATE SEEDING/VEGETATION AS NECESSARY
____ ACCUMULATED SEDIMENT SHALL BE DISPOSED OF PROPERLY, ALONG WITH ANY WASTES GENERATED DURING MAINTENANCE OPERATIONS
____ RIPRAP AREAS SHALL BE REPAIRED WITH THE ADDITION OF NEW RIPRAP, AS NECESSARY, OF SIMILAR SIZE AND SHAPE
____ ROADS SHALL BE SWEPT, VACUUMED AND/OR WASHED ON A REGULAR BASIS

2. STORMWATER COLLECTION SYSTEM:
OWNER SHALL PERFORM MONTHLY INSPECTIONS OF ALL COMPONENTS OF THE STORMWATER COLLECTION SYSTEM. THE MONTHLY INSPECTION SHALL OCCUR BETWEEN MARCH AND NOVEMBER AND INCLUDE THE FOLLOWING SPECIFIC AREAS OF CONCERN:

STORM INLETS/MANHOLES
____ REMOVE ACCUMULATED LEAVES AND OTHER DEBRIS FROM GRATES
____ RESET COVERS/LIDS ON AS-NEEDED BASIS
____ REMOVE ACCUMULTED SEDIMENT FROM MANHOLE BOTTOM WHEN 50% OF SUMP IS FILLED

STORM SEWERS/CULVERTS
____ VISUALLY INSPECT PIPES BY REMOVING MANHOLE LIDS, MAKE REPAIRS AS NECESSARY
____ STORM SEWERS AND CULVERTS SHALL BE CHECKED FOR SILTATION DEPOSITS AT INLETS, OUTLETS, AND WITHIN THE CONDUIT, CLEAN OUT AS NECESSARY
____ RESTORE RIPRAP AT OUTFALLS IF EROSION OBSERVED
____ RESTORE RIPRAP AT OUTFALLS
____ REPLANT AND RESEED ANY ERODED AREAS

3. VEGETATED AREAS
____ NEED FOR PLANTING, RESEEDING, OR SODDING. SUPPLEMENT ALTERNATIVE NATIVE VEGETATION IF A SIGNIFICANT PORTION HAS NOT ESTABLISHED (50% OF THE SURFACE AREA AFTER SECOND GROWING SEASON). RESEED WITH ALTERNATIVE NATIVE GRASS SPECIES IF ORIGINAL GRASS COVER HAS NOT SUCCESSFULLY ESTABLISHED.
____ EVIDENCE OF GRAZING, MOTORBIKES, OR OTHER VEHICLES, REPAIR.
____ CHECK FOR INVASIVE VEGETATION, REMOVE WHEN POSSIBLE.
____ REGULAR MOWING TO CONTROL VEGETATION; IT IS RECOMMENDED THAT NATIVE VEGETATION REMAIN UNCUT.
____ DEAD OR DAMAGED NON-NATIVE GRASSY AREAS - REPAIR WITH SEEDING WITH FERTILIZATION OR SEEDING WITH MULCH.

4. QUALIFIED SEWER CONSTRUCTION
____ PERFORM MANHOLE INSPECTIONS ONCE EVERY FIVE YEARS, MAKE REPAIRS AS NECESSARY.
____ PERFORM SEWER INSPECTIONS ONCE EVERY FIVE YEARS, MAKE REPAIRS AS NECESSARY.
____ PERFORM REGULAR CLEANING SO THAT EACH SEWER SEGMENT IS CLEANED ONCE EVERY 5 YEARS.
____ REMOVE ANY OBSTRUCTIONS PLACED IN MAINTENANCE EASEMENTS THAT MAY IMPEDE MAINTENANCE EQUIPMENT ACCESS.

NORTH

City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:

DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 200'-0"

REVISIONS:

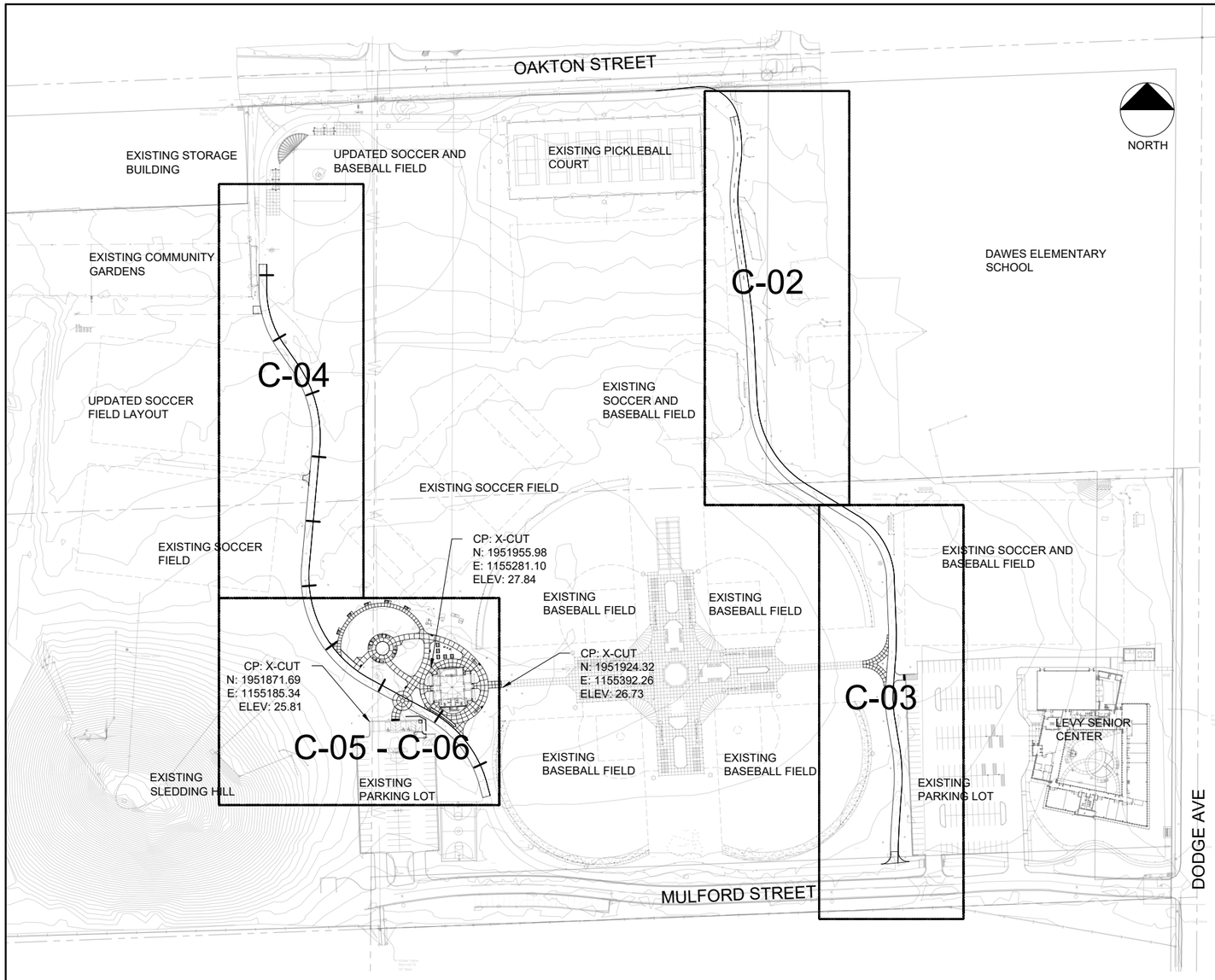
	2026.03.11 / ISSUE FOR BID

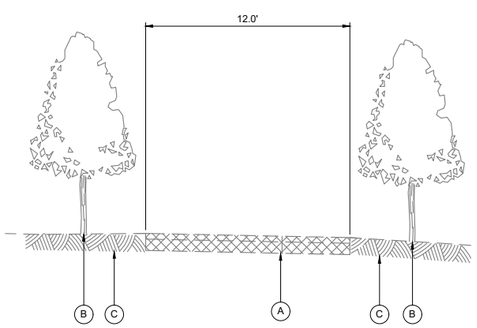
SHEET TITLE

DRAINAGE AREAS

SHEET NO.

DR-02

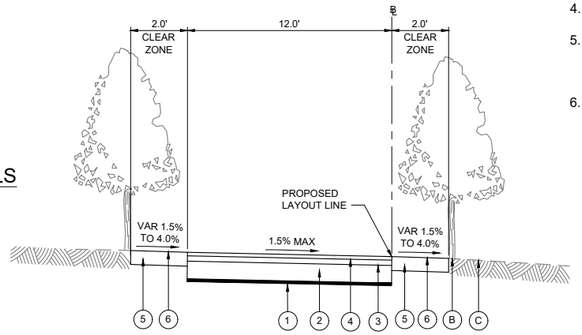




EXISTING ASPHALT AND AGGREGATE PATH

EXISTING CONDITIONS AND REMOVALS

- (A) ASPHALT, CRUSHED STONE AND AGGREGATE BASE
- (B) EXISTING TREE
- (C) EXISTING GROUND
- REMOVAL ITEMS - REMOVE TO MIN 12" DEPTH OR AS REQUIRED TO MATCH PROPOSED GRADES ON PROFILE AND CROSS SECTIONS



PROPOSED SHARED-USE PATH

LAYOUT NOTES

1. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
2. FIELD STAKING AND LAYOUT SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR. LAYOUT ALL CONSTRUCTION LINES AND VERIFY WITH THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING ANY CONSTRUCTION WORK.
3. IN THE EVENT THAT DISCREPANCIES ARISE BETWEEN WHAT IS SHOWN ON THE DRAWINGS AND ACTUAL FIELD CONDITIONS, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY FOR RESOLUTION.
4. UNLESS NOTED OTHERWISE, DIMENSIONS SHOWN ARE TO THE EDGE OF PAVEMENT, FACE OF WALL OR FACE OF CURB.
5. RADII OF EXISTING CURBS ARE ESTIMATED FROM SURVEY OR BASE DATA. MAKE ALL MODIFICATIONS NECESSARY TO ASSURE NEW CURBS MEET FLUSH, EVEN, AND ON TANGENT TO EXISTING CURBS.
6. WALKWAYS AND HARDSCAPE ELEMENTS INDICATED AS CURVILINEAR SHALL HAVE SMOOTH, CONTINUOUS CURVES AND ABUT AT 90 DEGREE ANGLES UNLESS OTHERWISE INDICATED.
7. CONCRETE SCORING SHALL BE EQUALLY SPACED AND PARALLEL, PERPENDICULAR, OR TANGENT TO ADJACENT IMPROVEMENTS UNLESS OTHERWISE NOTED.
8. PROVIDE EXPANSION ISOLATION JOINTS WHERE CONCRETE PAVING OR PAVING BASE MEETS A FIXED STRUCTURE (EXISTING OR PROPOSED).
9. PROVIDE FLUSH CONDITIONS AT JUNCTURE OF ALL WALKWAYS.
10. THESE CONSTRUCTION DRAWINGS HAVE BEEN CREATED WITH AUTOCAD SOFTWARE USING SITE BENCHMARKS AND A SITE COORDINATE SYSTEM BASED ON THE PROVIDED SURVEY FILE. AN ELECTRONIC COPY OF THE DRAWING FILES, SUITABLE FOR DOWNLOADING INTO SURVEY SOFTWARE WILL BE PROVIDED FOR CONSTRUCTION LAYOUT.
11. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES ON WHICH THE WORK IS BEING DONE CLEAR OF RUBBISH AND DEBRIS.
12. DO NOT INTERFERE WITH USE OF ADJACENT BUILDINGS, PARKING LOTS, STREETS OR ALLEYS.
13. SEED AND HYDROMULCH ALL LAWN AREAS DISTURBED BY CONSTRUCTION.

TYPICAL SECTION NOTES

1. FOR ALL PATH REMOVALS THAT DO NOT COINCIDE WITH PROPOSED PATH LOCATIONS, THE PARK LANDSCAPE MUST BE RESTORED WITH TOPSOIL AND SEEDING. EXISTING PAVEMENTS TO REMAIN SHALL BE PROTECTED WHEN ADJACENT TO EXISTING PAVEMENTS SCHEDULED FOR REMOVAL. SEE PROPOSED IMPROVEMENT PLAN FOR APPROXIMATE LIMITS.
2. EXISTING TREES AND PLANT MATERIAL NOT CALLED FOR REMOVAL MUST BE PROTECTED AS INDICATED IN THE PLANS AND PER REQUIREMENTS OF SECTION 201 OF THE IDOT STANDARD SPECIFICATION. ROOT PRUNING MUST BE PERFORMED AS SHOWN ON THE DRAWINGS..
3. HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50 (HAND METHOD) (IL-9.5mm) WILL BE USED FOR ANY RESTORATION OF EXISTING PAVEMENT NECESSARY FOR THE CONSTRUCTION OF ADA CURB RAMPS, DRIVEWAY APRONS AND PARKING LOT MODIFICATIONS.
4. PATH CROSS SLOPE SHALL BE A MINIMUM OF 1.0% AND A MAXIMUM OF 1.5%.
5. THE PARK LANDSCAPE ADJACENT TO THE PROPOSED 2' CLEAR ZONE SHALL BE RESTORED WITH TOPSOIL AND SEEDING AT CROSS SLOPES OF 6:1 PREFERRED UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
6. GEOTECHNICAL FABRIC FOR GROUND STABILIZATION SHALL BE INSTALLED BENEATH THE AGGREGATE BASE COURSE FOR THE ENTIRE LENGTH OF THE BIKE PATH.

PROPOSED IMPROVEMENTS

- (1) GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
- (2) AGGREGATE BASE COURSE, TYPE B, 8"
- (3) HOT MIX ASPHALT BINDER COURSE, IL-19.0, N50, 2-1/2"
- (4) HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50, 1-1/2"
- (5) TOPSOIL, FURNISH AND PLACE, 6"
- (6) SEEDING, CLASS 2A

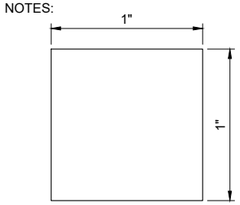
City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 200'-0"

REVISIONS:

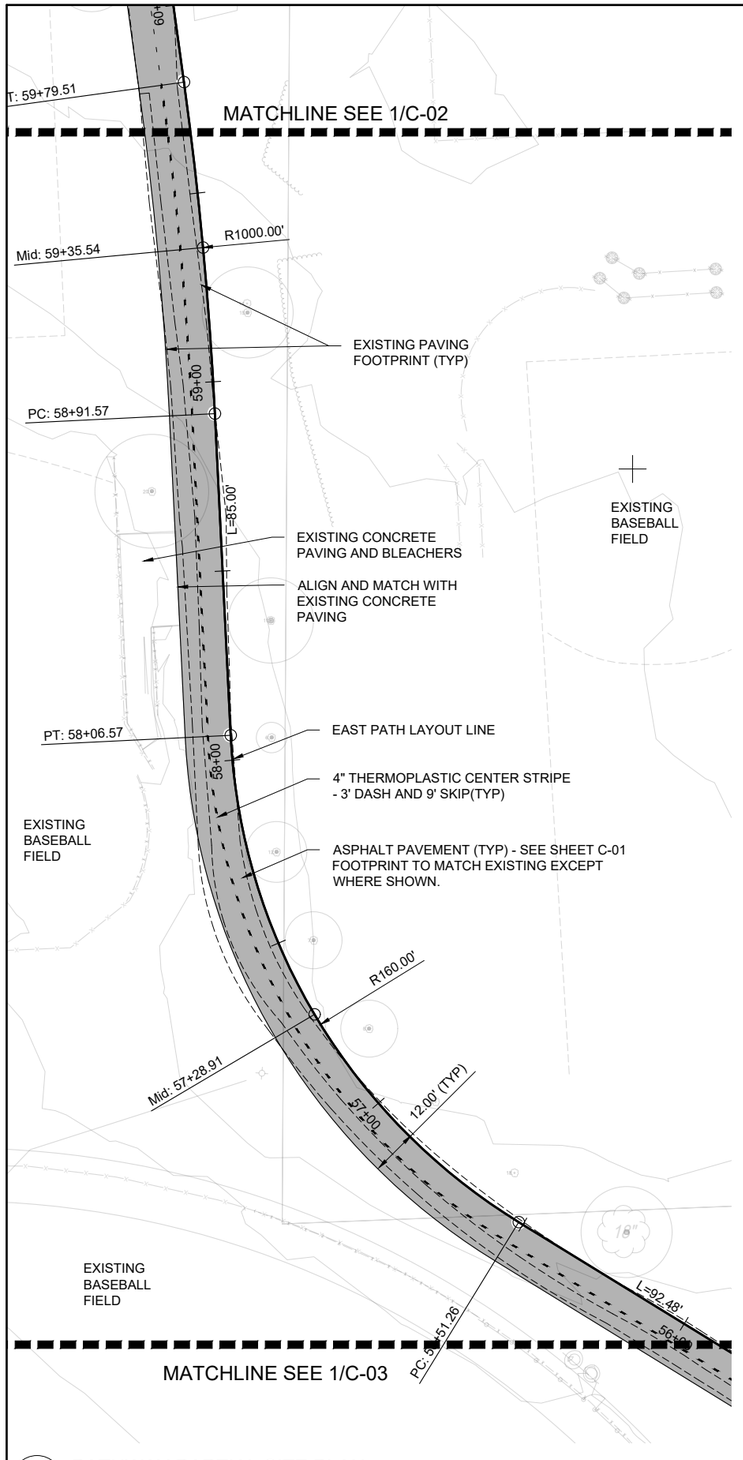
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

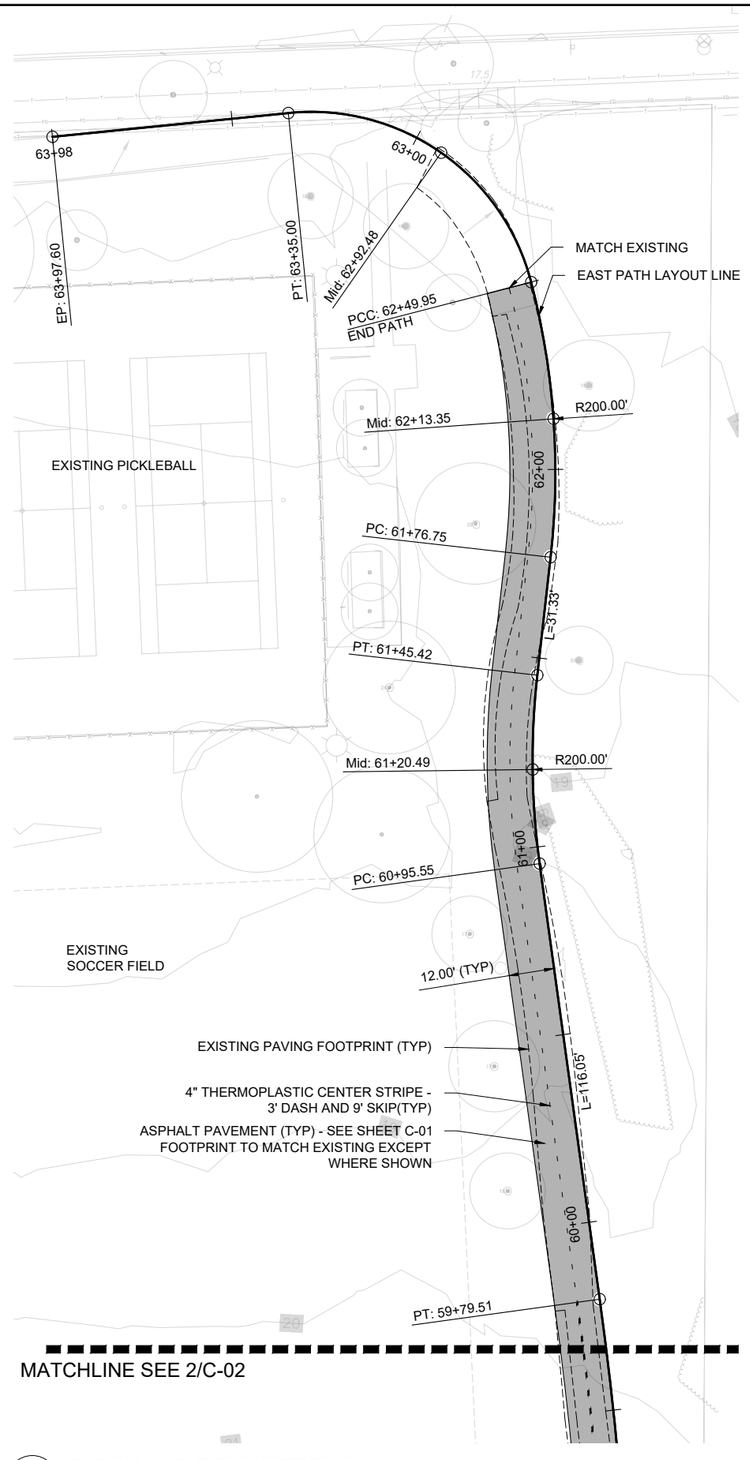
REGIONAL PLAN

SHEET NO.

C-01



2 PATHWAY PARTIAL SITE PLAN



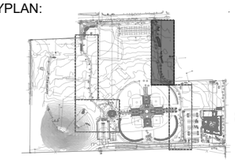
1 PATHWAY PARTIAL SITE PLAN

NORTH

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

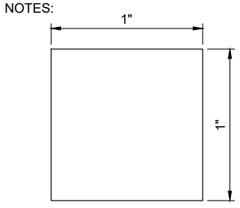
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

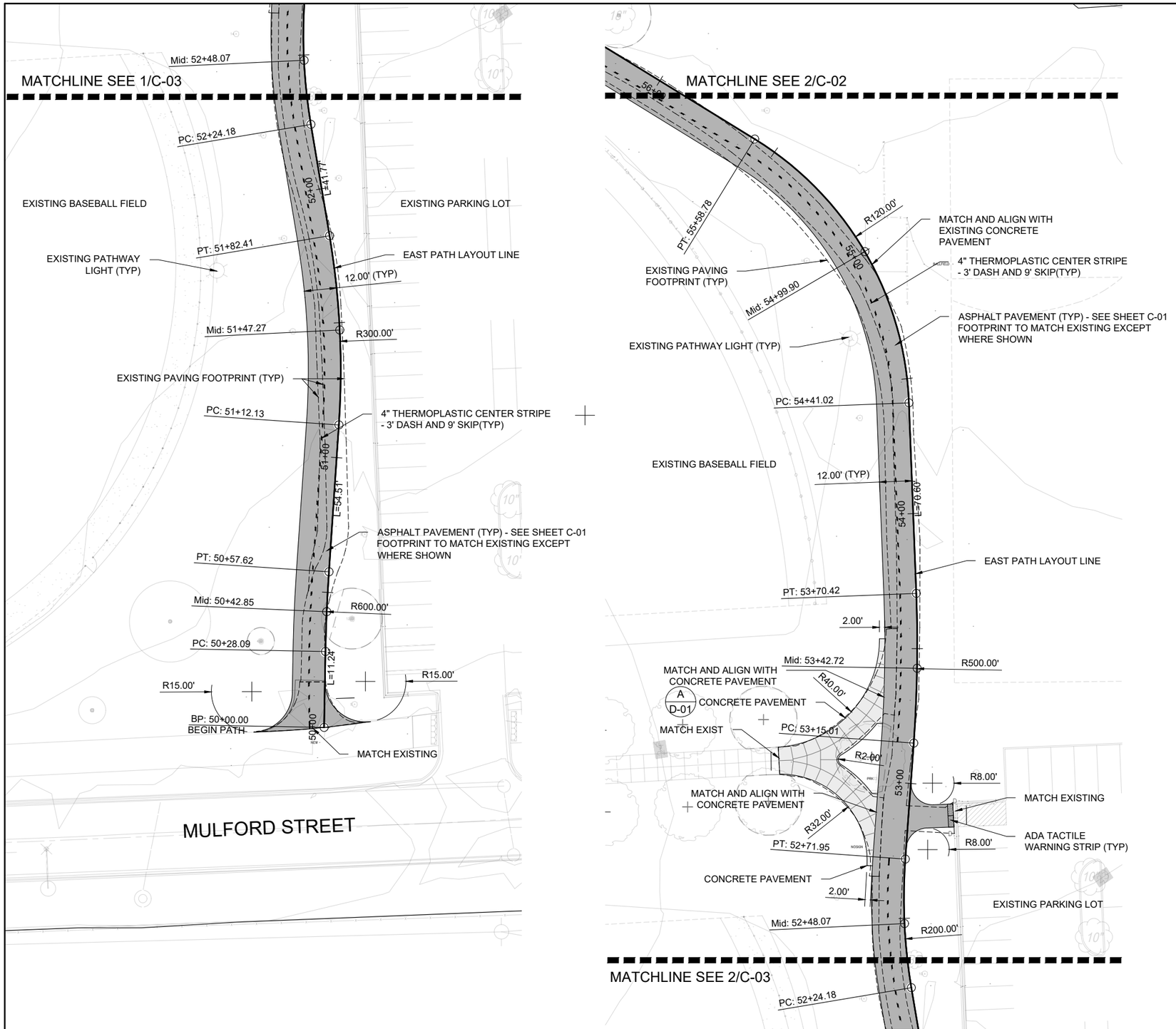
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

PATHWAY SITE PLAN

SHEET NO.

C-02



2 PATHWAY PARTIAL SITE PLAN

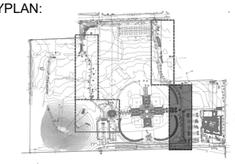
1 PATHWAY PARTIAL SITE PLAN

NORTH

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

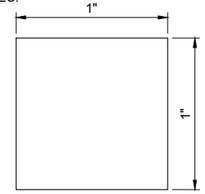
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

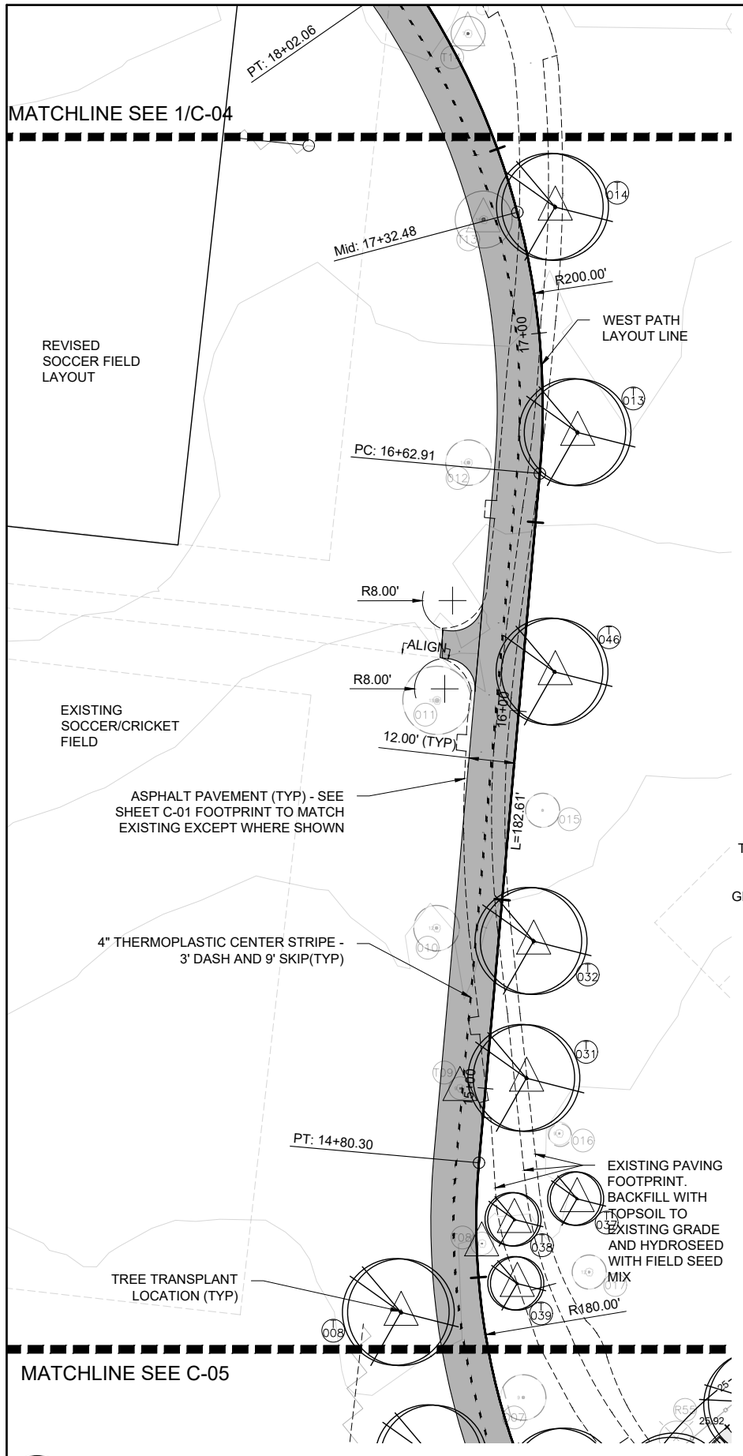
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

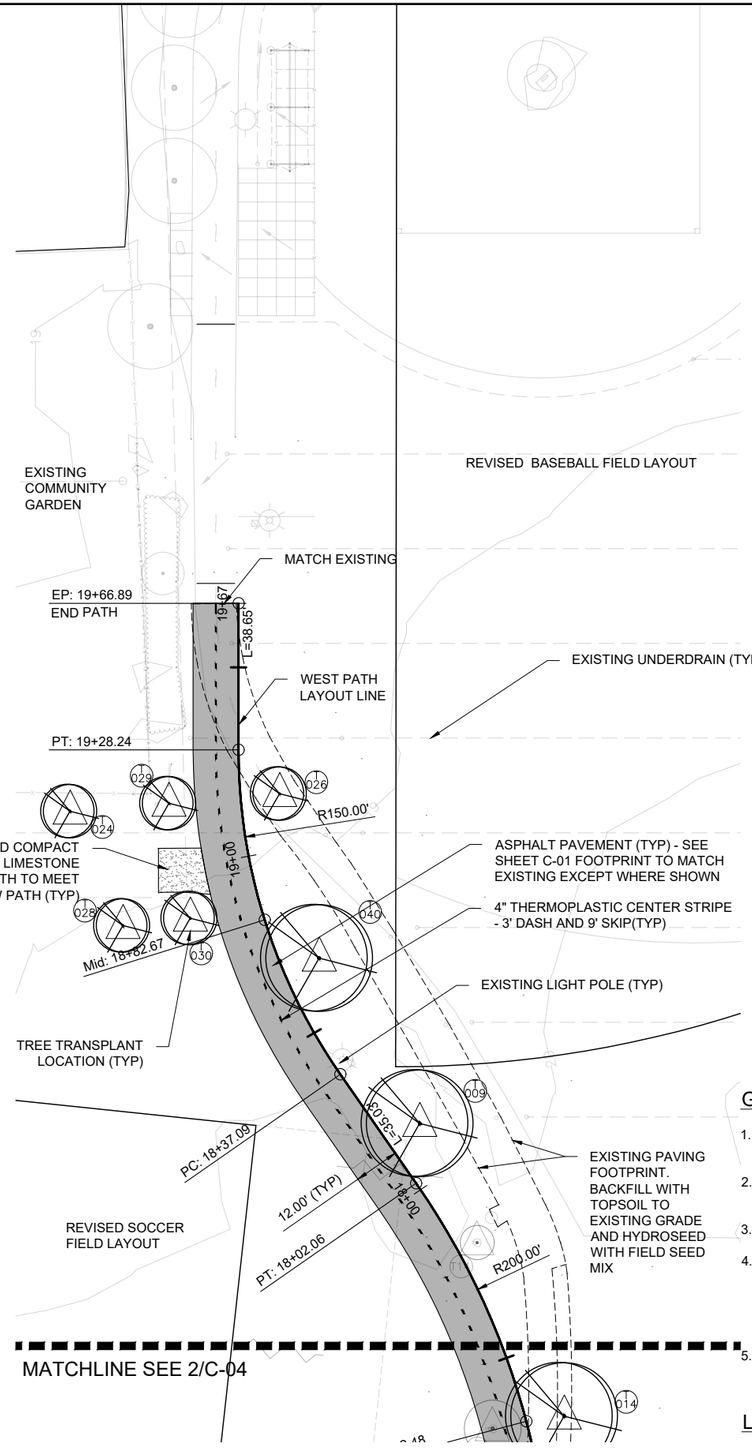
PATHWAY SITE PLAN

SHEET NO.

C-03



2 PATHWAY PARTIAL SITE PLAN



1 PATHWAY PARTIAL SITE PLAN

TREE TRANSPLANTS

KEY	BOTANICAL NAME	SIZE	CONDITION
T008	ULMUS SPP.	3"	FAIR
T009	ULMUS SPP.	3"	FAIR
T013	GLEDITISIA TRIACANTHOS INERMIS	6"	GOOD
T014	GLEDITISIA TRIACANTHOS INERMIS	5"	FAIR
T024	BETULA NIGRA	3"	FAIR
T026	BETULA NIGRA	3"	FAIR
T028	MALUS SPP.	4"	FAIR
T029	MALUS SPP.	5"	FAIR
T030	MALUS SPP.	5"	GOOD
T031	OSTRYA VIRGINIANA	4"	FAIR
T032	CELTIS OCCIDENTALIS	3"	FAIR
T037	MALUS SPP.	5"	FAIR
T038	MALUS SPP.	5"	FAIR
T039	MALUS SPP.	5"	FAIR
T040	GINKGO BILOBA	4"	FAIR
T046	GINKGO BILOBA	8"	VERY GOOD

GENERAL NOTES - TREE TRANSPLANTING

1. PRIOR TO TRANSPLANTING TREES, CONTRACTOR TO HAVE OLD PATHWAY FOOTPRINT EXCAVATED TO FULL DEPTH.
2. NEW PATHWAY STAKEOUT COMPLETED WITH ALL PROPOSED ELEVATIONS TO ALLOW FOR SUCCESSFUL TREE TRANSPLANT LOCATION AND ELEVATIONS.
3. ALL TREES TO BE DUG VIA 90" TREE SPADE AND DIRECT PLANTED IN THE SAME DAY.
4. ALL TREES TO RECEIVE GATOR BAGS AND TYPICAL MULCH RINGS PER DETAIL. WATERING TO BE RESPONSIBILITY OF CONTRACTOR ON A WEEKLY BASIS, THROUGH COMPLETION OF CONSTRUCTION. QTY OF WATER TO BE DETERMINED BASED UPON MEASURED DBH.
5. ALL TRANSPLANTS TO RECEIVE TREE PROTECTIVE FENCING FOLLOWING FINAL PLANTING.

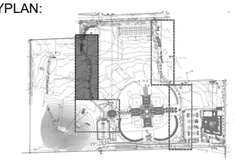
LEGEND

TRANSPLANT ITEM

NORTH

City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:

1"

1"

DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

PATHWAY SITE PLAN

SHEET NO.

C-04

MATCHLINE SEE 2/C-04

EXISTING PAVING FOOTPRINT. BACKFILL WITH TOPSOIL TO EXISTING GRADE AND HYDROSEED WITH FIELD SEED MIX

ASPHALT PAVEMENT (TYP) - SEE SHEET C-01 FOOTPRINT TO MATCH EXISTING EXCEPT WHERE SHOWN

4" THERMOPLASTIC CENTER STRIPE - 3' DASH AND 9' SKIP(TYP)

14+00

R180.00'

Mid: 13+75.63

AGES 2-12 PLAYGROUND (SEE SHEET C-05.3)

BENCH W/ BACK (TYP OF 5) F D-02

TREE GRATE (TYP OF 4) D D-03

EXISTING BASEBALL FIELD

WASTE/RECYCLING RECEPTACLE (TYP OF 7)

COAL RECEPTACLE G D-02

GRILL (TYP OF 2) E D-02

PICNIC TABLE (TYP OF 5)

STABILIZED CRUSHED STONE F D-01

ADD ADA SHROUD AT DRINKING FOUNTAIN'S HIGH BOWL

C D-01 FLUSH CONCRETE CURB (TYP)

BASE BID DEPICTED. SEE SHEET C-06 AND C-06.1 FOR ALT BIDS 1 AND 2 (SPLASHPAD) IN THIS AREA

D D-01 CONCRETE ADA RAMP (TYP OF 2)

AGES 13+ PLAYGROUND (SEE SHEET C-05.3)

13+00

RAINGARDEN A D-05

EXISTING WATER VALVE - ADJUST TO BE FLUSH WITH FINISHED GRADE

F D-02 BENCH W/O BACK (TYP OF 8)

EXISTING BUILDING CLEAN OUT - ADJUST TO BE FLUSH WITH FINISHED GRADE

EXISTING FIELD HOUSE

MATCH EXIST (TYP)

L=105.32'

12+00

PC: 12+70.96

EXISTING SLEDDING HILL

A D-01 CONCRETE PAVEMENT (TYP)

B D-01 CONTROL JOINT (TYP)

ADA TACTILE WARNING STRIP (TYP) MATCH EXIST (TYP)

EXIST SIGNAGE REINSTALLATION(TYP)

BUILDING WATER SHUTOFF - PROTECT AND ADJUST TO BE FLUSH WITH FINISHED GRADE

CONCRETE RETAINING WALL - SEE STRUCTURAL PLANS

NEW B6-12 CURB AND GUTTER. ASPHALT PAVING TO REPLACE IN KIND.

PC: 11+65.65

BICYCLE RACKS (TYP OF 10) C D-02

RAISED CONCRETE CURB (TYP) B D-02

R180.00'

11+00

EXISTING PAVING FOOTPRINT (TYP)

Mid: 10+93.04

WEST PATH LAYOUT LINE

EXISTING BASEBALL FIELD

EXISTING PARKING LOT

PC: 10+20.43

L=20.43'

10+00

BP: 10+00.00
BEGIN PATH

ALIGN AND MATCH EXISTING (TYP)

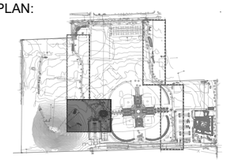
EXISTING BASKETBALL COURT

NORTH

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

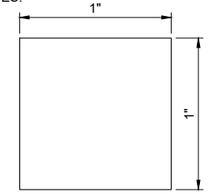
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

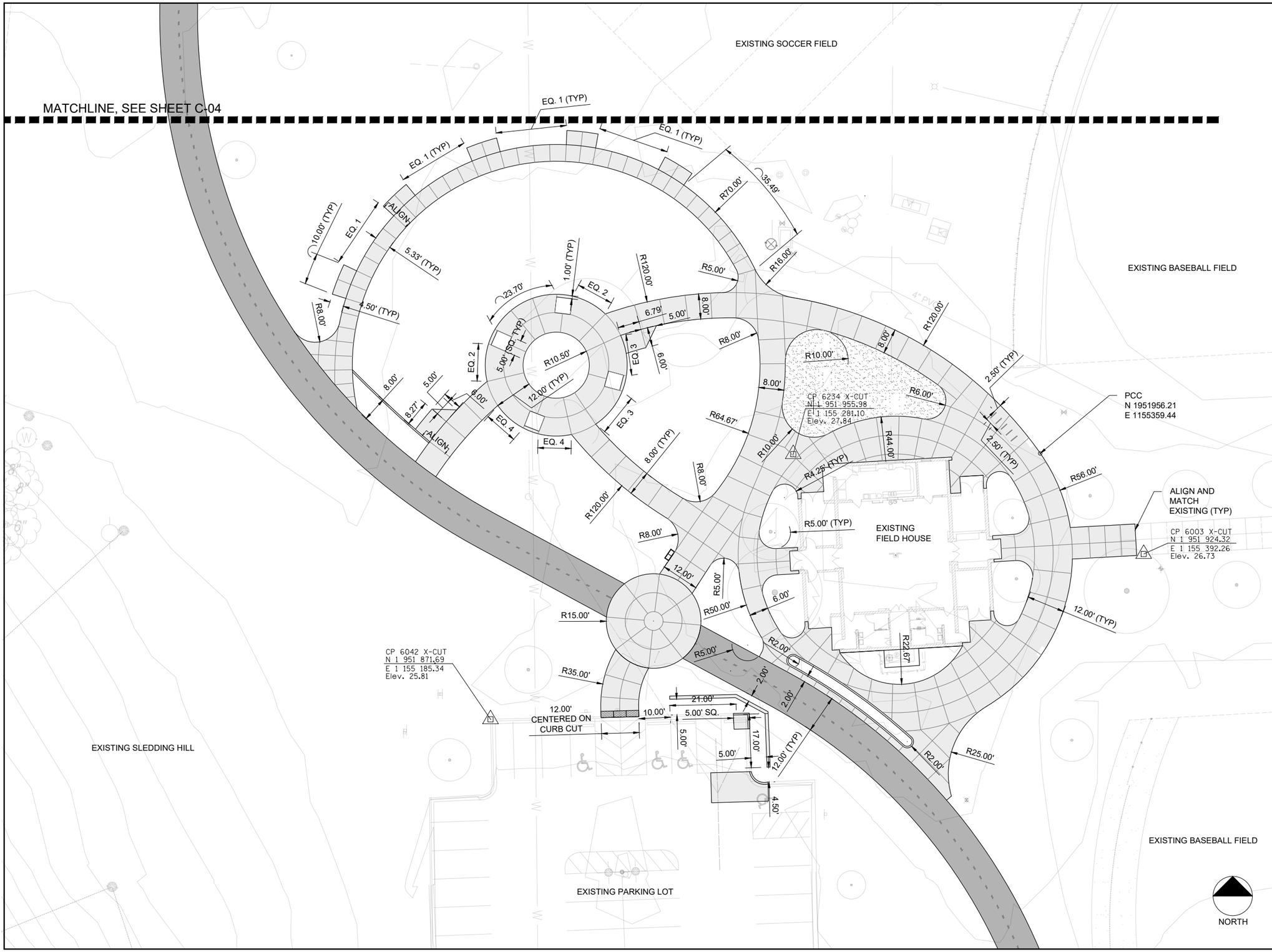
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

FIELD HOUSE SITE PLAN

SHEET NO.

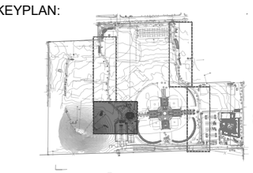
C-05



City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

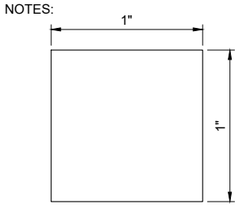
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 30'-0"

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

FIELD HOUSE DIMENSION PLAN

SHEET NO.

C-05.1

MATCHLINE, SEE SHEET C-04

EXISTING SOCCER FIELD

EXISTING BASEBALL FIELD

EXISTING SLEDDING HILL

EXISTING PARKING LOT

EXISTING BASEBALL FIELD

NOTE:
- ALL NEW PAVEMENTS ABUTTING EXISTING FIELD HOUSE STOOPS TO MATCH EXISTING GRADES.
- CONTRACTOR TO PIN INTO EXISTING STOOP WITH EPOXY COATED DOWELS.

EXISTING WATER VALVE - ADJUST TO BE FLUSH WITH FINISHED GRADE

Ex CB
Gr 25.33
Inv 23.33 (4" PVC N)
Inv 21.83 (8" DIP SE)

CP 6042 X-CUT
N 1 951 871.69
E 1 155 185.34
Elev. 25.81

BUILDING WATER SHUTOFF - PROTECT AND ADJUST TO BE FLUSH WITH FINISHED GRADE

Ex San MH
Rim 24.72
Inv 21.07
(8" PVC N,S,E,W)

CP 6234 X-CUT
N 1 951 955.98
E 1 155 281.10
Elev. 27.84

EXISTING BUILDING CLEAN OUT - ADJUST TO BE FLUSH WITH FINISHED GRADE

EXISTING FIELD HOUSE

MATCH EX. STOOPS (TYP ALL LOCATIONS)

MATCH EXIST (TYP)

CP 6003 X-CUT
N 1 951 924.32
E 1 155 392.26
Elev. 26.73

2% MAX

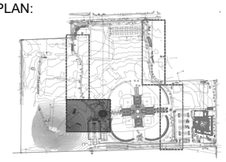
4" PVC

NORTH

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

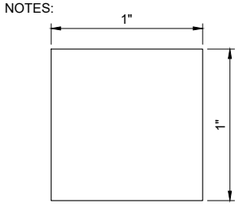
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 30'-0"

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

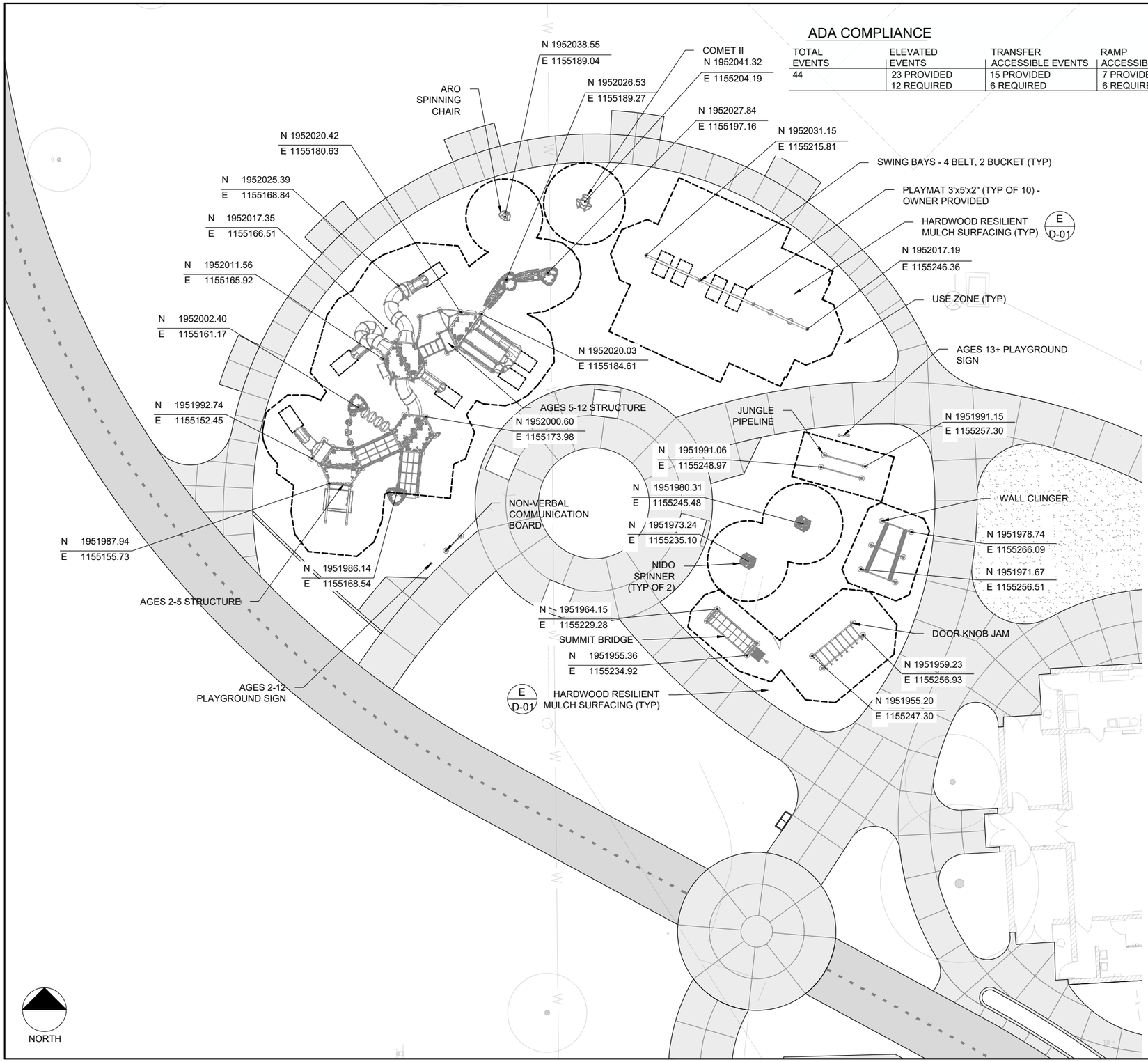
FIELD HOUSE GRADING PLAN

SHEET NO.

C-05.2

ADA COMPLIANCE

TOTAL EVENTS	ELEVATED EVENTS	TRANSFER ACCESSIBLE EVENTS	RAMP ACCESSIBLE EVENTS	GROUND EVENTS	TYPES OF GROUND EVENTS
44	23 PROVIDED 12 REQUIRED	15 PROVIDED 6 REQUIRED	7 PROVIDED 6 REQUIRED	21 PROVIDED 8 REQUIRED	8 PROVIDED 4 REQUIRED



NOTE:
THE CITY IS SEPARATELY PURCHASING PLAY EQUIPMENT FROM BURKE - PLAY ILLINOIS, LLC- PURCHASE OF THIS EQUIPMENT SHOULD NOT BE INCLUDED IN THE CONTRACTOR'S BID PRICE.

ONCE THE BID IS AWARDED AND THE CONSTRUCTION CONTRACT IS EXECUTED, RESPONSIBILITY FOR THE PURCHASE WILL BE ASSIGNED TO THE CONTRACTOR WHO WILL THEN FULLY MANAGE ALL ASPECTS OF THE PROCUREMENT FROM THAT TIME FORWARD INCLUDING ARRANGING FOR DELIVERY, VERIFICATION OF EQUIPMENT RECEIVED, STORAGE ON OR OFF-SITE OF EQUIPMENT, INSTALLATION OF EQUIPMENT, POST-INSTALLATION MANUFACTURER INSPECTION FOR ASTM COMPLIANCE, ETC. DIRECT PAYMENT TO MANUFACTURER FOR THE EQUIPMENT WILL BE MADE BY THE CITY ONCE CONTRACTOR VERIFIES ALL MATERIALS ARE RECEIVED AND UNDAMAGED.

City of Evanston

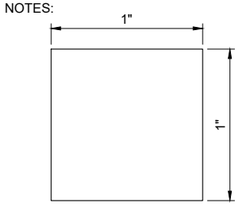
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 20'-0"

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

PLAYGROUND LAYOUT PLAN

SHEET NO.

C-05.3

SPLASHPAD NOTES

1. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
2. ALL SPLASHPAD PLUMBING AND ELECTRIC WORK TO BE PERFORMED AS DELEGATED DESIGN WITH FINAL DRAWING APPROVAL FROM MANUFACTURER.

BY OTHERS - NEW GATE VALVE - SEE SHEET DR-01

BY OTHERS - NEW 6" WATER SERVICE - SEE SHEET DR-01

IRRIGATION MAIN LINE - SEE SHEET IR-02

NEW B BOX AND 2" TAP INTO NEW 6" LINE

2" COPPER LINE FROM B BOX TO DISTRIBUTION CABINET BY CONTRACTOR

DISTRIBUTION CABINET WITH 1.5" WATER METER, 1.5" RPZ, AND RAINDROP MODULE (DMX-MFD4) TO BE MOUNTED INSIDE - SEE ENLARGEMENT

(2) NDS 17"X30" VALVE BOXES - 326BCDB-BG

8 ZONE SPLASHPAD PIPING, AND LED WIRING. SPLASHPAD TO BE DELEGATED DESIGN WITH FINAL APPROVAL BY CITY OF EVANSTON AND MANUFACTURER.

LED CLUSTER JET (TYP OF 4) W/ LOW FLOW NOZZLE

MANHOLE - SEE DR-01

LED SLANT FINGER JET (TYP OF 4) W/ LOW FLOW NOZZLE

A / D-01 CONCRETE PAVEMENT - IN LIEU OF BASE BID LANDSCAPE BED

CONTROL JOINT (TYP)

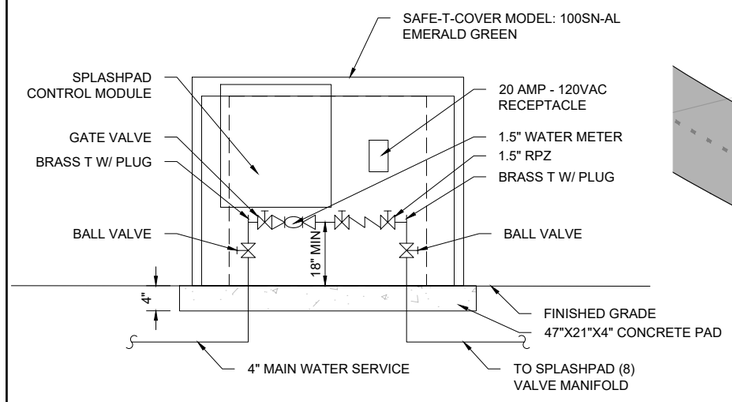
1" DRAIN LINE FROM JETS TO CENTRAL CATCH BASIN (TYP)

DRAIN LINE - SEE DR-01

ELECTRIC LINE TO BE BURIED IN CONDUIT PER CODE

NEW 20 AMP CIRCUIT TO BE INSTALLED IN EXISTING FIELDHOUSE ELECTRIC PANEL

RAINGARDEN



2 CABINET ENLARGEMENT
SCALE: ½" = 1'-0"

1 SPLASH PAD ALTERNATE
SCALE: 1" - 20'-0"

NORTH

City of Evanston

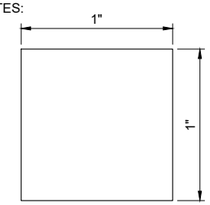
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: AS SHOWN

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

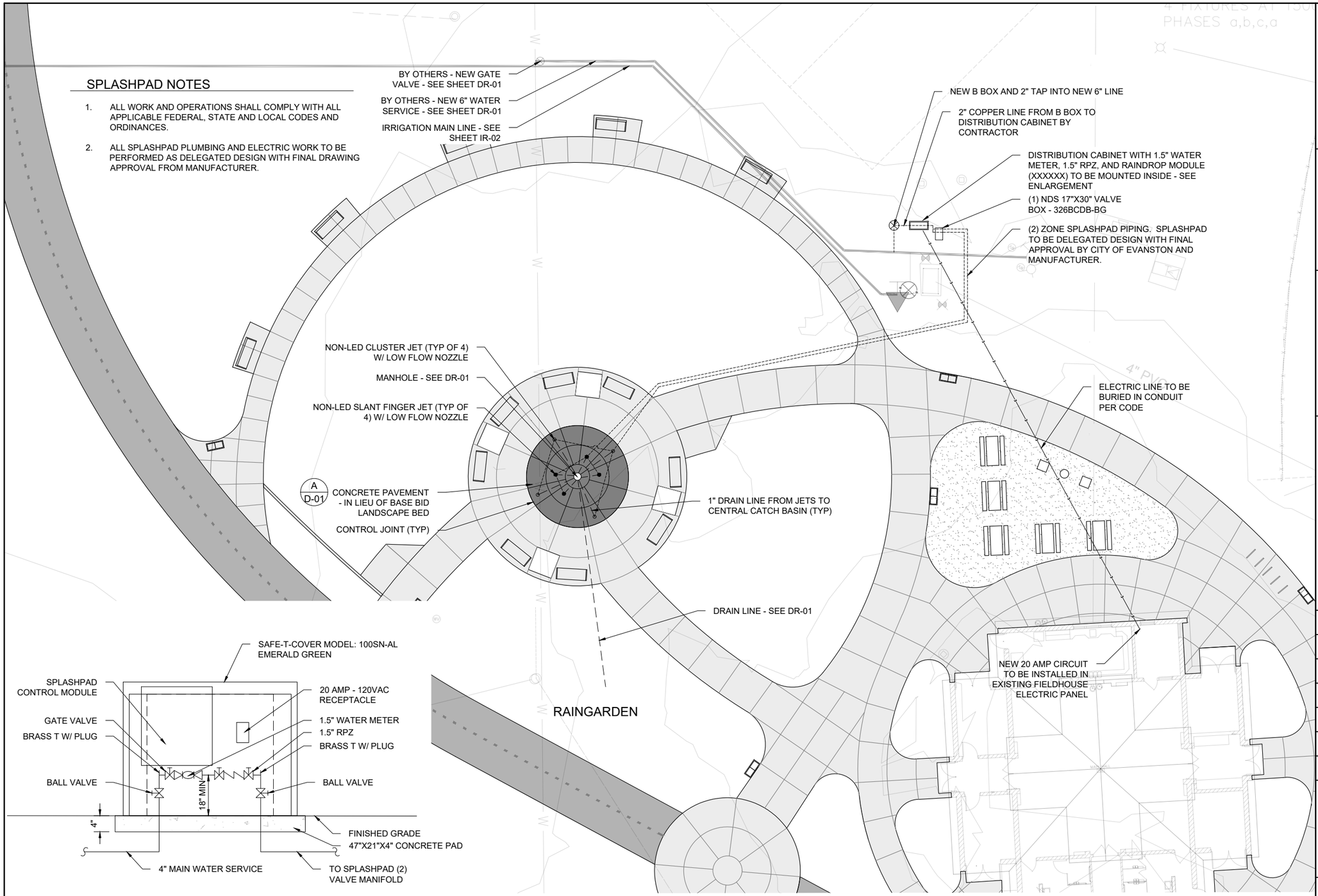
SPLASHPAD ALTERNATE 1 PLAN

SHEET NO.

C-06

SPLASHPAD NOTES

1. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
2. ALL SPLASHPAD PLUMBING AND ELECTRIC WORK TO BE PERFORMED AS DELEGATED DESIGN WITH FINAL DRAWING APPROVAL FROM MANUFACTURER.



2 CABINET ENLARGEMENT
SCALE: ½" = 1'-0"

1 SPLASH PAD ALTERNATE
SCALE: 1" - 20'-0"

City of Evanston

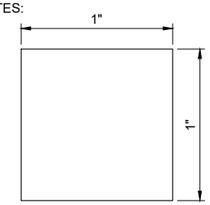
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: AS SHOWN

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

SPLASHPAD ALTERNATE 2 PLAN

SHEET NO.

C-06.1

REVISED BASEBALL FIELD LAYOUT

270 DEGREE SPRAY PATTERN

MOVE EXISTING TORO 640 ROTARY HEAD TO NEW LOCATION ALLOWING FOR NEW SPRAY PATTERN (TYP OF 3). NEW PIPE TO BE 1-1/4" SDR-21 CLASS 200 PVC AS NEEDED.

180 DEGREE SPRAY PATTERN

192 DEGREE SPRAY PATTERN

REVISED SOCCER FIELD LAYOUT

EXISTING IRRIGATION HEAD (TYP)

EXISTING IRRIGATION LINE (TYP)

NORTH

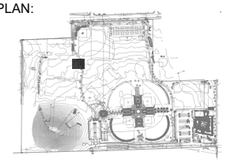
NOTES:

- ALL THRUST BLOCKING SHALL BE 2000 PSI CONCRETE. MIXTURE SHALL BE ONE PART CEMENT, TWO PARTS WASHED SAND AND FIVE PARTS GRAVEL.
- ALL THRUST BLOCKS MUST BE CONSTRUCTED SO THE BEARING SURFACE IS IN DIRECT LINE WITH THE MAJOR FORCE CREATED BY THE FORCE OF THE WATER ACTING ON THE PIPE OR FITTING .
- ALL THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
- THRUST BLOCKING TO OCCUR AT ALL PIPE TERMINATIONS AND CHANGES IN DIRECTION.

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

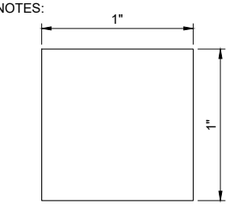
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 20'-0"

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

IRRIGATION PLAN

SHEET NO.

IR-01

EXISTING IRRIGATION HEAD (TYP)

EXISTING IRRIGATION LINE (TYP)

EXISTING IRRIGATION VALVE (TYP)

EXISTING 16" PCCP WATER MAIN

270 DEGREE SPRAY PATTERN

192 DEGREE SPRAY PATTERN

MODIFY EXISTING TORO 640 ROTARY HEAD TO NEW SPRAY PATTERN. ROTARY HEAD TO STAY IN ORIGINAL LOCATION

NEW 3" SDR CLASS 200 PVC MAINLINE (261 LF) THRUST BLOCKING AT ALL CHANGES IN PIPE DIRECTION

EXISTING CONTROL BOX

EXISTING B BOX

NEW 3" ISO VALVE WITH NEW WIRING FROM ABUTTING CONTROL CABINET

NORTH

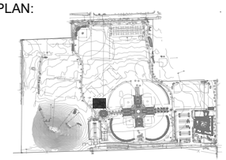
NOTES:

- ALL THRUST BLOCKING SHALL BE 2000 PSI CONCRETE. MIXTURE SHALL BE ONE PART CEMENT, TWO PARTS WASHED SAND AND FIVE PARTS GRAVEL.
- ALL THRUST BLOCKS MUST BE CONSTRUCTED SO THE BEARING SURFACE IS IN DIRECT LINE WITH THE MAJOR FORCE CREATED BY THE FORCE OF THE WATER ACTING ON THE PIPE OR FITTING .
- ALL THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
- THRUST BLOCKING TO OCCUR AT ALL PIPE TERMINATIONS AND CHANGES IN DIRECTION.

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

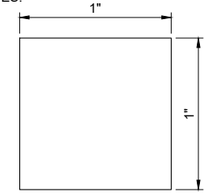
KEYPLAN:



PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 20'-0"

REVISIONS:

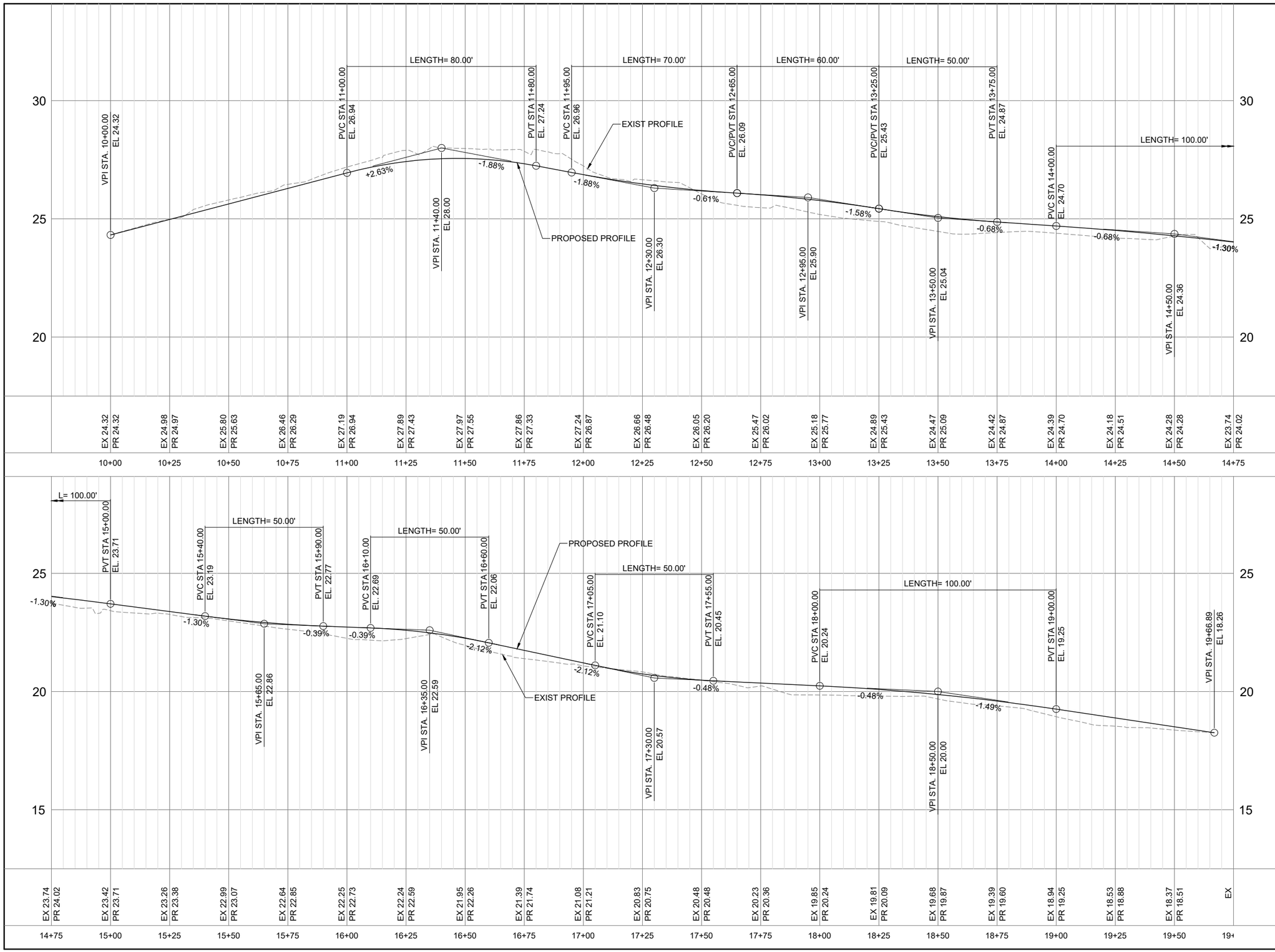
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

IRRIGATION PLAN

SHEET NO.

IR-02



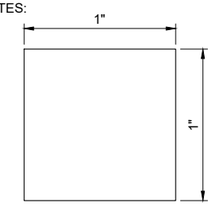
City of Evanston

Public Works Agency
2100 Ridge Avenue
Evanston, Illinois 60201

PROJECT NAME:

2026 JAMES PARK PLAYGROUND AND PATHWAY IMPROVEMENTS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0" H, 1"= 4'-0" V

REVISIONS:

NO.	DATE / DESCRIPTION

SHEET TITLE

PROFILE - WEST PATH

SHEET NO.

PP-01



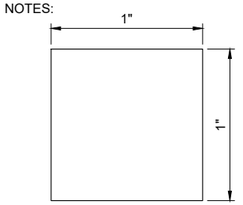
City of Evanston

Public Works Agency
2100 Ridge Avenue
Evanston, Illinois 60201

PROJECT NAME:

2026 JAMES PARK PLAYGROUND AND PATHWAY IMPROVEMENTS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0" H, 1"= 4'-0" V

REVISIONS:

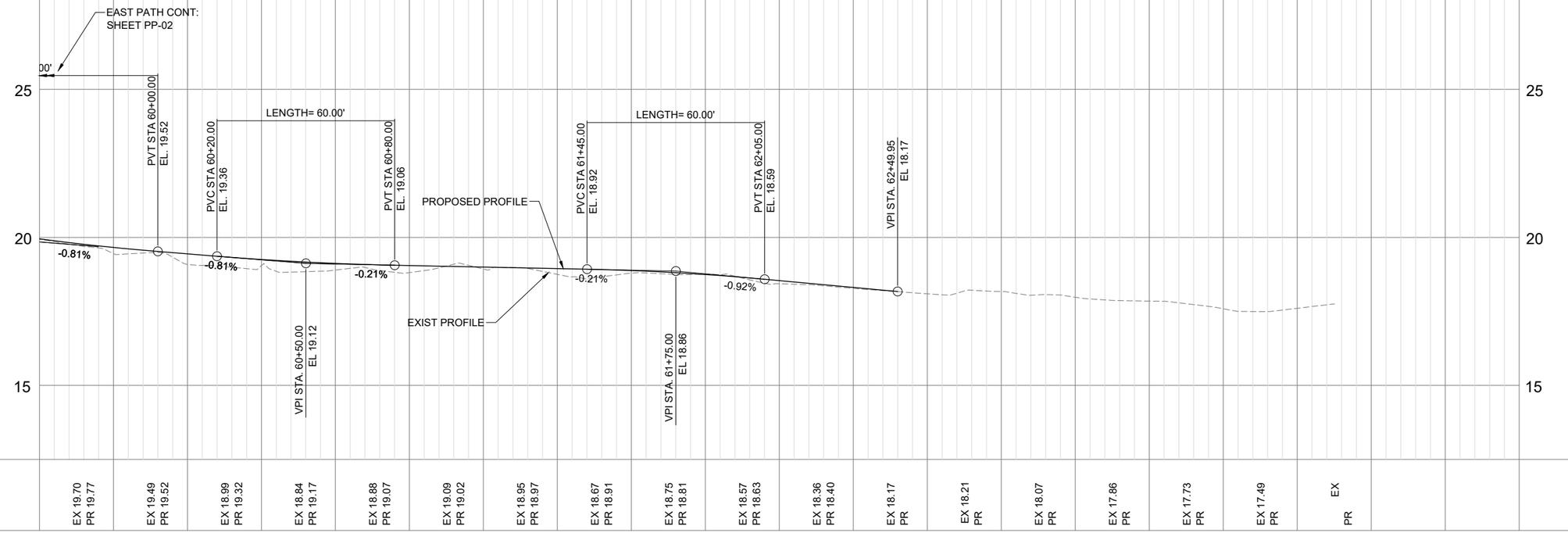
NO.	DATE / DESCRIPTION

SHEET TITLE

PROFILE - EAST PATH

SHEET NO.

PP-02



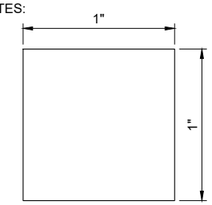
City of Evanston

Public Works Agency
2100 Ridge Avenue
Evanston, Illinois 60201

PROJECT NAME:

2026 JAMES PARK PLAYGROUND AND PATHWAY IMPROVEMENTS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0" H, 1"= 4'-0" V

REVISIONS:

NO.	DATE / DESCRIPTION

SHEET TITLE

PROFILE - EAST PATH

SHEET NO.

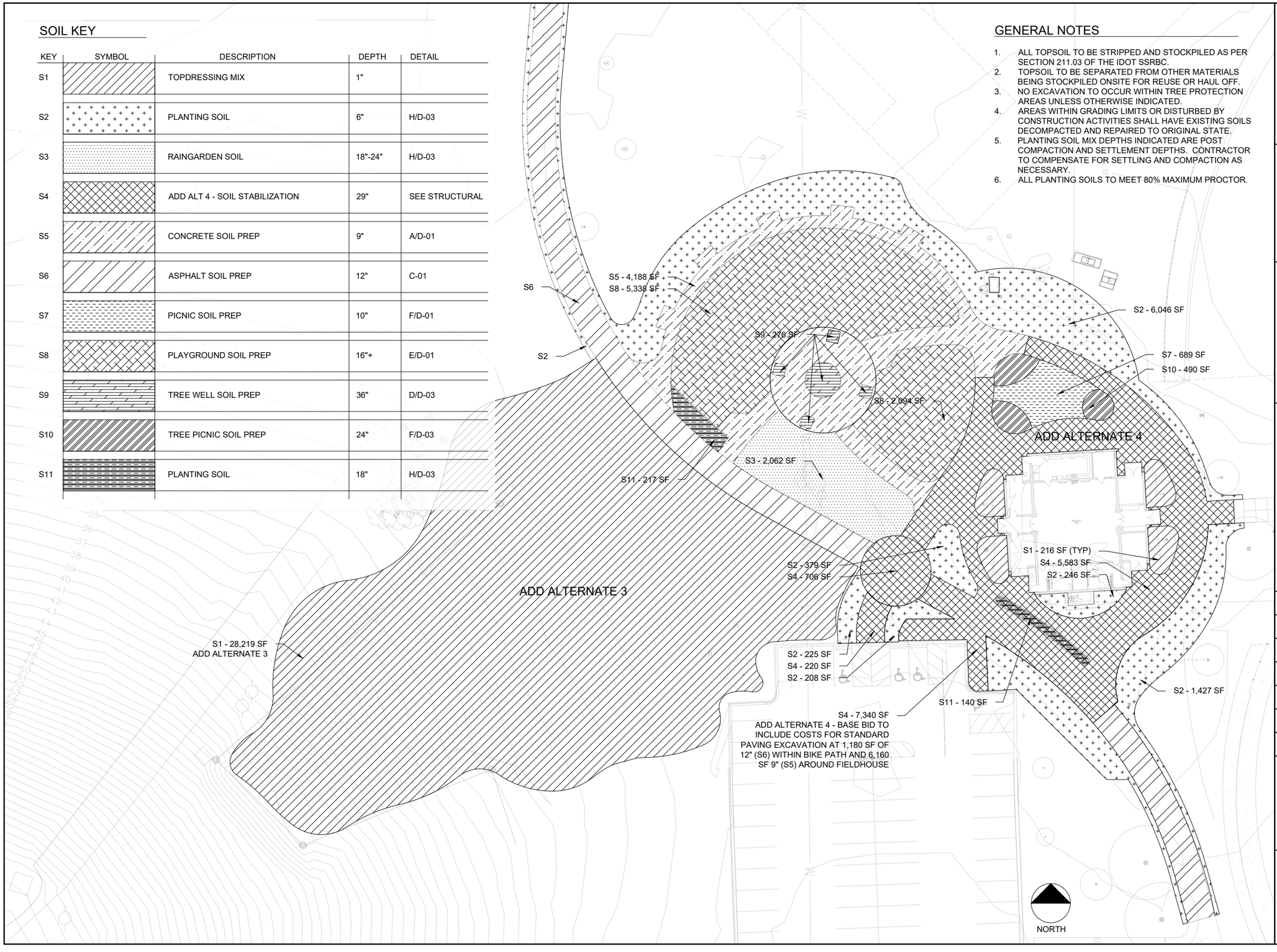
PP-03

SOIL KEY

KEY	SYMBOL	DESCRIPTION	DEPTH	DETAIL
S1		TOPDRESSING MIX	1"	
S2		PLANTING SOIL	6"	H/D-03
S3		RAINGARDEN SOIL	18"-24"	H/D-03
S4		ADD ALT 4 - SOIL STABILIZATION	29"	SEE STRUCTURAL
S5		CONCRETE SOIL PREP	9"	A/D-01
S6		ASPHALT SOIL PREP	12"	C-01
S7		PICNIC SOIL PREP	10"	F/D-01
S8		PLAYGROUND SOIL PREP	16"+	E/D-01
S9		TREE WELL SOIL PREP	36"	D/D-03
S10		TREE PICNIC SOIL PREP	24"	F/D-03
S11		PLANTING SOIL	18"	H/D-03

GENERAL NOTES

1. ALL TOPSOIL TO BE STRIPPED AND STOCKPILED AS PER SECTION 211.03 OF THE IDOT SSRBC.
2. TOPSOIL TO BE SEPARATED FROM OTHER MATERIALS BEING STOCKPILED ONSITE FOR REUSE OR HAUL OFF.
3. NO EXCAVATION TO OCCUR WITHIN TREE PROTECTION AREAS UNLESS OTHERWISE INDICATED.
4. AREAS WITHIN GRADING LIMITS OR DISTURBED BY CONSTRUCTION ACTIVITIES SHALL HAVE EXISTING SOILS DECOMPACTED AND REPAIRED TO ORIGINAL STATE.
5. PLANTING SOIL MIX DEPTHS INDICATED ARE POST COMPACTION AND SETTLEMENT DEPTHS. CONTRACTOR TO COMPENSATE FOR SETTLING AND COMPACTION AS NECESSARY.
6. ALL PLANTING SOILS TO MEET 80% MAXIMUM PROCTOR.



City of Evanston

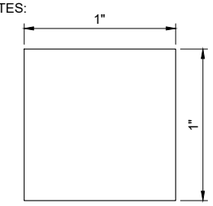
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0"

REVISIONS:

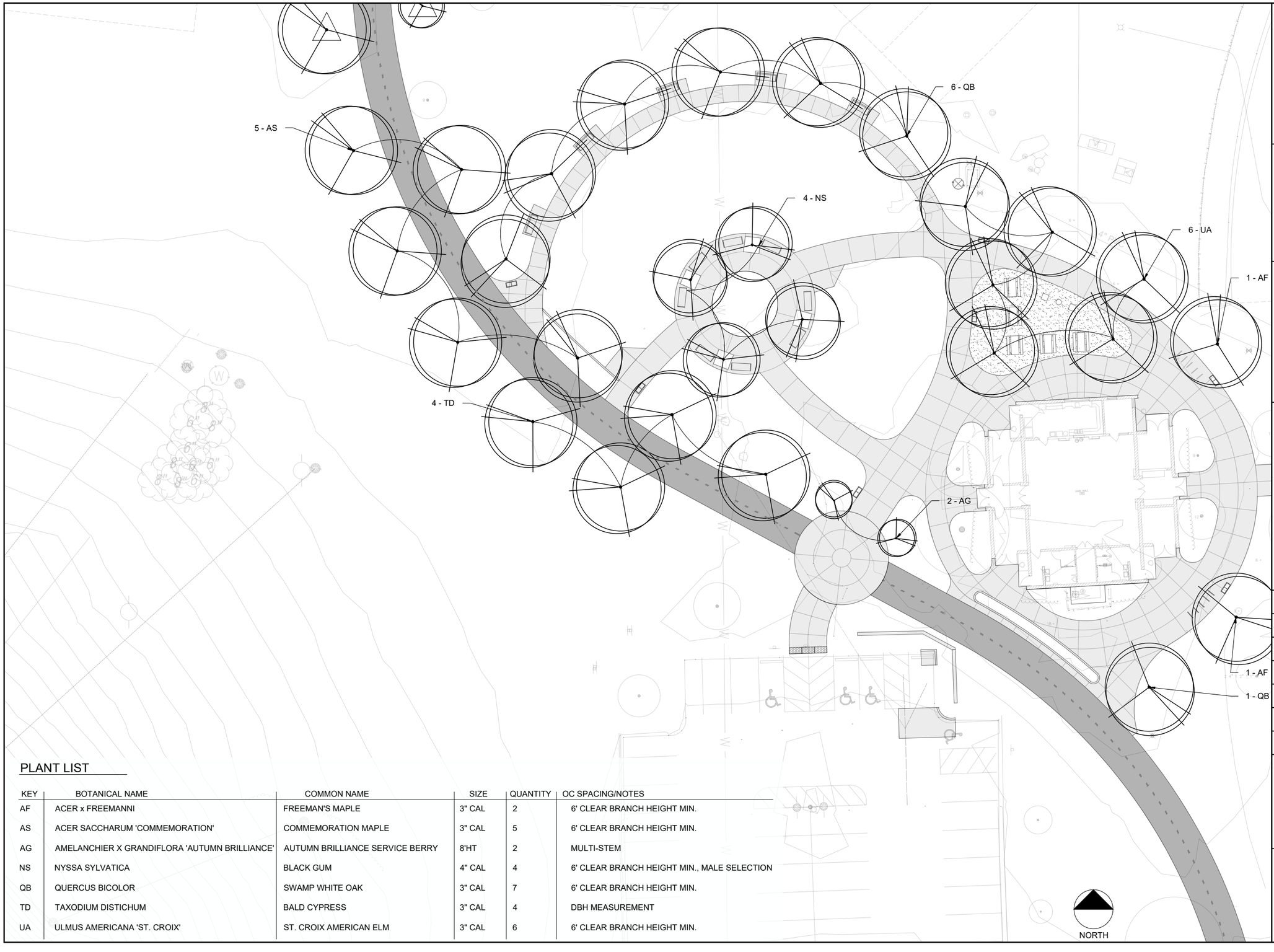
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

SOILS PLAN

SHEET NO.

P-01



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	OC SPACING/NOTES
AF	ACER x FREEMANNI	FREEMAN'S MAPLE	3" CAL	2	6' CLEAR BRANCH HEIGHT MIN.
AS	ACER SACCHARUM 'COMMEMORATION'	COMMEMORATION MAPLE	3" CAL	5	6' CLEAR BRANCH HEIGHT MIN.
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICE BERRY	8'HT	2	MULTI-STEM
NS	NYSSA SYLVATICA	BLACK GUM	4" CAL	4	6' CLEAR BRANCH HEIGHT MIN., MALE SELECTION
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL	7	6' CLEAR BRANCH HEIGHT MIN.
TD	TAXODIUM DISTICHUM	BALD CYPRESS	3" CAL	4	DBH MEASUREMENT
UA	ULMUS AMERICANA 'ST. CROIX'	ST. CROIX AMERICAN ELM	3" CAL	6	6' CLEAR BRANCH HEIGHT MIN.

City of Evanston

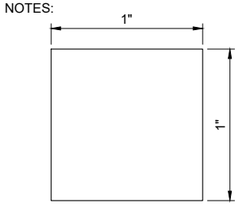
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 30'-0"

REVISIONS:

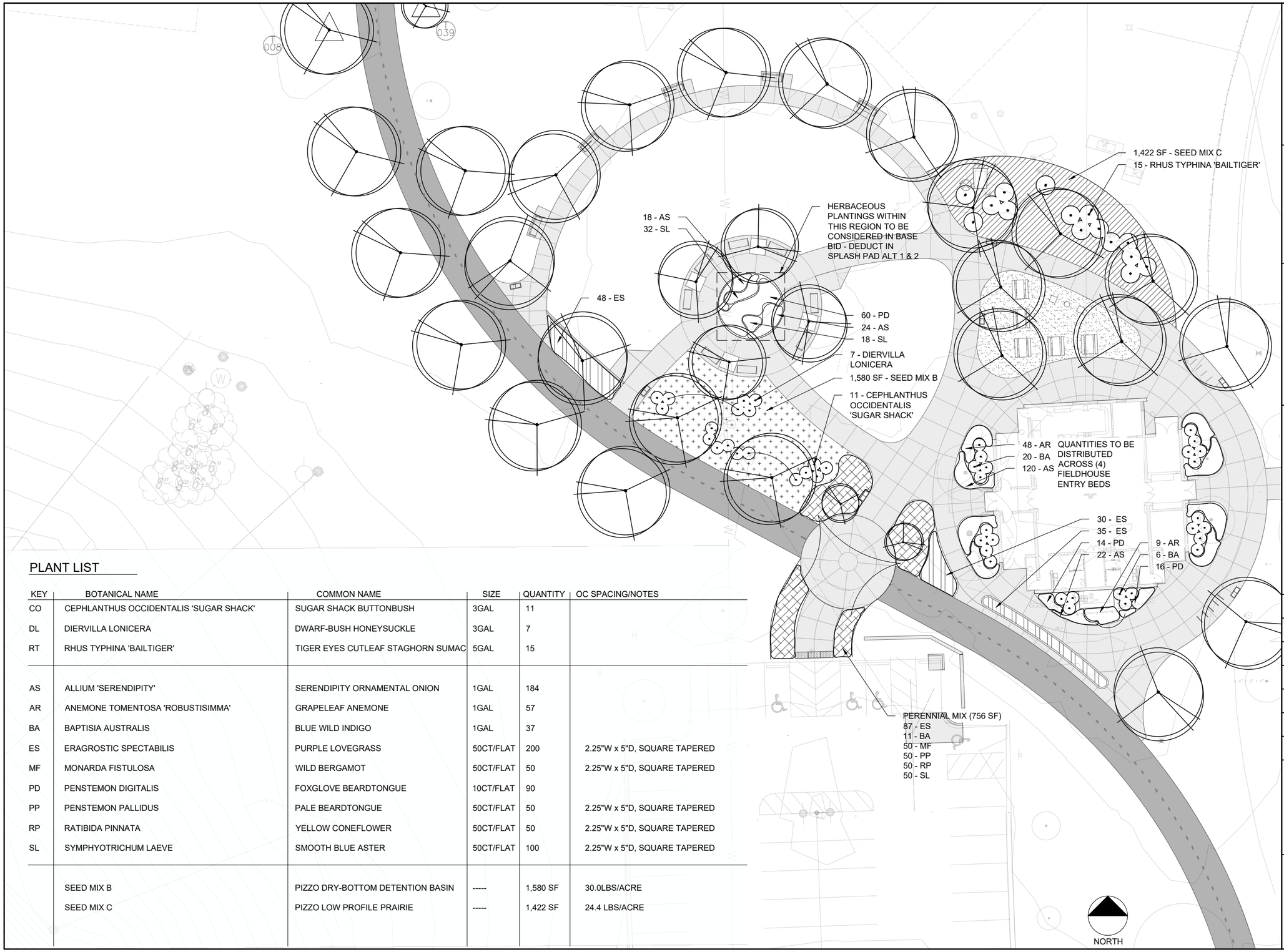
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

TREE PLANTING PLAN

SHEET NO.

P-02



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	OC SPACING/NOTES
CO	CEPHLANTHUS OCCIDENTALIS 'SUGAR SHACK'	SUGAR SHACK BUTTONBUSH	3GAL	11	
DL	DIERVILLA LONICERA	DWARF-BUSH HONEYSUCKLE	3GAL	7	
RT	RHUS TYPHINA 'BAILTIGER'	TIGER EYES CUTLEAF STAGHORN SUMAC	5GAL	15	
AS	ALLIUM 'SERENDIPITY'	SERENDIPITY ORNAMENTAL ONION	1GAL	184	
AR	ANEMONE TOMENTOSA 'ROBUSTISIMMA'	GRAPELEAF ANEMONE	1GAL	57	
BA	BAPTISIA AUSTRALIS	BLUE WILD INDIGO	1GAL	37	
ES	ERAGROSTIC SPECTABILIS	PURPLE LOVEGRASS	50CT/FLAT	200	2.25"W x 5"D, SQUARE TAPERED
MF	MONARDA FISTULOSA	WILD BERGAMOT	50CT/FLAT	50	2.25"W x 5"D, SQUARE TAPERED
PD	PENSTEMON DIGITALIS	FOXGLOVE BEARDTONGUE	10CT/FLAT	90	
PP	PENSTEMON PALLIDUS	PALE BEARDTONGUE	50CT/FLAT	50	2.25"W x 5"D, SQUARE TAPERED
RP	RATIBIDA PINNATA	YELLOW CONEFLOWER	50CT/FLAT	50	2.25"W x 5"D, SQUARE TAPERED
SL	SYMPHYOTRICHUM LAEVE	SMOOTH BLUE ASTER	50CT/FLAT	100	2.25"W x 5"D, SQUARE TAPERED
	SEED MIX B	PIZZO DRY-BOTTOM DETENTION BASIN	-----	1,580 SF	30.0LBS/ACRE
	SEED MIX C	PIZZO LOW PROFILE PRAIRIE	-----	1,422 SF	24.4 LBS/ACRE

City of Evanston

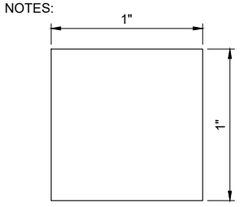
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 30'-0"

REVISIONS:

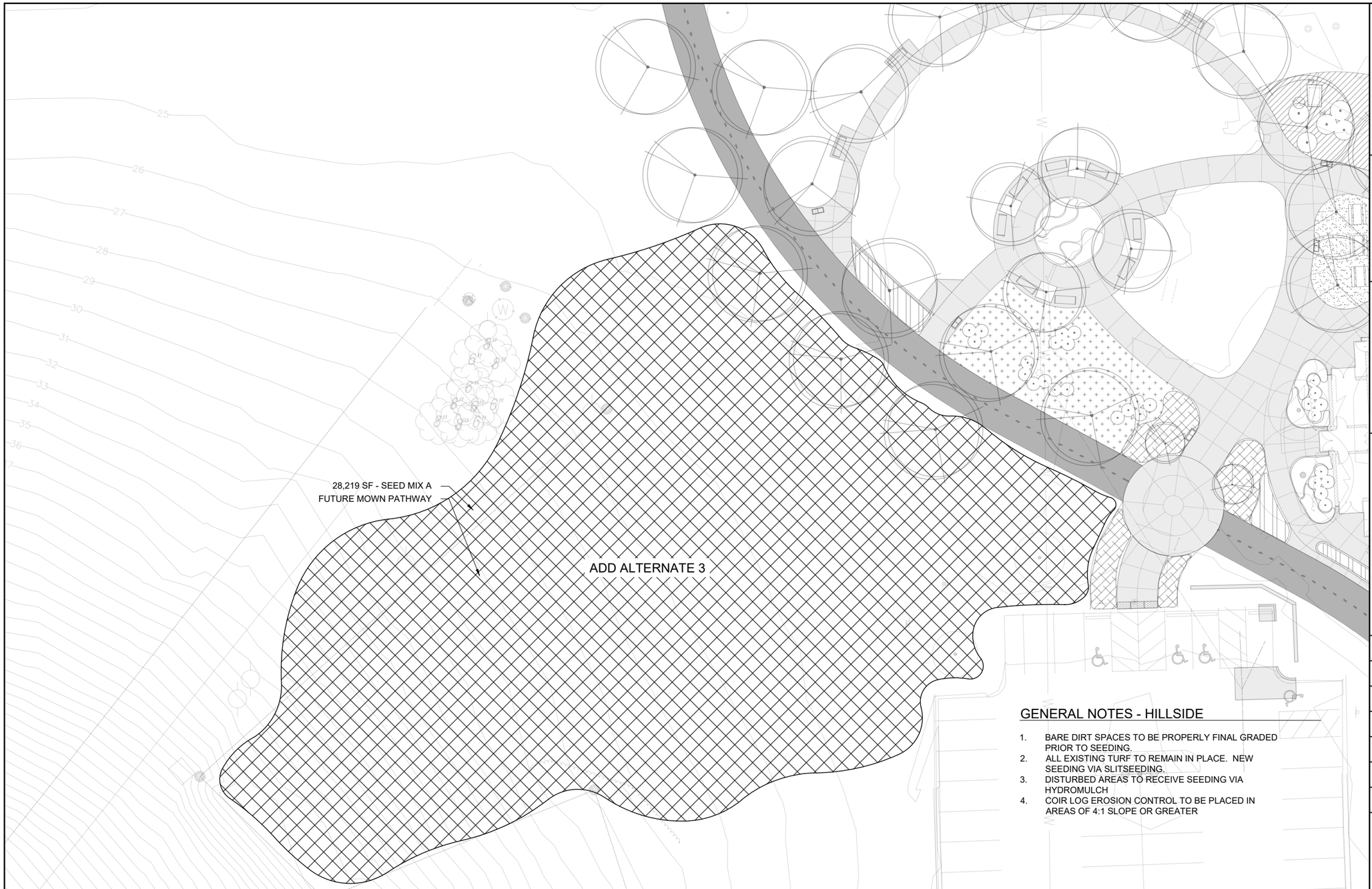
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

WOODY/ HERBACEOUS PLANTING PLAN

SHEET NO.

P-02.1



GENERAL NOTES - HILLSIDE

1. BARE DIRT SPACES TO BE PROPERLY FINAL GRADED PRIOR TO SEEDING.
2. ALL EXISTING TURF TO REMAIN IN PLACE. NEW SEEDING VIA SLITSEEDING.
3. DISTURBED AREAS TO RECEIVE SEEDING VIA HYDROMULCH
4. COIR LOG EROSION CONTROL TO BE PLACED IN AREAS OF 4:1 SLOPE OR GREATER

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	OC SPACING/NOTES
	SEED MIX A	PIZZO MESIC PRAIRIE	-----	28,219 SF	22.5 LBS/ACRE

NORTH

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:

1" x 1"

DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 30'-0"

REVISIONS:

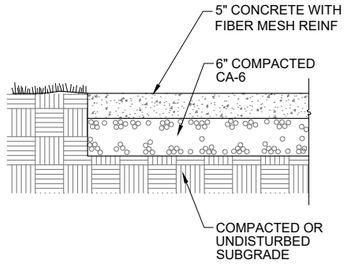
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

HILLSIDE ALTERNATE 3 PLAN

SHEET NO.

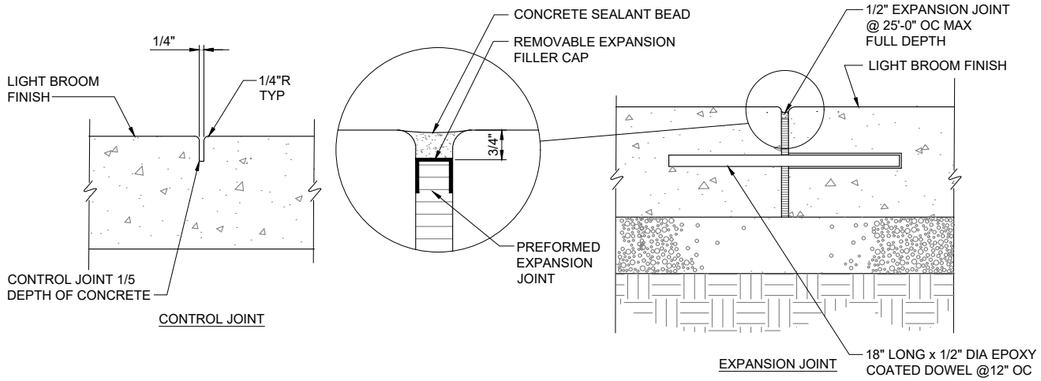
P-02.2



NOTES:
1. SEE DETAIL B SHEET D-01 FOR JOINTS.
2. CONTRACTOR SHALL PLACE CONTROL JOINTS EVERY 5' AND EXPANSION JOINTS EVERY 25' OR AS SHOWN ON PLANS.

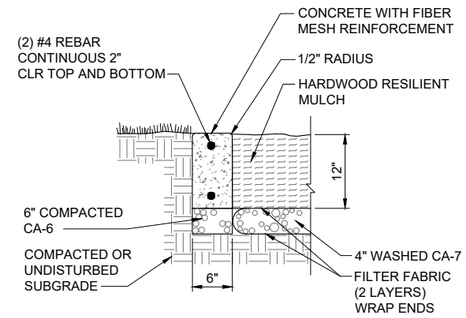
A CONCRETE PAVEMENT

NOT TO SCALE



B CONTROL AND EXPANSION JOINTS

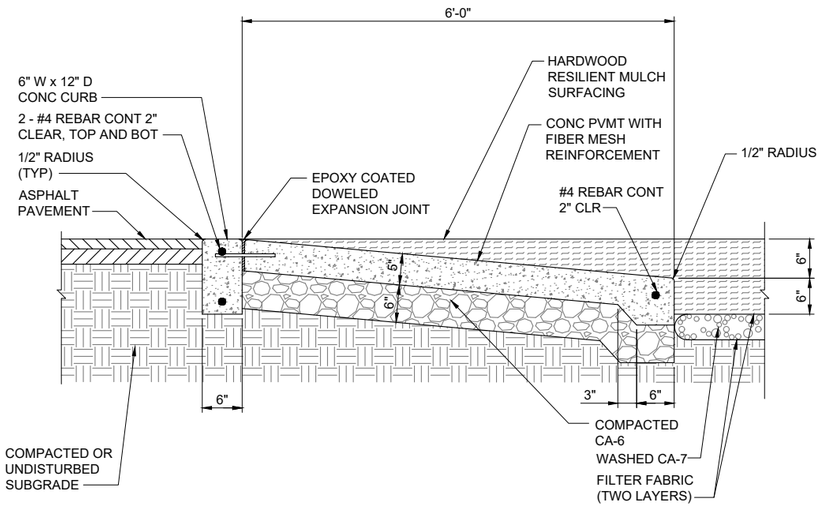
NOT TO SCALE



NOTES:
1. LIGHT BROOM FINISH ENTIRE VERTICAL FACE OF CURB WHEREVER ADJACENT TO HARDWOOD RESILIENT MULCH SURFACING.
2. CONTRACTOR SHALL INSTALL EXPANSION JOINTS EVERY 25'.

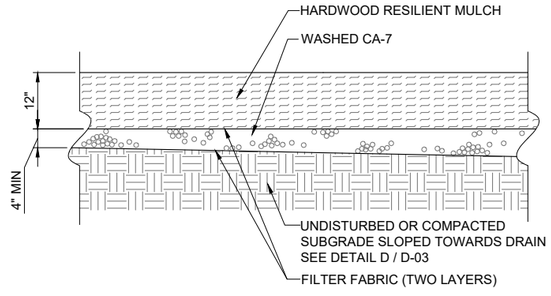
C FLUSH CONCRETE CURB

NOT TO SCALE



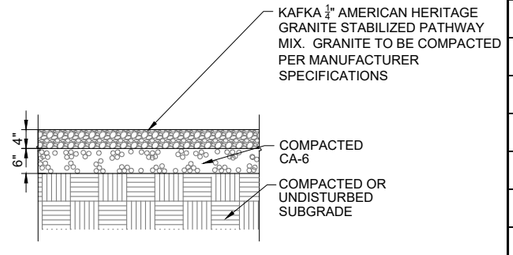
D CONCRETE ADA RAMP AND CURB

NOT TO SCALE



E HARDWOOD RESILIENT MULCH SURFACING

NOT TO SCALE



F STABILIZED CRUSHED STONE PAVING

NOT TO SCALE

City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: NONE

REVISIONS:

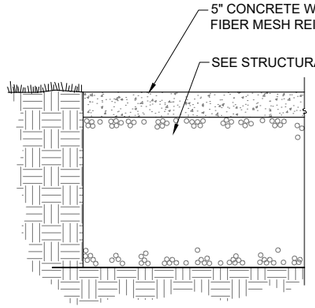
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

DETAILS

SHEET NO.

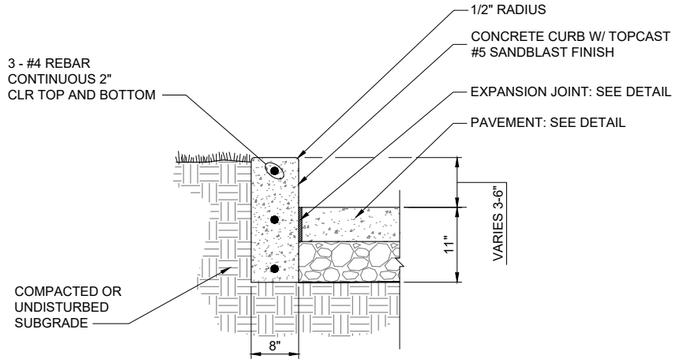
D-01



NOTES:
1. SEE DETAIL B SHEET D-01 FOR JOINTS.
2. CONTRACTOR SHALL PLACE CONTROL JOINTS EVERY 5' AND EXPANSION JOINTS EVERY 25' OR AS SHOWN ON PLANS.

A CONCRETE PAVEMENT w/ STRUCTURAL BASE

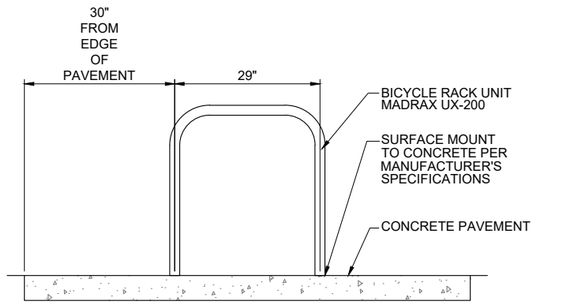
NOT TO SCALE



NOTES:
1. TOPCAST SANDBLAST FINISH ALL EXPOSED CURB FACES.
2. CONTRACTOR SHALL INSTALL EXPANSION JOINTS EVERY 25'.

B 8" CONCRETE CURB

NOT TO SCALE

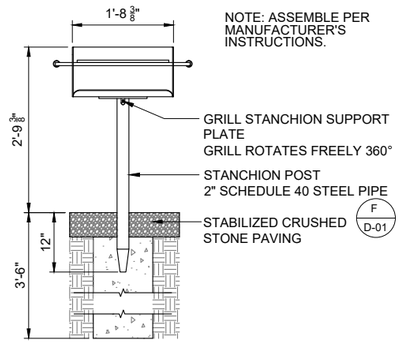


C BIKE RACK

NOT TO SCALE

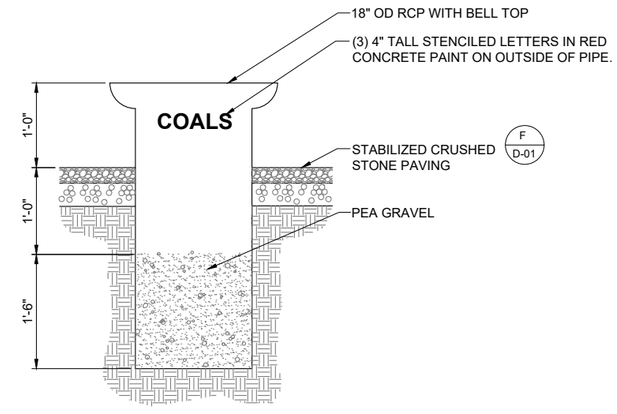
MANUFACTURER:	PRODUCT
DuMor, INC.* MIFFLINTOWN, PA p. 800-598-4018 www.dumor.com	GRILL MODEL 21-00 STYLE: IN-GROUND COLOR: BLACK

* OR APPROVED EQUAL



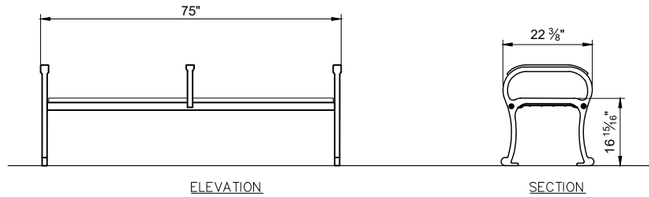
D GRILL

NOT TO SCALE



E COAL RECEPTACLE

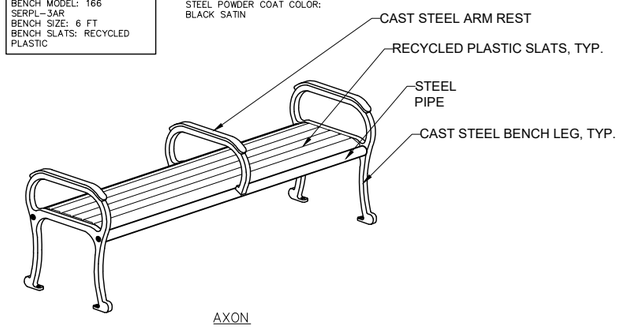
NOT TO SCALE



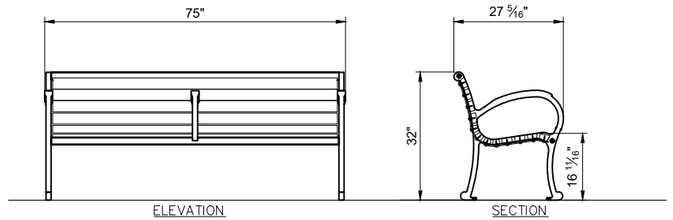
ELEVATION SECTION

MANUFACTURER: DuMor, INC.
BENCH MODEL: 166
SERPL-3AR
BENCH SIZE: 6 FT
BENCH SLATS: RECYCLED PLASTIC

SLAT COLOR: 'CEDAR'
STEEL POWDER COAT COLOR:
BLACK SATIN



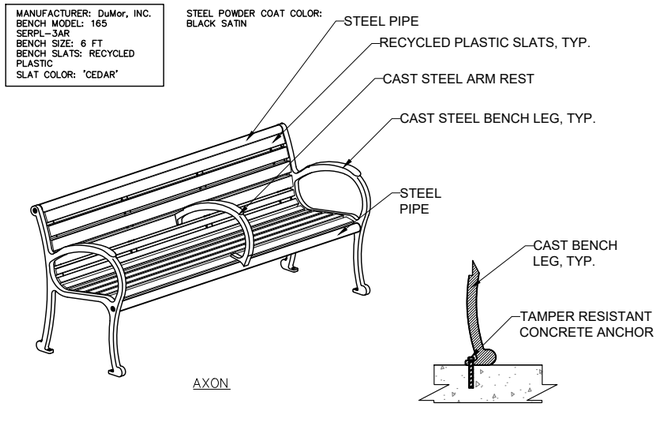
AXON



ELEVATION SECTION

MANUFACTURER: DuMor, INC.
BENCH MODEL: 165
SERPL-3AR
BENCH SIZE: 6 FT
BENCH SLATS: RECYCLED PLASTIC
SLAT COLOR: 'CEDAR'

STEEL POWDER COAT COLOR:
BLACK SATIN



AXON

F BENCH

NOT TO SCALE

City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:

DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: NONE

REVISIONS:

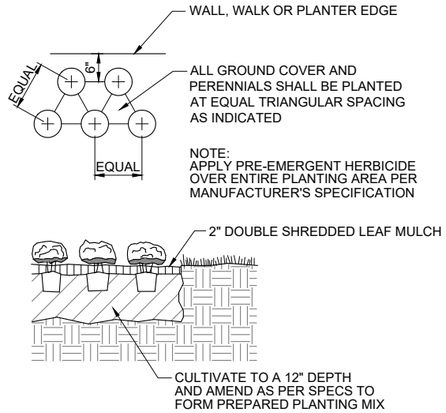
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

DETAILS

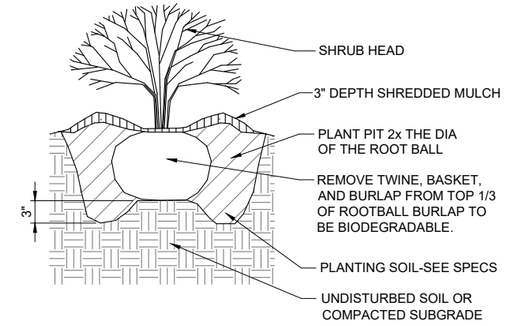
SHEET NO.

D-02



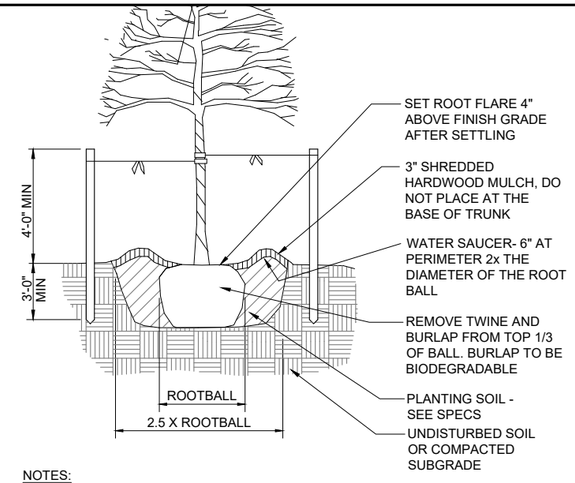
A GROUNDCOVER AND PERENNIAL PLANTING

NOT TO SCALE



B SHRUB PLANTING

NOT TO SCALE

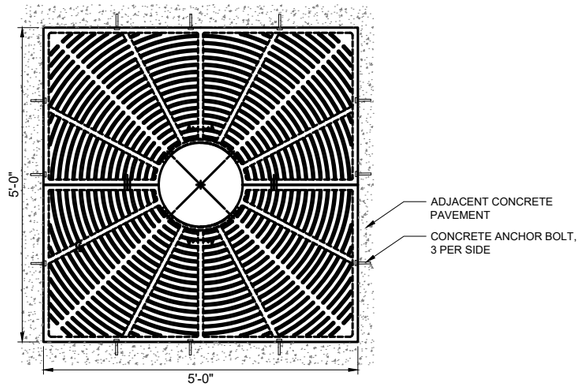


NOTES:

1. REMOVE WIRE BASKET, TWINE, AND ROPE. PULL BURLAP DOWN FROM TOP 1/3 OF ROOTBALL.
2. REMOVE ALL RIBBONS OR TREE TAGS AFTER OWNER APPROVAL.
3. TREES SHALL BE ALIGNED AND PLUMB AFTER WATERING AND SETTLING.
4. PRUNE TREES AS REQUIRED AND AS DIRECTED BY THE OWNER.
5. IF TREE FAILS TO REMAIN PLUMB, INSTALL 2 STEEL POSTS WITH 2 HORIZONTALLY OPPOSED GUY WIRES AND FLAGGING AND 2 REINF RUBBER HOSE SECTIONS WITH A DOUBLE STRAND OF #11 WIRE PER TREE. WRAP WIRE A MINIMUM OF 2 TIMES AROUND EACH POST.

C TREE PLANTING

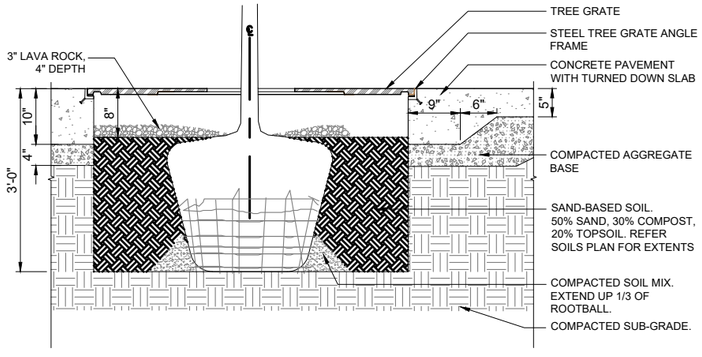
NOT TO SCALE



PLAN VIEW

NOTES:

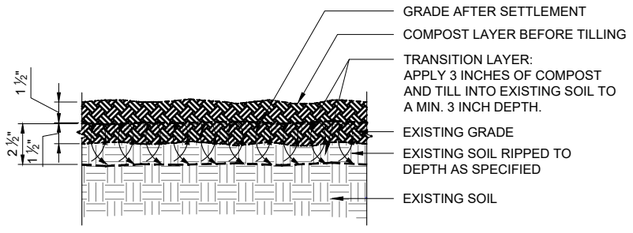
1. SET TREE PLUMB IN PLANTING PIT.
2. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
3. REFER SHEET PLANTING PLAN FOR ADDITIONAL PLANTING NOTES.



D TREE GRATE PLANTING

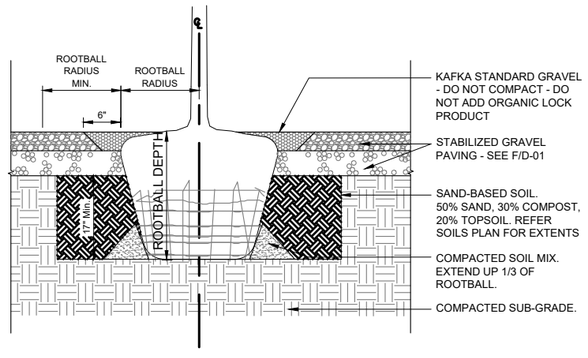
NOT TO SCALE

TRANSITION LAYER NOTE:
DIMENSIONS AND MATERIALS LISTED ARE FOR GENERAL REFERENCE. REFER TO SPECIFICATIONS FOR RELATIVE AND RELATED INFORMATION TO EACH MATERIAL ITEM AND METHODS LISTED.



E PLANTING MIX INSTALLATION

NOT TO SCALE



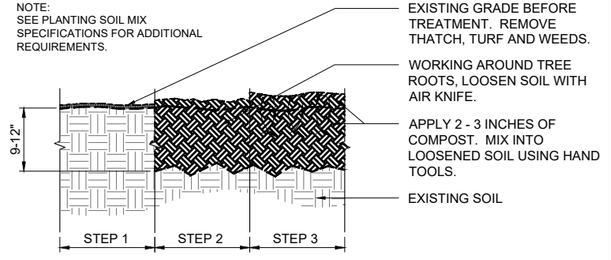
NOTES:

1. SET TREE PLUMB IN PLANTING PIT.
2. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
3. FOLLOW MANUFACTURER SPECIFICATIONS FOR ALL MIXING OF ORGANIC LOCK PRODUCT

F STABILIZED GRAVEL TREE PLANTING

NOT TO SCALE

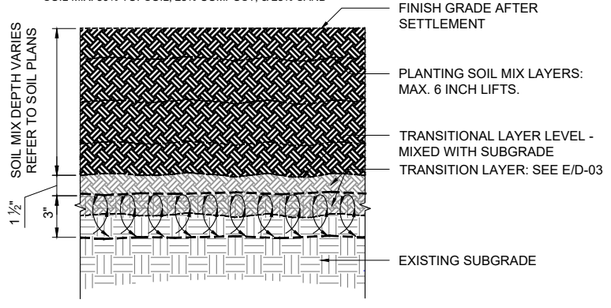
NOTE:
SEE PLANTING SOIL MIX SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



G AMENDED SOIL WITHIN TREE DRIPLINE

NOT TO SCALE

SOIL MIX INSTALLATION NOTE:
INSTALL PLANTING SOIL MIX AFTER TRANSITION LAYER HAS BEEN COMPLETED AND COMPACTED TO SPECIFICATIONS.
SOIL MIX: 50% TOPSOIL, 25% COMPOST, & 25% SAND



H PLANTING MIX INSTALLATION

NOT TO SCALE

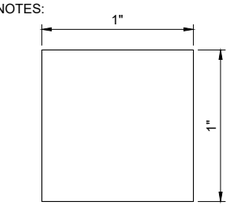
City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: NONE

REVISIONS:

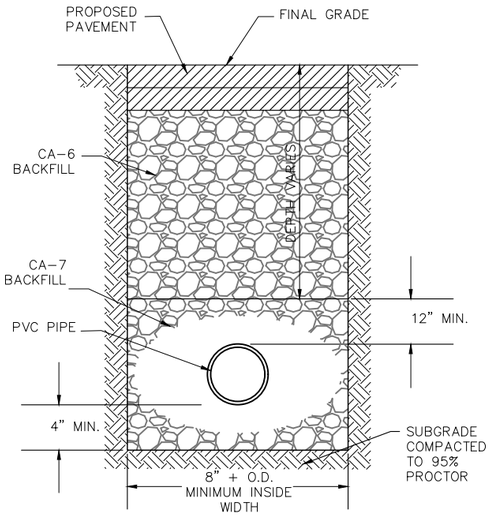
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

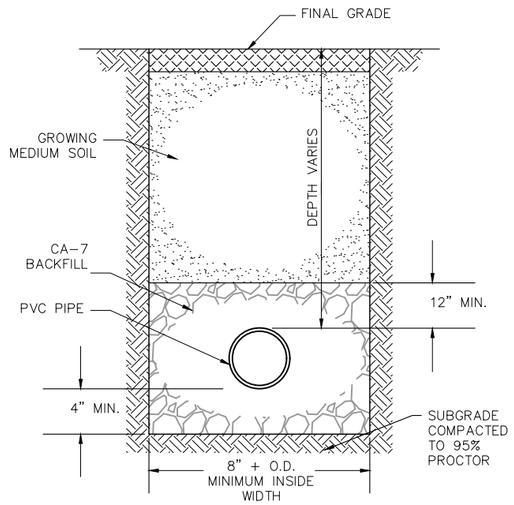
DETAILS

SHEET NO.

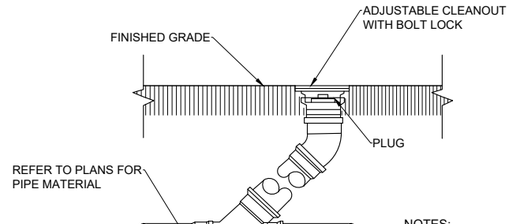
D-03



A UTILITY TRENCH DETAIL UNDER PAVEMENT
NOT TO SCALE

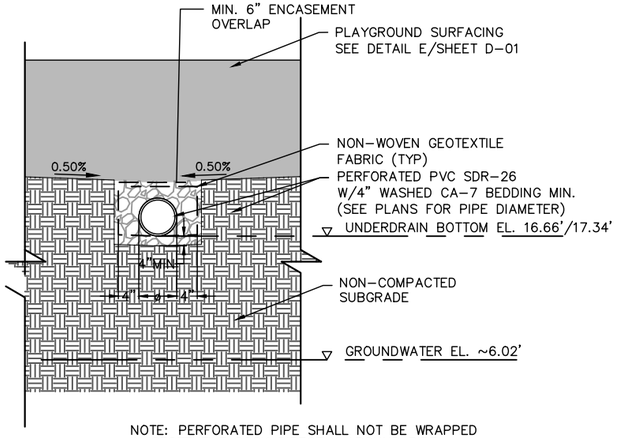


B UTILITY TRENCH DETAIL UNDER LANDSCAPE
NOT TO SCALE



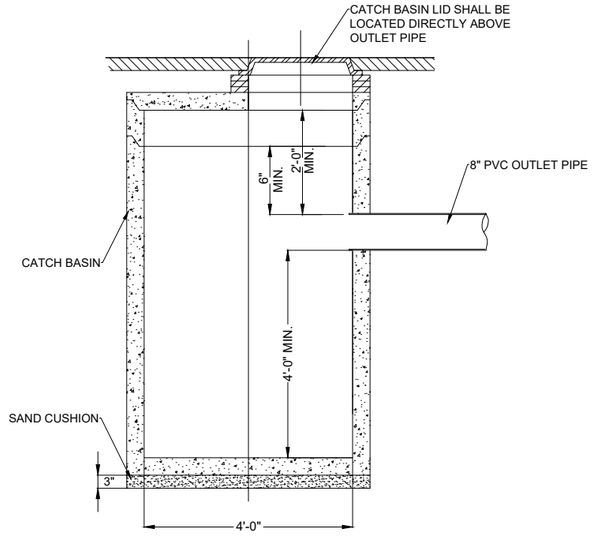
NOTES:
1. CLEANOUT FRAME AND LID SHALL BE JR SMITH MODEL #4220 OR #4240 SERIES, OR APPROVED EQUAL WITH BOLT LOCK DEVICE.
2. ALL RISER PIPE MATERIALS (INCL. FITTINGS AND PLUG) SHALL MATCH PROPOSED SEWER MATERIAL AS INDICATED ON PLANS.
3. ALL LIDS SHALL BE SET FLUSH WITH FINISHED GRADE.

C TYPICAL CLEANOUT TO FINISHED GRADE
NOT TO SCALE



NOTE: PERFORATED PIPE SHALL NOT BE WRAPPED IN GEOTEXTILE SOCK DIRECTLY AROUND PIPE.

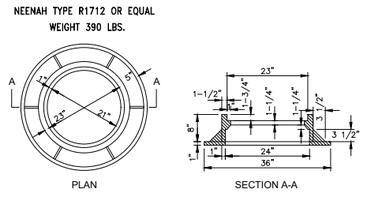
D PERFORATED UNDERDRAIN
NOT TO SCALE



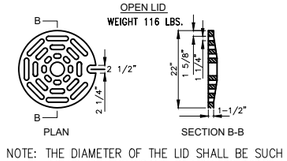
NOTES:

1. ALL INLET AND OUTLET PIPES SHALL BE JOINED WITH WATERTIGHT FLEXIBLE RUBBER CONNECTIONS, CONFORMING TO ASTM C-443 AND C-923 WITH STAINLESS STEEL BAND.

E CATCH BASIN TYPE A
NOT TO SCALE



FRAME



NOTE: THE DIAMETER OF THE LID SHALL BE SUCH AS TO FIT THE FRAME WITHOUT WEDGING

LID

F TYPE 1 FRAME AND LID
NOT TO SCALE

City of Evanston
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: NONE

REVISIONS:

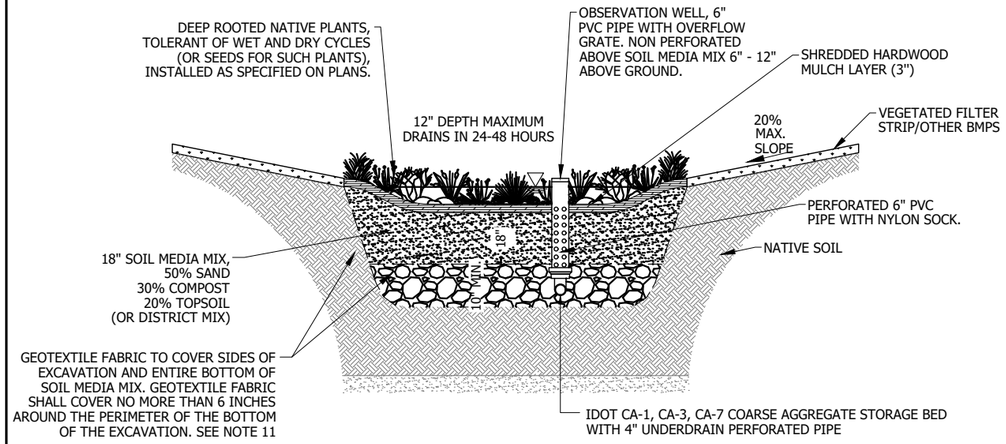
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

DETAILS

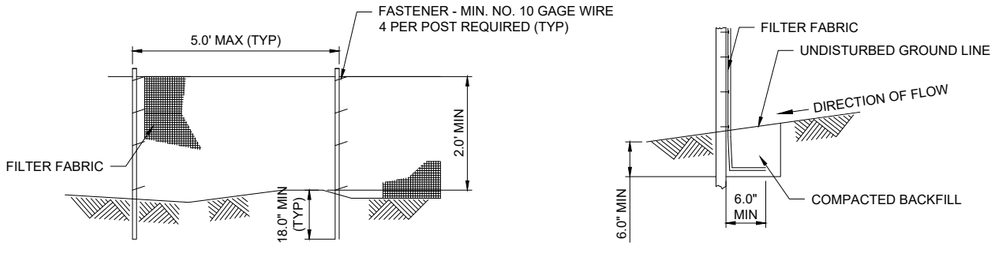
SHEET NO.

D-04



A RAINGARDEN

NOT TO SCALE



ELEVATION

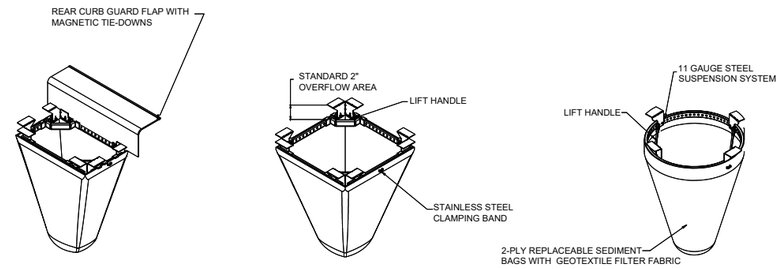
FABRIC ANCHOR DETAIL

NOTES:

1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS 1 WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 40 FOR WOVEN.
3. FENCE POSTS SHALL BE EITHER STANDARD STEEL POST OR WOOD POST WITH A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.

B DOUBLE ROW SILT FENCE

NOT TO SCALE



TYPICAL CURB BOX INLET FILTER

TYPICAL FLAT/RECTANGULAR/ROLLED CURB INLET FILTER

TYPICAL ROUND INLET FILTER

ACCEPTABLE MANUFACTURER'S AS LISTED BELOW
1. INLET & PIPE PROTECTION, INC.
Naperville, IL 60564 847 722-0690

2. MARATHON MATERIALS, INC.
Plainfield, IL 60544 800-983-9493

MAINTENANCE
1. CLEAN OUT AFTER EVERY RAIN EVENT

Material Property	Test Method	Value (min. ave.)	
> Inner Filter Bag Specs (2ft min vol)		Non-Woven	Woven Mono
Grab Tensile	ASTM D 4632	100 lbs	200 lbs
Puncture Strength	ASTM D 4833	65 lbs	90 lbs
Trapezoidal Tear	ASTM D 4535	45 lbs	75 lbs
UV Resistance	ASTM D 4355	70% at 500 hrs	90%
App Open Size (AOS)	ASTM D 4751	70 sieve (.212 mm)	40 sieve (.425 mm)
Premittivity	ASTM D 4491	2.0/sec.	2.1/sec
Water Flow Rate	ASTM D 4491	145 gpm/sqft.	145gpm/sqft
> Polyester Outer Reinforcement Bag Specifications			
Weight	ASTM D 3776	4.55 oz/sqyd +/-15%	
Thickness	ASTM D 1777	.040 +/- .005	
> Frame Construction			
A36 Structural Steel; 11 Gauge, Zinc Plated	ASTM A 576	Tensile Strength > 58,000 psi Yield Strength > 36,000 psi	

C INLET FILTER BASKET DETAIL

NOT TO SCALE

City of Evanston

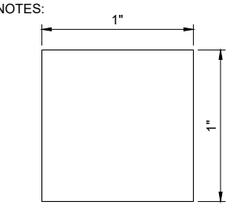
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: NONE

REVISIONS:

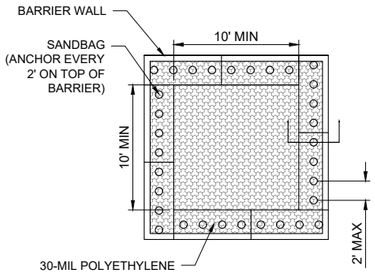
	2026.03.11 / ISSUE FOR BID

SHEET TITLE

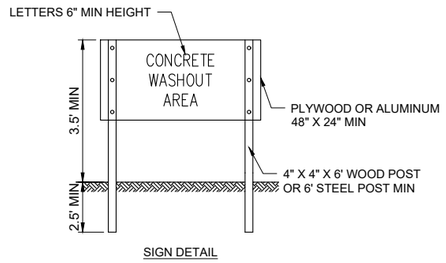
DETAILS

SHEET NO.

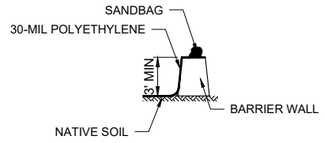
D-05



PLAN VIEW



SIGN DETAIL



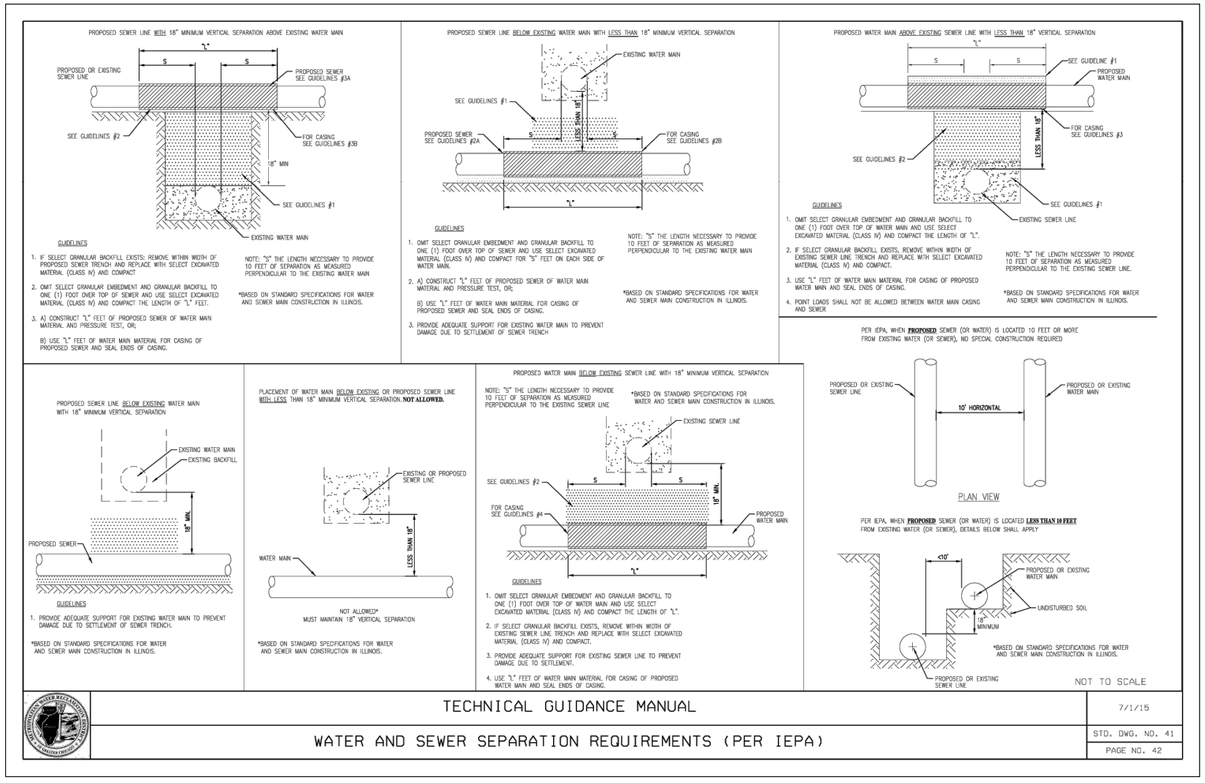
BARRIER WALL ANCHOR SECTION

NOTES:

1. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND/OR SLURRY AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION.
2. FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.

A TEMPORARY CONCRETE WASHOUT FACILITY

NOT TO SCALE



C WATER AND SEWER SEPARATION REQUIREMENTS (PER IEPA)

City of Evanston

Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:

DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: NONE

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

DETAILS

SHEET NO.

D-06

GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE VILLAGE AND THE ENGINEER AT LEAST 48 HOURS IN ADVANCE OF STARTING ANY CONSTRUCTION. THE CONSTRUCTION SHALL BE UNDER THE GENERAL INSPECTION OF THE CITY ENGINEER AND THE OWNER'S ENGINEER.

2. THE STANDARD SPECIFICATIONS GOVERNING THIS PROJECT ARE THE FOLLOWING:

   A. CITY OF EVANSTON (CITY ORDINANCES, CODES, AND REGULATIONS)
   B. COUNTY PUBLIC WORKS (ORDINANCES, CODES AND REGULATIONS)
   C. ROADWAY AND EARTHWORK CONSTRUCTION SHALL CONFORM TO "THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" CURRENT EDITION.

   WHERE A CONTRADICTION OCCURS WITH ANY PART OF THE STANDARD SPECIFICATIONS, THE MOST STRINGENT REQUIREMENT SHALL TAKE PRECEDENCE, AS DETERMINED BY THE ENGINEER.

3. ALL PERMITS AND EASEMENTS WILL BE OBTAINED BY THE CITY WITH ANY REQUIRED INSURANCE OR BONDS TO BE PROVIDED BY THE CONTRACTOR PRIOR TO THE START OF WORK ON THE PROJECT.

4. ALL VERTICAL CONTROL SHALL BE ON NORTH AMERICAN VERTICAL DATUM (NAVD 1988). HORIZONTAL CONTROL SHALL BE ON NAD ILE83 STATE PLANE COORDINATES.

5. WHEREVER PROPRIETARY EQUIPMENT IS SPECIFIED, "OR APPROVED EQUAL" IS IMPLIED. ALL PROPOSALS FOR SUBSTITUTION SHALL BE SUBMITTED TO THE MUNICIPALITY IN WRITING FOR THEIR APPROVAL.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED PERMITS FOR CONSTRUCTION ALONG OR ACROSS EXISTING STREETS OR HIGHWAYS. THEY SHALL MAKE ARRANGEMENTS FOR THE PROPER BRACING, SHORING AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS BEFORE CONSTRUCTION BEGINS. THEY SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE STREETS OR ROADWAYS AND ASSOCIATED STRUCTURES AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE ENGINEER.

7. NO WORK SHALL OCCUR WITHIN THE IDOT RIGHT-OF-WAY UNITL AN IDOT PERMIT HAS BEEN ISSUED.

8. THE CONTRACTOR SHALL KEEP A SET OF "APPROVED" CONSTRUCTION PLANS ON THE JOB SITE AND SHALL MAINTAIN (AS INDICATED HEREIN AND ELSEWHERE WITHIN THESE CONSTRUCTION NOTES, SPECIFICATIONS, AND PLANS) A LEGIBLE RECORD ON SAID PLANS OF ANY FIELD TILE ENCOUNTERED. ANY MODIFICATIONS/ALTERATIONS TO ALIGNMENT AND/OR TO PLANS AND SPECIFICATIONS OF PROPOSED IMPROVEMENTS, ETC. UPON COMPLETION OF THE CONTRACTORS' WORK, SAID PLANS AND INFORMATION SHALL BE PROVIDED TO ENGINEER.

9. ALL CONTRACTORS AND THEIR SUBCONTRACTORS SHALL INDEMNIFY THE OWNER, ENGINEER, AND MUNICIPALITY FROM ALL LIABILITY RESULTING FROM ANY NEGLIGENT ACT OR OMISSION WITH THEIR CONSTRUCTION, INSTALLATION, AND TESTING OF WORK ON THIS PROJECT AND SHALL NAME THEM AS ADDITIONAL INSURED ON THEIR COMMERCIAL GENERAL LIABILITY POLICIES FOR CLAIMS ARISING OUT OF THE WORK ON THIS PROJECT. A PROPER CERTIFICATE OF INSURANCE SHALL BE ISSUED PRIOR TO THE START OF CONSTRUCTION.

10. NOT ALL GAS, POWER OR TELEPHONE LINES, WHETHER ABOVE OR BELOW GROUND, HAVE BEEN SHOWN ON THE PLANS. THE LOCATION OF EXISTING UNDERGROUND UTILITIES, SUCH AS WATER MAINS, SEWERS, FIELD TILES, ETC., AS SHOWN ON THE PLANS, HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR MUST ASSUME RESPONSIBILITY FOR ALL UTILITIES WHETHER SHOWN OR NOT AND MUST REALIZE THAT THE ACTUAL LOCATIONS OF THE UTILITIES SHOWN MAY BE DIFFERENT THAN INDICATED.

11. ELECTRIC, TELEPHONE, NATURAL GAS, AND OTHER UTILITY COMPANIES HAVE UNDERGROUND AND/OR OVERHEAD SERVICE FACILITIES IN THE VICINITY OF THE PROPOSED WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE CONTRACTOR SHALL CALL J.U.L.I.E. AT (800) 892-0123 FOR UTILITY LOCATIONS.

12. THE CONTRACTOR SHALL FIELD VERIFY LOCATION, ELEVATION, MATERIAL, AND SIZE OF EXISTING UTILITIES AND STRUCTURES. NO ADDITIONAL COMPENSATION IS ALLOWED FOR MINOR DEVIATIONS OF ACTUAL CONDITIONS FROM THOSE SHOWN. IF THERE ARE ANY DISCREPANCIES, THE CONTRACTOR IS TO NOTIFY THE ENGINEER AT ONCE. NO WORK SHALL BE DONE UNTIL THE DISCREPANCY IS RESOLVED.

13. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF THEIR WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.

14. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED AGAINST ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE BY THE CONTRACTOR AND THEIR SURETY FOR A PERIOD OF 12 MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER, ENGINEER AND OTHER APPLICABLE GOVERNMENTAL AGENCIES.

15. THE CONTRACTOR WILL BE REQUIRED TO REPLACE IN KIND ALL SURFACE FEATURES DAMAGED OR REMOVED INCLUDING, BUT NOT LIMITED TO, CURB AND GUTTER, STREET PAVING, SIDEWALKS, DRIVES, LAWNS, TREES, PROPERTY PINS AND/OR MONUMENTS (COST INCIDENTAL).

16. WHERE OVERHANGING BRANCHES INTERFERE WITH OPERATIONS OF CONSTRUCTION, SAID BRANCHES SHALL BE TRIMMED AND SEALED IN ACCORDANCE WITH SECTION 201 OF THE IDOT STANDARD SPECIFICATIONS, AND THE COST OF SAME SHALL BE INCIDENTAL TO THE CONTRACT. TREES SHALL BE REMOVED ONLY AFTER RECEIVING APPROVAL OF THE OWNER. THE OWNER SHALL DESIGNATE THOSE TREES WHICH ARE TO BE REMOVED. A CONTRACTOR REMOVING TREES WITHOUT OWNER'S APPROVAL WILL BE RESPONSIBLE FOR REPLACEMENT OF SAID TREE(S) AS DIRECTED BY OWNER AT CONTRACTOR'S EXPENSE. IF ADDITIONAL TREES OR SHRUBS MUST BE REMOVED, THEY WILL BE PAID FOR IN ACCORDANCE WITH SPECIFICATIONS.

17. REMOVED PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC. SHALL BE DISPOSED OF LEGALLY BY THE CONTRACTOR, IF ONSITE DISPOSAL IS NOT FEASIBLE.

18. ALL PERMANENT TYPE PAVEMENTS OR OTHER PERMANENT IMPROVEMENTS WHICH ABUT THE PROPOSED IMPROVEMENT AND MUST BE REMOVED, SHALL BE SAWED FULL DEPTH WHERE DIRECTED PRIOR TO REMOVAL. ALL ITEMS SO REMOVED SHALL BE REPLACED WITH SIMILAR CONSTRUCTION MATERIALS TO THEIR ORIGINAL CONDITION OR BETTER. PAYMENT FOR SAWING SHALL BE INCLUDED IN THE COST FOR REMOVAL OF EACH ITEM.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION. BARRICADES AND WARNING SIGNS SHALL BE PROVIDED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS. ADEQUATE LIGHTING SHALL BE MAINTAINED FROM DUSK TO DAWN AT ALL LOCATIONS WHERE CONSTRUCTION OPERATIONS WARRANT, OR AS DESIGNATED BY THE ENGINEER OR MUNICIPALITY. ALL TRAFFIC CONTROL WORK SHALL BE DONE IN ACCORDANCE WITH THE IDOT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

20. THE CONTRACTOR SHALL HAVE A COMPETENT SUPERINTENDENT ON THE PROJECT SITE AT ALL TIMES IRRESPECTIVE OF THE AMOUNT OF WORK SUBLET. THE SUPERINTENDENT SHALL BE CAPABLE OF READING AND UNDERSTANDING THE PLANS AND SPECIFICATIONS, SHALL HAVE FULL AUTHORITY TO EXECUTE ORDERS TO EXPEDITE THE PROJECT, AND SHALL BE RESPONSIBLE FOR SCHEDULING AND HAVE CONTROL OF ALL WORK AS THE AGENT OF THE CONTRACTOR.

21. ALL EXISTING TRAFFIC SIGNS, STREET SIGNS, ETC., WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR REMOVAL OR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT LOCATIONS AS DESIGNATED BY THE ENGINEER. THIS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. DAMAGE TO THESE ITEMS SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR OWN EXPENSE. ALL SIGNS NOT REQUIRED TO BE RESET SHALL BE DELIVERED TO THE VILLAGE AS APPROPRIATE.

22. DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL ENSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING OR ANY OTHER ACCEPTABLE METHOD. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUEST, DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF.

23. WHENEVER DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THIS LOOSE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY BY THE RESPONSIBLE PARTY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

24. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER OR EXTENDED TO OUTLET INTO A PROPOSED DRAINAGE WAY. IF THIS CANNOT BE ACCOMPLISHED, THEN IT SHALL BE REPAIRED WITH NEW PIPE OF SIMILAR SIZE AND MATERIAL TO THE ORIGINAL LINE AND PUT IN ACCEPTABLE OPERATION CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE FOR ONSITE DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

25. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND FEDERAL SAFETY REGULATIONS AS OUTLINED IN THE LATEST REVISIONS OF THE FEDERAL CONSTRUCTION SAFETY STANDARDS (SERIES 1926) AND WITH APPLICABLE PROVISIONS AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS OF THE WILLIAMS-STEIGER OCCUPATIONAL HEALTH STATE SAFETY ACT OF 1970 (REVISED). THE CONTRACTOR, ENGINEER AND OWNER SHALL EACH BE RESPONSIBLE FOR THEIR OWN RESPECTIVE AGENTS AND EMPLOYEES.

26. WHENEVER THE PERFORMANCE OF WORK IS INDICATED ON THE PLANS, AND NO ITEM IS INCLUDED IN THE CONTRACT FOR PAYMENT, THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

27. ALL SIGNS, MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL COMPLY WITH IDOT STANDARDS AND THE ILLINOIS MUTCD.

28. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS OR PROPERTY OR REFERENCE MARKERS UNTIL THE MUNICIPALITY, ITS AGENT OR AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.

29. ANY AND ALL REQUIRED RESTAKING WILL BE PERFORMED BY THE SURVEYOR AT THE EXPENSE OF THE CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT STAKES PROVIDED FOR THEIR USE AND TO REPORT TO THE OWNER'S SUPERINTENDENT ANY SPECIFIC INSTANCES OF DAMAGED OR ALTERED STAKES AND/OR MONUMENTS PROVIDED.

DEMOLITION, CLEARING, GRUBBING, TREE PROTECTION AND PLANTING

1. ALL ITEMS NOTED ON THE PLANS TO BE REMOVED OR OTHER ITEMS NOT SPECIFICALLY NOTED NECESSARY TO BE REMOVED TO CONSTRUCT THE PROPOSED IMPROVEMENTS SHALL BE DEMOLISHED/REMOVED AND DISPOSED OF LEGALLY OFF-SITE AT NO ADDITIONAL COST TO THE OWNER.

2. ALL TREES, STUMPS, BRUSH, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE CUT, GRUBBED, REMOVED AND DISPOSED OF OFF-SITE FROM THE AREAS DELINEATED ON THE PLANS. ALL CLEARING AND GRUBBING SHALL BE APPROVED BY THE OWNER AND THE ENGINEER.

3. TREES OR GROUPS OF TREES SHOWN TO BE PROTECTED OR BEYOND THE LIMITS OF DISTURBANCE SHALL BE PROTECTED FROM DAMAGE BY ALL CONSTRUCTION OPERATIONS BY ERECTING TREE PROTECTION FENCING, OR BY OTHER APPROVED MEANS, CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN A MANNER TO PREVENT DAMAGING TREES DESIGNATED TO REMAIN OR TREES LOCATED OUTSIDE OF THE LIMITS OF DISTURBANCE.

4. AREAS OUTSIDE THE LIMITS OF DISTURBANCE SHALL BE PROTECTED FROM DAMAGE AND NO EQUIPMENT OR MATERIALS SHALL BE STORED IN THESE AREAS.

5. NO STUMPS, TREES, LIMBS, OR BRUSH SHALL BE BURIED IN ANY FILLS OR EMBANKMENTS.

6. CLEARING, TREE REMOVAL, TREE PROTECTION, TREE CARE, REPAIR AND REPLACEMENT OF BOTH EXISTING AND NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 201 OF THE IDOT STANDARD SPECIFICATIONS.

7. PLANTING AND CARE OF WOODY PLANTS SUCH AS TREES, SHRUBS, ETC. SHALL BE IN ACCORDANCE WITH SECTION 253 OF THE IDOT STANDARD SPECIFICATIONS.

WALL TABLE

STATION	NORTHING	EASTING	NOTES
00+00	1951878.09	1155242.24	
00+20.9	1951878.59	1155263.04	
00+31.5	1951873.49	1155272.44	
00+48.7	1951856.29	1155273.04	

ESTIMATED BILL OF MATERIAL

Material	Description	Quantity	Units
Block Unit	SienaEdge Standard Unit	55	Blocks
Coping Block Unit	SienaEdge Coping Unit	20	Blocks
Geogrid (Behind Wall)	Strata SGU 60	42	yd^2
Geogrid (Below Base)	Tensar TriAx TX5	27	yd^2
Filter Fabric	Filter Fabric	49	yd^2
Compacted Granular Base	Well Graded, Granular Crushed Gravel (Free Draining), Compacted to 98% SPD	2.55	yd^3
In Fill Soil	CA-6 Stones	16	yd^3
Structural Fill	3" rocks Riprap	20.84	yd^3
Drain Pipe	4" PVC Pipe	74	ft

LICENSED STRUCTURAL ENGINEER
SUFIAN NATSHEH
081-008942
STATE OF ILLINOIS

Expires 11/30/2026

REVISIONS

NO.	DATE:	DESCRIPTION:
1		
2		
3		
4		
5		

GSG CONSULTANTS, INC.
735 E. REMINGTON RD, SCHAUMBURG, IL 60173
TEL: +1 630.994.2600 | WWW.GSG-CONSULTANTS.COM
ILLINOIS PROFESSIONAL DESIGN FIRM# 184-002862

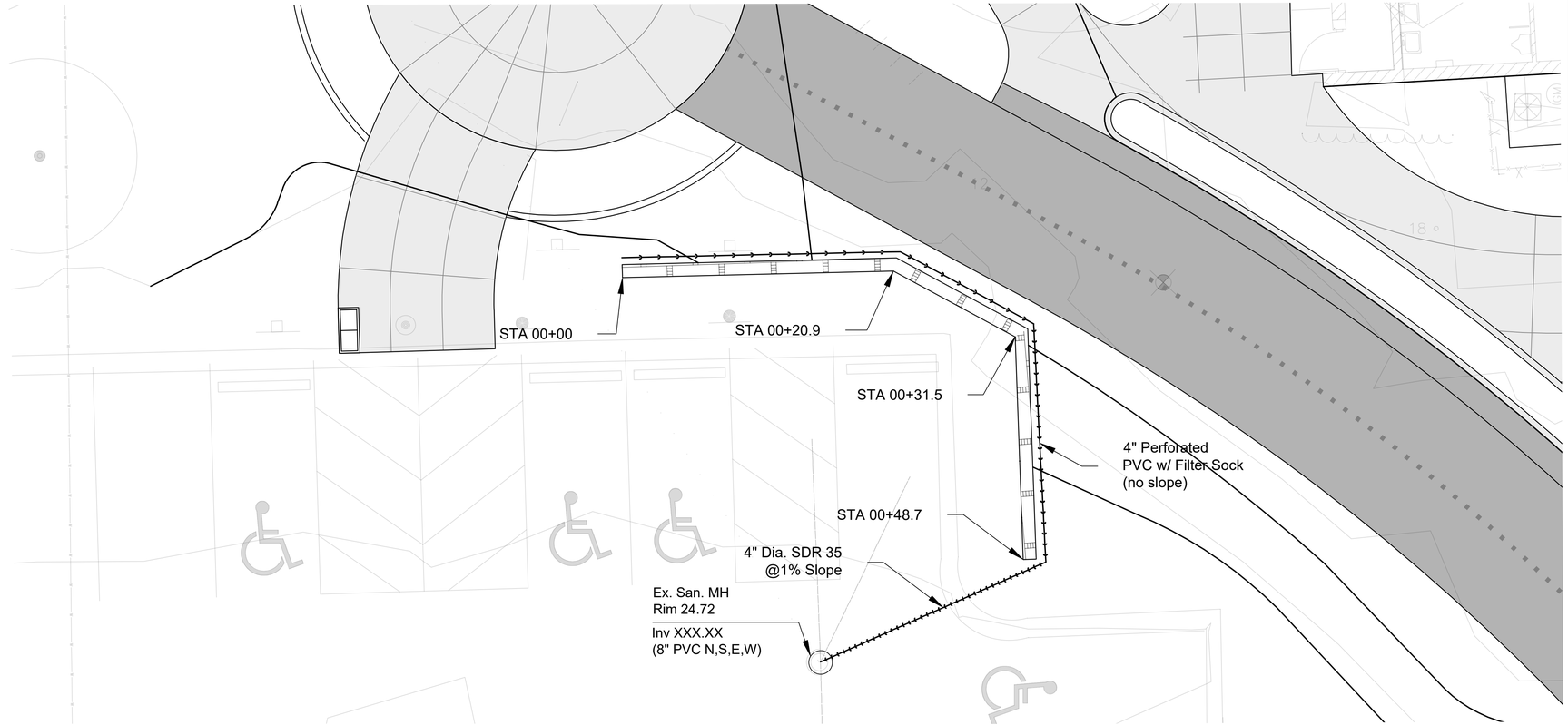
JAMES PARK PLAYGROUND - RETAINING WALL
GENERAL NOTES

EVANSTON, IL

DRAWN BY:	PROJECT:
SD	26-4004
CHECKED BY:	SCALE:
SN	VP SCALE
DATE:	SHEET:
03/09/2026	# OF #

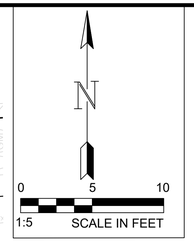
SHEET NO:

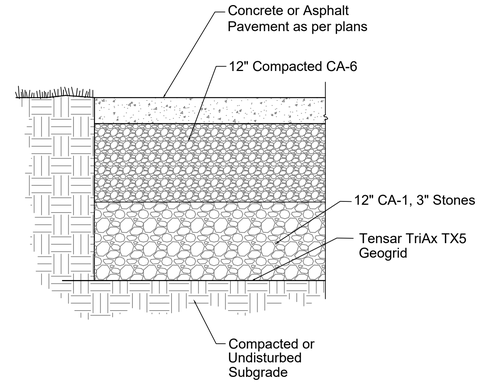
S-0



PROPOSED RETAINING WALL PLAN

1" = 5'



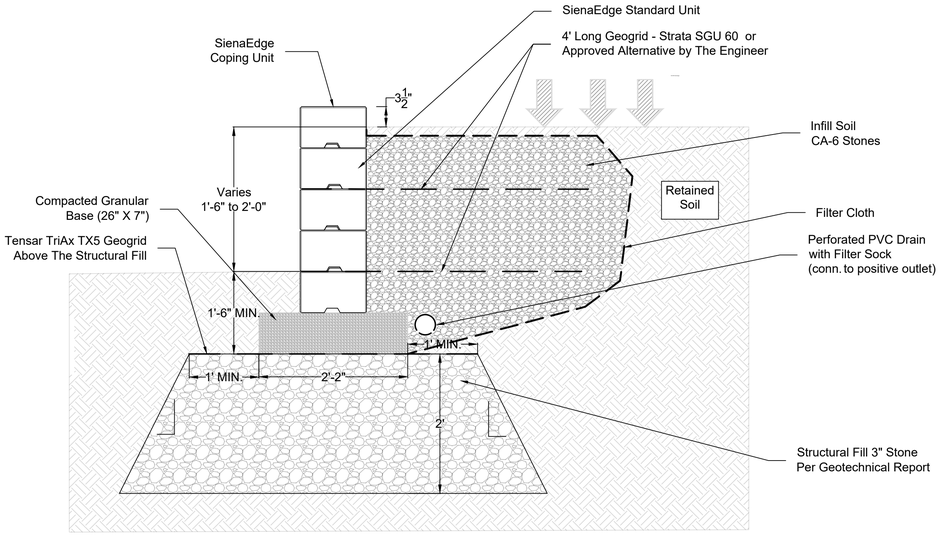


NOTES:

1. SEE DETAIL B SHEET D-01 FOR JOINTS.
2. CONTRACTOR SHALL PLACE CONTROL JOINTS EVERY 5' AND EXPANSION JOINTS EVERY 25' OR AS SHOWN ON PLANS.

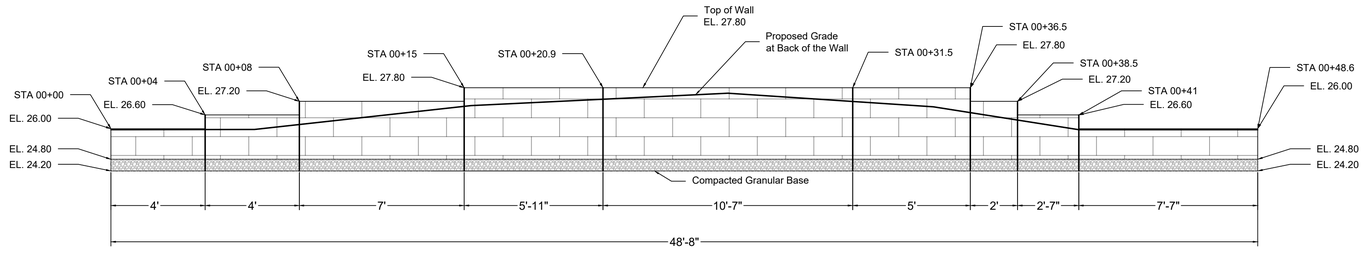
CONCRETE PAVEMENT W/ STRUCTURAL BASE

NOT TO SCALE



TYPICAL CROSS SECTION

NOT TO SCALE



UNFOLDED ELEVATION

NOT TO SCALE

LICENSED STRUCTURAL ENGINEER
SUFIAN NATSHEH
081-008942
STATE OF ILLINOIS
Expires 11/30/2026

REVISIONS

NO.	DATE:	DESCRIPTION:
1		
2		
3		
4		
5		

GSG CONSULTANTS, INC.
735 E. REMINGTON RD, SCHAUMBURG, IL 60173
TEL: +1630.994.2600 | WWW.GSG-CONSULTANTS.COM
ILLINOIS PROFESSIONAL DESIGN FIRM# 184-002862

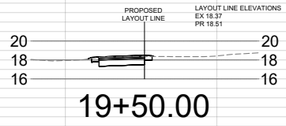
JAMES PARK PLAYGROUND - RETAINING WALL
PROPOSED PLAN AND ELEVATION

EVANSTON, IL

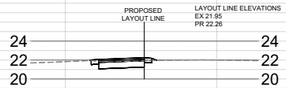
DRAWN BY:	PROJECT:
SD	26-4004
CHECKED BY:	SCALE:
SN	VP SCALE
DATE:	SHEET:
03/09/2026	# OF #

SHEET NO:

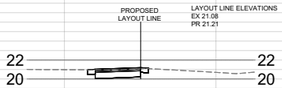
S-1



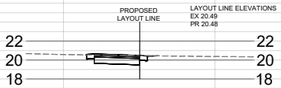
19+50.00



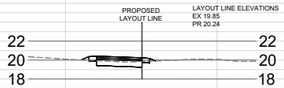
16+50.00



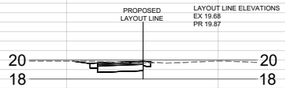
17+00.00



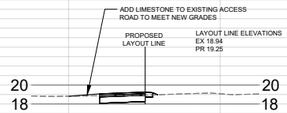
17+50.00



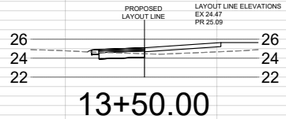
18+00.00



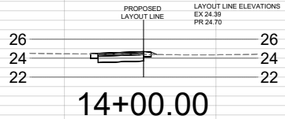
18+50.00



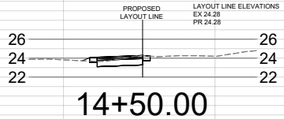
19+00.00



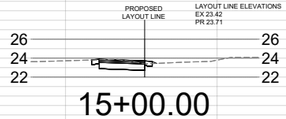
13+50.00



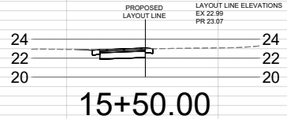
14+00.00



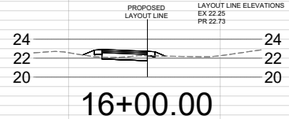
14+50.00



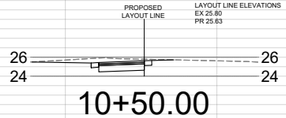
15+00.00



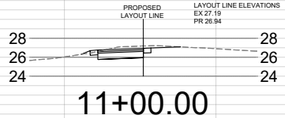
15+50.00



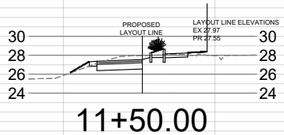
16+00.00



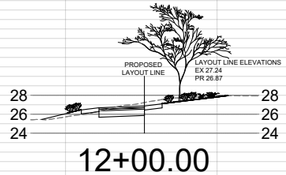
10+50.00



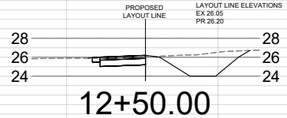
11+00.00



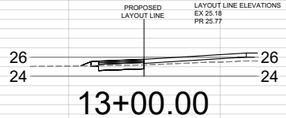
11+50.00



12+00.00



12+50.00



13+00.00

City of Evanston

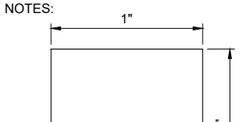
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0" H, 1"= 4'-0" V

REVISIONS:

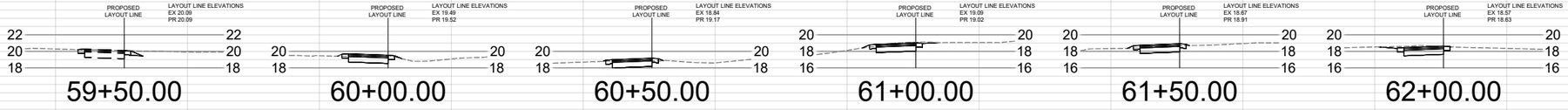
	2026.03.11 / ISSUE FOR BID

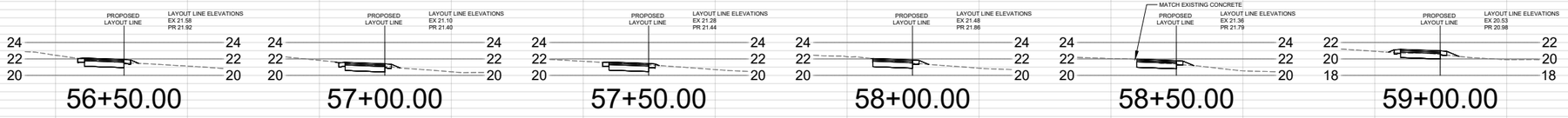
SHEET TITLE

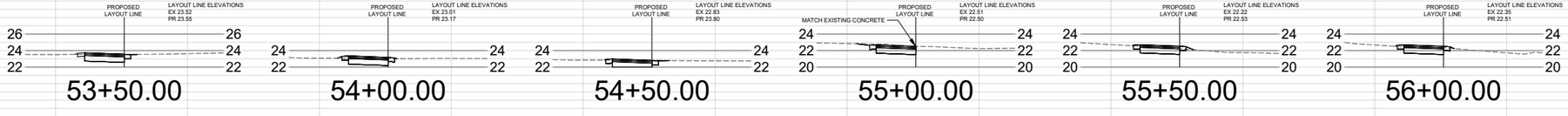
CROSS SECTIONS - WEST PATH

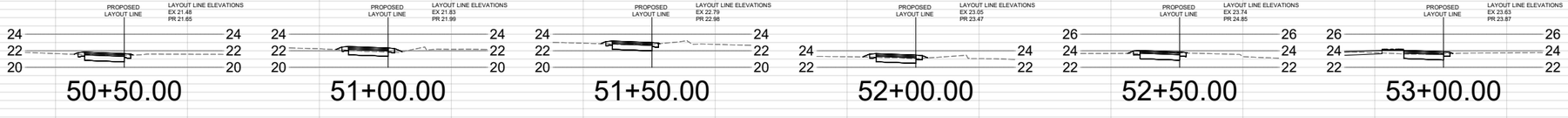
SHEET NO.

X-01









City of Evanston

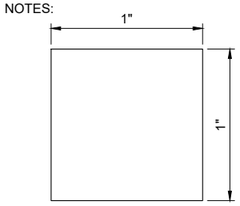
Public Works Agency
909 Davis Street
Evanston, Illinois 60201

KEYPLAN:

PROJECT NAME:

2026 JAMES PARK RENOVATIONS

NOTES:



DO NOT SCALE DRAWINGS. WHEN PRINTED TO THE CORRECT SCALE, THE BOX ABOVE MEASURES 1" x 1".

DRAWING SCALE: 1"= 40'-0" H, 1"= 4'-0" V

REVISIONS:

	2026.03.11 / ISSUE FOR BID

SHEET TITLE

CROSS SECTIONS - EAST PATH

SHEET NO.

X-02

Geotechnical Investigation Report

James Park Playground

Oakton Street and Dodge Avenue
Evanston, IL 60202

Prepared for:

City of Evanston™

Prepared by:

GSG CONSULTANTS, INC.
Engineers. Scientists. Construction Managers
735 Remington Road, Schaumburg IL 60173
Tel: 630.994.2600, www.gsg-consultants.com

December 2, 2025
Revised February 25, 2026

GSG CONSULTANTS, INC.

735 Remington Road
Schaumburg, IL 60173
Tel: 630.994.2600
www.gsg-consultants.com

February 25, 2026

Mr. Kenon Boehm
Landscape Designer II
City of Evanston
909 Davis Street
Evanston, IL 60201

Geotechnical Investigation Report
James Park Playground
Oakton Street and Dodge Avenue
Evanston, IL 60202

Dear Mr. Boehm:

Attached is a copy of the Geotechnical Investigation Report for the above referenced project. The report provides a brief description of the site investigation, site conditions, and geotechnical recommendations for the proposed improvements. The site investigation included advancing five (5) soil borings to depths of 10 to 60 feet.

Should you have any questions or require additional information, please call us at 630-994-2600.

Sincerely,

Rachel Miller, P.E.
Sr. Project Engineer

Dawn Edgell, P.E.
Geotechnical Department Manager

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Project Information 1
1.2 Purpose and Scope of Services 2
2.0 SITE SUBSURFACE EXPLORATION PROGRAM 3
2.1 Subsurface Exploration Program 3
2.2 Laboratory Testing Program 4
2.3 Subsurface Soil Conditions 4
2.4 Groundwater Conditions 5
3.0 GEOTECHNICAL ANALYSES 6
3.1 Derivation of Soil Parameters 6
4.0 STRUCTURE RECOMMENDATIONS 8
4.1 Shallow Foundation – Lightly Loaded Structures 8
4.2 Lateral Load Resistance for Shallow Foundations 9
5.0 PAVEMENT DESIGN RECOMMENDATIONS 10
5.1 Geotechnical Evaluation 10
5.2 Geotechnical Mitigation Options 10
5.3 Geotechnical Mitigation Recommendations 12
5.4 Topsoil Removal 12
5.5 Drainage Recommendations 13
6.0 CONSTRUCTION CONSIDERATIONS 14
6.1 Site Preparation 14
6.2 Subgrade Preparation 14
6.3 General Excavation 15
6.4 Groundwater Management 16
7.0 LIMITATIONS 17

Exhibits

Exhibit 1 Project Location Map
Exhibit 2 Structural Fill Placement below Footings

Appendices

Appendix A Soil Boring Location Plan
Appendix B Soil Boring Logs
Appendix C Laboratory Test Results

1.0 INTRODUCTION

The City of Evanston retained GSG Consultants, Inc. (GSG) to perform a subsurface exploration and geotechnical analysis, to provide recommendations regarding the proposed improvements at James Park. The park is located southwest of the corner of Oakton Street and Dodge Avenue in Evanston, Illinois as shown in **Exhibit 1 – Project Location Map**.

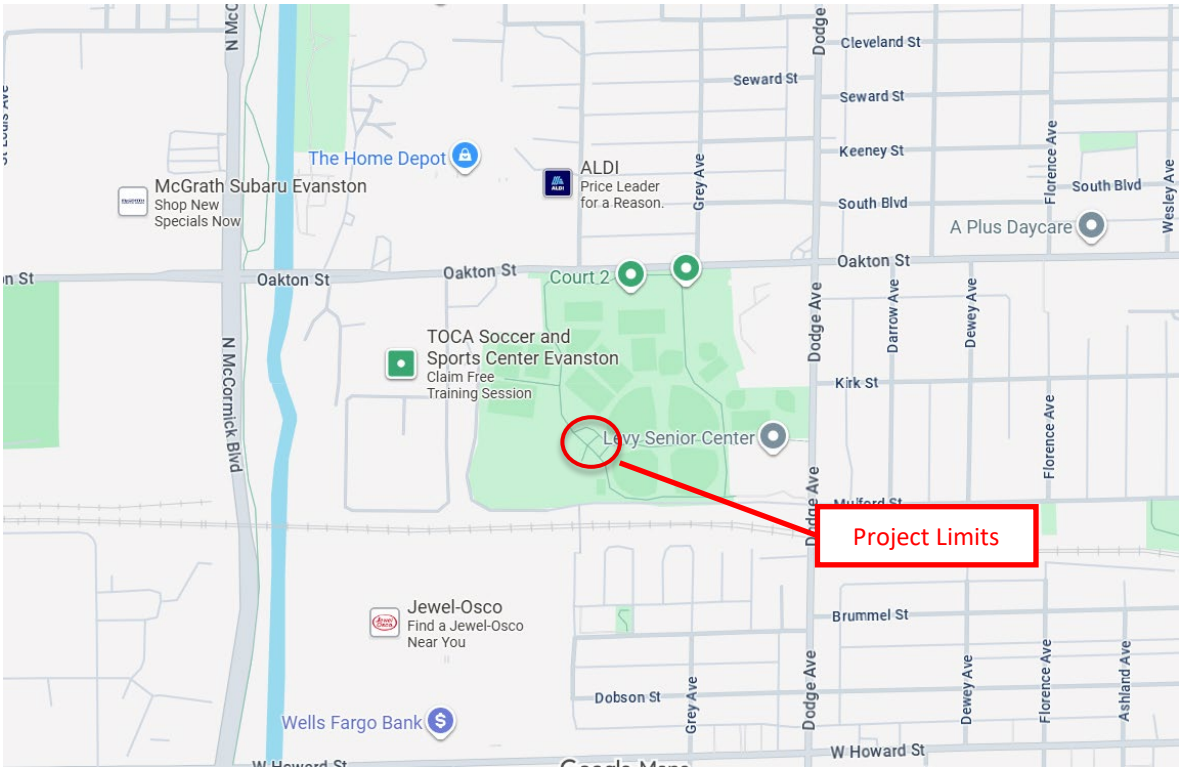


Exhibit 1 - Project Location Map

1.1 Project Information

Based on information provided by the City of Evanston and GSG site reconnaissance, James Park includes several athletic fields, walking paths, a parking lot, playground area, and a fieldhouse building. GSG understands the project will include remediation of the asphalt and concrete walkways around the fieldhouse, a new retaining wall, and new playground equipment.

James Park was built on top of a former landfill. Geotechnical explorations were completed by others at the property in 1999, 2000, 2021, and 2023. These historical borings show fill materials with debris extending to depths ranging from 3 to 59 feet below grade.

The park fieldhouse was constructed on deep foundations in 1960, with additions completed in 1999. It is understood that the pavements surrounding the fieldhouse have been settling for years. Although some of the pavements were replaced in 2011, settlement has continued since then. The differential settlement between the fieldhouse building and adjacent walkways is creating accessibility issues. This geotechnical report will discuss options to help mitigate the differential settlement.

In addition to the walkway settlement investigation, a new retaining wall will be constructed southwest of the field house. The retaining wall will be about 2 feet tall. The existing playground area northwest of the fieldhouse will be reconstructed and will include a splash pad and new playground equipment.

1.2 Purpose and Scope of Services

The objective of this study was to explore and characterize the subsurface soil conditions in order to provide recommendations regarding the suitability of the subsurface soil to support the proposed improvements. The scope of this study includes the following:

1. Perform site reconnaissance and advance five (5) soil borings to depths of 10 to 60 feet each.
2. Perform the geotechnical laboratory testing program on selected representative soil samples obtained during the field investigation to evaluate relevant engineering parameters of the subsurface soils.
3. Perform engineering analysis and evaluation of the data collected during the field study investigation and laboratory testing.
4. Provide recommendations for the design and construction of the proposed improvements.

2.0 SITE SUBSURFACE EXPLORATION PROGRAM

This section describes the subsurface exploration program and laboratory testing program completed as part of this project.

2.1 Subsurface Exploration Program

The subsurface soil investigation was conducted on October 17, 2025, and included advancing four (4) soil borings to a depth of 10 feet and one (1) boring to a depth of 60 feet below the existing ground surface. The proposed locations were selected by GSG in coordination with the City of Evanston and were offset as necessary due to field conditions and site accessibility. The elevations of the boring locations were measured by GSG personnel using handheld GPS equipment. The Boring Location Plan attached shows the as-drilled locations of the soil borings (**Appendix A – Soil Boring Location Plan**). **Table 1** provides a summary of the boring locations.

Table 1 – Summary of Subsurface Exploration Borings

Boring ID	Depth (feet)	Existing Ground Elevation	Northing (feet)	Easting (feet)
E-1	60	608.8	1952003.395	1155219.343
P-1	10	606.1	1951902.762	1155244.244
P-2	10	606.3	1951856.689	1155326.835
P-3	10	605.7	1951919.430	1155396.125
RW-1	10	605.3	1951877.299	1155282.592

The soil borings were drilled using a Geoprobe 7822DT drill rig using a 3¼-inch I.D. hollow stem auger. GSG performed the field exploration activities using standard penetration test procedures in accordance with ASTM D1586-99, “Penetration Test and Split-barrel Sampling of Soil.” In this procedure, a 2-inch O.D. split-spoon sampler is driven 18 inches into undisturbed soil using a 30-inch drop of a 140-pound hammer. The number of hammer drops (Blow Counts) is recorded at six-inch intervals for each sample collected. The number of blows to advance the sampler 12 inches is called the standard penetration test (SPT) value. The SPT values are shown on the **Soil Boring Logs (Appendix B)**.

Representative soil samples were obtained at 2.5-foot intervals to a depth to 20 feet, then 5-foot intervals to the termination depths. GSG’s field representative visually classified the soils according to the Unified Soil Classification System (ASTM 2487) and obtained relatively undisturbed samples of the subsurface soil for laboratory testing. Representative soil samples

were collected from each sample interval and placed in jars and returned to the laboratory for further testing and evaluation. After the soil borings were completed, the holes were backfilled with soil cuttings and patched with asphalt, where appropriate.

2.2 Laboratory Testing Program

All samples were inspected in the laboratory to verify the field classifications. A laboratory testing program was undertaken to characterize and determine engineering properties of the subsurface soils encountered. The following laboratory tests were performed on representative soil samples:

- Moisture Content – ASTM D2216
- Atterberg Limits – ASTM D 4318
- Organic Content – ASTM D2974
- Dry Unit Weight – ASTM D7263
- Sieve Analysis/Hydrometer - ASTM D422

The laboratory tests were performed in accordance with ASTM test procedures and requirements. Based on the laboratory test results, the soils encountered were classified according to the Unified Soil Classification System (USCS). The results of the laboratory testing program are shown on the **Soil Boring Logs (Appendix B).**

2.3 Subsurface Soil Conditions

The soil boring logs provide specific conditions encountered at each boring location, including detailed soil descriptions, stratifications, penetration resistance, location of the samples, and laboratory test data. The stratifications shown on the boring logs represent the conditions only at the actual boring locations and represent the approximate boundary between subsurface materials; however, the actual transition may be gradual. The general soil descriptions for the attached soil borings are presented below.

At the ground surface at boring location E-1, 12 inches of woodchips were encountered. At locations P-2 and RW-1, 4 inches of topsoil were observed. Soil boring P-1 encountered 4.5 inches of asphalt over 4 inches of gravel with sand subbase. Soil boring P-3 encountered 5 inches of concrete over 9 inches of gravel subbase.

Below the topsoil and pavements at locations P-1 through P-3 and RW-1, brown, gray, and black fill comprised of mixtures of silt, sand, sandy silt, gravel, clayey silt, and silty clay was encountered to the soil boring termination at depths of 10 feet (El. 596.3 to 595.3 feet). At location E-1, below the playground woodchips, silty clay fill was observed to a depth of 8 feet (El. 600.8 feet), underlain by granular fill comprised of silt, sandy silt, and brick to a depth of 44 feet (El. 564.8 feet). The fill materials at the soil boring locations included varying amounts of miscellaneous debris, brick, organics, glass, porcelain, petroleum, metal, and concrete. At boring location RW-1 an obstruction was encountered at 6 feet (El. 599.3 feet). The soil boring was offset a few feet and redrilled.

Below the fill, boring location E-1 encountered native, gray, stiff silty clay to a depth of 47 feet (El. 561.8 feet). Soft silty clay was then encountered to a depth of 57 feet (El. 551.8 feet), underlain by hard silty clay to soil boring termination at 60 feet (El. 548.8 feet).

The soft to stiff, gray silty clay encountered at boring E-1 had unconfined compressive strengths ranging from 0.25 tons per square foot (tsf) to 1.25 tsf; the hard clay at the termination of the boring had an unconfined compressive strength of 4.0 tsf.

2.4 Groundwater Conditions

Water level measurements were made at each location when evidence of free groundwater was detected on the drill rods or in the samples. The boreholes were also checked for free water immediately after auger removal and before filling the open boreholes with soil cuttings. Water was observed during drilling at a depth of 18.5 feet (El. 590.3 feet) at boring location E-1, which was likely perched water within the miscellaneous fill. Groundwater was not encountered at borings locations P-1 through P-3 and RW-1 during drilling operations or after drilling had ceased.

Based on the groundwater encountered at E-1 and in the historical geotechnical reports provided by the Client, GSG estimates the long-term groundwater level to range from 5 to 23 feet below existing grade (El. 604 to 582 feet). The water table is likely similar to the North Shore Channel water level nearby. Perched water may be encountered within the existing fill materials. Long term observations in cased borings or piezometers would be necessary to more accurately evaluate groundwater conditions at the site. It should be noted that fluctuations in groundwater level may occur due to variations in climatic conditions, surface runoff or other factors not evident at the time measurements were made and reported herein.

3.0 GEOTECHNICAL ANALYSES

This section provides GSG's geotechnical analysis for the design of the proposed improvements based on the results of the field exploration and laboratory testing.

3.1 Derivation of Soil Parameters

GSG determined the geotechnical parameters to be used for the project design based on the results of field and laboratory test data on the individual boring logs as well as our experience. Unit weights, friction angles and shear strength parameters were estimated using corrected standard penetration test (SPT) using published correlations for N values results for the fill and cohesionless soils and in-situ and laboratory test results for cohesive soils. The SPT values were corrected for hammer efficiency. The hammer efficiency correction factor considers the use of a safety hammer/rope/cat-head system, generally estimated to be 60% efficient. Thus, correlations should be based upon what is currently termed as N60 data. The efficiency of the automatic hammer used for this exploration was estimated to be approximately 99% for the Geoprobe 7822DT drill rig based on recent calibration testing. The correction for hammer efficiency is a direct ratio of relative efficiencies as follows:

$$N_{60} = N_{Field} * (99/60) \quad \text{7822DT Geoprobe}$$

Where the N_{Field} value is the field recorded blow counts.

Based on the field investigation data collected, generalized soil parameters for use in design are presented in **Table 3**.

Table 3 – Summary of Soil Parameters

Depth Range (Elevation, feet)	Soil Description	In situ Unit Weight γ (pcf)	Undrained		Drained	
			Cohesion c (psf)	Friction Angle ϕ (°)	Cohesion c (psf)	Friction Angle ϕ (°)
	New Engineered Clay Fill	125	1,000	0	50	25
	New Engineered Granular Fill	125	0	30	0	30
0-6 (606.5-600.5)	Fill Brown, Gray, and Black Silty Clay/Clayey Silt	135	3,000	0	300	25
6-41.5 (600.5-565)	Fill Brown, Gray, and Black Sandy Silt/Silt	120	0	20	0	20
41.5-44.5 (565-562)	Gray Stiff Silty Clay	133	1,250	0	50	28
44.5-54.5 (562-552)	Gray Soft Silty Clay	114	250	0	0	25
54.5-57.5 (552-549)	Gray Hard Silty Clay	139	4,000	0	400	28
0-5.5 (606.5-601) **P-2 only**	Fill Brown Sand	121	0	30	0	30
8-10.5 (598.5-596) **E-1 only**	Fill Reddish Brown Debris with Brick	113	n/a	n/a	n/a	n/a
9-10.5 (597.5-596) **P-1 only**	Fill Black and Light Gray Gravel	134	0	30	0	30
9-11 (597.5-595.5) **RW-1 only**	Fill Brown Sand	118	0	30	0	30

4.0 STRUCTURE RECOMMENDATIONS

This section provides GSG's geotechnical recommendations for new structure design based on the results of the field exploration and laboratory testing. Subsurface conditions in unexplored locations may vary from those encountered at the boring locations. If significant site grading is anticipated, we request that you contact GSG so that we may re-evaluate our recommendations.

Based on the wall height and soil conditions, a modular block wall could be considered for the new retaining wall. Modular block walls are typically well suited for areas that may settle over time, such as this site.

The type of foundation utilized for a structure is dependent upon soil type, soil consistency, and magnitude of loads. A shallow foundation system is considered a feasible option for the proposed playground equipment and retaining wall. A maximum spread foundation size of up to 6 feet by 6 feet and continuous footing of 2 feet by 40 feet were preliminarily assumed.

4.1 Shallow Foundation – Lightly Loaded Structures

Based on the results of the subsurface investigation, the proposed small structures (i.e., playground equipment and retaining wall) could be supported on shallow spread foundations and/or continuous footings bearing on existing fill, provided that some settlement is acceptable. The foundations should be placed at a minimum depth of 3.5 feet below grade to alleviate the effect of frost action.

Typically, existing fill materials are not considered suitable for support of foundations as there is potential for excessive total and differential settlement due to the unknown nature of the placement of the material. Some organic materials and debris were observed throughout the fill materials.

It is recommended to undercut and replace 2 feet of the existing fill materials with new granular structural fill to design bearing grade. The granular structural fill may be comprised of open-graded stone such as CA-1 or CA-7, capped with CA-6 if a levelling pad is needed. Geogrid reinforcement between the existing fill and new granular fill will provide a working platform and more evenly distribute the foundation loads. Shallow foundations bearing on new granular fill at 3.5 feet below grade could be designed for a net allowable bearing capacity of 1,000 psf. The allowable bearing pressure applies to dead plus live loads and includes a safety factor of at least 3 with respect to shear failure of the foundation soils. There is significant risk of foundation

settlement beyond 1 to 2 inches for the shallow footings, due to the presence of the existing extensive, debris and organic-laden fill materials.

If any of the assumptions or design loading information above is not correct or has been changed, GSG should be contacted to re-evaluate the foundation design recommendations. **Exhibit 2** illustrates the structural fill placement below the footings.

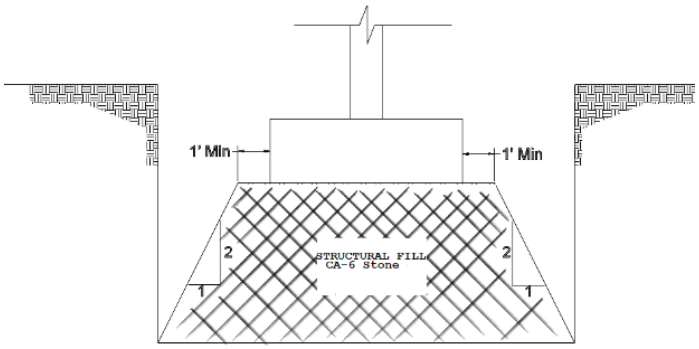


Exhibit 2: Structural Fill Placement below Footings

4.2 Lateral Load Resistance for Shallow Foundations

Resistance to lateral loads can be provided by a combination of friction at the foundation base and slab-on-grade, and by passive resistance acting against the vertical faces of foundation elements. A coefficient of friction of 0.35, which includes a factor of safety of 1.5, may be used for footings bearing on newly placed granular structural fill. For passive resistance, an equivalent fluid pressure of 250 pounds per cubic foot (pcf) acting against the footing may be used. Passive resistance in the upper three feet of soil should be neglected unless the area is covered by concrete or pavement. The friction and passive resistance may be used concurrently provided the passive resistance is reduced by 50%.

5.0 PAVEMENT DESIGN RECOMMENDATIONS

This section presents our geotechnical engineering analysis and recommendations regarding pavement settlement along the James Park paved walkways. GSG completed the geotechnical engineering analysis and developed recommendations based on the results of the field exploration program, laboratory results, and field observations.

5.1 Geotechnical Evaluation

Soil boring E-1 encountered uncontrolled landfill materials extending to about 44 feet below the existing ground surface. Deep-seated consolidation of debris and organic-laden fill materials has been occurring over time within the historical landfill, causing pavement distress. Settlement was likely exacerbated by the collapse of any small voids within the landfill materials over time. Changes in the water table level may have also influenced the settlement; the water table is likely near the North Shore Channel water level. We understand the existing pavement were constructed around 2011.

Based on the observed soil conditions of the soft native soils and the depth of the fill, we anticipate that the park pavements will continue to undergo additional settlement over long periods of time. However, the magnitude of these additional settlements cannot be determined due to the high variability of fill materials and debris.

5.2 Geotechnical Mitigation Options

Based on the site conditions, GSG developed the following repair options for the walkways at James Park.

Option 1. Construction Maintenance

A routine maintenance program on the existing park walkways would require pavement milling and overlays, and possibly full-depth pavement and gravel subbase replacements. This would likely be required over several years to account for cracking and differential settlement between the fieldhouse building and adjacent paths. This alternative will be less costly initially, however it will have cost and schedule impacts over several years, and impact pedestrian access for the required yearly work.

Option 2. Ground Improvement

A system of ground improvement through partial removal of existing materials, to the installation of deep foundation improvements could be considered to support the new pavements. The following options could be considered.

A. Ground Improvement Using Triaxial Geogrid

This option involves removing the top 2 feet of the upper variable fill materials, placing geotextile and geogrid ground reinforcement, and then placing stone aggregate such as CA-1 3 inch stone, followed by a new asphalt or concrete pavement. Installing triaxial geogrid at the bottom of the excavation will distribute the load, bridge over any future settling and loose areas, and reduce pavement cracking, faulting, and uneven settlement. A fabric separator should be placed immediately below the geogrid to help reduce the migration of fines into the aggregates and also provide some tensile strength.

It is recommended the geogrid be placed where new improvements will be constructed, including the new retaining wall and playground. This would provide an increased bearing capacity for the small structures as discussed in Section 4.1, in addition to mitigating the walkway settlement.

B. Partial Removal and Replacement

Partial removal and replacement of the upper soils with lightweight materials, such as **Geofoam**, may be considered. Backfilling the undercut area with lightweight materials, such as geofoam, can largely reduce the load transferred down to the bottom of the geofoam, reducing the settlement below the pavement sections.

This alternative would provide a lower cost than full removal and replacement with structural fill; however, this method would still require an extended period of time to complete. Geofoam may be damaged when exposed to certain chemicals, which could become an issue for a former landfill property. Geofoam can also cause pavements to ice over more quickly if the geofoam layers are placed above the frost depth.

C. Deep Foundations and Load Transfer Platform (LTP).

A load transfer platform consists of 3 to 4 feet of aggregate support with a system of deep foundations such as rammed aggregate piers, stone columns, or rigid inclusions. This is a method to improve the ground without completely removing and replacing the variable,

deep fill materials. However, due to the variability of the existing fill and debris observed in the borings and anticipated across the site, and the depth to a suitable bearing level below depths of 55 feet, this alternative would be excessively costly and impractical for the proposed improvements and will not be discussed further in the report.

5.3 Geotechnical Mitigation Recommendations

Option 1 will not prevent deterioration of the pavement over an extended period of time. However, this option can be planned for with budgeting and scheduling through the life cycle of the park facilities. This will have a lower initial capital cost for immediate improvements; however, this will require continuous maintenance and evaluation.

Option 2A is the most economical option to provide immediate support for the improvements, but it has some risk of pavement deterioration if the magnitude of future settlement is excessive (more than 2 inches). Option 2B would provide more bearing support for the proposed structures and pavements, however, there is a cost involved with removal and disposal of the existing materials, and the new engineered fill.

Option 2C is the most expensive option and will resolve the long term settlement issues. However, the overall cost of a deep foundation system is likely cost prohibitive for relatively small improvements.

We recommend ground improvement using triaxial geogrid, option 2A. This method is relatively low cost compared to options 2B and 2C. Geogrid will not stop the park paths from settling completely, but it will help to mitigate settlement and cause the area to settle more uniformly. Geogrid can also be used in the area of the new playground structures and retaining wall to increase the bearing capacity and reduce potential settlement, if desired.

5.4 Topsoil Removal

GSG measured about 4 inches of topsoil in the soil borings during the subsurface exploration activities. The historical geotechnical reports noted the topsoil thickness was typically between 2 and 12 inches, with up to 3 feet of topsoil in some areas. It is recommended that topsoil be completely stripped to the full depth encountered within the limits of the pathway improvement areas. Topsoil should be stripped and stockpiled as per Section 211.03 of the IDOT SSRBC. The topsoil should be separated from other materials being stockpiled onsite for reuse or haul off.

We recommend using a shrinkage factor of 15% to estimate the borrowed and furnished topsoil volume quantities. Topsoil may be reused in landscaping and other non-structural applications.

5.5 Drainage Recommendations

Moist subgrade was observed below the existing pavement. This suggests that surface water is penetrating the existing pavement and may be contributing to pavement failure. GSG recommends installing an underdrain system below the new pavement to collect water and discharge it away from the area.

6.0 CONSTRUCTION CONSIDERATIONS

6.1 Site Preparation

GSG recommends removing all existing mulch, topsoil, asphalt, and concrete pavements, and any soft or unsuitable/deleterious materials from the proposed improvement areas. After any unsuitable material is removed from the existing site, the exposed subgrade soils should be evaluated, and any unsuitable/deleterious material should be removed.

It is recommended that any abandoned underground utility lines should also be completely removed from beneath the proposed construction areas. Existing utility lines that are to be abandoned should be removed to the property line and should be plugged with cement grout. All excavations resulting from underground utilities removal activities should be cleaned of loose and disturbed materials, including all previously placed backfill, and backfilled with suitable fill materials.

Suitable structural fill materials shall be of a nature that will compact and develop stability satisfactory to the geotechnical engineer. It is recommended that structural fill generally consists of open-graded stone such as CA-1 or CA-7, capped with CA-6 if a levelling pad is needed. Materials to be used as structural fill shall be inorganic, free of waste and debris, and shall not contain frozen material or any material which, by decay or otherwise, might cause settlement. Structural fill shall be placed in lifts not to exceed 8 inches in loose thickness and should be compacted to a minimum of 95% of the material's standard proctor maximum dry density obtained according to ASTM D-698.

No foundation concrete or structural fill should be placed upon wet or frozen subgrade soils. Rainfall and runoff can soften soils and affect the load bearing capacity of the soils. All water entering any excavation should be removed prior to placement backfill materials above the subgrade soils.

6.2 Subgrade Preparation

The existing fill materials encountered may remain in place below the recommended granular base course thicknesses, provided they are free of large construction debris and excessive organic material, and the subgrade is prepared in accordance with the following recommendations.

The existing materials in the proposed improvement areas should be excavated down to the

recommended design depth of 8 inches below the base of the playlot. The exposed subgrade should then be scarified to a minimum depth of 8 inches, moisture conditioned to within two percent of the material's optimum moisture content and compacted to 95% of the material's maximum standard proctor value as determined per ASTM D-698. After completing the scarification and compaction activities, the subgrade should then be proof-rolled using a load tandem axle dump truck or similar rubber tire vehicle weighing at least 25 tons. The purpose of the proof-rolling is to detect the presence of unsuitable or unstable soil that may exist within a few inches of the subgrade level. Areas that are observed to rut or deflect excessively under the moving load should be investigated to determine the extent of the unstable material. The unsuitable soil should then be removed from the proposed playlot areas and replaced with structural fill. It is recommended that structural fill consist of crushed aggregate meeting IDOT CA-1, CA-7, or CA-6 gradation requirements. CA-6 can be used as a levelling pad above open-graded gravel fill, if needed. The structural fill should be compacted to 95% of the materials maximum standard proctor value as determined per ASTM D698. After the subgrade soils have been prepared as stated above, the base course materials should be placed.

6.3 General Excavation

The contractor will be responsible for providing safe excavation during the construction activities of the project. All excavations should be conducted in accordance with applicable federal, state, and local safety regulations, including, but not limited to the Occupational Safety and Health Administration (OSHA) excavation safety standards. Excavation stability and soil pressures on temporary shoring are dependent on soil conditions, depth of excavations, installation procedures, and the magnitude of any surcharge loads on the ground surface adjacent to the excavation. Surcharge loads from the excavated materials, construction equipment, and vehicles should be included in the design of the excavation system. Excavation near existing structures and underground utilities should be performed with extreme care to avoid undermining existing structures.

If water seepage occurs during footing excavation or where wet conditions are encountered such that the water cannot be removed with conventional sumping, GSG recommends placing open grade stone similar to IDOT CA-7 to stabilize the bottom of the excavation below the water table. The CA-7 stone should be placed 12 inches above the water table, in 12-inch lifts, and should be compacted with the use of a heavy smooth drum roller or heavy vibratory plate compactor until stable. The remaining portion of the excavation beneath the footings should be backfilled using approved structural fill consisting of granular materials such as IDOT CA-6.

6.4 Groundwater Management

The long-term groundwater level is anticipated at about 5 to 23 feet below existing grade (El. 604 to 582 feet). Significant groundwater management may not be needed for near surface construction; however perched water may be encountered within the existing fill materials. If rainwater run-off is accumulated at the base of excavation, the contractor should remove accumulated water using conventional sump pit and pump procedures and maintain a dry and stable excavation. The location of the sump should be determined by the contractor based on field conditions.

During earthmoving activities at the site, grading should be performed to ensure that drainage is maintained throughout the construction period. Water should not be allowed to accumulate in the foundation area either during or after construction. Undercut and excavated areas should be sloped toward one corner to facilitate removal of any collected rainwater or surface run-off. Grades should be sloped away from the excavations to minimize runoff from entering the excavations.

7.0 LIMITATIONS

This report has been prepared for the exclusive use of the City of Evanston. The recommendations provided in the report are specific to the project described herein and are based on the information obtained at the soil boring locations within the project area. The analysis has been performed and the recommendations provided in this report are based on subsurface conditions determined at the location of the borings. This report may not reflect all variations that may occur between boring locations or at some other time, the nature and extent of which may not become evident until the time of construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and review the recommendations presented herein.

APPENDIX A

SOIL BORING LOCATION PLAN



GSG CONSULTANTS, INC.
735 E. REMINGTON RD, SCHAUMBURG, IL 60173
TEL: +1630.994.2600 | WWW.GSG-CONSULTANTS.COM

DRAWN BY:	NN
CHECKED BY:	RM
DATE:	11/04/2025
SCALE:	1:100

City of Evanston

APPENDIX A: SOIL BORING LOCATION PLAN

JAMES PARK PLAYGROUND
336 DODGE AVENUE
EVANSTON, ILLINOIS 60202

APPENDIX B

SOIL BORING LOGS

GSG CONSULTANTS, INC.
735 Remington Road, Schaumburg, IL 60173
Tel: 630.994.2600, www.gsg-consultants.com

BORING NUMBER E-1

CLIENT City of Evanston
PROJECT NAME James Park Playground
PROJECT NUMBER 25-2084
PROJECT LOCATION Evanston, Illinois
DATE STARTED 10/17/25 **COMPLETED** 10/17/25
GROUND ELEVATION 608.77 ft **HOLE SIZE** 3 1/4"
DRILLING CONTRACTOR GSG Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 18.50 ft / Elev 590.27 ft
LOGGED BY MP **CHECKED BY** RM
AT END OF DRILLING --- N/A
NOTES
AFTER DRILLING --- N/A

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (N VALUE)	UNCONFINED COMPRESSION (tsf)
0		12 inches of Woodchips				
		FILL: SILTY CLAY, little sand, little gravel, trace organics, trace glass - Brown and Gray - Moist	SS 1	72	3-3-4 (7)	2.25
5			SS 2	22	1-1-1 (2)	
			SS 3	44	3-2-1 (3)	1.0
10		FILL: SANDY SILT, some brick - Dark Brown - Very Moist	SS 4	50	2-1-5 (6)	
		FILL: DEBRIS, with brick, little sand - Reddish Brown - Wet	SS 5	50	1-1-2 (3)	
15		FILL: SILT, some sand, little brick, trace misc debris - Brown, Black, and Gray - Very Moist	SS 6	67	5-7-4 (11)	
		Petrochemical odor at 16 to 33 feet	SS 7	72	5-4-4 (8)	
20		▽ FILL: SANDY SILT, little misc debris, trace gravel, trace porcelain, trace organics, trace glass - Black - Moist to Very Moist	SS 8	44	1-1-2 (3)	
25			SS 9	11	2-2-8 (10)	
30			SS 10	11	2-1-2 (3)	
35			SS 11	39	4-3-5 (8)	

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
□ Unconfined Compression (tsf)
2 4 6 8

(Continued Next Page)

GEOTECH BH PLOTS - GINT STD US.GDT - 12/2/25 11:51 - Z:\PROJECTS\CITY OF EVANSTON\JAMES PARK PLAYGROUND\GEOTECHNICAL\FIELD TESTING\JAMES PARK PLAYGROUND.GPJ

GSG CONSULTANTS, INC.
735 Remington Road, Schaumburg, IL 60173
Tel: 630.994.2600, www.gsg-consultants.com

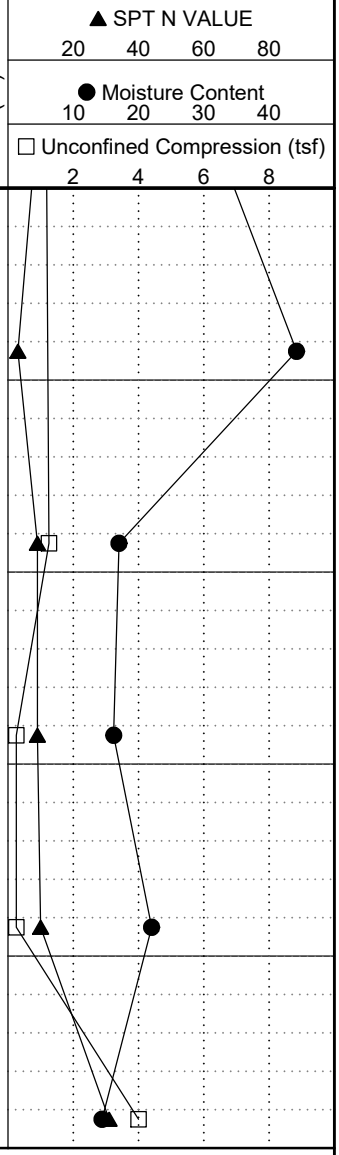
BORING NUMBER E-1

CLIENT City of Evanston **PROJECT NAME** James Park Playground

PROJECT NUMBER 25-2084 **PROJECT LOCATION** Evanston, Illinois

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (N VALUE)	UNCONFINED COMPRESSION (tsf)
35		FILL: SANDY SILT, little misc debris, trace gravel, trace porcelain, trace organics, trace glass - Black - Moist to Very Moist *(continued)*				
40			SS 12	72	5-1-2 (3)	
45		SILTY CLAY, trace gravel (CL/ML) - Gray - Stiff - Moist	SS 13	78	3-4-5 (9)	1.25
50		SILTY CLAY, trace gravel (CL) - Gray - Soft - Moist	SS 14	67	3-3-6 (9)	0.25
55			SS 15	100	2-5-5 (10)	0.25
60		SILTY CLAY, trace gravel (CL/ML) - Gray - Hard - Moist	SS 16	100	8-11-20 (31)	4.0

Bottom of borehole at 60.0 feet.



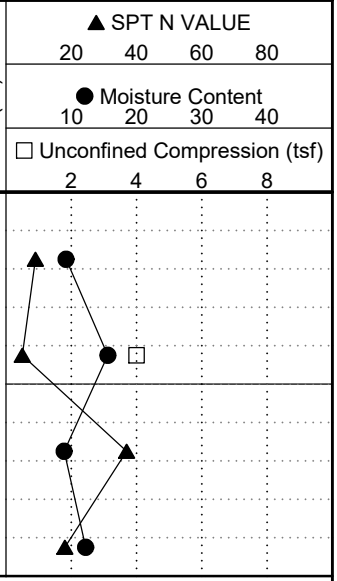
GEOTECH BH PLOTS - GINT STD US.GDT - 12/2/25 11:51 - Z:\PROJECTS\CITY OF EVANSTON\JAMES PARK PLAYGROUND\GEOTECHNICAL\FIELD TESTING\JAMES PARK PLAYGROUND.GPJ

GSG CONSULTANTS, INC.
735 Remington Road, Schaumburg, IL 60173
Tel: 630.994.2600, www.gsg-consultants.com

BORING NUMBER P-1

CLIENT City of Evanston
PROJECT NAME James Park Playground
PROJECT NUMBER 25-2084
PROJECT LOCATION Evanston, Illinois
DATE STARTED 10/17/25 **COMPLETED** 10/17/25
GROUND ELEVATION 606.15 ft **HOLE SIZE** 3 1/4"
DRILLING CONTRACTOR GSG Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING --- None
LOGGED BY MP **CHECKED BY** RM
AT END OF DRILLING --- N/A
NOTES Pavement core information collected a few feet from soil boring
AFTER DRILLING --- N/A

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (N VALUE)	UNCONFINED COMPRESSION (tsf)
0		4.5 inches of Asphalt 4 inches of Gravel, with sand FILL: SILT, little gravel, trace debris - Dark Brown - Moist	SS 1	56	6-5-4 (9)	
		FILL: CLAYEY SILT, some gravel, trace organics, trace glass - Dark Brown and Black - Moist	SS 2	28	4-2-3 (5)	4.0
5		FILL: SILT, with sand, trace gravel, trace brick - Brown - Moist	SS 3	72	16-21-16 (37)	
10		FILL: GRAVEL, with sand, little silt, trace brick, trace glass, trace organics - Black and Light Gray - Moist Cobbles at 8.5 to 9 feet	SS 4	22	20-9-9 (18)	
		Bottom of borehole at 10.0 feet.				



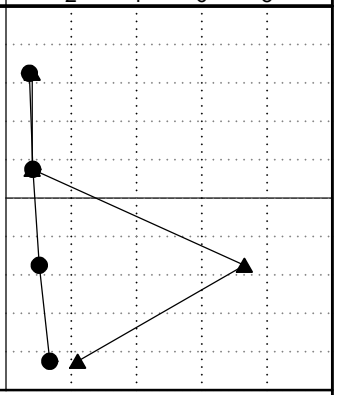
GEOTECH BH PLOTS - GINT STD US.GDT - 12/2/25 11:51 - Z:\PROJECTS\CITY OF EVANSTON\JAMES PARK PLAYGROUND\GEOTECHNICAL\FIELD TESTING\JAMES PARK PLAYGROUND.GPJ

GSG CONSULTANTS, INC.
735 Remington Road, Schaumburg, IL 60173
Tel: 630.994.2600, www.gsg-consultants.com

BORING NUMBER P-2

CLIENT City of Evanston
PROJECT NAME James Park Playground
PROJECT NUMBER 25-2084
PROJECT LOCATION Evanston, Illinois
DATE STARTED 10/17/25 **COMPLETED** 10/17/25
GROUND ELEVATION 606.34 ft **HOLE SIZE** 3 1/4"
DRILLING CONTRACTOR GSG Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING --- None
LOGGED BY MP **CHECKED BY** RM
AT END OF DRILLING --- N/A
NOTES
AFTER DRILLING --- N/A

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (N VALUE)	UNCONFINED COMPRESSION (tsf)
0		4 inches of Topsoil				
		FILL: SAND, medium grained, some gravel - Brown - Dry	SS 1	56	4-4-4 (8)	
			SS 2	56	4-3-5 (8)	
5		FILL: SANDY SILT, some brick, little gravel - Brown and Black - Moist Possible obstruction at 6 feet	SS 3	44	12-23-50 (73)	
			SS 4	33	12-17-5 (22)	
10		Bottom of borehole at 10.0 feet.				



GEOTECH BH PLOTS - GINT STD US.GDT - 12/2/25 11:51 - Z:\PROJECTS\CITY OF EVANSTON\JAMES PARK PLAYGROUND\GEOTECHNICAL\FIELD TESTING\JAMES PARK PLAYGROUND.GPJ

GSG CONSULTANTS, INC.
735 Remington Road, Schaumburg, IL 60173
Tel: 630.994.2600, www.gsg-consultants.com

BORING NUMBER P-3

CLIENT City of Evanston
PROJECT NAME James Park Playground
PROJECT NUMBER 25-2084
PROJECT LOCATION Evanston, Illinois
DATE STARTED 10/17/25 **COMPLETED** 10/17/25
GROUND ELEVATION 605.73 ft **HOLE SIZE** 3 1/4"
DRILLING CONTRACTOR GSG Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING --- None
LOGGED BY MP **CHECKED BY** RM
AT END OF DRILLING --- N/A
NOTES Pavement core information collected a few feet from soil boring
AFTER DRILLING --- N/A

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (N VALUE)	UNCONFINED COMPRESSION (tsf)
0		5 inches of Concrete 9 inches of Gravel FILL: SILTY CLAY, trace sand, trace gravel, trace brick, trace organics - Dark Gray and Brown - Moist	SS 1	56	5-5-8 (13)	4.5+
5			SS 2	33	3-3-3 (6)	4.5+
		FILL: SANDY SILT, little gravel, trace brick - Dark Gray - Moist	SS 3	11	4-2-2 (4)	
10		FILL: SILTY CLAY, with sand, trace glass, trace brick, trace organics, trace metal - Dark Gray - Moist	SS 4	28	1-0-1 (1)	1.5

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
□ Unconfined Compression (tsf)
2 4 6 8

Bottom of borehole at 10.0 feet.

GEOTECH BH PLOTS - GINT STD US.GDT - 12/2/25 11:51 - Z:\PROJECTS\CITY OF EVANSTON\JAMES PARK PLAYGROUND\GEOTECHNICAL\FIELD TESTING\JAMES PARK PLAYGROUND.GPJ

GSG CONSULTANTS, INC.
735 Remington Road, Schaumburg, IL 60173
Tel: 630.994.2600, www.gsg-consultants.com

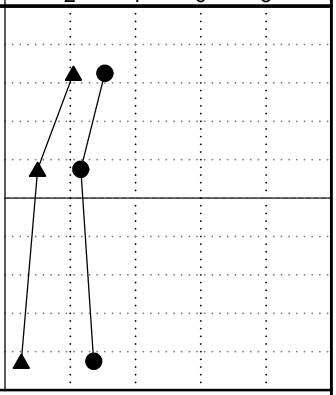
BORING NUMBER RW-1

CLIENT City of Evanston
PROJECT NAME James Park Playground
PROJECT NUMBER 25-2084
PROJECT LOCATION Evanston, Illinois
DATE STARTED 10/17/25 **COMPLETED** 10/17/25
GROUND ELEVATION 605.28 ft **HOLE SIZE** 3 1/4"
DRILLING CONTRACTOR GSG Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING --- None
LOGGED BY MP **CHECKED BY** RM
AT END OF DRILLING --- N/A
NOTES
AFTER DRILLING --- N/A

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (N VALUE)	UNCONFINED COMPRESSION (tsf)
0		4 inches of Topsoil				
		FILL: SILT, some clay, little gravel, little organics, trace sand, trace brick, trace concrete, trace glass - Black and Dark Brown - Moist	SS 1	33	6-13-8 (21)	
5			SS 2	33	4-4-6 (10)	
		Offset and redrilled due to obstruction at 6 feet	SS 3	0	50	
		FILL: SAND, fine grained, little clay, little brick, trace gravel - Brown - Moist	SS 4	33	5-3-2 (5)	
10						

Bottom of borehole at 10.0 feet.

▲ SPT N VALUE
20 40 60 80
● Moisture Content
10 20 30 40
☐ Unconfined Compression (tsf)
2 4 6 8



GEOTECH BH PLOTS - GINT STD US.GDT - 12/2/25 11:51 - Z:\PROJECTS\CITY OF EVANSTON\JAMES PARK PLAYGROUND\GEOTECHNICAL\FIELD TESTING\JAMES PARK PLAYGROUND.GPJ

GSG CONSULTANTS, INC.
735 Remington Road, Schaumburg, IL 60173
Tel: 630.994.2600, www.gsg-consultants.com

Unified Soil Classification

Soil Classification is based on the Unified Soil Classification System and ASTM Designations D-2487 and D-2488. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; they are described as: clays, if they are plastic, and silts if they are slightly Plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the basis of their relative in-place density and fine grained soils on the basis of their consistency. Example: Lean clay with sand, trace gravel, stiff (CL); silty sand, trace gravel, medium dense (SM).

Drilling & Sampling Symbols

SS : Split Spoon
ST : Thin-Walled Tube
HA: Hand Auger
AU: Auger Sample
HS: Hand Sample

Water Level (ft)
▽ While Drilling
▽ After Drilling
▼ 24-hour

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch OD split spoon, except where noted.

Major Divisions			Group Symbols	Typical Names
Coarse Grained Soils (More than Half of material is larger than No. 200 sieve size)	**Gravels** (More than hall of coarse fraction is larger than No. 4 sieve size)	**Clean Gravels** (Little or no fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines
		Gravels with fines (Appreciable amount of fines)	GM d / u	Silty gravels, gravel-sand-clay mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than hall of coarse fraction is smaller than No. 4 sieve size)	**Clean Sands** (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines
			SP	Poorly graded sands, gravelly sands, little or no fines
		Sands with fines (Appreciable amount of fines)	SM d / u	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures
Fine Grained Soils More than half of material is smaller than No. 200 sieve size)	**Silts and Clays** (liquid limit less than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or claye fine sands or clayey silts with slight plasticity
			CL	Inorganic clay of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays (liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silts
	Highly Organic Soils		Pt	Peat and other highly organic soils

Consistency of Cohesive Soil

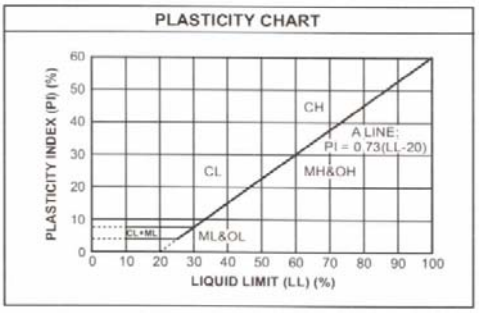
Unconfined Compressive strength, Qu, tsf			N-Blows/ft.		Consistency
<		0.25	Below 2	<	Very Soft
0.25	-	0.50	2-4	-	Soft
0.50	-	1.0	4-8	-	Medium Stiff
1.0	-	2.0	8-15	-	Stiff
2.0	-	4.0	15-30	-	Very Stiff
4.0	-	8.0	30-50	-	Hard
>	-	8.0	> 50	-	Very Hard

Relative Density of Coarse-Grained Soils

N-Blows/ft.	Relative Density
0-3	Very Loose
4-10	Loose
11-29	Medium Dense
30-49	Dense
50-80	Very Dense
>80	Extremely Dense

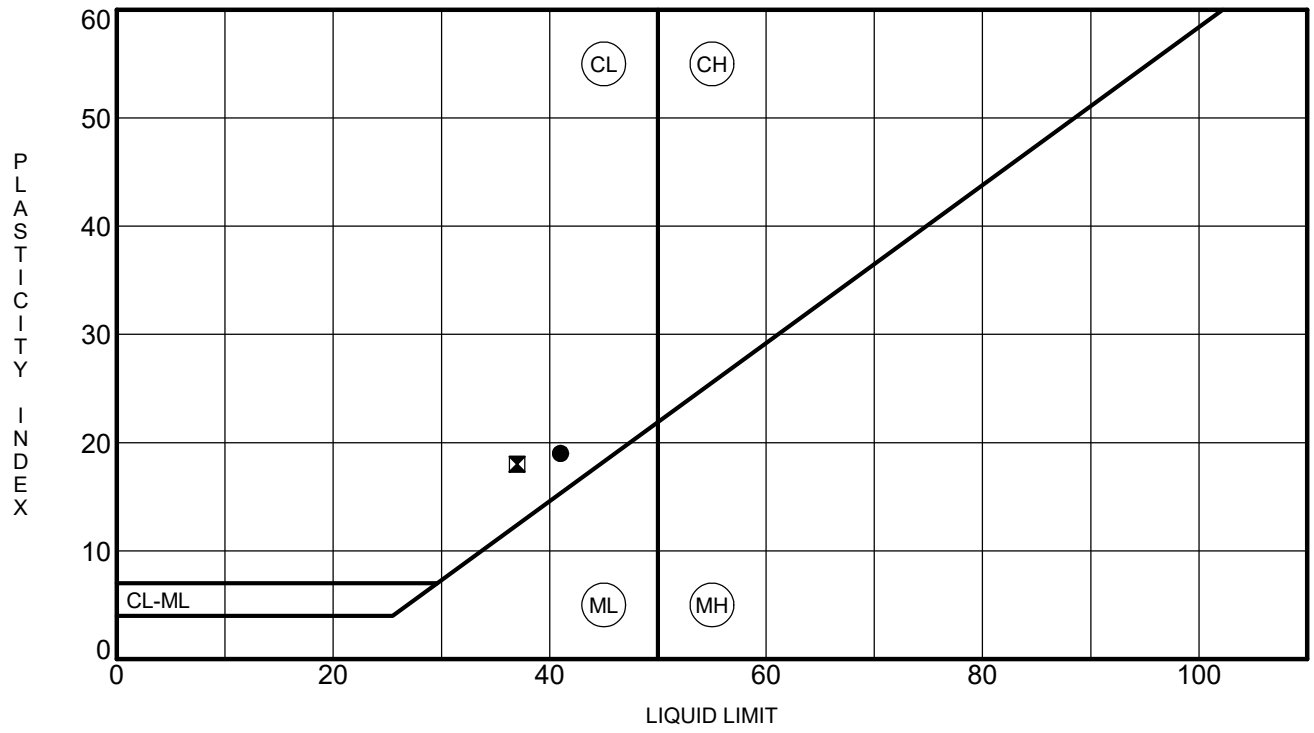
Description Term(s) of Components Present in Sample

Trace < 10%	Little 10-19%
Some 20-34%	And 35-50%



APPENDIX C

LABORATORY TEST RESULTS



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**E-1**	**53.50**	**41.0**	**22.0**	**19.0**		
⊠	**P-3**	**3.50**	**37.0**	**19.0**	**18.0**		

GSG Consultants, Inc
735 Remington Road
Schaumburg, IL 60173
(630) 994-2600

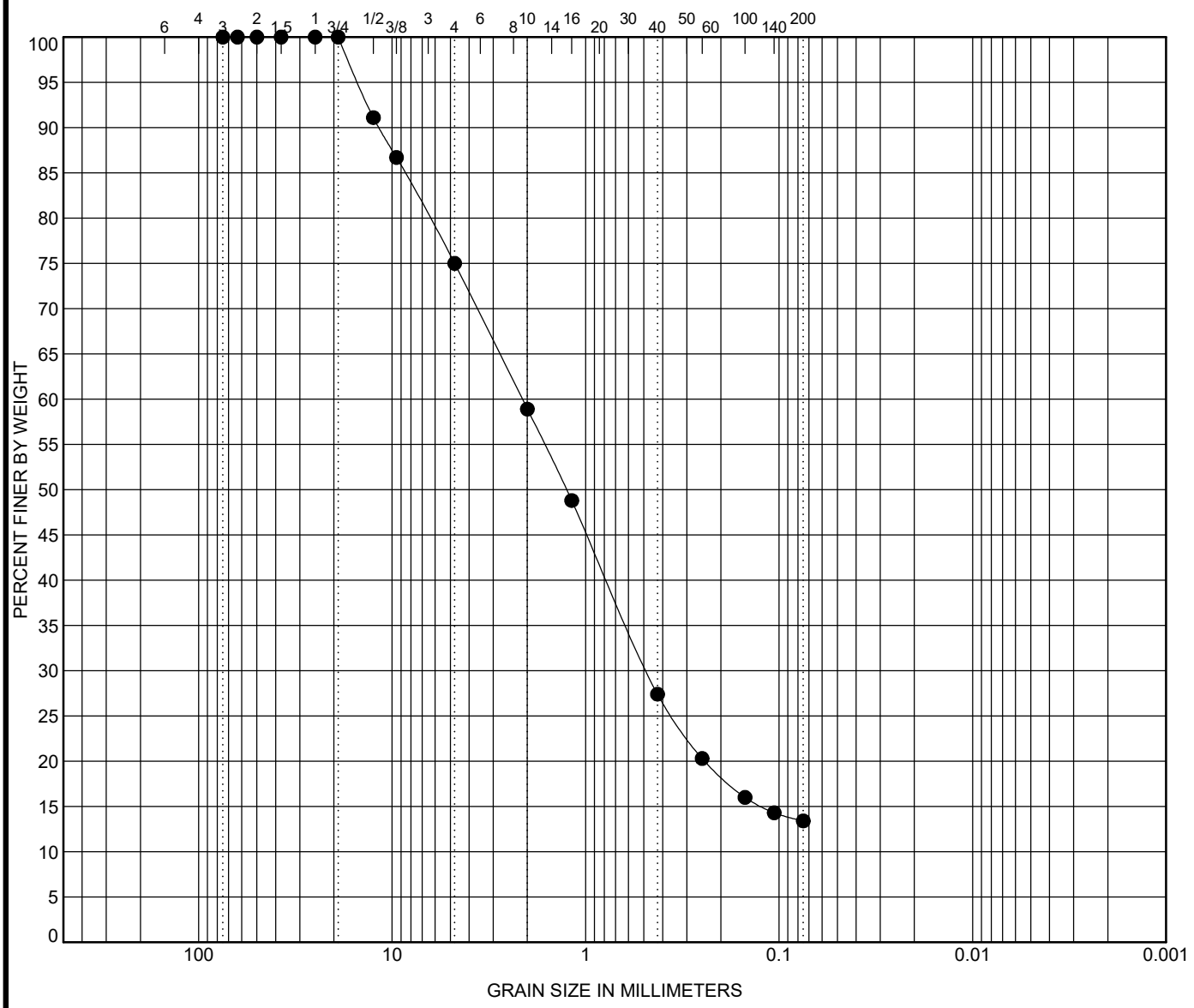
ATTERBERG LIMITS RESULTS

Route:

Section:

County:

ATTERBERG_LIMITS JAMES PARK PLAYGROUND.GPJ IL_DOT.GDT 11/3/25



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**P-2**	**3.50**						

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**P-2**	**3.50**		**2.122**	**0.481**					

GSG Consultants, Inc
735 Remington Road
Schaumburg, IL 60173
(630) 994-2600

GRAIN SIZE DISTRIBUTION

Route:

Section:

County:

GRAIN SIZE JAMES PARK PLAYGROUND.GPJ IL DOT.GDT 11/3/25

Organic Content Results

Boring ID	Sample Depth (ft)	Organic Content (%)	Soil Classification
E-1	38.5-40.0	10.4	ML Fill
RW-1	1.0-2.5	4.8	ML Fill

Unit Weight Results

Boring ID	Sample Depth (ft)	Wet Unit Weight (pcf)	Dry Unit Weight (pcf)	Soil Classification
E-1	1.0-2.5	123.8	104.1	CL/ML Fill

2/9/2026

1-O-26

AN ORDINANCE

Amending Title 1, Chapter 17, "Contracts with the City"

WHEREAS, the City of Evanston is a unit of local government organized and operating under federal and state laws; and

WHEREAS, on May 27, 2025, the City of Evanston adopted the Responsible Bidder Ordinance to ensure that only qualified contractors and subcontractors are awarded contracts on public works construction projects, and to ensure that workers on public works construction projects are paid appropriate wages and receive appropriate benefits in accordance with state and federal law; and

WHEREAS, from time to time the City of Evanston is able to secure external sources of funding, for instance from federal or state grants, that impose distinct sets of requirements for grant eligibility that do not always dovetail with the requirements of the current City Code; and

WHEREAS, the City of Evanston wishes to amend its ordinance on Contracts with the City to clarify how it intersects with external funding conditions;

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EVANSTON, COOK COUNTY, ILLINOIS:

SECTION 1: Title 1, Chapter 17, "Contracts with the City," is hereby amended as follows:

(A) All contracts with the City costing in excess of twenty-five thousand dollars ($25,000.00) must be approved by the City Council. Contracts for the purchase of goods or services to be utilized in the conduct of the affairs of the City, shall be let by the City Manager or his/her designee, with the approval of the City Council, to a reliable, responsible and acceptable bidder, after advertising for the same, and bonds to be approved by the City Council may be taken for the faithful performance thereof.

(B) All contracts for the purchase of goods or services with entirely City funds shall be awarded to the lowest quote/bid price or lowest evaluated quote/bid price from a responsive and responsible Evanston business enterprise ("EBE") provided the EBE's quote/bid price does not surpass the lowest quote/bid price or lowest evaluated quote/bid price from a responsive and responsible nonlocal business by more than five percent (5%). All contracts let from requests for proposals (RFPs) and requests for qualifications (RFQs) with entirely City funds shall be awarded to the most qualified consultant that is an EBE, provided the EBE price/cost does not surpass the lowest price/cost or lowest evaluated price/cost from a nonlocal business by more than five percent (5%). This requirement is waived if the contract is partially or completely funded from a source other than funds belonging to the City of Evanston, such as federal, state, or other grants, and (ii) the other funding source mandates terms that are inconsistent with or supersede this Section (B).

1. An "EBE" shall mean an entity which is located in or has one or more offices located in the City for a minimum of one year and which performs a "commercially useful function."

a. An EBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the EBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether an EBE is performing a commercially useful function, the City will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the EBE credit claimed for its performance of the work and other relevant factors.

b. An EBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of EBE participation. In determining whether an EBE is such an extra participant, the City will examine similar transactions, particularly those in which EBEs do not participate.

c. If an EBE does not perform or exercise responsibility for at least thirty (30) percent of the total cost of its contract with its own work force, or the EBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of

work involved, then it is not performing a commercially useful function.

d. When an EBE is presumed not to be performing a commercially useful function as provided in Subsection (B)1c of this Section, the EBE may present evidence to rebut this presumption. The City may determine that the firm is performing a commercially useful function given the type of work involved and normal industry practices.

2. In determining whether a business has been located in Evanston for one (1) year, the MWEBE Committee will consider the following:

a. Whether the vendor pays property and/or sales taxes in Evanston; and

b. Whether the business entity's address or the address given on the federal and/or state income tax return is within Evanston.

c. The date of issuance of an Evanston business license.

The City may waive the one-year requirement if the entity provides evidence of a substantial commitment to Evanston.

3. Businesses that maintain a distribution warehouse or which manufacture in Evanston will receive EBE credit of sixty (60) percent and one hundred (100) percent, respectively. Those that do not maintain a distribution warehouse or manufacturing operation but have an office in Evanston will be considered a broker and receive a five (5) percent credit.

4. Eligibility as an EBE will be periodically reviewed and may be revoked at any time if the entity no longer meets the above requirements.

INSERT: (C) Local Employment Program.
INSERT: (D) Minority, women, disadvantage, and Evanston business enterprise (M/W/D/EBE) goals.

(E) *Additional Requirements for Public Works Contracts*. All bidders for public works contracts must comply with the below specifications in bid submission and during the project for a successful bidder. The City Council may, by a majority vote of the members present, waive any of these requirements for an Evanston-owned business enterprise as defined in Subsection 1-17-1(D)(1) or a nearby business enterprise as defined in Subsection 1-17-1(E)(1).

1. *Definitions*. For the purposes of this Subsection, the following definitions apply:

APPRENTICESHIP TRAINING PROGRAM.	A program approved and registered by the United States Department of Labor's Office of Apprenticeship, or its successor organization, that has graduated at least five (5) apprentices in each other past five (5) years for each of the construction crafts the bidder will perform on the project. Evidence of graduation rates are not required for apprentice able crafts dedicated exclusively to the transportation of material and equipment to and from the public works project.
BIDDER.	A contractor that submits a bid in response to a City of Evanston request for proposal.
COMMERCIALLY USEFUL FUNCTION.	A business enterprise that is responsible for the execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved.
NEARBY BUSINESS ENTERPRISE ("NBE").	A business enterprise located within five (5) miles of Evanston City limits for a minimum of one (1) year and performs a commercially useful function.
PUBLIC WORKS CONTRACT.	Any construction, alteration, demolition, or repair work done under contract on City-owned property.
RELIABLE, RESPONSIVE AND ACCEPTABLE	A bidder who submits a bid that conforms in all material respects to the requirements and criteria in the invitation for bids. This means the bid promises to perform in the precise manner requested by the government, and any minor irregularities in the bid shall not defeat responsiveness.

2. *Excessive Pass Through Prohibited.* Any bidder must directly perform at least twenty-five (25) percent of the services identified in the project solicitation. The named bidder submitting the bid must be the entity directly performing the services. Any affiliates and/or subsidiaries shall not contribute to the minimum performance percentage required.

3. *Apprenticeship Training Program Required*.

(a) Public Works contracts for over twenty-five thousand dollars ($25,000.00) or greater shall only be let to: (i) a contractor with evidence of participation in an

apprenticeship training program applicable to the work to be performed on the project; or (ii) a contractor who has satisfied the experience requirements under subsection (d).

(b) All contracts submitted to the City Council must identify whether the contractor meets this requirement.

(c) Required evidence of participation in an apprenticeship program includes but is not limited to a copy of all applicable apprenticeship standards and apprenticeship agreement(s) for any apprentice(s) who will perform work on the public works project; and documentation from each applicable apprenticeship program certifying that it has graduated at least five (5) apprentices in each of the past five (5) years for each construction craft the bidder will perform on the project.

(d) Contractors may alternatively satisfy this requirement by certifying that all workers who will perform work on the public works project have relevant experience in lieu of participation in an apprenticeship program. Relevant experience may include: (i) performing at least one thousand eight hundred (1,800) hours of work in the trade the worker will perform on the public works project over the preceding two (2) years; (ii) completion of an apprenticeship program in the trade the worker will perform on the public works project; or (iii) obtaining a journeyman credential in the trade the worker will perform on the public works project. Required evidence to be eligible under this section includes but is not limited to W-2 records, journeyman credentials, apprenticeship completion cards, or certificates of graduation from apprenticeship programs. This requirement is waived if the contract is partially or completely funded from a source other than funds belonging to the City of Evanston, such as federal, state, or other grants, and (ii) the other funding source mandates terms that are inconsistent with or supersede this Section (E)(3)(d).

(e) Additional evidence of apprenticeship participation, graduation requirements, or previous experience may be requested by the City of Evanston in its discretion.

4. *Occupational Safety and Health Administration Safety Cards Required.* Prior to beginning work for the City, the bidder shall certify that all employees for the contractor that will be on the work site shall have completed a ten-hour or greater OSHA safety program. The contractor must submit copies of the employees' OSHA cards to the City prior to the project commencing.

5. *Nearby Business Enterprises*. In the absence of an Evanston business enterprise as required by City Code 1-17-1(B), the City shall award the contract for the public works

contract to the lowest bid price or lowest evaluated quote/bid price from a responsive or responsible NBE, provided that the NBE's bid price does not surpass the lowest bid price or lowest evaluated bid price from a responsible and responsible non NBE or EBE business by more than three (3) percent. This requirement is waived if the contract is partially or completely funded from a source other than funds belonging to the City of Evanston, such as federal, state, or other grants, and (ii) the other funding source mandates terms that are inconsistent with or supersede this Section (E)(5).

a. An NBE shall perform a commercially useful function.

i. To determine whether an NBE is performing a commercially useful function, the City will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the NBE credit claimed for its performance of the work and other relevant factors.

ii. An NBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of NBE participation. In determining whether an NBE is such an extra participant, the City will examine similar transactions, particularly those in which NBEs do not participate.

iii. If an NBE does not perform or exercise responsibility for at least thirty (30) percent of the total cost of its contract with its own work force, or the NBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, then it is not performing a commercially useful function.

iv. When an NBE is presumed not to be performing a commercially useful function as provided in Subsection (B)1c of this Section, the EBE may present evidence to rebut this presumption. The City may determine that the firm is performing a commercially useful function given the type of work involved and normal industry practices.

b. In determining whether a business has been located in Evanston or within five (5) miles of Evanston City limits for one (1) year, the MWEBE Committee will consider the following:

i. Whether the vendor pays property and/or sales taxes in Evanston, or, in the case of a NBE, in a community that is within five (5) miles of City limits; ~~and~~

ii. Whether the business entity's address or the address given on the federal and/or state income tax return is within Evanston or, in the case of a NBE, in a community that is within five (5) miles of City limits; and

iii. The date of issuance of an Evanston business license or, in the case of a NBE, the date of issuance of a business license by a community located within five (5) miles of City limits.

iv. The City may waive the one-year requirement if the entity provides evidence of a substantial commitment to Evanston.

c. Businesses that maintain a distribution warehouse or which manufacture in Evanston will receive EBE credit of sixty (60) percent and one hundred (100) percent, respectively. Those that do not maintain a distribution warehouse or manufacturing operation but have an office in Evanston will be considered a broker and receive a five (5) percent credit.

d. Eligibility as an NBE will be periodically reviewed and may be revoked at any time if the entity no longer meets the above requirements.

6. *Certifications Required at Time of Bid Submittal*. All bidders, including any subcontractors included in the bid, as applicable, shall be compliant and shall submit certification of compliance with the following at the time of the bid submittal:

a. The Prevailing Wage Act, 820 ILCS 130/1 *et seq*.

i. Compliance with the Prevailing Wage Act is required for the previous five (5) years and certification that the contractor has not been found in violation of the Prevailing Wage Act by the Illinois Department of Labor; and

ii. A contractor who has been found by the Illinois Department of Labor to be in violation of the Prevailing Wage Act twice in a five-year period shall be barred from bidding for a Public Works contract for four (4) years from the date of the most recent finding from the Illinois Department of Labor.

b. The Substance Abuse Prevention on Public Works Project Act, 820 ILCS 265/1 *et seq*;

i. Compliance with the Substance Abuse Prevention on Public Works Act must include a copy of its written program for the prevention of substance abuse pursuant to the Act.

c. The Workers' Compensation Act, 820 ILCS 305/1 et seq.;

i. A copy of the applicable workers' compensation policy must be submitted to the City along with documentation of the Illinois Department of Labor registration. The bidder shall additionally certify that all employees are properly classified under the workers' compensation policy.

d. The Unemployment Insurance Act, 820 ILCS 405/100, *et seq*.;

i. .A copy of the applicable Illinois Department of Employment Security current registration.

e. A copy of the Illinois Secretary of State's Department of Business Services online records evidencing that the bidder has a current corporate annual report on file. If the bidder is an individual, sole proprietor, or partnership, this subsection shall not apply;

f. A copy of the current registration with the Illinois Department of Revenue, if the bidder has employees;

g. A disclosure of any Federal, State or local tax liens or tax delinquencies against the bidder or any officers of the bidder in the last five (5) years;

~~h. Reserved;~~

~~i.~~ h. Compliance with the Federal Davis-Bacon Act and Related Acts, if applicable;

~~j.~~ i. Compliance with the Employee Classification Act 820 ILCS 185/1, *et seq*.;

i. All contractors and subcontractors shall submit certified payrolls as specified in Illinois Public Act 94-0515.

~~k.~~ j. All applicable professional or trade licensure, including documentation of said licenses, certification that all licenses are current, and disclosure of any suspension or revocation of such license held by the company, or of any director, officer or manager of the company;

~~l.~~ k. Certification of compliance with 720 ILCS 5/33E-11 and that the bidder is not barred from contracting with any unit of State or local government as a result of a violation of 720 ILCS 5/33E-3, 4;

~~m.~~ l. Certification that all individuals who perform work on behalf of the contractor are properly classified as either (i) an employee, or (ii) an independent contractor under all applicable state and federal laws and local ordinances; and

~~n.~~ m. Disclosure of any determinations by a court, State or Federal agency of violations of any federal, state or local laws, including but not limited to OSHA, contracting or antitrust laws, tax or licensing laws, environmental laws or the Federal Davis-Bacon and Related Acts.

Any bidder who fails to adhere to this Subsection shall be deemed disqualified from the bid process. If a bidder or contractor has a material change to the information provided to the City of Evanston, the bidder or contractor must notify the City within fourteen (14) days of this material change in writing. Failure to self-report a material change may result in disqualification from the bid.

7. *Subcontractors.* A bidder shall submit documentation including the name and address of each subcontractor from whom the bidder has accepted a bid and/or intends to hire on any part of the project. Further, each such subcontractor shall be required to adhere to the requirements set forth herein as though it were bidding directly to the City of Evanston. Each contractor shall submit all subcontractor information and supporting documentation to the City of Evanston prior to the subcontractor commencing work on the project. It shall be the responsibility of the bidder to ensure its subcontractors comply with all of the requirements of this Code, including the timely and complete submittals of all required documentation and full compliance with all obligations set forth in this Section.

8. *Certification for 12-Month Period*. In anticipation of bidding on a project, a contractor may submit the certifications identified in the preceding section to the City's Purchasing Manager or their designee. The Purchasing Manager or their designee shall review the certifications for completeness. Upon review, if the certifications are complete, the Purchasing Manager or their designee shall advise the contractor of same via an email address designated by the contractor. If the certifications are incomplete, the contractor shall be also notified via email and given fourteen (14) days to complete the submission. Once the certifications are completed, the contractor shall be notified of a "Certification for 12-Month Period" and shall not be required to resubmit these certifications for a period of twelve (12) months following the notification. Any material changes to these certifications shall be reported in writing to the City's Purchasing Manager or designee. In the event that these documents are still required to be submitted by a State or Federal agency that is contributing funding to a project, this provision shall not apply.

9. *Projects of Similar Size and Scope*. In projects in the amount of twenty-five

thousand dollars ($25,000.00) or greater, bidders shall identify and submit documentation with their bid of relevant experience on projects of similar size and scope in the past five (5) years and submit references for same. Projects of similar size and scope shall be as further defined and outlined in the request for proposal ("RFP"). The bidder shall also identify any civil judgments, mediation or arbitration awards against it for default, breach, or damages due to delay or work inadequately performed. Information submitted pursuant to this section shall be considered in determining responsible bidders for the project at issue.

10. *Statement of Past Performance*. Bidders shall submit with their bid a record of all work performed for public bodies completed in the prior three (3) years. Such statements shall include the name of the public body, the type of work performed, the original contract price, the final contract price, the names of all subcontractors used and if liquidated damages were assessed.

11. *Public Records*. All information submitted by a successful bidder pursuant to this Section ~~are~~ is subject to review pursuant to the Illinois Freedom of Information Act (5 ILCS 140/1 *et seq*.).

INSERT (F) Contractor Debarment, Suspension, and Prohibited Contracts

SECTION 2: All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SECTION 3: If any provision of this Ordinance or application thereof to any person or circumstance is held unconstitutional or otherwise invalid, such invalidity shall not affect other provisions or applications of this Ordinance that can be given effect without the invalid application or provision, and each invalid application of this Ordinance is severable.

SECTION 4: This Ordinance shall be in full force and effect beginning upon passage.

SECTION 5: The findings and recitals contained herein are declared to be prima facie evidence of the law of the City and shall be received in evidence as provided by the Illinois Compiled Statutes and the courts of the State of Illinois.

Introduced: February 9, 2026

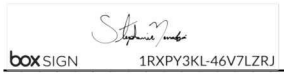
Adopted: February 9, 2026

Approved: February 10, 2026



Daniel Biss, Mayor

Attest:



Stephanie Mendoza, City Clerk

Approved as to form:



Alexandra B. Ruggie, Corporation Counsel

Amended Ordinance 1-O-26
SECTION 1: Title 1, Chapter 17, “Contracts with the City,” is hereby amended as follows:
(C) Local Employment Program.
(D) Minority, women, disadvantage, and Evanston business enterprise (M/W/D/EBE) goals.
(F) Contractor Debarment, Suspension, and Prohibited Contracts.

(C) Local Employment Program.

1. *Definitions*. For the purposes of this Subsection (C), the employment program, the following terms shall be defined as follows:

CONTRACT.	The written agreement to provide services established between the City and a contractor, including, but not limited to, a redevelopment agreement between the City and any contractor or party.
CONTRACTOR.	An individual, partnership, corporation, joint venture or other legal entity entering into a contract, or a subcontract of whatever tier, for a public works project.
DESK REVIEW.	A method of monitoring compliance with the local employment program in which the Business and Workforce Development Coordinator contacts a contractor or subcontractor to gather relevant information or request relevant documentation.
EMERGENCY WORK.	Work necessitated by an imminent threat to the property of the city or the health, safety, or welfare of its citizens.
GENERAL CONTRACTOR.	An entity that enters into a contract directly with the city. The general contractor may also be known as the prime contractor.
LOCAL RESIDENT DATABASE.	A database maintained by the City's Business and Workforce Development Coordinator containing the names of local residents who have expressed interest in employment on City public works projects.
NEW HIRE.	Any employee of a contractor who is not listed on the contractor's last quarterly tax statement and was hired prior to or during the commencement of work on a public works project contract subject to the requirements of the local employment program.
ON SITE MONITORING.	The Business and Workforce Development Coordinator's act of visiting the site of a public works project to ensure compliance with the requirements of the local employment program.
PUBLIC WORKS PROJECT.	Any construction, alteration, demolition, or repair work done under contract and paid for in whole or in part from City funds.
RESIDENT.	Any person whose domicile is in the City. The domicile is an individual's one and only true, fixed and permanent home and principal establishment. In order to qualify as a resident for purposes of the local employment program, an individual must have established domicile within the City at least thirty (30) days prior to commencing work on any public works project subject to the local employment program.
SUBCONTRACT.	A contract that exists between the general contractor and a subcontractor or between subcontractors of any tier.
SUBCONTRACTOR.	An entity that enters into a contract with the general contractor or another subcontractor.
TIER.	The level of relationship to the prime contractor of a subcontractor who enters into a contract under a prime contractor or another subcontractor to perform a portion of the work on a project.

2. *Work hours and new hire requirements*.

a. Unless prohibited by federal, state, or local law, all contractors entering into contracts with the City for public works projects valued at two hundred fifty thousand dollars ($250,000.00) shall ensure that:

1) Fifteen percent (15%) of the total work hours are performed at the construction site by City of Evanston residents, as laborers and/or trade persons; and

2) A minimum of one (1) Evanston resident is hired.

b. The effectiveness of the local employment program regarding the minimum percentage of work hours and residents hired will be evaluated by city staff after two (2) years of implementation.

c. These requirements shall bind the contractor both with respect to persons working directly for the contractor and to subcontractors, regardless of tier or phase of the project, hired to perform any portion of the contracted work. The contractor shall ensure that subcontractors comply with the requirements of the local employment program. It shall be the responsibility and obligation of the contractor that all contracts are in overall compliance with this Subsection (C) and all the requirements listed herein.

d. Requirements of the local employment program are satisfied if the contractor already employs Evanston residents sufficient to meet fifteen percent (15%) of the project's total work hours. Some or all of these requirements may be waived if a waiver is obtained from the City pursuant to Subsection (C)5. of this Section.

3. *Contracts, bid documents, subcontracts*. Where appropriate and consistent with law, contracts and bid documents shall incorporate the local employment program by reference and shall provide that the failure of any contractor or subcontractor to comply with any of its requirements shall be deemed a material breach of the contract or subcontract entitling the City to all the remedies and damages available for material breach of a contract. All subcontracts shall expressly acknowledge the City's status as a third party beneficiary to the subcontract and further expressly acknowledge that the City, as a third party beneficiary, shall have the right to enforce the provisions of the local employment program. Contracts and bid documents shall require bidders, contractors and subcontractors to maintain records necessary for monitoring their compliance with the local employment program.

4. *Automatic review*. This Subsection (C) shall be reviewed to address any deficiencies on a bi-annual basis by the Minority, Women and Evanston Business Enterprise Development Committee.

5. *Waiver*.

   a. The contractor may request that the Business and Workforce Development Coordinator waive all or a portion of the requirements imposed under the local employment program. Such requests must be in writing and must be received by the Business and Workforce Development Coordinator prior to the award of any public works project contract. In order to apply for a waiver, the contractor must submit:

      1) Documentation to the Business and Workforce Development Coordinator demonstrating that:

         a) The contractor utilized the local resident database to attempt to satisfy the local employment program hiring requirement.

b) The contractor notified residents of the employment opportunities available for the project. Such notification must have appeared in the employment section of a newspaper of local general circulation. Additionally, the Illinois department of employment security's office located in Evanston, Illinois, must have been notified of the employment opportunities. All notices must have stated that all qualified applicants would receive consideration without regard to race, color, religion, sex or national origin.

c) The contractor, for a contract utilizing union labor, contacted in writing Chicagoland labor unions to request a resident for employment on the project.

2) Any additional documents requested by the Business and Workforce Development Coordinator in order to evaluate the waiver request.

6. *Business and Workforce Development Coordinator*.

a. The Business and Workforce Development Coordinator shall determine, based on the required documentation and conditions cited by the contractor that make compliance unfeasible, whether to grant the waiver prior to the award of the contract. Examples of such conditions include, but are not limited to:

1) Intermittent service by one (1) trade throughout the life of the project.

2) Nonavailability of resident(s) necessary to fulfill craft position(s) required for the project.

b. If circumstances arise subsequent to the issuance of the contract, the results of which the contractor believes will prevent satisfying the local employment program requirements, the contractor will immediately notify the Business and Workforce Development Coordinator by requesting in writing a waiver of the percentage that cannot be met. The Business and Workforce Development Coordinator or his or her designee shall meet with the applicant as necessary and issue a decision within five (5) business days, including a determination as to any retroactive liability for failure to achieve the goals for work undertaken prior to the application for such a waiver.

7. *Local resident selection*. It is the contractor's responsibility to meet the requirement of the local employment program. In order to satisfy the work hours and/or new hire requirements of the local employment program, contractors working under a collective bargaining agreement shall contact the appropriate local union hall to request a resident. If a resident is not available for dispatch by that union hall, the contractor shall contact the Business and Workforce Development Coordinator or his or her designee to request an available Evanston resident. The Business and Workforce Development Coordinator or his or her designee will thereafter provide the name of a resident matching the qualifications defined by the contractor to the local union

hall and that resident will be dispatched to the contractor within three (3) business days in accordance with the lawful hiring hall rules of the respective union. Failure of the Business and Workforce Development Coordinator to provide an individual shall not relieve the contractor from their responsibility to comply with the local employment program.

In order to satisfy the work hours and/or new hire requirement of the local employment program, contractors working in the absence of a collective bargaining agreement shall contact the Business and Workforce Development Coordinator or his or her designee to request an available Evanston resident from the local resident database. The Business and Workforce Development Coordinator or his or her designee will provide the name of a resident matching the qualifications identified by the contractor within three (3) business days.

8. *Reporting requirements*. The contractor shall submit reports as required by the City in order to comply with the local employment program. These reports may include weekly certified payroll records for all crafts within five (5) working days of the end of each payroll period. Additionally, the City may require a weekly or monthly summary of the information that would be obtainable from the certified payroll regarding local hire by craft. These reports, if required, must show the person-hours on a laborer and/or trade person basis and, in the case of certified payroll records, identify the address, new hires, and trade and status journeyperson or apprentice of all employees on the project. All reports must have an original signature and be signed by an authorized officer of the company under penalty of perjury. The City will make a copy of all required forms available to contractors.

   Nothing in the local employment program is intended to eliminate the requirement of a contractor to maintain certified payrolls or of the subcontractors to provide certified payrolls to the contractor, or for any contractor to provide certified payrolls to any party that requests them, as required under Illinois state law.

9. *Monitoring*. The Business and Workforce Development Coordinator or his or her designee will monitor compliance with the requirements of the local employment program by means including, but not limited to, desk reviews or on site monitoring. Audits of compliance may require the review of documents such as certified payrolls, canceled checks, or quarterly wage and withholding reports. Full scale investigations of noncompliance or violations will be on an as needed basis as determined by the Business and Workforce Development Coordinator.

   A contractor that fails to provide requested documents or misrepresents material facts in such documents shall be deemed to be noncompliant with the local employment program.

10. *Post-award meeting*. At its discretion, the Business and Workforce Development Coordinator or his or her designee may require the contractor to attend a post-award meeting to familiarize the contractor with the local employment program requirements and to identify the individual by position

and name if available. If requested by the contractor post-award, or at any time during the project, the City shall hold such a meeting within ten (10) business days.

11. *Penalty*. If the contractor or subcontractor should fail to meet the total percentage of resident project hours for any reason, without having received a waiver as outlined in Subsection (C)5. above, the City may impose a fine up to one percent (1.0%) of the approved project price in total. Contractors or subcontractors that are out of compliance due to a resident termination or resignation, shall immediately notify the Business and Workforce Development Coordinator of this occurrence within two (2) business days. Subsequently, the contractor or subcontractor shall have five (5) additional business days to replace a terminated or resigned worker with another resident. If the contractor or subcontractor fails to make the replacement or to notify the Business and Workforce Development Coordinator of this occurrence, the offending party will also be subject to a penalty up to one percent (1.0%) of the approved project price. If the noncompliant contractor makes a good faith effort to replace the resident, the fine may be waived.

    At the sole discretion of the City, a contractor or subcontractor that has violated the terms of the local employment program within a three-year period may be determined a non-responsible bidder and excluded from bidding on future projects for a period of not less than one (1) year.

    At the sole discretion of the City, an employee that has been hired through the LEP may be removed from the program for a period of not less than one (1) year for failing to adhere to program guidelines or due to termination by the contractor for cause. Such termination process will be reviewed by the Business and Workforce Development Coordinator.

12. *Workforce reserve account*. The City shall establish a reserve account for the deposit of all penalty funds within the general fund. This account may be utilized for the support of the LEP and other workforce development programs as follows:

    - The MWEBE Committee shall receive a report on the balance of penalty funds as of the end of the fiscal year no later than March 31 after the close of that year.
    - The MWEBE Committee shall recommend utilization of these funds for placement in the next year's proposed budget in accordance with current LEP and workforce development program goals.
    - Both program goals and recommended expenditure of funds will be subject to approval by the City Council.

(D) *Minority, women, disadvantage, and Evanston business enterprise (M/W/D/EBE) goals.*

1. *Definitions*. For the purposes of this Subsection (D), Minority, Women, Disadvantage, and Evanston Business Enterprise (M/W/D/EBE) Goals, the following terms shall be defined as follows:

DISADVANTAGE-OWNED BUSINESS ENTERPRISE or DBE.	A firm must be at fifty-one percent (51%) owned by one (1) or more disadvantaged individual (socially and economically) or, in the case of a publicly-held corporation, fifty-one percent (51%) of the stock of which is owned by one (1) or more disadvantaged individual (socially and economically) whose management and daily business operations are controlled by one (1) or disadvantaged individual (socially and economically). The City Manager or his or her designee shall determine which DBE certifications shall be accepted by the City.
EVANSTON-OWNED BUSINESS ENTERPRISE or EBE.	An entity which is located in or has one (1) or more offices located in the City for a minimum of one (1) year and which performs a "commercially useful function." The business must be certified by the City in accordance with the provisions of Section 1-17-1(B).
MINORITY-OWNED BUSINESS ENTERPRISE or MBE.	A business which is at least fifty-one percent (51%) owned by one (1) or more members of one (1) or more minority groups, or, in the case of a publicly-held corporation, at least fifty-one percent (51%) of the stock of which is owned by one (1) or more members of one (1) or more minority groups, whose management and daily operations are controlled by one (1) or more members of one (1) or more minority groups. The City Manager or his or her designee shall determine which MBE certifications shall be accepted by the City.
M/W/D/EBE GOALS.	The City of Evanston establishes the goal of awarding not less than twenty-five percent (25%) of its contract awards to MBE, WBE, DBE and EBE businesses. The City of Evanston establishes the goal of awarding not less than three percent (3%) utilization of EBEs in its contract awards. The provisions of this Section shall be implemented by the City Manager or his or her designee. The provisions of this Section do not guarantee contract participation.
WOMEN-OWNED BUSINESS ENTERPRISE or WBE.	A business which is at least fifty-one percent (51%) owned by one (1) or more women, or, in the case of a publicly-held corporation, fifty-one percent (51%) of the stock of which is owned by one (1) or more women, whose management and daily business operations are controlled by one (1) or more women. The City Manager or his or her designee shall determine which WBE certifications shall be accepted by the City.

2. A minority-owned business enterprise ("MBE"), women-owned business enterprise ("WBE"), or disadvantage-business enterprise ("DBE") (collectively, "M/W/D/BE") must perform a "commercially useful function."

    a. A M/W/D/BE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the M/W/D/BE

must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether an M/W/D/BE is performing a commercially useful function, the City will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the M/W/D/BE credit claimed for its performance of the work and other relevant factors.

b. A M/W/D/BE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of M/W/D/BE participation. In determining whether a M/W/D/BE is such an extra participant, the City will examine similar transactions, particularly those in which M/W/D/BE's do not participate.

c. If a M/W/D/BE does not perform or exercise responsibility for at least thirty percent (30%) of the total cost of its contract with its own work force, or the M/W/D/BE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, then it is not performing a commercially useful function.

d. When an M/W/D/BE is presumed not to be performing a commercially useful function as provided in Subsection (D)(2)(c) of this Section, the M/W/D/BE may present evidence to rebut this presumption. The City may determine that the firm is performing a commercially useful function given the type of work involved and normal industry practices.

3. Businesses that maintain a distribution warehouse or manufacturing operation will receive M/W/D/BE credit of sixty percent (60%). Those that do not maintain a distribution warehouse or manufacturing operation will be considered a broker and receive a five (5) percent credit.

4. Eligibility as a M/W/D/BE will be periodically reviewed and may be revoked at any time if the entity no longer meets the above requirements.

~~(E)~~ (F) Contractor Debarment, Suspension, and Prohibited Contracts.

1. *Definitions*. For the purposes of this Subsection, the following definitions apply:

CITY MANAGER.	The City of Evanston City Manager or his/her designee.
CONTRACTOR.	A person, partnership, corporation, or other entity that has contracted with, or is seeking to contract with, the City to construct a public improvement, to provide goods to, or perform services for or on behalf of the City. A contractor includes a contractor, subcontractor, vendor, or any person or entity who or which owns an interest of ten percent (10%) or more in a contractor, subcontractor, or vendor.
DEBARMENT.	An action taken by the City which results in a contractor being prohibited from bidding or proposing on, being awarded or performing work on a contract with the City. A contractor who has been determined by the City to be subject to such a prohibition is debarred.

2. *Effect of Debarment or Suspension*. A debarred or suspended contractor is prohibited from bidding or proposing or being awarded or performing work on a contract with the City during the period of debarment or suspension.

3. *Debarment or Suspension*. The City Manager is authorized to debar or suspend a contractor for just cause. The period of debarment or suspension will be determined by the City Manager in consultation with the Corporation Counsel, on a case by case basis. Debarment or suspension may be lifted for good cause shown. Reasons for debarment or suspension include, but are not limited to, the following:

    a. Commission of fraud or a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract or in the performance of such a contract or subcontract;

    b. Conviction or indictment under a State or Federal statute of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which affects responsibility as a vendor or contractor;

    c. Conviction or indictment under a State or Federal antitrust statute;

    d. A finding by a State or Federal agency with statutory authority to adjudicate civil rights violations, or by a judge or jury in a State or Federal

court of competent jurisdiction, that the vendor or contractor has violated State or Federal civil rights statutes in its hiring or business practices;

e. Failure or default without good cause to perform in accordance with the terms of any contract and the associated supporting documents or unsatisfactory performance of any contract and the associated supporting documents with the City;

f. Disqualification or rejection of a bid by the vendor on three (3) or more occasions within a three (3) year period;

g. Commission of an act or omission indicating a lack of business integrity or business honesty;

h. Debarment, disqualification of suspension by another government entity for any reason; or

i. Any Federal or State funding that, by law, rule, or regulation, precludes the City from paying a contractor from those funding.

4. *Procedure*. Before a contractor is debarred or suspended, written notice of debarment or suspension must be provided to that contractor. Such notice must apprise the contractor of the reasons for the debarment or suspension and must inform the contractor of the right to be heard before the City Manager. The City Manager must grant a reasonable opportunity for the debarred or suspended contractor to be heard on the issue of said disbarment or suspension, if the contractor submits a request in writing within seven (7) calendar days of the mailing of the written notice. The City Manager will make a final determination after consulting with Corporation Counsel.

5. *Assignment of Contracts*. No contract will be assigned or sublet by the successful bidder without the consent of the City Manager.

6. *Prohibited Bidders and Contractors*.

   a. Unless otherwise provided, no contractor will bid or enter into a contract or subcontract under this Subsection if the business or any officer, director, partner, or other managerial agent of the business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 for a period of five (5) years from the date of conviction.

   b. Every bid submitted to and contract executed by the City and every subcontractor will contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the City Manager will declare the related contract void if any of the certificates completed pursuant to this Subsection (b) are false.

7. *Debt Delinquency*.

a. No person will submit a bid for or enter into a contract or subcontract under this Section if that person knows or should know that they or any affiliate is delinquent in the payment of any debt to the City, unless the person or affiliate has entered into a deferred payment plan to pay off the debt.

b. Every bid submitted to and contract executed by the City and every subcontract will contain a certification by the bidder, contractor, or subcontractor, respectively, that the contractor or the subcontractor and its affiliate is not barred from being awarded a contract or subcontract under this Section and acknowledges that the City Manager may declare the related contract void if any of the certifications completed pursuant to this Subsection (b) are false.

8. *Voidable Contracts.*

a. If any contract or amendment is entered into or purchase or expenditure of funds is made at any time in violation of this Subsection or any other law, the contract or amendment may be declared void by the City Manager or may be ratified and affirmed, provided the City Manager determines that ratification is in the best interests of the City. If the contract is ratified and affirmed, it will be without prejudice to the City's rights to any appropriate damages.

b. If, during the term of a contract, the City Manager determines that the contractor is delinquent in the payment of debt as set forth in Subsection 1-17-1(E)(7), the City Manager, or his/her designee, may declare the contract void if he/she determines that voiding the contract is in the best interests of the City.

c. If, during the term of a contract, the City Manager determines that the contractor is in violation of Subsection 1-17-1(E)(6), the City Manager will declare the contract void.

d. If, during the term of a contract, the contracting agency learns from an annual certification or otherwise determines that the contractor no longer qualifies to enter into City contracts under this Section, the City Manager may declare the contract void if he/she determines that voiding the contract is in the best interests of the City.

Cook County Prevailing Wage Rates posted on 3/2/2026

						Overtime										
Trade Title	**Rg**	**Type**	**C**	**Base**	**Foreman**	**M-F**	**Sa**	**Su**	**Hol**	**H/W**	**Pension**	**Vac**	**Trng**	**Other Ins**	**Add OT 1.5x owed**	**Add OT 2.0x owed**
ASBESTOS ABT-GEN	All	ALL		51.40	52.40	1.5	1.5	2.0	2.0	18.32	17.71	0.00	0.91	0.00	0.00	0.00
ASBESTOS ABT-MEC	All	BLD		42.02	45.38	1.5	1.5	2.0	2.0	16.44	16.64	0.00	0.92		3.37	6.73
BOILERMAKER	All	BLD		58.91	64.21	2.0	2.0	2.0	2.0	7.07	27.02	0.00	3.69	2.31	0.00	39.30
BRICK MASON	All	BLD		53.06	58.37	1.5	1.5	2.0	2.0	12.95	26.26	0.00	1.57	0.00	4.23	8.45
CARPENTER	All	ALL		56.71	58.71	1.5	1.5	2.0	2.0	13.64	27.26	2.61	1.04		0.00	0.00
CEMENT MASON	All	ALL		53.10	55.10	2.0	1.5	2.0	2.0	18.43	24.00	0.00	1.25		2.50	5.00
CERAMIC TILE FINISHER	All	BLD		49.09	49.09	1.5	1.5	2.0	2.0	13.25	17.61	0.00	1.37	0.00	5.57	11.14
CERAMIC TILE LAYER	All	BLD		57.04	62.04	1.5	1.5	2.0	2.0	13.25	21.60	0.00	1.50	0.00	7.63	15.26
COMMUNICATION ELECTRICIAN	All	BLD		51.14	56.25	1.5	1.5	2.0	2.0	16.70	14.48	1.40	1.27	0.10	0.00	0.00
CONCRETE SPECIALIST	All	BLD		51.81	58.21	1.5	1.5	2.0	2.0	12.95	27.56	0.00	1.57	0.00	4.88	9.75
CONCRETE SPECIALIST WELDER	All	BLD		54.40	58.21	1.5	1.5	2.0	2.0	12.95	27.56	0.00	1.57	0.00	4.88	9.75
ELECTRIC PWR EQMT OP	All	ALL		64.58	70.87	1.5	1.5	2.0	2.0	12.99	22.45	0.00	3.66	0.00	0.00	0.00
ELECTRIC PWR GRNDMAN	All	ALL		50.37	70.87	1.5	1.5	2.0	2.0	10.13	17.51	0.00	2.85	0.00	0.00	0.00
ELECTRIC PWR LINEMAN	All	ALL		64.58	70.87	1.5	1.5	2.0	2.0	12.99	22.45	0.00	3.66	0.00	0.00	0.00
ELECTRICIAN	All	ALL		57.75	63.53	1.5	1.5	2.0	2.0	19.34	21.13	1.60	1.87	0.30	0.00	0.00
ELEVATOR CONSTRUCTOR	All	BLD		70.68	79.52	2.0	2.0	2.0	2.0	16.28	21.36	5.65	0.80		0.00	0.00
FENCE ERECTOR	All	ALL		52.25	54.75	1.5	1.5	2.0	2.0	14.29	19.02	0.00	1.00	0.00	0.00	0.00
GLAZIER	All	BLD		53.55	55.05	1.5	2.0	2.0	2.0	16.04	26.64	0.00	2.30	0.00	0.00	0.00
HEAT/FROST INSULATOR	All	BLD		56.02	59.38	1.5	1.5	2.0	2.0	16.44	19.88	0.00	0.92		4.99	9.97
IRON WORKER	All	ALL		62.46	65.96	2.0	2.0	2.0	2.0	19.05	27.04	0.00	0.49	0.00	0.00	0.00
LABORER	All	ALL		51.40	52.15	1.5	1.5	2.0	2.0	18.32	17.71	0.00	0.91	0.00	0.00	0.00
LATHER	All	ALL		56.71	58.71	1.5	1.5	2.0	2.0	13.64	27.26	2.61	1.04		0.00	0.00
MACHINIST	All	BLD		60.39	64.39	1.5	1.5	2.0	2.0	11.43	9.95	1.85	1.47	0.00	0.00	0.00
MARBLE FINISHER	All	ALL		40.21	54.60	1.5	1.5	2.0	2.0	12.95	23.81	0.00	0.98	0.00	3.00	6.00
MARBLE SETTER	All	BLD		52.00	57.20	1.5	1.5	2.0	2.0	12.95	25.57	0.00	1.25	0.00	3.88	7.76
MATERIAL TESTER I	All	ALL		41.40		1.5	1.5	2.0	2.0	18.32	17.71	0.00	0.91	0.00	0.00	0.00

Cook County Prevailing Wage Rates posted on 3/2/2026

MATERIALS TESTER II	All	ALL		46.40		1.5	1.5	2.0	2.0	18.32	17.71	0.00	0.91	0.00	0.00	0.00
MILLWRIGHT	All	ALL		56.71	58.71	1.5	1.5	2.0	2.0	13.64	27.26	2.61	1.04		0.00	0.00
OPERATING ENGINEER	All	BLD	1	64.80	68.80	2.0	2.0	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	BLD	2	63.50	68.80	2.0	2.0	2.0	2.0	24.70	21.55	2.00	2.75	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	3	60.95	68.80	2.0	2.0	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	BLD	4	59.20	68.80	2.0	2.0	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	BLD	5	68.55	68.80	2.0	2.0	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	BLD	6	65.80	68.80	2.0	2.0	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	BLD	7	67.80	68.80	2.0	2.0	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	FLT	1	73.95	73.95	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	FLT	2	72.45	73.95	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	FLT	3	67.95	73.95	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	FLT	4	63.45	73.95	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	FLT	5	75.45	73.95	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	FLT	6	63.45	73.95	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	HWY	1	63.00	67.00	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	HWY	2	62.45	67.00	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	HWY	3	60.40	67.00	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	HWY	4	59.00	67.00	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	HWY	5	57.80	67.00	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	HWY	6	66.00	67.00	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
OPERATING ENGINEER	All	HWY	7	64.00	67.00	1.5	1.5	2.0	2.0	24.70	21.55	2.00	2.75		0.00	0.00
ORNAMENTAL IRON WORKER	All	ALL		59.26	62.76	2.0	2.0	2.0	2.0	14.86	27.70	0.00	2.25	0.00	0.00	0.00
PAINTER	All	ALL		54.30	61.09	1.5	1.5	1.5	2.0	16.26	17.59	0.00	1.86	0.00	0.00	0.00
PAINTER - SIGNS	All	BLD		48.16	54.11	1.5	1.5	2.0	2.0	8.20	16.81	0.00	0.00	0.00	0.00	0.00
PILEDRIVER	All	ALL		56.71	58.71	1.5	1.5	2.0	2.0	13.64	27.26	2.61	1.04		0.00	0.00
PIPEFITTER	All	BLD		58.50	61.50	1.5	1.5	2.0	2.0	15.15	22.85	0.00	3.12	0.00	0.00	0.00
PLASTERER	All	BLD		51.10	54.17	1.5	1.5	2.0	2.0	18.43	22.10	0.00	1.25	0.00	0.00	0.00
PLUMBER	All	BLD		60.50	64.15	1.5	1.5	2.0	2.0	19.10	17.94	0.00	1.98		0.00	0.00

Cook County Prevailing Wage Rates posted on 3/2/2026

ROOFER	All	BLD		52.00	57.00	1.5	1.5	2.0	2.0	12.80	18.19	0.00	1.14	0.00	0.00	0.00
SHEETMETAL WORKER	All	BLD		54.58	58.95	1.5	1.5	2.0	2.0	15.88	28.92	0.00	1.20	0.00	0.00	0.00
SIGN HANGER	All	BLD		37.62	40.63	1.5	1.5	2.0	2.0	7.85	4.90	0.00	0.00	0.00	0.00	0.00
SPRINKLER FITTER	All	BLD		63.20	65.95	1.5	1.5	2.0	2.0	15.45	19.95	0.00	1.15	0.00	0.00	0.00
STEEL ERECTOR	All	ALL		62.46	65.96	2.0	2.0	2.0	2.0	19.05	27.04	0.00	0.49	0.00	0.00	0.00
STONE MASON	All	BLD		53.06	58.37	1.5	1.5	2.0	2.0	12.95	26.26	0.00	1.57	0.00	4.23	8.45
SURVEY WORKER	All	BLD		58.45	59.45	1.5	1.5	2.0	2.0	19.10	14.40	0.00	1.59		0.00	0.00
SURVEY WORKER	All	HWY		58.45	59.45	1.5	1.5	2.0	2.0	19.10	14.40	0.00	1.59		0.00	0.00
TERRAZZO FINISHER	All	BLD		51.44	51.44	1.5	1.5	2.0	2.0	13.25	18.87	0.00	1.41	0.00	4.45	8.89
TERRAZZO MECHANIC	All	BLD		55.35	58.85	1.5	1.5	2.0	2.0	13.25	20.26	0.00	1.46	0.00	4.70	9.39
TRAFFIC SAFETY WORKER I	All	HWY		43.40	45.40	1.5	1.5	2.0	2.0	10.08	10.08	0.00	1.05	0.00	0.00	0.00
TRAFFIC SAFETY WORKER II	ALL	HWY		44.40	46.40	1.5	1.5	2.0	2.0	10.08	10.08	0.00	1.05	0.00	0.00	0.00
TRUCK DRIVER	E	ALL	1	45.55	46.20	1.5	1.5	2.0	2.0	13.35	16.09	0.00	0.30	0.00	0.00	0.00
TRUCK DRIVER	E	ALL	2	45.80	46.20	1.5	1.5	2.0	2.0	13.35	16.09	0.00	0.30	0.00	0.00	0.00
TRUCK DRIVER	E	ALL	3	46.00	46.20	1.5	1.5	2.0	2.0	13.35	16.09	0.00	0.30	0.00	0.00	0.00
TRUCK DRIVER	E	ALL	4	46.20	46.20	1.5	1.5	2.0	2.0	13.35	16.09	0.00	0.30	0.00	0.00	0.00
TRUCK DRIVER	W	ALL	1	44.83	45.38	1.5	1.5	2.0	2.0	12.20	16.61	0.00	0.30	0.00	0.00	0.00
TRUCK DRIVER	W	ALL	2	44.98	45.38	1.5	1.5	2.0	2.0	12.20	16.61	0.00	0.30	0.00	0.00	0.00
TRUCK DRIVER	W	ALL	3	45.18	45.38	1.5	1.5	2.0	2.0	12.20	16.61	0.00	0.30	0.00	0.00	0.00
TRUCK DRIVER	W	ALL	4	45.38	45.38	1.5	1.5	2.0	2.0	12.20	16.61	0.00	0.30	0.00	0.00	0.00
TUCKPOINTER	All	BLD		52.53	53.53	1.5	1.5	2.0	2.0	11.05	23.16	0.00	1.46	0.00	0.00	0.00

Legend

Rg Region
Type Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers
C Class
Base Base Wage Rate
OT M-F Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.
OT Sa Overtime pay required for every hour worked on Saturdays
OT Su Overtime pay required for every hour worked on Sundays
OT Hol Overtime pay required for every hour worked on Holidays

Cook County Prevailing Wage Rates posted on 3/2/2026

H/W Health/Welfare benefit
Vac Vacation
Trng Training
Other Ins Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

Explanations COOK COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

TRUCK DRIVERS (WEST) - That part of the county West of Barrington Road.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date. ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS ELECTRICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound vision production and reproduction, telephone and telephone interconnect, facsimile, data apparatus, coaxial, fibre optic and wireless equipment, appliances and systems used for the transmission and reception of signals of any nature, business, domestic, commercial, education, entertainment, and residential purposes, including but not limited to, communication and telephone, electronic and sound equipment, fibre optic and data communication systems, and the performance of any task directly related to such installation or service whether at new or existing sites, such tasks to include the placing of wire and cable and electrical power conduit or other raceway work within the equipment room and pulling wire and/or cable through conduit and the installation of any incidental conduit, such that the employees covered hereby can complete any job in full.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under: Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-

Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines: ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane: Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S

Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000 pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Cook County Prevailing Wage Rates posted on 3/2/2026

Class 6. ROV Pilot, ROV Tender

SURVEY WORKER

Operates survey equipment (such as levels, transits, data collectors, GPS and robotic total stations) for the purpose of performing construction layout and/or grade checking.

SURVEY FOREMAN

Operates survey equipment (such as levels, transits, data collectors, GPS and robotic total stations) for the purpose of performing construction layout and/or grade checking; oversees survey crew operations; and/or coordinates work of survey crews.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

TRAFFIC SAFETY Worker I

Traffic Safety Worker I - work associated with the delivery, installation, pick-up and servicing of safety devices during periods of roadway construction, including such work as set-up and maintenance of barricades, barrier wall reflectors, drums, cones, delineators, signs, crash attenuators, glare screen and other such items, and the layout and application or removal of conflicting and/or temporary roadway markings utilized to control traffic in construction zones, as well as flagging for these operations.

TRAFFIC SAFETY WORKER II

Work associated with the installation and removal of permanent pavement markings and/or pavement markers including both installations performed by hand and installations performed by truck.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION - EAST & WEST

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump

Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

Cook County Prevailing Wage Rates posted on 3/2/2026

City of Evanston has partnered with **Euna OpenBids** – an online network connecting local governments with suppliers across the nation. Euna OpenBids is open and accessible to all businesses. Euna OpenBids gives you instant access to RFPs, bids, quotes, and other opportunities with City of Evanston.

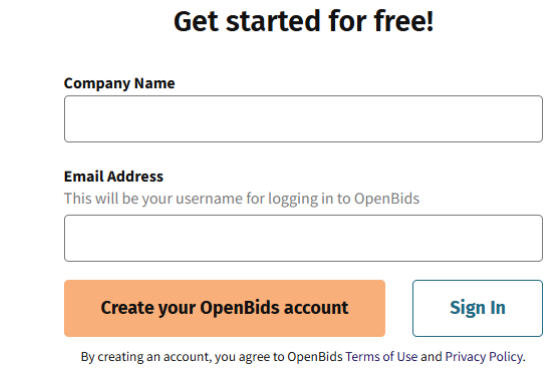
By registering for a complimentary account with Euna OpenBids, you get Instant Access to bids for City of Evanston. Your free Euna OpenBids account provides:

- **Instant** access to all bid and quotes for City of Evanston
- **Automatic** notifications from City of Evanston right to your inbox
- The ability to **quickly view** the contractual terms and scope of work
- All the **forms and documents** you need in one place.

It's Easy! Get started in 4 easy steps.

REGISTER

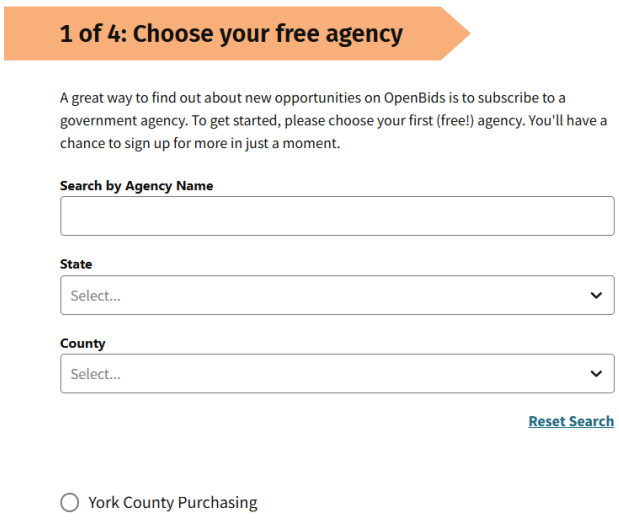
Go to
demandstar.com/registration



STEP 1

CHOOSE YOUR FREE AGENCY

Type "City of Evanston" in the Search Box, select the agency, then click "Next" .

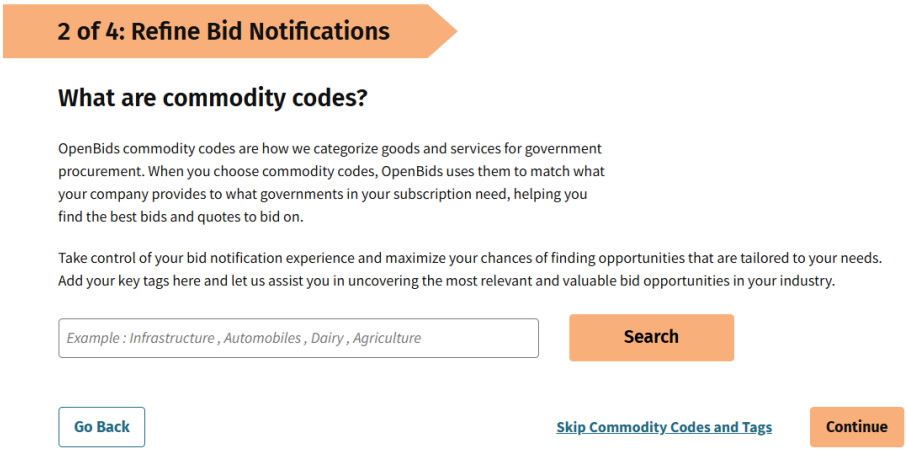


Copyright © 2025 Euna. All rights reserved.

STEP 2

CHOOSE COMMODITY CODES

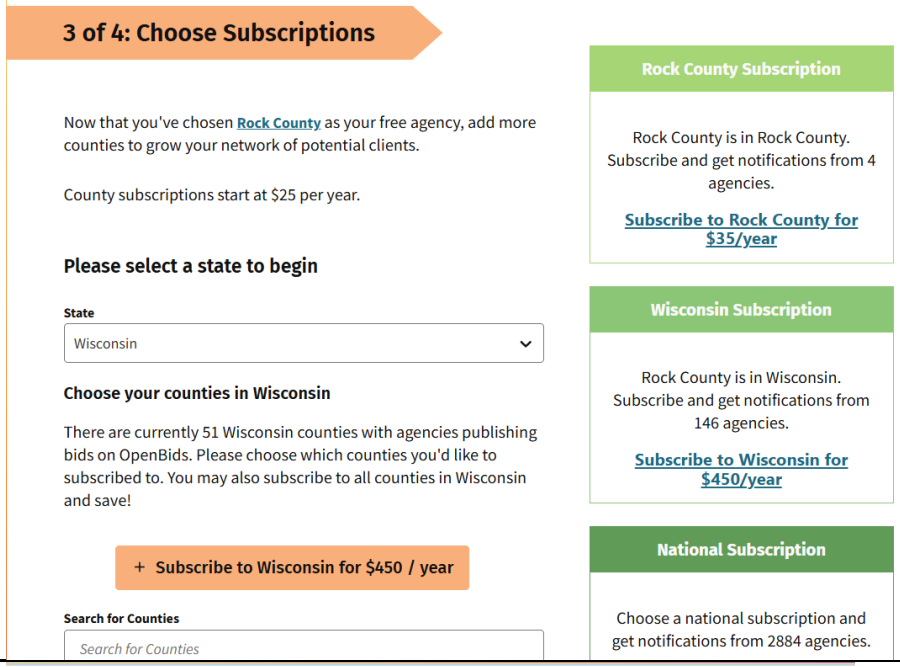
Get notifications – ones that are relevant to your business by describing what you offer via “commodity codes”



STEP 3

CHOOSE MORE NOTIFICATIONS

Click “Continue without Adding Subscriptions” to proceed to City of Evanston specifically. Or, if you’d like to get notifications when other governments near you post a relevant solicitation, you can select any combination of our county, state or national plans on this page.

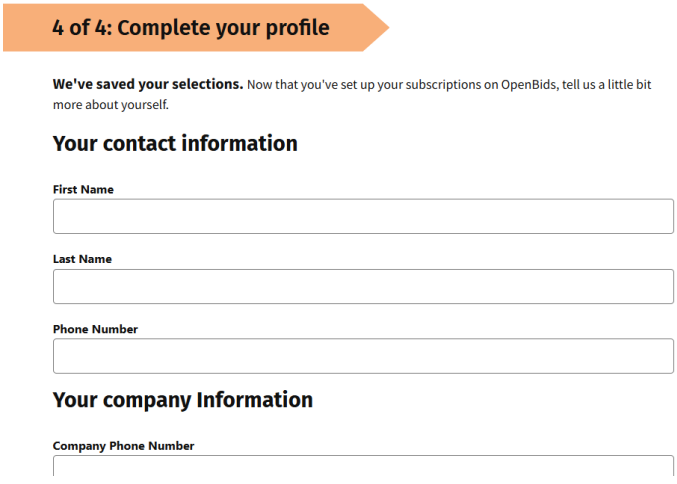


STEP 4

COMPLETE YOUR PROFILE

Enter your contact and company information and Click “Finish Registration”. You’ll receive an email to set up your password.

You’re done!



Copyright © 2025 Euna. All rights reserved.

EUNA solutions

EUNA OpenBids